

CAPACITY BUILDING FOR ENHANCED PRIVATE SECTOR ENGAGEMENT IN CLIMATE ACTION IN EASTERN AND SOUTHERN AFRICA: MAPPING STUDY

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United Nations
Framework Convention on
Climate Change



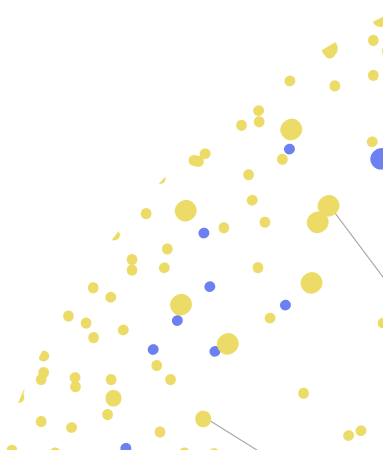
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List of Abbreviations

CBCCA	Community Based Climate Change Adaptation
CBOs	Community Based Organizations
CSOs	Civil Society Organizations
ESA	Eastern and Southern Africa Region
GCF	Green Climate Fund
GEF	Global Environment Facility
GHGs	Greenhouse Gases
IDRC	International Development Research Centre
KAM	Kenya Association of Manufacturers
KICC	Kenya Climate Innovations Centre
KEPSA	Kenya Private Sector Alliance
LECB	Low Emission Capacity Building
NAPs	National Adaptation Plans
NDCs	Nationally Determined Contributions
NETFUND	National Environment Trust Fund
NGOs	Non-governmental Organizations
NWP	Nairobi Work Programme
RETS	Renewable Energy Technologies
RUFORUM	Regional Universities Forum for Capacity Building in Africa
SDGs	Sustainable Development Goals
SMEs	Small and Medium Enterprises
SPSS	Statistical Package for Social Sciences
UB	University of Botswana
UC	University of Cape town
UEM	Universidade Eduardo Mondlane
UNDP	United Nations Development Programme
UNESCO	United Nations Educational, Scientific and Cultural Organization
UNFCCC	United Nations Framework Convention on Climate Change

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Executive summary

Combating climate change requires an all-inclusive approach, based on the engagement of all relevant stakeholders. The private sector is an especially critical stakeholder in climate action, as private sector activities are not only heavily impacted by climate change, but the sector also bears the key to climate adaptive and resilient growth in many of the world's economies. In the Eastern and Southern Africa (ESA) region, which adversely faces the harsh impacts of climate change, the role of the private sector cannot be understated.

Success in climate planning and implementation of climate change mitigation and adaptation actions is highly depended on the inclusion of the private sector, in particular small and medium sized enterprises (SMEs), which comprise the majority of private sector players in the region. To help address the needs and gaps on climate action, it is therefore important to map out the capacity building requirements of the private sector, as adequate and effective capacity building is a major precursor and determinant of successful climate action. It is particularly important that capacity building measures are bolstered to ensure maximum participation of SMEs. This is by prioritizing SME involvement in climate change awareness, public participation, and training, as well as ensuring that SME concerns are factored into climate policies, plans and strategies.

In acknowledgement of the important role played by the private sector in climate action, the International Development Research Centre (IDRC) in collaboration with United Nations Framework Convention on Climate Change (UNFCCC) commissioned a study to map out the type of capacity-building required by the private sector, particularly SMEs in 19 countries in the ESA region. Focused on Angola, Botswana, Eritrea, Eswatini, Ethiopia, Kenya, Lesotho, Malawi, Mauritius, Mozambique, Namibia, Rwanda, Seychelles, South Africa, South Sudan, Tanzania, Uganda, Zambia, and Zimbabwe. The study aimed to inter alia provide guidance to states within ESA on why introducing capacity building initiatives for the private sector regarding climate change action is necessary and how this can be best attained.

This report begins by giving an overview of the climate change impacts within the ESA region

and illustrates the common challenges of climate change in ESA regions such as drought and floods. It also analyses the role of the private sector in climate change action and the capacity building provisions in the Paris Agreement and the UNFCCC. Additionally, it highlights, that there is generally a dearth of information on the climate change capacity needs and gaps specifically facing SMEs. Hence, the need for the study which utilizes a mixed methodology comprising a field survey, key informant interviews and literature review, to obtain relevant data.

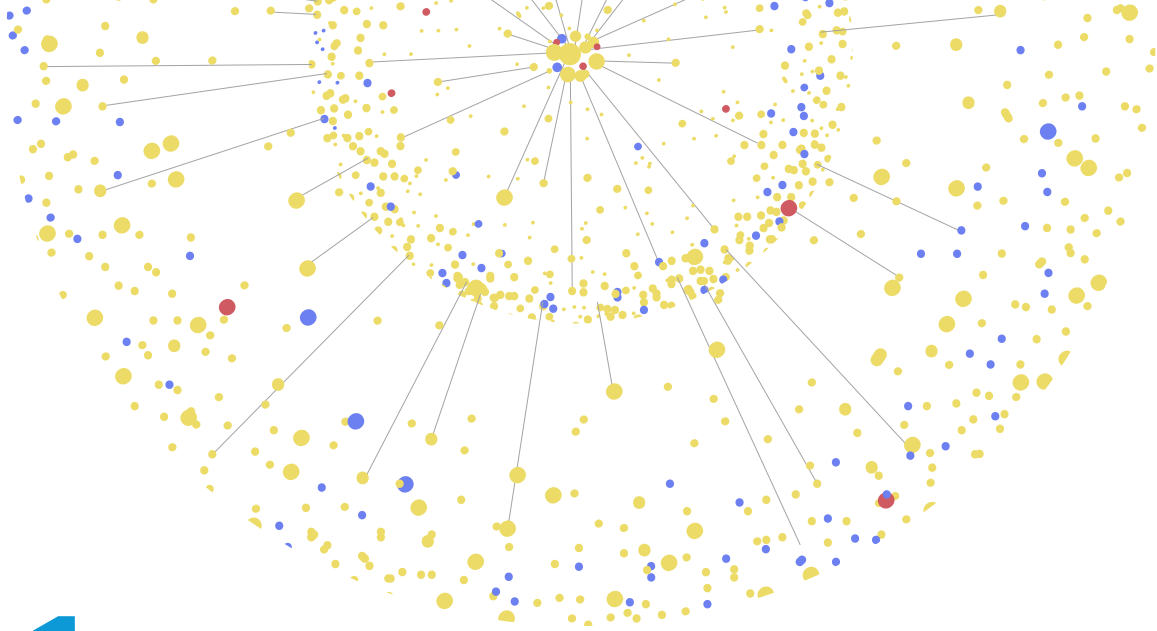
The main findings of the study illustrate that private-driven sectors in the ESA region such as agriculture, transport, mining, quarrying, manufacturing, and tourism have been affected by climate change. Among the key impacts found were water stress, reduction in crop yields, delays due to disruption of supply chains and changes in cropping seasons. The findings of the study undertaken reveal that the majority of the SMEs are aware of climate change impacts but lack the requisite knowledge and capacities on how to address these challenges. It was found that private sector engagement in climate change governance is minimal, SMEs are hardly involved in the preparation of national climate change plans and strategies, and it is unclear to what extent SME interests are incorporated in the decision-making process, more-so women run SMEs. Also, many of the SMEs are not aware of the policies and so cannot enact them highlighting the need for increased communication and capacity building.

Challenges faced by SMEs in tackling climate change are highlighted and include inadequate financial autonomy, limited knowledge, and limited technical and human resource capacity. These findings are supported by survey results. The results indicate that the priority for climate action support required by SMEs are in the areas of climate awareness raising, technical and financial capacity building and in provision of finances available for SMEs to climate proof their business. Other capacity building needs identified in the study include lack of information on climate change related losses within the ESA region which would serve as an awareness tool to SMEs for climate change preparation.

The study also establishes that although academic and research institutions are actively engaged in capacity building within the ESA region, their outreach scope among the SMEs is limited. SMEs in the region largely rely on media outlets, and then international organizations, government ministries and lastly academic and research institutions for climate information. There is also general skepticism surrounding the climate change information relayed, as SMEs question the quality of information received from the various sources. Illustrating through capacity building actions undertaken by several academic and research organizations in the ESA region, the study emphasizes that academic and research institutions have a key role to play in providing credible information that can be relied on by SMEs at both regional and national level.

Based on the findings of the study, there are opportunities that emerge which can be leveraged to foster SME capacity. The study emphasizes in its recommendations a multi-actor approach that brings together government, private sector, academia and research organizations to leverage their different complementary strengths in climate action.

The study highlights the importance for governments to develop conducive policies that bolster SME ability to mitigate and adapt to climate change, in collaboration with SMEs and other relevant stakeholders. The research found an apparent lack in participation of SMEs in NDC and NAP development. To ensure conducive policy development, additional outreach is needed to ensure SME participation in these processes. Further, the study recommends the development of guidelines on capacity building accompanied by a process that builds SMEs' understanding of climate policies and strengthens their capacity to comply with them. Creation of collaborative capacity building programmes with research institutions and academia is also highlighted as key to ensuring effective climate action. For effective capacity building programmes, the study emphasizes them to be designed in a manner which takes into account the specific and priority needs of SMEs. Additionally, the report recommends that these capacity building programmes should build SME capacity to understand and access climate finance. From these insights a five-pillar structure is recommended when developing comprehensive strategies to increase the capacities of SMEs to participate in climate action.



1

Introduction

1.1 Context of study

1.1.1 Overview of climate change status in eastern and southern africa

Sub-Saharan Africa is one of the regions in the world most severely impacted by climate change. Climate-induced extreme weather events such as heatwaves, droughts, floods, and recent cyclones such as Tropical Cyclone Idai and Kenneth, have had devastating effects on the continent. More than 11 million people face food insecurity in Southern African countries due to deepening drought and climate change.¹ Similarly, in Eastern Africa, increased frequencies of drought have amplified emergencies requiring an international humanitarian response.²

Climate change also has significant economic costs in the Eastern and Southern Africa (ESA) region. Extreme weather events leave countries with a high macro-economic cost burden and reduce economic growth. Climate change also exacerbates existing inequalities, disproportionately affecting the large populations of poor and vulnerable persons, groups, and

peoples in the ESA region, many of whom depend on natural resources for their livelihoods.

The situation is dire. Climate change projections highlight a warming trend, frequent extreme heat events, increasing aridity, and changes in rainfall, with decreases in Southern Africa and increases in Eastern Africa.³ Specifically, in Southern Africa, future projections are that the subtropical region is likely to experience a decrease in annual precipitation of up to thirty per-cent, contributing to increased aridity, whilst sea-level rise would increase flooding, particularly on the coasts of Kenya, Madagascar and Mozambique in Eastern Africa.⁴ The sea-level rise could be as much as one meter by the end of the twenty first century under a four degrees warming scenario.⁵

In Southern Africa, the delay in the onset of early summer rains, which are becoming shorter, is predicted to worsen. Also, temperatures are predicted to increase by five degrees or more in countries such as Namibia, Botswana and Zambia.⁶ Meanwhile, Eastern Africa faces the East African climate paradox. This is a phenomenon

1 Godfrey, S. and Tunhuma, F.A., The Climate Crisis: Climate Change Impacts, Trends and Vulnerabilities of Children in Sub Sahara Africa (UNICEF, 2020).

2 Godfrey, S. and Tunhuma, F.A., The Climate Crisis: Climate Change Impacts, Trends and Vulnerabilities of Children in Sub Sahara Africa (UNICEF, 2020).

3 Olivia Serdeczny et al, "Climate Change Impacts in Sub-Saharan Africa: from Physical Changes to their Social Repercussions", (2015) Regional Environmental Change vol 15 issue 8.

4 Godfrey, S. and Tunhuma, F.A., The Climate Crisis: Climate Change Impacts, Trends and Vulnerabilities of Children in Sub Sahara Africa (UNICEF, 2020).

5 Olivia Serdeczny et al, "Climate change Impacts in Sub-Saharan Africa: From Physical Changes to their Social Repercussions", (2015) Regional Environmental Change vol 15 issue 8.

6 Richard Washington, How Africa Will Be Affected by Climate Change, BBC. 15th December 2019. <https://www.bbc.com/news/world-africa-50726701>

whereby countries such as Kenya and Tanzania have lower rainfall with their long rainy season from March to May commencing later and ending sooner, against scientific predictions of increased wetness in that season.⁷

The 2021 edition of the African Economic Outlook notes that the continent's medium-term economic outlook is contingent on the resolution of the COVID-19 crisis, the pace of the economic recovery, and shocks such as climate change.⁸ In Eastern and Southern Africa, climate change is one of the main downside risks to the growth outlook. Climate change also has a bearing on the rights of peoples to economic, social and cultural development and the right of peoples to a satisfactory environment favourable to their development.⁹ Regional bodies such as the Africa Union's, African Commission on Human and Peoples' Rights (the Commission), also recognize the link between human rights and climate change. In 2019, the Commission considered the human rights impacts of extreme weather in the ESA region due to climate change, and inter alia, encouraged State Parties to fully integrate climate change considerations and the human and peoples' rights consequences into their broader development plans.¹⁰

1.1.2 The role of the private sector in climate action and requirements for capacity building under the Paris Agreement and the United Nations Framework Convention on Climate Change

Climate change in the ESA region, as in most of Africa, is a challenge threatening to impede attainment of the Sustainable Development Goals (SDGs). Addressing climate change as a quest for achieving the SDGs requires the participation of all stakeholders. The private sector is a critical stakeholder in climate action not just in the ESA region, but also globally.

The private sector in Africa can make a significant contribution to meeting the 2030 Agenda for Sustainable Development and the African Union's Agenda 2063, by increasing productivity, creating jobs and improving service delivery.¹¹ Given the risks of increased greenhouse gas (GHG) emissions

on productivity, and the need for the creation of green jobs and climate compatible sustainable service delivery, the private sector is a critical cog in the wheel of climate action. It has a role to play in both mitigation and adaptation, and in the face of the increasingly adverse impacts of climate change, the success of the continent will be increasingly dependent on the climate change actions taken by the private sector.

The United Nations Framework Convention on Climate Change (UNFCCC) and its Paris Agreement recognize the importance of private sector involvement in climate action. Under the UNFCCC, all Parties, taking into account their common but differentiated responsibilities and their specific national and regional development priorities, objectives and circumstances, shall promote and cooperate in education, training and public awareness related to climate change and encourage the widest participation in this process, including that of non-governmental organizations.¹²

The Kyoto Protocol's flexibility mechanisms, the Clean Development Mechanism and Joint Implementation scheme, succeeded in finding innovative ways of involving the private sector in climate change mitigation.¹³ To document the less common involvement of the private sector in adaptation, in 2012 the UNFCCC secretariat launched the Adaptation Private Sector Initiative database, under the Private Sector Initiative (PSI) of the Nairobi Work Programme (NWP) on impacts, vulnerability and adaptation to climate change. This initiative aimed at showcasing good practice climate change adaptation activities being undertaken by private companies and thus stimulate more action across regions and sectors.¹⁴

More recently, under the Paris Agreement, Parties undertake to reduce the impacts of climate change by holding the average global temperatures increase to well below 2°C above pre-industrial levels, and to take measures to limit temperature increase to 1.5°C above pre-industrial levels.² Commitment by Parties to involve the private sector in climate change action is anchored under Article 6 (8) (b) of the

7 Richard Washington, How Africa Will Be Affected by Climate Change, BBC, 15th December 2019. <https://www.bbc.com/news/world-africa-50726701>

8 African Development Bank (AfDB), African Economic Outlook 2021, From Debt Resolution to Growth: The Road Ahead for Africa (AfDB, 2021).

9 These rights are recognized in Articles 22 and 24 of the African Charter on Human and Peoples' Rights (the African Charter), respectively.

10 ACHPR / Res. 417 (LXIV) 2019.

11 United Nations Economic Commission for Africa (UNECA), Economic Report on Africa 2020: Innovative Finance for Private Sector Development in Africa Development in Africa (UNECA, 2020).

12 Article 4 (1) (i), United Nations Framework Convention on Climate Change.

13 Kati Kulovesi, "The Private Sector and the Implementation of the Kyoto Protocol: Experiences, Challenges and Prospects," Review of European Community and International Environmental Law 16(2):145 - 157, 2007.

14 <<https://unfccc.int/topics/resilience/resources/psi-database>> accessed on 2 June 2021

Paris Agreement, which provides for Parties to incentivize mitigation of greenhouse gases by the private entities and enhance involvement of the public and private sectors in implementation of the Nationally Determined Contributions (NDCs).

Further, Article 11 of the Paris Agreement makes provision for capacity-building. It sets out that capacity building under the Agreement should enhance the capacity and ability of developing country Parties, in particular countries with the least capacity, such as the least developed countries, and those that are particularly vulnerable to the adverse effects of climate change, such as small island developing States. This is to enable them to take effective climate change action, including, *inter alia*, to implement adaptation and mitigation actions. Capacity building should also facilitate technology development, dissemination and deployment, access to climate finance, relevant aspects of education, training and public awareness, and the transparent, timely and accurate communication of information. Article 11(2) outlines the capacity building goals, obligations and standards for Parties, underlining *inter alia*, that:¹⁵

- i. Capacity-building should be country-driven, based on and responsive to national needs, and foster country ownership of Parties, in particular, for developing country Parties, including at the national, subnational and local levels.
- ii. Capacity-building should be guided by lessons learned, including those from capacity-building activities under the Convention, and should be an effective, iterative process that is participatory, cross-cutting and gender-responsive.

Article 12 of the Paris Agreement further recognizes the importance of undertaking climate change education, creation of awareness, public participation, training, and public access to documents.

The Private sector is thus a critical player in climate action as mandated by international climate change agreements, with capacity building reiterated as a necessary imperative in the process.

1.1.3 The need for specific information on capacity needs and gaps

The involvement of the private sector in climate action is a requirement under the UNFCCC and the Paris Agreement. Capacity building that is country-driven, participatory, cross-cutting and gender responsive is also recognized as necessary to build this engagement. However, in the ESA region, specific information on climate change capacity needs and gaps has not been fully identified. Capacity building requirements for private sector, and more so, capacity needs and gaps for small and medium enterprises (SMEs) are not identified and documented. This results in a deficit in the skills and knowledge required to address climate change, both mitigation and adaptation.

With the lack of such information, it is difficult for Parties to identify the key priority areas and sectors where capacity building actions need to be reinforced. This then translates to inefficient action on the ground. Against the above background, this ESA mapping study has been designed to provide much-needed information on capacity needs and gaps for greater engagement of the private sector in climate action. This includes an understanding of the role of training and research institutions in providing capacity building on climate change in the ESA region, the progress made so far, potential for enhanced information and knowledge provision, and capacity building for SMEs. Entities such as academia and research organizations through their various climate-centred initiatives have an important role to play in helping provide knowledge, skills and information to the wider public and are instrumental in building capacities and skills of SMEs to address climate change. Therefore, there is a need for an understanding of, on the one hand, the existing capacity needs and gaps that these institutions can fill, and the opportunities within these institutions to address the identified gaps.

Small and medium sized enterprises play a major role in the economic growth of many countries. As critical stakeholders in the nation building process, it is important to build their mitigation potential and capacity to adapt to climate change. This would require mapping out of the impacts of climate change on the SME sector, a task which would ensure that proper government support is given to the SME sector. This study thus highlights

¹⁵ Article 2 (1) a, Paris Agreement

the impacts of climate change in the ESA region and recommends the necessary capacity building actions that will serve to empower the private sector and specifically SMEs, to take their place at the frontlines of climate action.

1.2 Scope and objectives

1.2.1 Objectives of the study

The main objective of this study was to map out the type of capacity-building required by the private sector, particularly SMEs as regards climate action. This is to help address the needs and gaps on climate action faced by ESA countries, necessary to achieve decarbonization and enhanced resilience.

The study aims to inform the development of future strategies to:

- i. Improve private sector, particularly SMEs, capacity to contribute to higher climate ambition and collective actions: enhancing resilience in collaboration with academic and research organizations, particularly through NDCs and NAPs and in close coordination and alignment with government-led climate actions and policies supporting decarbonization and enhanced climate resilience;
- ii. Harness potential platforms and other means to engage the private sector in capacity-building initiatives for climate action at different levels;

- iii. Develop specialist leaders to engage the private sector in climate actions, with an emphasis on SME representatives;
- iv. Provide recommendations for enabling private sector engagement in the implementation of NDCs and NAPs.

1.2.2 Scope of the study

The mapping study broadly focused on the role of private sector in climate action, with specific attention on SMEs in the ESA region.

It focused on 19 countries in the ESA region: Angola, Botswana, Eritrea, Eswatini, Ethiopia, Kenya, Lesotho, Malawi, Mauritius, Mozambique, Namibia, Rwanda, Seychelles, South Africa, South Sudan, Tanzania, Uganda, Zambia, Zimbabwe.

The study highlights climate related-capacity building needs at the national and local level through an analysis of data on:

- i. The impacts of climate change on the private sector;
- ii. The involvement of private sector entities in climate change governance such as in the development and implementation of national plans – specifically, NAPs and NDCs;
- iii. Climate change programmes and activities of academic institutions and research organizations;
- iv. Gender dimensions of ongoing initiatives;
- v. Collaborative programs between the private sector and academic institutions.

1.3 Methodology

The study was undertaken based on a mixed methodology involving a field survey, key informant interviews and literature review. The qualitative results were analyzed by undertaking content analysis and the derived quantitative data were then analyzed using SPSS. The findings were then used to derive the conclusions and recommendations captured in this report.

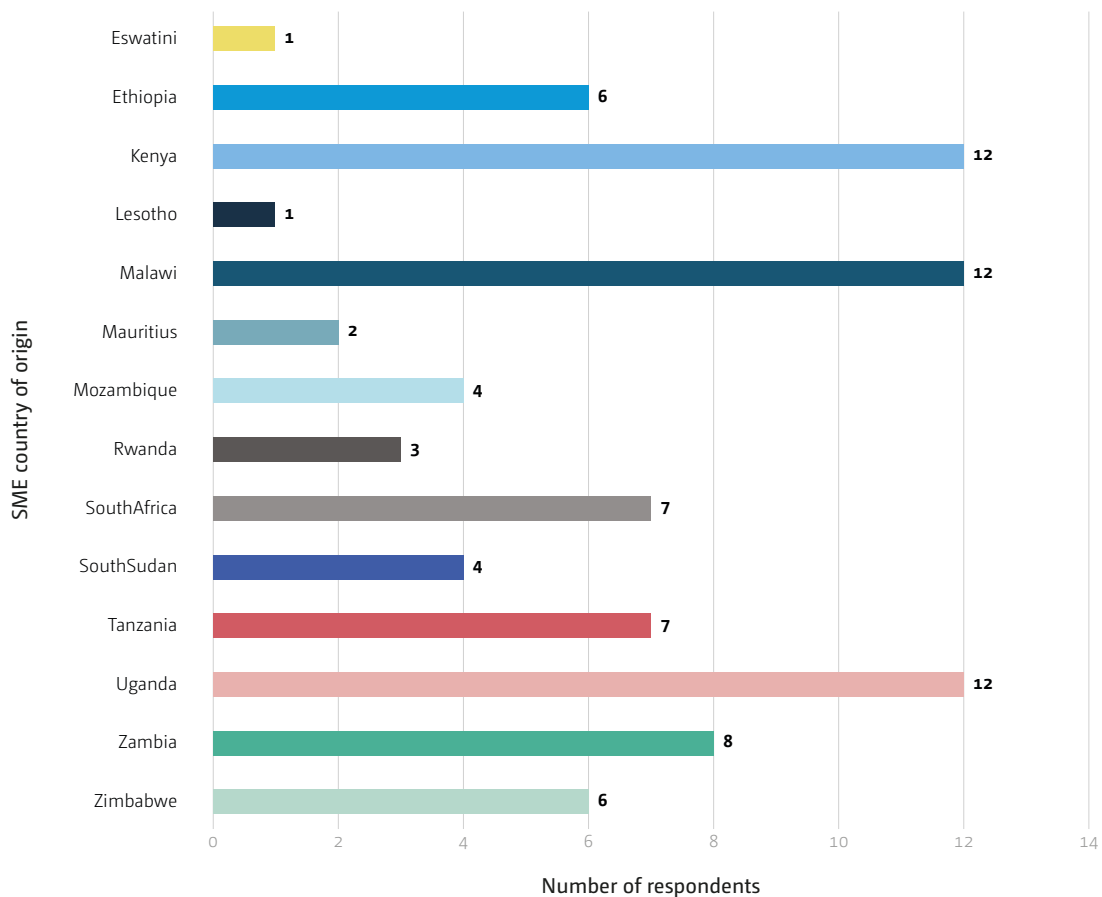
1.3.1 Field survey

The study encompassed a field survey sent to key SMEs and SME Associations in the ESA region. A copy of the survey is set out in **Annex B**. The survey targeted a total of 60 respondents from the region. The methodology envisaged collecting views from three respondents from each of the

19 countries, making the total 57 plus the three regional respondents. The survey was done using Google forms, and sent to email addresses found online. A total of 408 surveys were sent to SMEs and Associations. A total of 60 SMEs and Associations responded to the survey, as set out in the list of respondents in **Annex A**.

There was general regional representation in terms of the respondents and the countries with the highest frequency being Kenya, Uganda and Malawi at 12 each. There was, however, no response from five countries, namely: Angola, Eritrea, Botswana, Namibia and Seychelles. (**Figure 1**) below captures the country distribution of the 60 respondents who completed the survey. The detailed results from the survey are captured in **Annex D**.

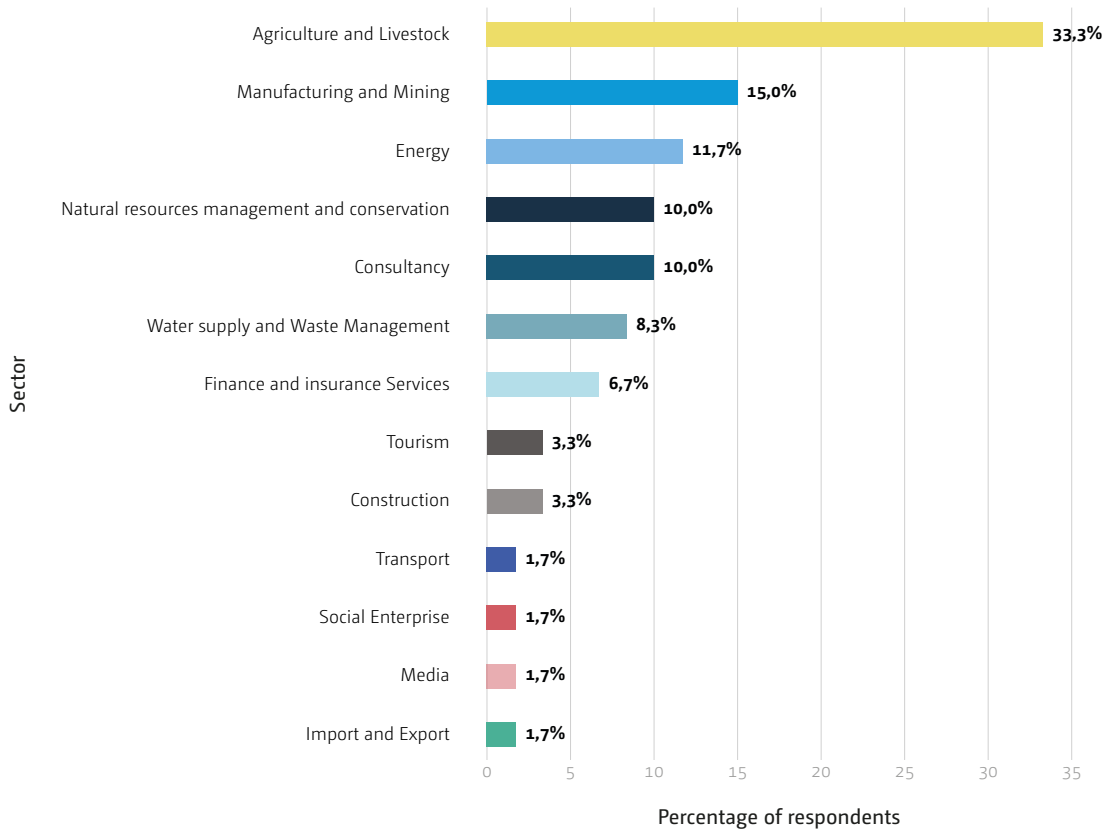
Figure 1 - Number of respondents per target country



In terms of sector distribution, the SMEs belonged to 13 sectors, with agriculture and livestock being the most represented (33.3%), followed by Manufacturing and Mining, Energy, Natural resources Management and Conservation, and

Consultancy (Figure 2). Four of these sectors had only one respondent each, representing 6.8% of the respondents and were grouped together as others. These were Import and Export, Media, Social Enterprise and Transport sectors.

Figure 2 - Sector to which the target SME or SME associations belong (single choice; n=60)



1.3.2 Key informant interviews

A total of three key informant interviews were done. These were representatives of the UN University, the Kenya Private Sector Alliance (KEPSA) and the Regional Universities Forum for Capacity Building in Agriculture (RUFORUM). The key informant interview guide is contained in Annex D.

The UN University represented academic institutions that operate globally but have

programmes targeting SMEs' climate action capacities and that offer potentials for collaboration with SMEs in ESA region. RUFORUM is a network of universities operating in the region and amongst its focus is capacity building and research on climate change issues in the agricultural sector. KEPSA was chosen to represent umbrella bodies of private sector entities with experience on the needs of SMEs and partnership between these and academic and research organizations.



1.4 Literature review

In addition to doing a survey and undertaking key informant interviews, the study involved a desk review of scholarly sources such as books, book chapters, journal articles, reports, working papers and policy briefs, highlighting information linked to climate-related capacity building needs of each country of study in the ESA region.

The desk review was carried out per country, and was structured along the following thematic areas:

- i. Country emission sources;
- ii. Data on SME spread in the country;
- iii. Climate impacts on the private sector generally, and the impacts specifically on SMEs;
- iv. Private sector/SME inclusion in the Government's climate agenda and policy making including private sector/SME role in the development and implementation of the countries' NDC and NAP;
- v. Regional and national level capacity building programmes and activities and level of country involvement;
- vi. Research institution and academia engagement in climate action and existence of programs between the private sector and academic institutions;

vii. Gender dimensions in capacity building;

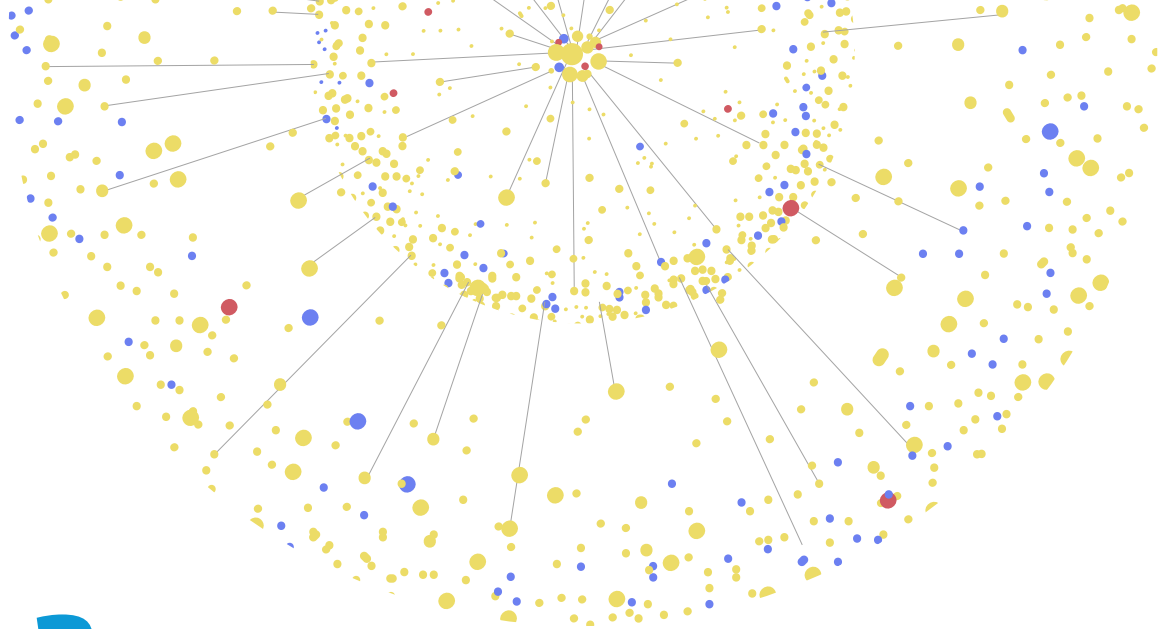
viii. Identified climate capacity building needs and gaps in country-specific literature.

The literature review also involved identifying academic, research and other supporting institutions involved in climate change capacity building with a view to identify what they offer in regard to capacity building needs for SMEs in the ESA region. **Annex E** contains the list of universities and what they offer, while **Annex F** deals with research organizations and other supporting organizations.

1.5 Limitations of the study

The limitations of the study include the low access to relevant published data in the countries under review. This dearth of information was further compounded by non-responses to the survey from Angola, Eritrea, Botswana, Namibia and Seychelles. In addition, the survey did not focus on collecting gender specific data. An in-depth literature review was, therefore, of critical importance to ensure that the perspectives and experiences of SMEs in these countries were gleaned from secondary sources of information.

2.1 Impacts of climate change on private sector.



2

Capacity building needs in ESA

2.1 Impacts of climate change on private sector

2.1.1 Summary regional impacts of climate change in ESA

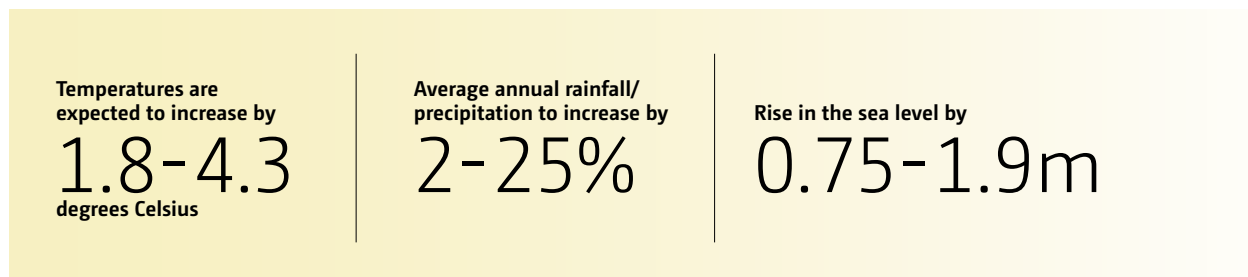
Climate change impacts within the ESA region have greatly affected both the economic and social status of the different countries. Extreme weather events such as floods and drought are common impacts felt within the ESA region, affecting key economic sectors.

Agriculture is a major contributor to the economies of Eastern Africa and is a sector largely dominated by small scale farmers.¹⁶ Climate change is, however, projected to lead to low crop yields due to amplified water stress, shortened planting seasons and increased pest attacks hence affecting the economies of these countries.¹⁷ Poverty levels and malnutrition cases are inevitable effects to be faced in Eastern Africa if urgent climate change

mitigation and adaptation measures are not undertaken. The region is heavily dependent on rain-fed agriculture, and hydropower and biomass are the main sources of energy.¹⁸

Other sectors anticipated to be greatly jeopardized by climate change in the region are pastoralism, hydropower production, biodiversity and human health, water sources and coastal zones.¹⁹ Food insecurity in the region is a rampant challenge that has further been exacerbated by pandemics such as COVID-19 and outbreak of desert locusts. It is estimated that over 20 million people within nine countries²⁰ in the region are currently faced with hunger.²¹ There is therefore need for adaptation measures that address these diverse aspects as a priority, given the new and emerging threats. This is especially relevant as the Eastern Africa region has been identified as one of the regions most affected by climate change, with the weakest capacity to adapt or mitigate climate change impacts.²²

16 Umesh Adhikari, "Climate change and Eastern Africa: A Review of Impact on Major Crops", (Journal of Food and Energy Security,2015).
 17 Umesh Adhikari, "Climate change and Eastern Africa: A Review of Impact on Major Crops", (Journal of Food and Energy Security,2015).
 18 Omambia A.N. et al., , "Climate Change Impacts, Vulnerability, and Adaptation in East Africa (EA) and South America (SA)", in Chen WY., Seiner J., Suzuki T., Lackner M. (eds) Handbook of Climate Change Mitigation (Springer, 2012)
 19 Hilary Hove et al., Review of Current and Planned Adaptation Action: East Africa (International Institute for Sustainable Development, 2011).
 20 Ethiopia, South Sudan, Kenya, Somalia, Uganda, Rwanda, Burundi, Djibouti and Eritrea.
 21 See : <https://www.wfp.org/news/hunger-could-double-east-africa-and-horn-months-coronavirus-spreads#:~:text=An%20estimated%20%20million%20people,South%20Sudan%2C%20Kenya%2C%20Somalia%2C>
 22 Msafiri Yusuph Mkonda. 'A Novel Assessment of the Impacts, Vulnerability, and Adaptation of Climate Change in Eastern Africa', (Intechopen, 2019)

Table 1 - Weather and climate projections for the Eastern Africa Region by 2100

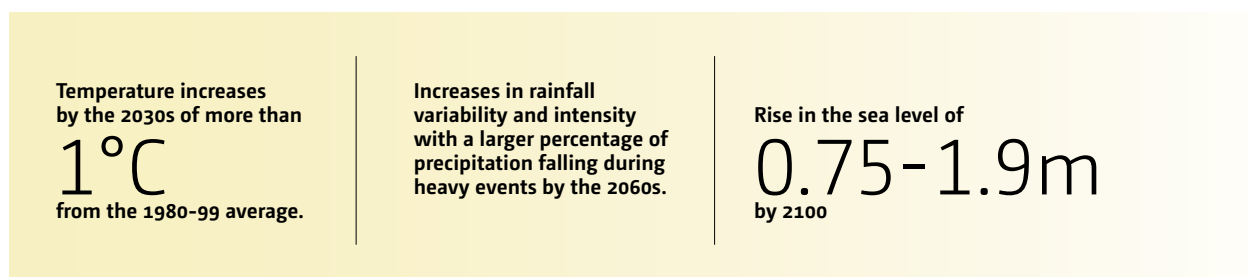
Source: *Climate Change Adaptation in East Africa, USAID*.²³

In Southern Africa, climate change impacts were largely felt in the region during the El Nino related droughts that led to a severity in food crisis.²⁴ Food inadequacy in the Southern Africa region is still a challenge. It is estimated that nearly 44.8 million people in the region are faced with food insecurity with the food insecurity rate having increased by 10% compared to the previous year.²⁵ Climate change in the region has stalled agricultural growth resulting in the food insecurity.

For instance, in Botswana small-scale farmers have largely been affected by drought leading to low crop yields.²⁶ In Zimbabwe, it is predicted that by the year 2050 more droughts and floods are to be experienced annually with longer and more frequent dry seasons.²⁷ The economic growth and development of the region continues to be

destabilised by frequent droughts, scarcity of water and increase in temperatures, as a result of climate change.²⁸ Climate change impacts in Zambia have been estimated to reduce the country's economic growth by 0.4 % per year, costing the country an estimated 4.3 billion dollars over a period of 10 years.²⁹

The climate change impacts faced in the Southern Africa region are coupled with other stress factors such as increased population growth, rural-urban migration and urbanisation.³⁰ The outcome of these climate change related impacts is likely to yield unsustainable development in the region. More mitigation and adaptation measures are urgent steps that should be undertaken in the region for successful management of climate change and sustainable development.

