United Nations
Economic Commission for Africa

ACPC
African Climate Policy Centre

CLIMATE CHANGE AS A COMPONENT OF SUSTAINABLE DEVELOPMENT

May 2018

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ABBREVIATIONS

AfT	Agenda for Transformation (Liberia)
CRGE	Climate Resilient Green Economy
COP	Conference of Parties
ECA/ACPC	Economic Commission for Africa/Africa Climate Policy Centre
EIA	Environmental Impact Assessment
EPA	Environmental Protection Agency
GHG	Green House Gas
HLPF	High Level Political Platform
IGCCC	Inter-Governmental Climate Change Committee
LDC	Least Developed Countries
MEWC	Ministry of Environment, Water and Climate
MRV	Measurement, Reporting and Verification
NAPA	National Adaptation Programme of Action
NCCRS	National Climate Change Response Strategy
NCP	National Climate Policy
NDCs	Nationally Determined Contributions
OPC	Office of the President and Cabinet
SDGs	Sustainable Development Goals
UNDP	United Nations Development Programme
UNFCCC	United Nations Framework Convention on Climate Change
ZimASSET	Zimbabwe Agenda for Socio-Economic Transformation

EXECUTIVE SUMMARY

This report presents findings of a desk study on the mainstreaming or integration of climate change mitigation and adaptation actions, articulated as Nationally Determined Contributions under the UNFCCC's Paris Agreement of 2015, in national development processes especially national and subnational programmes meant to achieve the 2030 Agenda for Sustainable Development Goals (SDGs) and Africa's Agenda 2063. In this regard, climate actions transcend science and draw into their compass social, political and economic issues that are at the heart of national and subnational governance and the attainment of the 17 SDGs and Agenda 2063. Whereas sustainable development policies, programmes and actions may deliver on both reduction of greenhouse gas (GHG) emissions and enhanced resilience to climate impacts, climate policies and measures for both mitigation and adaptation can also advance sustainable development goals. In consequence, climate change and the United Nations and African Union's sustainable development agendas are deeply entwined in ways that are not only mutually beneficial but also mutually reinforcing. Despite the growing recognition of these linkages, there are gaps in understanding the: specific governance arrangements in African countries that are being put in place to incorporate NDCs into sustainable development processes; mechanisms that have been developed for integrating NDCs, across sectors, into national and subnational development programmes; mechanisms for monitoring the implementation of NDCs and associated challenges; and the support that could be provided to ensure that climate change is fully integrated into national development processes.

The African Climate Policy Centre of the ECA commissioned this study to contribute towards filling these knowledge gaps and recommend actions that could be undertaken in support of selected African countries.

Main and specific objectives

As stated in the Terms of Reference, the overall objective of the study was to:

> *'Review and evaluate the governance systems that are being put into place by the African governments to ensure that the commitments to the Paris Agreement, the NDCs, are integrated into development policies and programmes, and particularly into national and subnational programmes that are designed to achieve Sustainable Development Goals.'*

The specific objectives of the study were to:

- Identify different governance arrangements for implementing NDCs;
- Review the mechanisms for integrating NDCs across sectors into national and subnational development programmes;

- Identify the mechanisms that exist or are being developed to monitor implementation of NDCs;
- Identify the technical support that ECA/ACPC can provide to selected African countries to ensure mainstreaming of climate change into national development processes; and
- Recommend support that ECA/ACPC can provide to selected African countries on reporting on NDCs and integration of climate change into national development policies and programmes.

Analytical framework

The *political economy* analytical framework utilised in this report to understand the governance arrangements and mechanisms for integrating and monitoring the integration of NDCs into national and subnational development policies and programmes differentiates, for investigative purposes, four interconnected spheres that are central to the governance of NDCs and sustainable development as enunciated in SDGs and Agenda 2063. These are the *policy context*, *action arena*, *policy reform processes* and *outcomes*. These four interlocking domains are elaborated further in Section 1.3 and they coalesce into a unifying thread that runs right through the whole report. Ultimately, the anticipated *outcomes* of interventions by African governments, and their global partners, in fulfilling commitments to the Paris Agreement include the unambiguous mainstreaming of NDCs into development policies and programmes, at national and subnational levels, at the same time achieving SDGs.

Methodology

In order to achieve the main and specific objectives of the study, the author used secondary data. This involved the review of literature on purposively selected African countries, namely Ethiopia, Liberia, South Africa and Zimbabwe. These countries were chosen on the basis of their geographical spread i.e. Liberia in West Africa, Ethiopia in East Africa and Zimbabwe and South Africa in Southern Africa and engagement in global processes on climate change and sustainable development.

Although the focus is on four (4) of the fifty four (54) African member states of the African Union and United Nations, these four case studies do mirror African Governments' commitments to the Paris Agreement, the 2030 Agenda on SDGs and Agenda 2063 of the African Union. Specific focus is on the alignment of these countries' NDCs to SDGs and Agenda 2063. This provides a backdrop for analysing the governance arrangements and mechanisms for integrating NDCs into national and subnational development policies and programmes as well as the mechanisms for monitoring the implementation of NDCs, the challenges faced and the technical support that the ECA/ACPC could provide to enhance the mainstreaming and implementation of NDCs and reporting on progress to the UNFCCC.

Main findings and recommendations

The following highlights from Section 2 summarise the report. Section 2.1 analyses the alignment of NDCs with four SDGs, namely SDGs 1, 7, 9, 13 and 17 and Agenda 2063 Actions 72a, d, f and g.

- The four countries have policies and programmes at national and subnational levels that seek to grow green economies at the same time reducing poverty (SDG 1 and Goal 1 of Agenda 2063) and making renewable and reliable modern energy accessible to the majority of the national populations (SDG 7 and Goal 7 of Agenda 2063), building climate resilient infrastructure and sustainable and innovative industries (SDG 9 and Goal 5 of Agenda 2063). However, it should be noted that existing policies and programmes were installed before these countries committed themselves to the NDCs submitted to UNFCCC under the Paris Agreement;
- NDCs of the four countries provide opportunities for taking actions to reduce GHG emissions from key sectors such as the energy, industrial and agricultural sectors (SDG 13 and Goal 7 of Agenda 2063). There are also specific initiatives aimed at enhancing adaptation to the negative impacts of climate change which may contribute to reducing vulnerability to the impacts of climate change through interventions promoting resilience in a whole range of sectors including agriculture, infrastructure, industry and building sectors, to name but a few.
- However, there are gaps in knowledge on the actual in-place implementation of climate change related policies, strategies and programmes and indicators of performance and progress.
- There are also challenges of insufficient public budgets for mainstreaming climate change into national development processes, lack of access to affordable international finance, inadequate capacity to monitor, report and verify climate emissions and mitigation measures as well as adaptation actions, and inadequate capacity to identify and adopt new climate smart technologies essential for greening the economies of the selected countries;
- Section 2.2 shows that the four countries have put in place varying governance arrangements that could, if appropriately adapted, support the implementation of NDCs and these include economic growth and climate policies, strategies and programmes that either cut across sectors or are specific to particular sectors. The four countries also have diverse institutional and organisational structures that could support the implementation of NDCs but as already noted, there are challenges with respect to mobilising domestic and international financial resources and building technical capacities to implement the well-intentioned climate policies and programmes.
- Section 2.3 provides evidence on the mechanisms that have been developed which could help to ensure that NDCs are integrated across sectors and into national and subnational

development programmes. These mechanisms include: 1) identifying and engaging stakeholders; 2) raising awareness strengthening policies, institutions and organisational structures; 3) implementing pilot activities; and 4 monitoring and evaluating performance indicators.

- Section 2.4 presents the mechanisms that exist, or are in development, to monitor the implementation of NDCs in the four selected African countries. This section notes that the Paris Agreement established a universal and harmonised *measurement*, *reporting* and *verification* (MRV) mechanism for *emissions*, *mitigation actions* and *support* but currently, there is no comparable system for adaptation to the impacts of climate change.
- Section 2.5 notes that African countries require technical support for mobilising financial resources and climate finance tracking; strengthening climate governance and institutions at national and subnational levels; building capacity and skills for mainstreaming climate change into development policies and practice; and defining, implementing, monitoring and evaluating the mainstreaming of technology transfer policies into national development processes.
- Finally, Section 2.6 concludes the report by recommending that the ECA/ACPC, working in partnership with selected African governments, could provide technical support on:
    - Strengthening the coordination and implementation of NDCs in order to fulfil commitments under the Paris Agreement at the same time meeting national development objectives;
    - Strengthening the legal frameworks on climate issues;
    - Research on the implementation of NDCs embedded in development policies;
    - Enhancing strategic communication on NDCs;
    - Mobilising and tracking the financing of NDCs;
    - Capacity and skills development for climate mainstreaming;
    - Establishment and/or strengthening of robust monitoring and evaluation of performance in implementing NDCs; and
    - Transfer of green technologies.

1. INTRODUCTION

This report presents findings of a desk study that reviewed and evaluated the governance arrangements that are being put in place by African governments to ensure that commitments to the Paris Agreement, the NDCs, are integrated into development policies and programmes, and particularly into national and subnational programmes that are designed to achieve the Sustainable Development Goals and by implication Agenda 2063. The study specifically focuses on four African countries namely Ethiopia, Liberia, South Africa and Zimbabwe but the findings have wider significance to other African countries. The four countries were purposively chosen on the basis of their diverse geographical locations and engagement in global governance initiatives. The report benefited greatly from comments made by participants at an intergovernmental meeting on Enhancing Readiness for Implementing Nationally Determined Contributions in Africa that was held at the United Nations Economic Commission for Africa in Addis Ababa 26-27 March 2018 and a Southern African Expert Group meeting that was held on 24-25 April 2018 at Kadoma Hotel and Conference Centre in Zimbabwe.

1.1. Background, rationale and objectives

In December 2015, 196 countries at the 21st Conference of Parties (COP 21) of the United Nations Framework Convention on Climate Change (UNFCCC)[1] adopted a historic climate change agreement (also known as the Paris Agreement) whose three key objectives, as defined in Article 2, are to:

1. Hold the increase in global average temperature to well below 2^0C above pre-industrial levels and pursue efforts to limit the increase to 1.5^0C;
2. Increase the ability to adapt to the adverse impacts of climate change and foster climate resilience and low Greenhouse Gases (GHG) emissions development; and
3. Make financial flows consistent with a pathway towards low GHG and climate-resilient development.[2]

The Paris Agreement will replace the Kyoto Protocol from 2020 onwards. The Paris Agreement can be seen as moving away from the 1997 Kyoto Protocol's climate governance regime which established legally binding obligations on industrialised countries to reduce their GHGs causing global warming and provided a mechanism for enforcing compliance.[3] The Paris Agreement continued to apply the 'common but differentiated responsibilities' framework in which all Parties to the UNFCCC now committed themselves to the objective of addressing the issue of

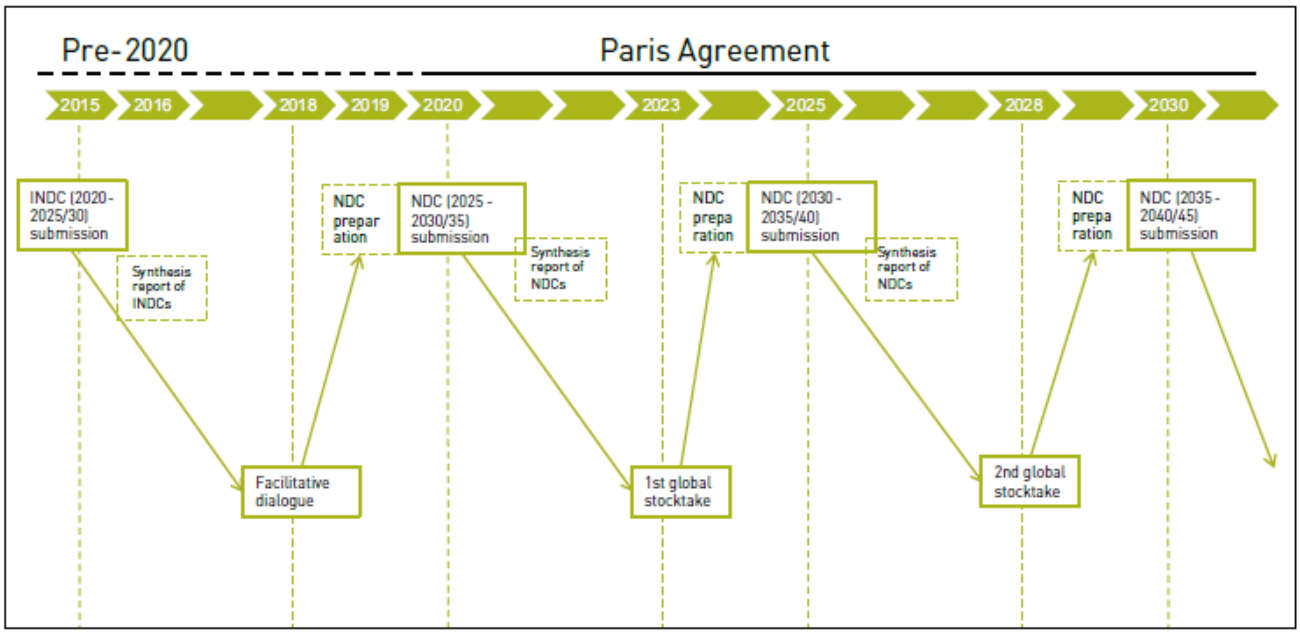
[1] https://unfccc.int/process-and-meetings/the-paris-agreement/nationally-determined-contributions-ndcs
[2]UNFCCC (2015) *Adoption of the Paris Agreement;*
[3]Brazier, A (2015) *Climate change in Zimbabwe: A guide for planners and decision makers* (Harare: Konrad Adenauer Stiftung)

global warming as articulated in the Intended Nationally Determined Contributions (INDC) documents that they submitted to the secretariat of the UNFCCC in the lead-up to COP 21.[4]

Upon ratification of the Paris Agreement by each Party, the countries' INDCs become Nationally Determined Contributions (NDCs) which reflect ambitions for reducing emissions considering each country's domestic circumstances and capabilities[5] and each Party is required to submit new and more ambitious NDCs every five years starting in 2020 and to work towards a pathway of low greenhouse gas emissions and climate-resilient development.[6]

The Paris Agreement requires all Parties to put forward their best efforts through NDCs and to strengthen these efforts in the years ahead. This includes requirements that all Parties report every five years on their emissions and on their implementation efforts. Guidelines on NDCs are being negotiated under the Ad Hoc Working Group on the Paris Agreement.[7] The NDC cycle is summarised in Figure 1 below.

