

Republic of Kenya



Ministry of Environment
and Forestry

Background Report on National Climate Change Priorities and Relevant Capacity Development Goals and Initiatives in Kenya

UN CC: Learn Climate Change Learning Programme June 2020

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ACRONYMS AND ABBREVIATIONS

ACE	Action for Climate Empowerment
AFC	Agricultural Finance Corporation
APBET	Alternative Provision of Basic Education and Training
ASALs	Arid and Semi-Arid Lands
AYICC	African Youth Initiative on Climate Change
CADP	County Annual Development Plans
CBC	Competency Based Curriculum
CCCF	County Climate Change Fund
CCCU	County Climate Change Unit
CCD	Climate Change Directorate
CGIAR	Consultative Group on International Agricultural Research
CIDP	County Integrated Development Plan
COG	Council of Governors
CSA	Climate Smart Agriculture
CUE	Commission of University Education
DANIDA	Danish International Development Agency
DFID	Department for International Development
EMCA	Environmental Management and Co-ordinating Act
ESD	Education for Sustainable Development
ESOK	Environmental Society of Kenya
EU	European Union
FAO	Food and Agriculture Organization of the United Nations
FIDA	International Federation of Women Lawyers
GCF	Global Climate Fund
GESIP	Green Economy Strategy and Implementation Plan
GIZ	Deutsche Gesellschaft für Internationale Zusammenarbeit
IIET	Institute of Energy & Environmental Technology
ILRI	International Livestock Research Institute
IMTR	Institute for Meteorological Training and Research
JKUAT	Jomo Kenyatta University of Agriculture and Technology
KAM	Kenya Association of Manufacturers
KATTI	Kenya Association of Technical Training Institutions
KCCWG	Kenya Climate Change Working Group
KEPSHA	Kenya Primary School Heads Association
KEREA	Kenya Renewable Energy Association
KESSHA	Kenya Secondary School Heads Association
KICD	Kenya Institute of Curriculum Development
KIPPRA	Kenya Institute for Public Policy Research and Analysis
KOEE	Kenya Organization for Environmental Education
KMD	Kenya Metrological Department
KSG	Kenya School of Government
MCK	Media Council of Kenya
MEF	Ministry of Environment and Forestry
MOE	Ministry of Education
NAP	National Adaptation Plan
NCCAP	National Climate Change Action Plan
NCCC	National Climate Change Council
NCCLS	National Climate Changer Learning Strategy
NCCRS	National Climate Change Response Strategy

NDC	National Determined Contribution
NEMA	National Environmental Management Authority
NGEC	National Gender Equality Commission
NITA	National Industrial Training Authority
SDG	Sustainable Development Goals
SIDA	Swedish International Development Cooperation Agency
TNT	The National Treasury
TSC	Teacher Service Commission
TVET	Technical and Vocational Education and Training
TVETA	Technical and Vocational Education and Training Authority
UNCC: Learn	The One UN CC Learning Partnership
UNDP	United Nations Development Programme
UNEP	United Nations Environment Program
UNESCO	UN Education, Science and Cultural Organization
UNFCCC	United Nations Framework Convention on Climate Change
UNGA	United Nations General Assembly
UNICEF	United Nations Children's Fund
UNITAR	United Nations Institute of Training and Research
UON	University of Nairobi
USAID	United States Agency for International Development
WWF	World Wide Fund for Nature

DEFINITION OF TERMS

Adaptation: means adjustment in natural or human systems in response to actual or expected climatic stimuli or their effects which moderates harm or exploits beneficial opportunities.

Climate change: means a change in the climate system which is caused by significant changes in the concentration of greenhouse gases as a consequence of human activities and which is in addition to natural climate change that has been observed during a considerable period.

Global warming: refers to the gradual increase, observed or projected, in global surface temperature, as one of the consequences of climate change. The main greenhouse gases that are measured in a GHG inventory are: carbon dioxide (CO₂), methane (CH₄), nitrous oxide (N₂O), perfluorocarbons (PFCs), hydrofluorocarbons (HFCs), sulphur hexafluoride (SF₆) and nitrogen trifluoride (NF₃).

Mitigation means human interventions that seek to prevent or slow down the increase of atmospheric greenhouse gas concentrations by limiting current or future emissions and enhancing potential sinks for greenhouse gases

Education for Sustainable Development: A broad and evolving concept that can be broadly interpreted as holistic and transformational education that addresses learning content and outcomes, pedagogy and the learning environment to achieve societal transformation. It incorporates key sustainable development issues such as - climate change, disaster risk reduction, gender equality, biodiversity, poverty reduction, and sustainable consumption - into teaching and learning.

Formal education: Learning activities carried out in school, college and university systems based on an established curriculum and on approved teaching and assessment methods.

Green Economy: Refers to a shift towards a development path that promotes resource efficiency and sustainable management of natural resources, social inclusion, resilience, and sustainable infrastructure development.

Green jobs: Green jobs are decent jobs that contribute to preserve or restore the environment, be they in traditional sectors such as manufacturing and construction, or in new, emerging green sectors such as renewable energy and energy efficiency. Informal education Results from daily life activities related to work, family or leisure, and is provided within families, religious organizations, community groups and traditional culture, as well as by news organizations, social media and various forms of entertainment.

Indigenous Traditional Knowledge (ITK): ITK is a community based functional knowledge system, developed, preserved and refined by generations of people through continuous interaction, observation and experimentation with their surrounding environment. It is a dynamic system, ever changing, adopting and adjusting to the local situations and has close links with the culture, civilization and religious practices of the communities.

Informal education: Results from daily life activities related to work, family or leisure, and is provided within families, religious organizations, community groups and traditional culture, as well as by news organizations, social media and various forms of entertainment.

Non-formal education: Refers to any organized educational activity taking place outside the framework of the formal education system and targets specific groups/categories of persons with life skills, values and attitudes for personal and community development.

Sustainable development: Development that meets the needs of the present without compromising the ability of future generations to meet their own needs.

1. INTRODUCTION

1.1. Background

Globally, climate change is causing a rise in average global temperatures and sea levels causing major economic, social and environmental disruptions. Kenya continues to grapple with the challenges posed by climate change despite contributing minimally to global GHG emissions, which account for less than one percent of total global emissions. The frequency and magnitude of extreme climate events such as droughts, storms and floods, continues to increase, leading to loss of lives, diminished livelihoods, reduced crop and livestock production, damaged infrastructure, among other adverse impacts. Climate change is therefore a significant threat to Kenya's future development, including achievement of the Kenya's economic blueprint Vision 2030 and the Government's Big Four Agenda 2018-2022 that focuses on enhanced food and nutrition security, affordable housing, increased manufacturing, and universal healthcare¹.

Climate-related risks to health, livelihoods, food security, water supply, human security, and economic growth are projected to increase with global warming of 1.5°C and increase further with 2°C²

Indeed, climate change is a major threat to Kenya's social, economic and environmental well-being disproportionately affecting women, children and vulnerable communities including those dependent on agricultural or coastal livelihoods.

The Kenyan economy is dependent on climate-sensitive sectors, such as agriculture, water, energy, tourism, wildlife, and health, whose vulnerability is increased by climate change. Increased intensities and magnitudes of climate-related disasters in Kenya aggravate conflicts, mostly over natural resources. They are a threat to Kenya's security.

Kenya recognizes the need for concerted global effort to comprehensively address climate change. In response, Kenya ratified the Paris Agreement in December 2016, signaling commitment towards meeting the global adaptation and mitigation goals.

Kenya's Climate Change Act that came into effect in May 2016, is in tandem with the Constitution of Kenya and Vision 2030 and was developed through an inclusive and consultative process that guides response to climate change at national and county levels³. It lays out the legal framework for climate change coordination within government and mainstreaming of climate change into development plans at national and county level.

The country has put in place a number of measures to address climate change; including the National Adaptation Plan (NAP 2017 - 2030) that addresses adaptation across all sectors of Kenya's economy and the National Climate Change Action Plan (NCCAP 2018 - 2022) that charts a low carbon climate resilient development pathway. This pathway emphasizes sustainable development, while prioritizing adaptation, and recognizing the importance of enhancing the climate resilience of vulnerable groups, including children, women, youth, persons with disabilities, the elderly, and marginalized and minority communities⁴.

Kenya's Nationally Determined Contribution (NDC) sets out intentions to contribute towards global efforts to; adapt to climate change by mainstreaming climate change adaptation into

¹ Government of Kenya. 2018. National Climate Change Action Plan (Kenya) 2018-2022. Ministry of Environment and Forestry, Nairobi, Kenya.

² IPCC, 2018: Global Warming of 1.5°C.

³ Ministry of Environment and Natural Resource (MENR) 2017. *Climate Change Policy, Planning and Budgeting at National and County Level: Facilitators Manual*.

⁴ Government of Kenya (2018). National Climate Change Action Plan (Kenya) 2018-2022. Ministry of Environment and Forestry, Nairobi, Kenya.

the Medium-Term Plans and implementing adaptation actions and reduce GHG emissions by 30 percent by 2030 relative to the business as usual scenario of 143 MtCO₂eq. Achievement of Kenya's NDC will require international support in the form of finance, investment, technology development and transfer, and capacity developments.

1.2. The Global Climate Change Capacity Building Context

Globally, it is evident that the post-2020 climate regime requires more ambition to reduce greenhouse gas (GHG) emissions while also increasing resilience. However, there is a big challenge to be addressed: As UN Climate Change Executive Secretary noted, *"there can be no collective climate ambition - true participation by all nations - unless we first build capacity of developing countries."*⁶

Capacity building is indeed, a critical element in enabling developing country Parties increase their ambition to meet the Paris Agreement's objectives and goals⁷. According to Dagnet *et al.* 2015⁸, in order for the Paris Agreement to be universally effective, capacity building⁹ is vital for enabling developing countries to contribute to the global effort to reduce emissions and adapt to climate change. However, countries are not all at the same stage of development, nor do they have the same levels of capabilities. This reality must be taken into account in building a low-carbon and climate-resilient world in an equitable way.

Capacity building is more than only climate action, as it has its own SDG target 17.9 in the 2030 Agenda for Sustainable Development: *"Enhance international support for implementing effective and targeted capacity-building in developing countries to support national plans to implement all the sustainable development goals, including through North-South, South-South and triangular cooperation."*

Dagnet *et al.* 2015 notes that, capacity building for climate action can be understood as *"the process through which individuals, organizations and societies obtain, strengthen and maintain the capabilities to achieve the ability to mitigate and adapt to climate change over time."* Building capacity is not a simple process of merely imparting knowledge or experience to individuals in isolation. Capacity is systemic, and so to build and then sustain individual capacity, efforts must also address the other two dimensions of a country's capacity system: its organizational and institutional arrangements. Capacity building efforts must therefore result in capacity built at all three levels simultaneously and in a synergistic manner that is appropriate for each national context.

The UNFCCC Capacity building framework has three dimensions - individual, institutional and systemic as illustrated in Figure 1.

⁵ Government of Kenya (2015), Kenya's Intended Nationally Determined Contribution.

⁶ UNFCCC 2019. Three reasons why Capacity Building will be at the heart of COP 25. <https://sdg.iisd.org/commentary/guest-articles/three-reasons-why-capacity-building-will-be-at-the-heart-of-cop-25/>

⁷ UNFCCC 2019. *Paris Committee on Capacity building Strategic Plan for Stakeholder Engagement, Communication and Resource Mobilization*. UNFCCC, PCCB, Bonn, July 2019.

⁸ Dagnet, Y., E. Northrop, D. Tirpak. 2015. *"How to Strengthen the Institutional Architecture for Capacity Building to Support the Post-2020 Climate Regime."* Working Paper. Washington, DC: World Resources Institute. Available online at <http://www.wri.org/publications/capacitybuilding>

⁹ **Capacity building** and **capacity development** are two phrases often used interchangeably and understandably assumed to mean the same thing. Literature however argues that there is in fact a clear distinction between the two with capacity building implying there is no capacity to begin with and capacity development acknowledging existing capacities and focusing on strengthening what is already there. Capacity development is a more holistic, collaborative approach that encourages ownership (Freeman K. 2010).

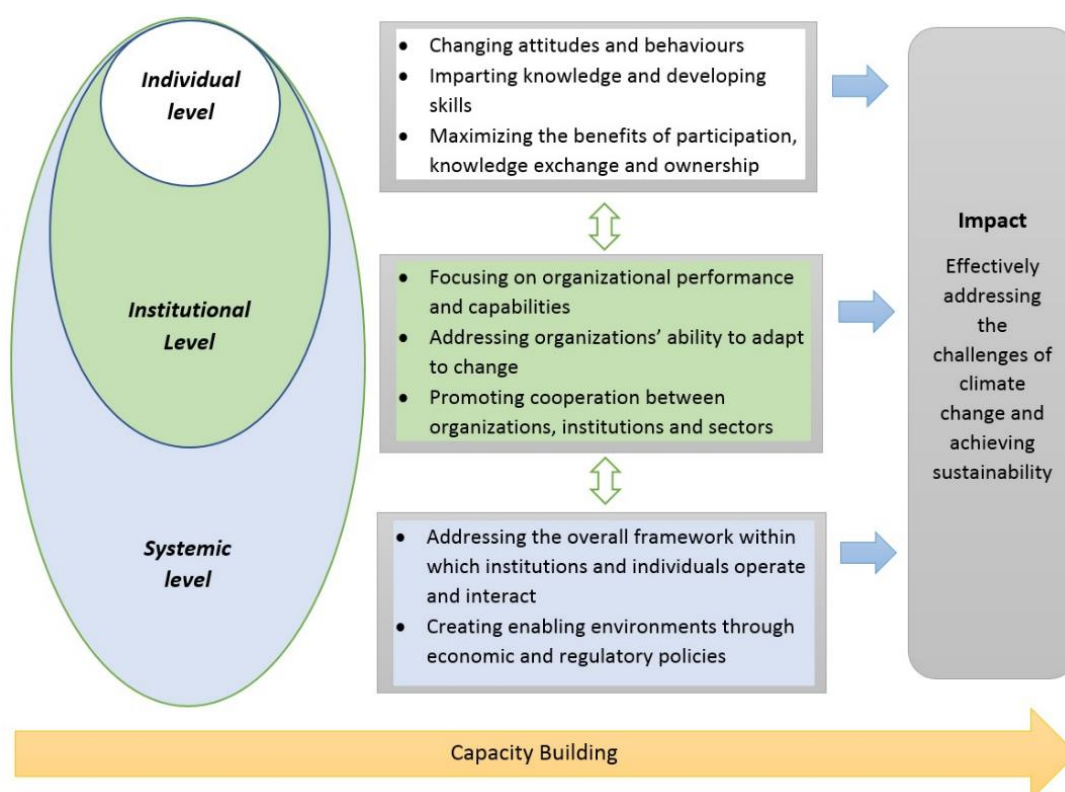


Figure 1: UNFCCC Capacity building framework¹⁰

Some of the global and regional commitments on climate change education, training and public awareness include;

- i. **Action for Climate Empowerment (ACE)**; a term adopted by the United Nations Framework Convention on Climate Change (UNFCCC). ACE refers to Article 6 of the Convention's original text (1992), focusing on six priority areas: **education, training, public awareness, public participation, public access to information, and international cooperation on these issues**. The implementation of all six areas has been identified in recent years as the pivotal factor for everyone to understand and participate in solving the complex challenges presented by climate change¹¹.
- ii. **Article 6 of the UNFCCC on Education, Training and Public Awareness** calls on governments to develop and implement education and training programmes, including the strengthening of national institutions, training of scientific, technical and managerial personnel, as well as implementing public awareness programmes on climate change and its effects in order to improve the capacity to implement mitigation and adaptation actions. Article 6 seeks to reduce the impact of climate change by enabling society to be a part of the solution¹². In 2012, the parties adopted the **Doha Work Programme on Article 6 of the Convention** to promote the implementation of activities related to these six thematic areas between 2013 and 2020.