Table 2 - Weather and climate projections for the Southern Africa Region

Source: *Climate Change Adaptation in Southern Africa, USAID*.³¹

- 23 Climate Change Adaptation in East Africa, USAID https://www.climatelinks.org/sites/default/files/asset/document/east_africa_adaptation_fact_sheet_feb2012.pdf
- 24 Serigne Tacko Kandji, et al., Climate Change Climate and Variability in Southern Africa: Impacts and Adaptation in the Agricultural Sector, (Word Agroforestry Centre and United Nations Environment Programme, 2006).
- 25 SADC Regional Vulnerability Assessment Programme, Synthesis Report on the State of Vulnerability and on the state of food and nutrition security and vulnerability in Southern Africa, (2020).
- 26 Mogomotsi P.K.et al., Climate Change Adaptation Strategies of Small-scale Farmers in Ngamiland East, Botswana. (Climatic Change 159, 441-460, 2020).
- 27 Anna Braizer (2015). Climate Change in Zimbabwe Facts for Planners and Decision Makers. Konrad-Adenauer-Stiftung.
- 28 Charles Nhemachena et al., Climate Change Impacts on Water and Agriculture Sectors in Southern Africa: Threats and Opportunities for Sustainable Development. (MDPI,2020).
- 29 James Thurlow et al., The Impact of Climate Variability and Change on Economic Growth and Poverty in Zambia. (IFPRI Discussion Paper 00890,2009).
- 30 Charles Nhemachena et al., Climate Change Impacts on Water and Agriculture Sectors in Southern Africa: Threats and Opportunities for Sustainable Development. (MDPI,2020).
- 31 USAID, Southern Africa adaptation fact sheet: Climate Change Adaptation in Southern Africa, (USAID, 2012). Available at [southern_africa_adaptation_fact_sheet_jan2012.pdf](https://www.climatelinks.org/sites/default/files/asset/document/southern_africa_adaptation_fact_sheet_jan2012.pdf) (climatelinks.org)

Climate change compounds the challenges of meeting the sustainable development goals and the promise of leaving no one behind as it impacts disproportionately those living in vulnerable circumstances such as women and young girls living in the global South. For example, during Cyclone Idai that affected parts of Malawi, Mozambique and Zimbabwe, pregnant women were forced to give birth in the most difficult of circumstances.³² In essence, in the ESA region as in most of the developing world, extreme climate-related hazards increase the vulnerability of women and girls, hindering their access to sexual and reproductive health services, safe water and improved sanitation, food security, and education.³³

2.1.2 Specific effects of climate change impacts on private sector businesses and operations

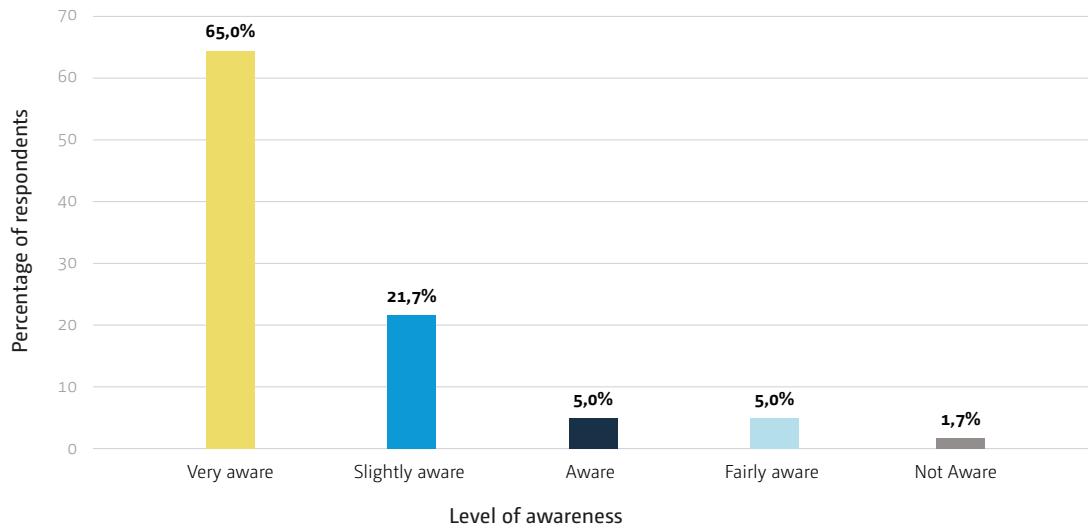
Sub-Saharan Africa's private sector generates about two thirds of investments in the continent, 75 per cent of economic output and more than 90 per cent of formal and informal employment.³⁴ Given this wide reach, the deleterious impacts of climate change on private sector businesses and operations have an undoubted detrimental effect on all aspects of life. Climate-related impacts on private sector are either direct or indirect.³⁵ Direct impacts are identified as those that affect the essential business operations for instance floods leading to destruction of assets, whereas indirect impacts are those resulting from changes in other sectors, for example, where there's scarcity of products in the supply chain.³⁶ There is limited information available on the impacts of climate

change on private sector in general, and on SMEs particularly, in the ESA region. This is despite the private sector in the region being a large contributor to the economic growth of the countries and SMEs specifically employing 80 percent of the workforce in sub-Saharan Africa.³⁷ In this role, the private sector is heavily involved in greenhouse gas (GHG) emitting sectors, as well as in sectors in great need of adaptive action.

The minimal existing information highlights that extreme weather events affect private sector players reliant on natural resources such as small-scale farmers who are largely affected by climate-induced drought.³⁸ In addition to agriculture, private-driven sectors that have felt the negative effects of climate change impacts are general manufacturing, mining and quarrying, and tourism.³⁹ Climate change also causes a disruption in transport, change in customer demand, loss of customers' income and heightens climate-induced disasters such as floods, which have an impact on business premises.⁴⁰ This impedes private sector growth and survival, and women and youth are hard hit as they are more heavily reliant on SMEs for job opportunities.⁴¹ During the study, survey respondents were asked to rate on a scale of 1 to 5, how aware they were of the impact of climate change on their business. Of the target respondents, 65% of them were very aware of the impacts that climate change poses to their businesses, while only one was not aware representing 1.7 % of the respondents. These findings demonstrate that there is some level of awareness amongst SMEs on the impacts of climate change on businesses. The issue is thus not one of general awareness but a need for knowledge on the required action to address these impacts.

- 32 Derick Nyasulu , "Climate Change Disproportionately Affects Women and Young Girls – and Here's Why" (UNFPA, 2 September 2019) <<https://esaro.unfpa.org/en/news/climate-change-disproportionately-affects-women-and-young-girls-%E2%80%93-and-heres-why>> accessed 3 June 2021
- 33 Derick Nyasulu , "Climate Change Disproportionately Affects Women and Young Girls – and Here's Why" (UNFPA, 2 September 2019) <<https://esaro.unfpa.org/en/news/climate-change-disproportionately-affects-women-and-young-girls-%E2%80%93-and-heres-why>> accessed 3 June 2021.
- 34 African Development Bank (AfDB), Supporting the Transformation of the Private Sector in Africa – Private Sector Development Strategy, 2013-2017, (AfDB, 2013) as quoted in Wanja Wanjiru, The East African Community Private Sector Development Strategy (EAC PSDS) Enhancing the Private Sector's Role in Addressing Climate Change, Briefing Paper, July 2018. Available at http://www.cuts-geneva.org/pdf/BP-1808%20-The_East_African_Community_Private_Sector_Development_Strategy.pdf
- 35 The Donor Committee for Enterprise Development (DCED), Private Sector Adaptation to Climate Change and Development Agency Support: The Private Sector Development Synthesis Note, 2016, (DCED, 2016). Available: <https://www.enterprise-development.org/wp-content/uploads/Private-Sector-Adaptation-Synthesis.pdf>
- 36 The Donor Committee for Enterprise Development (DCED), Private Sector Adaptation to Climate Change and Development Agency Support: The Private Sector Development Synthesis Note, 2016, (DCED, 2016). Available: <https://www.enterprise-development.org/wp-content/uploads/Private-Sector-Adaptation-Synthesis.pdf>
- 37 Crick F. et al, "How do African SMEs respond to climate risks? Evidence from Kenya and Senegal," World Development 108, 157-168 (2018).
- 38 Mogomotsi, P.K et al., Climate change adaptation strategies of small-scale farmers in Ngamiland East, Botswana. (Climatic Change 159, 441–460, 2020).
- 39 Adelphi, Baseline Study on Climate Change Impacts on the Private Sector in Rwanda, (Adelphi,2014). Available at: https://www.adelphi.de/en/system/files/mediathek/bilder/cca_private_sector_country_baseline_study_outline_rwanda.pdf
- 40 Red Cross Red Crescent Climate Centre, Opportunities and Barriers to The Access and Use of Climate Information for Small and Medium Enterprises (SMEs) in Uganda and Kenya (Red Cross Red Crescent Climate Centre, 2019). Available at: <https://www.climatecentre.org/downloads/files/Climate%20Ready%20Enterprises%20SME%20consultations%20synthesis%20report%20V1.pdf>
- 41 Crick F. et al, "How Do African SMEs Respond to Climate Risks? Evidence from Kenya and Senegal," World Development 108, 157-168 (2018).

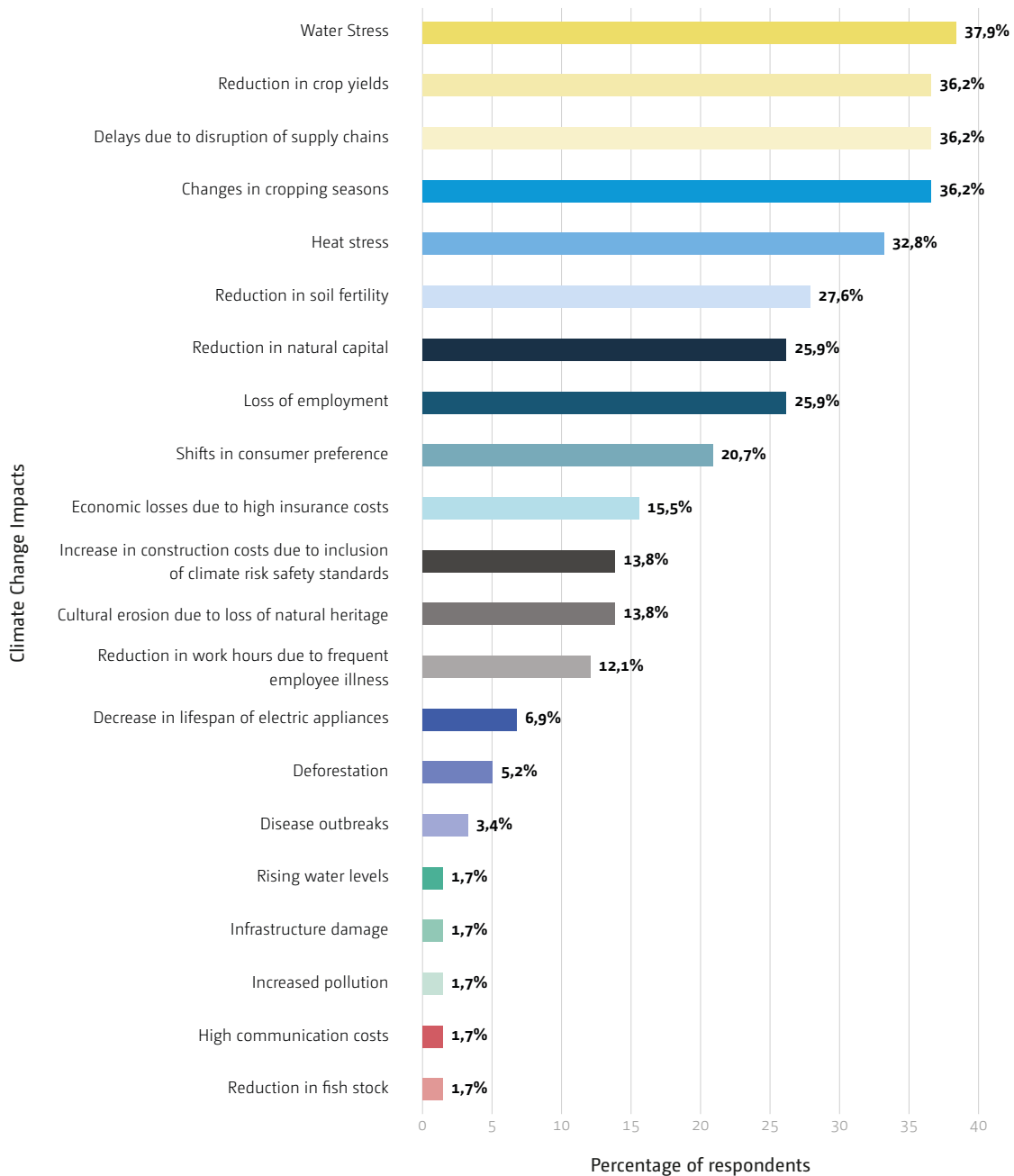
Figure 3 - Level of Awareness of SMEs about the Impacts of Climate Change on their Businesses (Single choice; n = 59)



According to the respondents, the climate change impacts that have the highest effect on SME business operations are water stress (37.9%), reduction in crop yields, delays due to disruptions of the supply chains, and changes in cropping seasons (all at 36.2%). The “Others”

category is made up of “Rising water levels”, “Infrastructure damage”, “Increased pollution”, “High communication costs” and “Reduction in fish stocks”. There are other impacts that disrupt business flow as listed in (Figure 4) below:

Figure 4 - Climate Change Impacts that are affecting SME businesses (multiple choice; n=58)



2.2. Role of SMEs in climate action

2.2.1 Data on SMEs spread in ESA.

The majority of countries in the ESA region do not have up-to-date data on SMEs. Nonetheless,

the available data gives estimates of the existing SMEs in specific countries. Lack of comprehensive data on SMEs is attributable to the lack of a single central database that collates the information.⁴²

⁴² SBP, 2008, The State of Small Enterprise in Lesotho. A study Undertaken By SBP For the Ministry of Trade and Industry, Cooperatives and Marketing.(SBP,2008)

The breakdown of information available on SMEs in the ESA countries is as shown below:

Country	Number of SMEs
Angola	8,232 SMEs ⁴³
Botswana	Not available
Eritrea	Not available
Eswatini	67,582 Micro SMEs established and 14,765 registered (estimates) ⁴⁴
Ethiopia	Not available
Kenya	7.41 million MSMEs in Kenya, with 1.56 million licensed whereas 5.85 million are unlicensed ⁴⁵
Lesotho	Estimated number of SMEs in Lesotho are 125,000 (outdated-as at the year 2000). There is no reliable market data on businesses in Lesotho ⁴⁶
Malawi	Number of SMEs not available. However, there is analysis available on the age classification of owners of SMSE ⁴⁷
Mauritius	124,000 SMEs ⁴⁸
Mozambique	26,213 SMEs. They create majority of formal employment in the country ⁴⁹
Namibia	Statistics on number of SMEs between 1997 -1999, the number of small manufacturing businesses was 11,971, while the number of small service businesses was 22,432. About 25 % of the SMEs are not registered by any authority ⁵⁰
Rwanda	Rwanda Private Sector Federation (2008) study estimates that there are over 72,000 SMEs operating in Rwanda, while only 25,000 of them are formally registered (34%) ⁵¹
Seychelles	There is no data available on the total number of SMEs in Seychelles. However, 509 Micro, small and medium enterprises have been trained under Seychelles MSME Development Project ⁵²
South Africa	As of 2017, there were 2.25 million SMEs in the country ⁵³
South Sudan	Unavailable
Tanzania	3,162,887-as per 2012 statistics ⁵⁴
Uganda	Federation of Small and Medium Enterprises in Uganda constitutes of 115,849 members ⁵⁵
Zambia	There are 1.02 million informal micro and small enterprises (MSMEs) in Zambia, along with about 30,000 formal MSMEs ⁵⁶
Zimbabwe	18,500 as per 2017 data ⁵⁷

43 SME Finance Forum, Angola | SME Finance Forum, <http://www.smefinanceforum.org/node/6950>

44 Kingdom of Eswatini (un.org)

45 The Focus on SMEs is a welcome Intervention (kam.co.ke)

46 SME policies and policy formulation in SADC countries. - Part 3 (fes.de)

47 Finscope-MSME-2019-survey-Full-Report.pdf (imanidevelopment.com)

48 Randhir Roopchand, SMEs in Mauritius: Economic Growth, Employment and Entrepreneurial Culture, (International Journal of Entrepreneurship and Small Business, Inderscience Enterprises Ltd, vol. 39(4), pages 585-596,2020)

49 Project Title (climateinvestmentfunds.org)

50 Microsoft Word - SME in Namibia-A Situational Analysis - 06.08.09XS.doc (technosol.de)

51 UWITONZE Marc.pdf (ur.ac.rw)

52 509 Micro, small and medium enterprises trained under Seychelles MSME Development Project (africabusinesscommunities.com)

53 South Africa | Financing SMEs and Entrepreneurs 2020: An OECD Scoreboard | OECD iLibrary (oecd-ilibrary.org)

54 F J Gmaba, SME Development Policies of Tanzania and Rwanda: Comparability of Policy Presentation on Focus, Significance, Challenges and Participation. (Journal of Development and Communication Studies, Vol. 6. No. 1, 2019)

55 Federation of Small and Medium-sized Enterprises in Uganda (fsmeuganda.org)

56 Manju Kedia, The Informal Sector in Zambia Can it Disappear? Should it Disappear? Working Paper (IGC, F-41004-ZMB-1,2012)

57 18 500 SMEs formalise operations | The Chronicle

2.2.2 SME inclusion in climate governance agenda and policymaking

To ensure that the legal environment is favourable for climate smart investments by the private sector, there is a need for active engagement of the private sector in the legal and policy reform processes.⁵⁸ As they are the predominant business players in the ESA region as in much of Sub-Saharan Africa, SMEs in particular ought to be actively engaged in the development, formulation and implementation of climate plans, policies, and strategies.

However, SME inclusion in climate change governance has not been adequately addressed in the ESA region. Although there is a general recognition that the private sector should be involved in climate change governance for example by the Africa Union,⁵⁹ there are no details on the steps specific countries have taken to ensure SME engagement in agenda setting and policymaking process.

In many countries the policymaking process is enumerated as being highly consultative, involving consultative meetings with a wide variety of stakeholders ranging from government ministries, parastatals, civil society organization (CSOs), non-governmental organizations (NGOs), community-based organisations (CBOs), private sector, the media, academia, and individuals.⁶⁰ The role of SMEs is nonetheless many times, not specifically highlighted, and it is unclear to what extent SME interests are incorporated in the decision-making process.

Similarly, country policies and plans do set out the important role of the private sector in meeting the goals of the plans, policies, and strategies, but again do not focus specifically on the role of SMEs. For example, Botswana's Draft Climate Change Policy recognizes private sector as key stakeholders in climate actions but does not go far enough to advance the important role of SMEs.⁶¹ Similarly, participation of the private sector is identified as a guiding principle of Ethiopia's Climate Resilient Green Economy National Adaptation Plan, without mention of SMEs.⁶² In Kenya, both the National Climate Change Response Strategy (NCCRS)⁶³ and Sessional Paper No. 5 of 2016 on National Climate Change Framework Policy⁶⁴ also recognize the importance of private sector involvement but make no specific recognition of SMEs.

From the field survey, most of the target SME respondents confirmed participating in general awareness workshops (55.8%) and attending COP meetings (32.7%) or trainings on climate financing (30.8%) as part of government-led initiatives to involve the private sector in climate issues. The low scoring end of the survey shows that the SMEs had a low participation rate the in preparation of the NDCs (13.5%) and in preparation of NAPs (9.6%). This despite these being the main instruments countries have to implement the Paris Agreement and as such key documents for SMEs.

Other government-led initiatives available for SME participation are shown in (Figure 5) below.

58 Crawford, A., Church, C., & Ledwell, C., Toolkit for Engaging the Private Sector in National Adaptation Plans (NAPs): Supplement to the UNFCCC Technical Guidelines for the NAP process. NAP Global Network & United Nations Framework Convention on Climate Change Adaptation Committee. (International Institute for Sustainable Development, 2020).

59 Africa Union (AU), Draft African Union Climate Change Strategy, (AU, 2014).

60 See for example, Government of Swaziland (GoS), The National Climate Change Policy (GoS, 2016) at page 10. At <https://info.undp.org/docs/pdc/Documents/SWZ/Swaziland%20Climate%20Change%20Policy%202016%20Final.pdf>; Government of Kenya (GoK), National Climate Change Action Plan (NCCAP) 2018-2022. At <https://www.lse.ac.uk/GranthamInstitute/wp-content/uploads/2018/10/8737.pdf>; The Kingdom of Lesotho, National Climate Change Policy Implementation Strategy (Lesotho, 2017). At [les184526.pdf](https://www.fao.org/docrep/018/i184526.pdf) (fao.org)

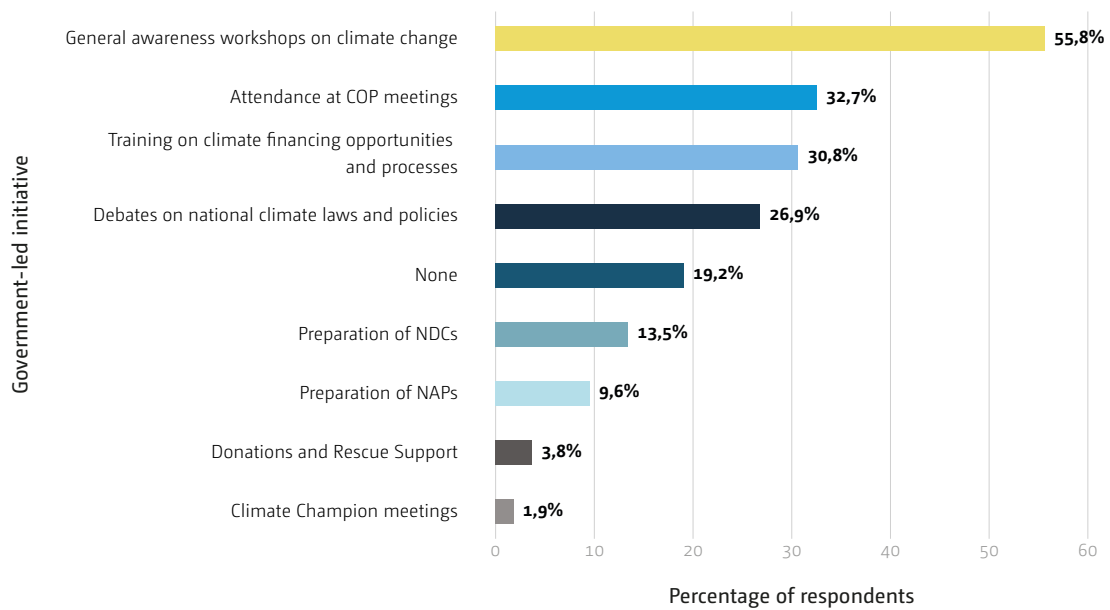
61 Botswana, Climate Change Response Policy, Draft Version 2 (17 Dec)

62 Federal Democratic Republic of Ethiopia, Ethiopia's Climate Resilient Green Economy National Adaptation Plan (Government of Ethiopia, 2019)

63 Government of Kenya (GoK), National Climate Change Response Strategy (GoK, 2010). https://cdkn.org/wp-content/uploads/2012/04/National-Climate-Change-Response-Strategy_April-2010.pdf.

64 Government of Kenya (GoK), Sessional Paper No. 5 of 2016 on National Climate Change Framework Policy (GoK, 2016). <http://www.environment.go.ke/wp-content/uploads/2018/08/Climate-Change-Framework-Policy-May2017.pdf>.

Figure 5 - List of government-led processes regarding climate change that SMEs participate in. (multiple choice; n=53)



2.2.2.1 Nationally determined contributions (NDCs)

Nationally Determined Contributions highlight the role of the private sector without more specificity on SMEs. All the 19 ESA countries have submitted their first NDCs pursuant to the Paris

Agreement. However, only five countries namely Angola, Ethiopia, Kenya, Rwanda and Zambia have submitted their new or updated NDCs. Out of the five new or updated NDCs, three take cognizance of the role of the private sector in climate action and more so on capacity building-related actions:

Kenya's NDC

- Kenya's updated NDC submission letter stipulates that the budget required by the country's mitigation and adaption actions is estimated at USD 62 billion. This is over a ten-year period. The Government of Kenya undertakes to fund 13% of this whereas 87% is to be mobilized from international sources in the form of technology development and transfer, finance and capacity building.
- The country commits to bridge the implementation gaps by enhancing adaptation resilience such as enhancing the adaptive capacity and climate resilience across all economic sectors.
- The NDC identifies the private sector as key in implementing various priority adaptation programmes which include climate-proof waste management infrastructure, mobilization of resources from the capital markets for green finance and green business agenda, promotion of green procurement through use of eco-friendly industrial labels.

Rwanda's NDC

- The NDC notes increased involvement of the private sector in solid waste collection service; for example, 90% of the population in Kigali had access to solid waste collection service in 2015 compared to 44% in 2012.
- Rwanda's Green growth and Climate Resilience Strategy areas of focus include green industry and private sector investment.
- The NDC outlines seven sectoral adaptation interventions⁶⁵ five out of which have a bearing on the contribution of the private sector.⁶⁶

Zambia NDC

- The institutional framework for climate change comprises a Technical Committee on Climate Change which includes representatives from relevant Ministries and a broad range of other stakeholders, including the private sector, civil society, financial institutions, among others.
- The NDC aims to develop a National Wildlife Adaptation Strategy and ensure its implementation through supportive policies, local community, civil society and private sector participation.

SME membership in business consulting and policy advocacy programmes such as in the case of Kenya where organizations such as the Kenya Private Sector Alliance (KEPSA)⁶⁷ and the Kenya Association of Manufacturers (KAM)⁶⁸ which are engaged in high-level advocacy on cross-cutting

law and policy-related issues including on climate change, provide good entry points for SMEs to add their voice to climate agenda setting and policymaking. For example, KEPSA was for example, part of the taskforce formulating Kenya's National Climate Change Action Plan 2018-2022.

⁶⁵ Water, Agriculture, Land and Forestry, Human Settlement, Mining, Cross-cutting and Health sector.

⁶⁶ Private sector engagement has been recognized as key in the following sectors: human settlement, mining, health, agriculture and water.

⁶⁷ See SME membership benefits here: < <https://kepsa.or.ke/sme-membership/> > accessed 3 June 2021.

⁶⁸ See SME membership benefits here: < <https://kam.co.ke/sme-development/> > accessed 3 June 2021.

2.2.2.2. National adaptation plans (NAPs)

Out of the 19 countries in the ESA region only two countries namely Kenya and Ethiopia have developed and submitted their NAPs.⁶⁹ Similar to the updated NDCs, the Kenyan and Ethiopian NAPs acknowledge the important role of the private sector in mitigation and adaptation

plans but fail to give definite roles to the private sector. The apparent lack in participation of SMEs in the NAP preparation, see (Figure 5) above, also highlights the need to provide additional information and training on the importance of NAPs to SMEs and for additional outreach to ensure their participation:

Ethiopia's National Adaptation Plan (NAP-ETH)

- Identifies mobilization and involvement of the private sector in climate change adaptation investments as a capacity need. The NAP goes further to provide for interventions that are necessary to fill this capacity gap to include: (i) incentivising the private sector to invest in adaptation actions; and (ii) creating opportunities for the private sector to actively engage in adaptation planning and monitoring.
- Various national programmes such as the Growth and Transformation Plan II articulate that transforming the domestic private sector to become a "capable development force" is a goal in the implementation of the plan.
- The NAP's Guiding principle recognizes that participation of all stakeholders including the private sector is necessary in the implementation of the NAP-ETH.

Kenya's National Adaptation Plan 2015-2030

- The NAP preamble identifies the private sector as among the stakeholders actively engaged and consulted in the NAP development. It lists the private sector as part of the Adaptation Thematic Working Group that provided technical inputs and insights relevant to enriching the development process of the NAP.
- The objective of the NAP includes enhancing the resilience of the "private sector investment in the national transformation, economic and social pillars of Vision 2030 to climate shocks".
- The NAP further recognizes that the implementation of the NAP is reliant on the institutional structures proposed in the Climate Change Act, 2016. The NAP goes further to elaborate the different roles of the stakeholders across the different sectors relevant in the implementation of the NAP. Among the identified sectors is the private sector whose role of creating awareness and information building is recognized as important in the adaptation actions.

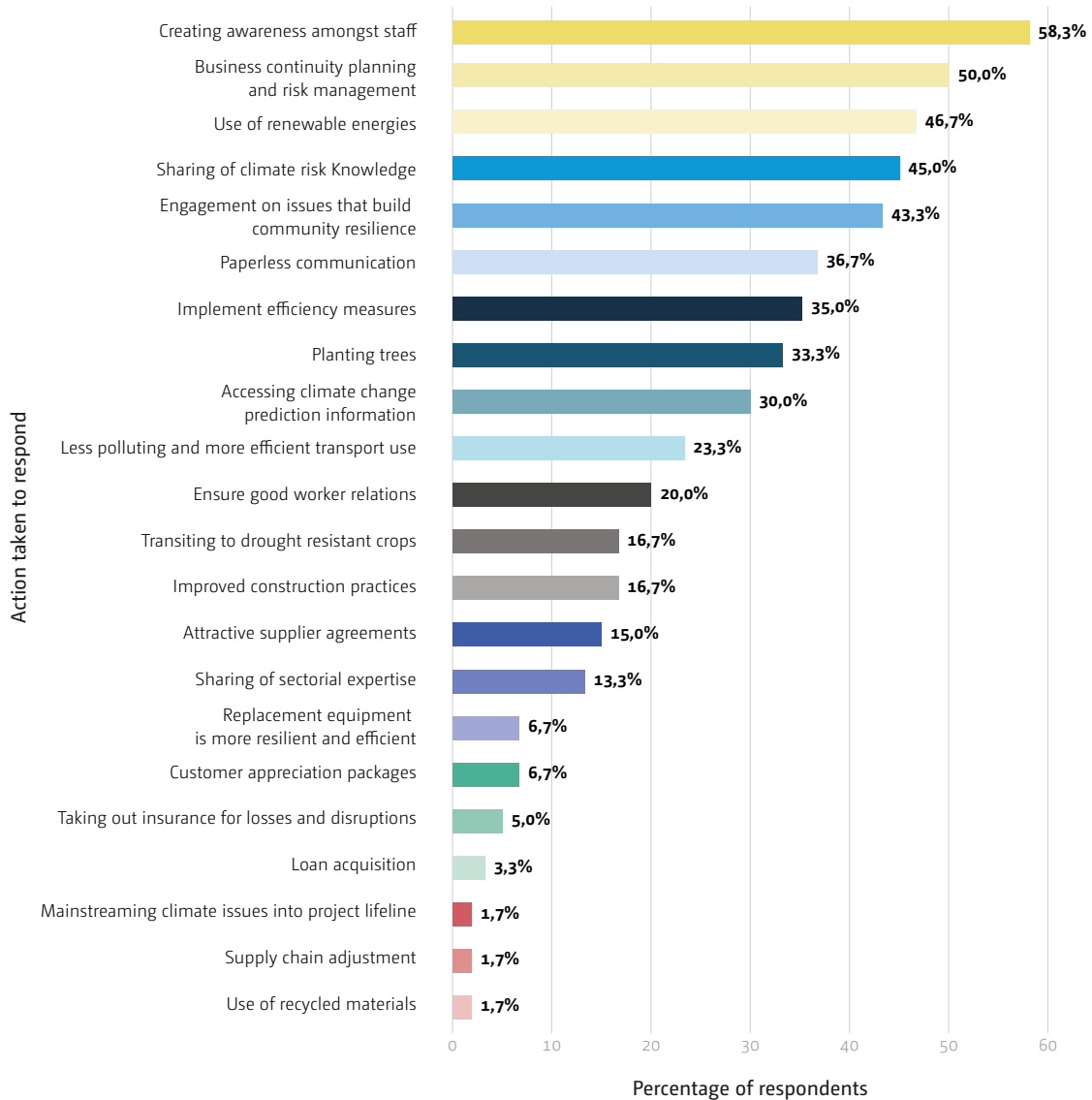
2.2.3 SME involvement in climate change action

Addressing climate change requires the involvement of all stakeholders, including the private sector. This is particularly important since climate change affects SMEs’ business operations as already highlighted earlier in this report. Generally, the ability of firms to deal with climate risks is affected by the external business environment they operate in.⁷⁰ Poor infrastructure and insufficient access to finance characterize the external business environment in many African countries including in the ESA region, and climate impacts are further compounded by these challenges with women-owned SMEs and informal SMEs being

disproportionately affected.⁷¹ Despite these challenges, SMEs in the ESA region have taken some initial climate action.

Results from the field survey indicate that the main actions that SMEs have undertaken to respond to and adapt to climate change are; creating awareness amongst their staff (58.3%); business continuity planning and risk management (50.0%); and use of renewable energies (46.7%). In the survey “Use of recycled materials”, “Supply chain adjustment”, and “Mainstreaming climate issues into project lifeline” were grouped into “Others” representing 5.1% of the respondents. Other actions adopted by SMEs to respond to climate change are presented in **Figure 6**.

Figure 6 - Some of the actions that have been undertaken by SMEs to respond to climate change (Multiple choice; n=60)

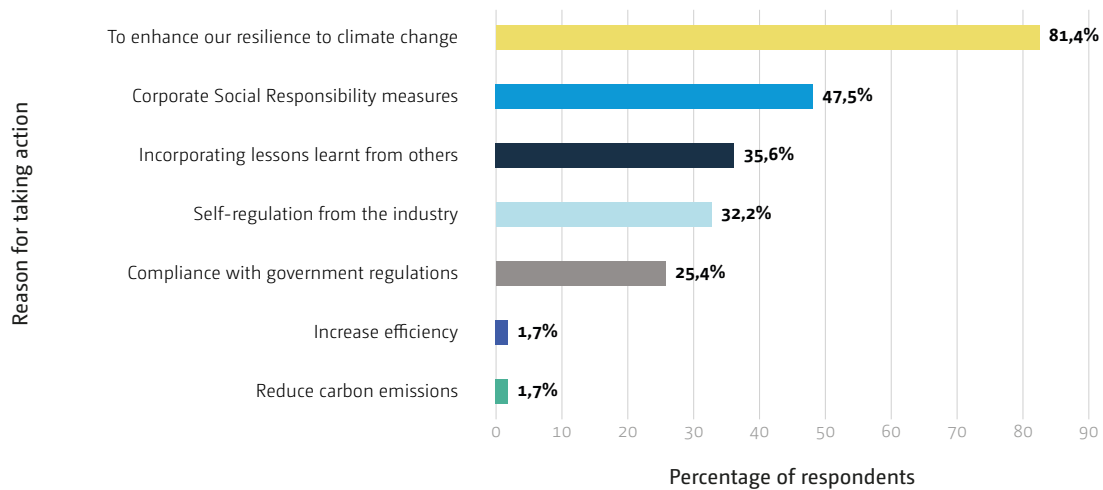


70 Crick F. et al, “How do African SMEs respond to climate risks? Evidence from Kenya and Senegal,” World Development 108, 157-168 (2018).
 71 Crick F. et al, “How do African SMEs respond to climate risks? Evidence from Kenya and Senegal,” World Development 108, 157-168 (2018).

Most of the SMEs undertake the above actions in response to climate change mainly to enhance their resilience (81.4%). Other major reasons include as a corporate social responsibility measure (47.5%), as a way of incorporating lessons learnt from others

(35.6%), as a result of self-regulations from the industries they belong to (32.2%), and compliance with government regulations (25.4%). "Reduce carbon emissions" and "Increase efficiency" were grouped under "Others", with 3.4%.

Figure 7 - Reasons why SMEs undertake climate action (Multiple choice, n=59)



Mitigation Action

The private sector in the ESA region has made several climate change-related investments, and these are in keeping with the general trend that the majority of the world's private finance flows are geared towards mitigation as opposed to adaptation.⁷² The private sector has demonstrated a proactive role in combating climate change, with climate change itself presenting entrepreneurial opportunities for enterprises seeking climate-related innovative solutions to reduce GHG emissions.⁷³ Investments have largely been witnessed in various economic sectors such as the energy sector where private entities are embracing clean energy solutions.⁷⁴ The private sector has also invested in sustainable transport systems, climate smart agriculture, climate smart waste management and green buildings.⁷⁵ However, information on areas of investment with a bearing on mitigation by

SMEs is limited. A review of initiatives such as the Kenya Climate Innovations Centre (KCIC) which offers incubation, capacity building and financing options to new, small and medium sized business ventures and Kenyan entrepreneurs that are developing innovations to address climate change,⁷⁶ points to a high preference for SMEs to invest in the renewable energy and agribusiness sectors. SME customers in these sectors are small-scale consumers, and it is relatively easy to penetrate with limited levels of investment, which SMEs access largely through grants awarded competitively.⁷⁷

Adaptation action

SMEs in developing countries often face myriad challenges in their business operations while attempting to adapt to climate change. These barriers include limited access to finance, markets, insurance, climate-smart inputs and services,

72 Bhim Adhikari & Lolita Shaila Safae Chalkara, mobilizing private sector investment for climate action: enhancing ambition and scaling up implementation. 2021 Journal of Sustainable Finance & Investment.

73 Inter-American Development Bank and Nordic Development Fund, Private Markets for Climate Resilience: Global Report (2020). Available at: <https://publications.iadb.org/publications/english/document/Private-Markets-for-Climate-Resilience-Global-Report.pdf>. (Accessed on 9/7/2021).

74 See for instance the Energy and Environment Partnership Trust Fund a financing facility by Nordic Development Fund which has been on the forefront of enhancing clean energy access, development and investment across Southern and East Africa. Available at: <https://eepafrica.org/about-us/>

75 International Finance Corporation, Climate Investment Opportunities in Emerging Markets, (World Bank, 2016). Available at: https://www.ifc.org/wps/wcm/connect/59260145-ec2e-40de-97e6-3aa78b82b3c9/3503-IFC_Climate_Investment_Opportunity-Report-Dec-FINAL.pdf?MOD=AJPERES&CVID=IBLd6Xq

76 For information about the KCIC, see: <https://www.kenyacic.org/>

77 Kaudi A. and Okumu A.E, Role of Small and Medium Size Enterprises in green and "inclusive" transition in Africa. Available at <https://www.greengrowthknowledge.org/sites/default/files/uploads/Alice%20Kaudia%20-%20Role%20of%20Small%20and%20Medium%20Size%20Enterprises%20in%20inclusive%20growth.pdf>

and knowledge about adaptation approaches.⁷⁸ The need for the private sector to implement and prioritize climate adaptation measures while developing climate smart enterprises is urgent. Whilst climate adaptation has gained vast recognition as an essential response to low carbon climate resilient development,⁷⁹ less attention has been given to the role of the private sector in climate adaptation needs.⁸⁰

Increasingly, governments and businesses are quickly coming to the realization on the urgency of investing in climate adaptation and resilience measures.⁸¹ This is no different for the ESA region. For instance, Rwanda has developed a Community Based Climate Change Adaptation (CBCCA) project that targets various stakeholders including the private sector. The CBCCA analyses various climate change indicators to evaluate the project which include indicators on climate adaptation such as development of effective strategies and actions by the private sector for managing flood and drought-related strategies.

Barriers that hinder businesses in developing countries to invest in adaptation actions have been classified into six:

- i. Social attitudes on adaptation;
- ii. Unfavourable policies;
- iii. Limited financial capacity;
- iv. Limited technical capacity to implement;
- v. Lack of awareness of climate risks;
- vi. Limited knowledge on adaptation.⁸²

Financing adaptation can be a key barrier but can be overcome where the adaptation costs are capable of being passed to the consumers or receiving subsidies.⁸³ Given the substantial research requirements involved in the identification of climate sensitivities and adaptation options, government support for research, the provision of guidance and tools, dialogues and linkages between research centres and government experts, and knowledge networks between the private sector and academia can support companies' implementation of adaptation.⁸⁴ In this context, partnerships between the private sector and governments, scientific organizations and academia may be effective instruments for enabling adaptation.

78 K. E Gannon, Supporting SMEs in developing countries to adapt to climate change through multi-stakeholder partnerships, 2020. Available at: <https://www.lse.ac.uk/granthaminstitute/news/supporting-smes-in-developing-countries-to-adapt-to-climate-change-through-multi-stakeholder-partnerships/>

79 Agrawala, S. et al., Private Sector Engagement in Adaptation to Climate Change: Approaches to Managing Climate Risks. (OECD Environment Working Papers, No. 39, OECD Publishing, 2011).

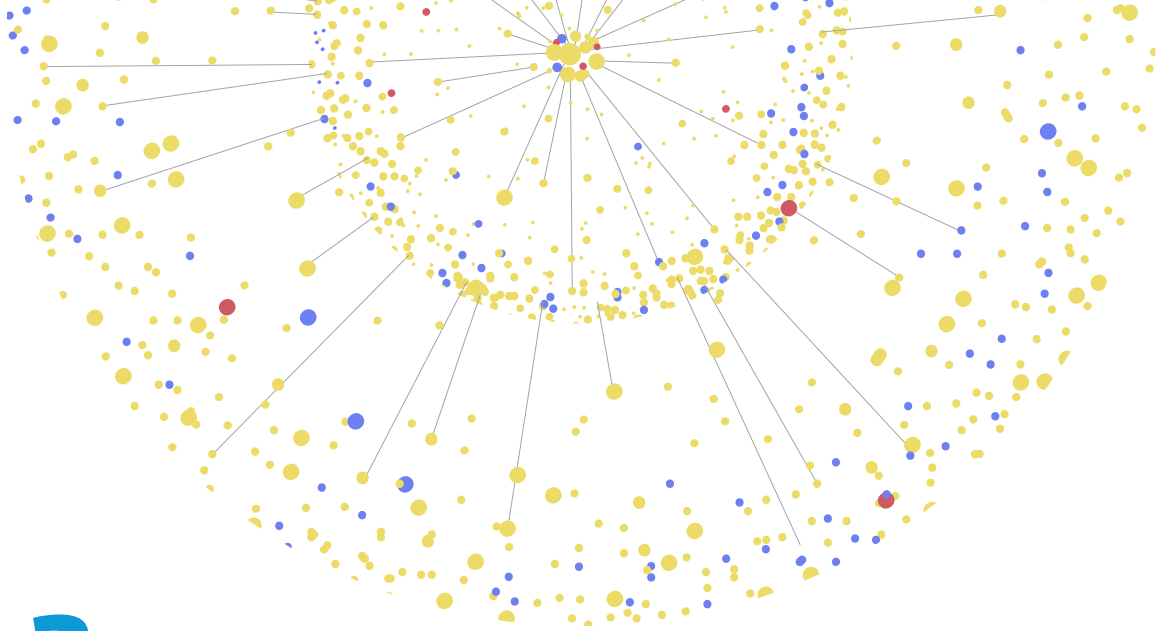
80 Agrawala, S. et al., Private Sector Engagement in Adaptation to Climate Change: Approaches to Managing Climate Risks. (OECD Environment Working Papers, No. 39, OECD Publishing, 2011).