Figure 1: The NDC cycle



Source: SIDA (2017) *Integrating climate action into national development planning – a coherent implementation of the Paris Agreement and Agenda 2030* (www.sida.org)

In other words, the NDCs express each Party's ambitions to mitigate emissions and adapt to the existing and expected adverse impacts of climate change over time and to exploit development

[4]USAID (2016) *Analysis of Intended Nationally Determined Contributions (INDCs)*
[5] Bird, N *et al.* (n.d.) *10 Propositions for Success: Integrating International Climate Change Commitments into National Development Planning*
[6] https://unfccc.int/process-and-meetings/the-paris-agreement/nationally-determined-contributions-ndcs
[7] https://unfccc.int/process-and-meetings/the-paris-agreement/nationally-determined-contributions-ndcs

opportunities that it presents.[8] Consequently, climate change goes beyond science and draws into its ambit social, political and economic issues that are central to national governance, the attainment of the 17 Sustainable Development Goals (SDGs) and the African Union's Agenda 2063. Therefore, climate change and sustainable development agendas are deeply intertwined in ways that can be mutually reinforcing. Whereas well-designed sustainable development policies and actions may deliver on both reduction of GHG emissions and enhanced resilience to climate impacts, climate policies and measures for both mitigation and adaptation can advance development objectives.[9] Predominant social, economic and political issues in the governance of both the climate and sustainable development agendas include, *inter alia*, efficacy of decision-making structures and institutions, coordination of decision-making processes, stakeholder engagement in policy processes across diverse public and private sectors at national and sub-national levels, civil society participation, poverty reduction and equity, affordable and clean energy, accountability, transparency, funding, monitoring, reporting and verification and partnerships for climate and SDG actions. Despite the growing recognition of the linkages between climate and sustainable development agendas, there are extant gaps in terms of understanding the governance arrangements for implementing NDCs, the integration of NDCs into national and subnational development processes, the mechanisms for monitoring implementation of NDCs, technical capacities (or otherwise) of role actors and the support that is needed to address barriers to a zero-carbon, climate resilient future. Parties to the Paris Agreement ratified NDCs before guidelines on mitigation and adaptation were developed and agreed upon at the UNFCCC and this has created implementation challenges for countries in Africa.[10]

To address these gaps, the African Climate Policy Centre of the Special Initiatives Division of the United Nations Economic Commission for Africa based in Addis Ababa commissioned this study whose objectives are presented below.

1.2. Objectives of the study

The overall and specific objectives of the study are as follows.

Overall objective

The overall objective of the study was to:

> 'Review and evaluate the governance systems that are being put in place by the African governments to ensure that the commitments to the Paris Agreement, the NDCs, are integrated into development policies and programmes, and particularly into national and subnational programmes that are designed to achieve Sustainable Development Goals.'

[8] IPCC (2007) Summary for policy makers

[9] Northrop, E. H. *et al.* (2016) *Examining the Alignment between Intended Nationally Determined Contributions and Sustainable Development Goals.* Working Paper (Washington DC: World Resources Institute).

[10] Africa Climate Talks II, Addis Ababa, Ethiopia,

Specific objectives

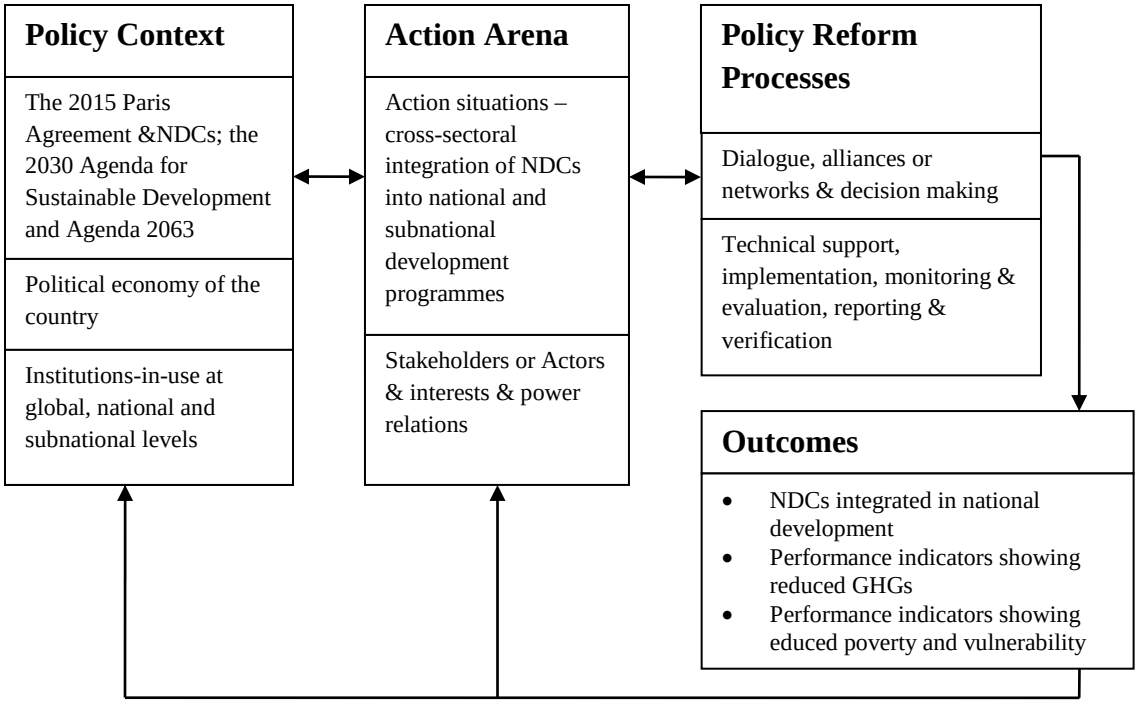
The specific objectives of the study were to:

1. Identify the different governance arrangements, including climate action plans and programmes, that have been put in place to support the implementation of the NDCs;
2. Review the mechanisms that have been developed to ensure that the NDCs are integrated across sectors into national and subnational development programmes;
3. Identify the mechanisms that exist or are in development to monitor the implementation of NDCs in selected African countries;
4. Identify the technical support that can be provided to selected African countries by the ECA/ACPC to ensure that climate change is fully mainstreamed into national development processes; and
5. Recommend support that can be provided to selected African countries by the ECA/ACPC on reporting on the NDCs and integration of climate change into national development programmes and policies.

1.3. Analytical framework

The analytical framework used to understand the governance arrangements and mechanisms for integrating and monitoring the integration of NDCs into national and subnational development policies and programmes is summarised in Figure 1 and elaborated below.

Figure 2: Analytical Framework on Governance of NDCs & Sustainable Development



Adapted from Ostrom, E. *et al* (2002) & The World Bank (2008)

The conceptual framework presented in Figure 1 above, distinguishes, for purposes of analysis, four interconnected domains that are central to the governance of NDCs and sustainable development. The *policy context* refers to the global architecture of climate change as embodied in the Paris Agreement, the 2030 Agenda for the 17 Sustainable Development Goals and Agenda 2063 both of which have a significant bearing on African countries' climate actions and development trajectories, policy discourses and *institutions-in-use* at the national and subnational levels.

Institutional analysis has generated a diverse set of traditions with different views on the relationship between *institutions* and *actors*. On the one hand, the rational choice approach often begins the analysis with a particular constellation of actors and sees institutions as a strategic choice of those actors.[11] The actors considered in this report are the United Nations agencies, governments and their line ministries and agencies, the private sector, NGOs, research entities, local communities and donor agencies. Institutions are seen as a social construction of the actors. In other words, actors make institutions. On the other hand, the structuralist approach sees institutions as the rules of the game which regulate the behaviour of actors through both formal and informal rules enforced by the actors and third parties.[12] From a structuralist

[11]Jackson, G (2009) *Actors and Institutions*
[12]North, D. C. (1991) Institutions *Journal of Economic Perspectives* 5,1: 97-112

perspective which has its origins in Durkheimian sociology, institutions are pre-existing social facts and exogenous to actors and they have a largely constraining character as they set clear boundaries on actors' choices and even actions. This dichotomy is itself not really helpful as it obfuscates the interconnectedness of institutions and actors. A relational approach conceptualises institutions and actors as mutually constitutive of one another and interdependent.[13] As Jackson (2009) notes, actors may be 'rule makers', but they take existing rules as a starting point for defining their own identities, interests and strategies. Contrariwise, actors may be 'rule takers' but nonetheless modify or even overturn rules from time to time. As Karl Marx (1852) cogently argued in his book *The Eighteenth Brumaire of Louis Bonaparte*:

> *'Men make their own history but not in circumstances of their own choosing.'*

From a relational or constitutive approach, socio-economic, cultural and political institutions underpinning climate and sustainable development governance, policy and actors' actions are reflexively intertwined with one another. Actors enact institutions and once put in place; those institutions enable and constrain actors' choices and actions and the pursuit of individual and collective interests. In the light of the foregoing arguments, this paper defines *institutions* as:

> *'sets of formal and informal rules, norms, constitutions, legislation, regulations, by-laws underlying political powers, bureaucratic agencies or social and private organisations and that shape actors' choices and are shaped by the interactions of humans with others and with nature.'*[14]

A distinction is made between *institutions* and *organisations;* institutions generally provide rules and *organisations* are social, political and economic entities bound together to achieve common objectives within institutional constraints.[15] The Paris Agreement and the 2030 Agenda for the Sustainable Development Goals are cases in point of global institutions or 'rules of the game' that are shaping, enabling and constraining inter-state relations and intra-state interactions and choices of actors at national and subnational levels.

The *political economy* of a country is marked by the interplay of economic and political forces over time. Salient features of a country's political economy include state and non-state actors, national constitutions and legislation shaping interactions and development policy formulation processes and implementation across sectors, markets and political parties, demographics, social and economic inequalities and regional disparities, and bio-physical features such as climatic variability and drivers of vulnerability to climate change, mitigation and adaptation..

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[13]Giddens, A. (1984) *The Constitution of Society* (Berkeley: University of California Press)
[14]Bates, R. (1989) *Beyond the miracle of the market* (Cambridge: Cambridge University Press); Cousins, B. (1992) Introduction. In: Cousins, B. (ed.) *Institutional dynamics in communal grazing schemes in Southern Africa* (Harare: CASS, University of Zimbabwe); Ostrom, E. (2002) *Aid, incentives and sustainability: An institutional analysis of development cooperation* (Stockholm: SIDA); The World Bank (2008) *The political economy of policy reform: Issues and opportunities for policy dialogue and development operations* (Washington DC: The World Bank).
[15]The World Bank (2008)

The a*ction arena* has two key elements to it, that is, the *action situations* and *actors* or *stakeholders*.[16] In this paper, *action situations* are taken to mean the various sectors that are expected to mainstream NDCs into national and subnational development programmes. These sectors include, among others, agriculture and food security, industry and commerce, mining, water resources, forestry, energy, transport, waste management, health, human settlements and social infrastructure and disaster risk management. The *actors* or *stakeholders* are individuals, groups, or organisations with an interest in the outcome of NDCs and sustainable development interventions either as a result of being affected positively or negatively.[17] Stakeholders have diverse interests and they may be governed by different sets of formal and informal institutions and they, in reality, lobby and negotiate policy change to promote their own interests using information asymmetries, unequal power relations and identifying 'windows of opportunity' for their strategic actions.[18] *Action situations* bring together *actors* or *stakeholders* with varying organisational structures; roles, functions and responsibilities; capabilities in terms of human resources and levels of expertise; financial resources; access to and use of information; and actor networks and power bases.

The *policy reform processes* refer to changes overtime in the mainstreaming of NDCs in the sustainable development policy and practice landscape arising from the interplay of, *inter alia*, information flows, participation in dialogue or public debate, formation of alliances or networks of change and partnerships, technical support, implementation, monitoring and evaluation, reporting and verification and leadership and decision making.[19] The integration of NDCs, across sectors, into national and subnational development programmes is not only technical but also political. Technical solutions such as 'climate-proofing' of development portfolios through a climate-change lens[20] may necessarily need to be reinforced by processes of consensus building around the underlying causes of vulnerability and what needs to be done to reduce it, communication, participation, management of power contestations and conflicts, compromise and adaptation.[21] Participation is a critical component of the policy reform process as it serves to increase legitimacy, ownership, effectiveness, efficiency and sustainability of the integration of NDCs in national and subnational development programmes.[22] In a nutshell, climate change mainstreaming throws into sharper relief the reform processes by which development policies, plans, programmes and projects, investments and actions are (re)designed and (re) organised and evaluated from the perspective of climate change mitigation and adaptation.[23] The primary targets of mainstreaming are national and subnational level processes and the key agents of

[16]Ostrom, E. (2002)
[17]The World Bank (2008)
[18]Ibid
[19]Ibid
[20]Ayers, J. *et al.* (2014) Mainstreaming climate change adaptation into development in Bangladesh. *Climate and Development* 6 (4): 293-305.
[21]The World Bank (2008)
[22]The World Bank (2007) *Tools for institutional, political and social analysis of policy reform.* (Washington D. C.: The World Bank)
[23]Ayers, J. *et al.* (2014)

mainstreaming are national and subnational governments and non-government stakeholders or actors.[24]

Thus the anticipated *outcomes* of interventions by national African governments in fulfilling commitments to the Paris Agreement include the explicit integration of NDCs into development policies and programmes and especially national and subnational programmes designed to achieve Sustainable Development Goals. This entails performance indicators on the reduction of GHG emissions and enhanced climate resilience at national and subnational levels especially among vulnerable groups.[25]

Recurrent concepts used in this report also require definitional clarity. The term *mainstreaming* of NDCs into development processes refers to the integration of climate change adaptation and mitigation into related government policies in various sectors[26] at both the national and subnational levels. This implies that mitigation of and adaptation to climate change needs to be taken into consideration when options for sustainable development policies, plans and programmes are being considered, designed and implemented. In other words, mitigation and adaptation are not regarded as 'add-ons' but rather regarded as central to all development policy and practice in order to ensure the short, medium and long-term sustainability of investments and human and environmental security. Whereas *mitigation* refers to interventions aimed at reducing the sources of GHG emissions or enhancing the sinks of GHGs[27], *adaptation* is conceptualised here as 'a process by which strategies to moderate harm, cope with and take advantage of beneficial opportunities presented by climate are enhanced, developed and implemented.'[28] In other words, mitigation addresses the causes of climate change and ways of reducing the accumulation of GHGs in the atmosphere. Adaptation addresses the impacts of climate change on socio-economic and political systems. Having provided the analytical and/or conceptual framework, we now turn to look at the methodology used and scope of the report.