¹⁰ <https://unfccc.int/topics/capacity-building/the-big-picture/capacity-in-the-unfccc-process>

¹¹ UNESCO and UNFCCC 2016. Action for Climate Empowerment. Guidelines for accelerating solutions through education, training and public awareness

¹² Mbiru S.S. (2019) Capacity Development to Support Planning and Decision Making for Climate Change Response in Kenya. In: Leal Filho W., Lackner B., McGhie H. (eds) Addressing the Challenges in Communicating Climate Change Across Various Audiences. Climate Change Management. Springer, Cham.

- iii. **Paris Agreement Article 12 of the Paris Agreement**, where Kenya is a signatory, requires parties to cooperate in taking appropriate measures, to enhance climate change education, training, public awareness, public participation and public access to information.

In addition and more recently, the need for capacity strengthening at both global and local level is also considered so vital by government representatives that this requirement forms a key pillar of the **Paris Agreement Article 11.1**¹³

Article 11.1 *Capacity-building under this 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, to take effective climate change action, including, inter alia, to implement adaptation and mitigation actions, and should 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.*

iv. **2030 Agenda Sustainable Development Goals (SDGs)**

Broadly all 17 Sustainable Development Goals (SDGs) have a bearing on climate change and protection of our natural environment, recognising that to create the future we want, economic and social development must go hand in hand with tackling climate change and protecting our natural environment.

Sustainable Development Goals 4, 12 and 13 bring out the important link between education, sustainable development and climate change response. **SDG 4** commits to; “ensure inclusive and equitable quality education and promote life-long learning opportunities for all”, **SDG 12** to “ensure sustainable consumption and production patterns” and **SDG 13** to “take urgent action to combat climate change and its impacts”.

Within these standalone goals, some specific targets recognise the interrelations between education and climate change:

- ✓ **Target 4.7:** By 2030, ensure that all learners acquire the knowledge and skills needed to promote sustainable development, including, among others, through education for sustainable development and sustainable lifestyles, human rights, gender equality, promotion of a culture of peace and nonviolence, global citizenship and appreciation of cultural diversity and of culture’s contribution to sustainable development.
- ✓ **Target 12.8:** By 2030, ensure that people everywhere have the relevant information and awareness for sustainable development and lifestyles in harmony with nature.
- ✓ **Target 13.3:** Improve education, awareness-raising and human and institutional capacity on climate change.¹⁴

¹³ UNFCCC 2015. Paris Agreement

https://unfccc.int/files/meetings/paris_nov_2015/application/pdf/paris_agreement_english_.pdf

¹⁴ Education A Powerful Tool For Combating Climate Change. A Guide For Education Unions And Educators. https://www.ei-ie.org/en/woe_homepage/woe_detail/16395/education-a-powerful-tool-for-combatting-climate-change

Gender equality and the empowerment of women is not only a stand - alone goal of the 2030 Agenda (SDG 5) but is also a prerequisite for the achievement of other goals¹⁵. **SDG 5** commits to achieving gender equality and empower all women and girls.

- ✓ **Target 5 C** focuses on adopting and strengthening sound policies and enforceable legislation for the promotion of gender equality and the empowerment of all women and girls at all levels.

SDG 17 calls for inclusive partnerships at all levels and revitalizing global partnerships for sustainable development.

- ✓ **Target 17.9** Enhance international support for implementing effective and targeted capacity-building in developing countries to support national plans to implement all the sustainable development goals, including through North-South, South-South and triangular cooperation.

v. Education for Sustainable Development: Towards achieving the SDGs: ESD for 2030

ESD for 2030 aims to build a more just and sustainable world through strengthening ESD and contributing to the achievement of all 17 Sustainable Development Goals. The strategic objective is to promote ESD as a key element of quality education and a key enabler of all 17 Sustainable Development Goals with special attention to individual transformation, societal transformation and technological advances. The target groups includes; policy makers, institutional leaders, learners, parents, educators, youth and communities.

The ESD for 2030 priority action areas are;

1. Advancing policy
2. Transforming learning and training environments
3. Developing capacities of educators and trainers
4. Mobilizing youth
5. Accelerating sustainable solutions at local level

vi. Paris Committee on Capacity Building (PCCB)

The Paris Committee on Capacity Building (PCCB) of the United Nations Framework Convention on Climate Change (UNFCCC) was established in 2015 to focus on a holistic and systematic approach to identifying and addressing capacity - building gaps and needs, with current focus on capacity building relating to NDCs. The goal of the PCCB Network is to foster synergies and enhance coherence and coordination in capacity-building efforts for climate action.

vii. Africa Environmental Education and Training Action Plan (AEETAP) 2015-2024

The African Ministerial Conference on the Environment (AMCEN) is a permanent forum where African ministers of the environment discuss mainly matters of relevance to the environment of the continent. The African Ministerial Conference on the Environment (AMCEN) recognizes the environmental education as an effective means for confronting environmental challenges and identifying future opportunities. To address environmental challenges facing Africa, AMCEN agreed to strengthen environmental education and training and developed the *Africa Environmental Education and Training Action Plan (AEETAP) 2015-*

¹⁵ UNGA 2019. Implementation of education for sustainable development in the framework of the 2030 Agenda for Sustainable Development. A/74/258. July 2018

2024 was prepared as a direct response to the 2012 AMCEN Arusha Declaration on Africa's post Rio+20 strategy for sustainable development. The core objective of the Action Plan is to enhance community environmental education and training within Africa, through various forms of education: training, life-long learning, capacity building programmes and projects.

It calls for reorientation of the education system; policy development; curriculum and programme innovation and design; transformative learning approaches that support action and change; transformative assessment practices; development of materials to support new approaches to environmental learning and action competence; and technology enhanced learning to foster wider access and participation in environmental education and training.

viii. Agenda 2063: The Africa we want.

The first Aspiration of Agenda 2063 is *A prosperous Africa based on inclusive growth and sustainable development* with one of its goals being; Africa's human capital fully developed as its most precious resource, through sustained investments based on universal early childhood development and basic education, and sustained investments in higher education, science, technology, research and innovation, and the elimination of gender disparities at all levels of education. Access to post-graduate education will be expanded and strengthened to ensure world-class infrastructure for learning and research and support scientific reforms that underpin the transformation of the continent.

1.3. Rational

Kenya has made great strides in responding to climate change with robust regulatory frameworks including laws, policies and strategies at both national and county levels. In response, numerous climate change actions and initiatives have been undertaken by national and county governments and various stakeholders including development partners, private sector, CSOs among others.

However numerous challenges still exist including; low level of awareness of climate change and its impacts, insufficient public participation and sensitization; climate change issues not fully integrated into Kenya's formal education system; inadequate capacity for policy makers at national and subnational levels on climate change mainstreaming; lack of clear MRV system and indicators among others.

Strengthening the capacity of individuals, institutions and systems can significantly boost collective climate action. At national level, effective implementation of Nationally Determined Contributions (NDCs), will require strengthened capacity and clear, comprehensive learning systems to ensure knowledge and skills at all levels of society in all affected sectors nationwide. The development and implementation of National Adaptation Plans (NAPs), also require significant capacity development (UNITAR 2018)¹⁶

The capacity development challenges associated with climate change require systematic, long term and programmatic effort to address. A *National Climate Change Learning Strategy* is a powerful tool to contribute to addressing these capacity challenges and support the implementation of NDCs and NAPs, as well as other relevant plans addressing climate change. Given the linkages between climate change and development, the Learning Strategy will also contribute to the achievement of the SDGs.

¹⁶ UNITAR, 2018. Guidance Note for Developing a National Climate Change Learning Strategy. Strengthening Human resources and Skills to Advance Nationally Determined Contributions (NDCs) and National Adaptation Plans (NAPs)

Since 2011, UN CC:Learn¹⁷ has engaged in Climate Change Learning Programmes with developing countries in Africa, Asia and Latin America, with the purpose of strengthening human resources, climate change learning, and skills development to advance the national climate change development agenda in the respective countries. UN CC:Learn's approach is to provide added value by contributing to existing processes through an enhanced focus on climate change learning and skills development, supporting the development and implementation of a National Climate Change Learning Strategy aligned with the national NDC and NAP.

In Kenya, the project, funded by the Government of Switzerland, through the United Nations Institute for Training and Research (UNITAR), which serves as the Secretariat to the One UN Climate Change Learning Partnership (UNCC: Learn), in partnership with the Climate Change Directorate under the Ministry of Environment and Forestry and in collaboration with the Ministry of Education, FAO and the Kenya Climate Change Working Group have embarked on a project to Strengthen Human Resources and Skills to Advance Kenya's Nationally Determined Contribution (NDC) and National Adaptation Plan (NAP).

The aim of the project is to enhance education, training and public awareness on climate change by strengthening knowledge and capacities in public and private sectors through education and training institutions. As part of this project, a National Climate Change Learning Strategy will be developed in order to strengthen existing processes by taking a more strategic approach to climate change learning.

The National Climate Change Learning Strategy will systematically examine and identify critical learning and skills development needs in key climate-related sectors for Kenya, including agriculture, energy, finance, forestry, health, industry, labour, mining, tourism, transport and water, as highlighted in the country's NDC and NAP. It also addresses challenges to existing training and educational systems in order to increase learning opportunities and reach all relevant stakeholders

The first step in development of this Learning Strategy is compiling the Background Report that will form the basis for the development of the National Climate Change Learning Strategy. The Report systematically reviews and presents existing national policies, laws, strategies, initiatives and priorities related to climate change capacity building and learning and highlights key stakeholders and their respective interests in capacity development and the role they will play towards development of the Learning Strategy. The Terms of Reference are presented in Annex 2.

¹⁷ The *One UN Climate Change Learning Partnership* (UN CC:Learn) is a collaborative initiative of more than 30 multilateral organizations supporting countries to design and implement systematic, recurrent and results-oriented climate change learning. <https://www.uncclearn.org/>

2. KENYA'S CLIMATE CHANGE LEGAL AND POLICY FRAMEWORK

2.1. Climate Change Capacity Building

Climate change capacity development has remained a central theme across all national climate change documents. This includes the National Climate Change Response Strategy 2010, National Climate Change Action Plan 2013 - 2017, Climate Change Act 2016, National Climate Change Framework Policy 2018, National Climate Change Action Plan 2018 - 2022, Nationally Determined Contribution (NDC) and National Adaptation Plan (NAP) among others. In addition, the Climate Change Act 2016 mandates national and county governments to facilitate capacity development for public participation in climate change responses through awareness creation, consultation, representation and access to information and provide mechanisms for and facilitate climate change research and development, innovation, training and capacity building.

With regards to climate change education, the Climate Change Act, 2016 and National Climate Change Framework Policy 2018 stipulates the integration of climate change into national education curricula at all levels to inculcate climate change awareness among children and youth. The National Climate Change Action Plan 2018 - 2022 prioritizes education of learners on climate change. Climate Change will be a core element in the national education curricula.

2.2. Legal and Policy Framework

Key milestones in Kenya's national climate change legal and policy framework for national climate action is illustrated in Figure 2 and further elaborated through Sections 2.1 - 2.12 highlighting the emphasis on capacity building.