81 Arame Tall, et al., Enabling Private Investment in Climate Adaptation and Resilience, (World Bank Group, 2021).

82 Lisa Dougherty-Choux, et al., Adapting from the Ground Up: Enabling Small Businesses in Developing Countries to Adapt to Climate Change (UNDP, 2015).

83 Agrawala, S. et al, Private Sector Engagement in Adaptation to Climate Change: Approaches to Managing Climate Risks, (OECD Publishing, 2011)

84 Kate Elizabeth, et al., Enabling private Sector Adaptation to Climate Change Among Small Businesses in Developing Countries: What Role for Multi-stakeholder Partnerships? Experiences from Kenya, (London School of Economics and Political Science, 2020).



3

Ongoing Capacity Building Efforts and Gaps

3.1 Required Capacity Building Support to SMEs

3.1.1 Awareness by SMEs on climate change impacts and required actions

As has been demonstrated so far in this report, the private sector and SMEs in the ESA region are generally aware of the negative impacts posed by climate change, however, very few have conducted risk assessments or considered adaptation options.⁸⁵ Most SMEs have not resorted to sustainable adaptation actions due to financial barriers.⁸⁶

An overwhelming majority of SMEs in the ESA region, as exemplified by a study in Uganda and Kenya, are aware of climate change and its diverse range of impacts on businesses.⁸⁷ SMEs may, however, fail to take climate action because they do not think they will be impacted by climate change, they do not have the financial resources to adapt, climate change is viewed as an act of

God, and they do not know what to do in order to adapt. This raises the importance of climate information and SME-specific data such as data quantifying losses to SMEs from climate change-related disasters.⁸⁸

SMEs in ESA thus require more sensitization on the type of mitigation and adaptation actions that they ought to undertake. Increased sensitization will allow SMEs to review, prioritize and implement actions based on climate risk information and adaptation measures availed to them.⁸⁹

During the survey, respondents identified the top three actions required to improve the capacity of SMEs to take climate action as being, improving climate awareness (34.5%), enhancing technical and financial trainings on climate issues (25.5%) and provision of financial support to SMEs (20.0%). From these results, capacity building support ranks highly amongst the needs by SMEs in the ESA region to enable them to improve their ability

85 Agrawala, S. et al., Private Sector Engagement in Adaptation to Climate Change: Approaches to Managing Climate Risks. (OECD Environment Working Papers, No. 39, OECD Publishing, 2011). Paris, <https://doi.org/10.1787/5kg221jkg1g7-en>.

86 Florence Crick et al., "How Do African SMEs Respond to Climate Risks? Evidence from Kenya and Senegal" (2018). Available at: <https://www.sciencedirect.com/science/article/pii/S0305750X18300974>

87 Red Cross Red Crescent Climate Centre, Opportunities and Barriers to The Access and Use of Climate Information for Small and Medium Enterprises (SMEs) in Uganda and Kenya (Red Cross Red Crescent Climate Centre, 2019). Available at: <https://www.climatecentre.org/downloads/files/Climate%20Ready%20Enterprises%20SME%20consultations%20synthesis%20report%20V1.pdf>

88 Red Cross Red Crescent Climate Centre, Opportunities and Barriers to The Access and Use of Climate Information for Small and Medium Enterprises (SMEs) in Uganda and Kenya (Red Cross Red Crescent Climate Centre, 2019). Available at: <https://www.climatecentre.org/downloads/files/Climate%20Ready%20Enterprises%20SME%20consultations%20synthesis%20report%20V1.pdf>

89 Red Cross Red Crescent Climate Centre, Opportunities and Barriers to The Access and Use of Climate Information for Small and Medium Enterprises (SMEs) in Uganda and Kenya (Red Cross Red Crescent Climate Centre, 2019). Available at: <https://www.climatecentre.org/downloads/files/Climate%20Ready%20Enterprises%20SME%20consultations%20synthesis%20report%20V1.pdf>

to take climate action. This was an open-ended question with 56 responses.

For example, a respondent from Malawi, suggested, “introducing free capacity building services for SMEs, such as technical and financial trainings”, while another from Kenya called for “capacity enhancement through training.” Similar sentiments were suggested by respondents from Tanzania, Zambia and Zimbabwe. They captured the needs for capacity building in the following terms:

“Specific SME groupings could focus on implementing projects to ameliorate the effect of climate change. For example, implementation of renewable energy technologies can be made attractive for SMEs by providing the training for professional conduct and access to affordable capital for executing projects. Other SME groupings could focus on waste reprocessing which has become a major eyesore in many African countries.”

Regarding climate awareness, one respondent from Zimbabwe mentioned that “increased awareness on the impacts of climate change as well as the mitigation measures that can be put in place” while another located across Rwanda, Tanzania and Uganda said, “More awareness campaign to educate people on climate change”

Another response received from Zambia underlined the importance of education “*More education measures for people to truly understand long-term effects of climate change and what steps can be taken now.*”

3.1.2 Capacity building needs for SMEs in ESA

The leading sectors that greatly contribute to GHG emissions in the ESA region are largely the same; namely: energy, land use change and forestry, agriculture, waste and industrial processes. The quantities of emissions per sector however vary, with the energy sector being the leading source of emissions in the Southern Africa region,⁹⁰ while Land-Use Change and Forestry takes the lead in the Eastern Africa region.⁹¹ Capacity building action for SMEs in these leading GHG emission sectors is therefore an area of priority that should be urgently addressed. On adaptation, the need for building resilience in the agriculture sector is well recognized in both Eastern and Southern Africa, given the prominent role played by agriculture as the largest sector in the region.⁹²

Overall, capacity building needs for SMEs in ESA are generally not well-documented. Some of the ESA countries have however identified climate change capacity building needs in their own countries, and the capacity needs vary from country to country as set out below:

90 USAID, GHG Emissions Factsheet Southern Africa, (2015). Available at : https://www.climatelinks.org/sites/default/files/asset/document/GHG%20Emissions%20Factsheet%20Southern%20Africa_11_17_15%20v2_edited_rev08-18-2016_Clean.pdf

91 USAID, GHG Emissions Factsheet East Africa, (2015). Available at : https://www.climatelinks.org/sites/default/files/asset/document/GHG%20Emissions%20Factsheet%20East%20Africa_12%2031%202015_edited_rev08-19-2016_Clean.pdf

92 IFAD, East and Southern Africa. Available at: <https://www.ifad.org/en/web/operations/regions/esa>

Country	Select Capacity Building Needs
Ethiopia	<ul style="list-style-type: none"> • Need for boosting dialogue between government entrepreneurs, SMEs and innovators so as to bridge technology gaps in climate technology and lack of government incentives for private sectors to adopt climate technologies⁹³
Namibia⁹⁴	<ul style="list-style-type: none"> • Enhancing capacity building for academics and professionals to deepen the understanding of vulnerability. • Apply and interpret climate models and impact models in sectors that are considered critical for the development of Namibia, to build a broader understanding of the vulnerability of various sectors to climate variability and change; • Application of economic principles to quantify/compare the impacts of certain changes and policy interventions to foster fact-based decision-making when allocating very scarce public resources to programmes or interventions; • Capacity building for local commercial banks as an important source of clean energy loans and debt funds, and project bundling; and • Theoretical and practical training of renewable energy technologies (RETs) technicians, government officials and NGOs throughout the country, to make renewable energy technical skills available countrywide. This needs to be accompanied by capacity support for the adoption of nation-wide regulatory policy to enforce standards for RETs currently perceived as barriers that prevent the roll-out of renewable energy projects in the country.
Rwanda	<ul style="list-style-type: none"> • Lack of developed capacity building programmes on environmental management⁹⁵.
Seychelles	<ul style="list-style-type: none"> • Integration of capacity building into national policies, strategies, laws.⁹⁶ • Developing capacity building in climate data collection and tracking, document management and climate finance⁹⁷
Zambia	<ul style="list-style-type: none"> • Capacity building needs that have been identified include assistance with data gaps, building scenarios, and local expertise. Technical assistance aimed at these needs is being provided in form of guidance materials, targeted backstopping, and training workshops.⁹⁸
Zimbabwe	<ul style="list-style-type: none"> • Need for gender inclusion in climate actions necessitates capacity building at different ministerial levels.⁹⁹ • Technology dissemination to farmers by private and public sectors to enable them manage climate change.¹⁰⁰

93 Information for Development Program, Climate Innovation Centre Business Plan: Ethiopia (Information for Development Program, 2011). Available at: [ethiopia_cic_business_plan_02.21.12_public.pdf](#) (infodev.org)

94 Heila Lotz-Sisitka, et al., Strengthening University Contributions to Climate Compatible Development in Southern Africa Namibia Country Report, (SARUA, 2014)

95 Emilie Bécault, et al, Getting Ready for Climate Finance: The case of Rwanda, (Belgian Policy Research Group on Financing for Development, 2016).

96 Republic of Seychelles, National Climate Change Strategy, (Republic of Seychelles, 2009).

97 Michele Martin, Capacity Building for Climate Resilience in Seychelles, (Seychelles Research Journal, Volume 1, Number 2,2019).

98 Zambia-EU-UNDP Low Emission Capacity Building Programme (LECBP). Available at : Zambia-EU-UNDP Low Emission Capacity Building Programme (LECBP) | Open Energy Information (openei.org)

99 Government of Zimbabwe, National Adaptation Plan (NAP) Roadmap for Zimbabwe, (Government of Zimbabwe, 2019).

100 Tinashe Mitchell Mashizha, building adaptive capacity: Reducing the Climate Vulnerability of Smallholder Farmers in Zimbabwe, (Business & Strategy Development, 2019)

3.1.3 Areas where SMEs have the greatest capacity building needs

SMEs often encounter greater challenges in tackling extreme weather events compared to large businesses due to various barriers such as inadequate financial capital, limited know-how, limited technological and human resources.¹⁰¹ Recovery of SMEs from climate change related shocks requires development and implementation of strategies that are resilient to climate change hazards.¹⁰² Integration of these adaptation measures into business plans require human resource expertise, funding, requisite knowledge and the technology know-how.¹⁰³

One of the greatest challenges faced by SMEs that hinder them from adopting climate resilient products and activities is the lack of technical skills to do so.¹⁰⁴ Building of requisite technical skills that enable SMEs to navigate adaptation options increases their business resilience to climate change and is therefore a paramount action that should be prioritized.

Encouraging peer to peer review on adaptive measures, facilitating benchmarking visits and information sharing on good practices is also key in addressing climate action capacity needs of SMEs. For an example of such an approach, look to Ireland where a Business-to-Business Green Mentor Programme was launched to encourage bigger companies with good practices in waste management to provide waste management information and guidance to SMEs.¹⁰⁵

Notably, the majority of SMEs have been unable to withstand climate-related shocks due to lack of financing which then bars them from developing adaptation strategies. For example, in the Eastern Africa region where small scale driven sectors such as agriculture accounts for 25-35% of the GDP,

only 2-5% of the financial lending is advanced to the sector.¹⁰⁶ This is illustrative of the low funding given to the agricultural sector despite its contribution to the economy and is true for many other sectors. Generally, SMEs are at a disadvantage when it comes to accessing financing from lenders compared to large enterprises.¹⁰⁷ SMEs that venture into green investments face a challenge in terms of developing and presenting financing proposals and how information on green investments is presented to lenders.¹⁰⁸ SMEs therefore require skills and training on accessing finance to enable them to enhance SME mitigation and adaptive capacity.

Lack of data quantifying losses arising from climate change impacts in the ESA region is also a major challenge in the region. Availing such data to SMEs may serve as an awareness tool on the need for disaster preparedness for these business entities.¹⁰⁹ Additionally, more partnership and collaborative measures ought to be undertaken to increase availability and access to climate-risk related information.¹¹⁰ Skills and training that enable SMEs to collaboratively collect, interpret and use climate data and information effectively is crucial, as such information is essential as a business planning and decision-making tool.

The ability of SMEs to adapt to climate change is largely dependent on public policy which in turn influences the business environment within which the SMEs operate. Governments in sub-Saharan Africa are encouraged to pursue initiatives that support the ability of SMEs to adapt to climate change while at the same time addressing barriers to business growth.¹¹¹ Training and capacity building to create awareness on existing policies, programmes and initiatives that SMEs can capitalize on to mitigate and adapt climate change impacts on their businesses is a major capacity building need in the region.

101 Antonis Skouloudis, et al., Small & Medium-Sized Enterprises, Organizational Resilience Capacity and Flash Floods: Insights from a Literature Review, (MDPI,2020).

102 Antonis Skouloudis, et al., Small & Medium-Sized Enterprises, Organizational Resilience Capacity and Flash Floods: Insights from a Literature Review, (MDPI,2020).

103 Florence Crick, et al., "How Do African SMEs Respond to Climate Risks? Evidence From Kenya and Senegal," World Development, (2019).

104 UNIDO, Promoting Climate Resilient Industry, (UNIDO). Available at: https://www.unido.org/sites/default/files/2015-12/01_UNIDO_Promoting_Climate_Resilient_Industry_0.pdf

105 OECD, Facilitating the Green Transition for ASEAN SMEs, (OECD, 2021). Available at: <https://www.oecd.org/southeast-asia/regional-programme/networks/Facilitating-green-%20transition-for-ASEAN-SMEs.pdf>

106 Jesse Bayer, "How to Close the Agri-SME Financing Gap: Evidence from East Africa " (Agri Links, 27 February 2019). <<https://www.agrilinks.org/post/how-close-agri-sme-financing-gap-evidence-east-africa>> accessed on 2 June 2021

107 OECD, Facilitating the Green Transition for ASEAN SMEs, (OECD, 2021). Available at: <https://www.oecd.org/southeast-asia/regional-programme/networks/Facilitating-green-%20transition-for-ASEAN-SMEs.pdf>

108 OECD, Facilitating the Green Transition for ASEAN SMEs, (OECD, 2021). Available at: <https://www.oecd.org/southeast-asia/regional-programme/networks/Facilitating-green-%20transition-for-ASEAN-SMEs.pdf>

109 Red Cross Red Crescent Climate Centre, Opportunities and Barriers to The Access and Use of Climate Information for Small and Medium Enterprises (SMEs) in Uganda and Kenya (Red Cross Red Crescent Climate Centre, 2019). Available at: <https://www.climatecentre.org/downloads/files/Climate%20Ready%20Enterprises%20SME%20consultations%20synthesis%20report%20V1.pdf>

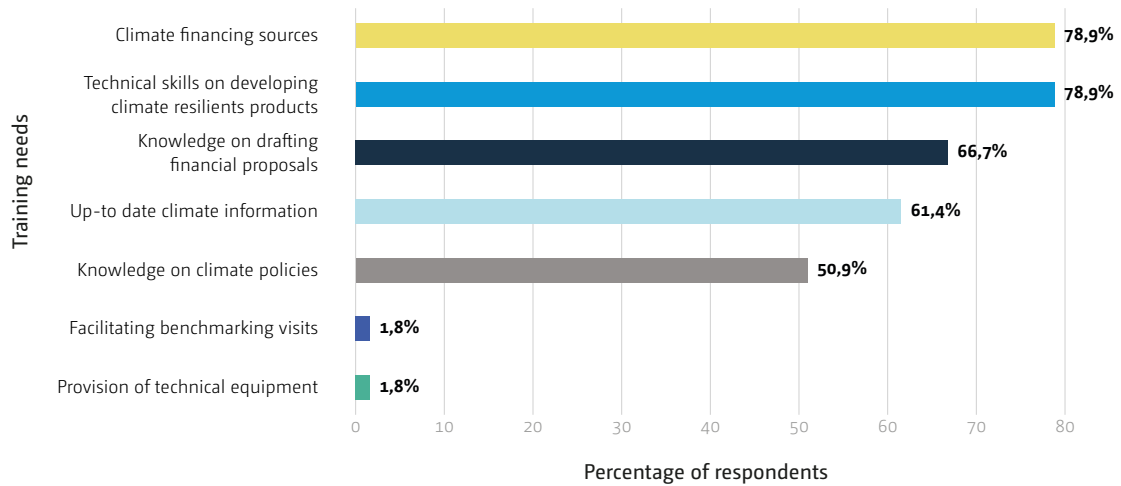
110 Red Cross Red Crescent Climate Centre, Opportunities and Barriers to The Access and Use of Climate Information for Small and Medium Enterprises (SMEs) in Uganda and Kenya (Red Cross Red Crescent Climate Centre, 2019). Available at: <https://www.climatecentre.org/downloads/files/Climate%20Ready%20Enterprises%20SME%20consultations%20synthesis%20report%20V1.pdf>

111 Crick, Florence, et al., Enabling private sector adaptation to climate change in sub-Saharan Africa, (Wiley Interdisciplinary Reviews: Climate Change, 2018).

In response to the question about organizational training needs to enhance the response to climate change, respondents prioritized: climate financing sources (78.9%); technical skills on developing climate-resilient products (78.9% each); knowledge on drafting finance proposals (66.7%), provision of up-to date

climate information (61.4%) and knowledge of climate policies (50.9%). The “Others” category encompassed “Facilitating benchmarking visits” and “Provision of technical equipment” as the needs required to improve climate response. **Figure 8** below captures the training needs identified by the respondents.

Figure 8 - Organizational training needs identified by SMEs to enhance their response to climate change (Multiple choice; n = 58)



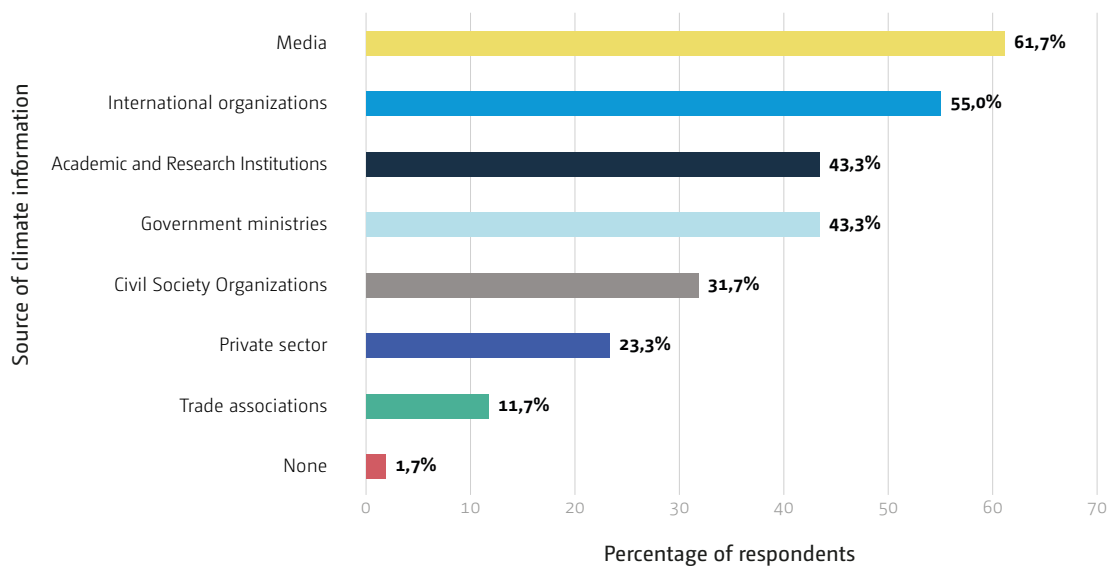
3.2 Status of Capacity Building Activities and Programmes

3.2.1 Overview of past and existing programmes and activities by academia and research organizations

Academia and research organizations in the ESA region are actively involved in climate change capacity building. However, the largest number of respondents to the field survey conducted under this study highlight that most of the information they get to enable them respond

to climate change comes from the media outlets (61.7%), followed by international organizations (55%), government ministries tie in third with academic and research institutions at (43.3%). This is depicted in **Figure 9** below. There is, therefore, scope to increase the involvement of academia and research organizations in climate-related capacity building to establish these institutions as leading purveyors of climate information. This would necessitate strengthening the specific institutional capabilities which are essential for the mainstreaming of adaptation and mitigation measures in development actions.¹¹²

112 Clare Shakya, et al., Building Institutional Capacity for Enhancing Resilience to Climate Change: An Operational Framework and Insights from Practice (IIED,2018).

Figure 9 - Sources of Climate Information for SMEs (Multiple choice; n = 60)

Academia and research organizations have an invaluable role to play in providing clear, credible information through relevant capacity building and training activities that promote SME engagement in climate change adaptation and mitigation actions. They are trusted as an objective and quality source of information. The survey results had 71.7% of the respondents judging the information they received as fair to excellent. While commendable, there is room for improvement in the quality to ensure that it is rated extremely highly since only 11.7% got the top grade of excellent, with the same number viewing the information they got as very poor.

These institutions also have a responsibility to encourage climate change actions that are gender-responsive and transformative, by encouraging the equal participation of both men and women in learning platforms, research programmes and in a variety of capacity building initiatives. **Annex E** and **Annex F** set out academic institutions and research institutions involved in climate capacity building, respectively. Best practice examples include:

- i. The University of Cape Town runs the African Climate and Development Institute which is focused on fostering collaborative research and training related to climate change.¹¹³

The University offers a Climate Information Platform that is valuable as it offers variable detailed information on climate change which can be utilised by the SMEs to develop climate change mitigation actions.¹¹⁴ The University also contributes to the preparation and dissemination of the Climate Change Transparency Report.¹¹⁵

- ii. The University of Limpopo has organized conferences on climate change.¹¹⁶ It has also developed two centers of excellence; the Risk and Vulnerability Science Centre (RVSC in 2012) and the Africa Centre for Sustainability Accounting and Management (ACSAM in 2013), through which it works with communities to reverse and redress some of the critical environmental, social, economic, and governance effects of climate change as well as persistently implementing and evaluating adaptation responses.¹¹⁷
- iii. The University of Nairobi has established academic centres offering undergraduate, graduate and postgraduate programmes related to climate change. These include the University's Institute for Climate Change and Adaptation that focuses on climate risk management and food security, technology development, human dimensions and health,

113 Penny Urquhart, et al., "Strengthening University Contributions to Climate Compatible Development in Southern Africa"(2014).

114 <<https://cip.csag.uct.ac.za/webclient2/app/>> accessed on 30 May 2021

115 <<https://www.news.uct.ac.za/article/-2020-11-13-online-launch-of-the-climate-transparency-report-2020>> accessed on 30 May 2021

116 <<https://www.ul.ac.za/globalchange2018/>> accessed on 30 May 2021

117 <https://www.ul.ac.za/application/StoryAdmin/index.php?Entity=Story_Comments&TheID=587> accessed on 30 May 2021

water environment and ecosystems, policy and communication as the major thematic areas. The institute also has undertaken wide research on climate change effects on small holder farmers and climate adaptation. Other University entities include the University's Centre for Advanced Studies in Environmental Law and Policy (CASELAP) and the Wangari Maathai Institute for Peace and Environmental Studies which cover modules on climate-related subjects in their curriculums.

- iv. The Strathmore University in Kenya also presents a good case study as it offers tailor-made technical training on sustainability through the Strathmore Center for Sustainability Leadership¹¹⁸ launched in 2016. The University also hosts the Kenya Climate Innovation Centre¹¹⁹ that provides incubation, business advisory and financial services to entrepreneurs with innovative solutions

for combating climate change. Strathmore University has also set up a UNESCO Chair for Climate Change Resilience and Sustainability.¹²⁰ UNESCO Chairs are programs established through agreements between UNESCO and institutions of higher learning with the aim of initiating programmes that advance learning and research in priority areas for UNESCO.¹²¹ The UNESCO Chair at the University is slated to last five years (renewable) and the chair will encompass the disciplines of climate change adaptation and mitigation, access to electricity, energy efficiency, education of youth and women, and public policy. The chair plans to collaborate with inter alia, the private sector, and academia, to develop and disseminate transformative ideas and innovations within its subject areas. Through this work, the project will help societies weather and thrive through the negative effects of climate change.

118 < <https://sbs.strathmore.edu/centers/center-for-sustainability-leadership/> > accessed 03 June 2021

119 < <https://www.kcicgroup.org/> > accessed 03 June 2021

120 < <https://strathmore.edu/news/strathmore-to-set-up-unesco-chair-to-address-climate-change/> > accessed 03 June 2021

121 < https://www.bing.com/search?q=UNESCO+chairs&q&form=QBRE&msbrank=6_6_0&sp=1&pq=unesco+chair&sc=6-12&sk=&cvid=9B0AFE8FF33A4CA09FAF175A31EC4A58 > accessed 03 June 2021

3.2.2 Overview of National Level Programme and Activities

There is at least one capacity building programme either relating to mitigation or adaptation actions;

or both; in most of the ESA countries that impact the capacity of SMEs in addressing climate change as set out in **Table 3** below:

Table 3 - National level programmes focused on climate change capacity building

Country	Programme/ Activity	Description	Duration	Status
Botswana	Climate Change, Food Security and Health project. ¹²²	A research project conducted by University of Botswana and funded by IDRC whose aim was to assist the farmers around the Okavango Delta develop coping strategies for adaptation in areas of food security and health needs as a result of climate change.	2010-2014	Unknown
Ethiopia	Climate change adaptation in agriculture and natural resources management ¹²³	The project, run by Wageningen University, is geared towards capacity development and knowledge sharing on climate change adaptation actions. The project has set up training courses on climate change adaptation at the University which provide support to bridge the gap between the NAPA and the actual implementation of adaptation strategies in Ethiopia.	Ongoing	Ongoing
Kenya	NETFUND's capacity building programme. ¹²⁴	<p>This program is conscious of the fact that institutions often lack technical and financial resources to adapt to climate change issues and environmental problems. The programme broadly focuses on provision of technical and financial resources, training, environmental education and public awareness, to organizations and citizens to consciously mainstream environmental management into their daily lives and practices.</p> <p>One key priority of the programme is supporting public and private entities in Kenya to aid in the country's transition to a green economy. The institutions targeted to benefit from this programme include national county governments, civil societies, corporate bodies and SMEs.</p>	-	Ongoing

122 Crawford, A, Review of current and planned adaptation action in Botswana, CARIAA Working Paper no. 7. (International Development Research Centre, 2016).

123 <https://vita.ie/eritrea/>

124 Capacity Building - National Environment Trust Fund (NETFUND), <http://www.netfund.go.ke/capacity-building/>

Country	Programme/ Activity	Description	Duration	Status
Lesotho	Improvement of Early Warning System to Reduce Impacts of Climate Change and Capacity Building to Integrate Climate Change into Development Plans. ¹²⁵	In 2011, the Government of Lesotho secured funding from the Global Environment Facility's Least Developed Country Fund to implement the Medium-Sized project, Improvement of Early Warning System to Reduce Impacts of Climate Change and Capacity Building to Integrate Climate Change into Development Plans. The objective of the project was to foster technical and human capacity in climate change forecasting and monitoring to facilitate proper climate change adaptation planning. Among stakeholders involved in the implementation of the project were schools that participated in the development of a curriculum that takes into account climate change considerations in education systems.	2011-2017	Completed
Malawi	Pig Farming as a Climate Change Adaptation Activity ¹²⁶	Due to failure in crop yields in the country, the government of Malawi with support from UNDP and the Global Environment Facility (GEF) Least Developed Countries Fund is assisting selected local communities to undertake pig farming. The project has mapped various ways in which communities can minimize disruptions from climate change crisis which include training the local farmers on alternative ways of generating income to counter income shortages emanating from unpredictable rainfall shortages that lead to low crop yields. The project aims to improve the resilience of these farmers to deal with climate change impacts.	-	-
Mozambique	Global Water Partnership's Water, Climate, and Development Programme ¹²⁷	The capacity building programme facilitated by the WACDEP Capacity Building Team for Mozambique and the Mozambique Country Water Partnership was launched in 2014 through a capacity building programme. Participants included private sector stakeholders and academia. The programme aims at building capacities for stakeholders to handle climate change management issues.	Unknown	Unknown
Namibia	Developing and Testing a Rangeland Production Early Warning System with Livestock Farmers in Namibia ¹²⁸	The project's targets at shielding livestock farmers in the country from weather shocks such as drought by building their capacity to make informed decisions on the state and productivity of their rangelands. One of the project's activities involved conducting a training programme on that informs people at local, regional and national level on desertification and appropriate counter-measures.	2015-2017	Unknown

125 Improvement of Early Warning System to Reduce Impacts of Climate Change and Capacity Building to Integrate Climate Change into Development Plans | Global Environment Facility (thegef.org), <http://www.thegef.org/project/>

126 Supporting communities in climate change adaptation activities | UNDP in Malawi, <http://www.mw.undp.org/content/malawi/en/home/presscenter/articles/2018/04/23/supporting-communities-in-climate-change-adaptation-activities.html>

127 WACDEP Mozambique Capacity Building Programme Launched - GWP, <https://www.gwp.org/en/GWP-SouthernAfrica/About-GWP-SAF/more/News/WACDEP-Mozambique-Capacity-Building-Programme-Launched/>

128

Country	Programme/ Activity	Description	Duration	Status
Rwanda	Project by the Nile Basin Discourse Forum in Rwanda ¹²⁹	The project targets building capacity and raising awareness for a sensitive community on climate change adaptation in Rwanda. The targets of the project included building capacity of civil societies and journalists on climate change adaptation, disseminating information on climate change adaptation, documenting best practices of climate change adaptation and building capacity building of civil organizations to tackle climate change.	2009-2010	Completed
South Africa	Climate Change Capacity Building ¹³⁰	The project aims at improving human and institutional capacity towards attainment of low carbon development goals. Some of the activities to be undertaken under the project included conducting trainings and workshops on the linkage between climate change and gender.	2016-2018	Unknown
Tanzania	Mitigation of Climate Change in Agriculture (MICCA) ¹³¹	The project conducted a climate change capacity needs assessment within the Morogoro region in Tanzania. The CSA made recommendations for capacity development.	Unknown	Unknown
Uganda	The Low Emission Capacity Building (LECB) Project for Uganda ¹³²	The project aims at building the technical and institutional capacity in development of GHG inventory systems and NAMA. As a result, the project aids in developing the country's capacity to deal with climate change.	2011-2017	Completed
Zambia	Zambia-EU-UNDP Low Emission Capacity Building Programme (LECBP) ¹³³	The project aims at building the technical and institutional capacities and coordinating public private local initiatives on climate change. Some of the mapped activities include strengthening implementation of climate change policies, enhancing capacity for implementation of NAMA and LEDs.	2011-2016	Completed
Zimbabwe	Building Climate Resilience of Vulnerable Agricultural Livelihoods in Southern Zimbabwe ¹³⁴	Some of the mapped activities under the project include building the capacity of farmers and the capacity of the institutional staff on weather information, water management and agricultural planning.	2020-2027	Pending

129 Rwanda - Building capacity and raising awareness for a sensitive community on climate change adaptation - Arkleton Trust, Rwa<https://arkletontrust.co.uk/rwanda-building-capacity-raising-awareness-sensitive-community-climate-change-adaptation/nda> - Building capacity and raising awareness for a sensitive community on climate change adaptation - Arkleton Trust

130 Capacity Building Programme to Implement South Africa's Climate National System | Global Environment Facility (thegef.org) , <https://www.thegef.org/project/capacity-building-programme-implement-south-africas-climate-national-system>

131 United Republic of Tanzania | Mitigation of Climate Change in Agriculture (MICCA) Programme | Food and Agriculture Organization of the United Nations (fao.org), <http://www.fao.org/in-action/micca/on-the-ground/africa/united-republic-of-tanzania/en/>

132 The Low Emission Capacity Building (LECB) Project for Uganda | UNDP in Uganda, [https://www.ug.undp.org/content/uganda/en/home/operations/projects/SustainableInclusiveEconomicDevelopmentProgramme/THELOWEMISSIONCAPACITYBUILDINGPROJECTFORUGANDA.html#:~:text=What%20is%20the%20project%20about%3F&text=This%20EU%2DUNDP%20Project%20focuses,and%20verification%20\(MRV\)%20systems](https://www.ug.undp.org/content/uganda/en/home/operations/projects/SustainableInclusiveEconomicDevelopmentProgramme/THELOWEMISSIONCAPACITYBUILDINGPROJECTFORUGANDA.html#:~:text=What%20is%20the%20project%20about%3F&text=This%20EU%2DUNDP%20Project%20focuses,and%20verification%20(MRV)%20systems)

133 Zambia-EU-UNDP Low Emission Capacity Building Programme (LECBP) | Open Energy Information (openei.org), [https://openei.org/wiki/Zambia-EU-UNDP_Low_Emission_Capacity_Building_Programme_\(LECBP\)](https://openei.org/wiki/Zambia-EU-UNDP_Low_Emission_Capacity_Building_Programme_(LECBP))

134 Building Climate Resilience of Vulnerable Agricultural Livelihoods in Southern Zimbabwe | UNDP in Zimbabwe , https://www.zw.undp.org/content/zimbabwe/en/home/library/environment_energy/building-climate-resilience-of-vulnerable-agricultural-livelihood.html

3.2.3 Overview of regional level programmes and activities

There are regional level programmes in the ESA region focused on climate change action which have an impact on SMEs climate change capacity building. These are set out in Table 4 below:

Table 4 - Regional level programmes on climate change capacity building

Regional Programme	Countries involved	Description	Duration	Status
Southern African Regional Universities Association Climate Change Capacity Development Programme. ¹³⁵	Membership as of 2021 was 16 countries all which are SADC members: Angola, Botswana, Comoros, Democratic Republic of Congo, Eswatini, Lesotho, Madagascar, Malawi, Mauritius, Mozambique, Namibia, Seychelles, South Africa, Tanzania, Zambia and Zimbabwe.	SARUA is a vice chancellor-based membership for public and private universities in the SADC region. The five-year Climate Change Capacity Development programme has been developed by SARUA. It aims at building capacity for climate change development which is emerging as a platform for significant collaboration across the academic sector. Several workshops for research institutions and academic institutions on capacity building have been held under the project. The project has further highlighted that there is need for capacity building pathways on research capacity, and curriculum innovation capacity in institutions to be bolstered.	Unknown	Unknown
Resilience in the Limpopo River Basin (RESILIM) ¹³⁶	Botswana, Mozambique, South Africa and Zimbabwe	One of the objectives of the program is to develop the capacity of the relevant stakeholders for sustainable management of water and biodiversity resources. Training and capacity building were a part of nearly every RESILIM activity. Over its five-year lifespan it helped 4,435 people, 52 percent being female, increase their climate change adaptation skills through 50 trainings and workshops. Training topics included disaster management, vulnerability assessments, water quality monitoring, integrated water resources management, database and Geographic Information System skills, climate change science and adaptation strategies etc.	2012-2017	Completed
Adaptation at Scale in Semi-Arid Regions ¹³⁷	Programme works in 8 countries in Southern Africa, East Africa, West Africa, and South Asia: Botswana, India, Ethiopia, Ghana, Kenya, Mali, Namibia, and Uganda	The project focuses on research; capacity building; knowledge communication in climate change adaptation actions. Capacity building has been undertaken by enhancing conducting workshops and trainings to enhance the research skills of the project members and enhancing the capacity of vulnerable groups such as women.	2014-2019	Unknown

135 sarua_vol2no1_angola_country_report.pdf (adeanet.org), https://www.adeanet.org/en/system/files/sarua_vol2no1_angola_country_report.pdf

136 RESILIM_Final_Report.pdf (chemonics.com), https://www.chemonics.com/wp-content/uploads/2018/01/RESILIM_Final_Report.pdf

137 Home | Adaptation at Scale in Semi-Arid Regions (uct.ac.za), <http://www.assar.uct.ac.za/>

Regional Programme	Countries involved	Description	Duration	Status
Climate Information for Resilient Development in Africa ¹³⁸	Benin, Burkina Faso, Liberia, Sierra Leone, Sao Tome and Principe, Ethiopia, the Gambia, Uganda, Tanzania, Malawi and Zambia	The programme is focused on strengthening national climate information systems and draw upon a platform of knowledge management. The programme calls out for capacity building as one of the ways which African countries should prioritize to build the continent's resilience to climate change.	-	Ongoing
Southern Africa Region Environmental Program ¹³⁹	Angola, Namibia and Botswana	This project aims to build capacity among a range of stakeholders to integrate climate information into policies and practices with a focus on addressing threats to ecosystems and biodiversity, improving access to water supply and sanitation, and improving sustainable and climate-resilient livelihood opportunities. Expected outcomes of the program are that the adaptive capacity of the communities will be increased	2010-2015	Unknown
Workshop on Adaptation Finance for African Region. ¹⁴⁰	Angola, Congo, Egypt, Eswatini, Gambia, Ghana, Kenya, Lesotho, Mozambique, Namibia, Nigeria, Rwanda, Seychelles, Sierra Leone, South Sudan, Sudan, Uganda and Zimbabwe	UNDP-UN Environment National Adaptation Plan Global Support Programme (NAP-GSP) organised two four-day training workshops on Adaptation Finance for the African region, one for anglophone and one for francophone countries. The training workshops took place from 25-28 September 2018 and 1-4 October 2018 respectively, in Kigali, Rwanda.18 African countries participated.	-	-
Capacity building for coastal EBA in SIDSprogramme ¹⁴¹	-	The project aims to help vulnerable communities in Africa and Asia-Pacific to adapt to the impacts of climate change by inter alia improving their capacity to plan.	Unknown	Unknown
Africa, the Caribbean, and the Pacific Capacity building project ¹⁴²	Countries involved are situated in the African, Caribbean and Pacific hub.	This programme was designed to address challenges facing African countries in fulfilment of their obligations under MEAs. It focuses on capacity building related to multilateral environmental agreements in Africa, Caribbean, and the Pacific countries program whose objectives include building national and institutional capacity of the ACP states.	-	-

138 Programme on Climate Information for Resilient Development in Africa (CIRDA) | UNDP Climate Change Adaptation ([adaptation-undp.org](https://www.adaptation-undp.org)) , <https://www.adaptation-undp.org/projects/programme-climate-information-resilient-development-african-cirda#:~:text=The%20Programme%20on%20Climate%20Information,systems%20as%20well%20as%20to>

139 Southern Africa Regional Environmental Program | Globalwaters.org, <https://www.globalwaters.org/content/southern-africa-regional-environmental-program>

140 Africa Regional Training Workshop on Adaptation Finance | National Adaptation Global Support Programme, https://www.globalsupportprogramme.org/africa_finance

141 Seychelles | Ecosystem-based Adaptation through South-South Cooperation (ebasouth.org)

142 UN Environment Program (UNEP), Environmental Change through Capacity Building: Africa, the Caribbean, and the Pacific – Capacity building related to multilateral environmental agreements (MEAs) in African, Caribbean and Pacific (ACP) countries, (UNEP, 2017).

Regional Programme	Countries involved	Description	Duration	Status
Lake Victoria Environmental Management Programme ¹⁴³	Burundi, Kenya, Rwanda, Tanzania, Uganda.	This regional initiative targets to enhance institutional capacity building to develop climate resilience within the Lake Victoria basin. It also targets building the capacity of women and children who are to benefit from sustainable land and water management practices, reduced environmental degradation, improved climate resilience, and enhanced livelihood opportunities in selected hotspot areas.	-	Ongoing
The Regional Universities Forum for Capacity Building in Agriculture (RUFORUM) ¹⁴⁴	Network of 129 African Universities including from the ESA region	The initiative aims to strengthen the capacities of universities to foster innovations responsive to the demands of smallholder farmers through the training of high-quality researchers, the output of impact-oriented research and the maintenance of collaborative working relations among researchers, farmers, national agricultural research institutions and governments	-	Ongoing

143 Government of Uganda ,Guidelines for The Integration of Climate Change In Sector Plans and Budgets.(Government of Uganda, 2014) Available at: <http://ccd.go.ug/wp-content/uploads/2018/04/National-Climate-Change-Mainstreaming-Guidelines-.pdf>

144 About RUFORUM - RUFORUM Impact, <https://ruforumimpact.org/about/>

3.3 Gaps from Existing Capacity Building Programmes

Capacity building is an essential aspect of climate change initiatives,¹⁴⁵ and undertaking capacity building initiatives and programmes for relevant stakeholders is imperative for developing countries in the implementation of their NDCs.¹⁴⁶ A review of the existing capacity building programmes initiated by government, academia, research institutions and development partners to build local capacity on climate change, shows that the ESA region has made strides in developing climate change capacity building programmes at the regional and national level, as well as at the local institutional level. In many cases the capacity building programmes do not specifically target SMEs, but they do have a significant bearing on SME activities.