1.4. Methodology and scope

In order to achieve the objectives highlighted in Section 1.2., secondary data was used. This entailed the review of literature on African governments' commitments to Sustainable Development Goals (SDGs), Agenda 2063 and the Paris Agreement's Nationally Determined Contributions (NDCs). Four African countries, namely Ethiopia, Liberia, South Africa and Zimbabwe were purposively selected for in-depth case study using the political economy

[24] Ibid

[25] I am grateful to Dr Amos Makarau and other participants at the Expert Group Meeting held at Kadoma Hotel and Conference Centre for highlighting the need to include performance indicators in assessing outcomes of mainstreaming NDCs.

[26] https://climatepolicyinfohub.eu/issues/adaptation

[27] https://www.cifor.org/fileadmin/fileupload/cobam/ENGLISH-Definitions%ConceptualFramework.pdf

[28] http://www.vcccar.org.au/climate-change-adaptation-definitions;

conceptual framework in Figure 1 which assisted the author to address the Terms of Reference received from UNECA-ACPC. The four different case studies do mirror African governments' commitments to the Paris Agreement, the 2030 Agenda on SDGs and Agenda 2063. The study identified policy gaps, opportunities and challenges in integrating NDCs into national development in the four countries and these gaps create space for suggesting pathways through which technical support by UNECA-ACPC could be provided to selected African countries to ensure that climate change is fully mainstreamed into national development programmes and policies and build the capacity of selected African countries to monitor, evaluate and report on NDCs and their integration national and subnational development programmes. The report was presented and benefited immensely from peer reviewers' comments made at a meeting on Enhancing Readiness for Implementing Nationally Determined Contributions which was held at UNECA in Addis Ababa, Ethiopia 26-27 March 2018 and also at a Southern African Expert Group Meeting which was held on 24-25 April 2018 at Kadoma Hotel and Conference Centre in Zimbabwe.

1.5. Structure of succeeding section

Section 2, which constitutes the bulk of this report, starts by examining the alignment of NDCs with SGDs and Agenda 2063 in Section 2.1. That lays the backdrop for identifying, in Section 2.2., the different governance arrangements including climate action plans and programmes that have been put in place that could support the implementation of the NDCs. The focus is on Ethiopian, Liberian, South African and Zimbabwean policies, plans, strategies and programmes and institutional and organisational structures that could support the implementation of NDCs. These governance arrangements were established before NDCs were adopted and therefore governance arrangements may therefore need to be revisited to incorporate NDCs. Furthermore, the section takes note of gaps in the policy and institutional frameworks that may constrain the implementation of NDCs. Section 2.3 reviews mechanisms that have been developed to ensure that the NDCs are integrated across sectors and into national and subnational development programmes. Section 2.4 identifies mechanisms that exist, or are in development, to monitor the implementation of NDCs in the four selected African countries and again takes cognisance of existing gaps. On the basis of the evidence presented in these foregoing sections, Section 2.5 looks at the technical support that ECA/ACPC could provide to selected African countries to ensure that climate change is fully integrated into national development processes. The section suggests steps that governments could take in mainstreaming NDCs in development processes. Finally, Section 2.6 recommends the kinds of support that the ECA/ACPC could provide to selected African countries to enhance reporting on NDCs and the integration of climate change into national development programmes and policies.

2. MAIN FINDINGS

This section starts by examining the alignment of some SDGs to NDCs and Agenda 2063 in Ethiopia, Liberia, South Africa and Zimbabwe and that sets the stage for reviewing climate governance arrangements, mechanisms for integrating climate change into national development and mechanisms for monitoring implementation of NDCs. This section also identifies the technical support that ECA/ACPC could provide to selected African countries to ensure the mainstreaming of climate change into national development policy processes. Whilst taking note that the success of integrating NDCs in development plans and programmes depends on the specificities of a country's political arrangements, policies, institutions and processes, the section presents a phased approach that governments could adapt and use to integrate NDCs across sectors. Finally, the section concludes the report by recommending specific actions that ECA/ACPC could take to provide.

2.1. Alignment of NDCs with SGDs and Agenda 2063

Whereas SDGs and their associated targets and Agenda 2063 were agreed upon at the global and continental levels respectively, and are now being translated into practice nationally, NDCs were nationally defined before adoption of the Paris Agreement and will now require full implementation by individual countries including integration of climate actions into national and subnational development plans and programmes.[29] SDGs, Agenda 2063 and NDCs incorporate the concept of universality and these initiatives promote the participation of every country in Africa regardless of their level of development or their share of GHG emissions and this opens unique opportunities for global and national coordination in identifying pathways for integrated implementation on the ground.[30]

The alignment of NDCs with SDGs and Agenda 2063 provides opportunities for national and subnational governments in African countries to approach implementation in an all-inclusive and synergistic manner.[31] This helps to move away from the silo approaches of focusing on individual sector goals to a holistic and integrated approach to the implementation of climate and sustainable development actions.[32] SDGs, Agenda 2063 and NDCs can be achieved if countries take a *whole-of-government approach* in which ministries and all sectors play their part and similarly NDCs require a wide range of sectors to deliver on emissions reductions and increase resilience.

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[29]Northrop, E. H. *et al.* (2016) *Examining the Alignment between Intended Nationally Determined Contributions and Sustainable Development Goals.* (Washington DC: World Resources Institute); SIDA (2017) *Integrating climate action into national development planning – a coherent implementation of the Paris Agreement and Agenda 2030* (www.sida.org)

[30]

[31] Ibid

[32]SIDA (2017) *Integrating climate action into national development planning – Coherent implementation of the Paris Agreement and Agenda 2030*

A review of the SDGs, Agenda 2063 and NDCs in the four select case studies shows variation in the manner in which these agendas are being addressed.[33] Whilst taking cognisance of the indivisibility of the SDGs, this paper presents illustrative evidence on alignment of NDCs with Sustainable Development Goals 1, 7, 9, 13 and 17 and respectively Goals 1, 7, 5, 7 and 18 of Agenda 2063.

SDG 1: End poverty in all its forms everywhere	**Goal 1 of Agenda 2063: A high standard of living, quality of life and well-being for all citizens**

In Ethiopia, the Climate Resilient Green Economy (CRGE) Strategy addresses both climate change adaptation and mitigation and the Growth and Transformation Plan (or National Development Plan) aims to make Ethiopia a carbon-neutral and middle-income country by 2030 thereby demonstrating the reduction of poverty.[34] In Liberia, more than half of the population lacks access to basic social services and the country has high unemployment levels. Liberia adopted the Agenda for Transformation as a framework for meeting the country's expectation for climate resilient socio-economic development, sustained and accelerated economic growth and attaining middle-income status by 2030 which again will provide evidence of poverty reduction. As in Ethiopia and Liberia, South Africa faces challenges of climate change as a developing country with the overriding priority of eliminating poverty and eradicating inequality through reduced dependence on coal for energy and creation of jobs from investments in a green economy. In the same vein, Zimbabwe's main climate thrust is adaptation and poverty reduction. Nonetheless strategically beneficial mitigation actions in, *inter alia,* the energy sector present good opportunities for reducing GHGs while at the same time enhancing socio-economic growth and improving livelihoods. This was enunciated in Zimbabwe's national economic blueprint, the Zimbabwe Agenda for Socio-Economic Transformation (ZimASSET) which seeks to achieve sustainable development and social equity anchored on climate resilience, indigenisation, empowerment and employment creation.

From the foregoing paragraph, it is evident that there is a convergence of interest, at global, continental and country levels, in eradicating poverty and reducing inequalities through carbon-neutral economic growth strategies aimed at attaining country-level middle income status.

[33]Republic of Liberia (2015) *Intended Nationally Determined Contributions (INDC); South Africa's Intended Nationally Determined Contributions (INDC); Zimbabwe's Intended Nationally Determined Contribution (INDC)* submitted to the United Nations Framework Convention on Climate Change (UNFCCC); Federal Democratic Republic of Ethiopia (2015) *Intended Nationally Determined Contribution (INDC) of the Federal Democratic Republic of Ethiopia.*

[34] Federal Democratic Republic of Ethiopia (2015) *Intended Nationally Determined Contribution (INDC) of the Federal Democratic Republic of Ethiopia*

SDG 7: Ensure access to affordable, reliable, sustainable and modern energy for all	Goal 7 of Agenda 2063: Environmentally sustainable and climate resilient economies and communities

Whereas SDG 7 obligates countries everywhere to ensure access to affordable, reliable, sustainable and modern energy, Goal 7 of Agenda 2063 speaks of connecting Africa through world-class infrastructure including harnessing all African energy resources to ensure modern, efficient, reliable, cost-effective, renewable energy and environmentally friendly energy to all African households, businesses, industries and institutions through building the national and regional energy pools and grids. In Ethiopia, the main sources of GHGs in 2010 were livestock emitting methane and nitrous oxide and contributing 42% of the 150 Mt CO_2e; deforestation and forest degradation emitted nitrous oxide contributing 37% of the total followed by crop cultivation (4%), electric power generation (3%), transport sector emissions (3%) and building sector emissions (3%).[35] Ethiopia's climate change mitigation of GHG emissions is centred on these sources of GHGs as further explained under Goal 13 below.

Liberia's major sources of GHGs are the energy sector (67.5%) and agriculture (31.9%).[36] The majority of Liberians use biomass as the primary source of energy and in 2004, it was estimated that 95% of the population of 3.5 million people relied on firewood and charcoal for cooking, heating and palm oil for lighting.[37] Liberia seeks to reduce GHGs emanating from use of firewood, charcoal, palm oil and fossil fuels by raising the share of renewable energy and replacing inefficient cooking stoves with stoves that have higher efficiency.

South Africa is currently heavily dependent on coal with a fleet of old and inefficient coal-fired power plants that are nearing, but not yet at, the end of their design life-cycles.[38] South Africa is investing in transforming the future energy mix by replacing an inefficient fleet of ageing coal fired power plants with clean and high efficiency technology and also investing in renewable energy.

In comparison, Zimbabwe's energy sector is the largest contributor to GHGs at 49%, followed by industry (40%), agriculture (6%) and emissions from waste (5%).[39] The majority of the rural energy needs are met from firewood, candles and paraffin and in view of the energy sectors' high GHG emissions; the mitigation component is focusing on the energy sector and the promotion of use of renewable energy.

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[35].Ibid

[36]Republic of Liberia (2015) *Intended Nationally Determined Contributions (INDC); South Africa's Intended Nationally Determined Contributions (INDC)*

[37] Republic of Liberia (2015) *Intended Nationally Determined Contributions (INDC); South Africa's Intended Nationally Determined Contributions (INDC)*

[38] *South Africa's Intended Nationally Determined Contributions (INDC)*

[38] Ibid

[39]*Zimbabwe's Intended Nationally Determined Contribution (INDC)* submitted to the United Nations Framework Convention on Climate Change (UNFCCC)

SDG 9: Build resilient infrastructure, promote inclusive and sustainable industrialisation and foster innovation	Goal 5 of Agenda 2063: Transformed Economies and Jobs

The term infrastructure refers to technical structures that support a society such as roads, water supply, sewers, power grids, and information and telecommunications technology.[40] Viewed functionally, infrastructure facilitates the production of goods and services. In SDG 9 there is explicit recognition, at global level, that investments in infrastructure and innovation are crucial drivers of economic growth and development especially in areas of mass transport, renewable energy and information and communication technologies as these provide new jobs essential for poverty reduction and finding enduring solutions to environmental challenges such as achieving energy efficiency. Similarly, Goal 5 of Agenda 2063 highlights African countries' need to transform, grow and industrialise economies through adding value to renewable and non-renewable natural resources and connecting the African continent through climate resilient infrastructure that is first in its class. If the African continent does not innovate and industrialise, it will remain trapped in a disadvantageous position in the global economy in which it will remain a producer and exporter of lower value primary products and an importer of higher value finished manufactured goods. The challenge is for the African continent to adopt a green economy pathway in a global context where industrialisation has traditionally driven by the exploitation of fossil fuels.