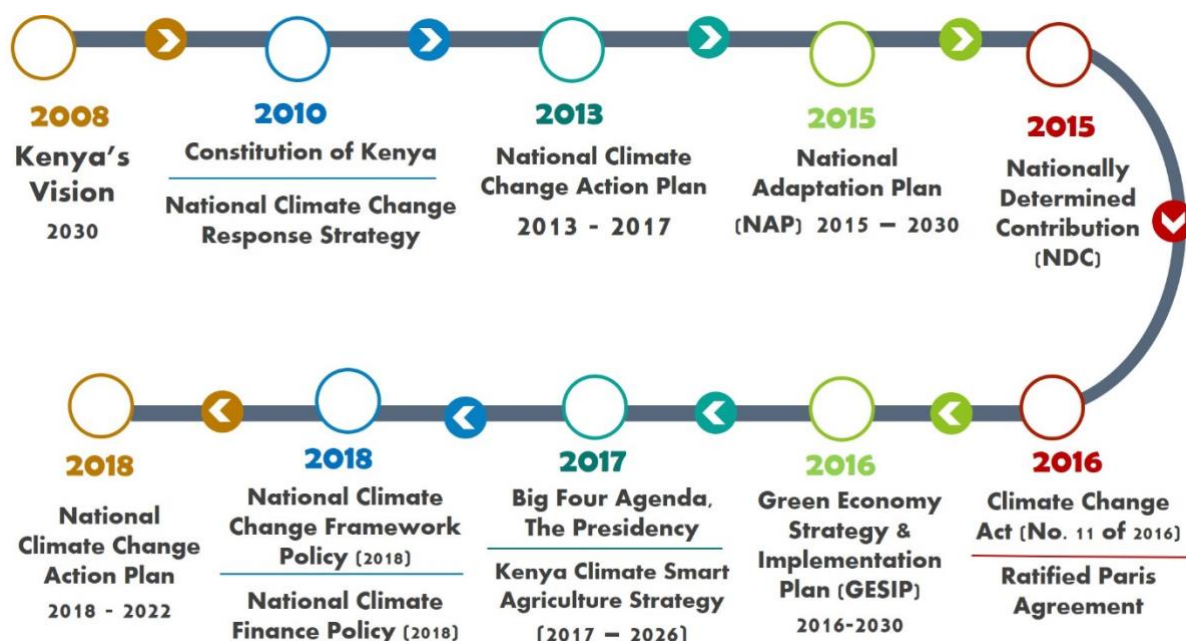


Figure 2: Key milestones in Kenya's Legal and Policy Framework for National Climate Change Action

2.2.1. Constitution of Kenya 2010

Kenya's constitution provides the basis for action on climate change guaranteeing citizens a clean and healthy environment, which is a fundamental right under the Bill of Rights. Article

42, states that every person has the right to a clean and healthy environment, which includes the right to have the environment protected for the benefit of present and future generations through legislative and other measures, particularly those contemplated in Article 69, section (d) which encourages public participation in the management, protection and conservation of the environment.

The Constitution of Kenya (2010) also created the devolved system of government comprised of the National Government and 47 County Governments. County Governments have a key delivery role in implementing the Climate Change Act, 2016, having jurisdiction, as set out in the Fourth Schedule (Part 2) of the Constitution, over sectors relevant to climate change action, such as agriculture, soil and water conservation, forestry, water and sanitation, tourism, and health. Article 203(2) of the Constitution requires that County Governments be allocated a minimum of 15% of national revenue received annually, but the allocation often surpasses this minimum, which gives County Governments considerable scope to influence investments in climate change action¹⁸.

2.2.2. Climate Change Act (No. 11 of 2016)

Kenya's Climate Change Act (2016) is national legislation that provides for an enhanced response to climate change and provides mechanisms and measures to achieve low carbon climate resilient development. The Act adopts a mainstreaming approach that includes integration of climate change considerations into all sectors and in County Integrated Development Plans (CIDPs). The Act establishes the National Climate Change Council, chaired by His Excellency the President. The Council is responsible for overall coordination and advisory functions. The Act also establishes the Climate Change Fund - a financing mechanism for priority climate change actions and interventions.

The Climate Change Directorate (CCD), also established by the Act and domiciled in the Ministry of Environment and Forestry, is the lead agency coordinating climate change activities. Climate change response is a shared responsibility between the National Government and County Governments. State departments and national government public entities are expected to designate a unit with adequate staff and financial resources and county governments designate a County Executive Member to coordinate climate change affairs.

The Climate Change Act 2016 provides a regulatory framework for the development, management, implementation and regulation of mechanisms to enhance climate change resilience and low carbon development for the sustainable development of Kenya.

With regards to climate change education, public awareness and public access to information the Act stipulates the following;

i. Curricula

- The National Climate Change Council shall advise **Kenya Institute of Curriculum Development** to integrate climate change into various disciplines and subjects of the national education curricula at all levels **Section 21 (1)**

¹⁸ Government of Kenya. 2018. National Climate Change Action Plan (Kenya) 2018-2022. Ministry of Environment and Forestry, Nairobi, Kenya.

- The Council shall advise the public agencies responsible for regulating universities (**Commission of University Education**) and tertiary institutions curricula on integration of climate change into their curricula **Section 21 (2)**

ii. Information and Knowledge Management

- The National Climate Change Action Plan shall prescribe measures and mechanisms; to Review and determine mechanisms for climate change knowledge management and access to information. **Section 13 (3)(i)**
- The Climate Change Directorate provide and serve as a national center for knowledge and information management for collating, verifying, refining and dissemination of knowledge and information on climate change -**Section 9 (8c)**
- In formulating the National Climate Change Action Plan, the Cabinet Secretary shall be informed by; scientific knowledge about climate change - **Section 13 (5)(a)** and indigenous knowledge related to climate change adaptation and mitigation -**Section 13 (5)(g)**

iii. Climate Change Research and Technology Transfer

The National Climate Change Action Plan shall prescribe measures and mechanisms; to strengthen approaches to climate change research and development training and technology transfer **Section 13 (3)(k)**

iv. Gender equality and implementation of gender equity

Requires the President to ensure compliance with the no more than two thirds gender principle when appointing members to the National Climate Change Council - **Section 7(6)**

v. National gender and intergenerational responsive public education and awareness strategy

The Cabinet Secretary responsible for climate change affairs shall - formulate a **national gender and intergenerational responsive public education and awareness program** on climate change and implementation program **Section 8(2c)**

2.2.3. Kenya Vision 2030 -Third Medium Term Plan

Kenya's Third Medium Term Plan (MTP III) includes climate change as a thematic crosscutting issue, and mainstreams climate actions into development planning, decision making and implementation in all sectors of the economy at national and county levels to ensure sustainable development.

The MTP III recognizes that capacity building is critical for low carbon climate resilient development and proposes climate change capacity building programs for 2018 - 2022 which include;

- The Capacity Building and Public Awareness Programme:** to strengthen both institutional and human capacity towards enhancing access to timely and accurate information on climate change. It will entail awareness creation; establishing dialogue, networking and building alliances on climate change; and integrating climate change into the education system.
- Climate Change Governance and Coordination** that will strengthen the Climate Change Directorate and operationalize climate change units in the Ministries, Counties, Departments and Agencies (MCDAs); formulate and implement national gender and intergenerational responsive public education and awareness on climate change;

mainstream climate change actions into the National and County Governments’ policies and plans; and operationalize the National Climate Change Resource Centre.

2.2.4. National Climate Change Response Strategy 2010

The National Climate Change Response Strategy 2010, was the first national policy document on climate change. It advanced the integration of climate change adaptation and mitigation into all government planning, budgeting, and development objectives.

The Strategy emphasized the need for enhanced capacity building to strengthen capability of developing countries like Kenya to respond to climate change and proposed a capacity building framework. In addition, the strategy proposed the incorporation of climate change into educational curricula at different levels starting with primary through to tertiary.

2.2.5. Kenya National Adaptation Plan (2015 - 2030)

The National Adaptation Plan (NAP) is the basis for the adaptation component of Kenya’s Nationally Determined Contribution (NDC) and consolidates the country’s vision on adaptation actions.

The NAP elaborates priority actions and sub actions in the 20 planning sectors (MTP); in the short, medium and long term. In most of the 20 sectors, capacity building is identified as a gap that needs to be addressed during implementation and integration in the national development agenda.

Specific capacity building sub - actions in the planning sectors are presented in Table 1.

Table 1: Planning Sector Actions and Sub Actions relating to capacity building in the NAP

Planning Sector	Action	Sub action
Devolution	Mainstream climate change adaptation into County Integrated Development Plans and other county plans.	<ul style="list-style-type: none"> • Increase awareness of climate change impacts to communities in counties. • Build the capacity of county governments on climate change adaptation.
Public Sector Reforms	Integrate climate change adaptation into public sector reforms.	<ul style="list-style-type: none"> • Re-orient the curricula of the Kenya School of Government to include climate change adaptation as a cross cutting issue. • Update the Kenya School of Government curricula with climate change adaptation issues.
Human Resource Development, Labour and Employment	Enhance adaptive capacity and resilience of the informal sector.	<ul style="list-style-type: none"> • Conduct capacity building on ‘green jobs’ and enterprises.
Infrastructure	Enhance climate proofing of infrastructure.	<ul style="list-style-type: none"> • Conduct capacity building on infrastructure climate proofing.
Land reforms		<ul style="list-style-type: none"> • Build the capacity of land planners in climate change landuse planning • Build the capacity of land managers in climate change adaptation.

Planning Sector	Action	Sub action
Education and Training	Mainstream climate change adaptation in education (formal, nonformal and informal) and training.	<ul style="list-style-type: none"> • Assess the inclusion of climate change adaptation in school curricula. • Design appropriate education material with climate change issues. • Integrate climate change adaptation issues into the formal education curriculum. • Integrate climate change adaptation into the education policy. • Develop and implement a public awareness mechanism on climate change adaptation. • Operationalise the National Climate Change Resource Centre and enhance linkages with other resource centres at all levels • Update curriculum and public outreach strategies on climate change adaptation as necessary.
Health	Strengthen integration of climate change adaptation into the health sector.	<ul style="list-style-type: none"> • Increase public awareness and social mobilisation on climate change and impacts on health.
Environment	Mainstream climate change adaptation in the environment sector.	<ul style="list-style-type: none"> • Enhance the capacity to enforce and monitor compliance of adaptation actions. • Strengthen early warning and climate information services through improving the Climate Information Service Providers network and enhancing integration of local/indigenous knowledge into early warning systems. • Strengthen the capacity of national and county institutions responsible for coordinating climate change adaptation
Water and Sanitation	Mainstreaming of climate change adaptation in the water sector.	<ul style="list-style-type: none"> • Enhance capacity of institutions and bodies responsible for water and sanitation on climate change impacts and the water sector. • Promote awareness on climate change impacts and the water sector including promoting public awareness on water conservation (recycling, waste water management) and efficient water use.
Population, Urbanisation and Housing	Enhance the adaptive capacity of the population, urbanisation, and housing sector.	<ul style="list-style-type: none"> • Increase awareness on impacts of climate change on population and housing.

Planning Sector	Action	Sub action
Gender, Vulnerable Groups and Youth	Strengthen the adaptive capacity of vulnerable groups* (women, orphans and vulnerable children, the elderly, and persons with disability).	<ul style="list-style-type: none"> • Create awareness for climate opportunities that women and youth can access.
Tourism	Enhance the resilience of the tourism value chain.	<ul style="list-style-type: none"> • Build capacity and raise awareness on impacts of climate change on the tourism sector to relevant departments and partners.
Agriculture	Enhance the resilience of the agricultural value chain.	<ul style="list-style-type: none"> • Promote indigenous knowledge on crops. • Increase awareness on climate change impacts on the agriculture value chain. • Support adaptation of private sector agricultural value chain actors through capacity building efforts
Livestock	Enhance the resilience of the livestock value chain.	<ul style="list-style-type: none"> • Increase awareness on climate change impacts on the livestock sector. • Conduct capacity building in indigenous knowledge, livestock insurance schemes, early warning systems, early action, livestock management and breeding

2.2.6. Kenya's Nationally Determined Contribution (NDC) 2015

Kenya's NDC presents Kenya's commitment and intention to achieve a low carbon resilient development pathway and includes both mitigation and adaptation contributions based on national circumstances. The mitigation contribution "seeks to abate Kenya's GHG emissions by 30% by 2030, relative to the business as usual scenario of 143 MtCO₂eq. However, as a minimal contributor to global GHG emissions, Kenya places significant priority on enhancing resilience and adapting to the effects of climate change.

To fully realize and achieve the adaptation and mitigation actions set out in the NDC, Kenya will require international support in form of finance, investment, technology development and transfer and capacity building

The priority adaptation actions in the Education and Training MTP sub sector include enhancing education, training, public awareness, public participation, public access to information on climate change adaptation across public and private sectors.

Kenya's current NDC is currently being reviewed and updated by the Climate Change Directorate and relevant stakeholders in the various NDC Sectors, in preparation for submission of the second NDC.

2.2.7. National Climate Change Framework Policy 2018

The goal of this National Climate Change Framework Policy is to enhance adaptive capacity and resilience to climate change and promote low carbon development for the sustainable development of Kenya.

With regards to education and public awareness, the policy requires the Government to;

- i. Put in place a strategy for identifying, refining and disseminating climate change knowledge to the public and other stakeholders in user-friendly formats.
- ii. Mainstream climate change in basic, secondary and tertiary level education curricula.
- iii. Incorporate climate change knowledge into government-implemented public awareness initiatives including civic education and extension programmes.
- iv. Collaborate with, and support, private sector and civil society in incorporating climate change knowledge into advocacy and public awareness raising programmes.
- v. Strengthen the capacity and ensure sufficient resourcing of institutions engaged in climate change public awareness.

2.2.8. 2nd National Communications to the UNFCCC 2015

Kenya's second National Communication noted that the level of awareness of climate change issues and impact was low across the country and Education, Training and Public Awareness on climate change issues receive minimal consideration in Kenya's formal education system. As such climate change was not formally acknowledged in Kenya's education curricular at primary, secondary and tertiary levels. Recommendations were made to strengthen the mainstreaming of climate change in all levels of education, training and public awareness¹⁹.

2.2.9. National Climate Change Action Plan (NCCAP) 2018 - 2022

Kenya's National Climate Change Action Plan is a five-year plan that seeks to further Kenya's development goals in a low carbon climate resilient manner. The action plan sets out adaptation, mitigation, and enabling actions and is anchored in the Climate Change Act 2016.

The NCCAP 2018-2022 guides the climate actions of the National and County Governments, the private sector, civil society, and other actors, to enable Kenya transition to low carbon climate resilient development.

The strategic objectives and priority actions outlined in the NCCAP are aligned with both national and international development priorities, including the Government of Kenya's Big Four Agenda, Medium Term Plan III and the Sustainable Development Goals (SDGs). Priority actions in the NCCAP are designed to enhance adaptation as well as catalyze efforts to lower greenhouse gas (GHG) emissions, and help Kenya meet its Nationally Determined Contribution (NDC).

The NCCAP 2018-2022 outlines seven (7) strategic objectives; Disaster Risk Management (SO1); Food and Nutrition Security (SO2); Water and the Blue Economy (SO3); Forestry, Wildlife, and Tourism (SO4); Health, Sanitation, and Human Settlements (SO5); Manufacturing (SO6); and Energy and Transport (SO7).