Gaps in these capacity building programmes however exist. For example, SMEs surveyed did not rate highly the quality of climate information they receive from various sources such as media, government, and academia and research organizations (35% of the respondents rated this information as fair, 16.7% as poor and only 11.7% as excellent). This low rating highlights a failure of the different capacity building programmes to adequately fill key SME knowledge needs. It points to a gap in the engagement of specialists able to understand and articulate climate change concerns for SMEs, for example by using tools and methods that reach a wide cross-section of SMEs, and factor in cultural, gender, and community participation concerns. It also highlights the need for contemporary, up-to-date knowledge in different climate change specializations amongst trainers, and their consistent up-skilling through training of trainers' programmes to ensure capacity building programmes are robust and on target. In an interview with a key informant this gap was captured as follows:

“There is need to unpack climate information especially in the context of the private sector, so that they see where they come in and can make sense of all the climate information and models that we keep researching on as academic and research institutions. Currently, people rely almost exclusively on weather updates and predictions that are not always trusted.”

Whereas the role of academics and researchers is particularly important to ensure they provide the evidence base to inform climate action and train the human resource necessary to work in SMEs and other business enterprises on climate adaptation and mitigation initiatives, the failure to meet SME knowledge needs could be further tied to the formal nature of capacity building programmes so far set up by these institutions. For example, there is a proliferation of universities offering climate and climate change-related courses. The formal design of the curriculum at this level and the structured delivery may not always meet the needs of SMEs, who may not take the time to attend certain programmes of learning due to length or cost concerns. Structuring formal learning to leverage on technology such as providing short modules through online learning, as well as providing a flexible combination of both formal and informal learning may present SMEs with a time and cost-effective way to develop the knowledge and skills necessary to take climate action.

Another gap that emerges in analysing the existing capacity building programmes in the ESA region is that programmes are heavily focused on climate change and its impacts on agriculture, largely undertaken in the rural parts of ESA countries. This is beneficial as agriculture remains the backbone of many ESA region country economies and is a key focus for SMEs who increasingly manage private sector value chains, purchasing commodities directly from smallholder farmers and then processing, packaging, transporting, and selling food products to the urban and rural consumer.¹⁴⁷ However, there is limited focus on SME traders in urban areas and their needs. Such SMEs are often involved in a variety of sectors such as retail, manufacturing and the services industry. This is despite that urban centers contain a sizable number of SMEs and contribute significantly to GDP. Such businesses are affected by climate change impacts and have capacity building needs. These needs revolve around know-how on technical issues, finance, legal, policy and regulatory matters, as well as general climate change information to enable their businesses and organizations to respond better to climate change, especially with regards to adaptation. This calls for the recognition of the different roles SMEs play in the economy in both the rural and urban context and how these roles are impacted by climate change, to be factored into any climate change programme.

145 < <https://www.iied.org/capacity-building-for-climate-action-ambition-what-have-we-learned> > accessed on 02 June 2021

146 United Nations Framework Convention on Climate Change (UNFCCC) Paris Committee on Capacity-building (PCCB) Bonn, February 2020. < https://unfccc.int/sites/default/files/resource/2nd_CB_Hub_SummaryReport_0.pdf >

147 Alliance for a Green Revolution in Africa (AGRA), The Hidden Middle: A Quiet Revolution in the Private Sector Driving Agricultural Transformation, Africa Agriculture Status Report 2019 (AGRA, 2019).

This lack of holistic thinking on the linkages of climate issues into different sectors and businesses operating in different environments is a huge gap that requires to be filled. For example, as one key informant indicated, most of the research and academic information available on climate change actions is on crop and livestock which leaves out other stakeholders such as businesspeople in urban centres. There is also a dearth of information on how climate information links with urban areas. For example, information on how climate change affects the pricing of goods and services (e.g., shared taxis and their pricing in the wet and dry). This would require Universities to develop and impart skills on how to automate prediction to link income and costs due to climate changes.

3.4 Opportunities from Existing Activities for Filling Identified Gaps

Academic and research institutions are critical in the development and implementation of capacity building initiatives.¹⁴⁸ Creation of awareness through training and dispersion of climate change-related education can be easily achieved through academic and research institutions. Academic institutions in the Southern Africa region have actively created awareness on climate change actions through the implementation of the SARUA programme.¹⁴⁹ It is anticipated that the public and private universities in the entire ESA region will actively undertake research and come up with climate change mitigation and adaptation solutions.¹⁵⁰

The majority of the ESA countries have set out commitments in their NDCs to ensure the participation of and partnership with academic and research institutions. A common approach taken by the ESA countries is the integration of climate change-related studies in their education curriculum.¹⁵¹ For instance, the climate change workshop held in Ethiopia on 24 November 2016 aimed at improving Ethiopia's Strategy for Climate Change Education, pronounced itself on a number of priority actions such as the "development

of supplementary materials for teachers and students; the development of guidelines to integrate climate change within regional curricula; and to capitalize on the existing school clubs."¹⁵²

Identification of climate adaptation measures requires undertaking research to provide viable solutions that meet the specific needs of those affected by climate change. The link between the private sector, government and the academia and research institutions are therefore important in the development and implementation of mitigation and adaptation measures. For academic and research institutions to actively be engaged in capacity building climate adaptation and mitigation actions, the public sector must be willing to support the research and facilitate climate change dialogues.

Collaboration between the private sector, academic and research institutions in climate change actions is important and is ongoing in many countries in the ESA region. In Botswana for example, a team of researchers and practitioners from the University of Botswana (UB), University of Cape Town (UCT), and Oxfam GB successfully worked across the country to reach out to different audiences, including the private sector, in an adapting to climate change project in semi-arid Botswana (Bobirwa sub-district).¹⁵³ In Kenya, the National Environment Trust Fund (NETFUND) has a capacity building programme that broadly focuses on the provision of technical and financial resources, training, environmental education and public awareness, to organisations, including SMEs, to consciously mainstream environmental management into their daily lives and practices. This initiative by NETFUND has attracted numerous sponsors from the private sector in implementation of its programmes.¹⁵⁴

It is, however, important to note that a large proportion of the survey respondents (82%) were not aware of any existing partnerships between SMEs and academia/research organizations in their countries, highlighting the need for more awareness on the climate initiatives being undertaken in every country at any given time.

148 European Capacity Building Initiative, Pocket Guide to Capacity Building, (IIED, 2018). Available at: <https://pubs.iied.org/sites/default/files/pdfs/migrate/G04165.pdf>

149 < <https://sarua.africa/> > accessed 2 June 2021

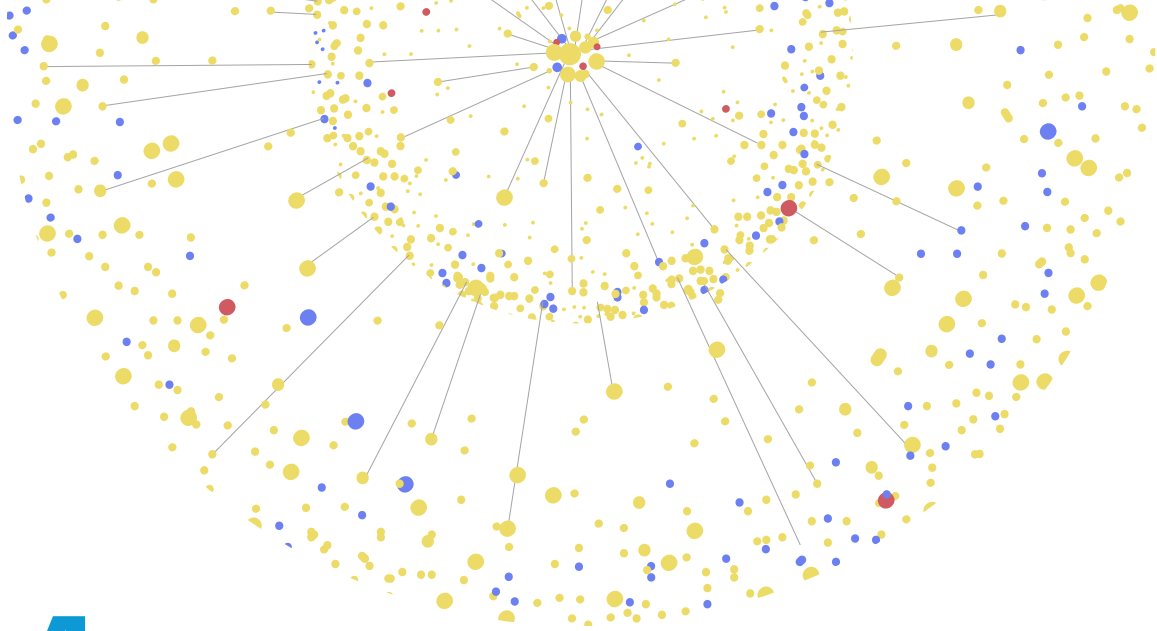
150 Gilbert Nakweya, "Governments must work with universities on climate change" University World News (East Africa, 16 June 2017). Available at: <https://www.universityworldnews.com/post.php?story=20170613122353675>

151 <https://cdkn.org/project/embedding-ccd-into-university-curriculum-in-southern-africa/?loclang=en_gb>

152 Education for Climate Change in Ethiopia: The Government Leads a Discussion on Priorities for the Climate Resilient and Green Economy Strategy. Available at : Education for Climate Change in Ethiopia: The Government Leads a Discussion on Priorities for the Climate Resilient and Green Economy Strategy | UNITAR

153 Adaptation at Scale in Semi-Arid Regions (ASSAR), Adapting to climate change in semi-arid Botswana: ASSAR's key findings, (ASSAR, 2018).

154 Capacity Building - National Environment Trust Fund (NETFUND), <https://www.netfund.go.ke/capacity-building/>



4

Recommendation

4.1 Five Pillars for Comprehensive Capacity Building Strategy

The majority of the respondents in the field survey believe that improving climate awareness campaigns coupled with partnerships to provide skills and targeted knowledge to SMEs are among the best ways to improve the capacity of SMEs to take climate action. Many participants highlighted the importance of technical and financial training on climate issues as a key area to enable effective participation in climate action. Finally, it was indicated that provision of financial support to SMEs for climate response is needed to improve the SME capacity to respond to climate change.

All these elements should be accounted for when developing a comprehensive capacity building strategy. In addition, there is a need to better inform SMEs on the policies affecting them as well as including them in the policy making processes. As such, this report recommends a multi-actor approach that brings together government, private sector, academia and research organizations, leveraging on the different complementary strengths and knowledge of each of the entities. The UNFCCC Paris Committee on Capacity-building (PCCB) buttresses the importance of meaningful partnerships, highlighting that capacity building

efforts in climate action require coherence and coordination of the different actors.¹⁵⁵

To answer these findings the study recommends ESA countries to develop comprehensive capacity building strategies for SME participation in climate action. For the development of these strategies the study puts forwards five pillars to support and guide the process: I) Policy reform to enhance SME capacities to mitigate and adapt to climate change, II) Development of guidelines on capacity building that identify key entry points and expectations, III) Support for the development of collaborative capacity building programmes, IV) Identification of SME-specific needs for capacity building and V) Improvement of SME access to climate finance. Finally, six concrete steps for developing a capacity building programme are suggested.

4.1.1 Pillar I: Policy reform

Policy interventions can influence SMEs' ability to respond to climatic risks.¹⁵⁶ There is therefore need for a redoubling of effort by governments in the ESA region, to develop through a collaborative process with other stakeholders, the requisite policies that enhance SMEs ability to mitigate and adapt to climate change. This includes policies that drive climate change capacity building initiatives through specific legal and policy provisions that incentivize training and capacity building, such as Kenya's Climate Change Act 2016

155 United Nations Framework Convention on Climate Change (UNFCCC) Paris Committee on Capacity-building (PCCB, The 2nd Capacity-building Hub: Summary Report. < https://unfccc.int/sites/default/files/resource/2nd_CB_Hub_SummaryReport_0.pdf > accessed on 3 June 2021

156 Florence Crick et al, "How do African SMEs respond to climate risks? Evidence from Kenya and Senegal," World Development 108 (2018) 157-168.

which provides that the Government shall provide incentives to persons involved in the conduct of accredited training in programmes that are aimed at eliminating climate change.¹⁵⁷

In addition to explicit laws and policies on capacity building, government is well-positioned to build private sector capacity in climate action by instituting climate smart policy reforms that encourage innovative business models fostering private investments in key sectors of the green economy; providing tax and other fiscal incentives; and creating an enabling environment to allow ease of carbon and climate finance flows in the country. Climate smart policy reforms create an enabling environment for SMEs, ensuring they are attuned to climate change and the opportunities for adaptive or mitigation action. Such SMEs are in turn receptive to initiatives for capacity building and training that develop climate knowledge, awareness and technical skills, raising the uptake for capacity building programmes amongst SMEs and the wider private sector.

Policy reforms would largely be informed by the country's NDC, NAP and other national plans and strategies, and these should be developed through a collaborative process between government, private sector and other stakeholders. As at the time of study, only five countries in the ESA region had submitted their updated NDCs and only two their NAPs and even so, the submitted NDCs and NAPs fail to give a specific focus on SMEs' role in climate change actions. It is therefore imperative that the private sector and SME stakeholders such as SME associations are factored into these plans and policies and actively involved in their formulation. The role of capacity building in actualizing climate goals should also be clearly articulated.

It is recommended to enhance the private sector's involvement in climate change law and policy formulation through the tool of public participation, including in the formulation of National Development Strategies, NDCs, NAPs, and Long Term Low Emission Development Strategies. This necessitates greater SME stakeholder engagement, for example by attending dialogue forums organized by SME/private sector member associations, or by government during the law and policy-making process, to deliberate on proposed laws and policies and providing comments to these drafts.

In addition to enhancing the inclusion of the private sector in the formulation of laws and

policies, adequate follow up is necessary so that SMEs understand the applicable implementing rules and regulations. Incentives (and disincentives) need to be well understood such that SMEs can make well informed decisions. An example of private sector associations which include SMEs in their membership that are active in taking climate action focusing on both mitigation and adaptation is the Kenya Private Sector Alliance (KEPSA) which has been engaged in multi-stakeholder forums on climate law and policy-making and have also endorsed the formation of the Climate Business Information Network Kenya as a one-stop platform for sharing, capacity building and reporting of climate change adaptation solutions by Kenyan enterprises.

SME climate law and policy sensitization forums in the different ESA region countries are an important step in integrating SMEs into climate response initiatives through the design of programmes which can provide information to SMEs about how climate change policies are being developed and implemented, and this can be strengthened by being done in collaboration with academia and research organizations.

4.1.2 Pillar II: Guidelines on Capacity Building

A further recommendation is the development of a guideline on climate change capacity building for SMEs, to provide direction to both policymakers and the private sector on the key entry points for building SME knowledge and skills on climate action. This guideline should be dovetailed with a process that builds SME understanding on climate policies and what their implementation entails for their day-to-day operations, and how their needs including those related to capacities can be integrated in the development and implementation of climate change plans and policies.

This study has shown that across the board, the submitted NDCs and NAPs do recognize private sector as a key target audience in climate change actions but fail to give definite roles to the private entities. As such, guidelines on the integration of SMEs are needed to set out details on the steps countries are to take to ensure SME engagement in climate change capacity building initiatives as well as in agenda setting and, in the policymaking, and implementation process. There is also need for governments to incorporate gender-based approaches to capacity building programmes as well as in the development and

¹⁵⁷ Section 26 (1) (c), Climate Change Act, 2016.

implementation of related climate change plans and policies.

From the survey results, fewer than 10 per cent of respondents are involved in preparation of national climate change plans and strategies, and it is unclear to what extent SME interests are incorporated in the decision-making process; more so women-run SMEs. As such, the development and implementation of these plans should integrate gender considerations and any guideline on SME capacity building and inclusion should address the specific needs of women in all sectors and at all levels.

4.1.3 Pillar III: Collaborative capacity building programmes

It is important that academic and research institutions develop strong and structured collaborative links with each other, as well as with the private sector. This can be achieved through formulation of joint membership associations constituting the private sector, and academic and research institutions. Private sector, academic and research institutions can also jointly undertake climate change actions and programmes and the implementation of the programmes should as far as possible, include practical components at the business premises of the SMEs. This will result in mutual benefits to both the SMEs and the Universities as it will lead to practice-oriented programmes that are solution-focussed.

For SME capacity building programmes on climate action to be responsive, targeted and meet the real needs of the private sector there is also need for joint collation of data on climate impacts as well as regular opportunities for information sharing whereby research and academic institutions disseminate their research outputs to SMEs, to enable SMEs to take accurate and timely action to respond to climate change.

Additionally, the efforts in several ESA countries to develop innovation hubs by academic universities and research institutions should be upscaled and include partnerships with SMEs and other private sector players. The collaboration should be country-wide to ensure SMEs can reach out to climate innovation hubs at the University closest to them. For instance the Kenya Climate Innovation Centre is the first green innovation hub hosted by Strathmore University, and offers capacity building and financing options to new SMEs focused on addressing climate change in the country.¹⁵⁸ Currently in Nairobi, where

the University is based, there is scope for the replication of similar innovation hubs based across the country, to ensure that the prioritisation of skills-building on innovations focusing on climate responses and actions is not concentrated in the capital cities of many of the ESA countries, but is spread across the country, leaving no SME behind. Such a country-wide focus requires collaboration with sub-national governments who regulate the activities of SMEs at the sub-national level.

There is also potential for peer-to-peer learning exchanges between SMEs that have advanced practices or policies for example on assessing climate change risks, or between SMEs and larger corporations to build capacities, for example through the global compact or similar initiatives. There is also scope for cooperation amongst countries, for example through development of exchange programmes between universities and research organizations from within the region that have tailor-made programmes on climate action for SMEs. In addition to south-south collaboration, there is scope for collaboration with academic and research organizations outside the ESA region, such as collaboration with the United Nations University (UNU) that has programmes for local capacity building.

From the survey carried out under this study, a high percentage of the respondents do not know of any organized trainings in their countries and over 80 per cent of respondents were not aware of any existing partnerships between SMEs and academia/research organizations in their countries. The existence of capacity building initiatives without the awareness of potential beneficiaries on the existence of these initiatives is an issue that needs to be urgently solved in the different ESA region countries. This study recommends the establishment of an “ESA SME climate capacity building repository” that is updated regularly with details of academic and research projects and programmes of interest for SMEs.

The aim of such a repository would be to meet the immense need for awareness raising on the capacity building programmes ongoing in different countries in the ESA region, targeted at building the capacity of SMEs to take climate action. Though academic and research institutions in the ESA region have been active in climate change capacity building programs, respondents to the survey ranked these institutions as lagging behind media and international organizations, as their main sources of climate information.

Increased visibility of ongoing collaborative programmes will change this dynamic.

4.1.4 Pillar IV: SME-specific capacity building programmes

To be effective, capacity building programmes need to be SME-friendly. To do so, training providers ranging from the government, sub-national governments, academia and research institutions and non-governmental organizations need to develop collaborative and relevant high-quality training and research programmes which meet the needs of SMEs. Prior to the establishment of any capacity building programme, a proper needs assessment is essential to ensure that training providers identify, understand, and prioritize the needs of SMEs they are targeting. This can be done by carrying out surveys at the institution-level to assess the capacity building needs of users of academic and research institution programme.

As an example of surveys at the institutional level, the Institute for Climate Change and Adaptation at the University of Nairobi has conducted a study on "Assessing Climate Change Awareness among Staff and Students at the University of Nairobi which called on staff and students to fill in a questionnaire. The aim of the study was to evaluate knowledge and understanding, attitude, norms and practices regarding climate change among staff and students of the University, and the findings of the study would be used to develop programmes and curricula centred on enhancing climate change knowledge both within and outside the University community.¹⁵⁹ Needs assessments should also be done during the curriculum development and review processes by involving not just university or research institution staff but also a wide-range of external stakeholders such as private sector players/SMEs, to ensure private sector and specifically SME needs are factored in the curriculum.

Further, the delivery of training programmes should be needs-specific and structured to ensure length of time and cost concerns do not act as barriers for SMEs embracing learning and research opportunities. This is particularly in the case of women-run SMEs where low incomes and family obligations may limit the capacity of these SMEs to take on lengthy or costly capacity building

programmes. Short training modules through online learning, as well as providing a flexible combination of both formal and informal learning are therefore recommended as a time and cost-effective way to develop the knowledge and skills of SMEs to take climate action. Academic and research institutions can also increase awareness on climate change by ensuring that the information disseminated to the public is packaged in a clear and simple manner that is easily comprehensible. For instance, Mekelle University's (Ethiopia) course on capacity building and awareness creation on climate change impacts is translated into the local language.

While academic institutions regularly carry out research and produce reports, it is important that the outputs of such reports be unpacked and developed into user-friendly and business-focussed language to increase uptake and relevance among SMEs in the ESA region. Additionally, they need to develop context-specific solutions to climate change impacts. Countries have different operation systems, while the global North have formal systems the global South have informal systems, and it is counterproductive to import and implement solutions that do not fit local contexts.

With regards to content, capacity building programmes in the ESA region need to move beyond the current agriculture focus to other sectors where SMEs operate and need climate information to enable them to take action. While agriculture is the mainstay of most of the economies in the ESA region, the current trend towards industrialisation and urbanisation has seen many SMEs established and operating in urban areas and new non-traditional sectors. Aligning to these realities will make the capacity building programmes not only marketable but responsive to the gaps.

There is also a need to address the current gap in regional approach to climate response that is accessible easily to all stakeholders. ICPAC¹⁶⁰ for example is one of the regional arms concerned with climate change issues but is not accessible due to the pricing (USD 200 for memberships). This can be solved by domesticating such regional processes in Universities that are accessible and can expand the network easily, like WASCAL¹⁶¹.

¹⁵⁹ Personal communication to the author. May 25th, 2020.

¹⁶⁰ IGAD Climate Predictions and Application Centre (ICPAC) is a climate center accredited by the World Meteorological Organization. It provides Climate Services to 11 East African Countries that aim at creating resilience in a region deeply affected by climate change and extreme weather by providing an understanding of climate trends, building scenarios and analysing impacts. See: <<https://www.icpac.net/>> accessed on 2 June 2021

¹⁶¹ West African Science Service Centre on Climate Change and Adapted Land Use (WASCAL) is a large-scale research-focused Climate Service Centre designed to help tackle climate challenges by enhancing the resilience of human and environmental systems to climate change. The centre has strengthened the research infrastructure and capacity in West Africa related to climate change by pooling the expertise of ten West African countries and Germany. See: <<https://wascal.org/>> accessed on 2 June 2021

4.1.5 Pillar V: Access to Finance

Lack of financial resources hinders SMEs in the ESA region from taking climate action. This is despite the existence of funding sources both in the region and globally, and highlights that a main challenge for SMEs is a lack of awareness on the diverse sources of climate finance as well as a lack of expertise in developing fundable proposals to access such funding. There is therefore need for partnerships between SMEs and academic and research institutions, financial institutions, development cooperation agencies and bilateral and multilateral partners, for the design of capacity building programmes that build SMEs' capacity to understand and access climate finance.

Capacity building is needed to increase SME knowledge and understanding on opportunities available from a variety of financiers including multilateral funds such as the Global Environment Facility (GEF), Green Climate Fund (GCF) and the Adaptation Fund. Training on proposal development to enable SMEs to access financial support for climate action is also crucial.

Examples of collaborative capacity building programmes include the UNDP funded Capacity Building Support to the National Environment and Climate Change Fund (FONERWA), the Rwanda National Fund for environment and climate change. The programme which was implemented by the Rwanda Natural Resources Authority (RNRA) under the ministry of Natural Resources (MINERENA), included awareness raising to support the submission of good quality proposals and enhanced reporting on results.¹⁶²

Other programmes more specifically focus on building the capacity of SMEs, such as the German government funded project on 'financing and capacity building for micro and small climate-smart enterprises'.¹⁶³ The project has instituted Climate Finance Practitioner Labs in a number of countries, with two countries in the ESA region - South Africa and Uganda. The Labs promote the design, development and implementation of prototype financial products and instruments in the areas of climate adaptation and mitigation and improve access to finance for socially inclusive and climate-smart SMEs.¹⁶⁴

The above examples highlight the important role of international cooperation in building the capacity of SMEs to understand and access climate finance. Success of these initiatives is reliant on strong country level ownership, with local institutions like governments, academia and private sector all playing an active role in the capacity building programmes, supported by national and international agencies. There is scope for an access to climate finance programme for SMEs in the ESA region with priority SME sectors aligned with national climate action priorities, and local ownership embedded through the programme leveraging on partnerships with local academia and research organization who would play an important role in the training programmes. There would also be need for a training of trainers' component in the programme to enhance the capacities of trainers with the requisite knowledge and skills to assist SMEs in the region to engage more in climate action.

4.1.6 Design of an SME Capacity Building Support Programme

To help enhance the capacity on SMEs on climate action, it is recommended that a comprehensive capacity building programme be designed. This programme should include the following:

- i. Design of short courses on climate action for SMEs, collaboratively between a University and an SME association, with one of them focussing on gender aspects of climate action;
- ii. Preparation of practical information materials on climate action which presents the technical information on climate change in a language understood by SMEs;
- iii. Technical support to SMEs to develop climate action financing projects;
- iv. Support to SMEs for peer-to-peer learning from successful climate action initiatives;
- v. Regular capacity building webinars and seminars by experts on climate action;
- vi. Developing a portal on support and services available from various actors to SMEs and making this accessible to them for uptake.

¹⁶² UNDP, Capacity Building Support to National Environment and Climate Change Fund (FONERWA). Available at https://www.rw.undp.org/content/rwanda/en/home/operations/projects/poverty_reduction/capacity-building-support-to-national-environment-and-climate-ch.html. Accessed 2 June 2021.

¹⁶³ Federal Ministry for the Environment, Nature Conservation and Nuclear Safety, International Climate Initiative (IKI). Financing and capacity building for micro and small Climate-smart Enterprises: Filling the gap of the missing middle. Available at https://www.international-climate-initiative.com/en/details/project/financing-and-capacity-building-for-micro-and-small-climatesmart-enterprises-filling-the-gap-of-the-missing-middle-13_I+_041-328. Accessed 2 June 2021.

¹⁶⁴ Federal Ministry for the Environment, Nature Conservation and Nuclear Safety, International Climate Initiative (IKI). Financing and capacity building for micro and small Climate-smart Enterprises: Filling the gap of the missing middle. Available at https://www.international-climate-initiative.com/en/details/project/financing-and-capacity-building-for-micro-and-small-climatesmart-enterprises-filling-the-gap-of-the-missing-middle-13_I+_041-328. Accessed 2 June 2021

Annex A

List of ESA SMEs and Associations Survey Respondents

SN	Association/SME	Country	Sector
1	Groundwater and G.I.S consultants Limited	Uganda	Water Resources Supply and Management
2	Siyakhana Growth and Development NPO	South Africa	Agriculture and Livestock
3	Natureâ€™s Nectar	Zambia	Agriculture and Livestock
4	Piratas do Pau	Mozambique	Design and production
5	Eco Harvest	Zambia	Biodiversity
6	Benau	Tanzania; Zambia; Zimbabwe	Engineering
7	Eastern and Southern Africa Small Scale Farmers' Forum Uganda	Uganda	Agriculture and Livestock
8	Market Opportunity Worldwide	Malawi	Consultancy, Value Addition, Export, Agribusiness, Social Enterprise
9	Kibebe Limited	Malawi	Artisan Goods
10	Sigma Immobili Limited	Uganda	Construction
11	Exodus & Company (Pvt) Ltd	Zimbabwe	Construction
12	Hunadi Energy Solutions	South Africa	Energy and Environment
13	Musana Camps	Uganda	Camping
14	Chaca-Green Enterprises Limited	Zambia	Agriculture and Livestock
15	AET AFRICAS	South Africa	Manufacturing and mining
16	Arusha Women Entrepreneur	Tanzania	Food processing
17	Seed Trade Association of Malawi	Malawi	Agriculture and Livestock
18	East African Centre for Renewable Energy and Efficiency (EACREEE)	Uganda	Energy
19	SEED TRADE ASSOCIATION OF KENYA (STAK)	Kenya	Agriculture and Livestock

SN	Association/SME	Country	Sector
20	Genesis Analytics	Kenya; South Africa	Consulting
21	ABdesign Lda	Mozambique	Design and manufacturing
22	Seed Trade Association of South Sudan	South Sudan	Agriculture and Livestock
23	Motorcare Mozambique Lda	Mozambique	Automotive
24	Trinity Technologies Ltd	South Sudan	Fintech
25	inteWaste	Malawi	Waste Management
26	SME Association of Zimbabwe	Zimbabwe	Business Development Services for MSMEs
27	LA CONSULT LIMITED	Uganda	MEDIA
28	Kanybek General Trading and Investment Co. Ltd	South Sudan	Agriculture and Livestock
29	Renew'N'Able Malawi	Malawi	Non-Governmental Organisation - Energy & Climate Change Sector
30	SSMTRLRecycle and Waste Management	South Africa	Recycling and Waste Management
31	AGRISEED TECHNOLOGIES SEED CO. LTD.	Tanzania	Agriculture and Livestock
32	Gennis Consulting	Kenya	Energy
33	Wastewater managers association	Kenya	Wastewater
34	Ecoscience and Engineering Limited	Kenya	Consultancy
35	Namburi Agricultural Company Ltd	Tanzania	Agriculture and Livestock
36	New Forests Rwanda Ltd	Rwanda; Tanzania; Uganda	Forestry
37	Kukula Solar	Zambia	Clean Energy
38	Mantaray	Eswatini; Ethiopia; Kenya; Lesotho; Malawi; Mauritius; South Africa; Tanzania; Uganda; Zambia; Zimbabwe	Research
39	Food Integrity Africa	Zimbabwe	Consultancy and Training

SN	Association/SME	Country	Sector
40	Open Capital Advisors	Kenya; Uganda; Zambia	Professional Services
41	Smart Energy Enterprise (SEE)	Malawi	Agriculture and Livestock
42	KABIDULA INVESTMENT	Malawi	Agriculture and Livestock
43	Kilifi Port Development Limited	Kenya	Eco-industrial Park
44	A and H Development Solutions	Ethiopia	Manufacturing and mining
45	Escospa Corporation Ltd	Kenya	Agriculture and Livestock
46	Agrireal Africa	Kenya	Forestry
47	NYANGORORA BANANA PROCESSORS LIMITED	Kenya	Agriculture and Livestock
48	Honey Products Limited	Malawi	Forestry
49	Rwanda Transport Development Agency	Rwanda	Transport
50	Hortinet Foods Ltd	Malawi	Agriculture and Livestock
51	The nature and biodiversity conservation union (NABU)	Ethiopia	Natural resource conservation and livelihood improvement
52	Agri SA	South Africa	Agriculture and Livestock
53	Green Ventures	Malawi	Agriculture and Livestock
54	Energy saving stoves production enterprise	Ethiopia	Fabrication of energy saving different stoves
55	TMEA	Ethiopia; Kenya; Malawi; Mozambique; Rwanda; South Sudan; Tanzania; Uganda; Zambia	Aid for Trade
56	association of Sendea Uganda ltd	Uganda	Solar energy industry
57	Cleanology Corporation Africa	Zimbabwe	Water Solutions and Hygiene
58	Sunil Designers Co. Ltd	Mauritius	Manufacturing and mining
59	Federation of Small and Medium-Sized Enterprises-Uganda	Uganda	Business Membership Organisation
60	Sheka bee product development and marketing union	Ethiopia	Agriculture and Livestock

Annex B

Survey Questionnaire

Eastern and Southern Africa Private Sector Climate Action Capacity Building Needs: A Mapping Study

A. Background

Your Email address*(we will only use your Email in case we have any questions to your answers below.
Your address will not be shared with any third parties)

1. Name of Organization
2. Name of person filling out this survey on behalf of the above organization
3. In which country is your organization located?
4. Which Sector does your organization belong to?
 - Agriculture and Livestock
 - Construction
 - Finance and insurance services
 - Forestry
 - Manufacturing and mining
 - Marine and Fisheries
 - Small-scale informal traders
 - Tourism
 - Transport
 - Other sector (specify).....

B. Climate Change Action

5. On a scale of 1 to 5, how aware are you of the impact of climate change on your business?
 - 1. Not aware
 - 2. Aware
 - 3. Fairly aware
 - 4. Slightly aware
 - 5. Very Aware
6. Which of the following impacts of climate change have affected your business operations
(You may check multiple)?
 - Changes in cropping seasons
 - Cultural erosion due to loss of natural heritage etc.
 - Decrease in lifespan of electric appliances
 - Delays due to disruption of supply chains
 - Economic losses due to high insurance costs
 - Heat stress
 - Increase in construction costs due to inclusion of climate risk safety standards.
 - Loss of employment
 - Reduction in natural capital/raw materials
 - Shifts in customer preference
 - Reduction in work hours due to frequent employee illness
 - Reduction in crop yield
 - Reduction in soil fertility
 - Water stress
 - Others (Please specify).....

7. Which actions have you taken to respond to and adapt to climate change impacts on your business? (you may check multiple)
- Accessing climate change prediction information
 - Attractive supplier agreements (supplier agreements that have flexibility for extreme weather events)
 - Business continuity planning and risk management (business plans take into account threats to the business stemming from climate change)
 - Engagement on issues that build community resilience (improving roads, water supply, improve quality of suppliers' produce)
 - Creating awareness amongst staff
 - Customer appreciation packages (build strong customer loyalty)
 - Implement efficiency measures (waste reduction, more efficient equipment, water saving measures)
 - Ensure good worker relations (build loyalty amongst staff)
 - Improved construction practices
 - Less polluting and more efficient transportation use
 - Loan acquisition (used to anticipate or overcome extreme weather events)
 - Paperless communication
 - Planting trees
 - Replacement equipment is more resilient and efficient
 - Taking out insurance for losses and disruptions associated with climate change Sharing of sectorial expertise (share and demonstrate what you are doing to anticipate climate change)
 - Sharing of climate risk knowledge
 - Transiting to drought resistant crops
 - Use of renewable energies (solar, biogas, hydro, wind)
 - Others (specify).....
8. Why have you taken the climate change actions in number (7) above? (you may check multiple)
- Compliance with government regulations
 - Corporate Social Responsibility measures
 - Incorporating lessons learnt from others
 - Self-regulation from the industry or sector we operate in
 - To enhance our resilience to climate change
 - Other(specify).....
9. What incentives exist to support you to take climate action as a business? (you may check multiple)
- Concessional insurance premiums to protect against damages from climate change
 - Financial rescue packages and support to cushion against climate change loss and disruptions
 - Free climate-related trainings and information
 - Government tax reductions/exemptions in events of climate damages
 - Technical support in improving community resilience
 - Other (specify).....
10. From which of the following have you ever received finances to deal with climate change impacts? (you may check multiple)
- Bank loans
 - Bilateral/multilateral donors.
 - Business partners
 - Colleagues
 - Government
 - NGOs
 - SME fund
 - Other (specify).....

C. Capacity Building

11. What would you suggest to improve capacity of SMEs to take climate action in your country/ region?
12. In your country of operation, where do you receive information on climate change from? (you may check multiple)
- Academic and research institutions
 - Civil Society Organizations
 - Government ministries and agencies
 - International organizations
 - Media
 - Private Sector
 - Trade associations
 - Others (specify).....
13. On a scale of 1-5, how would you rate the quality of the information you currently receive to enable you to prepare and respond to climate change impacts?
- 5. Excellent
 - 4. Good
 - 3. Fair
 - 2. Poor
 - 1. Very Poor
14. Which of the following climate change processes led by government have you been involved in?
- Attendance at Conference of the Parties (COP) meetings
 - Debate on national climate change laws and policies
 - General awareness workshops on climate change
 - Preparation of National Adaptation Plan (NAP)
 - Preparation of Nationally Determined Contribution (NDC) under the Paris Agreement
 - Training on climate financing opportunities and processes
 - Others (Please specify).....
15. From the list below, select the main training needs you would have as an organization to enable you take action to address climate change impacts? (you may check multiple)
- Climate financing sources
 - Knowledge on drafting financing proposals on climate change
 - Knowledge on climate policies and regulations
 - Technical skills on developing climate resilient products and services
 - Up to date and reliable information on climate trends
 - Others (specify).....
16. If you have attended any climate related training, who organized the training?
- Not applicable-no training attended
 - Academic and research institutions
 - Civil society organizations
 - Government ministries and agencies
 - International organization
 - Private Sector
 - Trade associations
 - Other
17. Please list ongoing capacity building partnerships between academic/research institutions and SMEs for climate action in your country, if any.....

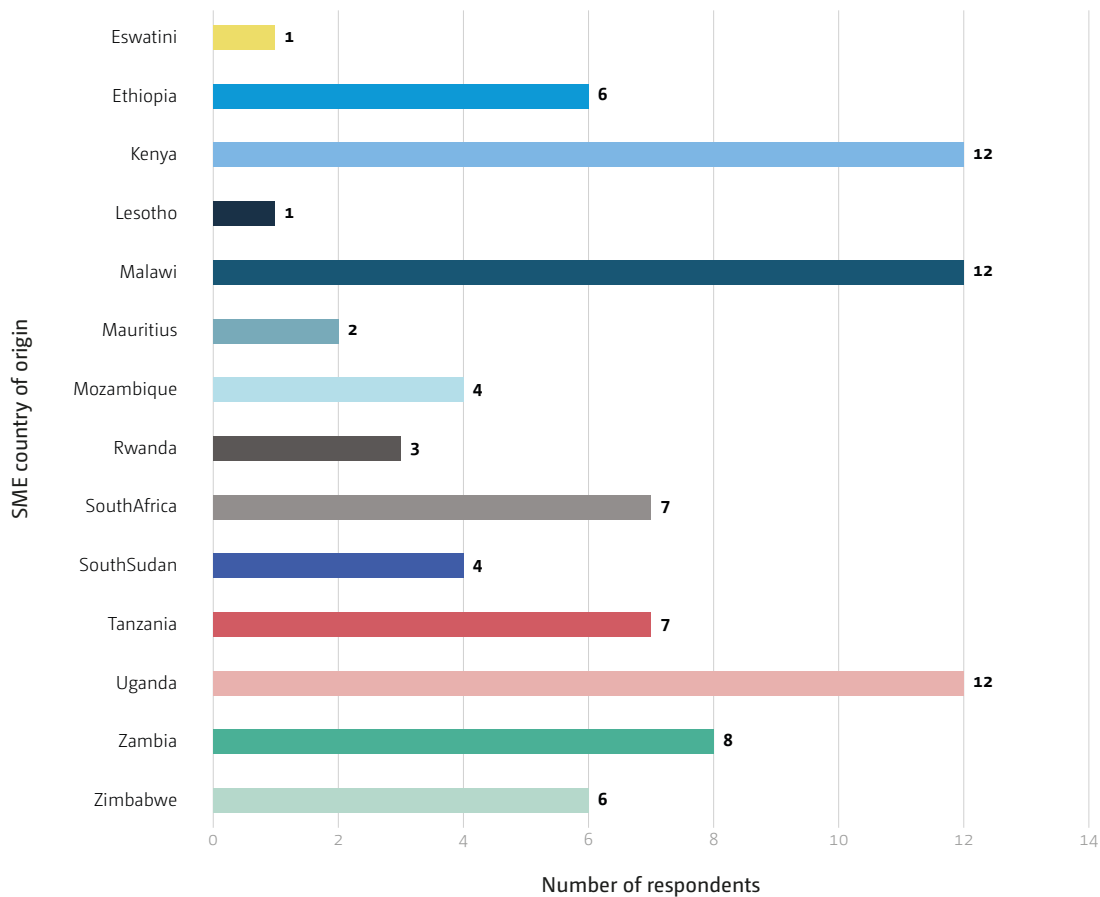
Annex C

Survey Results

QUESTION 3: In which country is your organization located? (Multiple choice; n = 60)

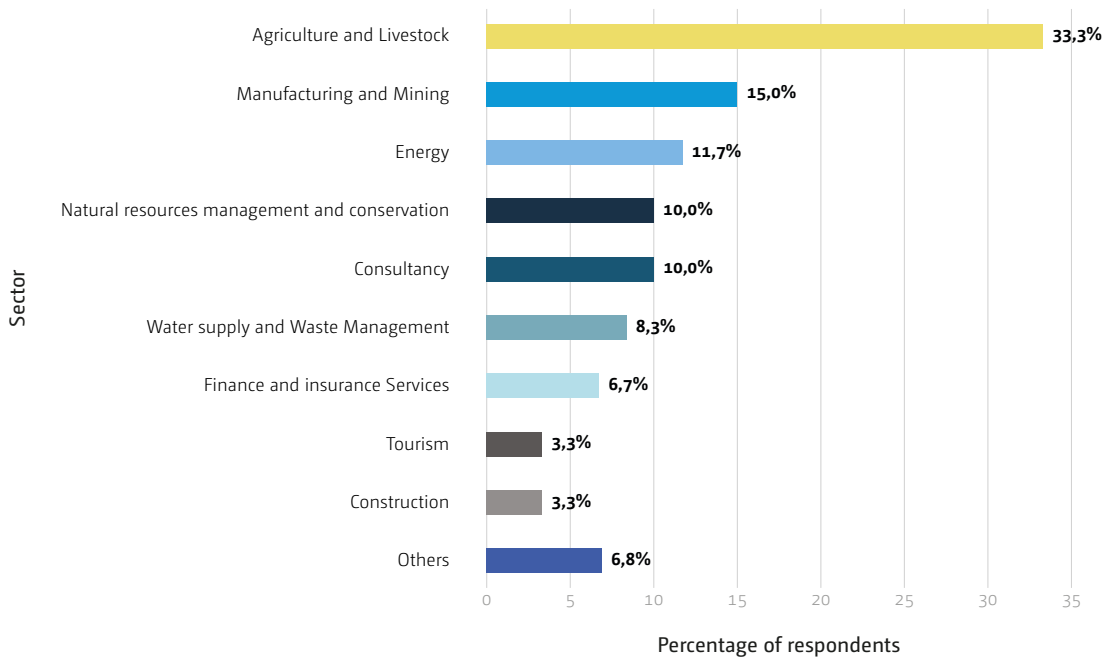
There was a general regional representation in terms of the respondents. The countries with the highest frequency were Kenya, Uganda and Malawi. We did not have respondents from five countries namely: Angola, Eritrea, Botswana, Namibia and Seychelles.