Ethiopia's INDCs document identifies, *inter alia*, electric power generation from renewable energy, transport, industry including mining, buildings and waste and green cities as its priority sectors for mitigation actions aimed at reducing GHG emissions.[41] In Liberia, the *Industry for Liberia's Future* document of 2011 provided a framework for the development of a thriving and competitive industrial sector in Liberia. However, Liberia's economy is heavily dependent on the extractives sector namely mining, palm oil production and fisheries which are not closely integrated with other sectors resulting in 'growth without development.'[42] The development of the industrial sector in Liberia in constrained by poor infrastructure namely roads, electricity, water and telecommunications which were severely degraded during the 14-year civil war; poor information or data and statistics on industry and weak coordination between government and the business sector as well as an unskilled labour force. South Africa has a comparatively diversified economy whose major sectors include mining, manufacturing and agriculture. However, as South Africa's INDCs document notes, the economy is heavily dependent on coal. Coal is the country's largest economically recoverable energy resource and among its top three mineral exports. Domestically, coal is used to produce: over 70% of primary energy; more than

[40] African Development Bank (2011) *Infrastructure and Growth in Zimbabwe: An Action Plan For Sustained Strong Economic Growth* (Tunis: AfDB)
[41] Federal Democratic Republic of Ethiopia (2015) *Intended Nationally Determined Contribution (INDC) of the Federal Democratic Republic of Ethiopia*
[42] Ministry of Commerce and Industry (2011) *Industry for Liberia's Future* (Government of the Republic of Liberia)

90% of electricity and a third of liquid fuels.[43] Therefore, South Africa is a major emitter of CO_2 which contributes to climate change The National Development Plan and several sectoral policies, plans and strategies including the Green Economy Strategy seek to gradually shift South Africa's development path which is centred on the GHG emission-intensive mining and energy industries to an inclusive, environmentally sustainable and climate resilient economy characterised by significantly less waste, pollution and GHG emissions.[44]

SDG 13: Take urgent action to combat climate change and its impacts	**Goal 7 of Agenda 2063: Environmentally sustainable and climate resilient economies and communities**

Whereas SDG 13 enjoins countries to take urgent action to combat climate change and its impact, Goal 7 of Agenda 2063 highlights the need to create environmentally sustainable and climate resilient African economies and communities. The four case study countries help to shed light on country level translation of these goals into practice. Ethiopia's plan to *mitigate* GHG emissions is built on four pillars namely expanding electric power generation from renewable energy improving crop and livestock production practices for greater food security while reducing emissions, protecting and re-establishing forests for their economic and ecosystem services and sequestering significant amounts of carbon dioxide, and leapfrogging to modern and energy efficient technologies in transport, industry and building sectors.[45]

In comparison, Liberia's climate change mitigation actions are sector based and target the energy, waste and transport sectors. Three priority areas of adaptation include agriculture in which diversification of crop cultivation and small ruminants rearing are central; building hydro-meteorological monitoring system and building coastal defence walls to reduce vulnerability of urban coastal areas; protection of forest and biodiversity rich zones and improving infrastructure and transport networks.[46]

South Africa's INDCs document highlights the transitioning of its global mitigation commitment from a relative deviation from 'business-as-usual' to an absolute peak, plateau and decline GHGs trajectory.[47] Related measures in terms of *adaptation* include integrating adaptation sector policies into national and subnational policy frameworks to enable implementation. This also entails the development of an early warning, vulnerability and adaptation monitoring system for key climate vulnerable sectors and geographic regions.

[43] National Planning Commission (2012) *National Development Plan 2030 - Our Future, Make it Work*
[44] Partnership for Action on Green Economy (2017) *Green Economy Inventory for South Africa: An Overvies* (Pretoria: South Africa).
[45] Federal Democratic Republic of Ethiopia (2015) *Intended Nationally Determined Contribution (INDC) of the Federal Democratic Republic of Ethiopia*
[46] Republic of Liberia (2015) *Intended Nationally Determined Contributions (INDC); South Africa's Intended Nationally Determined Contributions (INDC)*
[47] *South Africa's Intended Nationally Determined Contributions (INDC)*

As already pointed out, Zimbabwe's low carbon development pathway similarly focuses on the energy sector. Climate actions in this sector are supported by a number of complementary initiatives in the spheres of renewable energy, bio-fuels, and transport and forest policies that seek to keep GHGs at a minimum level while ensuring green growth.

SDG 17: Strengthen the means of implementation and revitalise the global partnership for sustainable development	Goal 18: Africa is no longer aid dependent and takes full responsibility for financing her development

On the one hand, the implementation of mitigation and adaptation in all the four case study countries is predicated on the mobilisation of domestic human and financial resources as well as international support for capacity building, finance and technology transfers. On the other hand, Agenda 2063, Goal 18 envisages an African continent that is no longer aid dependent and which takes full responsibility for financing her development.

In reality, in Ethiopia, the implementation of NDCs is contingent on international support that stimulates investments. Nonetheless, Ethiopia is committing its own public resources to adaptation efforts. While the Climate Resilient Green Economy (CRGE) Strategy calls for US$7.5 billion per year to address the challenges of climate change in Ethiopia, the country receives about US$432 million per year and this leaves a huge deficit between expected and actual funding for climate change actions.[48] Similarly, Liberia's implementation of NDCs on mitigation and adaptation is conditional on the provision of adequate means of implementation by the international community in the form of *financial resources, capacity building* and the *transfer of technologies*.

For the unconditional commitments, South Africa has mobilised significant financial resources and made investments aimed at mitigating and adapting to climate change. However, there remains a gap in terms of fulfilling its conditional commitments that depend on mobilising technology transfers, finance and provision of capacity building from the international community. In Zimbabwe, up to US$26.175 billion is required by 2030 to support the agricultural sector's adaptation to climate change but the sector currently relies on US$0.5 billion allocation from the national treasury.[49] The estimated costs to implement action plans for Zimbabwe's Climate Change Response Strategy amount to US$9.9 billion dollars over a period of 10 years.[50] Based on budget estimates for the period 2010-2013, the entire Ministry of

[48]Echeverria, D. & A. Terton (2016) *Review of current and planned adaptation action in Ethiopia.* CARRIAA Working Paper # 48

[49] *Zimbabwe's Intended Nationally Determined Contribution (INDC)* submitted to the United Nations Framework Convention on Climate Change (UNFCCC)

[50]Government of Zimbabwe, Ministry of Environment, Water and Climate (2014) *Zimbabwe's National Climate Change Response Strategy* (Harare, Zimbabwe)

Environment, Water and Climate is projected to receive US$6 billion over 10 years.[51] Therefore, there is a huge funding gap for climate actions in Zimbabwe.

The five SDGs and Goals of Agenda 2063 reviewed here provide illustrative examples of their linkages to climate actions articulated in NDCs of four selected African countries. However, these linkages need to be demonstrated in governance arrangements and policy processes and this is the subject to which we now turn.

2.2. Identification of different governance arrangements, including climate action plans and programmes that have been put in place to support the implementation of NDCs

Section 1.3 presented a conceptual framework for climate and sustainable development governance. This section follows through on that framework and ideas presented on the alignment of NDCs, SDGs and Agenda 2063 in Section 2.1. To recap, the governance of climate and sustainable development involves much more than the work of governments; it relates to decision-making at all levels – parliaments, national and subnational governments, the private sector, civil society, donor agencies and traditional authorities. Therefore, governance deals with institutions and organisations, decision-making structures and processes, and about who is responsible, how they wield their power, and how they are held accountable.

At the global level, climate governance is defined by international instruments or framework conventions, the primary ones being the UNFCCC, the Kyoto Protocol of 1997 and the Paris Agreement of 2015. Under the UNFCCC, the Conference of Parties (COP) of 195 Parties meets every year to assess progress towards achieving the goals of the Convention and decision making is by consensus taking into account the *common but differentiated responsibilities* of the Parties especially the development needs of developing countries in Africa and elsewhere.[52] The first phase of the Kyoto Protocol ended in 2012 but it was extended to 2020 to allow for continued emissions reductions by Parties until the Paris Agreement comes into force in 2020.

The governance of SDGs involves countries voluntarily providing reports on their progress to the UN High Level Political Forum (HLPF). In 2017, 43 countries volunteered to present their national voluntary reviews to the HLPF.[53] At continental level, the African Union provides platforms at which climate change and sustainable development pathways are discussed and agreed upon as reflected in Agenda 2063.

[51]Mombeshora, S. (2016) *A stakeholder analysis report in support of the EU Action Document.* A report submitted to Agreco, Brussels.
[52]https://unfccc.int/resource/docs/convkp/conveng.pdf
[53]https://sustainabledevelopment.un.org/hlpf/2017#vnrs

Having outlined the global climate and SDGs governance framework, and the African continent's Agenda 2063, we now turn to examine the different governance arrangements, including climate action plans and programmes that have been put in place to support the implementation of NDCs at country level. The focus here is on the four case study countries and we will look at each one of them in turn starting with governance arrangements in Ethiopia.

2.2.1. Ethiopia

Ethiopia has put in place a whole range of governance arrangements that support the implementation of NDCs and these include policies, strategies, plans and programmatic climate actions as well as an elaborate institutional structure of climate governance.

2.2.1.1. Policies, plans, strategies and programmes supporting implementation of NDCs

Salient policies, plans, strategies and programmes supporting the translation of NDCs into practice include:

- Growth and Transformation II (2015-2020);
- Climate Resilient Green Economy Strategy of 2011;
- Ethiopia's Agricultural Sector Policy and Investment Framework (2010-2020;
- Health Sector Programme of Adaptation to Climate Change (n.d.);
- National Policy and Strategy on Disaster Risk Management of 2013;
- Scaling-Up Renewable Energy Programme of 2012;
- Biomass Energy Strategy of 2013;
- Ethiopian Industrial Development Strategic Plan 2013-2025; and
- Ethiopia's Programme of Adaptation on Climate Change.

2.2.1.1.1. Growth and Transformation II (2015-2020)

The Growth and Transformation II (2015-2020) Plan seeks to build a climate resilient green economy and its adaptation priorities[54] that have relevance to the synergistic implementation of NDCs, include improving food security, incomes of farmers and pastoralists, expanding renewable electricity production and protecting and rehabilitating forests.[55]

[54] Federal Democratic Republic of Ethiopia (2015c) cited in Echeverria, D & A. Terton (2016) *Review of current and planned adaptation action in Ethiopia.* CARRIA Working Paper # 48
[55] Ibid

2.2.1.1.2. Climate Resilient Green Economy Strategy

The Climate Resilient Green Economy Strategy (CRGE) of 2011 recognises the need to integrate and mainstream adaptation across Ethiopia's development agenda. The CRGE Strategy is connected with the goals of the Growth and Transformation II Plan and it seeks to promote green growth in agriculture, forestry, power generation and industry, transportation and buildings.[56] More emphasis is placed on climate change mitigation rather than adaptation. Climate mitigation is to be achieved through high crop and livestock production whilst reducing GHG emissions, maintaining and creating carbon sinks through afforestation and higher energy efficiency (cf. Section 2.1 SDGs 3 and 13).

2.2.1.1.3. Ethiopia's Agricultural Sector Policy and Investment Framework 2010-2020

The main objective of Ethiopia's Agricultural Sector Policy and Investment Framework 2010-2020 is to increase rural incomes and national food security and is therefore of immediate relevance to climate adaptation under NDCs and SGDs. The agriculture policy and investment framework has four pillars, namely productivity and production, rural commercialisation, natural resources management and disaster risk management and food security.[57] Climate change adaptation is addressed under the natural resources management pillar. Specifically, climate adaptation involves sustainable land use management, and research on new crops and farming which thrive under drier conditions exacerbated by climate change, improved water harvesting, improved weather forecasting and risk management measures aimed at coping with climate variability in Ethiopia.[58]

2.2.1.1.4. Health Sector Programme of Adaptation to Climate Change

The Health Sector Programme of Adaptation to Climate Change (n.d.) aims to identify districts at high risk of the impacts of climate change which include the spread of vector and water borne diseases and keeping track of climate related hazards such as heat strokes as well as curbing the spread of malaria.[59]

2.2.1.1.5. National Policy and Strategy on Disaster Risk Management of 2013

The National Policy and Strategy on Disaster Risk Management of 2013 seeks to increase the country's resilience capacity against climate-induced hazards and disasters. The policy outlines an all hazards multi-sectoral approach to disaster risk management whose main components are preparedness, response, mitigation and recovery.[60]

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[56]Ibid
[57]Ibid
[58]Echeverria, D & A. Terton (2016) *Review of current and planned adaptation action in Ethiopia.* CARRIA Working Paper # 48
[59]Ibid
[60]Ibid

2.2.1.1.6. Scaling-Up Renewable Energy Programme of 2012

The Scaling-Up Renewable Energy Programme seeks to expand Ethiopia's renewable energy production and to make this technology e.g. improved cook stoves available to 80% of households. The programme does not specify measures to be taken to reduce vulnerability to climate change.[61]

2.2.1.1.7. Biomass Energy Strategy of 2013

The Biomass Energy Strategy of 2013 aims to improve access to sustainable and affordable biomass through the introduction of energy efficient technology which reduces demand for firewood. However, the strategy needs to integrate climate change.[62]

2.2.1.1.8. Ethiopian Industrial Development Strategic Plan 2013-2025

The Ethiopian Industrial Development Strategic Plan (2013-2025) lays out the vision, goal and strategies for steering the country on a path to attain middle-income status by 2025. The vision is to build an industrial sector with the highest manufacturing capability in Africa which is diversified, globally competitive, environmentally-friendly and capable of significantly improving the living standards of the Ethiopian people by 2025. The vision does not explicitly take cognisance of climate change. The goal is to increase the share of the industrial sector's contribution to the Gross Domestic Product from 13% to 27% by 2025.[63] The strategies for achieving the goal include, among others, ensuring a conducive business environment, availing quality industrial inputs for value-addition and enhancing technology transfer in, among others, the building, energy, textile, leather and horticulture industries.

2.2.1.1.9. Ethiopia's Programme of Adaptation on Climate Change

Ethiopia's Programme of Adaptation on Climate Change replaced the country's National Adaptation Programme of Action which was submitted to the UNFCCC in 2007.[64] The Programme of Adaptation on Climate Change moves away from a project based approach to an adaptation mainstreaming framework at government, sectoral and local levels. In this programme, climate adaptation is integrated into national, regional/subnational and sectoral plans.[65]

A whole range of strategies plans and programmes in Ethiopia have the potential to support the implementation of NDCs. However, some of the strategies were established before the Paris

[61]Ibid
[62]Ibid
[63] Federal Democratic Republic of Ethiopia (2013) *Ethiopian Industrial Development Strategic Plan 2013-2025* (Addis Ababa, Ethiopia)
[64]Echeverria, D & A. Terton (2016) *Review of current and planned adaptation action in Ethiopia.* CARRIA Working Paper # 48
[65]Echeverria, D & A. Terton (2016) *Review of current and planned adaptation action in Ethiopia.* CARRIA Working Paper # 48

Agreement of 2015 that ushered in NDCs. Consequently, there is need for policy and decision makers to revisit such policies, strategies, plans and programmes to ensure that the existing governance arrangements across sectors are consistent with the country's ambitions articulated in the NDCs. Nonetheless, Ethiopia's CRGE Strategy and the associated CRGE Facility established an elaborate institutional and organisational structure of climate governance that potentially supports the implementation of NDCs. This is the subject to which we now turn.