A range of crosscutting enabling actions are required to effectively deliver the adaptation and mitigation actions set out in the seven priority climate change areas. The enabling actions take place in five areas; Enabling policy and regulatory framework; Technology and innovation; Capacity development and knowledge management; Climate finance and resource mobilization; and Transparency, Measurement, Reporting, and Verification Plus (MRV+). A tool has been developed that tracks the implementation status of the NCCAP actions in keeping in line with Kenya's responsibility for transparency and accountability under the Paris Agreement.

¹⁹ NEMA 2015: Second National Communication to the United Nations Framework Convention on Climate Change

The NCCAP priority actions on capacity development are presented in Table 2, emphasizing the establishment of engendered coordination structures, effective implementation of the Climate Change Act and National Climate Change Policy, 2018 and for the effective delivery of Kenya’s NDC.

Table 2: Priority enabling actions: Capacity development and knowledge management

Enabling Actions	Coordinating Institution and Relevant Partners
<ul style="list-style-type: none"> • Operate a publicly accessible National Climate Change Resource Centre (NCCRC) that includes a robust and up-to-date climate change knowledge management system, and an updated climate change information portal with platforms for children, the youth, women, and marginalised and minority communities; and • Use Knowledge Harvesting techniques to capture and share information, including on climate change-based traditional knowledge, especially from women and the elderly. 	<ul style="list-style-type: none"> • CCD
<ul style="list-style-type: none"> • Establish Community Education, Business and Information Centres in select Counties, building on the model established in Samburu County, to improve access to information and reduce climate vulnerability. • The Centres will be managed by engendered local management committees, and will provide focused services for women, the youth, minority, and other marginalised groups. 	<ul style="list-style-type: none"> • COG • County Government • CCD
<ul style="list-style-type: none"> • Strengthen the capacity of National Government institutions to implement the Climate Change Act, including: <ul style="list-style-type: none"> ✓ Training of staff of climate change units on reporting and climate finance; • ✓ Support to NCCC; ✓ Training on the climate change-gender nexus; ✓ Supporting CCD in its coordination 	<ul style="list-style-type: none"> • The National Treasury and Planning • CCD • State Departments
<ul style="list-style-type: none"> • Build the capacity of County Governments, including: <ul style="list-style-type: none"> ✓ Strengthening of Climate Change Coordination Units (CCCU); ✓ Setting up functional County Climate Change Fund (CCCFs), and gazettment of engendered County Environment Committees and other supportive structures; ✓ Coordination of climate change programmes across Counties; ✓ Mobilisation and tracking of climate finance using gender disaggregated data, including CCCF allocations; and ✓ Monitoring and reporting on the impact of climate change programmes. 	<ul style="list-style-type: none"> • CoG • County Governments • The National Treasury and Planning • CCD
<ul style="list-style-type: none"> • Strengthen the capacity to NEMA to implement the Climate Change Act, including integrating climate change in impact assessments and, GHG emissions control, regulation, and enforcement. 	<ul style="list-style-type: none"> • NEMA • CCD
<ul style="list-style-type: none"> • Build the capacity of stakeholders, including: <ul style="list-style-type: none"> ✓ Vulnerable groups, such as women, the youth, marginalised and minority communities, and persons with disabilities, to participate in, attract funding for, and report on climate change actions. 	<ul style="list-style-type: none"> • CCD • County Governments

Enabling Actions	Coordinating Institution and Relevant Partners
<ul style="list-style-type: none"> ✓ The private sector and civil society to implement and report on climate actions. 	
<ul style="list-style-type: none"> • Develop a national gender and inter-generational responsive awareness plan and build capacity for effective gender integration in NCCAP 2018-2022, and in the implementation of NDC; • Incorporate a knowledge harvesting approach to develop the strategy for capturing knowledge and insights from the local level; and • Engage women and the youth in the development of the gender and intergenerational responsive awareness plan. 	<ul style="list-style-type: none"> • National Gender and Equality Commission (NGEC)
<ul style="list-style-type: none"> • Develop and operationalise a public awareness and engagement strategy that highlights outreach to politicians and media. • Engage vulnerable groups, including women, older members of society, children, youth, persons with disabilities, and members of minority and marginalised communities, in the development of the strategy. 	<ul style="list-style-type: none"> • CCD
<ul style="list-style-type: none"> • Integrate climate change in the education system, emphasizing integration in existing curriculum for lower secondary grades 7, 8 and 9 	<ul style="list-style-type: none"> • Ministry of Education • Kenya Institute of Curriculum Development • CCD

2.2.10. Green Economy Strategy and Implementation Plan (GESIP) 2016 - 2030

The Green Economy Strategy and Implementation Plan (GESIP) will guide the national and county governments, the private sector, civil society and other actors adopt development pathways with higher green growth, cleaner environment and higher productivity relative to the business as usual growth scenario. It will aid Kenya’s transition to sustainable path in the following five thematic areas: Sustainable infrastructure, building resilience, sustainable natural resource management, resource efficiency and social inclusion and sustainable livelihood.

Within GESIPs the five thematic areas, there are a number of strategies aimed at accelerating a transition towards a globally competitive low carbon pathway. Through these strategies, the GESIP will contribute to the implementation of the Paris Agreement and attainment of the Sustainable Development Goals. Specifically, Thematic Area 5 on Social Inclusion and Sustainable Livelihoods has strategies that addresses mainstreaming the green economy into all forms of education and training through;

- i. Institutionalizing policy on Education on Sustainable Development (ESD)
- ii. Strengthening gender responsive green economy training pedagogy and andragogy
- iii. Strengthening institutions to enhance green economy transformation
- iv. Catalyzing behavioral change and promote skill-oriented training necessary for a green economy

Other strategies addressing education and capacity building include; Revamping training in TVET including apprentice schemes and entrepreneurship training, Promote

research in all aspects to inform opportunities in the green economy, pursue measures to promote innovation including indigenous knowledge, build capacity on environmental management and promote use of indigenous knowledge systems.

2.2.11. Kenya's Submission to the Subsidiary Body on Implementation (SBI 48) of the UNFCCC on Gender and Climate Change 2018

Kenya recognizes the importance of capacity building to empower women and the vulnerable in society including children, the elderly and disabled persons to build their own resilience and contribute to national resilience building in order to achieve the goals set out in the Gender Action Plan. Noting that there are still gaps including inadequate public participation at implementation; insufficient public participation, sensitization and awareness; inadequate capacity for policy makers at national and subnational levels on gender mainstreaming; and lack of clear MRV and indicators (that are gender sensitive) for all policies, Kenya made submissions under activity A2 on Capacity Building with the following recommendations;

- I. Translate and simplify all climate change legal and policy documents and decisions into local languages to convey the message to the grassroots, especially the local communities.
- II. Training policymakers (national and subnational) on various gender responsive approaches including, gender mainstreaming in climate change actions, collection and analysis of sex disaggregated data to inform climate actions in all sectors.
- III. Harmonize the national and subnational climate change policies to ensure gender is integrated.
- IV. Enhance participatory processes to include all stakeholders especially Civil Society Organizations (CSOs) to advocate and disseminate, train on gender and climate change at grassroots level.
- V. Work with the youth to develop ICT mobile technologies for disseminating gender and climate change actions
- VI. Establish dialogue forum for male and female youth to discourse and participate in climate change actions.
- VII. Undertake a gap analysis of all climate change related policies/plans /strategies/action for gender responsiveness.

2.2.12. Big Four Agenda

Kenya's Big Four Agenda establishes the governments priority focus areas for 2018 to 2022 to foster economic development and provide a solution to the various socio-economic problems facing Kenyans by; enhancing Manufacturing; providing Food and Nutrition Security, Universal Health Coverage and Affordable Housing.

The NCCAP 2018-2022 takes cognizance of the impacts of climate change on Kenya's socioeconomic sectors and identifies strategic areas where climate change action over the next five years will be linked to the Big Four Agenda.

2.2.13. County Integrated Development Plans (CIDPs)

Climate change is a shared responsibility between the National Government and County Governments. All County Governments are required by the Climate Change Act, 2016 to mainstream climate change in their County Integrated Development Plans (CIDPs) and County Annual Development Plans (CADPs). These documents guide county development

activities hence the inclusion of climate change mitigation and adaptation activities in these documents is key. Building capacity of County Governments, includes among others; strengthening of Climate Change Coordination Units (CCCUs) and setting up functional County Climate Change Funds (CCCFs) and gazettement of engendered County Environment Committees and other supportive structures.

2.2.14. Sector Strategies, Plans and Regulations

At the national level, several ministries and departments have established climate change-related plans and policies to guide them in mainstreaming climate actions in their sectors.

Sector	Strategies, plans and regulations
Agriculture	<p>Kenya Climate Smart Agriculture Strategy (2017 - 2026)</p> <p>Organize and conduct training on Climate Smart Agriculture (CSA) and mainstreaming CSA into training curricula of basic education and tertiary training institutions</p>
Forestry	<p>National Forest Programme, 2016 - 2030</p> <p>Enhance capacity in forestry education, extension, training and research Forest education curriculum review in education, training and research institutions, Improve delivery of forest education</p>
Environment	<p>Environmental Management and Co-ordinating Act (EMCA)</p> <p>Green Economy Strategy and Implementation Plan (GEISP) 2016-2030</p>
Disaster Risk Management	<p>Kenya's Disaster Risk Financing Strategy (2018-2022)</p> <p>National Disaster Risk Management Policy (2017)</p>
Energy	Energy Act (2019)
Water	<p>National Water Master Plan</p> <p>Water Act (No. 43 of 2016)</p>
Transport	<p>Kenya National Aviation Action Plan for International Civil Aviation Organisation (ICAO)</p> <p>Mitigation plan for International Maritime Organisation (IMO) (2017)</p>
Gender	<p>National Policy in Gender and Development 2000</p> <p>Build capacities of development agencies in gender mainstreaming into environment and climate change laws, policies and programmes and ensure that women, men, girls and boys participate in and contribute to and benefit from climate resilient programmes and projects</p> <p>Remove gender bias in the school curriculum, educational materials and practices, improve teacher attitude and classroom interactions</p>

3. EDUCATION AND CLIMATE CHANGE CAPACITY BUILDING POLICIES AND PRIORITIES

3.1. Introduction

It has long been recognised by the international community that education plays a crucial role in the transition towards a low-carbon global economy. Education is a powerful element in preparing societies for the global challenges that climate change brings; equipping individuals, communities and the world with the understanding, knowledge, skills and attitudes to engage in shaping green, low emission and climate resilient societies²⁰.

The provision of quality education and training to all Kenyans is fundamental to Kenya's overall strategy for socio-economic development.

The Ministry of Education is responsible for Kenya's education system which is comprised of: Pre-Primary Education, Primary Education, Secondary, Adult and Continuing Education, Technical and Vocational Education and Training (TVET), University Education, Special Needs Education, and Teacher Education²¹.

The functions of education and training are shared between the national and county governments as contained in Schedule 4 of the Constitution of Kenya 2010. The functions of the National Government are: education policy, standards, curriculum, examinations, granting of university charters, universities, tertiary educational institutions, institutions of research, higher learning, primary schools, special education, secondary schools, special education institutions and promotion of sports and sports education.

The functions of the County Government in relation to education are: pre-primary education, village polytechnics, home-craft centres, farmers training centres and childcare facilities.

Kenya has followed the 8-4-4 system of education, consisting of 8 years of free and compulsory primary school, 4 years of free but not compulsory secondary school and 4 years of university education. The 8-4-4- system followed the objective based curriculum, which lays emphasis on summative evaluation. A new competency-based structure consists of 2 years of pre-primary (for ages 4-5); 3 years of lower primary and 3 years of upper primary (for ages 6-11); and 3 years of junior secondary as well as 3 years of senior secondary (for ages 12-17 years). The new structure follows a Competency Based Curriculum (CBC), which seeks to nurture every learner's potential by ensuring all learners acquire the core competencies. The CBC emphasizes formative rather than summative evaluations. The government has begun rolling out the CBC in early years education and hopes to completely phase out the 8-4-4 curriculum by 2027.

Technical and Vocational Education and Training (TVET) has experienced remarkable growth over the last few years with the number of TVET institutions increased from 874 in 2015 to 2191 in 2019. The university sub-sector has also witnessed growth with the number of universities increasing from 53 in 2015 to 63 in 2019²²

The Kenya National Qualifications Authority (KNQA)²³, set up in 2015 coordinates and harmonizes education, training, assessment and quality assurance of all qualifications awarded in the country and over sees and regulates the work of the Basic, TVET and University education sectors.

²⁰ UNESCO. 2016. Changing minds, not the climate. The Role of Education. 2571.18 ED-2017/WS/49 REV

²¹ Government of Kenya (2018). National Education Sector Strategy Plan 2018 - 2022

²² Kenya National Bureau of Statistics. 2020. Economic Survey 2020. ISBN: 978-9966-102-16-4

²³ www. <http://www.knqa.go.ke/>

3.2. Curriculum Reforms

The Ministry of Education in line with the demands of Vision 2030 instituted curriculum reforms in the country. The Ministry through its agency, Kenya Institute of Curriculum Development developed the National Curriculum Policy and Basic Education Curriculum Framework to guide the process. The curriculum has so far been implemented from Pre-Primary 1 to Grade 4, with Grade 5 scheduled to be rolled out in 2021. Development of Curriculum designs for Junior Secondary (Grade 7 to 9) is complete and work is ongoing for Senior Secondary (Grade 10 to 12). Kenya's Education for Sustainable Development (ESD) Policy for the Education Sector, 2017 has largely informed the reforms with the environment and its components such as climate change being a key focus.

During the Kenya's National Tree Planting day in 2018, the President of Kenya reiterated that learners should be introduced to the impacts of climate change and the necessity of preserving our environment as stipulated by the Climate Change Act, 2016 (Section 21 (1) (2)). The President directed the Ministry of Environment and Forestry and the Ministry of Education to integrate climate change into the Education Curriculum at all levels²⁴.