Figure C. 1 - Number of respondents per target country



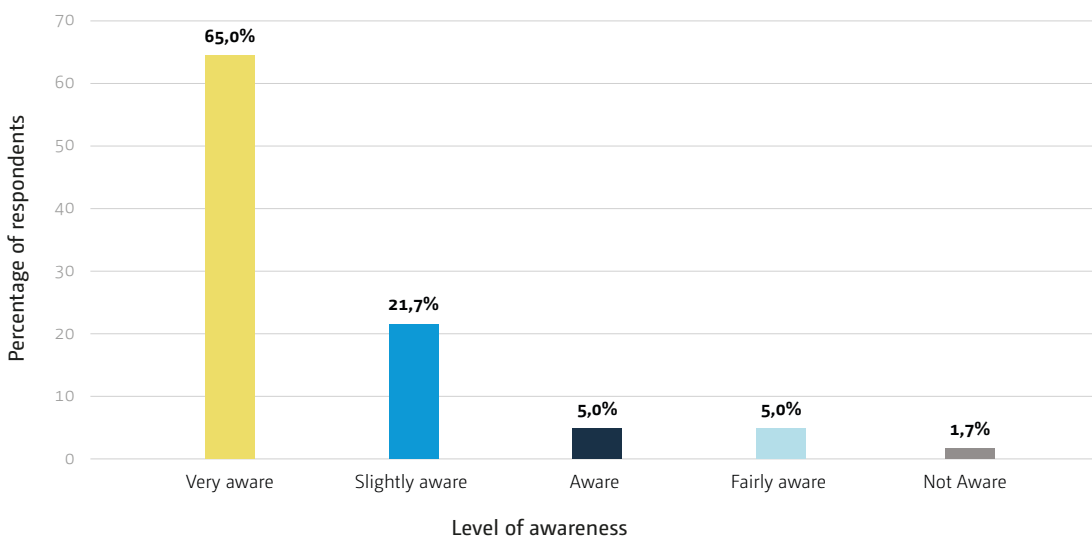
QUESTION 4: Which Sector does your organization belong to? (Single choice; n = 60)

Figure C. 2 - Sector to which the target SME or SME associations belong



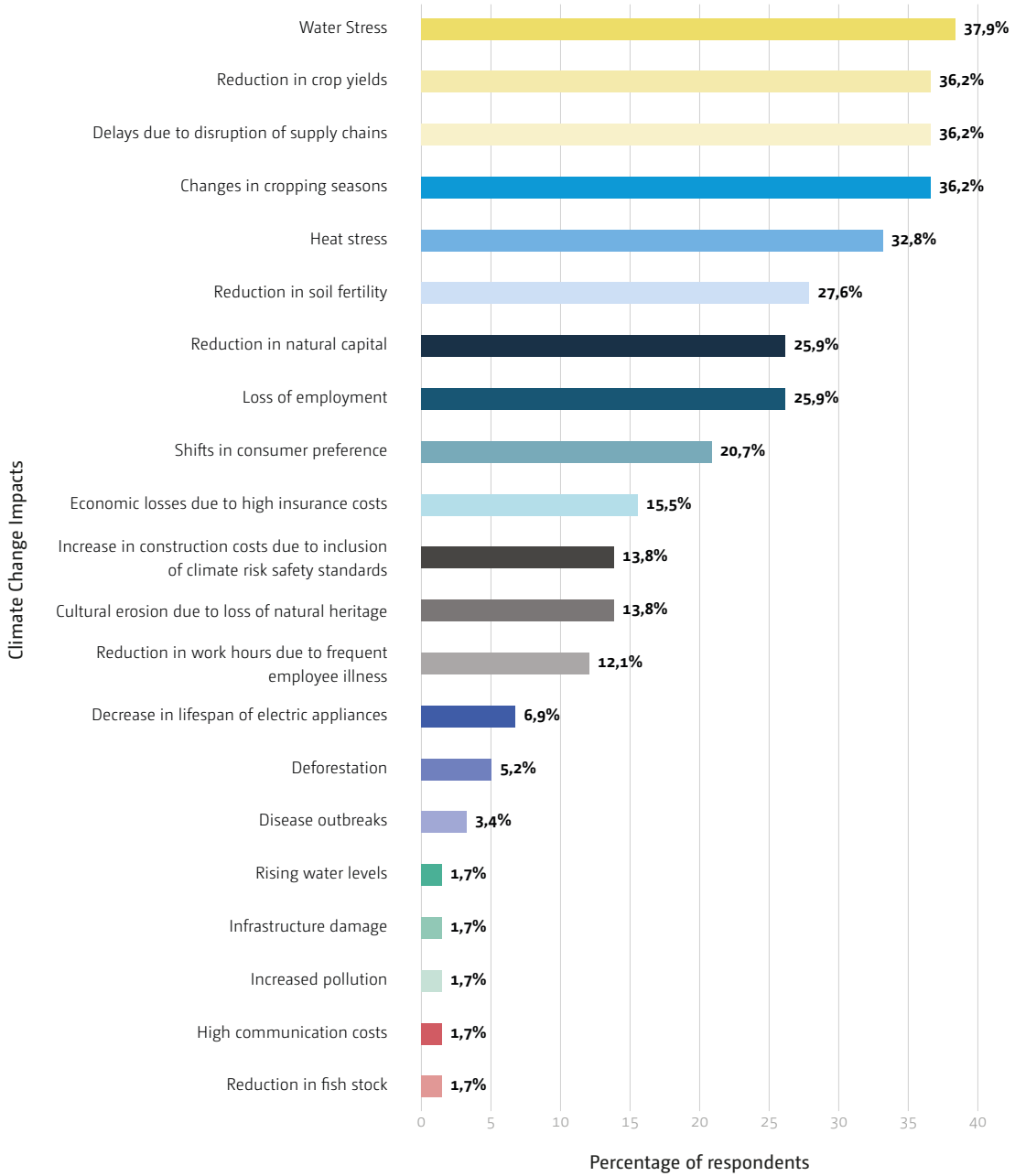
QUESTION 5: On a scale of 1 to 5, how aware are you of the impact of climate change on your business? (Single choice; n = 59)

Figure C. 3 - Level of Awareness of SMEs about the Impacts of Climate Change on their businesses



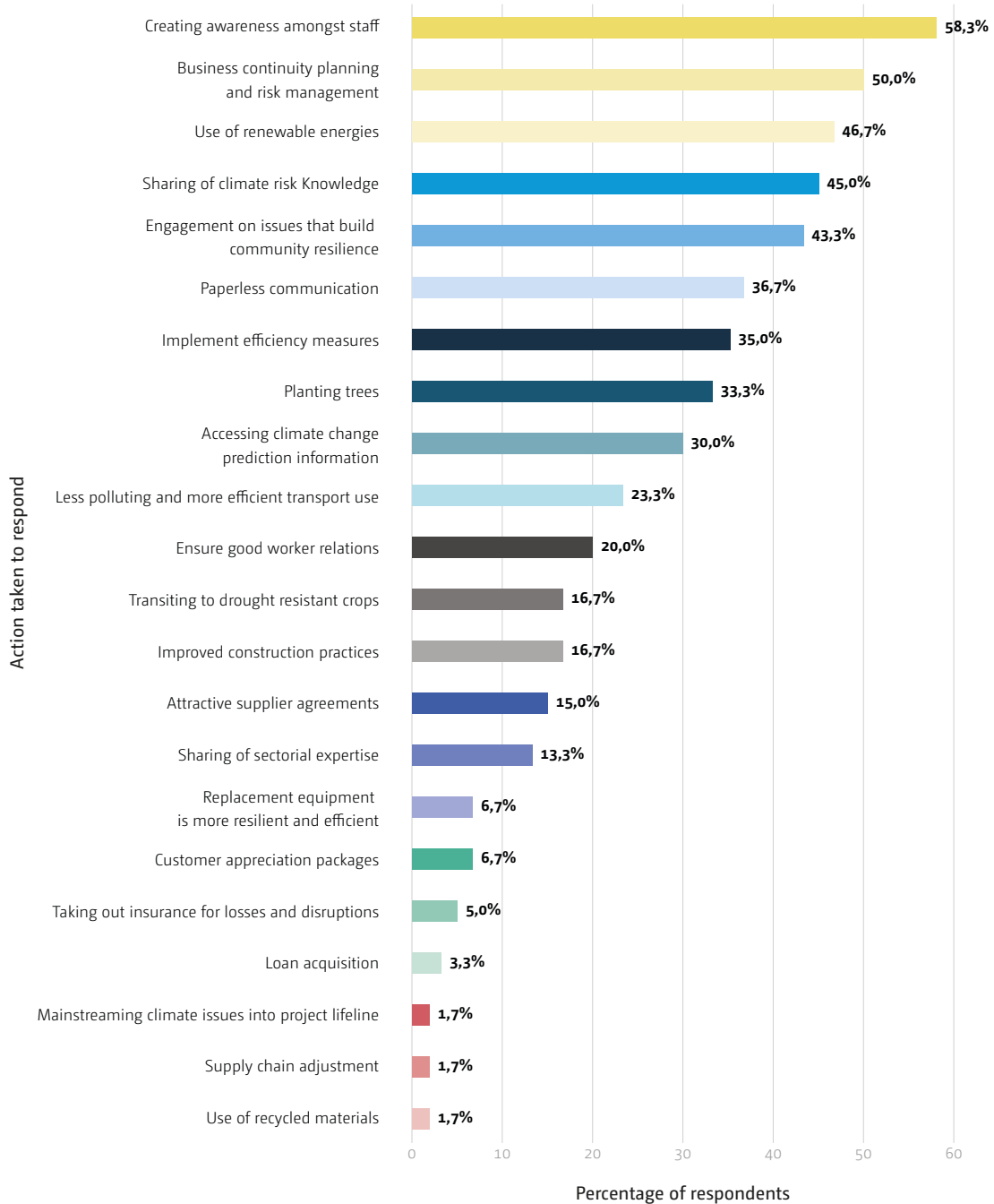
QUESTION 6: Which of the following impacts of climate change have affected your business operations (Multiple choice; n = 58)

Figure C. 4 - Climate Change Impacts that are affecting SME businesses



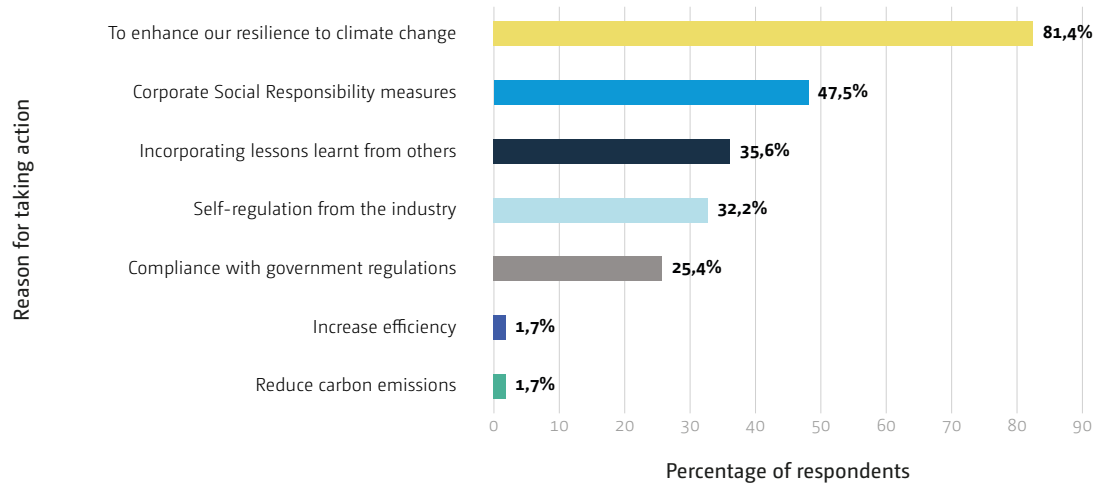
QUESTION 7: Which actions have you taken to respond to and adapt to climate change impacts on your business (Multiple choice; n = 60)

Figure C. 5 - Some of the actions that have been undertaken by SMEs to respond to climate change



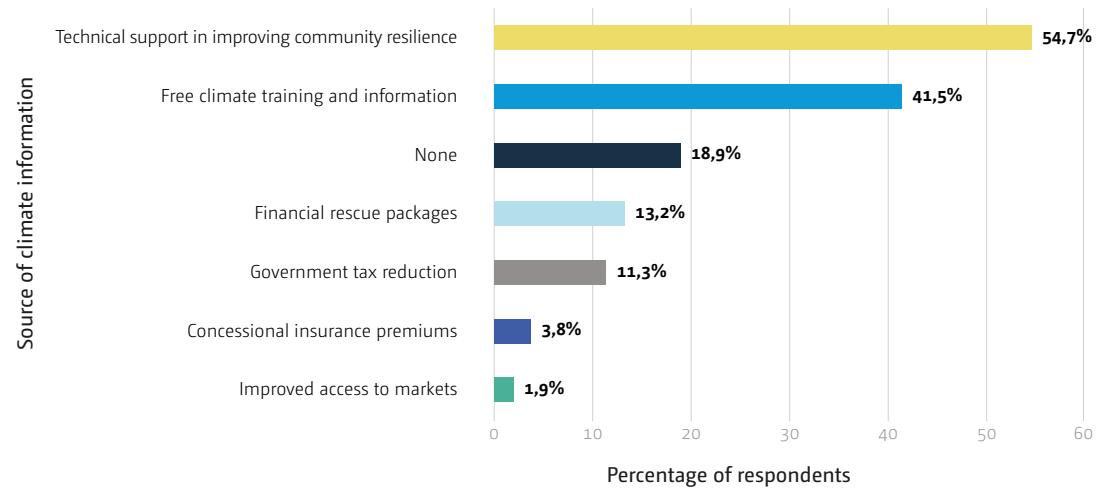
**QUESTION 8: Why have you taken the climate change actions in number (7) above?
(Multiple choice, n = 59)**

Figure C. 6 - Reasons why SMEs undertake climate action



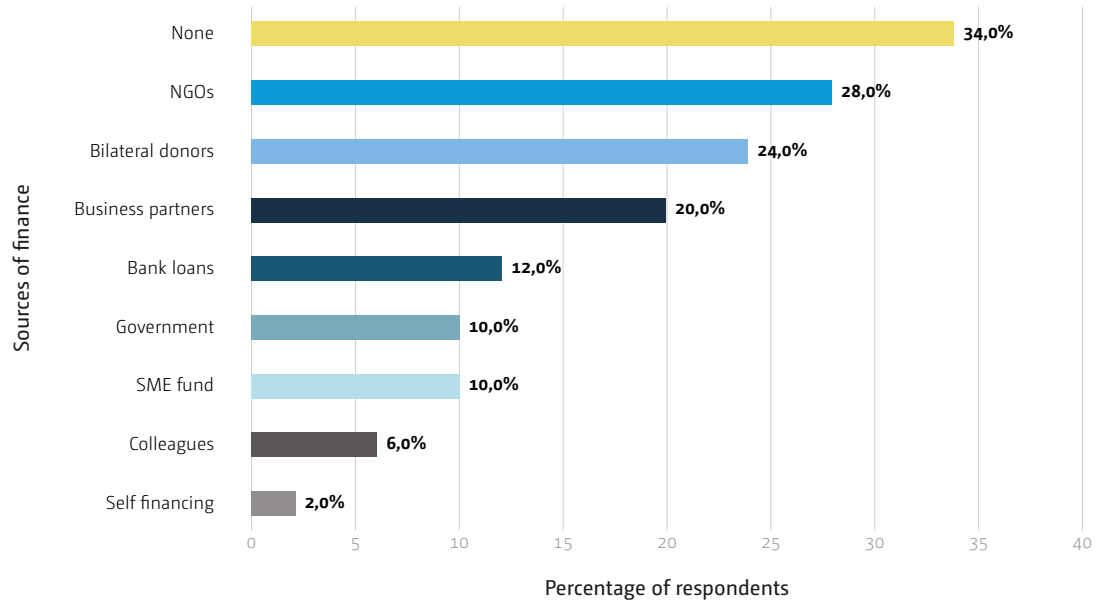
**QUESTION 9: What incentives exist to support you to take climate action as a business?
(Multiple choice; n = 54)**

Figure C. 7 - Incentives that exist to facilitate SME action towards climate change



QUESTION 10: From which of the following have you ever received finances to deal with climate change impacts? (Multiple choice; n = 51)

Figure C. 8 - Sources of finances to SMEs to help them act on climate change issues



QUESTION 11: What would you suggest to improve the capacity of SMEs to take climate action in your country/region? (Open-ended; n = 56)

Table C.1 - Suggested actions to improve the capacity of SMEs to take climate action

Suggestions for SME action capacity improvement	Number of respondents	Percentage of respondents
Climate awareness campaigns	19	34.5%
Technical and Financial Trainings on climate issues	14	25.5%
Financial support to SMEs on climate response	11	20.0%
Policy guidance and support from government	5	9.1%
Tax incentives for SMEs taking climate action	5	9.1%
Digitize business	2	3.6%
Increase access to reliable climate information	2	3.6%
Promotion of energy efficiency measures & alternatives	2	3.6%
Reduce interests on climate action loans	2	3.6%
Technical and Financial support on climate issues	2	3.6%
Access to financial and technical resources for climate action	1	1.8%
Develop active early warning systems	1	1.8%
Develop green financing instrument to improve the SMEs capacity to address Climate action	1	1.8%
Develop multisector enterprises	1	1.8%
Financial support to SMEs on climate response from Government	1	1.8%
Increase availability of affordable climate friendly technologies	1	1.8%
Promote climate smart Agriculture	1	1.8%
Promote improved waste management	1	1.8%
Provision of information on alternative practices	1	1.8%
Provision of information on financial incentives	1	1.8%
Provision of security and collateral by government	1	1.8%
Provision of subsidies for climate sensitive sectors	1	1.8%

Suggestions for SME action capacity improvement	Number of respondents	Percentage of respondents
SME inclusion in climate change processes	1	1.8%
Subsidize insurance schemes	1	1.8%
Support experiential learning and action research	1	1.8%
Support networking among SMEs	1	1.8%
Support of lending institutions to allow for flexible climate smart loans	1	1.8%
Technical Assistance in developing bankable projects eligible for climate financing.	1	1.8%
Training on climate smart Agriculture	1	1.8%

Some of the direct suggestions to the ways of improving SME capacity to respond to climate change were as follows:

Regarding climate awareness, one respondent from Zimbabwe mentioned that *“increased awareness on the impacts of climate change as well as the mitigation measures that can be put in place”* while another located across Rwanda, Tanzania and Uganda said, *“More awareness campaign to educate people on climate change”*

On climate-related trainings; a respondent from Malawi said, *“Introduce free capacity building services for SMEs, such as technical and financial trainings”* while another from Kenya mentioned that *“Capacity enhancement through training”*

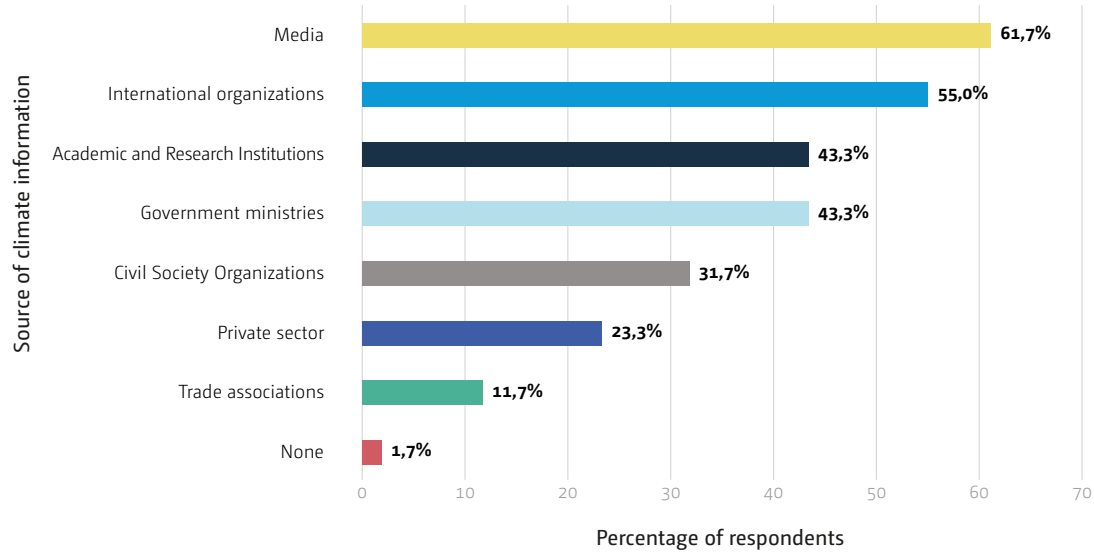
Other responses received from the survey regarding capacity improvement were *“More education measures for people to truly understand long-term effects of climate change and what steps can be taken now.” (Zambia)*

“Specific SME groupings could focus on implementing projects to ameliorate the effect of climate change. For example, implementation of renewable energy technologies can be made attractive for SMEs by providing the training for professional conduct and access to affordable capital for executing projects. Other SME groupings could focus on waste reprocessing which has become a major eyesore in many African countries. Technologies such as biomass to energy which same multiple causes you in reducing the uncoordinated dumping of waste to actually getting the waste and turning it to energy” (Tanzania, Zambia, Zimbabwe)

“Increase injection of funds to lending institutions to provide flexible loans to climate smart SMEs. Introduce free capacity building services for SMEs, such as technical and financial trainings. Reduce interest rates on SMEs in climate action to boost their impact.” (Malawi)

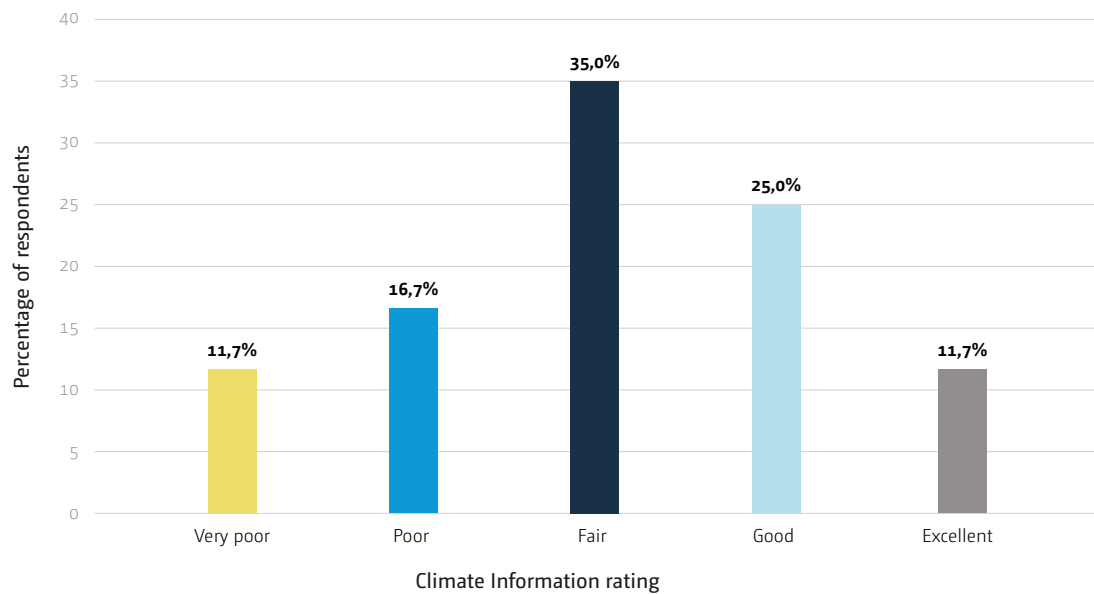
QUESTION 12: In your country of operation, where do you receive information on climate change from? (Multiple choice; n = 60)

Figure C. 9 - Sources of Climate Information for SMEs



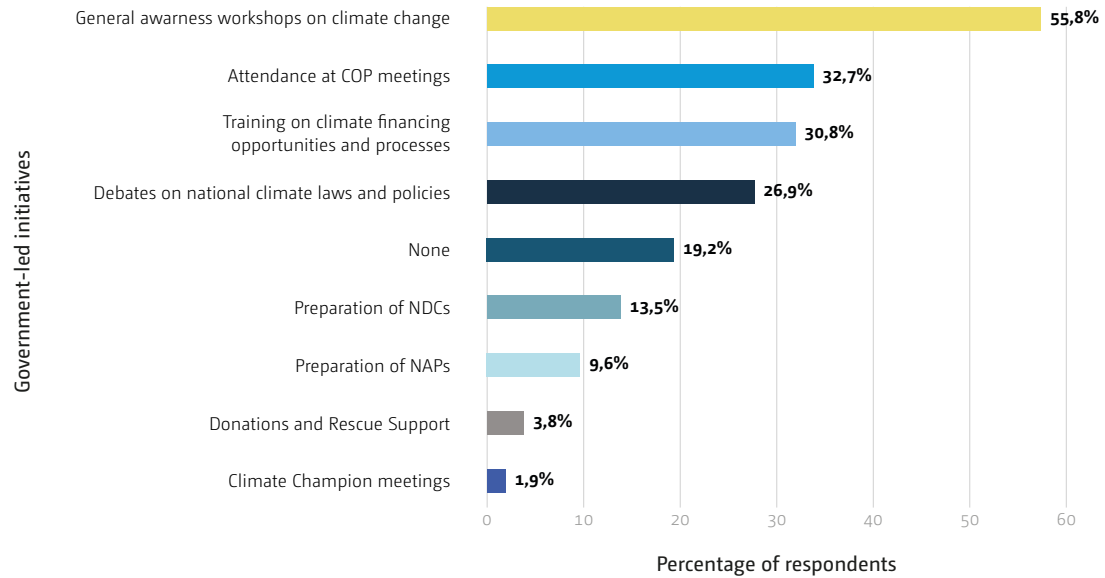
QUESTION 13: On a scale of 1 to 5, how would you rate the quality of the information you currently receive to enable you to prepare and respond to climate change impacts? (Single choice; n = 60)

Figure C. 10 - Rating of the quality of climate-related information received by SMEs to facilitate response to climate change



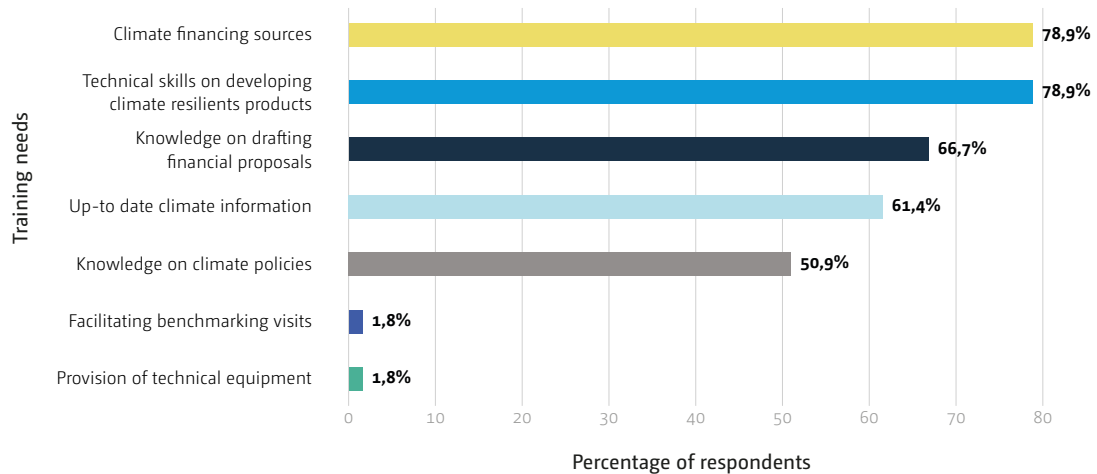
QUESTION 14: Which of the following climate change processes led by government have you been involved in? (Multiple choice; n = 53)

Figure C. 11 - List of government-led processes regarding climate change that SMEs participate in



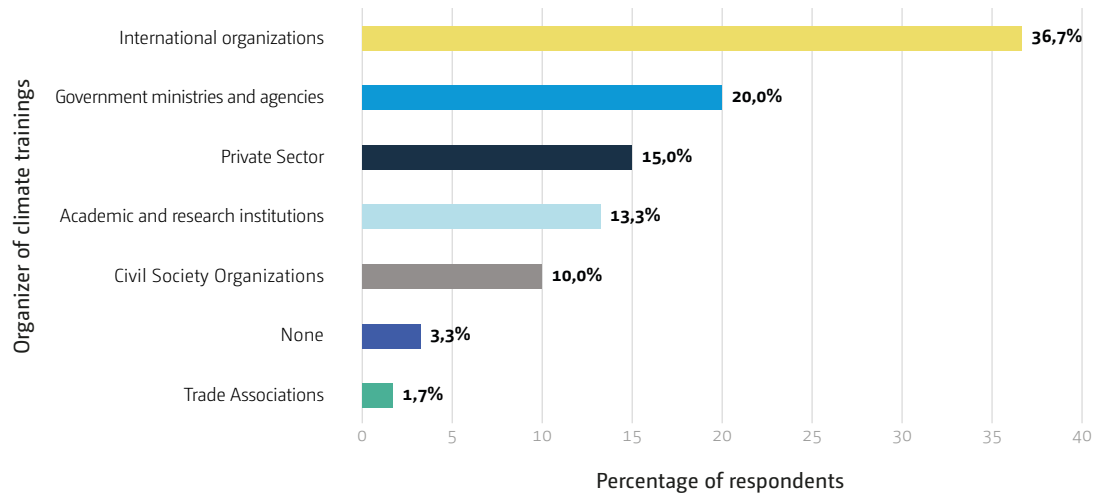
QUESTION 15: From the list below, select the main training needs you would have as an organization to enable you take action to address climate change impacts? (Multiple choice; n = 58)

Figure C. 12 - Organizational training needs identified by SMEs to enhance their response to climate change



QUESTION 16: If you have attended any climate-related training, who organized the training? (Multiple choice; n = 59)

Figure C. 13 - Bodies actively involved in organizing climate change-related trainings



QUESTION 17: Please list ongoing capacity building partnerships between academic/research institutions and SMEs for climate action in your country, if any (Multiple choice; n = 36)

Table C. 2 - Existing organizations that partner with SMEs in climate-related activities in different countries

Country	SME Partner organization (s)
Ethiopia	The Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ)
Ethiopia	Mennonite Economic Development Associates (MEDA)
Ethiopia	SNV
Kenya	Kenya Private Sector Alliance (KEPSA)
Kenya	Tea Research Institute and Escospa Corporation
Kenya	Escospa Corporation and Technical University of Kenya
Malawi	SEED Africa Awards
Mauritius	SME Mauritius Ltd and SMEs
Rwanda; Tanzania; Uganda	New Generation Plantations (NGP)
South Africa	University of Johannesburg and Siyakhana Organic Garden
South Africa	Seed Carbon Management
South Africa	Council for Scientific and Industrial Research (CSIR)
South Africa	National Cleaner Production Centre (NCPC)
South Africa	Innovation Hub Climate Centre
South Sudan	The Sudd Institute and NGOs
Zambia	National conservation Commission

Annex D

Key Informant Interview Guide

Eastern and Southern Africa Private Sector Climate Action Capacity Building Needs: A Mapping Study

Key Informant Interview Guide- Academic and Research Institutions

1. What activities do you undertake to support capacity building for private sector, especially SMEs, to enable them take action to respond to climate change?
2. What has been the uptake and feedback by SMEs on your programmes and activities?
(Probe for relevance, methodology, duration, resource persons)?
3. From which country(ies) in the Eastern and Southern Africa Region have the participants to your programmes been?
4. Which other institution (academic or research) do you know that offer training for SMES and larger private sector on climate action?
5. Do you know of any ongoing collaboration between academic/research institution and private sector for addressing capacity needs and gaps on climate change from SMEs in the ESA region?
(probe for focus, duration, funder, structure and methodology of delivery)
6. Which do you consider as the priority topics for academic and research institutions to focus on to equip private sector with capacity to enable them take climate action?
7. What opportunities do you know that exist for capacity building partnership between universities and research institutions in ESA region and the other regions of the world, which SMEs and private sector in ESA can take advantage of?
8. What general recommendations could you make to enhance the capacity of private sector in ESA region, with a special focus on SMES, to enable them take greater action on climate change matters?

Annex E

Academic institutions involved in climate change capacity building and their offers

Country	Programme/Activity	Description of program or activity or role of institution in capacity building program.
Angola	Methodist University of Angola	A research project conducted by University of Botswana and funded by IDRC whose aim was to assist the farmers around the Okavango Delta develop coping strategies for adaptation in areas of food security and health needs as a result of climate change. ¹⁶⁵
Angola	Climate change virtual school	The school program targets at creating awareness on climate change impacts and the need to mainstream change actions/activities undertaken by stakeholders in several African countries: Angola, Botswana, Ethiopia, Ghana, Kenya, Malawi, Mozambique, Namibia, Nigeria, South Africa, Uganda, Zambia, Zimbabwe. ¹⁶⁶
Botswana	University of Botswana	The University very active in creating awareness on climate change. It has educated the general public and stakeholders on climate change science and the socio-economic implications of climate change on local and regional economies. ¹⁶⁷
Botswana	Botswana Open University	The University offers a Master of Science programme in Climate Change and Sustainable Development (MSc. CCSD ¹⁶⁸)
Botswana	Botswana institute for Technology Research and Innovation, Climate Change Division	BITRI Climate Change Division focuses on understanding the impact of climate change on Botswana's economic sectors such as agriculture, water resources, energy and health. Droughts, extreme events, increasing temperatures, vector-borne disease outbreaks and changes in water availability are some of the significant risks posed by climate change. ¹⁶⁹
Botswana	Botswana University of Agriculture and Natural Resources	Botswana University of Agriculture and Natural Resources has climate change their broad research themes along with water security and natural resources management ¹⁷⁰ . They have a PhD in Animal Science with aspects of climate change.
Eswatini	University of Eswatini	Faculty of science and engineering offers Master of Science in Environmental Resources Management ⁻¹⁷¹ . The Faculty of Agriculture offers Master of Science in Environmental Resources Management ¹⁷² . The faculty of Health Science offers two undergraduate programmes; Bachelor of Science in Environmental Management and Occupational Safety and Health ⁻¹⁷³ and Bachelor of Science in Environmental Management and Water Resources ¹⁷⁴
Ethiopia	Addis Ababa University	Department of Geography and Environmental Studies offers Bachelor of Arts in Geography and Environmental Studies ¹⁷⁵

165 https://www.angop.ao/noticias-o/?v_link=https://www.angop.ao/angola/en_us/noticias/sociedade/2011/5/22/University-students-discuss-Climate-Change,da2deb3c-cb72-4995-81b0-4093be908125.html

166 Climate Change Virtual School - Angola, Botswana, Ethiopia, Ghana, Kenya, Malawi, Mozambique, Namibia, Nigeria, South Africa, Uganda, Zambia, Zimbabwe | UNFCCC, <https://unfccc.int/climate-action/momentum-for-change/activity-database/climate-change-virtual-school>

167 University of Botswana active in climate change research | University of Botswana (ub.bw), <https://www.ub.bw/news/university-botswana-active-climate-change-research>

168 <https://www.ub.bw/news/university-botswana-active-climate-change-research>

169 <http://www.bitri.co.bw/climate-change-division/>

170 BUAN (ac.bw)

171 Graduate Programmes – University of Eswatini (uneswa.ac.sz), http://www.uneswa.ac.sz/academics/graduate_programmes/

172 Graduate Programmes – University of Eswatini (uneswa.ac.sz), http://www.uneswa.ac.sz/academics/graduate_programmes/

173 Undergraduate Programmes – University of Eswatini (uneswa.ac.sz), http://www.uneswa.ac.sz/academics/undergraduate_programmes/

174 Undergraduate Programmes – University of Eswatini (uneswa.ac.sz), http://www.uneswa.ac.sz/academics/undergraduate_programmes/

175 Bahir Dar University courses, details and contact information - CoursesEye.com, <https://www.courseseye.com/colleges-and-universities/1917-bahir-dar-university.aspx>

Country	Programme/Activity	Description of program or activity or role of institution in capacity building program.
Ethiopia	Bahir Dar University	The department of Disaster Risk Management & Sustainable Development Offers Bachelor's programme in Disaster Risk Science & Sustainable Development ¹⁷⁶ - and Masters in Disaster Risk Management & Sustainable Development ¹⁷⁷
Ethiopia	Bahir Dar University	M.Sc. in Environment and Climate change ¹⁷⁸
Ethiopia	Wolaita Sodo University	Offers Masters in Climate Change and Sustainable Development ¹⁷⁹
Ethiopia	Wolkite University	Bachelor of Natural Resource Management ¹⁸⁰
Ethiopia	Wollega University	College of Natural Resources and Environment science offers Bachelor of Geo Environmental Science ¹⁸¹
Kenya	University of Nairobi: The Institute for Climate Change and Adaptation	The institute offers academic programmes for national, regional and international students interested in learning and solving climate change problems ¹⁸² .
Kenya	Masinde Muliro University of Science and Technology (MMUST)	Offers a Bachelor of Science in Climate Change Adaptation and Sustainable Development ¹⁸³
Kenya	University of Nairobi	Offers a bachelors in Climate Change & Development, Master of Science in Climate Change, Doctor of Philosophy in Climate Change and Adaptation See. They also offer a Master of Climate Change Adaptation (MCCA) here. They have a The Institute for Climate Change and Adaptation that focuses on Climate Risk Management and food security, Technology development, human dimensions and health, water environment and ecosystems, Policy and communication as the major thematic areas see. They also have a wide research on climate especially of small holder farmers and climate adaptation, ¹⁸⁴ The University's Centre for Advanced Studies in Environmental Law and Policy (CASELAP) ¹⁸⁵ , and the Wangari Maathai Institute for Peace and Environmental Studies ¹⁸⁶ , also focus on environmental courses that allow a specialization in climate change

176 Bahir Dar University - Bahir Dar, Ethiopia (riskreductionafrica.org), <http://www.riskreductionafrica.org/partners-and-programmes-1/bahir-dar-university-bahir-dar-ethiopia.html>

177 Bahir Dar University - Bahir Dar, Ethiopia (riskreductionafrica.org) <http://www.riskreductionafrica.org/partners-and-programmes-1/bahir-dar-university-bahir-dar-ethiopia.html>

178 Master of Science in Climate Change and Development in Ethiopia (courseseye.com), <https://www.courseseye.com/course/7641/master-of-science-in-climate-change-and-development-ethiopia>

179 Masters in Climate Change and Sustainable Development in Ethiopia (courseseye.com), <https://www.courseseye.com/course/1917/masters-in-climate-change-and-sustainable-development/ethiopia>

180 Bachelor of Natural Resource Management in Ethiopia (courseseye.com), <https://www.courseseye.com/course/2309/bachelor-of-natural-resource-management-natural-resource-management/ethiopia>

181 Bachelor of Natural Resource Management in Ethiopia (courseseye.com), <https://www.courseseye.com/course/2309/bachelor-of-natural-resource-management/ethiopia>

182 THE INSTITUTE FOR CLIMATE CHANGE AND ADAPTATION | Climate Change & Adaptation (uonbi.ac.ke), <https://icca.uonbi.ac.ke/slideshow-entry/institute-climate-change-and-adaptation>

183 MMUST undergraduate Borchure Revised 2018.pdf, <http://www.mmust.ac.ke/mmust/images/Programmes/MMUST%20undergraduate%20Borchure%20Revised%202018.pdf>

184 Ndambiri_Assessment of Farmers Adaptation to the Effects of Climate Change in Kenya.pdf (uonbi.ac.ke), http://erepository.uonbi.ac.ke/bitstream/handle/11295/51197/Ndambiri_Assessment%20of%20Farmers%20Adaptation%20to%20the%20Effects%20of%20Climate%20Change%20in%20Kenya.pdf?sequence=1&isAllowed=y

185 Admission View | Centre for Advanced Studies in Environmental Law & Policy (CASELAP) (uonbi.ac.ke), <https://caselap.uonbi.ac.ke/index.php/admission-view>

186 PROGRAMS | Wangari Maathai Institute for Peace and Environmental Studies (uonbi.ac.ke), <https://wmi.uonbi.ac.ke/index.php/admission-view>

Country	Programme/Activity	Description of program or activity or role of institution in capacity building program.
Kenya	Strathmore University	Offers tailor-made technical training on sustainability through the Strathmore Center for Sustainability Leadership (CSL) ¹⁸⁷ , launched in 2016. The university also hosts the Kenya Climate Innovation Centre ¹⁸⁸ that provides incubation, business advisory and financial services to entrepreneurs with innovative solutions for combating climate change. Strathmore university has also set up a UNESCO Chair for Climate Change Resilience and Sustainability ¹⁸⁹ . Slated to last five renewable years, the chair will encompass the disciplines of climate change adaptation and mitigation, access to electricity, energy efficiency, education of youth and women, and public policy. The chair plans to collaborate with inter alia, the private sector, and academia, to develop and disseminate transformative ideas and innovations within its subject areas. Through this work, the project will help societies weather and thrive through the negative effects of climate change
Kenya	Kenyatta University	Offers Master of Science (Climate Change And Environmental Sustainability) ¹⁹⁰ . They also offer Doctor of Philosophy (Climate Change and Sustainability) ¹⁹¹ . The School of environmental sciences engages in schools' community outreach mainly on tree planting ¹⁹²
Kenya	Maseno University	Offers Certificate in Climate change Adaptation, Bachelor of Science, Climate Change and Development with IT and Master of Science, Climate Change and Development
Lesotho	RVCC Training Portal	A programme formulated to support the implementation of "Reducing vulnerability from climate change in Foothills, Lowlands and Senqu River Basin" (RVCC) project. The programme intends to enhance the capacity of identified trainees to collect, evaluate and interpret meaningful climate change data from relevant sources and authorities to enable effective project planning, implementation, and monitoring and evaluation, Build knowledge of and skills in the assessment of climate change risk and vulnerability in order to identify factors contributing to vulnerability in a specified area, Build capacity to identify, prioritize and implement climate change adaptation responses for a specified area and interventions, Build knowledge of managing climate change intervention projects/activities, Build knowledge of and skills in using cost-benefit analysis and cost-effectiveness analysis to assess the feasibility of adaptation projects, Build capacity to use the RVCC monitoring and evaluating system in existing and future projects ¹⁹³
Malawi	Malawi Institute of Education	The Government of Malawi has published a 'Climate Change Sourcebook for Primary School Teachers' in support of its National Climate Change Learning Strategy, developed under the One UN Climate Change Learning (UN CC: Learn) Partnership. See: ¹⁹⁴ . The Ministry of Education, Science and Technology, Malawi Institute of Education (MIE), the Environmental Affairs Department, academia, teachers and primary education advisers partnered in creating the Sourcebook, which complements an educational poster on climate change that was distributed to all primary schools throughout the country.