2.2.1.2. Institutional and organisational structures supporting implementation of NDCs

The CRGE Strategy established the following institutional and organisational structures that are of immediate relevance to the implementation of NDCs:

- Ethiopia's Environmental Council;
- CRGE Ministerial Committee; and
- Technical Working Group.

2.2.1.2.1. Ethiopia's Environmental Council

Ethiopia's Environmental Council brings together the Prime Minister's Office, Members of the Federal Ministries, Presidents of national regional states and representatives from civil society.[66] The Council has overall responsibility and oversight of the CRGE Strategy.

2.2.1.2.2. CRGE Ministerial Committee & Technical Working Group

The Ministerial Committee, whose chair is appointed by the Environmental Council, facilitates cross-governmental cooperation on climate issues and is poised to support the implementation of NDCs. The CRGE Ministerial Committee is supported by a Technical Working Group which is further segmented into subsectoral working groups.[67]

2.2.1.2.3. CRGE Facility

The CRGE Facility is housed in the Ministry of Finance and Economic Cooperation and its location there provides financial integrity and institutional capacity. The CRGE Facility is a national financial mechanism for mobilising funds from national, private and international sources. Its work and decisions have a direct bearing on the implementation of NDCs in

[66] Ibid
[67] Ibid

Ethiopia. It supports initiatives that reduce emissions and vulnerability as well as enhance the capacity of implementing and executing agencies.[68]

The CRGE Facility has a Ministerial Committee that governs the facility and it is chaired by the Prime Minister's Office. A CRGE Management Committee supports the CRGE Ministerial Committee and it is chaired by the Ministry of Finance and Economic Cooperation. In addition, there is also a CRGE Facility Advisory Group which consists of representatives from multilateral organisations, international NGOs, civil society, the private sector representing industry and academia. Implementing agencies are from federal and regional bodies working with multiple stakeholders from civil society, private sector and academia.[69]

It is apparent that the CRGE Facility is an inclusive governance arrangement of direct significance to the implementation of NDCs in Ethiopia. However, it is not yet clear how this Facility is supporting in practice the implementation of NDCs.

2.2.1.2.4. Ministry of Environment, Forest and Climate Change

The Ministry of Environment, Forest and Climate Change (formerly the Environmental Protection Authority) is the lead government agency for climate change in Ethiopia and it is responsible for the coordination of national adaptation and mitigation activities and it represents Ethiopia at the UNFCCC Conference of Parties.[70] We will now turn to examine governance arrangements that have been put in place to support implementation of NDCs in Liberia.

2.2.2. Liberia

Contemporary climate governance arrangements in Liberia are emerging from the shadow of a vicious civil conflict that ended in 2003. The civil war not only impacted politics, the economy and society but also the institutions that underpinned these spheres. A number of policies, plans, strategies and programmes have been initiated which have a bearing on the implementation of NDCs in Liberia.

[68]Echeverria, D & A. Terton (2016) *Review of current and planned adaptation action in Ethiopia.* CARRIA Working Paper # 48
[69]Ibid
[70] Bewket, W *et al.* (2015) *Agricultural adaptation and institutional responses to climate change vulnerability in Ethiopia.* CCAFS Working Paper No 106. CGIAR Research Programme on Climate Change, Agriculture and Food Security (CCAFS)

2.2.2.1. Policies, plans, strategies and programmes supporting implementation of NDCs

2.2.2.1.1. National Adaptation Programme of Action

Liberia submitted its National Adaptation Programme of Action (NAPA) in 2008. NAPAs provide a process for Least Developed Countries (LDCs), including Liberia, to identify priority activities that respond to their *urgent* and *immediate* needs to adapt to climate change – those for which further delay would increase vulnerability and/or costs at a later stage.[71] The Liberia NAPA document identified agriculture, public health, fisheries and coastal defence system for cities of Buchanan and Monrovia as key vulnerable sectors and proposed adaptation actions that the implementation of NDCs can build on.

In agriculture, adaptation actions included altering the timing of crop cultivation in response to changing rainfall patterns, inter-cropping and livestock farming, irrigation and the optimisation of lowland/swamp farming practices.[72] Public health adaptation actions involved identifying and disinfecting water sources that are breeding grounds for insects such as mosquitoes under the roll-back malaria programme. In fisheries, adaptation actions included the regulation of fishing practices to prevent overexploitation and in coastal defence system for cities of Buchanan and Monrovia adaptation actions included hardening and stabilisation of beaches to protect them from erosion, construction of a Groyne System in Monrovia and a Break Water System in Buchanan.[73]

2.2.2.1.2. Agenda for Transformation – Steps Towards Liberia RISING 2030

The Agenda for Transformation (AfT) which was launched in 2013 is Liberia's national development plan and it has five pillars namely, peace, justice and rule of law; economic transformation; human development; government and public administration and cross-cutting issues.[74] In AfT, climate change adaptation and mitigation is recognised under the fifth pillar on cross-cutting issues. [75]

However, the AfT of 2013 identifies the following issues as severely hampering environmental, and in consequence climate, governance:

- Weak environmental governance, including limited compliance and enforcement capacity;
- Lack of national environmental quality standards and relevant regulatory tools;

[71]http://unfccc.int/national_reports/napa/items/2719.php
[72] Republic of Liberia (2008) *National Adaptation Programme of Action (NAPA);* Adaptation Partnership (n.d.) *Liberia – Review of current and planned adaptation action- West Africa.*
[73] Ibid
[74]
[75]Republic of Liberia (2015) *Intended Nationally Determined Contributions (INDC); South Africa's Intended Nationally Determined Contributions (INDC)*

- Limited implementation of environmental policy due to conflicting roles of governing bodies;
- Low budget support;
- Weak link of environmental management to Liberia's economic development;
- Weak public awareness and public participation in the promotion of environmental sustainability related to critical environmental issues (particularly climate change, waste management and conservation);
- Poor inter-agency coordination in the areas of effective Environmental Impact Assessment (EIA), harmonized sectoral environmental laws and policies, and environmental reporting;
- Uncoordinated land use policy and practice that hinders the sustainability of agriculture and food security;
- Inadequately trained personnel; and
- Lack of requisite logistics and infrastructure, particularly in the area of monitoring and assessment.

In other words, these are challenges to NDC implementation which arise from inadequate means of implementation.

2.2.2.1.3. Industry for Liberia's Future

The goal of *Industry for Liberia's Future* is to diversify the economy and improve the industrial sector so as to maximise the utilisation of the country's productive capacities. The policy document does not explicitly take into account climate change and its implications for agro-based industrial growth and infrastructure development.

2.2.2.1.4. Short, Medium and Long Term Plans

Nevertheless, the INDCs document points out that in the short, medium and long term, Liberia plans to implement adaptation actions in different sectors as follows:

Agriculture

Liberia plans to develop and promote drought resistant and flood tolerant early maturing crop varieties. This is to be complemented by the establishment of a gene bank of climate resilient varieties of indigenous crops as well as the development of climate resilient agroforestry diversification and livestock production systems. The country also aims to create a platform for knowledge and experience sharing on best adaptation practices.[76]

[76]Republic of Liberia (2015) *Intended Nationally Determined Contributions (INDC); South Africa's Intended Nationally Determined Contributions (INDC)*

Energy

In the energy sector, Liberia seeks to protect water catchments around hydro-power stations and strengthen transmission and distribution infrastructure for public utilities. There is no mention of renewable energy.

Health

In the health sector, Liberia seeks to develop early warning systems for climate driven infectious diseases and integrating climate change considerations into existing health policies and strategies taking into account gender-differentiated impacts and responses.[77]

Forestry

The country aims to raise awareness of the importance of forest conservation and increase forested land through reforestation of degraded land as well as protecting forests and biodiversity rich forest zones.[78]

Coastal zone management

Liberians are being displaced from Monrovia and Buchanan due to sea level rise.[79] Coastal zone management involves the development of a management plan that includes the construction of hard structures such as sea walls and facilitation of technology transfer and training of institutional and local experts in coastal zone management and monitoring.[80]

Transport infrastructure

Liberia seeks to implement and reinforce design standards and planning codes for roads and other infrastructure to cope with flooding, sea level rise and windstorms as well as strengthening early warning and evacuation planning for intense rainfall events and floods.[81]

Despite these good intentions, some sectoral policies have not yet mainstreamed the impacts of climate change and these include energy and hydrology/meteorology. The INDC document indicates that a climate change policy that serves as a pillar for sectoral strategies and plans was being developed[82] but it is not yet available on the Internet.

[77]Republic of Liberia (2015) *Intended Nationally Determined Contributions (INDC); South Africa's Intended Nationally Determined Contributions (INDC)*
[78] Ibid
[79]Adaptation partnership (n.d.) *Review of current and planned adaptation action: West Africa.*
[80]ibid
[81]Ibid
[82]Ibid

2.2.2.2. Institutional and organisational structures supporting implementation of NDCs

Liberia's institutional and organisational structures that have the potential to support the implementation of NDCs include the Environmental Protection Agency, the National Environmental Policy Council and the National Climate Change Steering Committee.

2.2.2.2.1. Environmental Protection Agency

The Environmental Protection Agency (EPA) was created in 2005 and charged with creating and promoting awareness, coordinating and strengthening the activities of environmental organisations, developing an environmental policy, environmental protection and management law.[83] The EPA is responsible for leading Liberia's National Adaptation Programme of Action and it is the focal point for communicating with the UNFCCC on adaptation.

2.2.2.2.2. National Environmental Policy Council

The National Environmental Policy Council is responsible for overseeing policy formulation at the EPA and sets priorities for national goals and objectives for the protection of the environment.[84]

2.2.2.2.3. National Climate Change Steering Committee

The National Climate Change Steering Committee and Secretariat were created in 2010 and are responsible for developing a comprehensive national policy framework to combat climate change in Liberia.[85]

To effectively support the implementation of NDCs in Liberia, the institutional and organisational frameworks and coordination of national adaptation plans need to be strengthened. We now turn to examine governance arrangements in South Africa that support the implementation of NDCs.

2.2.2.2.4. National Industrial Policy Committee

The National Industrial Policy Committee prepared the *Industry for Liberia's Future* policy document. However, its relationship with committees focusing on climate change is not clear.

[83]USAID (n.d.) *Climate Change Adaptation in Liberia*
[84]USAID (n.d.) *Climate Change Adaptation in Liberia*
[85]Ibid

2.2.3. South Africa

The governance arrangements supporting the implementation of NDCs in South Africa are enunciated in its National Development Plan 2030 and the National Climate Change Response Policy.

2.2.3.1. Policies, plans, strategies and programmes supporting implementation of NDCs

2.2.3.1.1. National Development Plan 2030

The National Development Plan takes cognisance of the negative impacts of climate change on South Africa and the opportunities it provides for climate change mitigation and adaptation. It notes that, *'South Africa is not only a contributor to greenhouse gas emissions – it is also particularly vulnerable to the effects of climate change on health, livelihoods, water and food, with a disproportionate impact on the poor, especially women and children. While adapting to these changes, industries and households have to reduce their negative impact on the environment.'*[86]

The South African government will lead the transition to a low carbon economy by creating an enabling environment for the private sector and civil society to contribute to a just transition to a low carbon economy by creating policy frameworks and economic signals that promote appropriate changes in business practice and behaviour.[87] The plan outlines peak, plateau and decline scenarios for carbon emissions characterising the country's transition to a low carbon or green economy.

The NDP presents South Africa's primary approach to adapting to climate change in order to strengthen the nation's economic and societal resilience. The approach includes ensuring that all sectors of society are more resilient to the future impacts of climate-change by: decreasing poverty and inequality; creating employment; increasing levels of education and promoting skills development; improving health care; maintaining the integrity of ecosystems and the many services that they provide.[88] In this regard, these actions also address the SDGs.

2.2.3.1.2. National Climate Change Response Policy

The National Climate Response Policy's two objectives are to:

1. Effectively manage inevitable climate change impacts through interventions that build and sustain South Africa's social, economic and environmental resilience and emergency capacity; and

[86]National Planning Commission (2012) *National Development Plan 2030 - Our Future, Make it Work*
[87]National Planning Commission (2012) *National Development Plan 2030 - Our Future, Make it Work*
[88]ibid

2. Make a fair contribution to the global effort to stabilise GHG concentrations in the atmosphere at a level that avoids dangerous anthropogenic interference with the climate within a timeframe that enables economic, social and environmental development to proceed in a sustainable manner.[89]

The climate change response policy advocated economic, social and political interventions that integrate mitigation and adaptation elements within a developmental framework. This was followed through in the National Development Plan 2030. The South African government identified near-term priority flagship programmes covering both adaptation and mitigation measures. The flagship programmes of relevance to the implementation of NDCs in South Africa are as follows:

- *The Climate Change Response Public Works Flagship Programme* which includes the expanded Public Works Programme, Working for Water, Working on Fire and Working for Energy. These programmes have proven effective in building climate resilience and relieving poverty;
- *The Water Conservation and Demand Management Flagship Programme* which involves the accelerated provision of water harvesting tanks in rural low-income settlements and water conservation and water demand management in the mining, power generation, agriculture and water services sectors;
- *The Renewable Energy Flagship Programme* is helping to expand the deployment of renewable energy technologies including solar heating;
- *The Transport Flagship Programme* under the Department of Transport is facilitating the development of an enhanced public transport programme to promote lower-carbon mobility in metros and smaller cities and create an Efficient Vehicles Programme that results in average efficiency in the South African government and general public vehicle fleet by 2020;
- *The Adaptation Research Flagship Programme* led by the South African National Biodiversity Institute sought to design and roll out a national and regional research programme to scope sectoral adaptation requirements and costs and identify adaptation strategies with cross-sectoral linkages and benefits including the assessment of climate change vulnerabilities in the sub-region.[90]

2.2.3.2. Institutional and organisational structures supporting implementation of NDCs

South Africa has put in place elaborate institutional and organisational arrangements on which the implementation of NDCs can depend. This is because achieving climate change resilient

[89] National Climate Change Response Policy (2011)
[90] National Climate Change Response Policy (2011)

development requires both horizontal and vertical integration of climate change into government planning and it needs to involve all sectors of society including the private sector.