Currently aspects of weather and climate are taught in primary school under Science and Social studies subjects and in secondary school under subjects like Geography, Biology and Agriculture which are all electives and not compulsory. Therefore, learners can go through two years of secondary school without getting any climate related knowledge. Electives are selected in Form 3.

At university level, few syllabi have incorporated climate change. In most universities, climate content is taught under Geography, Agriculture and Environment. However a few universities have started courses focusing mainly on climate change at post graduate level including; University of Nairobi, Kenyatta University and Maseno University²⁵. However it is also noted that according to Kenya Universities and Colleges Central Placement services, there is a decline in number of students who take up degree programs in climate change and food security²⁶.

Besides integrating climate change into the formal education curriculum; there are other opportunities to impart climate change knowledge and deepen and extend understanding and compliment formal learning through non formal and in formal educational learning for both learners and the general public.

Non - formal education and in formal learning, including intergenerational lifelong learning taking place within the community, provides learners with critical opportunities to relate them to realities that concern them and influence them to take the necessary action.

Examples of non-formal learning activities in schools include clubs such as; environmental, music, drama and journalism among many others. Others could include visits to museums, resource centers such as National Climate Change Resource Centre and participation in art competitions such as the *Kenya Climate Change Art and Essay Competition*²⁷. Young learners

²⁴ [https://www.president.go.ke/2018/05/12/speech-by-his-excellency-hon-uhuru-kenyatta-c-g-h-president-and-commander-in-chief-of-the-defence-forces-of-the-republic-of-kenya-during-the-national-tree-planting-day-at-moi-forces-academy-nairobi-2/](https://www.president.go.ke/2018/05/12/speech-by-his-excellency-hon-uhuru-kenyatta-c-g-h-president-and-commander-in-chief-of-the-defence-forces-of-the-republic-of-kenya-during-the-national-tree-planting-day-at-moi-forces-academy-nairobi/)

²⁵ Huho Julius. 2015. Climate Change Knowledge gap in Education System in Kenya. Volume 2. Issue 3. ISSN (Online): 2349 – 5219.

²⁶ Ouma, W. (2020, June 8th). Dons want incentives offered for climate and food security courses.

²⁷ Kenya's Ministry of Environment and Forestry in collaboration with the Ministry of Education and other partners held the *inaugural Kenya Climate Change Art and Essay Competition 2018*. The Competition was open to learners from ages 6-19 years in Nairobi County schools in with a dedicated category for special need learners. The Competition captured the creative skills of learners through drawing and essay writing, expressing their understanding and response to climate change.

in schools and universities can also learn through participation in hands on experiential learning like the *World Climate Simulation*²⁸ event.

Additionally, intergenerational learning presents a great opportunity because children have unique perspectives on climate change, they represent an audience that is easily reached through schools, and are arguably best equipped to navigate the ideologically fraught topic of climate change with older generations in ways that inspire action²⁹. Intergenerational learning describes the way people of all ages can learn together and from each other and is an important part of Lifelong Learning, where the generations work together to gain skills, values and knowledge. This includes building on the positive resources that both the younger and older generations, including the elderly have to offer each other and those around them. The Climate Change Act 2016 recognizes this important role and in Section 3 (2) (e) mandates the national and county governments to mainstream intergenerational and gender equity in all aspects of climate change response.

3.3. Legal and Policy Framework

3.3.1. Basic Education Act

Section 42 (4) of the Basic Education Act stipulates that the Cabinet Secretary shall upon advice of the National Education Board advise the government on the promotion of environmental protection education for sustainable development.

3.3.2. The Technical and Vocational Education and Training Act, 2013

Provides for the establishment of a technical and vocational education and training system; to provide for the governance and management of institutions offering technical and vocational education and training; to provide for coordinated assessment, examination and certification; to institute a mechanism for promoting access and equity in training; to assure standards, quality and relevance; and for connected purposes

3.3.3. National Education Sector Strategic Plan 2018 - 2022

The National Education Sector Strategic Plan (NESSP) 2018-2022 is an all-inclusive, sector wide plan that spells out policy priorities, programmes and strategies for the education sector. It covers the following sub-sectors: Pre-Primary Education, Primary Education, Secondary, Adult and Continuing Education, Technical and Vocational Education and Training (TVET), University Education, Special Needs Education, and Teacher Education.

Under the cross cutting issues two programmes specifically mention incorporation of climate change in their activities. These are;

Programme 1.5 Promote Education for Sustainable Development (ESD). The aim of the program is to; 25operationalize the ESD policy and equip learners with knowledge and skills needed to promote sustainable development. The following activities will be implemented:

- Develop ESD Action plan;

²⁸ The *World Climate Simulation* is a role playing exercise of the UN climate change negotiations for groups including policy makers, youth, students and even members of the public. It is unique in that it uses an interactive computer model to rapidly analyse the results of the mock-negotiations during the event. <https://www.climateinteractive.org/programs/world-climate/>

²⁹ Lawson, Danielle F. Stevenson, Kathryn T., Peterson, M. Nils, Carrier, Sarah J., Strnad, Renee, Seekamp, Erin (2018) Intergenerational learning: Are children key in spurring climate action? Global Environmental Change Part A: Human & Policy Dimensions. Nov2018, Vol. 53, p204-208. 5p. <https://doi.org/10.1016/j.gloenvcha.2018.10.002>

- Build capacity of education managers and stakeholders on integration of ESD and climate change in all learning institutions;
- Conduct awareness campaigns on ESD for learners and school communities; and Monitor and evaluate ESD policy implementation in learning institutions.

Programme 3.6: Greening Technology in TVET -Greening TVET (GTVET)

GTVET is a programme aimed at creating awareness on conservation and sustainability of the environment. The TVETs will develop skills and competencies that pave way for a green economy and society through the following activities:

- Implement greening and waste management technology curricula in TVET;
- Build capacity of managers and trainers on implementation of TVET greening technology;
- Provide equipment for implementation of TVET greening technology;
- Incorporate climate change and use of renewable energy technologies (solar, wind, biofuels) in TVET; and
- Conduct Research on greening technology to inform policy.

3.3.4. Education for Sustainable Development (ESD) Policy for the Education Sector. Ministry of Education 2017

The Government of Kenya is committed to promoting Education for Sustainable Development (ESD) as a key element of enabling sustainable development and delivery of quality education. The Policy shall be applicable to the two levels of Government and shall include programmes and activities at all levels of education. Its implementation will address key education result areas that include basic education, higher education, teacher and technical & vocational training institutions and workplace, lifelong learning and non-formal education, and capacity building, networking and social learning.³⁰

The ESD Policy was launched in 2017 and incorporates climate change learning. It provides for the incorporation of key themes of sustainable development such as poverty alleviation, human rights, innovation, health and environmental protection and climate change into the Kenyan education system. Learning content involves integrating critical issues, such as; climate change, poverty reduction, gender equality, biodiversity, disaster risk reduction (DRR), and sustainable consumption and production (SCP) into the curriculum.

The Sector Policy on ESD shall be applicable to the two levels of Government and shall include programmes and activities at all levels of education. Its implementation will address key education result areas that include basic education, higher education, teacher and technical & vocational training institutions and workplace, lifelong learning and non-formal education, and capacity building, networking and social learning.

Additionally, the Policy also stipulates that Ministry of Education in collaboration with the National Museums of Kenya, National Commission for Science, Technology and Innovation and other stakeholders shall promote indigenous knowledge and learning for sustainable development by; integrating indigenous knowledge into all levels of learning, undertaking research and document relevant indigenous knowledge to inform ESD practices in the country and establishing linkages between indigenous knowledge and other forms of scientific knowledge.

³⁰ Ministry of Education (2017). Education for Sustainable Development Policy for the Education Sector. Republic of Kenya

Kenya is putting emphasis on approaches that promote whole-institution development of ESD such as *Eco-schools* and *Green Campus* that mainstream sustainability into all aspects of the learning environment. The whole institution approach includes embedding sustainability issues into the curriculum and learning processes, facilities and operations, interaction with surrounding community, governance and capacity building.

3.3.5. Basic Education Curriculum Framework 2017

This framework and the *Policy Framework for Reforming Education, Training and Research for Sustainable Development - Sessional Paper No. 1 of 2019* are anchored on the National Goals of Education of which, the 8th promotes positive attitudes towards good health and environmental protection, inculcating in the learner the value of physical and psycho-social wellbeing for self and others.

3.3.6. Presidential Directive (Ref No. OP/CAB 26/1/3A) - 24th May 2018

Following the Presidential Directive to the Ministry of Environment and Forestry (MEF) and the Ministry of Education to integrate climate change into the Education curriculum at all levels, the MEF is spearheading this process in collaboration with the Ministry of Education through a comprehensive process that has brought together all agencies mandated to develop and regulate education curricula in all levels of education in Kenya. Draft guidelines for mainstreaming climate change in curricula at all levels of education have been developed and shared with stakeholders for input. A validation workshop is planned with relevant stakeholders.

3.3.7. County Government Act (No. 70) 2012

The County Government Act (No. 70) 2012 gives the Counties powers to manage pre-primary, youth polytechnics and childcare services.

4. CLIMATE CHANGE LEARNING PROGRAMS AND INITIATIVES

Climate change learning initiatives and programs that have been implemented nationally and sub nationally are presented in the five Action for Climate Empowerment priority areas; *Education, Training, Public Awareness, Public Access to Information and Public Participation*. This is by no means exhaustive and will continue to be updated during the development process of the National Climate Change Learning Strategy.

4.1. EDUCATION

4.1.1. ESD in Kenya

The Ministry of Education (MoE) established a national ESD coordination desk in 2012 and collaborates with the Ministry of Environment and Forestry and the National Environment Management Authority (NEMA) to promote ESD activities. A national steering committee comprising of representatives from government, civil society organizations and the private sector has been spearheading the process of ESD implementation in Kenya. ESD was entrenched in the 2013-2018 National Education Sector Plan (NESP). MoE established partnerships and networks with other organizations such as the Ministry of Health, Ministry of Environment and Natural Resources, UNESCO, UNEP, WFP, UNICEF and the Israel's Agency for International Development (MASHAV), for effective implementation. The Ministry has an MoU with MASHAV that has been implemented for the last 5 years on ESD.

Broadly, the following achievements have been realised with regard to the status of ESD in Kenya:

- i. Stakeholders for sustainable development are increasingly taking up education, public awareness and training to advance sustainable development.
- ii. The Government has incorporated education strategies, tools and targets into national sustainable development strategies, climate change plans and related economic frameworks such as the Green Economy.
- iii. Partnerships, collaborations and networks, for example, **Regional Centres of Expertise** (RCEs) have been formed to enhance the implementation of ESD.
- iv. ESD facilitates interactive, learner driven pedagogies that equip learners with knowledge, values and skills for sustainability.
- v. Several teachers and education officials have been trained and a number of schools are practising ESD³¹.

4.1.2. Regional Centres of Expertise

A Regional Centres of Expertise (RCE) is a network of existing formal, non-formal and informal education organisations, mobilised to deliver education for sustainable development (ESD) to local and regional communities.

RCEs in Kenya have provided useful platforms for capacity building in the education sector. As networks of formal, non-formal and informal education organisations, RCEs are catalysing and supporting the reorientation of education and training systems in their regions. The Education Sector is represented in each of the eight Regional Centres of Expertise (RCEs) that are operating in Kenya.

³¹ GOK 2017. Education for Sustainable Development Policy for the Education Sector. Ministry of Education 2017.

4.1.3. Development of Guidelines for mainstreaming climate change in education curricula

In response to the Presidential directive draft guidelines for mainstreaming climate change in curricula at all levels of education³² have been developed. The guidelines were developed through a consultative multi agency process under the auspices of the Ministry of Environment and Forestry (MEF) and Ministry of Education (MoE). The process involves all agencies mandated to develop and regulate education curricula at all levels of education in the country including; Commission for University Education (CUE), Kenya Institute of Curriculum Development (KICD), Kenya School of Government (KSG), Teachers Service Commission, Technical and Vocational Education and Training Authority (TVETA), Kenya Association of Technical Training Institutions (KATTI) among others.

The guidelines also serve to fulfil international and national obligations to integrate climate change in education at all levels. The specific objectives of the guidelines are to provide curriculum developers with guidelines on designing curricula that enables learners to;

- Understand climate change and its impacts
- Acquire appropriate knowledge, skills and competencies to respond to climate change
- Appreciate efficient production and utilization of resources
- Apply whole institution approach in teaching and learning
- Promote implementation of global, regional and local climate action plans
- Promote research and innovation in climate change

The draft guidelines are ready and will be subjected to a validation workshop with all stakeholders including climate change experts, curriculum developers and teachers.

4.1.4. Climate Change Education for Sustainable Development (CCESD)

This Project was implemented by Kenya Organization for Environmental Education (KOEE) in Kakamega and Vihiga counties from 2013-2014 with support from Act! and UKaid. The project's overall aim was to build capacity of faith leaders and community groups through non formal value-based climate change education for sustainable development, with focus on addressing food security using eco-systems based adaptation approaches.

The project objectives included;

- Increasing awareness of climate change and its effects on development.
- Building capacity of religious communities through training to promote food security and climate change adaptation, including sustainable land management practices with faith as the motivation.
- Promoting climate change adaptation and friendly technologies including eco-system based approaches through micro-project demonstrations to enhance food security.

Achievements

- Trained 25 faith leaders (15 males and 4 females; and 6 youth (3 males and 3 females) on value-based climate change education for sustainable development.
- Micro projects established in Kakamega and Vihiga counties in eight sites i.e. churches and mosques or congregants' home.
- Resource materials including Training Manuals and Sermon Guides were also developed for use by faith leaders during their sermons.

³² Ministry of Environment and Forestry (2020). Draft Guidelines for Mainstreaming Climate Change in Curricula at All Levels of Education.

4.2. TRAINING

4.2.1. Climate Change Training Program

The Ministry of Environment and Forestry in collaboration with the Kenya School of Government (KSG), the Kenya Institute of Curriculum Development (KICD) and other stakeholders developed a curriculum for a short course to mainstream Climate Change into the National and County Policy, Planning & Budgetary Processes. The course targeted National Officers and County Directors and Planning and Finance Officers in charge of climate sensitive sectors such as environment, agriculture, transport and energy.