187 Center for Sustainability Leadership - Strathmore University Business School, <https://sbs.strathmore.edu/centers/center-for-sustainability-leadership/>

188 <https://www.kcicgroup.org/>

189 Strathmore to Set Up UNESCO Chair to Address Climate Change | Strathmore University

190 MASTER OF SCIENCE (CLIMATE CHANGE AND ENVIRONMENTAL SUSTAINABILITY) (ku.ac.ke). <http://www.ku.ac.ke/schools/environmental/index.php/departments/environmental-sciences-and-education/91-programmes/302-master-of-science-climate-change-and-environmental-sustainability>

191 <http://www.ku.ac.ke/schools/environmental/index.php/programmes/postgraduate>

192 <http://www.ku.ac.ke/schools/environmental/index.php/114-slider/390-schools-community-outreach-programmes>

193 <https://www.rvccdata.org/>

194 <http://sdg.iisd.org/news/malawi-develops-primary-school-climate-change-curriculum/>

Country	Programme/Activity	Description of program or activity or role of institution in capacity building program.
Malawi	University of Malawi	
Malawi	Malawi University of Science and Technology	They offer a Bachelor of Science in Earth Sciences ¹⁹⁵ - and several masters studies like Master of Science in Environmental Sciences, Master of Science in Geography and Earth Sciences, Master of Science in Water Resources Modelling and Governance, Masters in Integrated Water Resources Management (IWRM) in collaboration with WaterNet ¹⁹⁶
Malawi	Malawi University of Science and Technology	Program Faculty: Ndata School of Climate and Earth Sciences, Department of Climate Sciences offers Bachelor of Science in Geo-Information and Earth Observation Science ¹⁹⁷ , Bachelor of Science in Disaster Risk Management ¹⁹⁸ , Bachelor of Science in Meteorology and Climate Science ¹⁹⁹ , BSc in Earth Science (Geology) ²⁰⁰ - and a MSc. Environmental Studies & Earth Sciences ²⁰¹
Mauritius	University of Technology Mauritius, Université des Mascareignes & University of Mauritius	The three universities have been identified as key academic institutions involved in climate change activities in the country ²⁰² .
Mozambique	Universidade Eduardo Mondlane	The University was among the stakeholders that participated in the WACDEP Capacity Building Programme in 2014. WACDEP supports countries' climate resilience in development planning and decision-making processes. Other participants included consultancy firms dealing with Environmental issues, various Government Departments and Ministries associated with water, such as National Directorate for Water - Ministry of Public Works and Housing, National Directorate for Environmental Management - Ministry for Coordination of Environmental Action, Department of Water Supply and Sanitation - Ministry of Public Works and Housing, the Department of Water Resources Management, under the National Directorate for Water and the Ministry of Planning and Development. ²⁰³
Namibia	University of Namibia	The Africa Adaptation Project (AAP), funded by Government of Japan and implemented through UNDP in partnership with other organisations, aimed at supporting integrated and comprehensive approaches to climate change adaptation in 20 countries in Africa. In Namibia, the project funded the sweet-stem sorghum research program at the University of Namibia; a program to educate youth on improved farming practices at Onamulunga Combined School in northern Namibia ²⁰⁴ . The University is also an active research partner with Future Climate for Africa, aimed at enhancing scientific knowledge and prediction of African climate and piloting methods to ensure impact on specific development challenges. The University also partners with

195 <https://www.cc.ac.mw/studies/programmes-undergraduate>

196 <https://www.cc.ac.mw/studies/programmes-masters>

197 <https://www.cc.ac.mw/studies/programmes-masters>

198 <https://www.must.ac.mw/programs/bachelor-of-science-in-disaster-risk-management/>

199 <https://www.must.ac.mw/programs/bachelor-of-science-in-meteorology-and-climate-science/>

200 <https://www.must.ac.mw/programs/bsc-in-earth-science-geology/>

201 <https://www.mastersportal.com/search/#q=ci-175|lv-master|di-117>

202 <https://openjicareport.jica.go.jp/pdf/12266664.pdf>

203 <https://www.gwp.org/en/GWP-SouthernAfrica/About-GWP-SAF/more/News/WACDEP-Mozambique-Capacity-Building-Programme-Launched/>

204 https://www.adaptation-undp.org/sites/default/files/downloads/cba_onamulunga_-_alm_project_profile_0.pdf

Country	Programme/Activity	Description of program or activity or role of institution in capacity building program.
Rwanda	University of Rwanda	The University offers a Masters course on Climate Change and Sustainable Development Governance ²⁰⁵ . College of Agriculture, Animal Sciences and Veterinary Medicine offers a bachelors in Agroforestry which covers issues of climate change. The University also offers a short course on climate change and sustainable development governance hosted at The Centre of excellence in Biodiversity and Natural Resource Management, College of Science and Technology at University of Rwanda. They also offer BSc Forestry and Nature Conservation ²⁰⁶ and a Master of Science in Water Resources and Environmental Management at the College of Science and Technology ²⁰⁷
Rwanda	University of Lay Adventists in Kigali	The faculty of environmental sciences offers a Bachelor of Environmental Management and Conservation ²⁰⁸ and Master of Environmental and Development Studies in Environmental Economics and Natural Resource Management ²⁰⁹ . There is also another programme, bachelor of Emergency and Disaster Management offered which empowers resilience to climate extremities among students and benefitting communities ²¹⁰ .
Seychelles	University of Seychelles	The University has worked together with Seychelles Global Climate Change Alliance + Climate Change to implement programmes such as Sustainability Seychelles which aimed at evoking discussions on climate change among the young people.
South Africa	The African Climate and Development Institute	The institute which is run by the University of Cape Town is focused on supporting collaborative research and training and climate change and development.
South Africa	University of Cape town	University of Cape town is very active in climate change issues. It started the African Climate and Development Initiative which supports collaborative research and training in climate change and development ²¹¹ . They have the Climate Analysis Group which is the leading international climate research Centre based in Africa with broad research skills and competency in both physical and social dimensions of climate, a strong experience in engaging with society, and an excellent track record in capacity development ²¹² . They have a climate the Climate Information Platform that is a one-stop place for most of the climate information that SMEs can take advantage of ²¹³ . The Graduate School of Business in 2019 proposed that climate change be included in the business programme curriculum to help the business students and owners respond to climate change appropriately ²¹⁴ . They participate in the annual release of the Climate Transparency Report ²¹⁵ . They are involved in research about climate change and food crisis ²¹⁶ and farming ²¹⁷ . Some of the courses offered that are relevant to climate change capacity building are Cleaner Energy Cooler Climate: Developing sustainable energy solutions for South Africa, International Environmental Justice and the Climate Change Challenge, Climate change and health in the SADC Region. The University also organizes workshops for communities on climate change ²¹⁸

205 <https://cavm.ur.ac.rw/spip.php?rubrique162>

206 <https://cavm.ur.ac.rw/spip.php?rubrique162>

207 <https://cst.ur.ac.rw/Master-of-Science-in-Water-Resources-and-Environmental-Management>

208 <https://www.courseseye.com/course/86/bachelor-of-environmental-management-and-conservation-environmental-management-and-conservation/rwanda>

209 <https://www.courseseye.com/course/89/master-of-environmental-and-development-studies-in-environmental-economics-and-natural-resource-management/rwanda>

210 <https://www.courseseye.com/course/85/bachelor-of-emergency-and-disaster-management-emergency-and-disaster-management/rwanda>

211 <http://www.acdi.uct.ac.za/>

212 <http://www.csag.uct.ac.za/>

213 <https://cip.csag.uct.ac.za/webclient2/app/>

214 <https://www.gsb.uct.ac.za/po-adding-climate-change-to-curriculum-is-top-priority>

215 <https://www.news.uct.ac.za/article/-2020-11-13-online-launch-of-the-climate-transparency-report-2020>

216 <https://www.news.uct.ac.za/article/-2020-03-20-climate-change-and-southern-africas-emerging-food-crisis>

217 <https://www.news.uct.ac.za/article/-2019-11-13-farming-in-south-africa-is-under-threat-from-climate-change-heres-how>

218 <https://www.uhf.ac.za/news/RVSCcommunityengagementworkshopclimatechangescience>

Country	Programme/Activity	Description of program or activity or role of institution in capacity building program.
South Africa	University of the Free State	University of the Free State offers Master of Science, with a specialization in climate change ²¹⁹ . They have the CAN-DOO programme in the Department of Soil, Crop and Climate Sciences that aims at developing infrastructure that will facilitate and expand public outreach and encourage public engagement in climate science as the public become responsive to regional climate changes ²²⁰ . They are also involved in organizing public knowledge sharing workshops and symposiums ²²¹ .
South Africa	University of Limpopo	University of Limpopo organizes conferences on climate change ²²² . The University also developed two centers of excellence; the Risk and Vulnerability Science Centre (RVSC in 2012) and the Africa Centre for Sustainability Accounting and Management (ACSAM in 2013), through which it works with communities to reverse and redress some of the critical environmental, social, economic, and governance effects of climate change as well as persistently implementing and evaluating adaptation responses ²²³ . It offers Bachelor of Science in Geography and Environmental Studies with course units on introductory and applied climatology ²²⁴ . Part of their core research areas is also climate change and environment protection ²²⁵ .
South Africa	University Mpumalanga	University Mpumalanga offers a Diploma in Animal Production which now has been modified to include issues of climate change ²²⁶ . They also have research themes that include climate change ²²⁷ . They also have a Bachelor of Science in Environmental Science that ensures sustainability by addressing issues like climate change ²²⁸ . They also have a master's of Science with climate courses embedded ²²⁹ .
South Africa	Nelson Mandela University	Nelson Mandela University's Department of Computing Sciences received funding from The British Council Creative Commission as part of Project-ArC – an international consortium of 12 universities that will collaborate to deploy local initiatives for Climate Change accountability and responsibility. The project addresses issues of energy use efficiency, waste reduction and e-learning for climate information transfer ²³⁰ . They also are involved in climate information sharing by means of public talks ²³¹ and have research focus on climate change ²³² and global change projects exist ²³³ .
South Africa	University of Witwatersrand, Johannesburg	The University is an active research partner with Future Climate for Africa, aimed at enhancing scientific knowledge and prediction of African climate and piloting methods to ensure impact on specific development challenges.

219 <https://www.ufs.ac.za/natagri/departments-and-divisions/soil-and-crop-and-climate-sciences-home>

220 <https://www.ufs.ac.za/supportservices/departments/service-learning-at-our-university-home/unlisted-pages/natural-and-agricultural-sciences/can-doo-programme-in-climate-sciences-152>

221 <https://www.ufs.ac.za/conferences/conference/african-water-and-climate-resilience-symposium>

222 <https://www.ul.ac.za/globalchange2018/>

223 https://www.ul.ac.za/application/StoryAdmin/index.php?Entity=Story_Comments&TheID=587

224 https://www.ul.ac.za/index.php?Entity=agri_geo_enviro_under

225 <https://www.ul.ac.za/research/index.php?Entity=Current%20News%20and%20Events&TheS=97>

226 <https://www.ump.ac.za/Study-with-us/Faculties-and-Schools/Faculty-of-Agriculture-and-Natural-Sciences/School-of-Agricultural-Sciences/Diploma-in-Animal-Production>

227 <https://www.ump.ac.za/Research-and-Innovation/Institutional-Research-Themes>

228 <https://www.ump.ac.za/Study-with-us/Faculties-and-Schools/Faculty-of-Agriculture-and-Natural-Sciences/School-of-Biology-and-Environmental-Sciences/Bachelor-of-Science-in-Environmental-Science>

229 <https://www.ump.ac.za/Study-with-us/Faculties-and-Schools/Faculty-of-Agriculture-and-Natural-Sciences/School-of-Biology-and-Environmental-Sciences/Master-of-Science>

230 <https://news.mandela.ac.za/News/Computing-Sciences-at-Mandela-Uni-part-of-internat>

231 <https://mapru.mandela.ac.za/News/Public-talk-on-climate-change-by-MAPRU-honours-stu>

232 https://mapru.mandela.ac.za/apex/media/Store/images/Outreach/Outreach_pdf/Nature-Climate-Change.pdf

233 <https://cmr.mandela.ac.za/Research-Training/Research-Themes/Global-Change>

Country	Programme/Activity	Description of program or activity or role of institution in capacity building program.
South Sudan	University of Juba	The University offers a BSc Environmental Studies ²³⁴ -, BSc Forestry ²³⁵ . The School of Natural Resources & Environmental Studies (SNRES) BSc Natural Resources ²³⁶ , Masters in Natural Resources Management ²³⁷ , Diploma Programme in Environmental Sciences ²³⁸ , PhD in Natural Resource Management ²³⁹
Tanzania	University of Dar es Salaam	The University offers a course in MSc. Climate Change and Sustainable Development which equips students with skills to conduct climate change-related research, link climate change and development and integration of climate change into policy making ²⁴⁰ . In addition, the University's Institute of Resource Assessment is also actively involved in Climate Change Mitigation in Agriculture ²⁴¹ .
Tanzania	The Open University of Tanzania	The University offers BSc Environmental Studies, BSc Energy Resources ²⁴² , and Bachelor of Arts in Natural Resources Management. These are all courses that are very critical in building capacity to increase climate action
Tanzania	University of Dar Es Salaam	The college of social sciences offers BA in Geography and Environmental Studies ²⁴³ , while the College Of Natural And Applied Sciences PhD Environmental Science ²⁴⁴ , Postgraduate Diploma in Meteorology, and MSc. Biodiversity & Conservation
Uganda	Makerere University, Gulu University and Busitema University	The three universities have been identified as key participants in the implementation CBIT Programme: Strengthening the capacity of institutions in Uganda to comply with the transparency requirements of the Paris Agreement ²⁴⁵ .
Uganda	Busitema University	Offers a Master of Science in Climate Change and Disaster Management, and PhD in Ecology and Biodiversity (Research) ²⁴⁶
Uganda	Gulu University	Offers three masters programmes that cover climate-related issues; a Master of Science in Agri-Enterprises Development, Master of Science in environmental Sciences and Natural Resources Management, and Master of Science in Food Security and Community Nutrition ²⁴⁷ ,
Uganda	Kabale University	The University is actively involved in climate research to address issues of farmers and women action to climate change ²⁴⁸ . They also have a few courses that cover aspects of climate change like Master of Science in Environment and Natural Resources ²⁴⁹ ,

234 <https://www.university-directory.eu/jredirect/143252/Environmental+Studies/program-courses/Bachelor-degrees/65/University+of+Juba/SD/5180/Environmental+Studies+%28Bachelor+of+Science+Degree+%28Honours%29%29>

235 <http://www.jonares-uoj.com/pages/SNRES-Acad>

236 <http://www.jonares-uoj.com/pages/SNRES-Acad>

237 <http://www.jonares-uoj.com/pages/SNRES-Acad>

238 <http://www.jonares-uoj.com/pages/SNRES-Acad>

239 <http://www.jonares-uoj.com/pages/SNRES-Acad>

240 <https://www.udsm.ac.tz/web/index.php/centres/cccs/masters-programs>

241 <https://www.udsm.ac.tz/web/index.php/institutes/ira>

242 <https://www.out.ac.tz/bsc-er/>

243 https://www.udsm.ac.tz/web/index.php/study/programme/BA_in_Geography_and_Environmental_Studies_23

244 <https://www.cbitplatform.org/projects/strengthening-capacity-institutions-uganda-comply-transparency-requirements-paris>

245 <https://www.cbitplatform.org/projects/strengthening-capacity-institutions-uganda-comply-transparency-requirements-paris>

246 <https://busitema.ac.ug/academics/post-graduate-training/>

247 <http://fae.gu.ac.ug/service/masters-of-food-security-and-community-nutrition/>

248 <https://www.kab.ac.ug/?s=climate+change>

249 <https://www.kab.ac.ug/programme/master-of-science-in-environment-and-natural-resources/>

Country	Programme/Activity	Description of program or activity or role of institution in capacity building program.
Uganda	Kyambogo University	Offers degree programmes aligned to climate change like Bachelor of Environmental Science Technology and Management, and Master of Science in Water & Sanitation Engineering. Together with Makerere University & Wageningen University, they awarded PhD opportunities to address issues of climate change, (Restoring Resilience & Stimulating Stewardship of the Manafwa Watershed (2019 – 2022) ²⁵⁰ . They also have published research on climate change ²⁵¹ ,
Uganda	Lira University	Participates in climate change events, ²⁵² and therefore contributes to raising awareness in communities, including SMEs
Uganda	Makerere University	Makerere University has several courses with components of climate change like Post graduate diploma in meteorology, Bachelor of Environmental Science, Bachelor of Meteorology, Bachelor of Science in Forestry, Bachelor of Geographical Sciences ²⁵³ , MSc. in Integrated Watershed Management and Master of Science in Environment and Natural Resources Management ²⁵⁴ , Makerere University also hosts the Regional Center for Crop Improvement (MaRCCI), which is an African Regional Centre of Excellence for Crop Improvement supported by a grant from World Bank (2017-2022). It has been involved in developing clean energy technologies to combat climate change ²⁵⁵ ,
Zambia	University of Zambia.	University of Zambia is a member of SARUA. Together with other SADC universities, the University of Zambia has aided in conducting research, teaching and community and policy outreach activities that are associated with climate actions ²⁵⁶ .
Zimbabwe	Chinhoyi University of Technology	The University offers modules with components on climate change in the School of Agricultural Sciences and Technology (SAST) as well as School of Wildlife Ecology and Conservation (SWEC).
Zimbabwe	University of Zimbabwe	Faculty of Agriculture Environment and Food Systems offers a range of programmes like BSc Honours Climate Science Resilience and Livelihoods, BSc Honours Applied Environmental Sciences and Technology. They also offer MSc Climate Change and Food Systems, MSc Industrial Ecology and Environmental Management and MSc Environmental Systems Engineering.

250 PhD Scholarship Announcement (2 vacancies) ~ Kyambogo University (kyu.ac.ug), <https://kyu.ac.ug/phd-scholarship-announcement-2-vacancies/>

251 Research & Publications - FED ~ Kyambogo University (kyu.ac.ug), <https://kyu.ac.ug/research-publications-fed/>

252 World Meteorological Day 23-3-2018 – Lira university, <https://lirauni.ac.ug/world-meteorological-day-23-3-2018/>

253 https://courses.mak.ac.ug/search-courses?title=climate&field_academic_programs_sharing_tid=&field_course_code_value=&field_instructor_year_of_study_tid=All&field_semester_tid=All&tid=All&field_course_instructor_tid=

254 Postgraduate | Makerere University, <https://www.mak.ac.ug/academic-programmes/postgraduate>

255 DESIGN OF AN IMPROVED COOKING STOVE FOR CLEAN ENERGY, ELECTRICITY GENERATION, FOOD SECURITY AND CLIMATE CHANGE MITIGATION – Research and Innovations Fund (mak.ac.ug), <https://rif.mak.ac.ug/design-of-an-improved-cooking-stove-for-clean-energy-electricity-generation-food-security-and-climate-change-mitigation/>

256 SARUA-Climate-Change-Vol1No1-KCPF.pdf (cdkn.org), <https://cdkn.org/wp-content/uploads/2014/06/SARUA-Climate-Change-Vol1No1-KCPF.pdf>

Annex F

Research Organizations and other Support Institutions involved in capacity building and what they offer

Country	Name of Institution/ Research organization	Description of program or activity or role of institution in capacity building program.
Angola	The Ecological Youth of Angola- Juventude Ecologica Angolana (JEA)	This is an environmental NGO founded in 1991 by a group of young Angolan activists to foster environmental issues including climate change. Programme: Climate Awareness: The focus is to promote environmental education in the country ²⁵⁷ .
Eritrea	Vita ²⁵⁸	The major focus of this organization was initially on refugees. However, climate action has become a core focus of the organization. Offers: <ul style="list-style-type: none"> Vita Green Impact Fund; meant to finance low-carbon emission and carbon reduction projects in the country
Eswatini	Climate and Clean Air Coalition ²⁵⁹	The organization partners with the government of Eswatini especially in reduction and elimination of short-lived climate pollutants, given that the country produces refrigeration equipment. Offers: <ul style="list-style-type: none"> Free expert assistance to government and policy personnel especially on climate pollution issues. They provide guidance on technological options, mitigation measures, funding opportunities, application of measurement tools²⁶⁰ Information sharing about climate-related content in different regions for example cleaner fuels and vehicles in Africa (factsheet)²⁶¹, . This kind of information can help SMEs choose the low-emission vehicles to use in their business operations Capacity building on energy-efficient alternative refrigerants and technologies in developing countries²⁶²
Eswatini	Eswatini Climate Coalition ²⁶³	It is an organization focused on enhancing awareness, action and civic engagement around climate change in Eswatini, especially among the different sectors. Offers: <ul style="list-style-type: none"> Public presentations of climate-related materials for communities Education and awareness programmes for schools, students and youth in Eswatini Opportunity to participate in their projects. SMEs can act by partnering with the organization in raising awareness in the communities through participating in the organization projects. This can be some sort of corporate responsibility²⁶⁴.

257 Ecological Youth of Angola [JEA] (trickleout.net) <https://trickleout.net/index.php/directoryofenterprises/angola/ecological-youth-of-angola-jea>

258 Vita in Eritrea - For Climate Smart Communities, <https://vita.ie/eritrea/>

259 <https://www.ccacoalition.org/en/partners/eswatini>

260 <https://www.ccacoalition.org/en/solutioncenter/expert-assistance>

261 https://www.ccacoalition.org/en/file/7478/download?token=_AJm_zXl

262 <https://www.ccacoalition.org/en/activity/catalyzing-climate-friendly-and-efficient-cooling>

263 <https://eswatiniclimate.org/>

264 <https://eswatiniclimate.org/contact/>

Country	Name of Institution/ Research organization	Description of program or activity or role of institution in capacity building program.
Ethiopia	Population, health and environment Ethiopia Consortium (PHE-EC) ²⁶⁵	<p>Among a range of thematic areas that they handle, the consortium also targets on addressing climate change and environmental sustainability issues in Ethiopia.</p> <p>Project: SRHR and Environment Integration DFPA/DANIDA: Aimed at addressing the nexus between population dynamics and Environmental Sustainability and Climate Change Adaptation with focus on both policy advocacy and operational level integration. It has envisioned creating community and environmental resilience²⁶⁶.</p>
Ethiopia	Vita ²⁶⁷	<p>The major focus of the organization was initially on refugees; however, climate action has become a core focus of the organization.</p> <p>Offers:</p> <ul style="list-style-type: none"> • Vita Green Impact Fund; meant to finance low-carbon emission and carbon reduction projects in the country. For example, they can finance a tree planting project and when carbon measuring is done, they sell the carbon credits to emitting bodies and get that money for the subsequent projects.
Kenya	Kenya Climate Innovation Centre ²⁶⁸ :	<p>The innovation Centre offers incubation, capacity building and financing options to new small and medium businesses and the Kenyan entrepreneurs that are developing innovations to address the challenges of climate change.</p> <p>Running Programmes:</p> <ul style="list-style-type: none"> • Incubation Programme: targets start-ups and early-stage enterprises that have at least developed a prototype. Intensive practical training and business coaching is given to the businesses to enable them prove their concepts in the market and progress towards commercialization. • Green-Tech Accelerator Programme: Nurtures the graduates from the Incubation programme. It facilitates their rapid growth, and enables them to undertake more difficult business investments²⁶⁹ : <p>Activities/Services offered:</p> <ul style="list-style-type: none"> • Business advisory, SME enabling Environment, • SME financing especially for green enterprises • Access to facilities, for example, working space for startup companies, allows for networking and business meetings • Information access especially on market intelligence and clean technologies opportunities²⁷⁰ :
Kenya	African Biodiversity Network (ABN) ²⁷¹ :	<p>This is an advocate of the development and utilization of indigenous crop seed and foods, but also stretches to enhancing biodiversity conservation and use of agrofuels.</p> <p>Programmes:</p> <ul style="list-style-type: none"> • Community Seeds and Knowledge, this programme aims at reviving the traditional seed diversity and reduce the use of genetically modified seeds by the small holder farmers²⁷² : • Capacity building and skills development • Strengthening Networking, Communication and Regional Advocacy²⁷³ :

265 <https://phe-ethiopia.org/>

266 <https://vita.ie/ethiopia/>

267 <https://www.awf.org/>

268 <http://www.kenyacic.org/>

269 <https://www.kenyacic.org/our-programs/>

270 <https://www.kenyacic.org/our-programs/>

271 <https://africanbiodiversity.org/community-seeds-and-knowledge-csk/>

272 <https://africanbiodiversity.org/community-seeds-and-knowledge-csk/>

273 <https://africanbiodiversity.org/wp-content/uploads/2018/05/Thematic-areas5.jpg>

Country	Name of Institution/ Research organization	Description of program or activity or role of institution in capacity building program.
Kenya	African Forest Forum ²⁷⁴ :	<p>An organization focused on ensuring sustainable forest management and building sustainable business models for forest-based value chains in the country.</p> <p>Programme: Capacity Building and Skills Development; focused on</p> <ul style="list-style-type: none"> • Assessing gaps in capacities and skills; • Analyze gaps in all relevant institutions and bodies to address both traditional forest and tree management practices and new emerging issues in forestry like the services of forests in climate change adaptation and mitigation, and trans-boundary forest issues²⁷⁵.
Kenya	African Wildlife Foundation ²⁷⁶ :	<p>Works with technical partners, the non-governmental- and the private sector, especially getting their inputs on the AWF programmes that tackle a range of issues including climate change.</p> <p>Programmes: Climate Change; especially regarding advocacy for the protection of large landscapes as a mitigator of climate impact²⁷⁷</p> <p>Activities under the programme:</p> <ul style="list-style-type: none"> • Introducing climate-smart agriculture and sustainable energy solutions • Empowering communities to secure their water sources
Kenya	Back to Basics (BTB) ²⁷⁸ :	<p>It is a women-led non-profit Organization registered and working in Kenya to support Communities, especially women and youth.</p> <p>Programmes:</p> <ul style="list-style-type: none"> • Sustainable livelihoods and environmental stewardship, values-based youth empowerment and education & Women and Chemicals management network²⁷⁹. • Values-based youth empowerment education²⁸⁰. <p>Activities:</p> <ul style="list-style-type: none"> • Agro-ecology, Permaculture, livelihood's improvement • Integrated Conservation and Economic empowerment programmes, Greening projects (Schools, Institutions etc.) • Landscape Restoration, Reforestation, • Establishment of community-managed tree nurseries, Protection and rehabilitation of ecosystems and water catchments • Setting up of programs that work with young people, create opportunities for youth through partnerships • Empowering and Engaging Youth • Capacity building and training, Advocacy and Awareness creation, Information sharing, Partnerships and networking, Policies and Lobbying, Events and activities, Experiential learning

274 <https://aforum.org/>

275 <https://aforum.org/capacity-building-and-skills-development-2/>

276 <https://www.awf.org/>

277 <https://www.awf.org/land-protection/climate-change>

278 <https://www.back-tobasics.org/>

279 <https://www.back-tobasics.org/our-work/sustainable-livelihoods/>

280 <https://www.back-tobasics.org/our-work/values-based-youth-empowerment-education/>

Country	Name of Institution/ Research organization	Description of program or activity or role of institution in capacity building program.
Kenya	Catholic Youth Network for Environmental Sustainability in Africa (CYNEA) ²⁸¹ :	<p>An organization driven by the need to upscale ecological awareness and developing programs and initiatives that facilitate this. Located in Kenya, Ethiopia, Zimbabwe, Tanzania, Zambia, Rwanda and South Africa.</p> <p>Programme: Climate Change Toolkit²⁸²:</p> <p>Activities²⁸³:</p> <ul style="list-style-type: none"> • Youth education and Awareness Creation • Networking and Advocacy Training • Encouraging and Supporting Local Action Plans • Women trainings on several environmental issues including waste management²⁸⁴
Kenya	Centre for Environment Justice and Development ²⁸⁵ :	<p>The main purpose of its formulation was to promote sound management of chemicals and waste to ensure that the natural environment and wellbeing of the Kenyan vulnerable populations are protected.</p> <p>Programmes:</p> <ul style="list-style-type: none"> • Marine Litter and Waste Management²⁸⁶ • Highly Hazardous Pesticides Elimination²⁸⁷ <p>Activities:</p> <ul style="list-style-type: none"> • Improving value chain efficiency through strengthening the entrepreneurial capacity of artisan women • Building the capacity of women to address the challenge of marine pollution through a waste segregation and recycling program in Mombasa • Rapid assessment of the use of highly hazardous pesticides in the flower farms in Naivasha Kenya • Developing a community monitoring system of highly hazardous pesticides in flower growing region of Naivasha, Kenya
Kenya	Environment Liaison Centre International (ELCI) ²⁸⁸ :	<p>One of the main pillars of its formulation was to encourage the development of information and service centers in the world on a wide range of issues including climate change. They have programmes running in agriculture and food security²⁸⁹, biodiversity and natural resources management²⁹⁰, and most importantly, climate change.</p> <p>Programme: Climate Change and Energy²⁹¹.</p> <p>Activities:</p> <ul style="list-style-type: none"> • Provide effective tools and leadership for communities, CSOs and private sector to adapt to, and mitigate the effects of climate change • Promote access to clean energy in line with SDG no. 7 and in consideration of SDG no. 8, as well as the United Nations Sustainable Energy for All Initiative (SE4ALL)

281 <https://www.cynesa.org/>282 <https://www.cynesa.org/projects/climate-change/>283 <https://www.cynesa.org/about-us/>284 <https://www.cynesa.org/category/posts/multi-faith-women-leaders-advocacy-training/>285 <http://cejadkenya.org/home-2?gvas=blue>286 <http://cejadkenya.org/6-marine-litter-and-waste-management>287 <http://cejadkenya.org/5-highly-hazardous-pesticides-elimination>288 <https://elci.org/>289 <http://www.elci.org/agriculture-food-security>290 <http://www.elci.org/biodiversity-natural-resources-management>291 <http://www.elci.org/climate-change-energy>

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Kenya	Centre for Justice Governance and Environmental Action ²⁹² .	<p>This is an environmental and human rights organization whose principles are hinged on environmental governance and protection.</p> <p>Programmes:</p> <ul style="list-style-type: none"> • Climate Change and Environment Governance²⁹³, • Advocacy; also seeking to enhance the capacity of the media in community environmental injustices²⁹⁴, • Education and Empowerment²⁹⁵ • Strategic Litigation²⁹⁶ <p>Activities:</p> <ul style="list-style-type: none"> • Building the capacities of communities to understand climate change, mitigation, adaptation and to identify linkages between the environment and human rights. • Empowering communities to identify and monitor environmental issues like pollution, deforestation, environmental degradation, and equipped with how to curb pollution and deal with environmental toxic chemical poisoning. • Setting up environmental clubs which are motivated to be active and are empowered on the environment; climate change and human rights.
Kenya	Environmental Compliance Institute ²⁹⁷ .	<p>A Non-Governmental Organization with a mission of promoting sustainable societies in Africa through good environmental governance and establishing environmental rule of law</p> <p>Programmes:</p> <ul style="list-style-type: none"> • Climate & Clean Air²⁹⁸, • Environmental Regulatory Training²⁹⁹, • Regional Cooperation/EANECE³⁰⁰, <p>Activities:</p> <ul style="list-style-type: none"> • Raising awareness of climate change and its impacts on the environment, peoples and livelihoods • Promoting the adoption and implementation of policies, legislation and practices that improve air quality • Reduce energy use and limit greenhouse gas emissions, including short-lived climate pollutants (SCLPs) • Promoting regional harmonization of environmental laws, regulations and standards, brings together its members to jointly build capacity on priority environmental enforcement and compliance issues • Advancing the strengthening of relationships among the member countries and institutions to improve cooperation on trans-boundary environmental issues. <p>Courses offered³⁰¹ :</p> <ul style="list-style-type: none"> • Introduction to Environmental Law • Environmental Inspections • Safety and Risk Assessment in Environmental Inspections • Principles of Environmental Compliance & Enforcement • Performance Indicators for Compliance & Enforcement Programs • Next Generation Environmental Management Strategies (pollution prevention assessments and strategies, voluntary environmental reporting systems, internal compliance auditing, etc.) • Environmental Petitioning and Public Participation in Environmental Decision Making and Enforcement (for civil society groups)

292 <https://www.centerforjgea.com/>293 https://www.centerforjgea.com/climate_change.php294 <https://www.centerforjgea.com/advocacy.php>295 <https://www.centerforjgea.com/education&empowerment.php>296 <https://www.centerforjgea.com/litigation.php>297 <https://www.eci-africa.org/>298 <https://www.eci-africa.org/programs/climate-change-clean-air/>299 <https://www.eci-africa.org/programs/environmental-regulatory-training/>300 <https://www.eci-africa.org/programs/regional-cooperation/>301 <https://www.eci-africa.org/programs/environmental-regulatory-training/>

Country	Name of Institution/ Research organization	Description of program or activity or role of institution in capacity building program.
Kenya	Forest Action Network (FAN) ³⁰² :	<p>Activities:</p> <ul style="list-style-type: none"> • Strengthening of Community-based organizations related to forestry management through trainings on Participatory Forest Management • Training of government officers including as exchange visits to countries with experience in participatory forest management • Training District Environment Committees (DEC) on their roles and responsibilities to improve the health of the environment
Kenya	Green Africa Foundation ³⁰³ :	<p>Focused on working with communities especially on the implementation of practical community-driven projects aimed at greening Africa.</p> <p>Programmes:</p> <ul style="list-style-type: none"> • Capacity Building Programme³⁰⁴, • Seedling Donation for Environmental Conservation³⁰⁵, <p>Activities:</p> <ul style="list-style-type: none"> • Conducts capacity building programmes at community levels to empower the communities to be better placed to identify their capabilities and use those capabilities in identifying and solving their needs and priorities for their well-being. • Prepares certified seeds in established nurseries and seedlings distributed to evaluated groups and institutions that undertake planting during the community social responsibility activities, to enhance adaptation
Kenya	Indigenous Information Network ³⁰⁶ ,	<p>An organization that deals with development issues affecting Indigenous people and local communities especially women, children, youth and other vulnerable members of our communities.</p> <p>Programmes:</p> <ul style="list-style-type: none"> • Partnerships and Networking³⁰⁷, • Water Projects, especially increasing clean water availability to the communities in remote area³⁰⁸ • Traditional Knowledge, including assessing how climate change impacts affect traditional knowledge³⁰⁹ • Children and Youth Empowerment, together with partners, they have a mentoring programme called VIVA and Girls for climate to mentor girls to help them overcome climate impacts unique to the girl child³¹⁰

302 <https://www.fankenya.org/index.html>303 <http://www.greenafricafoundation.org/>304 http://www.greenafricafoundation.org/programs/capacity_building_program.php305 http://www.greenafricafoundation.org/programs/environmental_conservation.php306 <http://indigenous-info-kenya.net/>307 <http://indigenous-info-kenya.net/partnerships-and-networking/>308 <http://indigenous-info-kenya.net/water-projects/>309 <http://indigenous-info-kenya.net/traditional-knowledge/>310 <http://indigenous-info-kenya.net/youth-empowerment/>

Country	Name of Institution/ Research organization	Description of program or activity or role of institution in capacity building program.
Kenya	International Center for Research in Agroforestry (ICRAF) ³¹¹ :	<p>With key goal of guiding research in agriculture and related fields, it works to mitigate tropical deforestation, land depletion and rural poverty through improved agroforestry systems.</p> <p>Programmes³¹²:</p> <ul style="list-style-type: none"> • Education: They have initiated a programme to encourage and help universities and technical colleges incorporate agroforestry subjects into their curricula, which can benefit farmers (especially small scale) • Information: Through documentation and publications, information on agroforestry is distributed worldwide to be accessed by interested stakeholders. • Trainings: Provided mainly to national institutions to improving small holder farmer productivity • Multipurpose tree improvement: This aims at developing tree species, easily accessible to local farmers, but that can address many demands like food, fodder, fuelwood and so on. • Characterization and impacts: This programme aims at sharing skills and methods of assessing the impact of climate change, soil mismanagement, identifying marketing strategies that improve the lives of farmers.
Kenya	Interwaste Research and Development East Africa Trust ³¹³ :	<p>A non-profit organization focused on tackling environmental problems resulting from mishandling of urban solid waste, wastewater, or from WASH, agriculture, deforestation and chemical and hazardous wastes sectors in Africa</p> <p>Activities³¹⁴:</p> <ul style="list-style-type: none"> • They carry out capacity building among institutions, training waste engineers and managers on technical, environmental, social and energy issues of solid waste/wastewater and WASH management, eradicate poverty and create employment • They develop educational materials for solid waste and WASH management courses in national universities in Africa • Provide standard guidelines for the disposal of human and animal health care waste • Collect and disseminate information regarding waste management, to government, local and international organizations, bodies and persons engaged in industry and commerce, including SMEs • Train and motivate urban local authorities to be involved in waste management and do leasing of landfills/dumpsites for developments and improvements. • Advise and assist other organizations, bodies or persons focused on waste management issues by offering gifts or loans or property or by the provision of other extension services • Strengthen the capacity of the community to protect the environment and manage their waste

311 <http://www.ciesin.org/IC/icraf/ICRAF.html>312 <http://www.ciesin.org/IC/icraf/programs.html#train>313 <https://interwaste-ea.co.ke/>314 <https://interwaste-ea.co.ke/about-us-2/>

Country	Name of Institution/ Research organization	Description of program or activity or role of institution in capacity building program.
Kenya	Kenya Climate Change Working Group Association ³¹⁵ :	<p>This is a national network of Civil Society organizations uniting voices and action on climate change. They seek to develop and implement climate change sensitive policies, projects and activities to minimize human vulnerability to climate change</p> <p>Current Projects³¹⁶:</p> <ul style="list-style-type: none"> • UN Climate Change Learn Project, with the main goal of strengthening human resources, learning and skills to advance green, low emission and climate resilient development in Kenya • Green and Inclusive energy – Hivos, with the main purpose of enhancing the role of communities in climate change adaptation in Kenya • Enhancing Last Mile Energy Access to accelerate achievement of universal energy access and advocacy to catalyze increased investment in decentralized renewable energy and capacity building of members on access to modern energy services • Climate hearings; a debate platform for stakeholders to discuss climate change problems in their area and brainstorm on possible solutions • Africa Adaptation initiative, meant to contribute towards providing an enabling environment for the mainstreaming of climate adaptation in Kenya.
Kenya	Kenya Network of Grassroot Women Foundation (KenGROW) ³¹⁷ :	<p>An organization leading in engaging women in developmental opportunities to improve their socio-economic capacities and participation in leadership.</p> <p>Programmes:</p> <ul style="list-style-type: none"> • Environmental conservation, mainly focusing on community education on how to establish nurseries and adopt tree planting³¹⁸, • Economic empowerment, by engaging them in income-generating activities like Aloe Vera farming, small animal husbandry, boda- boda services, brick making, and beadwork³¹⁹. • WASH, especially engaging community leaders to advocate and demonstrate the use of soap and handwashing, construction of pit latrines and water harvesting storage tanks³²⁰ • Community mobilization, using self-help groups (SHGs) and other community-based organizations (CBOs), relevant information regarding climate change can be shared³²¹.
Kenya	KTDA Foundation ³²² :	<p>An organization with a vision to empower the small holder tea farmers and their communities economically and socially through development of sustainable programmes and partnerships</p> <p>Programmes:</p> <ul style="list-style-type: none"> • Environmental sustainability: The programme aims at promoting climate change mitigation, adaptation and resilience among tea farmers to ensure sustainable harvests³²³ • Economic empowerment by collaboration, they work directly with 611,000 farmers, focusing on building their capacities to increase income from increased tea earnings, savings and venturing into complementary green economy business enterprises³²⁴

315 <https://www.kccwg.org/>

316 <https://www.kccwg.org/projects.html>

317 <https://kengrowfoundation.org/>

318 <https://kengrowfoundation.org/community-mobilization/>

319 <https://kengrowfoundation.org/economic-empowerment/>

320 <https://kengrowfoundation.org/water-sanitation-and-hygiene/>

321 <https://kengrowfoundation.org/community-mobilization/>

322 <https://ktdafoundation.org/>

323 <https://ktdafoundation.org/our-pillars/environmental-sustainability/>

324 <https://ktdafoundation.org/our-pillars/economic-empowerment/>

Country	Name of Institution/ Research organization	Description of program or activity or role of institution in capacity building program.
Kenya	Light and Power Centre World Outreach ³²⁵ .	<p>An organization with focus of improving livelihoods of communities through empowering young people. They do this through educational sponsorships and scholarships, mentorship and leadership development, sports, and business development.</p> <p>Programmes³²⁶:</p> <ul style="list-style-type: none"> • Business Development (Job skills and trains youth in business development and management) • Mentorship: for young men and women that trains emerging community leaders in servant and transformational leadership • Sponsorships; x-candidate programs, internship opportunities, and work opportunities among Light and Power's small businesses
Kenya	Pan African Climate Justice Alliance (PACJA) ³²⁷ :	<p>This is consortium of over 1000 organizations from 48 African countries with membership from the local communities, Community-based organizations, faith-based Organizations, Non-Governmental organizations, Trusts, Foundations, Indigenous communities, Farmers and pastoralist groups; with the sole purpose of advancing a just and inclusive approach to address climate and environmental challenges</p> <p>Programmes:</p> <ul style="list-style-type: none"> • Research Knowledge & Development • Public engagement and mobilization; to implore people to act on climate change and environmental issues and implement international sustainable development agreements • Policy influence, Institutional and governance strengthening; they engage in the formulation of national climate change and environmental governance policy and programs in the country.
Kenya	Sustainable Environmental Development Watch (SUSWATCH Kenya) ³²⁸ :	<p>A group of civil society organizations that are dealing with sustainable development issues in thematic areas like Water, Sanitation and Waste Management, Agriculture and Food Security, Gender and Green Energy, Climate Change and Sustainable Land Management.</p> <p>Running Project:</p> <ul style="list-style-type: none"> • East African Civil Society for Sustainable Energy & Climate Action EASE-CA Project in 2019 – 2022³²⁹, The project is in Kenya, Tanzania and three Ugandan districts (Nakasongola, Nakaseke and Nebbi districts). It seeks to increase access to sustainable energy and other climate solutions for local communities in Kenya, Tanzania and Uganda. It also plants to increase effective participation and leadership for improved livelihoods and reduction of poverty among men and women.