2.2.3.2.1. National government

In terms of institutional arrangements and actions, the NDP 2030 seeks to ensure that climate change is effectively addressed and mainstreamed in every department, under the supervision of the Presidency and National Planning Commission, as an essential component of a broader national development strategy. The role of national government is to:

- Formulate and update the climate change response strategy;
- Amend and promulgate legislation to deal with climate change;
- Establish and administer the regulatory framework for managing emission reductions;
- Consider and implement market-based instruments such as carbon taxes in the short-term while considering the appropriateness of carbon trading schemes; and
- Participating in international negotiations on climate change.[91]

Therefore, it is absolutely necessary that the implementation of NDCs has the full support of national government and the Presidency as well as Parliament.

2.2.3.2.2. Parliament

Parliament has the responsibility to oversee the implementation of the National Climate Response Policy through portfolio committees especially the Committees on Water and Environmental Affairs, Energy, Agriculture, Forestry, Fisheries, Trade and Industry, Mining, Science and Technology and Transport. Parliamentary support in the implementation of NDCs is crucial in order to hold the Executive to account and if need be to amend legislation so that climate change and NDCs are incorporated into existing legislation.[92]

2.2.3.2.3. Inter-Ministerial Committee on Climate Change

The multi-faceted and cross-cutting nature of climate resilient development requires a coordination committee at Cabinet level that ensures that climate change response actions are aligned with national policies and legislation.[93] This committee could provide much needed support in the implementation of NDCs. On matters to do with climate change mitigation and adaptation, the Minister of Environmental Affairs chairs the Cabinet committee on environment.[94]

[91] Ibid
[92] ibid
[93] National Climate Change Response Policy (2011)
[94] Ibid

2.2.3.2.4. Intergovernmental Committee on Climate Change

The Intergovernmental Committee on Climate Change (IGCCC) was established to operationalise cooperative governance in the area of climate change. The IGCCC brings together the relevant national, provincial and organised local government to assess the implementation of the National Climate Change Response Strategy.[95] Naturally, the IGCCC is therefore relevant to the implementation of NDCs in South Africa.

2.2.3.2.5. Provincial and local government

Provincial governments coordinate provincial adaptation and mitigation responses across their own departments as well as between district municipalities within the provinces. Provinces develop their own climate response strategies after assessing the climate risks and impacts and seek to give effect to the National Climate Change Response Policy at provincial level.[96]

At local government level climate change adaptation and mitigation is integrated into district Integrated Development Plans and municipal service delivery programmes. However, the functions and powers of local government as they relate to climate change mitigation and adaptation need to be clearly articulated.

2.2.3.2.6. Market based instruments

The South African government introduced a range of market based instruments in industry and commerce that have relevance to the implementation of NDCs. These instruments relate to both climate change mitigation and adaptation and they include the:

- Electricity generation levy;
- Motor vehicle emissions tax;
- The incandescent light bulbs levy; and
- Carbon taxes.

Levies and taxes are meant to discourage behaviours that promote GHG emissions. The South African government also introduced incentive measures meant to support renewable energy investments and these include:

- Income tax exemption for revenues from the sale of certified emissions reducing units resulting from the Clean Development Mechanism;
- Energy efficiency savings tax allowances; and
- Depreciation allowances for renewable electricity generation and biofuels production.[97]

[95] Ibid
[96] Ibid
[97] National Climate Change Response Policy (2011

Among the case study countries presented in this paper, South Africa appears to be ahead of the curve in terms of use of market based instruments to achieve mitigation and adaptation outcomes. We now turn to look at the comparative governance arrangements that support the implementation of NDCs in Zimbabwe.

2.2.4. Zimbabwe

Zimbabwe's national climate change governance structures and processes derive their authority from the Constitution of Zimbabwe of 2013, National Climate Policy (NCP), National Climate Change Response Strategy (NCCRS) and Acts of Parliament and statutory instruments that give effect to national environmental legislation and commitments under UN Conventions, Treaties and Protocols to which Zimbabwe is a signatory.[98]

2.2.4.1. Policies, plans, strategies and programmes supporting implementation of NDCs

Through the UNFCCC process and in order to attain the SDGs, the Government of Zimbabwe is committed to protect the climate system for the benefit of present and future generations.[99] This objective is further elaborated in the National Climate Policy.

2.2.4.1.1. National Climate Policy

As already indicated, the National Climate Policy (NCP) of 2016 creates a pathway to a climate resilient and low-carbon economy in which the people have adequate capacity to adapt to the impacts of climate change and continue to develop in harmony with the environment.[100] The policy aims to achieve some aspects of the SDGs especially SDG 13 on the urgent need to combat climate change at the same time addressing resilience to disaster risks and hazards such as droughts and floods. The policy seeks to:

1. Develop and strengthen capacity in weather, climate research and modelling through education and training, skills development and institutions and infrastructure development;
2. Promote and strengthen low emissions technology development transfers in the energy sector and information sharing;

[98] Brazier, A. (2015) *Climate change in Zimbabwe: A guide for planners and decision makers* (Harare: Konrad Adenauer Stiftung)
[99] National Climate Policy 2016
[100] Brazier, A. (2015) *Climate change in Zimbabwe: A guide for planners and decision makers* (Harare: Konrad Adenauer Stiftung)

3. Reduce vulnerability to climate variability and climate related disasters by strengthening adaptive capacity in the water, agriculture, health, forestry and biodiversity, infrastructure sectors and human settlements;
4. Accelerate mitigation measures by adopting and developing low carbon development pathways in the energy, industrial, waste, agriculture, land-use and land-use change and forestry sectors;
5. Strengthen education, training and awareness to climate variability and change and communication;
6. Mobilise, allocate and manage financial resources;
7. Foster collaboration among national and international institutions in climate related issues; and
8. Strengthen climate governance to increase Zimbabwe's resilience and contribute to global emissions reduction.[101]

The NCP is supported by the NCCRS and the National Environmental Policy, the Energy Policy and Forest Policy among other instruments that are aimed at achieving sustainable and climate resilient development.[102] The other policies and pieces of legislation that that need to be harmonised with the National Climate Policy include the:

- Industrial Development Policy;
- National Biofuels Policy;
- Renewable Energy Policy;
- Forestry Policy;
- Agricultural Policy;
- Drought Mitigation Policy;
- Civil Protection Act;
- Environmental Management Act; and
- Zimbabwe Agenda for Socio-Economic Transformation (ZimASSET).[103]

2.2.4.1.2. National Climate Change Response Strategy

The Ministry of Environment, Water and Climate, with guidance from the Office of the President and Cabinet (OPC), developed the National Climate Change Response Strategy (NCCRS) of 2014 to steer national response measures in addressing the impacts of climate change. Its main goal is mainstreaming climate change adaptation and mitigation strategies in economic and

[101] National Climate Policy 2016
[102] Ibid
[103] Nachmany, M *et al.* (2015) Climate Change Legislation in Zimbabwe. An excerpt from The 2015 Global Climate Change Legislation Study: A Review of Climate Change Legislation in 99 Countries (http://www.lse.ac.uk/GranthamInstituter/legislation/

social development at national and sectoral levels through multi-stakeholder engagement. The NCCRS has seven pillars and sector specific strategies. The seven pillars are as follows:

1. Adaptation and disaster risk management;
2. Mitigation and low-carbon development strategies;
3. Capacity building to bring about the following – adaptation and mitigation, climate change communication, education and awareness raising, research and development and appropriate institutions to address climate change issues;
4. Governance framework – institutions, networks and negotiations;
5. Finance and investment partnerships and international financing;
6. Technology development and transfer, including infrastructure; and
7. Communication and advocacy, information management and dissemination.[104]

2.2.4.2. Institutional and organisational structures supporting implementation of NDCs

The institutional and organisational structure for climate change mitigation and adaptation in Zimbabwe is composed of the following:

2.2.4.2.1. Parliament of Zimbabwe

The Parliament of Zimbabwe consists of the House of Assembly and the Senate and it derives its mandate and authority from the Constitution. The role and functions of Parliament are legislative, exercising executive oversight, representation and public debate.

It exercises its legislative role by deliberating on and passing Bills that are subject to assent by the Head of State for them to become national law. The Executive is accountable to Parliament as a body elected to represent the people. Through its House of Assembly Portfolio Committees, Parliament monitors all government policies and programmes to ensure efficient use of national resources.[105]

There are 19 Portfolio Committees named after the government ministries and departments that they shadow which cover broad concepts. The Portfolio Committee of particular significance to the implementation of NDCs is the Portfolio Committee on Environment, Water, Climate, Tourism and Hospitality Industry which shadows the Ministry of Environment, Water and Climate and the Ministry of Tourism and Hospitality Industry. Committees are small groups of Members of Parliament (MPs) who are assigned either temporarily or on a permanent basis to examine matters more closely than could be done by the full House of Assembly.

[104] Government of Zimbabwe, Ministry of Environment, Water and Climate (2014) *Zimbabwe's National Climate Change Response Strategy* (Harare)

[105] http://www.parlzim.gov.zw/about-parliament/publications/roles-functions—mandate-of-committees-of-parliament

The Terms of Reference of the Portfolio Committee on Environment, Water, Climate, Tourism and Hospitality Industry include:

- Overseeing the budgets of the two ministries that are allocated by the Ministry of Finance in relation to expenditures suggested by the two ministries;
- Considering and dealing with all bills and statutory instruments or other matters which are referred to it by or under a resolution of the House or by the Speaker;
- Conducting oral evidence sessions with key state and non-state stakeholders relevant to the formulation and implementation of policies of the two ministries;
- Conducting public hearings on matters of national interest;
- Conducting field visits to selected areas on specific subjects;
- Considering and dealing with all international treaties, conventions and agreements relevant to it, which are from time to time negotiated, entered into or agreed upon; and
- Recommending actions to be taken by the two ministries relating to any of the foregoing matters.

2.2.4.2.2. Office of the President and Cabinet

The Office of the President and Cabinet (OPC) coordinated a National Climate Change Task Team that comprised Permanent Secretaries from relevant ministries, namely environment, agriculture, water, and economic planning.[106] The task team oversaw the development of the NCCRS and the National Climate Policy.

Zimbabwe's climate change governance involves centralised coordination at the highest level of the OPC. The OPC has greater power to convene sector ministries and its activities are given greater priority by ministries.

2.2.4.2.3. Ministry of Environment, Water and Climate

The Ministry of Environment and Climate (MEWC) is the lead ministry on climate change issues and its mission is to create and maintain a clean, safe and healthy environment, ensuring the management, conservation and sustainable use of natural resources in a changing climate.

The overall functions of MEWC are to:

1. Develop, implement and monitor policies on environment, biodiversity, water, climate and seismic issues and legislation for sustainable development;
2. Coordinate and mainstream ratified multilateral and regional protocols, agreements and standards into national laws;

[106] Dodman, D. & D. Milton (2015) The national and local politics of climate change adaptation in Zimbabwe. *Climate and Development* 7 (3): 223-234.

3. Provide leadership in the advocacy and awareness of environment, biodiversity, water, climate and seismic programmes;
4. Coordinate resource mobilisation and the proper use of resources allocated for the governance of the entire ministry's projects and programmes
5. Facilitate and coordinate capacity development in the areas of environment, biodiversity, water, climate and seismology;
6. Ensure the proper management of all parastatals and state agencies under the ministry; and
7. Provide technical advice and guidance on environment, biodiversity, water, climate and seismic issues to the Office of the President and Cabinet.

The roles and responsibilities of MEWC are further broken down into departmental functions in order to achieve key results as specified in ZimASSET. The Ministry has the following departments:

- Environment and Natural Resources Management;
- Water Resources Planning and Management;
- Climate Change Management;
- Meteorological Services;
- Legal Services;
- Finance, Human Resources and Administration; and
- Internal Audit.[107]

2.2.4.2.4. Department of Climate Change Management

The Department of Climate Change Management in the Ministry of Environment, Water and Climate is the focal point for engagement with the UNFCCC. The Department is mandated to promote best practices in climate change adaptation and mitigation strategies to enhance the country's response capacity to manage the impacts of climate change.[108] The Department is tasked to:

1. Develop climate related policies and strategies;
2. Coordinate climate research;
3. Promote climate change education;
4. Carry out public awareness and training on climate change issues; provide guidance and ensure implementation of ZimASSET issues; and
5. Promote energy efficiency and creation of green jobs

The foregoing governance arrangements in Ethiopia, Liberia, South Africa and Zimbabwe that have been put in place provide platforms for engagement in the implementation of NDCs and

[107] http://www.environment.gov.zw/index.php/about-us/functions
[108] http://www.climatechange.org.zw

sustainable development. South Africa, Zimbabwe and Ethiopia have relatively elaborate governance policies, strategies and institutional structures. In Liberia, the Environmental Protection Agency requires capacity building together with associated entities focusing on climate change adaptation and mitigation.

We had begun to look coordination mechanisms of governance institutions and we will now turn examine this subject in more detail in Section 2.3 below.

2.3. Review of mechanisms that have been developed to ensure that the NDCs are integrated across sectors and into national and subnational development programmes

Climate resilience is becoming an integral part of national development objectives. There are three broad types of policy responses to mainstreaming or integrating climate adaptation and mitigation ambitions, encapsulated in NDCs, into national and subnational development planning and programmes.

First there is the *climate-proofing approac*h which aims to protect development interventions that have been planned in isolation of the climate change context by increasing capacity to cope with, and recover from, the impacts of existing climate variability.[109] Climate resilience is integrated at a later stage of design to minimise the impacts of climate change on the intervention. The entry point under this approach is often through project based interventions.