The program was supported by the USAID - UNDP funded Low Emission and Climate Resilient Development (LECRD) Project (Box 1).

Achievements

- Curriculum and Facilitators manual developed.
- Twenty-three (23) facilitators trained to deliver the climate change training program.
- Inaugural training program held with 27 participants (10 national and 17 county officers).
- Five (5) Training Case Studies showcasing county climate change initiatives developed to compliment training.

The Climate Change for Policy, Planning and Budgeting at National and County Level training program responded to the need to mainstream climate change into national and sub national policy, planning and budgeting process.

Institutional capacity was built at the Kenya School of Government with the climate change training program being offered as part of the regular training schedule. The School also held its first ever Climate Change Symposium and currently has a fully functional department on climate change.

Through additional support the curriculum has been reviewed and relevant and targeted programs developed including;

- i. Curriculum review undertaken and training program tailored for training 42 technical officers from the Lake Region Economic Block (LREB) with support from National Drought Management Authority - ADA Consortium
- ii. Training of 15 officers from the Ministry of Transport, State Department of Transport and Maritime Shipping Affairs was undertaken - Support from **G**erman Agency for International Cooperation (GIZ)
- iii. Curriculum reviewed and designed for training County Climate Change Units (CCCU) with 336 County Officers (242 Male and 94 Female) trained - Support from the FAO NAP Readiness Program.
- iv. Training for 60 members of County Assembly of Kisumu County with support from Care Kenya
- v. A new collaboration with DANIDA will enable the KSG develop further relevant climate change training program

Box 1: The Low Emission and Climate Resilient Development (LECRD) Project

The LECRD Project, funded by the United States Agency for International Development (USAID) through the United Nations Development Programme (UNDP) has been working with the Climate Change Directorate (CCD) under the Ministry of Environment and Forestry, to support Kenya's efforts to pursue long-term, transformative development and accelerate sustainable climate resilient economic growth, while slowing the growth of greenhouse gas emissions. Since commencement in 2014, the LECRD project has built synergy and sustainability of its impacts by implementing activities through linkages and partnerships with government ministries and agencies, Counties, Civil Society Organizations (CSOs), development partners.

The Project strengthen Kenya's climate change coordination processes; contributed toward enhancing access to clean and efficient energy systems; supported development of a national sustainable greenhouse gas (GHG) inventory system; facilitated improved national and county decision making on climate change interventions; support capacity building of climate knowledge management system; and contributed towards minimizing the impacts of extreme climate events for improved and resilient livelihoods.

Success Factors

- Engagement and involvement of stakeholders at all stages of the training program design, development and implementation enhanced the ownership and success of the program and its quality, delivery and outcome,
- The use of multi-disciplinary team of local subject matter experts to develop and deliver the training made it relevant and contextualised local climate circumstances,
- Interaction between the national and sub - national government enriched the discussions, sharing of experiences and helped bridge the understanding between different levels of government,
- Engagement of relevant stakeholders throughout the design, development and implementation process ensured; ownership, commitment to, and success of the climate change training program.

4.2.2. Climate Finance Training Program

The MEF in collaboration with The National Treasury (TNT) developed a training program on Climate Finance, Tracking and Climate Change Budget Coding (CCBC) within the Integrated Financial Management Information System (IFMIS) targeting staff in the finance departments of the National and County governments. The objective to improve our ability to mobilize and effectively manage and track adequate and predictable climate change finance from public and private sources.

Achievements

- Developed a curriculum and training handbook on climate finance: budget, coding, tracking and reporting.
- Training of twenty (20) TOTs on climate finance: budget coding, tracking and reporting
- Sensitization workshops for 313 and 138 national and county government officers respectively to sensitize public officers on tracking of climate public finance. This training supports mainstreaming of climate change in the County Integrated Development Plans (CIDPs) and mainstreamed into national planning through medium term plans.

The program was supported by the USAID - UNDP funded Low Emission and Climate Resilient Development (LECRD) Project and the NDC Support Program (Box 2).

Box 2: The Low Emission and Climate Resilient Development (LECRD) Project

NDC Support Programme in Kenya is funded by UNDP and implemented jointly with the USAID-supported Low Emissions and Climate Resilient Development (LECRD) project with the overall goal to support the implementation of Kenya's NDC. The NDC Support Programme in Kenya focuses on improving climate governance, long-term climate planning, strengthening existing mitigation actions, and applying innovative financing approaches to attract private sector investment. The NDC Programme serves as the lead coordinating agency in the NDC Partnership for Kenya.

The Programme has developed a private sector engagement and coordination framework, undertaken an in depth gender analysis of legal, policy and institutional frameworks, giving special consideration to key NDC sectors, developed guidelines on gender mainstreaming into climate change actions, designed, developed and operationalized the NDC - Monitoring, Reporting and Verification (MRV) system at sectoral and national levels and developed a training handbook on Climate Finance: Budget Coding, Tracking and Reporting.

4.2.3. Technical and Vocational Education and Training Institutions (TVETs)

The Ministry of Environment and Forestry in collaboration with relevant stakeholders including Institute of Energy & Environmental Technology (IIET) - Jomo Kenyatta University of Agriculture and Technology (JKUAT), National Industrial Training Authority (NITA), Technical and Vocational Education and Training Authority (TVETA) built the capacity of ten (10) Technical Vocational Education and Training Institutes to be able to train on design, installation, and maintenance of solar photovoltaic (PV) and solar water heating systems.

Achievements

- Solar Water Heating (SWH) Manual developed. The manual can be used as a course book for skills training in Technical and Vocational Education and Training Institutions where solar water heating is offered as a distinct course.
- Ten selected TVETS provided with training equipment for both solar PV and solar water heating to facilitate practical learning sessions and become model Training Centers of Excellence
- Sixty (60) instructors trained (52 Males and 8 Females)
- Scholarships provided for 200 technicians to undergo solar PV and solar water heating training.

The program was supported by the USAID - UNDP funded Low Emission and Climate Resilient Development (LECRD) Project.

4.2.4. Training of editors and journalists on responsible and responsive reporting on climate related disasters including El Nino

The Ministry of Environment and Forestry in collaboration with Media Council of Kenya (MCK) developed a training program for media practitioners on responsible and responsive reporting on climate related disasters including El Nino. The objective of the training was to transform their thinking and understanding of El Nino and disasters to realize their role in effective reporting to transform society through availing accurate and timely climate change information

Achievements

- Curriculum and online portal developed

- 159 Journalists and Editors (39 female and 120 male) trained on '*Responsive and Responsible Reporting on El Nino as a Climate Change Phenomenon including the Related Disasters*'.
- Learning portal developed on disaster reporting to ensure continuity on capacity building of media practitioners

The program was supported by the USAID - UNDP funded Low Emission and Climate Resilient Development (LECRD) Project.

The curriculum has since been reviewed with support from FAO through the NAP Readiness Program, a TOT for facilitators held and plans are underway to train 50 journalists.

4.2.5. Training of Environmental Bloggers with the Bloggers Association of Kenya (BAKE)

The Ministry of Environment and Forestry organized a three-day sensitization workshop for environmental bloggers from the wider Nairobi area on climate change matters. The training contributed to content creation for the Kenya Climate Change Knowledge Portal and the sharing of climate-change-related information.

Achievements

- 40 environmental bloggers trained
- Several articles written during and after the training and published on social media
- World Climate simulation event was conducted during the workshop giving the bloggers first-hand experience of how the negotiations are carried out at the annual UNFCCC Conference of Parties Conference.

The program was supported by the DANIDA funded Green Growth and Employment Project (GGEP), and the LECRD Project.

4.2.6. Capacity building of environmental journalists to effectively report on climate change

The MEF in collaboration with the Media Council of Kenya (MCK) strengthened the knowledge base for adaptation by developing a regional climate change training program to improve the capacity of environmental journalists to effectively report on climate change issues.

Achievements

- Gap analysis on climate change reporting in Uganda, Kenya and Ethiopia undertaken
- Reviewed existing training materials and developed a regional climate change training curriculum for journalists in partnership with the Media Council of Kenya (MCK), Climate Change Directorate (CCD), University of Nairobi (UON) among other academic and research institutions.
- A Training of Trainers (TOT) conducted for 20 journalists
- Training planned for 60 journalists at the county level in partnership with the MCK, UON, CCD and the Environment Society of Kenya (ESOK).

The support for this initiative is through the Kenya's Green Climate Fund NAP readiness project implemented in partnership with the FAO.

4.2.7. Enhancing Effective Climate Change Reporting for Climate Action

The Kenya Organization for Environmental Education (KOOE) implemented a four-month (Sept 2017- Jan 2018) project to train journalists on effective climate change reporting. The project aimed at enhancing public awareness on existing climate change response strategies and policies and with an objective of training journalists on effective climate change reporting and developing a guidebook on effective climate change reporting. The project involved journalists from Nairobi, Garissa, Wajir, Mandera, Kilifi, Mombasa, Kwale, Laikipia, Baringo and Turkana Counties.

The main project outcomes included:

- Report on gaps for effective climate change reporting developed based on Knowledge, attitudes and practices (KAP) survey and SWOT analysis survey in Baringo, Laikipia, Turkana, Kwale, Kilifi, Mombasa, Garissa, Wajir and Mandera Counties.
- Consultative meeting with journalists and climate change actors on effective climate change reporting
- Development of a Guidebook on effective climate change reporting
- 500 guidebooks produced for journalists on effective climate change reporting
- 48 journalists (radio, TV, print & digital) capacity built on effective climate change reporting and education for sustainable development (ESD)
- 25 county-based stories on climate change developed and disseminated in Kenya
- Three networks of journalists dedicated on climate change reporting formed

The project was funded by UKAID through Act! and the partners included; Kenya Institute of Curriculum Development (KICD), National Environment Management Authority (NEMA), Kenya Metrological Department (KMD), Media for Environment, Science, Health and Agriculture (MESHA), Environmental Journalism Society of Kenya (EJSK) and Media Council of Kenya (MCK)

4.2.8. Capacity building of Kenya Metrological Department (KMD)

The MEF supported the;

- Procurement and installation of twenty (20) Automatic Weather Stations in ten (10) counties to improve climate information data collection and weather forecasting and contribute to minimizing the impacts of extreme climate events for improved and resilient livelihoods.
- Development of a curriculum on Basic Maintenance and Operation for Automatic Weather Stations (AWSs) and trained 43 Participants (38 males, 5 females) on the course.
- Review of the curriculum has done by KMD, Institute for Meteorological Training and Research (IMTR). IMTR has entrenched the course in its regular programmes to ensure its sustainability, making it the first meteorological institute in Africa to offer this course.
- Training of one staff member to pursue a one-year master's degree in HPC and ICT at University of Reading in the UK and another to pursue master's degree in climatology at University of Nairobi

The program was supported by the USAID - UNDP funded Low Emission and Climate Resilient Development (LECRD) Project.

4.2.9. Education for Sustainable Development (ESD) Marine Programme

World Wide Fund for Nature (WWF) Kenya works with schools in Coastal Kenya to promote ESD through;

- Establishment of school gardens/tree planting exercises
- Beach clean-up exercises
- Scholarships for girls from a disadvantaged background in Lamu

4.2.10. UN Alliance on Climate Change Education, Training and Public Awareness

- Developed a study guide for school teachers and students in Africa on climate change mitigation and adaptation with support from UNESCO

4.2.11. Support to Women and Other Vulnerable Groups

- Development of draft guidelines on gender mainstreaming into climate change actions - **NDC Support Program**
- Training of women and other vulnerable groups on alternative livelihoods and clean energy related enterprises - **Kenya Climate Change Working Group**
- Economic Empowerment of Women through Climate Smart Agriculture (CSA) - UN Women partnered with AFC to enhance AFC's gender capacity including, gender mainstreaming, and developed the Women's Access to Agricultural Finance in Kenya Baseline Survey in partnership with KIPPRA, FAO and the EU.
- UN Women and AFC also conducted farmers' training in four counties (Busia, Kilifi, Kitui and Laikipia) aimed at enhancing women's access to agricultural credit 876 farmers (61% Women, 39% Men, 26% youth) - **UN Women**
- **UN Women** and **FAO** are embarking on a project to empower women economically through climate-smart agriculture focusing on 3 ASAL counties in Kenya
- In 2016, NGECC and FIDA with support from CIGAR trained 47 CECs for gender and 47 CEC responsible for climate change, water and natural resource management on mainstreaming gender in climate change

4.2.12. Training of journalists on objective climate change reporting

- 35 Journalists trained (23 Females and 12 males) - October 2017 - **Kenya Climate Change Working Group**
- 56 Journalists trained from the counties including media students (30 Females and 26 males) - September 2018 - **Kenya Climate Change Working Group**
- Training on role of devolution as a gateway to integration of gender and social inclusion in green and inclusive energy - Planned for June 2020

4.2.13. Training of Member of County Assembly (MCA)s on climate change, budgeting and mainstreaming

- Training on mainstreaming climate change into county actions and plans targeting MCAs in Kajiado County Budget and environment committees ahead of the finalization of the 2nd CIDP 32 MCAs trained (15 Males 17 Females) March 2017 - Kenya Climate Change Working Group
- Training of Kajiado county environment committee members on CC and gender mainstreaming. Key CSOs working in the county, MPIDO participated in the workshop workshop. (30 Trained 18 Males, 12 Females) May 2019 - Kenya Climate Change Working Group

4.2.14. Training of Diplomats and Online Youth Climate Dialogues

Under the new UN CC:Learn project in Kenya planning is ongoing for;

- Training for around 25 diplomats and government officials on climate change negotiations under the leadership of the Climate Change Directorate and Foreign Service Academy (FSA) of the Ministry of Foreign Affairs
- Online Youth Climate Dialogues, a UN CC:Learn initiative facilitating exchange on climate change among students in different countries via video-conference

The two programs will be supported by UNITAR/UN CC:Learn Secretariat and potentially, other interested partners channeled through the UN CC:Learn project in Kenya to strengthen Human Resources and skills to advance the NDC and NAP.