325 <https://www.lightandpowercentre.org/index.html>

326 <https://www.lightandpowercentre.org/programs.html>

327 <https://pacja.org/>

328 <https://www.suswatchkenya.org/>

329 <https://www.suswatchkenya.org/ease/>

Country	Name of Institution/ Research organization	Description of program or activity or role of institution in capacity building program.
Kenya	The Green Belt Movement ³³⁰ :	<p>This is an organization dealing in environmental issues, particularly with the focus on empowering communities to conserve the environment and improve their livelihoods.</p> <p>Programmes:</p> <ul style="list-style-type: none"> • Mainstream Advocacy, especially campaigns to preserve public land and forests in the country • Climate Change, Main goal is to strengthen the understanding and capacity of rural communities to take action against climate change, but also raise awareness nationally on the role of local communities and forests in tackling climate change, to foster participation³³¹ • Gender Livelihood and Advocacy. Here, community members are educated on the linkages between human activity and the environment, which empowers them to act, and stand up for their rights³³². • Jobs, Internships & Volunteering³³³, • Tree Planting and Water Harvesting: They employ a watershed-based approach to restore degraded watersheds of key water catchments so as to improve their functions and improve the livelihood of the local communities³³⁴
Kenya	Inuka Enterprise Program ³³⁵	<p>The main aim is to support and empower micro, small and medium enterprises to optimize operations and increase their economic productivity</p> <p>Programmes:</p> <ul style="list-style-type: none"> • Capacity Building Program; It involves; training for MSMEs to enhance their business' ability to access finance from banks; Train-the-Trainer Model to create capacity to reach the whole country, targeted intervention based on the Government's priority areas and leverage partnerships, and to facilitate business networking³³⁶
Kenya	Kenya Organization for Environmental Education ³³⁷	<p>This an NGO formed with the main goal of ensuring environmental sustainability</p> <p>Programmes:</p> <ul style="list-style-type: none"> • Eco-Schools; an international programme being implemented in over 60 countries aimed at empowering students to be the change agents for a sustainable world through team and action-oriented activities³³⁸ • Learning about Forests (LEAF) programme. It has been implemented in Kenya by with over 500 schools participating in the programme. The project was developed to increase awareness of the key role forests play for sustainable development, and enable their active participation in the management of forests³³⁹ • Natural Resources and Governance (NRG) aims to enhance sustainable utilization of natural resources and increase citizen participation in governance for improved livelihoods and food security, especially by encouraging development of climate-smart technologies³⁴⁰ • Green Key; for improving awareness and action about sustainable development³⁴¹

330 <http://www.greenbeltmovement.org/>

331 <http://www.greenbeltmovement.org/node/696>

332 <http://www.greenbeltmovement.org/what-we-do/community-empowerment>

333 <http://www.greenbeltmovement.org/what-we-do/see-where-we-work>

334 <http://www.greenbeltmovement.org/what-we-do/tree-planting-for-watersheds>

335 <https://inukasme.co.ke/>

336 <https://inukasme.co.ke/capacity-building>

337 <https://koe.org/>

338 <https://koe.org/eco-schools-programme/>

339 <https://koe.org/learning-about-forests/>

340 <https://koe.org/natural-resources-and-governance/>

341 <https://koe.org/green-key-programme/>

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Lesotho	Technologies for Economic Development ³⁴² ,	<p>This body was formulated to mainly handle the dissemination of the biogas technology in Lesotho and has now expanded to handle three main thematic areas, Sanitation, Energy, Biodiversity.</p> <p>Offers:</p> <ul style="list-style-type: none"> • Facilitation of the use of renewable energy sources • Promotion of local business models to protect Lesotho's biodiversity • Management of large-scale development cooperation projects
Mauritius	SME Mauritius ³⁴³	<p>This organization has a major goal of developing and promoting entrepreneurship in the country. They have a range of programmes that registered and licensed SMEs can take advantage of.</p> <p>Programmes:</p> <ul style="list-style-type: none"> • SME Utility Connection Assistance Scheme (UCA) which aims at helping SME businesses get connected to grids of many utility suppliers in the country, like water and power supply at reduced costs, sometimes grants of Rs 150,000 maximum value are awarded to eligible SMEs to implement this³⁴⁴ • SME Start-Up Programme, where they provide financial support to local business persons who are struggling financially so that they can develop³⁴⁵ • SME Marketing Support Scheme (MSS) which seeks to improve access to markets and satisfy consumer demands. They fund costs associated with achieving the two areas above³⁴⁶. • Inclusiveness and Integration Scheme (INC) that aims at establishing a strong networking relationship among the SMEs to enable them share ideas and experiences. This could improve business operations and reduce vulnerability of each SME to climate change impacts³⁴⁷.
Namibia	AGRIBUSDEV ³⁴⁸ :	<p>Major role is managing and supervising the Green Scheme Program in Namibia</p> <p>Programmes and offers:</p> <ul style="list-style-type: none"> • Cropping calendar for farmers • Good agricultural practices information • Common pests and disease information • Green scheme produce

342 <https://tedlesotho.wordpress.com/>

343 <https://smemu.org/>

344 <https://smemu.org/sme-utility-connection-assistance-scheme-uca/>

345 <https://smemu.org/sme-start-up-program/>

346 <https://smemu.org/sme-marketing-support-scheme-mss/>

347 <https://smemu.org/inclusiveness-and-integration-scheme-inc/>

348 <http://www.agribusdev.org.na/>

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Rwanda	The Rwanda Green Fund (FONERWA) ³⁴⁹ :	<p>This fund is mainly designed to provide technical and financial support to the exceptional private and public projects that help achieve Rwanda's commitment to a green economy development. It allows interested businesses or actors to submit project proposals aimed at addressing climate-related challenges and funds such projects. The fund won the UN Climate action award 2018³⁵⁰</p> <p>Achievements:</p> <ul style="list-style-type: none"> • 106,980 people supported to cope with effects of climate change • 21,145 hectares of watersheds and water bodies protected • 61,592 households with improved access to off-grid clean energy • About 83M USD in seed capital lobbied from DFID, KFW, UNDP, External donors and partnerships. <p>Offers:</p> <ul style="list-style-type: none"> • Training in project/ business proposal writing for example a total of 723 Stakeholders have already been trained so far • Seed funding for projects that lead to green economic development
Rwanda	WCS Rwanda ³⁵¹	<p>A non-governmental, science-based conservation organization that works in over 50 countries around the world aiming to enhance sustainable development and conservation of nature.</p> <p>Offer:</p> <ul style="list-style-type: none"> • Regarding climate change, they provide free data that can be used by policy makers and planners to evaluate the effectiveness of climate change adaptation strategies in Rwanda and provide reports on the status of biodiversity and ecosystem services that will be shared with partners. SMEs can tap into this information to inform their business management plans³⁵².
South Africa	Mineworkers Development Agency ³⁵³ :	<p>Formulated to provide alternative socio-economic livelihoods for former mineworkers and their communities in labor sending areas and Southern African Development Community.</p> <p>Programmes:</p> <ul style="list-style-type: none"> • Artisan programme, they provide training meant to develop artisans in plumbing and electrical Engineering. • Leadership programme, teaches candidates about leadership in the industry • Skills programme, candidates are given skills in carpentry, electrical, plumbing, paving and civil construction that they can later use to improve their livelihoods³⁵⁴ • Enterprise development; trained more than 886 beneficiaries in business skills management in SADC and 1173 in technical business skills

349 <http://www.fonerwa.org/about>

350 <http://www.fonerwa.org/blog/rwanda-green-fund-wins-top-un-award-climate-action>

351 <https://rwanda.wcs.org/>

352 <http://mda.org.za/training-and-skills-development-support/>

353 <http://mda.org.za/training-and-skills-development-support/>

354 <http://mda.org.za/training-and-skills-development-support/>

Country	Name of Institution/ Research organization	Description of program or activity or role of institution in capacity building program.
South Africa	ActionAid International ³⁵⁵ :	<p>The organization offers its services in Ethiopia, Kenya, Malawi, Mozambique, Rwanda, South Africa, Tanzania, Uganda, Zambia and Zimbabwe.</p> <p>Programme: Land and climate³⁵⁶,</p> <p>Activities:</p> <ul style="list-style-type: none"> • Ensuring smallholder farmers have control over their food sources • Ensuring fair distribution of land and resources • Facilitating better land access for women, indigenous peoples, young people and other excluded groups • Advocate for climate justice, which aims at ensuring that people who are suffering get support and compensation
South Africa	Indigenous Peoples of Africa Co-ordinating Committee (IPACC) ³⁵⁷ :	<p>A network of 135 Indigenous peoples' organizations in 21 African countries working on sustainable development and environmental issues</p> <p>Programmes³⁵⁸:</p> <ul style="list-style-type: none"> • Environmental & Climate Justice: Promotion of indigenous knowledge systems in NAPs, Conservation of African forests, Protection and promotion of indigenous peoples' rights to intellectual property of genetic and natural resources. • Indigenous Peoples' Networking; the Secretariat raises funds and assists in project implementation at site level or assisting leaders to get to UN or regional meetings
South Africa	Organic Trade Association (OTA) ³⁵⁹ :	<p>This is an organization that aims to enhance the production and utilization of organic products, including improving market access for organic products and services.</p> <p>Activities:</p> <ul style="list-style-type: none"> • Organic Fraud Prevention Solutions³⁶⁰, • Organic Education Webinars, for example Introducing the Organic Market Basket Webinar scheduled for 22, June, 2021³⁶¹ • GRO Organic Voluntary Research, Promotion, and Education Program: \$0.5 Million invested in research + extension; \$1 Million committed to promotion; Four distinct program areas with seven projects in progress³⁶², <p>Climate change trainings conducted or yet to be delivered:</p> <ul style="list-style-type: none"> • Climate Action Planning for Organic Brands with the CAMP Tool; helps companies fast track climate action. Concluded on 1st April, 2021 • U.S. Climate Policy & Organic Agriculture; involved discussion of policy principles to support organic as a key to mitigating climate change. Was concluded in August 27, 2020 • Organic & Climate – Breakthrough Progress in the EU • Organic & Climate – Consumer Messaging for Maximum Impact

355 <https://actionaid.org/>356 <https://actionaid.org/land-and-climate>357 <https://www.ipacc.org.za/>358 <https://www.ipacc.org.za/>359 <https://ota.com/>360 <https://ota.com/OrganicFraudPrevention>361 <https://ota.com/programs-events/organic-education-webinars>362 <https://ota.com/programs-events/gro-organic-voluntary-research-promotion-and-education-program>

Country	Name of Institution/ Research organization	Description of program or activity or role of institution in capacity building program.
South Africa	South-SouthNorth ³⁶³ :	<p>It supports responses to climate change through policy and knowledge interventions, partnerships and networking.</p> <p>Programmes:</p> <ul style="list-style-type: none"> • Future Climate for Africa, with the mission of generating new climate science focused on Africa and to ensure that this science has an impact on human development³⁶⁴ • Mobilizing Investment for NDC implementation, the main aim is to encourage and facilitate private sector investment into NDCs³⁶⁵ • The Southern Africa Climate Finance Partnership; a knowledge sharing and capacity enhancement platform in several African countries³⁶⁶ • Climate Resilient Infrastructure Development Facility • The Africa LEDS Partnership (AfLP); Advocating low emission development strategies³⁶⁷, <p>Projects:</p> <ul style="list-style-type: none"> • Small Grant facility³⁶⁸: Allows civil society organizations to access climate finance to implement locally relevant adaptation projects at the community level in at least one of the three investment windows: Climate-Smart Agriculture, Climate-Resilient Livelihoods and Climate-Proof Settlements <p>Activities:</p> <ul style="list-style-type: none"> • Improving scientific understanding of climate variability and change across Africa and the impact of climate change on specific development decisions; • Demonstrating flexible methods for integrating improved climate information and tools in decision-making; and • Improving medium to long term (5-40 year) decision-making, policies, planning and investment by African stakeholders and donors. • Identify priority sub-sector(s) per country, map the current policy environment and barriers to scaling up financing and investment and identify key public and private sector stakeholders. • Build financing and investment cases and facilitation strategies for the priority sub-sector identified. • Develop and implement investment-enabling actions through providing support to public actors and the private sector to create favorable conditions for financing of NDC implementation. • Applied Research – Identify knowledge gaps pertaining to barriers and enablers for accessing and implementing international climate finance and avenues for overcoming these through knowledge brokering; and sharing of emerging lessons through a suite of academic research papers and practitioner-targeted knowledge products. • Capacity Enhancement – Build the capacity of practitioners to develop and implement financially feasible and socially responsive climate related projects through the piloting of a formal practitioner-training programme with a partner academic institution, facilitating peer-to-peer learning exchanges, and the further piloting of a youth internship programme in key institutions. • Targeted Technical Assistance – Facilitate learning engagements between institutions and technical experts to understand emerging policy and process constraints and collaboratively develop solutions through the adoption of innovative tools, resources and strategic approaches; informing on-going research. • Advances the preparation of climate resilient water infrastructure projects • Supports climate resilient water infrastructure projects access finance

363 <http://www.southsouthnorth.org/>

364 https://southsouthnorth.org/portfolio_page/future-climate-for-africa/

365 https://southsouthnorth.org/portfolio_page/mobilising-investment-for-ndc-implementation/

366 https://southsouthnorth.org/portfolio_page/southern-africa-climate-finance-partnership-sacfp/

367 https://southsouthnorth.org/portfolio_page/africa-leds-partnership-aflp/

368 https://southsouthnorth.org/portfolio_page/small-grants-facility/

Country	Name of Institution/ Research organization	Description of program or activity or role of institution in capacity building program.
		<ul style="list-style-type: none"> • Provides technical assistance and capacity building support to partners on the best way to select, prepare, manage and implement water infrastructure projects within their contexts. • to develop and pilot a prototype financial instrument that can more effectively and efficiently channel climate and blended funding to these markets • Establish stakeholder engagement vehicles to coordinate activities and promote synergies among different stakeholders in the three countries (i.e. SMEs, financial institutions, policymakers, climate funds) with the overall aim to establish a pathway to increase access to catalytic climate and blended finance on a national as well as on the regional level • Support peer-to-peer learning and capacity building for government, financiers and the private sector, using tailored outreach, training and technical assistance. • Catalyze increased investment in action-oriented adaptation research driven by end-user needs that will help create practical and effective adaptation and resilience solutions. • Promote research modalities and activities that are: collaborative and Southern-led, strengthen local universities and research institutions, lead to capacity-building and facilitate linkages between research and implementation at multiple levels.
South Africa	Southern Africa Resource Watch (SARW) ³⁶⁹ :	<p>Has a main responsibility of advocating and promoting human rights and environmental protection in resource extraction activities by monitoring corporate and state conduct in a peaceful and collaborative manner.</p> <p>Programmes:</p> <ul style="list-style-type: none"> • Capacity Building, they educate communities about their rights and work with leaders to implement programmes³⁷⁰ • Climate change research, for example the study on the nexus between Climate Change and Extractive Industries in Southern Africa
South Africa	The Council for Scientific and Industrial Research ³⁷¹	<p>Programmes:</p> <ul style="list-style-type: none"> • Nextgen Enterprises and Institutions; enables the transition of South Africa's institutions into a digitalized era to support effective service delivery; improve government transparency and accountability, as well as facilitate industrial and societal advancement³⁷², • Advanced Agriculture and Food³⁷³,
South Africa	Umgibe Farming Organics and Training Institute ³⁷⁴ ,	<p>The institute aims at achieving sustainable development through climate-smart agriculture, and development of advanced crop for food security.</p> <p>Programme:</p> <ul style="list-style-type: none"> • Cooperative Training; Runs training and outreach programs on the growing high nutrient food gardens, including crop diversification, promoting backyard vegetable and horticulture gardens, school gardens and grain banks to achieve food and nutritional security for the small holder growers³⁷⁵.

369 <https://www.sarwatch.co.za/>370 <https://www.sarwatch.co.za/what-we-do/#capacity>371 <https://www.csir.co.za/>372 <https://www.csir.co.za/nextgen-enterprises-and-institutions>373 <https://www.csir.co.za/advanced-agriculture-and-food>374 <http://umgibe.org/>375 <http://umgibe.org/our-world/umgibe-training>

Country	Name of Institution/ Research organization	Description of program or activity or role of institution in capacity building program.
South Africa	CLIMATE INNOVATION CENTRE SOUTH AFRICA ³⁷⁶ :	<p>The organization provides business development support to start-ups in the South African green economy in collaboration with the World Bank's InfoDev and the Development Bank of Southern Africa (DBSA)'s green fund.</p> <p>Programmes:</p> <ul style="list-style-type: none"> • Innovation Program³⁷⁷, • Skills development³⁷⁸, <p>Activities:</p> <ul style="list-style-type: none"> • Gap innovation competitions; looks for innovators, researchers and entrepreneurs that are working on novel technologies that will improve the efficiency of government service delivery, increase the competitiveness of the local economy and enhance the quality of life of ordinary citizens • Openix • Coachlab® Skills & Leadership Development, a youth skills development programme managed by The Innovation Hub in collaboration with prominent industry partners, government and academia. • Schools Programme Fablab; promote innovation and entrepreneurship at school level and creates a platform for identification and nurturing young entrepreneurs.
South Africa	START ³⁷⁹	<p>START focuses on providing training, research, education and networking that strengthen scientific skills and inspire leadership for advancing solutions to critical sustainability challenges. In collaboration with Centre for Complex Systems in Transition at Stellenbosch University, Transdisciplinary Lab at ETH Zurich, International Social Science Council (ISSC), and the National Research Foundation of South Africa, START has led efforts to outline curricula for training courses on Transdisciplinary research and application.</p> <p>Programmes:</p> <ul style="list-style-type: none"> • Global Observation of Forest Cover and Land Dynamics (Gofc-Gold)³⁸⁰ • Transdisciplinary Research and Application³⁸¹ • Women in Science
South Africa	African Climate and Development Initiative ³⁸²	<p>Formulated to facilitate and substantially extend climate change research and education at University of Cape Town with the specific context of addressing the development challenges of Africa from an African perspective.</p> <p>Programme:</p> <ul style="list-style-type: none"> • Africa Climate and Development Initiative, provides interdisciplinary training in climate change and sustainable development, with a focus on the issues of relevance to African development.

376 <https://www.theinnovationhub.com/business-incubators/climate-innovation-centre-south-africa-6/>

377 <https://www.theinnovationhub.com/innovation-programmes>

378 <https://www.theinnovationhub.com/skills-development>

379 <https://start.org/>

380 <https://start.org/programs/gofc-gold/>

381 <https://start.org/programs/TD-research/>

382 <http://www.acdi.uct.ac.za/>

Country	Name of Institution/ Research organization	Description of program or activity or role of institution in capacity building program.
South Africa	Siyakhana Organic Garden ³⁸³	<p>With the main vision of promoting health, transforming communities and enhancing environments, this organization offers a range of short capacity building courses in a range of areas, that SMEs in agriculture can tap into to ensure climate resilience.</p> <p>Trainings/Courses offered³⁸⁴:</p> <ul style="list-style-type: none"> • Permaculture Gardening • Sustainable Urban Agriculture • Nutrition and Herbalism • Health Promotion • Physical Activity
Tanzania	Western Indian Ocean Marine Science Association (WIOMSA):	<p>The organization promotes the educational, scientific and technological development of all aspects of marine sciences throughout the Western Indian Ocean (WIO) region consisting of 10 countries: Somalia, Kenya, Tanzania, Mozambique, South Africa, Comoros, Madagascar, Seychelles, Mauritius.</p> <p>Programme:</p> <ul style="list-style-type: none"> • Marine and Coastal Science for Management (MASMA) programme; it is regional competitive research granting mechanism providing funding and technical support for coastal and marine research, training and communications in the Western Indian Ocean (WIO) region • Capacity development³⁸⁵,
Tanzania	Sokoine University Graduate Entrepreneurs Cooperative (SUGECO) ³⁸⁶ :	<p>Aims to promote agribusiness innovation and enhancement to develop creative mindsets, ingenuity, and inspirational success in the field.</p> <p>Programmes:</p> <ul style="list-style-type: none"> • Capacity Building and Training³⁸⁷, • Internship programme, SUGECO organizes short attachments at local farms³⁸⁸, • Entrepreneurship value chain development model³⁸⁹, • Agriculture processing and value addition research • Policy advocacy³⁹⁰, • Farm management and consultancy services³⁹¹, <p>Activities and offers:</p> <ul style="list-style-type: none"> • Youth practical agribusiness skills and entrepreneurship training • National Apprenticeship Programs, International Internships • Changing Mindset, Technical Capacity-Building, Entrepreneurship and Business Planning, Internship and Apprenticeship Attachments, Incubation • Contribute to improve the business environment and participate in dialogue and policy advocacy • Present policy challenges to the government and engage in dialogue and advocate to transform the business environment into one that supports enterprises • Contribute to reducing business risk from a business environment perspective by collaborating and sharing initiatives to improve the business environment.

383 <https://www.siyakhana.org/>384 <https://www.siyakhana.org/what-we-do/building-skills-and-capacity/>385 <https://www.wiomsa.org/our-work/capacity-development/>386 <http://www.sugeco.or.tz/>387 <https://www.sugeco.or.tz/capacity-building-and-training>388 <https://www.sugeco.or.tz/internship-programs>389 <https://www.sugeco.or.tz/entrepreneurship-value-chain-development-model>390 <https://www.sugeco.or.tz/policy-advocacy>391 <https://www.sugeco.or.tz/policy-advocacy>

Country	Name of Institution/ Research organization	Description of program or activity or role of institution in capacity building program.
Tanzania	Tanzania Industrial Research and Development Organization (TIRDO) ³⁹² :	<p>It is a research and development organization that helps the industrial sector of Tanzania through providing technical expertise and support services to upgrade their technology base.</p> <p>Programmes³⁹³:</p> <ul style="list-style-type: none"> • Greener Cassava Processing System Leading to Zero Waste for Enhanced Market Access by Small and Medium Entrepreneurs • Capacity Building for Commercial Production of Edible and Medicinal Mushrooms in Tanzania • Capacity building in medicinal and aromatic plant utilization for Tanzania through training and assistance on documentation, gene banking, conservation, processing and quality control • Consultancy³⁹⁴,
Tanzania	Association of Tanzania Employers ³⁹⁵ :	<p>It represents employers in all sectors of the national economy excluding the civil service and currently has 1400 direct members and 7500 indirect members drawn from private business firms, companies and some parastatal organization</p> <p>Programme: Training service for members</p> <p>Training courses:</p> <ul style="list-style-type: none"> • Increasing Employee Productivity and Performance with Workplace Innovation • Managing Poor Performance and Performance Development • HR Metrics & Data Analysis • The Role of HR in Managing the Future of Work & Business Disruptions • Organizational Analysis and Strategic Planning • People Strategies that drive Positive Business Results • Leadership Skills and Organization Dynamics in the 21st Century • Financial Reporting & Business Performance Analysis • Talent Acquisition, Recruitment function and Succession Planning • Risk Management and Internal Controls
Tanzania	Village Inc. Africa ³⁹⁶ :	<p>Programme: Financing; Providing capital via Microcredits, and expertise that enable and empower rural communities in Sub-Saharan Africa to develop sustainable businesses that create opportunities, and improve lives</p>

392 <https://www.tirido.or.tz/index.php>

393 <https://www.tirido.or.tz/research.php>

394 <https://www.tirido.or.tz/research.php>

395 <https://ate.or.tz/>

396 <https://villageinc.wordpress.com/about/>

Country	Name of Institution/ Research organization	Description of program or activity or role of institution in capacity building program.
Uganda	Centre for Climate Change Innovations (CCI) ³⁹⁷ :	<p>They aim at achieving a climate resilient society with a sustainable natural resource base</p> <p>Programmes:</p> <ul style="list-style-type: none"> • Research and training³⁹⁸ , • Outreach³⁹⁹ , • Advocacy; in mainstreaming climate change and evaluation of natural resources in government departmental planning and implementation⁴⁰⁰ , <p>Activities:</p> <ul style="list-style-type: none"> • Sustainable land management, • Solution-based project designing and implementation, • Indigenous knowledge in climate change adaptation and mitigation • Seminars and conferences, • Community training, • Awareness creation
Uganda	Makerere University Centre for Climate Research and Innovations (MUCCRI) ⁴⁰¹ :	<p>Programmes:</p> <ul style="list-style-type: none"> • Climate Boot camps⁴⁰², • Short courses⁴⁰³, • Public lectures⁴⁰⁴, • Internships⁴⁰⁵, • Conferences⁴⁰⁶, <p>Short Courses:</p> <ul style="list-style-type: none"> • Introducing climate change: the science, impacts and approaches to address climate change • Energy, Forestry and Climate Change • Approaches to building climate resilient natural resource management • Climate change and water resource management • Approaches to climate change adaptation planning
Uganda	Uganda National Meteorological Authority ⁴⁰⁷ ,	<p>This is a semi-autonomous government authority for weather and climate services in Uganda and a focal institution to Inter-Governmental Panel on Climate Change (IPCC).</p> <p>Activities/Offers:</p> <ul style="list-style-type: none"> • Trainings and research⁴⁰⁸, • Climate disaster warnings • Mobile weather alerts • Farmer weather information • Seasonal weather forecasts • Seasonal weather performance

397 <http://ccci.org.ug/>398 <http://ccci.org.ug/activities/research-and-training.html>399 <http://ccci.org.ug/activities/research-and-training.html>400 <http://ccci.org.ug/activities/advocacy.html>401 <https://muccri.mak.ac.ug/>402 <https://muccri.mak.ac.ug/training/bootcamps>403 <https://muccri.mak.ac.ug/content/short-courses>404 <https://muccri.mak.ac.ug/content/public-lectures>405 <https://muccri.mak.ac.ug/content/internship-opportunities-muccri-0>406 <https://muccri.mak.ac.ug/content/muccri-conferences-and-workshops>407 <http://ccd.go.ug/>408 <https://www.unma.go.ug/directorate-of-training-and-research/>

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Uganda	Ministry of Water and Environment (Climate change department) ⁴⁰⁹ :	<p>The department handles most of the climate related business for the country including issues.</p> <p>Running Projects and Programmes:</p> <ul style="list-style-type: none"> • Capacity Building Initiative for Transparency Project (CBIT)⁴¹⁰, • CHAI Project, strengthen the adaptive capacity of individuals and communities in the cattle-corridor to water-related impacts of climate change⁴¹¹, • GCCA, strengthen knowledge and capacities for climate change adaptation in Uganda through trainings and production of education material that will address: key institutions at national and district level, the Civil Societies and Uganda Communities at large⁴¹²,
Uganda	Advocates Coalition for Development and Environment (ACODE) ⁴¹³ :	<p>Runs several projects including women empowerment in business⁴¹⁴, Gender-Responsive budgeting; Green investments⁴¹⁵,</p> <p>Programmes:</p> <ul style="list-style-type: none"> • Environment and Natural Resources Governance Programme • Economic Governance Programme • Peace, Security and Democracy Programme • Science, Technology and Innovation Programme <p>Activities:</p> <ul style="list-style-type: none"> • Strengthening governance frameworks and improved practices that support sustainable management and utilization of environment and natural resources • Building capacities of local governments to implement Local Economic Development policies, • Building capacity of national political and administrative institutions • Supporting democratic, legal and policy reforms • Increasing access to information on appropriate technologies in the agricultural sector • Strengthening the legal and policy frameworks for STI in the agricultural sector.
Uganda	Environmental Management for Livelihood Improvement Bwaise Facility (EMLI Bwaise Facility) ⁴¹⁶ :	<p>This is national membership environmental NGO focused on improving the standards of living of the most vulnerable people in Uganda by ensuring sustainable livelihoods.</p> <p>Projects:</p> <ul style="list-style-type: none"> • Africa Adaptation Initiative Project⁴¹⁷; • Oversaw the Adaptation Finance Tracking Project⁴¹⁸, • and recently Enhancing Climate Finance Transparency⁴¹⁹

409 <http://ccd.go.ug/>410 <http://ccd.go.ug/cbit/>411 <http://ccd.go.ug/chai/>412 <http://ccd.go.ug/gcca/>413 <https://www.acode-u.org/>414 <https://www.acode-u.org/rural-women>415 <https://www.acode-u.org/green-economy>416 <http://bwaisefacility.org/>417 <http://bwaisefacility.org/index.php?page=58>418 <http://bwaisefacility.org/index.php?page=64>419 <http://bwaisefacility.org/index.php?page=67>

Country	Name of Institution/ Research organization	Description of program or activity or role of institution in capacity building program.
		<p>Programmes⁴²⁰:</p> <ul style="list-style-type: none"> • Climate Change (reducing vulnerability and building resilience) • Ecosystems and Environment management (empowering communities to sustainably manage their environment and natural resources) • Environmental Governance (promoting public policy dialogues on environment and natural resources) • Chemicals and Waste (increasing capacity to environmentally-sound management of chemicals and hazardous waste) • Livelihood Programme (improve health, food and nutrition security and increase income) <p>Activities:</p> <ul style="list-style-type: none"> • Reducing vulnerability and building resilience to impacts of climate change • Reducing greenhouse gas emissions and enhancing access to climate finance • Education and awareness-raising • Empowering communities to sustainably manage their environment and natural resources • Restoration of degraded ecosystems like wetlands • Promoting and supporting the environmental basis for sustainable development. • Promoting public policy dialogues on environment and natural resources • Increasing capacity to environmentally sound management of chemicals and hazardous waste • Education, • Awareness-raising and networking with NGOs • Micro-grant support for families, • Seeds and tools supply for agricultural productivity • Assist with establishment of Small nature-based business
Uganda	Regional Centre for International Development Corporation (RCIDC) ⁴²¹ :	<p>This is a membership-based capacity building development organization focused on promoting professional research for sustainable development, social justice, human rights, youth empowerment, women and gender equality, agriculture, environment natural resources management, advocacy campaigns; and is currently having two-hundred-member organizations.</p> <p>Activities or offers:</p> <ul style="list-style-type: none"> • Offer professional Management, Training in leadership, promoting the development of small and medium scale enterprises (SMEs) to become the main vehicle for enhancing sustainability and economic growth. • Co-ordinate, cooperate or work in partnership with any local, international organizations / agencies, associations or groups and individuals with similar interest and objectives in promoting better world for everyone to live • Promote quality professional research for sustainable development • Influence policy, Education, Social Justice, human rights, youth empowerment, women and Gender equality children and women empowerment, Peace and security, conflict Negotiations and management • Environment Natural Resources management, Networking, Agriculture, capacity building, campaigns advocacy and consultancy

420 <http://bwaisefacility.org/index.php?page=41>421 <https://www.globalhand.org/en/organisations/46269>

Country	Name of Institution/ Research organization	Description of program or activity or role of institution in capacity building program.
Uganda	The Community Development Resource Network ⁴²² :	<p>An NGO focused on correcting social injustices in arising from gender and other forms of inequality, poor governance, limited empowerment and the denial of rights in Uganda.</p> <p>Programmes⁴²³:</p> <ul style="list-style-type: none"> • Economic Empowerment / Self Reliance • Environmental justice and Sustainability • Gender and social equity • Livelihood and sustainable food systems • Land justice • Youth economic empowerment • Organizational and institution development <p>Activities:</p> <ul style="list-style-type: none"> • Livelihood's enhancement and citizens' empowerment programming by using resources sustainably • Networking and joint programming with organizations and individuals with similar goals • Promotion and protection of rights of marginalized communities including ethnic minorities, children, and women and girls • Motivating and mobilizing people to rely on their own resources for development • Promotion of good governance and accountable service delivery through advocacy and building capacity of community-based organizations
Uganda	Uganda Coalition for Sustainable Development ⁴²⁴ :	<p>Programmes⁴²⁵:</p> <ul style="list-style-type: none"> • Biodiversity • Climate Change and Energy • Integrated Water Resource Management (IWRM) • Sustainable agriculture • Sustainable Socio-economic Development <p>Activities:</p> <ul style="list-style-type: none"> • Research activities including ecological and socio-economic research that provides information needed to improve the conservation of natural resources while safeguarding community interactions • Community development activities, including projects that promote positive impacts on conservation that are consistent with national policies, plans and are socially and environmentally sound, equitable and transparent • Maintain environment services such as watershed protection and erosion control, Reduced Emissions from Deforestation and forest degradation • Assessing vulnerability, Coping strategies, Adaptation, Mitigation, Resilience • Improved management and maintenance of existing water supply systems, and Conservation of water catchment areas • Agriculture and food security, Soil-water management, Diversification and intensification of food and plantation crops, Best farming practices and experiences, Soil fertility maintenance • Educational and outreach programmes on conservation and management of soil and water • Building Partnerships with like-minded civil society and other development actors to secure sustainable development in the implementation of the Poverty Eradication Action Plan and other nation-wide policies and practices

422 <https://cdrn.or.ug/>423 <https://cdrn.or.ug/practice-areas/>424 <https://www.ugandacoalition.or.ug/>425 <https://www.ugandacoalition.or.ug/?q=content/thematic-areas>

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		<ul style="list-style-type: none"> Increasing unsustainable patterns of consumption and production in Uganda as part of civil society contribution to monitoring barriers towards sustainable development and pro-poor policies and practices in Uganda Following up the commitments made on trade and environment in the Johannesburg Plan of Action (among others paragraph 91), i.e., to ensure the enhancement of mutual supportiveness of trade, environment and development with a view to achieving sustainable development; the Millennium Declaration, Gender mainstreaming and analysis
Uganda	Environmental Alert ⁴²⁶ :	<p>The NGO works with local communities in some of the West Nile, Eastern Uganda, Central Uganda, Western Uganda and the Albertine Region districts through linking evidence-based information and micro-advocacy action to intermediary and national policy and advocacy processes. It runs several projects that are in line with climate change adaptation and mitigation for example Inclusive Green Growth for Poverty Reduction, Sustainable WASH (SusWASH) Project, STEP- UP Project⁴²⁷,</p> <p>Programmes:</p> <ul style="list-style-type: none"> Environment and Natural Resources Water Sanitation and Hygiene Food security enterprise Promoting local innovation Finance and administration Resource mobilization
Uganda	Support for Women in Agriculture and Environment (SWAGEN) ⁴²⁸ ,	<p>An NGO that seeks to provide ecosystem-based solutions for the challenges in Uganda, including climate change.</p> <p>Activities:</p> <ul style="list-style-type: none"> Works with forest-dependent indigenous peoples and local communities to promote agro-ecological technologies and practices, plant trees for food and climate mitigation, construct fuel efficient stoves, rainwater harvesting facilities and transfer appropriate energy technologies such as solar at household level for climate change adaptation to enhance community resilience Promotes use of modern apiary practices using modern Langstroth beehives that do not use fire for harvesting
Uganda	KadAfrica ⁴²⁹ :	<p>Programme:</p> <p>Training of farmers program; they do this through their extension services, and agriculture training to out growers to expand their knowledge, and increased access quality seedlings, and initiative that increase yield and quality of their fruits</p>

426 <http://envalert.org/>427 <http://envalert.org/current/>428 <https://zenaga.de/netzwerk/kooperationen/uganda-swagen/>429 <http://www.kadafrika.wordpress.com/>

Country	Name of Institution/ Research organization	Description of program or activity or role of institution in capacity building program.
Uganda	Village Enterprise ⁴³⁰ :	<p>An organization that seeks to equip and empower entrepreneurs starting business in Africa with resources and skills necessary to start sustainable businesses and savings groups, with the aim that income and savings they later make can enhance their livelihoods and climate resilience.</p> <p>Programmes: Graduation Program⁴³¹,</p> <p>Activities:</p> <ul style="list-style-type: none"> • Training in business establishment and management* • Business savings groups for capital generation • Seed funding for business enterprises* • Business management mentoring
Uganda	Uganda Carbon Bureau ⁴³² :	<p>It is the only full-service carbon finance company in East Africa which provides support to project developers, carbon credit buyers, development agencies, financiers and the public with all aspects of project funding and carbon asset development in the voluntary and compliance carbon markets.</p> <p>Programmes and offers:</p> <ul style="list-style-type: none"> • Climate Information • Climate sense⁴³³, • Open-door policy for climate information inquiries
Uganda	Africa Innovations Institute ⁴³⁴	<p>A non-governmental organization focused on research and innovations development especially in agriculture and food systems to ensure sustainable increase in smallholder farmers' income, food and nutrition security as well as environmental sustainability in Eastern and Central Africa.</p> <p>Programmes:</p> <ul style="list-style-type: none"> • Climate change and environment sustainability programme⁴³⁵: • Capacity and institutional development programme⁴³⁶:
Uganda	Climate Action Network ⁴³⁷ :	<p>This is registered civil society coalition comprising of Non-Governmental Organizations, Academia, and private sector players working on actions to combat the climate change crisis and its impacts in Uganda</p> <p>Programmes and offers:</p> <ul style="list-style-type: none"> • Climate Research and Development; focused on revealing the impacts of climate change to leaders and communities⁴³⁸ • Climate Advocacy and Campaigning; focused on centering climate impacts and people to ensure quick actions, amplifying the voices and stories of frontline and impacted communities, ensuring accountability from leaders for climate action, improving response actions to climate extremities⁴³⁹ • Capacity building⁴⁴⁰