Second, there is the *climate-first approach* which addresses incremental changes in existing climate related risks, by increasing a society's capacity to cope with extremes and variability. The entry point under this policy response is often stand-alone pilot strategies or projects that are subsequently scaled up and integrated into existing sectoral and national and subnational plans and programmes. An example is the initial National Adaptation Programmes of Action (NAPAs) implemented in Least Developed Countries like Ethiopia and Liberia which allowed these countries to identify priority activities and projects that responded to their urgent and immediate climate adaptation needs.[110]

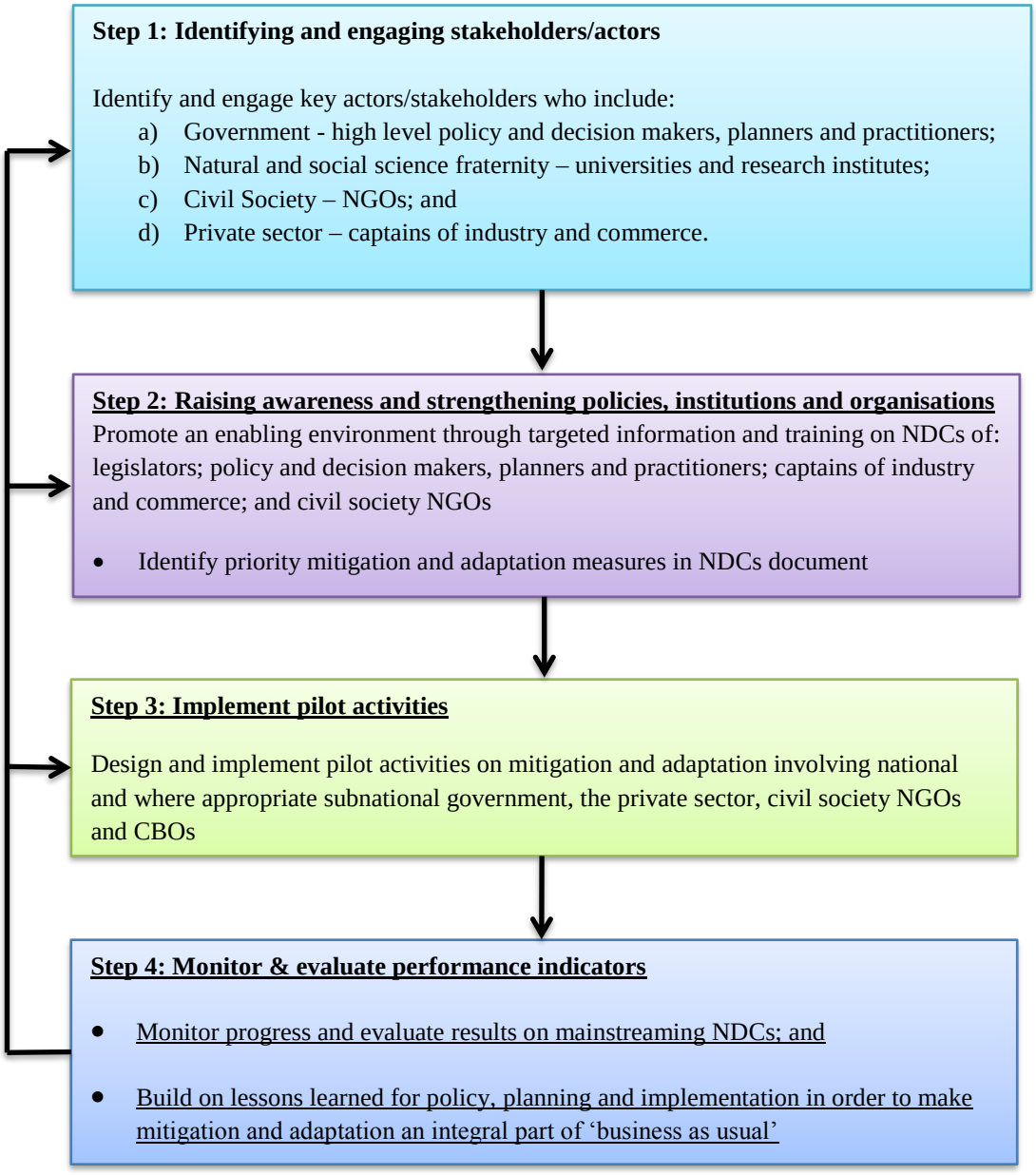
Third there is *the development-first approach* which has climate resilience as an integral part of the development planning process from the beginning. Policy makers focus on making development planning processes resilient to climate change so that they can deliver climate resilient development outcomes.[111] The entry point is often the national, sectoral or local development planning framework. This is the approach that the four case study countries of Ethiopia, Liberia, South Africa and Zimbabwe have articulated in their NDCs.

[109] Pervin, M (2013) *A framework for mainstreaming climate resilience into development planning*
[110] Ibid
[111] Ibid

Having outlined the different approaches to mainstreaming climate change, we will now turn to review the mechanisms that have been developed to ensure that NDCs are integrated across sectors and national and subnational development programmes in the four case study countries. Following Ayers, Huq *et al.* (2014)[112], and EU (n.d)[113] and Pervin (2013)[114] the mechanisms reviewed here are represented in Diagram 3 and further elaborated below.

[112] Ayers, J. *et al.* (2014) Mainstreaming climate change adaptation into development in Bangladesh. *Climate and Development* 6 (4): 293-305.
[113] https://climatepolicyinfohub.eu/issues/adaptation
[114] Pervin, M (2013) *A framework for mainstreaming climate resilience into development planning*

Figure 3: Mechanisms for Mainstreaming NDCs in Development Processes



Adapted from: Ayers *et al.* (2014); EU (n.d.) and Pervin (2013)

Although Figure 3 may suggest a linear sequence in mainstreaming NDCs, in practice it is an iterative and dynamic process. The diagram further elaborates the political economy analytical framework that was presented in Figure 2.

Step 1: Identifying and engaging key stakeholders/actors

Step 1 involves identifying key stakeholders in government, the private sector and civil society. This necessarily involves stakeholder analysis which is a way of understanding the mainstreaming of NDCs at national and subnational levels through engaging stakeholders. Climate change mainstreaming constitutes the *action arena* consisting of *action situations* and *actors/stakeholders*[115] (cf Section 1.3. and Figure 2). Mainstreaming provides sites for management or action situations. A stakeholder analysis is important because it identifies persons or entities that may affect or be affected by proposed interventions and potential fault lines that could affect the initiative as well as relationships that the intervention could build on going forwards.

By identifying, engaging and coordinating stakeholders, an enabling environment that supports climate change mainstreaming is created and this is a primary requirement for ensuring the effective and sustainable integration of NDCs in development planning processes and across sectors.

The INDC documents point out that all relevant stakeholders were consulted during the development of INDCs.

Step 2: Raising awareness and strengthening policies, institutions and organisations

For mainstreaming to be effective, decision making should be based on the best available knowledge on existing and expected climate change impacts and their implications for sustainable development at national, regional and sectoral levels and potential mitigation and adaptation options.[116] Information services play an important role in influencing evidence-based decision making under conditions of uncertainty brought by climate change. By raising awareness based on policy relevant information, the buy in of parliamentarians, policy and decision makers in government, private sector and civil society is enhanced. The political will of politicians, technocrats, donor partners, private sector and civil society is central to adaptation and mitigation planning contexts. Political will plays a key role in identifying NDCs integration as a policy objective and it is demonstrated in different countries in different ways through legislation, components of national development policies, plans and strategies or climate objectives in sectoral policies and programmes.

In Ethiopia, the mechanisms showing political will that were developed to integrate NDCs across sectors into national and subnational development programmes plans and policies include the:

- Growth and Transformation II Plan (2015-2030) which prioritised adaptation and building a climate resilient green economy;

[115] Ostrom, E. *et al.* (2002) *Aid, incentives and sustainability: An institutional analysis of development cooperation* (Stockholm: SIDA)
[116] https://climatepolicyinfohub.eu/issues/adaptation

- Climate Resilient Green Economy (CRGE) Strategy which streamlined development priorities in line with climate change risks and opportunities for mainstreaming climate actions across Ethiopia's development agenda; and
- Establishment of climate governance institutional and organisational structures enabling coordination of climate change interventions and programmes across sectors and at national and subnational levels.

In Liberia, the Agenda for Transformation (AfT) articulates the political will of the government in addressing the impacts of climate change by proposing adaptation and mitigation actions across sectors such as agriculture, health, coastal zone management, forestry and infrastructure.

In South Africa the National Development Plan 2030 and the National Climate Change Response Policy are ample evidence of the creation of an environment enabling the implementation of NDCs. Again in Zimbabwe, the National Climate Policy, the National Climate Change Response Strategy and associated legislation demonstrate the political commitment of the government to implement climate actions enunciated in NDCs.

In all the four case study countries, the need to improve the quantity, quality and policy relevance of information is emphasised in the policy and strategy documents e.g. CRGE in Ethiopia; National Development Plan and National Climate Response Strategy in South Africa; the National Climate Policy and the National Climate Change Response Strategy in Zimbabwe and the Agenda for Transformation in Liberia.

As already noted, a policy depicts a government's objectives which are then implemented through planning instruments, programmes and projects. Policy, institutional arrangements and financial frameworks are the three key components of a planning system that provide a mechanism for implementing NDCs.

To be effectively mainstreamed into development planning, climate change mitigation and adaptation which form the central plank of NDCs need to be incorporated into existing policies and legislation as well as those to be designed in the future.

The *institutional arrangements* in the four case study countries, and beyond are central to influencing the mainstreaming of the climate change agenda (see Section 2.2. above). Institutional arrangements reflect the extent to which government rules, regulations and organisations can support the coordinated integration of climate resilience[117] or NDCs into development planning across sectors and into national and subnational programmes.

In addition, *financial frameworks* equally help to integrate climate resilience into development planning at national and subnational levels and across sectors once the objectives have been expressed through policy and institutions.[118] Unconditional actions in NDCs are to be funded

[117] Pervin, M (2013) *A framework for mainstreaming climate resilience into development planning*
[118] Ibid

through national budgetary allocations but conditional actions require support from the international community in the form of financial resources, capacity building and technology transfers.

However, in all the four countries, resource mobilisation for implementation of NDCs remains a challenge. There are serious funding gaps constraining actions aimed at increasing climate resilience and these funding gaps need to be filled.

Step 3: Implementing pilot activities

In a coherent framework where climate change needs to be well integrated into national, subnational and sectoral planning processes, pilot programmes and projects are a mechanism through which policies, strategies and action plans are translated into concrete actions.[119] The performance indicators of mainstreaming NDCs into development programmes and projects should be clearly spelt during the design of pilot activities. For instance in South Africa, near-term priority flagship programmes are an integral part of the National Climate Response Policy.

As we have already seen, the implementation of flagship programmes underscored the urgency of acting on mitigation and adaptation responses as soon as possible in many sectors that had research, and policy implementation, experience addressing the challenges of climate change[120] but there is little or no evidence available on the Internet demonstrating their effectiveness. These flagship programmes now need to include performance indicators to enable scaling-up and leveraging climate resilient investments building on ongoing initiatives. The effectiveness of the mechanisms for integrating NDCs across sectors into national and subnational development programmes needs to be demonstrated in practice and this requires monitoring, evaluation and reporting.

Step 4: Monitoring and evaluating performance indicators.

The agency in government coordinating the implementation of pilot programmes and projects demonstrating the mainstreaming of NDCs in development processes should be able to monitor and evaluate performance indicators and report on progress or the lack of it. This is the subject to which we now turn.

2.4. Mechanisms that exist or are in development, to monitor the implementation of NDCs in selected African countries

Given the nature and implications of climate change and the economic and social implications of effective climate change responses, decisions need to be based on accurate, current and complete

[119] ibid
[120] National Climate Change Response Policy 2011

information in order to reduce risks and ensure that interventions are effective. The Paris Agreement of 2015 established universal and harmonised measurement, reporting and verification (MRV) for climate change mitigation.[121] As Singh *et al.* (2016) point out, *measurement* is needed to:

- Identify emissions trends;
- Determine where to focus GHG reduction efforts;
- Track mitigation-related support;
- Assess whether mitigation actions planned under NDCs are proving effective;
- Evaluate the impact of support received; and
- Monitor progress achieved in reducing emissions.[122]

Reporting and *verification* are important in ensuring good governance i.e. transparency, accountability and credibility of results and for building confidence and trust that the resources given and received are being effectively used. Singh *et al.* (2016) identify three types of MRV, namely MRV for *emissions*, MRV for *mitigation actions*, and MRV for *support*.

The MRV of *emissions* is conducted at national, organisational and facility levels to understand an entity's emissions profile and report it in the form of an emission inventory. The MRV of *mitigation actions* such as policies and projects helps to assess their GHG effects and sustainable development effects and to monitor implementation. This involves estimating the change in GHG emissions or other non-GHG variables.[123] The MRV of *support* e.g. climate finance, technology transfer and capacity building helps to keep track of the provision and receipt of climate support, monitor results achieved and assess impact.[124] Whilst taking cognisance of the universal application of MRV, the four country case studies show variations in the mechanisms that exist or are in development, to monitor the implementation of NDCs. Currently, there is no universally adopted standard for monitoring, reporting and verifying adaptation measures in the NDC documents that were submitted to the UNFCCC in the lead up to COP21 in Paris in 2015.

2.4.1. Ethiopia

The Ethiopian NDCs document points out that the Ministry of Environment and Forest is expected to organise consultative dialogues to review the implementation of national and sectoral adaptation plans. It is expected that this iterative process will ensure that national and sectoral adaptation plans are regularly updated and implemented. Whether this is enough to evaluate performance remains a moot point. The section on monitoring and evaluation in the NDCs document is silent on MRV of emissions, mitigation actions and support. The Climate Resilient

[121] Singh, n. J. *et al.* (2016) *MRV 101: Understanding measurement, reporting and verification of climate change mitigation*
[122] Ibid
[123] ibid
[124] ibid

Green Economy Strategy takes note of the need to develop MRV but it is silent on how this will be done and what its key components will be in the Ethiopian context.

2.4.2. Liberia

The Liberian NDCs document recognises the MRV system as a fundamental pillar of the NDCs for purposes of transparency and accountability. The MRV is expected to build on existing structures for monitoring and evaluation and inter-sectoral coordination.

However, in order to track progress toward the implementation of NDCs and co-benefits, Liberia requires support to ensure that its MRV is strengthened with regards to: institutional arrangements; roles and responsibilities; indicators of development and their application; and MRV methodologies.[125]

2.4.3. South Africa

South Africa has a national climate change response Monitoring & Evaluation system that has the following components:

- Tool to provide complete, accurate and up to date information on climate change;
- Tool for reporting of GHG emissions by the industry;
- Tool for compilation of the GHG inventory;
- MRV guidelines for reporting emission reductions from mitigation programmes;
- GHG improvement programme; and
- Tool for tracking the Desired Adaptation Outcomes i.e. monitoring and evaluating South Africa's transition to a climate resilient economy and society.[126]

The challenges faced in developing the MRV system in South Africa include developing and maintaining predictable partnerships with the donor community that match the prioritisations that have been set by the national government. The other challenge is one of staff retention.[127]

2.4.4. Zimbabwe

The Zimbabwe NDCs document points out that the Results Based Management system, which is coordinated by the Office of the President and Cabinet, will be used as the principal monitoring and execution framework for the adaptation component of Zimbabwe's NDCs together with other internationally agreed and relevant guidelines.