4.2.15. Climate Change Education for Sustainable Development (CCESD)

This Project was implemented by Kenya Organization for Environmental Education (KOE) in Kakamega and Vihiga counties from 2013-2014 with support from Act! and UKaid. The project's overall aim was to build capacity of faith leaders and community groups through non formal value-based climate change education for sustainable development, with focus on addressing food security using eco-systems based adaptation approaches.

The project objectives included;

- Increasing awareness of climate change and its effects on development.
- Building capacity of religious communities through training to promote food security and climate change adaptation, including sustainable land management practices with faith as the motivation.
- Promoting climate change adaptation and friendly technologies including eco-system based approaches through micro-project demonstrations to enhance food security.

Achievements

- Trained 25 faith leaders (15 males and 4 females; and 6 youth (3 males and 3 females) on value-based climate change education for sustainable development.
- Micro projects established in Kakamega and Vihiga counties in eight sites i.e. churches and mosques or congregants' home.
- Resource materials including Training Manuals and Sermon Guides were also developed for use by faith leaders during their sermons.

4.3. PUBLIC AWARENESS

4.3.1. Kenya Climate Change Art and Essay Competition 2018: Nairobi County Edition

In line with Government's directive to mainstream climate change into Kenya's curriculum, Ministry of Environment and Forestry in collaboration with the Ministry of Education and other stakeholders designed and successfully held the first Kenya Climate Change Art and Essay Competition: Nairobi County Edition to enable children present their understanding and interpretation of climate change through creative works of art and essays (English and Swahili). The theme of the Competition was: *Climate Change: Dream, Express, Act!* The Competition was open to learners in Primary, Secondary and APBET (Alternative Provision of Basic Education and Training) Schools in Nairobi County from 6 to 19 Years, including a category for Special Need Learners.

Achievements

- Over 4300 entries (painting, drawing and essays in English and Swahili) were submitted
- 112 schools participated including 9 schools for special need learners.
- 150 winners and 7 schools were awarded with laptops, tablets, book vouchers and branded bags
- Learner-centred award ceremony attended by over 1500 learners and 300 stakeholders.
- During the award ceremony all the learners and invited guests were given eco-friendly bags and reusable water bottles courtesy of RETRAK (Retail Trade Association of Kenya) in line with Kenya's plastic bag ban.
- All learners were awarded certificates of participation.

The program was supported by the USAID - UNDP funded Low Emission and Climate Resilient Development (LECRD) Project with additional support from the GoK and other private sector players.

Success Factors

- Throughout the Competition the use of social, print and electronic media helped to create awareness and engage the learners and schools on climate change issues
- Leveraging on private sector engagement and support helped to create awareness, engage with learners, teachers and parents throughout the competition period and provided gifts and give away for learners and stakeholders during the Awards Ceremony.
- Teachers played a critical role throughout the competition period.
- A committed and creative design and program delivery team
- Engaged a *Young Environmental Champion* to create awareness and engage young learners
- Flexibility in design of the program to take advantage of the opportunities as they emerged including adding a category for special need learners and APBET Schools

4.3.2. National Assembly and Senate Committee

Learning workshop organised by MEF for the National Assembly and Senate Environmental Committees on the Climate Change Act 2016, the National Climate Change Action Plan 2018 - 2022, climate finance and the Sustainable Waste Management Bill and Policy 2019. The workshop stimulated dialogue on the different climate change related Acts and Policies and increased awareness for improved implementation.

Supported by the DANIDA funded Green Growth and Employment Project, and the USAID - UNDP funded Low Emission and Climate Resilient Development (LECRD) Project.

4.3.3. Renewable Energy Day

The MEF in collaboration with KEREA and other stakeholders organized the Renewable Energy Day Themed: *Renewable Energy - Powering the Future* provided a platform for private sector players and government to meet and dialogue on key topics in the sector. Over 300 participants from government, business, finance institutions, civil society organizations, universities as well as members of the public participated.

This could become an annual event bring together to showcase renewable energy technologies and opportunities in the country.

4.3.4. Faith Based-Climate Change Education for Sustainable Development

The Project was implemented by KOEE from July 2015 - Feb 2016 Machakos County, funded by UKAID and Embassy of Sweden through Act!. The overall goal of the Project was to promote adaptation to climate change through faith-based education for sustainable development in Machakos County. The project aimed at promoting climate-smart technologies that promote sustainable natural resource management as well as adaptation and resilience to climate change, using education and advocacy.

The Project objectives were to;

1. Engage the county government on climate-responsive policy development, implementation and enforcement with participation from non-state actors.
2. Promote adoption of Climate-smart technologies in energy and agriculture through capacity building
3. Create and increase awareness on Climate Change trends for mitigation and adaptation

The Project had micro-projects and subsidy components in agriculture, energy and water aimed at enhancing community livelihoods as well as creating learning centres for good practices within the community for replication purposes.

Achievements

- Provided seed funding for the establishment of six micro-projects - 2 institutional energy saving jikos, 3 water harvesting structures, and 1 greenhouse.
- Supported establishment of various projects through a cost-sharing approach by providing partial support for community groups in energy (domestic cooking stoves and solar lanterns), water (tanks), and agriculture (dairy goat).

4.3.5. Climate-Smart Agriculture (CSA) Campus Forum

The Climate Smart Agriculture Youth Network (CSAYN) in collaboration with the CGIAR Research Program on Climate Change, Agriculture and Food Security (CCAFS), the Alliance of Bioversity International and CIAT and the University of Nairobi, held the inaugural *Climate-Smart Agriculture (CSA) Campus Forum* at UoN. The aim of the Forum was to create awareness on climate smart agriculture and build capacity and skills of students studying agricultural courses and equip them with knowledge to harness the massive opportunities in agribusiness. In addition, the students were able to learn from agriculture professionals, youth champions in agriculture as well as human resource personnel from the different agriculture organizations.

Achievements

- 464 graduate and undergraduate students from the College of Agriculture and Veterinary Sciences (CAVS), research scientists in CSA, professionals from research and development organizations, young champion farmers implementing CSA and faculty from UoN attended the Forum.
- The Forum was broadcast on television and livestreamed by TV47 to Kenya's 47 Counties

4.4. PUBLIC ACCESS TO INFORMATION

4.4.1. National Climate Change Resource Centre (NCCRC)

The NCCRC was built by the Government of Kenya and operationalized by the LECRD Project. The Centre is located at the Kenya Meteorological Department Headquarters and is

a national repository for climate change information and knowledge. It has a specialized library, amphitheater and training facilities including a webinar room and an exhibition hall to showcase climate technologies. The Resource Centre incorporates green building concepts such as the use of solar lighting, biogas and water recycling. The facility is open to the public and hosts climate change related meetings, workshops, seminars, webinars and exhibitions.

4.4.2. Kenya Climate Change Knowledge Portal

The Kenya Climate Change Knowledge Portal www.kcckp.go.ke is virtual online platform, a one stop web based repository of climate change information in Kenya ensuring widespread access and dissemination of climate change related information. The portal has dedicated microsites for children and youth.

4.4.3. Community Education Business and Information Centre (CEBIC)

The CEBIC will provide access to information and creation of business opportunities for communities especially in the Arid and semi-arid areas. This is a key element in spurring establishment of sustainable ventures for community empowerment to further establish their resilience towards climate change impacts. The MEF with support from USAID UNDP funded LECRD Project, constructed a CEBIC at Lesidai, Samburu County. The Centre will promote access to information as well create business opportunities for vulnerable communities in arid and semi-arid lands. Services to be offered at the Centre include ICT services, M-pesa, Renewable energy shop, Agrovet, training facilities, cultural Centre and library.

The NCCAP 2018 – 2022 proposes construction of two additional Community, Education, Business and Information Centres by 2023

4.4.4. Joto Afrika magazine

The MEF with support from USAID UNDP funded LECRD Project and in collaboration with Arid Lands Information Network (ALIN), enhanced sharing of information and knowledge on climate change through the production and dissemination of nine (9) digital and physical issues of the quarterly **Joto Afrika magazine** (<https://www.alin.net/Joto%20Afrika>) under the following themes;

1. Kenya Taking Bold Steps to Combat Climate Change ~ **COP 21, Nov 2015**
2. Green Growth: An Overview of the Framework for Development ~ **Apr 2016**
3. Youth and Climate Change ~ **Aug 2016**
4. Kenya Climate Action to Address Climate Change ~ **COP 22, Nov 2016**
5. National and County Government Response to Climate Change ~ **Apr 2017**
6. Role of Science and Innovation in Climate Change ~ **Aug 2017**
7. Implementing Kenya Nationally Determined Contribution ~ **COP 23- Nov 2017**
8. Taking Stock since the Paris Climate Agreement ~ **May 2018**
9. Climate Change: It is time for Action! ~ **Dec 2018**

4.5. PUBLIC PARTICIPATION

The Climate Change Act 2016 states in Section 24 (1) that public entities at each level of government shall, at all times when developing strategies, laws and policies relating to climate change, undertake public awareness and conduct public consultations.

During the development of the National Climate Change Action Plan 2018 – 2022, there was extensive consultation with over 1,000 stakeholders, including representatives from the National and County Governments, civil society, the academia, women's groups, youth groups, marginalised and minority groups, and the private sector.

5. STAKEHOLDER ANALYSIS

In this context stakeholders are the broad range of actors involved in climate-related capacity building³³. This analysis identified relevant institutions and organizations that are involved in climate change and learning initiatives, programs and activities in capacity development and will play a key role in the development of the National Climate Change Learning Strategy. The list is by no means exhaustive and will continue to be updated during the development process of the National Climate Change Learning Strategy. Table 3 indicates the stakeholder and the role they play in climate change education capacity development.

Table 3: Stakeholders and role in climate change education capacity development

Type of Stakeholder	Stakeholder/Institution	Role in Capacity Development
National Climate Change Policy, Coordination and Oversight	National Climate Change Council (NCCC)	<ul style="list-style-type: none"> • Provide advice on mainstreaming climate change into education sector training • Facilitate access to information
	CS Ministry of Environment and Forestry	<ul style="list-style-type: none"> • Formulate a national gender and intergenerational responsive public awareness and educational program on climate change
	CS The National Treasury	<ul style="list-style-type: none"> • Grant incentives to persons who conduct accredited training programs that eliminate climate change
Government Ministries, Departments and Agencies	Ministry of Environment and Forestry	
	Climate Change Directorate (CCD)	<ul style="list-style-type: none"> • Key role in development of the National Climate Change Learning Strategy (NCCLS) • Develop guidelines for mainstream climate change in education curricula
	Kenya Metrological Department (KMD)	<ul style="list-style-type: none"> • training programs in all fields of meteorology • Enhancing integration of local/indigenous knowledge into early warning systems.
	Ministry of Education	
	Kenya Institute of Curriculum Development (KICD)	<ul style="list-style-type: none"> • Key role in development and implementation of the National Climate Change Learning Strategy (NCCLS) • Integration of climate change in primary and secondary education curricula • Development of curriculum, curriculum support materials, conduct

³³ UNFCCC 2019. *Paris Committee on Capacity building Strategic Plan for Stakeholder Engagement, Communication and Resource Mobilization*. UNFCCC, PCCB, Bonn, July 2019.

Type of Stakeholder	Stakeholder/Institution	Role in Capacity Development
		research and in-service training for curriculum developers
	Commission of University Education (CUE)	<ul style="list-style-type: none"> Integration of climate change in university curricula
	Technical and Vocational Education and Training Authority (TVETA)	<ul style="list-style-type: none"> Integration of climate change in TVET curricula
	The National Treasury and Planning	<ul style="list-style-type: none"> Development of sector wise climate change policy Ensure that the NCCLS is linked to the planning processes and Ensure that the Strategy implementation activities are integrated in the National budget
	Ministry of Energy	<ul style="list-style-type: none"> Integrate climate change learning into their existing programmes and initiatives Ensure that the NCCLS is linked to and helps to address capacity gaps (institutional, technical and human) in sectorial ministries, department and agencies in implementation of NDC, NAP and NCCAP
	Ministry of Agriculture, Livestock, Fisheries and Co-operatives	
	Ministry of Water, Sanitation and Irrigation	
	Ministry of Health	
	Ministry of Devolution and The ASALs	
	Ministry of Transport, Infrastructure, Housing, Urban Development and Public Works	
	Ministry of Tourism and Wildlife	
	Ministry of Industry, Trade and Enterprise Development	
	Ministry of Labor and Social Protection	
	Ministry of Public Service and Gender	
	Ministry of Petroleum and Mining	
	Ministry of Lands and Physical Planning	
	National Drought Management Authority (NDMA)	
	National Gender and Equality Commission (NGEC)	<ul style="list-style-type: none"> Integration of gender sensitive and participatory education
	National Museums of Kenya	<ul style="list-style-type: none"> Integrate indigenous knowledge into all levels of learning.