430 <https://villageenterprise.org/>431 <https://villageenterprise.org/what-we-do/>432 <https://www.ugandacarbon.org/>433 <https://www.ugandacarbon.org/carbon-foundation-east-africa/climate-sense>434 <https://www.afrii.org/>435 <https://www.afrii.org/climate-change-and-environment-sustainability-programme/>436 <https://www.afrii.org/climate-change-and-environment-sustainability-programme/>437 <https://can.ug/>438 <https://can.ug/climate-research-and-development/>439 <https://can.ug/climate-advocacy-and-campaigning/>440 <https://can.ug/capacity-building/>

Country	Name of Institution/ Research organization	Description of program or activity or role of institution in capacity building program.
Uganda	OXFAM ⁴⁴¹ :	<p>This International confederation of 20 affiliates works with partners and local communities in more than 90 countries around the globe especially on issues like extreme inequality, poor governance and corruption, climate change, human-caused and natural disasters, gender-based violence, lack of access to resources and incomes.</p> <p>Programme: Climate change research and information sharing: Several projects have been conducted by the organization to address climate change issues in communities⁴⁴²</p>
Uganda	Greenwatch ⁴⁴³	<p>Its main purpose is to help communities in cities, villages and towns achieve sustainable development through efficient waste management to reduce climate change impacts that may arise from improper waste disposal.</p> <p>Programme: Capacity Building & Awareness Training Programs: This are mainly geared towards waste management. They help schools, government and private sector bodies in management of waste they generate to ensure environmental sustainability⁴⁴⁴</p>
Uganda	Uganda Green Enterprise Finance Accelerator ⁴⁴⁵	<p>An organization that aims to facilitate the flow of green finance into the Ugandan SMEs sector through strengthening green SMEs and improving available financial mechanisms for SME debt financing</p> <p>Programmes:</p> <ul style="list-style-type: none"> • Catalyser Programme. Here, hands-on interactive workshops are organized to enable enterprises to work with peers on key topics for financial readiness and growth, especially regarding financial systems management, financial systems capacities, growth strategy and financial modelling and planning⁴⁴⁶ • Accelerator Programme and Loan Facilitation. Here, enterprises are matched with UGEFA partner banks to enable them access loan facilities. UGEFA then renders targeted one-on-one support to enterprises, with experienced business development support advisors to enhance enterprise growth⁴⁴⁷. • Co-creation of tailored loan mechanisms. UGEFA works hand-in-hand with financial institutions to support the development and pilot implementation of loans tailored to the needs of green SMEs⁴⁴⁸. • Annual Green Finance Dialogue Fora. These are meant to facilitate networking and exchange of knowledge and insights on green and climate finance • Technical Assistance. Here, UGEFA supports banks to expand their customer base to green and growing SMEs • Interactive Green and Climate Finance Trainings. The aim is to render free trainings to financial institutions to build the case for green SME Finance and to leverage opportunities for green and climate finance

441 <https://uganda.oxfam.org/>

442 <https://www.oxfam.org/en/search?keys=climate+change>

443 <https://greenwatch.org.in/>

444 <https://greenwatch.org.in/green-services/>

445 <https://ugefa.eu/>

446 <https://ugefa.eu/i-have-a-business>

447 <https://ugefa.eu/i-have-a-business>

448 <https://ugefa.eu/i-finance-change>

Country	Name of Institution/ Research organization	Description of program or activity or role of institution in capacity building program.
Uganda	ECOTRUST ⁴⁴⁹	<p>An organization dealing with a range of theme like Built Environment, Capital Initiatives, Climate, Oceans & Fisheries, Food Systems, Forests, Indigenous Communities, Knowledge Systems, Water & Watersheds.</p> <p>Activities:</p> <ul style="list-style-type: none"> • They have projects in the forests, watersheds, and farmlands mostly increasing tree cover to helps landscapes withstand the consequences of global warming⁴⁵⁰. • They have a Forest Planner programme to help small landowners meet the challenge of managing forestlands. • To improve food security, they work with large-scale institutions like schools, hospitals, and corporate cafeterias to localize their purchasing power in support of regional farmers, ranchers, and fishermen who are utilizing regenerative and sustainable production and harvest methods.
Uganda	Ecological Christian Organization (ECO) ⁴⁵¹	<p>This is an NGO working towards realization of sustained livelihoods for marginalized, under-served and vulnerable groups in Uganda.</p> <p>Programmes:</p> <ul style="list-style-type: none"> • Ecosystems Management & Restoration. They support activities leading to the achievement of this within the L. Victoria basin and other fragile landscapes in Uganda, including promoting participation and inclusion of women in the natural resource structures and networks for the management of critical natural resources⁴⁵² • Resilience & Climate Change Adaptation. Here, ECO aims to increase the capacity of local institutions and community groups to support local adaptation and disaster risk reduction initiatives; they also participate in national climate change dialogue and policy processes, undertake research and documentation of adaptation options in the Arid and Semi-Arid Lands (ASALs) to inform policy review⁴⁵³ • Natural Resources Governance. They work with government agencies, CSOs and local mining groups/conservation groups, and CBOs to disseminate information and work out mechanisms of promoting social accountability and strengthening capacity of the district natural resource departments to effectively respond to community demands⁴⁵⁴
Uganda	Parliamentary Forum on Climate Change ⁴⁵⁵	<p>This was formed in 2008 by members of the 8th parliament to respond to the pressing environmental, social and economic issues presented by Climate Change.</p> <p>Activities:</p> <ul style="list-style-type: none"> • Awareness and capacity building for Members of Parliament and selected constituencies on the implication of climate change effects and legislation. • Conduct field excursions, benchmarking missions and learning visits to well performing approved climate Change Technologies nationally and internationally. • Supporting national climate change policy and Climate Change law development processes • Supporting national REDD+ process • Influencing global climate dialogue; especially with entities like United Nations Framework Convention on Climate Change (UNFCCC) Conference of Parties (COPs), the International Renewable Energy Agency especially regarding Uganda's transition to a sustainable energy future. • Strategic Plan development • Regional climate integration

449 <https://ecotrust.org/>

450 <https://ecotrust.org/our-programs/climate/>

451 <http://ecouganda.org/>

452 <http://ecouganda.org/ecosystems-management-restoration/>

453 <http://ecouganda.org/resilience-climate-change-adaptation/>

454 <http://ecouganda.org/natural-resources-governance/>

455 <https://www.parliament.go.ug/page/parliamentary-forum-climate-change-pfcc>

Country	Name of Institution/ Research organization	Description of program or activity or role of institution in capacity building program.
Zimbabwe	ZERO Regional Environment Organization ⁴⁵⁶ :	Programmes: <ul style="list-style-type: none"> • Climate change, Climate change policy and other information⁴⁵⁷: • Knowledge management center
Zimbabwe	Zimbabwe Environment Law Association ⁴⁵⁸ :	Programmes: <ul style="list-style-type: none"> • Responsible Investments and business⁴⁵⁹, • Climate change and energy⁴⁶⁰,
Regional/ Global	weADAPT (Global Research Collaborative Centre) ⁴⁶¹ :	Programmes: <ul style="list-style-type: none"> • Climate finance • Community-based adaptation • Disasters and climate change • Gender and social equity.
Regional/ Global	Climate & Development Knowledge Network-Africa ⁴⁶² :	Information is easily accessible for the SMEs regarding the programmes or focus areas below Programmes: <ul style="list-style-type: none"> • Adaptation & resilience • Disaster risk management • Knowledge management • Policy and practice • Agriculture & food security • Gender approaches • Low carbon energy • Urban & subnational areas • Climate change mitigation • Green growth • Loss & damage from climate change • Water • Climate finance • Climate negotiations • Physical climate science
Regional/ Global	Women Organizing for Change in Agriculture and Natural Resource Management (WOCAN)-Global ⁴⁶³ :	Programmes: <ul style="list-style-type: none"> • Leadership & Gender Training. Activities include Gender Integrated Planning, Gender Integrated Participatory Monitoring and evaluation, Design a mainstreaming action plan for your organization, Reframing leadership for gender equality, Communication and networking, Negotiation skills and Training of trainers • Technical Support. Activities include provision of technical support to generate new knowledge through analysis of specific issues and pilot projects to inform policy and program development, acting as an 'incubator' of new field-tested ideas that support its mission, through innovative ideas that may serve to increase women's assets and transform gender relations⁴⁶⁴. • Women's Leadership Circles for Agriculture and Natural Resource Management (WLCAN). Activities include developing women's leadership, promoting regular dialogue between women policy makers/ professionals and women farmers/leaders/ entrepreneurs and creating new spaces for women farmer's voices to be heard at policy levels⁴⁶⁵.

456 <https://www.zeroregional.net/>457 <https://www.zeroregional.net/resource-centre/>458 <http://www.zela.org/>459 <http://www.zela.org/responsible-investments-and-business/>460 <http://www.zela.org/climate-change-and-energy/>461 <https://www.weadapt.org/>462 <http://www.cdkn.org/>463 <https://www.wocan.org/what-we-do/womens-leadership-circles>464 <https://www.wocan.org/what-we-do/technical-support>465 <https://www.wocan.org/what-we-do/womens-leadership-circles>

Country	Name of Institution/ Research organization	Description of program or activity or role of institution in capacity building program.
Regional/ Global	Future Climate for Africa ⁴⁶⁶ :	Offer: <ul style="list-style-type: none"> Climate related information
Regional/ Global	Green Climate Fund ⁴⁶⁷ :	Present in Angola, Botswana, Eritrea, Eswatini, Ethiopia, Kenya, Lesotho, Malawi, Mauritius, Mozambique, Namibia, Rwanda, South Africa, South Sudan, Seychelles, Tanzania, Uganda, Zambia and Zimbabwe Offer: <ul style="list-style-type: none"> Climate funding; They run the Private Sector Facility which is a dedicated division designed to fund and mobilize private sector actors, including institutional investors, project sponsors and financial institutions on climate action. They have several projects running in each of these countries⁴⁶⁸.
Regional/ Global	World Resources Institute	Offer: Climate watch ⁴⁶⁹ : Climate related information and updates
Regional/ Global	Green Policy Platform	Programme: <ul style="list-style-type: none"> Climate research⁴⁷⁰: Funded Academic Programmes⁴⁷¹ <ul style="list-style-type: none"> PhD in Integrated Management of Water, Soil and Waste; offered at United Nations University Institute for Integrated Management of Material Fluxes and of Resources (UNU-FLORES)⁴⁷² MSc Economics and Environment funded by undertaken from SOAS University of London Master's in environmental science: Ecological Environment Protection and Management undertaken at Beijing Normal University M.S. in Green Business and Policy undertaken at Korea Advanced Institute of Science and Technology (KAIST)
Regional/ Global	SNV ⁴⁷³	This international development organization helps people living in poverty raise income and improves their access basic services especially those in agriculture, energy, and water, sanitation and hygiene (WASH) sectors. They operate in Asia, Africa and Latin America. Programme: <ul style="list-style-type: none"> Harnessing climate change mitigation initiatives to benefit women⁴⁷⁴: Dutch Fund for Climate and Development (DFCD)⁴⁷⁵: Climate Smart Agriculture⁴⁷⁶: Climate Resilient Agribusiness for Tomorrow (CRAFT)⁴⁷⁷:

466 <https://futureclimateafrica.org/>467 <https://www.greenclimate.fund/>468 <https://www.greenclimate.fund/sectors/private>469 <https://www.climatewatchdata.org/>470 <https://www.greengrowthknowledge.org/themes/climate-change>471 <https://www.greengrowthknowledge.org/academic-programmes/search>472 <https://flores.unu.edu/en/education/phd-programme/phd-programme-in-integrated-management-of-water-soil-and-waste.html#overview>473 <https://snv.org/>474 <https://snv.org/project/harnessing-climate-change-mitigation-initiatives-benefit-women>475 <https://snv.org/project/dutch-fund-climate-and-development-dfcd>476 <https://snv.org/project/climate-smart-agriculture>477 <https://snv.org/project/climate-resilient-agribusiness-tomorrow-craft>

Country	Name of Institution/ Research organization	Description of program or activity or role of institution in capacity building program.
Regional/ Global	Association of Climate Action Network Eastern Africa ⁴⁷⁸ :	<p>Activities/ Objectives:</p> <ul style="list-style-type: none"> • Climate change awareness and capacity building of governments and citizens within the Eastern Africa region. • Protect local, national, regional and global climate from dangerous anthropogenic influence. • Promote wise and sustainable use of natural resources and sustainable national development that meets the needs of the present generation without compromising the ability of future generations to meet their own needs. • Initiate and facilitate dialogue over natural resource management conflicts in Uganda • Inspire government, business, community, and individual action to on climate change. • Develop an objective understanding of climate change and its causes, and share this information with all people, especially all members. • Organize, support, inspire and coordinate its members to take effective action on climate change • Carryout research on environment and sustainable development. • Work closely with local, national and international associations, societies or agencies on matters of Climate Change and the environment.
Regional/ Global	Climate and Agriculture Network for Africa ⁴⁷⁹ :	<p>This is a knowledge sharing web-based platform by the CGIAR Research Program on Climate Change, Agriculture and Food Security (CCAFS) East Africa and a network of partners</p> <p>Programmes or information offers⁴⁸⁰:</p> <ul style="list-style-type: none"> • Climate-Smart Agriculture • Building resilience to climate change • Low emissions development • Financing climate adaptation • Gender and Equity • Policies for adaptation
Regional/ Global	Stockholm Environment Institute Africa (SEI Africa) ⁴⁸¹ :	<p>They share information and projects on climate change, under the following categories;</p> <p>Programmes⁴⁸²:</p> <ul style="list-style-type: none"> • Adaptation • Climate Policy • Climate services • Disaster risk • Finance • Mitigation
Regional/ Global	SME Finance Forum ⁴⁸³ :	<p>Programmes/Projects:</p> <ul style="list-style-type: none"> • IFC Financing to Micro, Small and Medium Enterprises⁴⁸⁴. • Women, Business and the Law – SME Finance⁴⁸⁵:

478 <http://www.acanea.org/>479 <https://canafrica.com/>480 <https://canafrica.com/index.php/about-us>481 <https://www.sei.org/centres/africa/>482 <https://www.sei.org/topic/climate/>483 <https://www.smefinanceforum.org/>484 <https://www.smefinanceforum.org/data-sites/ifc-financing-to-msme>485 <https://www.smefinanceforum.org/data-sites/women-sme-finance>

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Regional/ Global	Climatelinks ⁴⁹¹ :	<p>This is a one-stop portal for climate and development information for practitioners. It covers many sectors like climate change adaptation and mitigation, agriculture, water and sanitation etc. and funded by USAID. They are available in all the ESA target countries.</p> <p>Offers:</p> <ul style="list-style-type: none"> Climate risk management information; there are several case-study projects in Mozambique, Uganda. They have the Climate risk profiles for countries/ regions⁴⁹², Climate risk management in action⁴⁹³ Trainings are offered to staff and other practitioners to improve their knowledge, skills and abilities⁴⁹⁴, and SMEs can tap into this knowledge-base Resilient Energy Platform, which provides support for development of resilient, sustainable, and secure power systems. This is done by provision of expert resources, training materials, data, tools, and direct technical assistance to interested actors⁴⁹⁵ <p>On-going Projects:</p> <ul style="list-style-type: none"> Learning Agenda for Climate Services in Sub-Saharan Africa, which seeks to generate and analyze new information, evidence, and learning on the effective and sustainable production, delivery, and use of climate information to improve decision-making and outcomes for rural agricultural livelihoods⁴⁹⁶. This is something SMEs in the agricultural sector can benefit from.
Regional/ Global	Green Policy Platform ⁴⁹⁷ :	<p>This organization offers climate and other developmental information and documentation, that could be key for the private sector to orient their business strategy to align with governments policy and priority areas. They have green growth information some of the ESA region target countries like Botswana, Mauritius, Kenya, South Africa, Uganda, Ethiopia, Mozambique⁴⁹⁸</p> <p>Offers:</p> <ul style="list-style-type: none"> Research on climate change and other development challenges, resources available⁴⁹⁹ Training tools on business models and other issues⁵⁰⁰ Guidance documents on implementations of projects related to climate change, water access, gender involvement in projects⁵⁰¹ Country specific documents on climate and sustainable development issues⁵⁰² Projects on climate change mitigation, adaptation and sustainable development running in different countries⁵⁰³

491 <https://www.climatelinks.org/where-we-work>

492 <https://www.climatelinks.org/climate-risk-management/regional-country-risk-profiles>

493 <https://www.climatelinks.org/climate-risk-management-action>

494 <https://www.climatelinks.org/training>

495 <https://www.climatelinks.org/resources/resilient-energy-platform>

496 <https://www.climatelinks.org/projects/learning-agenda-climate-services-sub-saharan-africa>

497 <https://www.greengrowthknowledge.org/>

498 <https://www.greengrowthknowledge.org/national-documents/browse/country/botswana-88/country/ethiopia-122/country/kenya-152/country/mauritius-173/country/mozambique-180/country/rwanda-206/country/south-africa-223>

499 <https://www.greengrowthknowledge.org/resources>

500 <https://www.greengrowthknowledge.org/tools-and-platforms/search>

501 <https://www.greengrowthknowledge.org/guidance/search>

502 <https://www.greengrowthknowledge.org/national-documents/browse/country/botswana-88/country/ethiopia-122/country/kenya-152/country/mauritius-173/country/mozambique-180/country/rwanda-206/country/south-africa-223>

503 <https://www.greengrowthknowledge.org/projects/browse>

Country	Name of Institution/ Research organization	Description of program or activity or role of institution in capacity building program.
		<p>Training Programmes:</p> <ul style="list-style-type: none"> • PhD in Integrated Management of Water, Soil and Waste at United Nations University Institute for Integrated Management of Material Fluxes and of Resources (UNU-FLORES)⁵⁰⁴ • MSc Economics and Environment at the SOAS University of London⁵⁰⁵ • Master in Environmental Science: Ecological Environment Protection and Management at Beijing Normal University⁵⁰⁶ • M.S. in Green Business and Policy at Korea Advanced Institute of Science and Technology (KAIST)⁵⁰⁷ • The World Bank Course - Circular Economy and Private Sector Development: Learning Series⁵⁰⁸. This is an online course available till end of this month, April 2021. • Webinars on various aspects including environmental management and climate change⁵⁰⁹
Regional/ Global	Met Office ⁵¹⁰	<p>This is the national meteorological service for the UK that provides critical weather services and world-leading climate science to inform decision making.</p> <p>Programme:</p> <ul style="list-style-type: none"> • Weather and Climate Information Services for Africa (WISER): core objective is to enhance the quality, accessibility and use of weather and climate information services at all levels of decision making for sustainable development in Africa, this includes for business owners⁵¹¹. The project comes to closure in September, 2021 <p>Projects:</p> <ul style="list-style-type: none"> • Research and Knowledge Management uptake & impact: DN535300. This is majorly meant to enhance access and use of weather and climate information services (WCIS) in the East Africa region⁵¹².
Regional/ Global	International Institute for Environment and Development	<p>Provide a lot of published information about various countries regarding climate change⁵¹³, Food and agriculture, Forests and Gender issues among others.</p> <p>For example, information about climate change⁵¹⁴ and Food and agriculture⁵¹⁵ is available. SMEs can tap into such knowledge base to help them adjust their business management plans to integrate climate change issues.</p> <p>Offers:</p> <ul style="list-style-type: none"> • Improving participation of women and children in climate change decisions like The Pamoja Voices toolkit, Tanzania⁵¹⁶ • Reviews of climate impacts on least developed countries⁵¹⁷

504 <https://www.greengrowthknowledge.org/academic-programme/phd-integrated-management-water-soil-and-waste>

505 <https://www.soas.ac.uk/economics/programmes/msceconenvdev/>

506 <https://www.greengrowthknowledge.org/academic-programme/master-environmental-science-ecological-environment-protection-and-management>

507 <https://www.greengrowthknowledge.org/academic-programme/ms-green-business-and-policy>

508 <https://www.greengrowthknowledge.org/course/world-bank-course-circular-economy-and-private-sector-development-learning-series>

509 <https://www.greengrowthknowledge.org/webinar/search>

510 <https://www.metoffice.gov.uk/about-us/what/working-with-other-organisations/international/projects/wiser>

511 https://www.metoffice.gov.uk/binaries/content/assets/metofficegovuk/pdf/business/international/wiser/wiser_infographic_final.pdf

512 <https://www.metoffice.gov.uk/about-us/what/working-with-other-organisations/international/projects/wiser/opportunities#Research>

513 <https://www.iied.org/climate-change>

514 https://www.iied.org/search/site/Rwanda?f%5B0%5D=im_taxonomy_vocabulary_19%3A642

515 https://www.iied.org/search/site/Rwanda?f%5B0%5D=im_taxonomy_vocabulary_19%3A642&f%5B1%5D=im_taxonomy_vocabulary_19%3A651

516 <https://www.iied.org/strengthening-voices-women-young-people-shaping-local-climate-action>

517 <https://www.iied.org/2020-review-climate-impacts-least-developed-countries>

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Regional/ Global	Climate Expert ⁵¹⁸	<p>Climate Expert, developed by the Deutsche Gesellschaft fuer Internationale Zusammenarbeit (GIZ) GmbH, helps companies analyze climate change risks and provides opportunities for them to generate strong adaptation strategies.</p> <p>Its target is small and medium-sized enterprises (SMEs) and industrial zones that are or will be affected by climate change and consultants, experts and multipliers who want to support the private sector in adapting to climate change. There is specific climate adaptation information for Rwanda⁵¹⁹</p> <p>Offers:</p> <ul style="list-style-type: none"> • Analysis of climate risks and opportunities for businesses especially SMEs, see example⁵²⁰ • Information on how financial institutions can support companies/SMEs in adapting to climate change, see details⁵²¹ • Tools and training material like Introduction to the Climate Expert tools, Guide for industrial zones, Full company assessment (Excel Sheets), Quick company assessment for SMEs to determine if they are negatively affected by climate change and how well they are prepared to adapt, Training of consultants, and also online adaptation trainings⁵²²
Regional/ Global	African Center for Technology Studies	<p>African Centre for Technology Studies (ACTS) is a development research institution focused on harnessing applications of science, technology and innovation policies for sustainable development in Africa.</p> <p>Programme:</p> <ul style="list-style-type: none"> • Climate Resilient Economies Programme: Designed to build capacity of African countries and institutions in Climate change mitigation, adaptation and negotiation, improve access to climate finance, facilitate green growth, and an African sustainability hub, but also act as the African regional climate innovation network, and improve access to clean and affordable energy⁵²³
Regional/ Global	University for Peace ⁵²⁴	<p>It trains leaders for peace and is a unique global academic institution with over 2,000 Alumni hailing from more than 120 nations. It offers Master's and Doctoral degree programmes.</p> <p>Trainings available:</p> <ul style="list-style-type: none"> • Climate Adaptation and Climate Justice. This is a six- week course that runs from 12 Apr 2021 - 21 May 2021, and targeted at improving response to climate change by providing skills to identify climate extremes, their impacts and ways to address them⁵²⁵

518 <https://www.climate-expert.org/en/home/>519 <https://www.climate-expert.org/en/home/business-adaptation/rwanda/>520 <https://www.climate-expert.org/en/home/business-adaptation/introduction-to-adaptation/>521 <https://www.climate-expert.org/en/home/business-adaptation/financing-adaptation/>522 <https://www.climate-expert.org/en/home/tools-trainings/introduction-to-tools/>523 <https://www.acts-net.org/climate-resilient-economies-programme>524 <https://www.upeace.org/>525 <https://reliefweb.int/training/3722583/climate-adaptation-and-climate-justice>

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Regional/ Global	Geneva Centre for Security Policy ⁵²⁶	<p>Has interesting programmes that are easily accessible to all SMEs and sectors willing to undertake climate action all over the world including the ESA region.</p> <p>Trainings available:</p> <ul style="list-style-type: none"> Climate and Security Futures - Virtual Learning Journey, an online course that is meant to enhance understanding on the implications of climate change for security, examine possible climate and security futures, explore strategic foresight and apply related methods. It targets private sector, government practitioners, and NGOs among others⁵²⁷
Regional/ Global	UN System Staff College ⁵²⁸	<p>Trainings available</p> <ul style="list-style-type: none"> Climate Sensitive Programming for Sustaining Peace – why and how? A discussion with practitioners⁵²⁹. Although this training closed on 9 Apr 2021, several trainings (free and paid) are available on climate change and other development aspects of the economy
Regional/ Global	Africa Enterprise Challenge Fund ⁵³⁰	<p>With headquarters in Kenya, it supports businesses to innovate, create jobs, leverage investments and markets to create resilience and sustainable incomes in rural and marginalized communities in Africa. It also acts as a knowledge hub that SMEs can take advantage of especially regarding funding for resilience.</p> <p>Programmes:</p> <ul style="list-style-type: none"> Seeds for Impact Programme; it is a 60M USD, six-year initiative which seeks support small seed companies in their efforts to produce improved seeds of staple crops⁵³¹. It covers countries in Eastern Africa like Uganda, Kenya, Tanzania, Rwanda, and Southern Africa like Mozambique, Zimbabwe, Zambia REACT SSA, which supports the Private Sector to meet the energy needs of rural communities in Africa. They fund private sector projects/ businesses that enhance supply of cleaner fuels, raise awareness of the dangers from indoor air pollution. The target countries include Burkina Faso, Ethiopia, Kenya, Liberia, Mali, Mozambique, Zimbabwe, Sudan and Somalia⁵³². Innovation Fund, which is a US\$1.2 million AECF initiative aimed at surfacing innovations in clean cooking and productive use of energy technologies and services, targeting businesses that show market readiness for emerging innovations. Available in Ethiopia, Kenya, Mozambique and Zimbabwe⁵³³ REACT Household Solar Programme, promotes a market-based approach for the private sector delivery of solar home system products and services in the target countries in sub-Saharan Africa. The programme offers interest free loans, non-repayable grants, and technical assistance to the private sector actors. It was launched in 2017 in Zambia, Sierra Leone, Zimbabwe and Malawi and the implementation phase is ongoing. The second phase was initiated for private companies in Ethiopia and Somalia in Eastern Africa, and Senegal, Nigeria, Ghana in Western Africa⁵³⁴

526 <https://www.gcsp.ch/>527 <https://reliefweb.int/training/3701769/climate-and-security-futures-virtual-learning-journey>528 <http://www.unssc.org/home/>529 <https://reliefweb.int/training/3726040/climate-sensitive-programming-sustaining-peace-why-and-how-discussion-practitioners>530 <https://www.aecfafrica.org/>531 https://www.aecfafrica.org/sites/default/files/file/knowledge-hub/270MM_X_180MM_SIP_BROCHURE.pdf532 https://www.aecfafrica.org/index.php/portfolio/renewable_energy/react_ssa533 <https://www.aecfafrica.org/index.php/the-AECF-innovation-fund>534 https://www.aecfafrica.org/index.php/portfolio/renewable-energy/household_solar

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		<ul style="list-style-type: none"> • REACT Kenya Relief Fund; formed within the framework of Covid-19 to avail emergency grants to local businesses in off grid energy sector who are struggling to maintain access to energy to their thousands of rural customers. A 2 M USD fund where SMEs in the sector can apply for 50,000-200,000 USD⁵³⁵ • REACT RBF; also meant to improve access to clean energy in Kenya. Open to private energy companies operating in KENYA, with a total award fund of 500,000 USD⁵³⁶ • AECF Connect; a programme which supports investees to enable them identify new sources of commercial capital, and provides investors with capital to initiate projects, and leverage more private sector capital into these projects over time⁵³⁷ • Investing in Women, which provides funding to competitions with a special bias towards investments in women-owned/led small- medium enterprises and companies that make significant contributions to reducing the gender gap. This has been initiated in Ethiopia among the target countries⁵³⁸ • Kakuma Kalobeyi Challenge Fund (KKCF); which was started to support established companies, social enterprises, and local entrepreneurs in implementing commercially viable and sustainable businesses, that have the potential to raise incomes, provide goods and services, create jobs and/or improve living standards in both the camp and Turkana community⁵³⁹

Regional/ Global	UN Climate Change Learning Partnership (UN CC:Learn) ⁵⁴⁰	<p>This is a very informative platform with a range of online courses on climate change. The courses taught are available for all the SMEs in all regions of the world.</p> <p>Climate related Courses offered:</p> <ul style="list-style-type: none"> • Integrating Climate Risk Information into NAPs; this would be an interesting course for SMEs to know how to align their business plans to the government adaptation plans, hence ensuring that they do not miss out on the programmes that government develops to support climate action⁵⁴¹ • Introductory e-Course on Climate Change; Provides the basics of what climate change is and can easily enable SMEs to get acclimatized to the climate change terminology and begin to connect with local and global climate debates⁵⁴². • Introduction to Sustainable Finance; one of the key objectives of this course is to assist learners identify opportunities for the public and private sectors to issue green bonds and green loans. This is something SMEs can seek to understand⁵⁴³ • Financing Local Adaptation to Climate Change: An Introduction to Performance-Based Climate Resilience Grants. This is another interesting course that SMEs can take advantage of as it helps them to implement climate action at their scale of operations⁵⁴⁴. • Finding the Money - Financing Climate Action. Another course that would help SMEs understand the finance sources for climate action especially those available to their governments⁵⁴⁵. • National Adaptation Plans: Building Climate Resilience in Agriculture. A very good course for SMEs in the agricultural sector, which helps them to identify how climate smart agriculture can be done to align with NAPs⁵⁴⁶
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535 <https://www.aecfafrica.org/index.php/covid-19>

536 https://www.aecfafrica.org/sites/default/files/react-rbf/2020-12/REACT_RBF.pdf

537 <https://www.aecfafrica.org/index.php/portfolio/aecf-connect>

538 https://www.aecfafrica.org/portfolio/aecf_gender_lens_investment

539 <https://www.aecfafrica.org/portfolio/Kakuma-Kalobeyei-Challenge-Fund>

540 <https://uncclearn.org/>

541 <https://uncclearn.org/course/view.php?id=60&page=overview>

542 <https://uncclearn.org/course/view.php?id=7&page=overview>

543 <https://uncclearn.org/course/view.php?id=59&page=overview>

544 <https://uncclearn.org/course/view.php?id=104&page=overview>

545 <https://uncclearn.org/course/view.php?id=77&page=overview>

546 <https://uncclearn.org/enrol/index.php?id=37>

Country	Name of Institution/ Research organization	Description of program or activity or role of institution in capacity building program.
Regional/ Global	Climate Seed ⁵⁴⁷	<p>Focused on supporting emission reduction projects, this organization is very important for SMEs to partners with especially when they want to contribute to climate change mitigation.</p> <p>Offers:</p> <ul style="list-style-type: none"> • Technical support in implementing low-carbon projects • Networking, by linking clients to top specialists in climate related issues
Regional/ Global	Self Help Africa ⁵⁴⁸	<p>Offers⁵⁴⁹:</p> <ul style="list-style-type: none"> • Enterprise development: This is mainly concerned with linking small scale farmers, cooperatives and producer groups to the market • Microfinance: They offer finance access to smallholder farmers to allow them invest into their farm enterprises • Formation and support of farmer cooperatives; to enable them to have a unified voice for bargaining fair prices for produce
Regional/ Global	Care ⁵⁵⁰	<p>Programmes:</p> <ul style="list-style-type: none"> • Climate Learning & Advocacy for Resilience (CLAR) which aims at improving climate resilience through development of new learning and evidence from vulnerable contexts; influencing adaptation finance and country specific National Adaptation Plan (NAP) processes; and facilitating multi-stakeholder learning. The programme implementation exists in Ethiopia, Mozambique, Tanzania and Uganda. It started in 2018 and is still running⁵⁵¹ <p>Short Courses:</p> <ul style="list-style-type: none"> • The Basics of Climate Vulnerability and Capacity Analysis which mainly meant to enable learners gathers and analyze information on community-level vulnerabilities to and capacities for climate change⁵⁵²
Regional/ Global	Adaptation Fund ⁵⁵³	<p>The main mission of the fund is to assist developing countries build resilience and adapt to climate change.</p> <p>Offers:</p> <ul style="list-style-type: none"> • Project funding; actors submit their project and programme proposals directly through accredited National, Regional, or Multilateral Implementing Entities⁵⁵⁴ • Innovation grants; Small grants (up to US\$250,000 each) are available to vulnerable developing countries for adaptation and mitigation projects or actions. They also have large grants (up to US\$ 5 million each) to roll out proven solutions in new countries and regions or to scale up effective innovations⁵⁵⁵ • Readiness Programme for Climate Finance; helps strengthen the capacity of national and regional implementing entities in developing countries to receive and manage climate financing⁵⁵⁶ • External Technical Support for Concept and Project Design; The fund partners with the Climate Technology Centre and Network (CTCN) to support countries seeking project financing from the Adaptation Fund with complimentary technical assistance to address specific challenges and strengthen design of their project concepts and proposals before submission⁵⁵⁷

547 <https://climateseed.com/>548 <https://selfhelpafrica.org/ie/>549 <https://selfhelpafrica.org/ie/how-we-work/#enterprise>550 <https://careclimatechange.org/>551 <https://careclimatechange.org/climate-learning-and-advocacy-for-resilience-clar/>552 <https://careclimatechange.org/academy/courses/basics-of-cvca/>553 <https://www.adaptation-fund.org/>554 <https://www.adaptation-fund.org/apply-funding/project-funding/>555 <https://www.adaptation-fund.org/apply-funding/innovation-grants/>556 <https://www.adaptation-fund.org/readiness/>557 <https://www.adaptation-fund.org/apply-funding/project-funding/>

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		<ul style="list-style-type: none"> Capacity building seminars⁵⁵⁸ Learning grants; benefits Nationally Implementing Entities (NIEs) with the goal to help encourage a culture of learning across institutions and help build NIE capacities⁵⁵⁹ <p>Projects Running in Target Countries: There are several projects being funded by the Adaptation Fund in Kenya, Lesotho, Malawi, Mauritius, South Africa, Tanzania, Uganda and Zimbabwe. They also have projects in;</p> <ul style="list-style-type: none"> Eritrea: Climate Change Adaptation Programme In Water and Agriculture In Anseba Region, Eritrea, with the target of to promoting increased food security in Eritrea through Climate Smart Agriculture⁵⁶⁰ Ethiopia: Climate Smart Integrated Rural Development Project meant to increase resilience to recurrent in Ethiopia⁵⁶¹
Regional/ Global	Climate Finance Readiness Training- CliFIT ⁵⁶²	<p>Training Modules:</p> <ul style="list-style-type: none"> Private sector engagement; highlights mostly the role of the private sector in delivering climate finance Introduction to Climate Finance Readiness; hinges on national and international climate finance and the challenges countries face Gender and climate finance: focused on gender equality and human rights issues in climate change Effective and transparent spending: is about the capacities needed to provide monitoring and evaluation for climate actions
Regional/ Global	African Development Bank Group ⁵⁶³	<p>Offers:</p> <ul style="list-style-type: none"> Africa Climate Change Fund; mainly to scale up access to climate finance and use funds provided more effectively in African countries, Co-finance climate-resilient and low-carbon projects and programs and provide capacity-building in climate change and green growth for African countries and stakeholders at national and regional levels⁵⁶⁴. Access to finance for SMEs through Financial institutions: Seeks to identify and process requests to support up to 25 Financial Institutions with a total Programme envelop amount of USD 125 million. Some percentage of the envelop money is directed towards financial institutions focusing on women entrepreneurs⁵⁶⁵.
Regional/ Global	International Finance Corporation ⁵⁶⁶	<p>Programmes:</p> <ul style="list-style-type: none"> SME Capacity Building - Local Advisory Services Program: Offers training to SMEs to ensure business continuity, supports women entrepreneurs, and facilitates coordination among development stakeholders in business⁵⁶⁷

558 <https://www.adaptation-fund.org/readiness/news-seminars/>559 <https://www.adaptation-fund.org/knowledge-learning/learning-grants/>560 <https://www.adaptation-fund.org/project/climate-change-adaptation-programme-in-water-and-agriculture-in-anseba-region-eritrea/>561 <https://www.adaptation-fund.org/project/climate-smart-integrated-rural-development-project/>562 <https://clifit.org/about>563 <https://www.afdb.org/en>564 <https://www.afdb.org/en/topics-and-sectors/initiatives-partnerships/africa-climate-change-fund>565 <https://www.afdb.org/en/topics-and-sectors/initiatives-partnerships/access-to-finance-for-smes-through-fis>566 https://www.ifc.org/wps/wcm/connect/corp_ext_content/ifc_external_corporate_site/home567 https://www.ifc.org/wps/wcm/connect/industry_ext_content/ifc_external_corporate_site/financial+institutions/priorities/sme+finance/sme-advisory-training

Country	Name of Institution/ Research organization	Description of program or activity or role of institution in capacity building program.
Regional/ Global	International Trade Centre ⁵⁶⁸	<p>It is an organization focused on supporting the internationalization of small and medium-sized enterprises (SMEs), by improving their competitiveness, access to markets, and financing, to improve livelihoods of women, youth and poor communities. It has operations in the Eastern and Southern Africa region</p> <p>Programmes:</p> <ul style="list-style-type: none"> • Programme for building African capacity for Trade (PACT II); funded by the Canadian International Development Agency (CIDA), it aims at improving the capacity of African regional and national institutions to enhance export competitiveness, increase market linkages and export revenues of African small and medium size enterprises with a special focus on women-owned enterprises⁵⁶⁹. • Supporting Indian Trade and Investment for Africa (SITA); focused on Ethiopia, Kenya, Rwanda, Uganda and the United Republic of Tanzania, it aims to alleviate the challenges they face in increasing and diversifying exports⁵⁷⁰.
Regional/ Global	Mennonite Economic Development Associates (MEDA) ⁵⁷¹	<p>This a development organization that has branches in different continents, but in the target region, has offices in Eastern Africa (Ethiopia, Tanzania and Kenya). It focuses on creating business solutions in countries susceptible to poverty but also helps design market systems for entrepreneurs, that integrate technical assistance and access to capital to improve productivity.</p> <p>Offers⁵⁷²:</p> <ul style="list-style-type: none"> • Information dissemination & training; they share information on climate action, assist in developing friendly technologies and engage stakeholders to create awareness among them, that creates a multiplier effect in terms of climate response. They also offer training environmental sustainability and climate change training to partners and organize annual refresher training for staff. • Building tools & resources; they have the Environmental Management System (EMS) which focuses on screening and assessment directed towards mitigating environmental and climate change risks associated with their work. They also supporting entrepreneurs in climate change adaptation and improving local environment conditions. • Green Finance; work with financial institutions in developing green business model and financial products that enhance climate-friendly business practices among the clients.

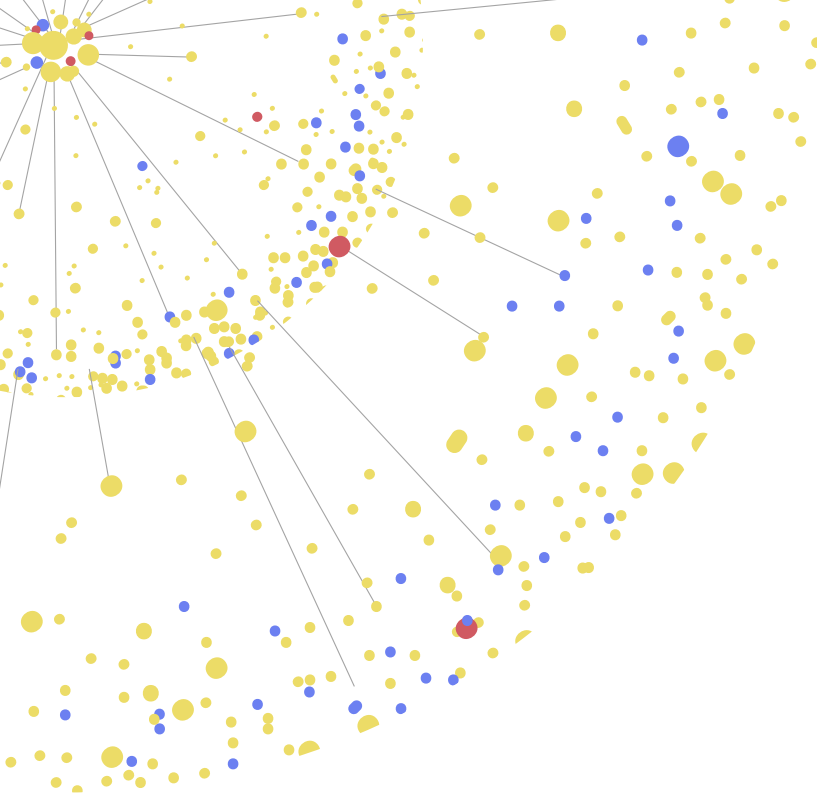
568 <https://www.intracen.org/>

569 <https://www.intracen.org/itc/projects/pact-ii/>

570 <https://www.intracen.org/sita/>

571 <https://www.meda.org/>

572 <https://www.meda.org/expertise/environment-and-climate-change>



United Nations
Framework Convention on
Climate Change



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Regional Collaboration Centre – Kampala
Promoting Action Against Climate Change