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[125]Republic of Liberia (2015) *Intended Nationally Determined Contributions (INDCs); South Africa's Intended Nationally Determined Contributions (INDC)*

[126] http://www.pmg.org.za/files/170613Tracking.ppt

[127] Mantlana, B. (n.d.) *Progress and challenges with the establishment of MRVin African countries – An example of South Africa*

Adaptation will track the following indicators: number of people vulnerable to climate change; access to water; water stress levels; level of awareness; livestock productivity; proportion of population undernourished; inventory of adopted climate change mitigation and adaptation strategies; levels of project yields to 2030 as planned interventions are rolled out and number of hectares with drought resistant crops under cultivation.[128]

Sources of information on adaptation include the Zimbabwe Vulnerability Assessment, internal food and security reports for the Cabinet under the Early Warning Unit and crop yield assessments by the Ministry of Agriculture.

So far, technical assistance from donors has been sought by the Department of Climate Change Management on the development of the NDCs Implementation Framework and MRV and a team of local and international experts which started work in August 2017 is developing the Framework and it was expected to finish its work in February 2018.[129] The work of the team involves the following actions:

- Developing a methodology and work plan validated by a stakeholder workshop;
- Gathering data and projects for use in updating the baseline projections;
- Evaluating the Business as Usual (BAU) projections and mitigation projects;
- Prioritising the mitigation measures for implementation;
- Recommending an effective and efficient resource mobilisation plan; and
- Developing a robust NDCs Implementation and MRV Framework.

The team of experts and government are assisting stakeholders to develop long-term energy plans.[130] An NDCs Implementation and MRV Framework is expected by the end of 2018.

2.5. Technical support that can be provided to selected African countries by the ECA/ACPC to ensure that climate change is fully mainstreamed into national development processes

As already noted, the existing legislation, policies and strategies in the four selected countries were put in place before the submission of INDCs in 2015 and subsequent ratification of the Paris Agreement. This ratification occurred before the UNFCCC had developed guidelines on how to implement NDCs at country level. There is therefore a gap in knowledge and practice which the ECA/ACPC could help to fill by providing technical support to selected countries in order to ensure that climate change mitigation and adaptation is fully integrated into national development agendas and processes.

[128] *Zimbabwe's Intended Nationally Determined Contribution (INDC)* submitted to the United Nations Framework Convention on Climate Change (UNFCCC)
[129] Zhakata, W. (2017) Zimbabwe's NDC Implementation and MRV Framework
[130] Zhakata, W. (2017) Zimbabwe's NDC Implementation and MRV Framework

2.5.1. Strengthening the coordination and implementation mechanisms of NDCs

Section 2.2 looked at the governance arrangements, including institutional and organisational structures, which could support the implementation of NDCs. There is need to strengthen existing institutions charged with coordinating the implementation of NDCs. In Ethiopia this includes the Environmental Council, the CRGE Facility in the Ministry of Finance and Economic Cooperation and the Ministry of Environment, Forests and Climate. It is the Ministry of Environment, Forests and Climate which coordinates national mitigation and adaptation actions and reporting to the UNFCCC Secretariat. In Liberia, the Environmental Protection Agency is responsible for coordinating climate activities. In South Africa the Offices of the President and Cabinet have overall responsibility for coordinating inter-Ministerial actions on climate change mitigation and adaptation assisted by Ministries of Environment.

The strengthening of institutions and organisations responsible for coordinating climate actions helps to catalyse the embedding of NDCs in national development policies and strategies so that:

- There is greater ownership of the development and implementation of NDCs;
- Sectoral policies align with national climate targets and national targets align with the legally binding goals laid out in the Paris Agreement of 2015; and
- Coherence is achieved between mid and long-term planning and sector targets and/or indicators.

2.5.2. Strengthening legal and policy frameworks

Currently, climate change mainstreaming into national development processes is addressed by environmental legislation that was passed before the 2015 Paris Agreement, the SDGs and Agenda 2063. Climate change is addressed through a variety of fragmented sectoral policies including those related agriculture and food security, water resources management, natural resources management and disaster risk management.[131] The lack of appropriate legislative frameworks specifically focusing on climate change mainstreaming in development processes inhibits implementation of mitigation and adaptive capacity at national and subnational levels. The uncertainty of climatic variability and weather extremes will require more flexible governance structures that are underpinned by legislation and able to manage multiple risks.[132]

[131] Chagutah, T (2010) *Climate change vulnerability and preparedness in Southern Africa*
[132] Bulkeley H and V. C. Broto (2012) Government by experiment? Global cities and the governing of climate change.*Transactions of the Institute of British Geographers 2012*

2.5.3. Supporting research on the implementation of NDCs

There is need for ECA/ACPC to partner and support Universities in Africa to research and document for drawing lessons on the preparation and implementation of NDCs over time. Research and documentation helps to continuously improve knowledge on the mainstreaming of climate actions in development processes. Improvements in the quantity and quality of data and information on mitigation and adaptation are critical for influencing policy and decision makers in preparing for the impacts of adverse weather events arising from climate change such as floods and droughts. Research also helps to draw into close alliance researchers with policy and decision makers, climate scientists, and adaptation specialists.

2.5.4. Enhancing strategic communication

Strategic communication based on the best available climate science evidence, helps to improve awareness on climate change and what to do about it among policy and decision makers. Moreover, the training of journalists on climate change issues helps them to better inform the public as well as policy and decision makers. Strategic communication also helps to influence budgetary allocations in Ministries of Finance and Parliaments. Furthermore, climate information and options for mitigation and adaptation should be translated into local languages in order to reach a wide spectrum of stakeholders including those who are most vulnerable to the vagaries climate change.

2.5.5. Supporting financial resources mobilisation and climate finance tracking

In a survey to identify support needs in developing countries, the UNDP (2016) found out that the dominant need was mobilising resources for NDC implementation.[133] The national governments in the four case study countries are faced with insufficient public budgets for funding the mainstreaming of climate change into national development processes. This is largely due to unstable and weak revenue bases and lack of access to affordable international finance.[134] There are also challenges of tracking climate finance in a consistent and comprehensive way to understand the quantum of resources spent on mainstreaming climate change in order to meet the objectives set in NDCs, SDGs and Agenda 2063. There is the additional difficulty of mobilising private funding for subnational governments without the backing of central government.

[133] UNDP (2016) *Developing country support needs for implementing National Determined Contributions (NDCs): Results from a survey conducted by the UNDP.*
[134] Low Emissions Development Partnership (2014) *Integrating national and subnational climate action: Resource guide*

In Ethiopia, the CRGE Facility established by the Ministry of Environment, Forests and Climate Change and the Ministry of Finance and Economic Cooperation is intended to mobilise international climate finance and to coordinate the development of systems to track climate finance but, according to the African Development Bank, the finances from multilateral financial institutions are currently not being tracked.[135] This weakens Ethiopia's capacity to account for climate finances and its ability to mobilise more resources necessary for funding the full integration of climate change into national development processes.

As already noted, in Liberia the mainstreaming of climate change into national development processes is suffering from low budget support. The same applies to Zimbabwe where the Ministry of Environment, Water and Climate has received 0.17% of the national budget[136] and South Africa's funding of climate change mainstreaming also leaves gaps in implementing NDCs and SDGs.

The ECA/ACPC could provide technical support to enable these countries to access international climate change funding and to establish robust systems for tracking the use and impact of the funding. The entry points are the periodic reviews of national development plans and annual estimates of budget expenditure led by Ministries of Finance and Economic Development. Furthermore, the ECA/ACPC could help these countries to reorient industrial investments in a manner that that builds capacity to reduce GHG emissions in various sectors but mainly in the energy sector.

The ECA/ACPC could also provide support in the development and implementation of effective public-private partnership models that help governments to leverage local and international private sector funding for mainstreaming climate change mitigation and adaptation in the business sector. The entry points are the periodic reviews of sectoral policies, plans and strategies which provide windows for reorienting investments that promote the emergence of green economies.[137]

2.5.6. Supporting capacity and skills development for climate mainstreaming

At an Expert Group Meeting held in Kadoma Hotel and Conference Centre on 24-25 April 2018, participants pointed out that the ECA/ACPC could support capacity development for mainstreaming climate actions in policy processes at national and subnational levels in partnership with relevant coordinating institutions such as Parliaments Offices of Presidents and Cabinet or Prime Ministers. Mainstreaming of climate actions could be done using flexibly using the model presented in Figure 3 in Section 2.3.

[135] African Development Bank (n.d.) *Transitioning from INDCs to NDCs in Africa*
[136] Mombeshora, S. (2016) *A stakeholder analysis report in support of the EU Action Document.* A report submitted to Agreco, Brussels.
[137] Dia, A. M. (n.d.) *Update of NDC implementation in Africa* (UNDP)

2.2.7. Supporting the establishment of robust monitoring and evaluation of performance

All climate actions need to be monitored and evaluated to assess progress. In consequence, the ECA/ACPC could support countries to establish and/or strengthen existing Monitoring and Evaluation as well as MRV systems that enable effective learning from practice and adaptive implementation of climate actions. Each stage in the implementation of the suggested model should have feedback loops. Therefore, the strengthening of the capacity of lead institutions or UNFCCC focal points in each country is critical.

2.5.8. Supporting technology transfers

Technological advancement in some parts of the world has resulted in the development of technologies that reduce impacts on the climate. Technology transfer policies are therefore an integral part of mainstreaming climate change into national development processes for without technology transfers '*it may be difficult to achieve emission reduction at a significant scale.*' (IPCC, 2007)[138] African countries need to increase their capacity to identify and adopt new climate smart technologies essential for developing green economies.

The ECA/ACPC could partner governments in select African countries and provide technical support at policy, institutional and implementation levels in order to address barriers to technology transfers that are limiting the greening of African economies.

2.6. Recommended support that can be provided to selected African countries by the ECA/ACPC on reporting on the NDCs and integration of climate change into national development programmes and policies

While African countries have developed policies plans, strategies and programmes to address climate change, there remains the challenge of implementing NDCs, tracking progress and reporting on it in a robust and consistent manner.

Recommendation #1: Provide support for strengthening the coordination and implementation of NDCs

The ECA/ACPC, working in partnership with the governments of select African countries, should provide technical supporting effective coordination and implementation of NDCs. This

[138] IPCC (20070 *Fourth Assessment Report*

will enable the selected countries to move from statements of intent to actual implementation. The Model suggested in Figure 3 could be used to execute climate mainstreaming in the selected countries in an iterative manner in time for the 2020 post-Kyoto Protocol timeline for implementing NDCs.

Recommendation #2: Provide support for strengthening the legal frameworks of NDCs

The legislative frameworks guiding the implementation of climate actions were installed before the Paris Agreement of 2015. The ECA/ACPC could provide support to selected countries that want to incorporate NDCs into their legislative frameworks. The ECA/ACPC could work closely with Parliaments and governments of the selected countries. This will ensure that the implementation of NDCs has a strong legal backing that enables countries to meet the commitments enunciated in their NDCs.

Recommendation #3: Provide support for research on the implementation of NDCs

The ECA/ACPC, in partnership with Universities and Research Institutes in selected countries, could support research on the preparation of NDCs that provides countries with solid foundation for raising their ambitions to further reduce GHD emissions as expected in reporting to the UNFCCC. Research is critical for the effective implementation of NDCs. It helps stakeholders, especially policy and decision makers, to learn from practice and to share the lessons learned in order to continuously improve on the integration of climate actions in development processes.

Recommendation #4: Provide support enhancing strategic communication on NDCs

Policy and decision making should be predicated on the best available knowledge that is strategically communicated to the decision makers. In consequence, the evidence generated by research needs to be effectively communicated at various levels starting from the Head of State and Government right through to the grass roots. In addition to supporting researchers, the ECA/ACPC could also support the training of journalists who can then communicate climate issues at these various levels. This includes translating climate information into local languages in order to reach the widest range of stakeholders so that vulnerable groups are not left behind.

Recommendation #5: Provide support for mobilising resources and tracking financing of NDCs

In the four case study countries there is the recurrent issue of inadequate funding of climate actions including the financing of the implementation of conditional and unconditional components of NDCs. There is need for ECA/ACPC to assist selected countries in mobilising domestic financial resources from public budgets, industry and commerce, investment banks and bilateral as well as multilateral funding agencies. There is also need to support capacity development in tracking climate finance so that the selected countries provide models of good practice in reporting at continental and global levels.

Recommendation #6: Support capacity and skills development for climate mainstreaming

Capacity and skills development in mainstreaming climate actions in NDCs, at national and subnational levels and across sectors, is of the essence. Capacity and skills should be developed among key stakeholders in Parliament national and subnational government, the private sector and NGOs. The model presented in Figure 3 could be applied in a flexible iterative manner.

Recommendation #7: Support establishment and/or strengthening of robust monitoring and evaluation of performance.

The implementation of NDCs necessarily requires sound monitoring and evaluation (M&E) and MRV mechanisms in order to measure progress and take corrective actions where countries can things are not working as expected. Robust M&E and MRV mechanisms allow learning from practice or experiential learning. Crucially, the lessons learned need to be communicated to policy and decision makers so that adjustments can be made to NDC ambitions so that African countries can fulfil their obligations under the Paris Agreement from the year 2020 onwards.

Recommendation #8: Support transfer of green technologies

The transfer of green technologies and the associated training of relevant actors in African countries is vital. ECA/ACPC could assist governments of selected countries to establish bilateral and multi-lateral linkages and networks for technology transfers under South-South and/or North-South development cooperation frameworks. Green technologies across a whole range of sectors implicated in GHG emissions will go a long way in assisting African countries to meet their mitigation targets under the Paris Agreement.

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