Type of Stakeholder	Stakeholder/Institution	Role in Capacity Development
	National Commission for Science and Technology	<ul style="list-style-type: none"> Facilitate quality in the research, science, technology and innovation sector through regulation, promotion and provision of advisory services.
County Government	Council of Governors	<ul style="list-style-type: none"> Ensure that the NCCLS strengthens the capacity of county institutions responsible for coordinating and implementing climate change actions
	County Governments	<ul style="list-style-type: none"> Responsible for pre-primary education, village polytechnics, home-craft centres, farmers training centres and childcare facilities
Education and Training Institutions - Design and deliver climate change education and learning	Kenya School of Government (KSG)	<ul style="list-style-type: none"> State corporation established to offer management training, research, consultancy, and advisory services to the public sector, including national and county governments, private sector and NGOs
	Teachers Service Commission (TSC)	<ul style="list-style-type: none"> Capacity building of teachers
	Kenya National Qualifications Authority (KNQA)	<ul style="list-style-type: none"> Certification of appropriate qualifications
	Commission for University Education (CUE)	<ul style="list-style-type: none"> Approve climate change and integrated curricular
	Kenya Institute of Curriculum Development (KICD)	<ul style="list-style-type: none"> Develop curricula for all levels of education Develops and prints curriculum support materials Organizing and conducting in service and orientation programs for curriculum developers
	Kenya Education Management Institute	<ul style="list-style-type: none"> Build the capacity of education personnel to enable them deliver education services efficiently and effectively
	Kenya National Commission for UNESCO (KNATCOM)	<ul style="list-style-type: none"> Facilitates national and international policy formulation in the fields of education, sciences, culture and communication and information
Kenya Institute of Special Education (KISE)	<ul style="list-style-type: none"> service provision for persons with special needs and disabilities through human capital development, research, functional assessment, rehabilitation, Inclusive education practices, technology and production of learning and assistive materials 	

Type of Stakeholder	Stakeholder/Institution	Role in Capacity Development
	The National Industrial Training Authority (NITA)	<ul style="list-style-type: none"> • promote the highest standards in the quality and efficiency of Industrial Training in Kenya and ensure an adequate supply of properly trained manpower at all levels in the industry.
	Technical and Vocational Education and Training Authority (TVETA)	<ul style="list-style-type: none"> • regulate and coordinate TVET training through registration and licensing of institutions and trainers and the development of standards and guidelines
	Kenya Association of Technical Training Institutions (KATTI)	<ul style="list-style-type: none"> • Co-ordinates the activities of Technical Training Institutes
Civil Society Organizations - Advocacy, Public awareness, public participation	Kenya Climate Change Working Group (KCCWG)	<ul style="list-style-type: none"> • A national climate change network bringing together CSOs in Kenya to conduct awareness, capacity building, research and advocacy locally and globally
	Kenya Organization For Environmental Education (KOEED)	<ul style="list-style-type: none"> • Run eco schools programs that promoting ESD • Climate change training
	CARE Kenya	<ul style="list-style-type: none"> • Climate change adaptation programs
	Arid Lands Information Network (ALIN)	<ul style="list-style-type: none"> • Facilitate information and knowledge exchange between extension workers or infomediaries and arid lands communities
	WWF-Kenya	<ul style="list-style-type: none"> • Run ESD Programs
	ADA Consortium	<ul style="list-style-type: none"> • Climate change training and information documentation and dissemination
	Kenya Platform for Climate Governance	<ul style="list-style-type: none"> • A national Climate Change Governance platform of national, county and local level CSOs, and groups to conduct awareness, capacity building, research and advocacy locally and globally.
	Jitokeze Wamama Wafrika	<ul style="list-style-type: none"> • A community based organization in West Pokot County in the North Western region of Kenya. committed to empowering marginalized women and girls in West Pokot Kenya, through training and support on skills needed for establishing sustainable livelihoods
	Indigenous Information Network (IIN)	<ul style="list-style-type: none"> • Working on development issues that affect and impact on Indigenous Peoples and local communities with a main focus on women children youth and other vulnerable members of our communities.

Type of Stakeholder	Stakeholder/Institution	Role in Capacity Development
Faith Based Organizations	Christian Aid in Kenya	<ul style="list-style-type: none"> Addressing climate change through poverty eradication among other initiatives.
	The Anglican Church	<ul style="list-style-type: none"> Demystifying scientific climate change information to a level where ordinary citizens within their liturgies are able to start thinking green and to reflect on the ways in which their faith mandates climate action.
Academic and Research Institutions - Research and Training	University of Nairobi, Institute of Climate Change Adaptation (ICCA)	<ul style="list-style-type: none"> Post Graduate Climate Change Training - MA and PhD programs
	Jomo Kenyatta University of Agriculture and Technology (JKUAT), Institute of Energy and Environmental Technology (IEEC)	<ul style="list-style-type: none"> Technical Training, Research, Data and Information provider
	Strathmore University, Energy Research Centre	<ul style="list-style-type: none"> Energy Research and Training
	Dedan Kimathi University of Science and Technology - Geothermal Training and Research Institute	<ul style="list-style-type: none"> Geothermal Training, Research, Data and Information provider
	Kenyatta University	<ul style="list-style-type: none"> Postgraduate Degree on Climate Change and Sustainability
	Kenya Agricultural and Livestock Research Organization (KALRO)	<ul style="list-style-type: none"> Research, Data collection, information provider for agricultural research
	Kenya Industrial Research Institute (KIRDI)	<ul style="list-style-type: none"> Research, Data collection, information provider for industrial research
	Kenya Forestry Research Institute (KEFRI)	<ul style="list-style-type: none"> Research, Data collection, information provider for forestry research
Private Sector	Kenya Private Sector Alliance (KEPSA)	<ul style="list-style-type: none"> Promote use of appropriate climate friendly technologies
	Kenya Renewable energy Association (KEREAA)	<ul style="list-style-type: none"> Renewable energy
	Kenya Association of Manufacturers (KAM)	<ul style="list-style-type: none"> Kenya's leading representative organization for industry uniting industrialists and serves as a common voice for Kenya's manufacturing sector.
	Kenya Climate Innovation Centre (KCIC)	<ul style="list-style-type: none"> Provides incubation, capacity building services and financing to Kenyan entrepreneurs and new ventures that are developing innovative solutions to address climate change challenges
	Climate Yetu	<ul style="list-style-type: none"> Offers consultancy, training and advisory services to those trying to find solutions to climate and environment problems in Kenya and Africa.

Type of Stakeholder	Stakeholder/Institution	Role in Capacity Development
		•
Media - Public awareness and access to information	Media Council of Kenya (MCK)	<ul style="list-style-type: none"> • Training of media practitioners • Sharing information
	Bloggers Association of Kenya (BAKE)	<ul style="list-style-type: none"> • Training of environmental bloggers • Sharing information
	Media Houses	<ul style="list-style-type: none"> • Information dissemination and public awareness
International Development Partners	ILRI USAID GIZ DANIDA GCF SIDA DFID SNV World Bank	<ul style="list-style-type: none"> • Provide technical, financial and human capacity for implementation of climate change learning projects and programs
UN AGENCIES	UNDP FAO UNESCO UNEP UNICEF UN Women	<ul style="list-style-type: none"> • Provide technical, financial and human capacity for implementation of climate change learning projects and programs •
Youth led organizations	Trees for Goals	<ul style="list-style-type: none"> • Raise awareness on climate change through football
	The Climate Smart Agriculture Youth Network	<ul style="list-style-type: none"> • Create awareness, sensitize and build the productive capacity of young people and People Living With Disabilities (PLWD) on CSA concepts for adaptation, reducing emissions (mitigation) and increasing food productivity in a sustainable manner.
	Child with Nature Organisation	<ul style="list-style-type: none"> • Youth led organization addressing climate change and environmental degradation
	Green Generation Initiative	<ul style="list-style-type: none"> • Environmental Conservation
	African Youth Initiative on Climate Change (AYICC) Kenya	<ul style="list-style-type: none"> • Umbrella youth network of African based youth organizations, university groups, rural youth groups, schools, and like-minded individuals.

6. GAPS

The review of the legal and policy framework, shows that climate change capacity development and learning is a central theme across Kenya's national climate change documents and various climate change and education documents stipulate the integration of climate change into national education curricula at all levels to inculcate climate change awareness among children and youth. In response, numerous climate change actions and initiatives have been undertaken by national and county governments and various stakeholders including development partners, private sector, CSOs among others.

It is noted, that there is lack of a coordination mechanism to guide these efforts, facilitate engagement of relevant stakeholders and make development and implementation of activities across levels of government and sectors more effective. In addition, there is inadequate data and information on resources and support received towards climate change learning and capacity development activities. There is need for systematic monitoring and reporting of climate change capacity building including climate change learning.

With support from the government, development partners, private sector and CSOs, climate change learning initiatives and public awareness campaigns have built capacity of various stakeholders including national and county government officers, media practitioners, technical officers and even young learners. This has provided the much-needed technical skill and knowledge to support implementation of Kenya's NDC and the NAP. In addition, climate change information and knowledge has been made available through various initiatives such as the National Climate Change Resource Centre, the Kenya Climate Change Knowledge Portal, *JotoAfrika* magazine among others.

However numerous challenges still exist including; low level of awareness of climate change and its impacts, insufficient public participation and sensitization; climate change issues not fully integrated into Kenya's formal education system; inadequate capacity for policy makers at national and subnational levels on climate change mainstreaming; lack of clear MRV system and indicators among others. There is need for more outreach and public awareness programs to ensure that climate change information is freely available and in formats that are suitable for all stakeholders especially at community level.

Individual and institutional climate change capacity building is ongoing in Kenya, both at national and sub national level and across sectors however there are financial, technical and human resource constraints to implement, sustain and upscale these efforts. It is evident from the case of Kenya School of Government that after initial support to develop the climate change training program, additional support from other development partners enabled the climate change curriculum to be reviewed and further training undertaken targeting national and county government officers.

Curriculum reforms are ongoing in Kenya and efforts to integrate climate change into education curricula are underway. Climate change has not been fully integrated into curricula and is not offered as a stand-alone subject but as part of environmental studies in Grades 1-6. A guideline to mainstream climate change into education curricula has been developed but not validated by stakeholders. At tertiary and TVET level, very few institutions offer climate change courses. Additionally, there is shortage of human capacity to teach or facilitate climate change and staff in national and county governments have limited knowledge and understanding on climate change impacts and the appropriate response. Appropriate training and supplementary materials have not been developed to augment the teaching and facilitation of climate change.

Equipping young learners with appropriate knowledge, skills and attitudes on climate change is paramount. Young people need to be included in the efforts to combat climate

change as they will be future leaders and decision makers of society and will be handling future negative consequences of this global challenge. Exposure of young learners to climate change issues through formal, non-formal and informal education helps them to appreciate the associated dangers and the necessity of preserving our environment as evidenced by the success of the Kenya Climate Change Art and Essay Competition. It is important to engage them by giving them platforms and spaces to contribute to the conversation and provide solutions to address climate change. Having an informed younger generation on climate change adaptation and mitigation issues is critical in realizing a transformative shift of human practices, as has been demonstrated in recent years with events like “*FridaysForFuture*”; a global youth movement that brings youth to demand for proactive climate action from their leaders.

Learning approaches need to take into consideration digital and distance learning solutions to reach learners in schools and universities, whose education has been disrupted by the current global COVID 19 pandemic. The *Global Education Coalition*³⁴ launched by UNESCO seeks to facilitate inclusive learning opportunities for children and youth during this period of sudden and unprecedented educational disruption and aims to help countries in mobilizing resources and implementing innovative and context-appropriate solutions to provide education remotely, leveraging hi-tech, low-tech and no-tech approaches. One such initiative is *Earth School*³⁵, which provides free, high-quality educational environmental content to help students, parents and teachers around the world who are currently at home. UN CC:Learn, a partnership of more than 30 multilateral organizations supporting countries to design and implement systematic and results oriented climate change learning, also offers a free e-learning platform offering learning materials on many different climate change topics through its One UN Climate Change Training³⁶.

7. CONCLUSIONS

Building and sustaining individual and institutional capacity and providing an enabling environment is fundamental to climate change response both at global and national level. The review indicates that in Kenya has; robust progressive regulatory frameworks including laws, policies and strategies that respond to climate change learning and a wide range of stakeholders involved in supporting, developing and implementing individual and institutional capacity development programs and climate change learning initiatives.

However there needs to be a more coordinated multisectoral, interdisciplinary approach for an effective response. Partnerships are critical in the development of a holistic National Climate Change Learning Strategy as this will provide a systematic strategic country driven process to strengthen climate change learning and skills development to enable appropriate climate change response in Kenya.

The National Climate Change Learning Strategy is a powerful tool that will strengthen individual and institutional capacity building by integrating climate change learning across sectors and governance levels. This will help achieve Kenya’s national and international climate change obligations and support implementation of NCCAP, NDCs, NAPs and SDGs.

As Kenya is currently updating her NDC, the Strategy should inform the update with respect to technical, financial and human capacity building needs. The Strategy will take stock of

³⁴ <https://en.unesco.org/news/unesco-rallies-international-organizations-civil-society-and-private-sector-partners-broad>

³⁵ <https://www.unenvironment.org/news-and-stories/press-release/earth-school-launches-keep-students-connected-nature-time-covid-19>

³⁶ <https://www.uncclearn.org/>

existing initiatives, identify gaps, build on existing efforts, prioritize actions and mobilize targeted resources. This includes the ongoing government response to the COVID 19 pandemic which includes a Response Stimulus Package of KES 850 million to mitigate deforestation and climate change and the recognition of global warming as a threat to Kenya's economy in the 2020/2021 Budget and the need to pursue a green economy.

The development of Kenya's National Climate Change Learning Strategy should be an extensive consultative and engendered participatory process that cuts across a broad range of stakeholders to ensure sustainably and long-term support. This will involve the National and County Government and non-state-actors including development partners private sector, civil society, research and academia and the media. The strategy development process should ensure a holistic approach by including vulnerable groups including Persons with Disability, women, youth, the elderly, marginalized and minority communities.

Priority areas that have emerged from the review that should inform the development of the Learning Strategy include focusing on;

- Strengthening the capacity of National Government institutions and County Government in prioritized sectors to implement the Climate Change Act 2016 through targeted training programs.
- Supporting the process of integration of climate change in all levels of the formal education system including finalization of the mainstreaming guidelines, development of the capacities of teachers and facilitators to teach climate change and development of supplementary teaching and learning materials.
- Enhancing opportunities for non-formal and informal learning by; strengthening the capacity of the existing structures such as the National Climate Change Resource Centre (NCCRC), the Community Education Business and Information Centre (CEBIC) and the Kenya Climate Change Knowledge Portal among others and tapping into indigenous traditional knowledge and intergenerational learning.
- Develop and operationalize an extensive climate change public awareness and engagement strategy that highlights outreach to stakeholders including politicians and media and engages vulnerable groups, including women, older members of society, children, youth, persons with disabilities, and members of minority and marginalized communities.

8. RECOMMENDATIONS

The following recommendations are proposed for consideration during the development of the National Climate Change Learning Strategy (NCCLS).

Coordination

1. The development of the National Climate Change Learning Strategy requires extensive consultation at both levels of government and multi stakeholder and cross sectoral engagement and involvement. A TaskForce to provide not only technical guidance but to oversee the development and implementation of the NCCLS is proposed. The engendered Taskforce will be coordinated by the Climate Change Directorate, Ministry of Environment and Forestry with representation from from National and County Government, private sector, CSOs, academia, media, youth, Persons with Disability and Marginalized Persons.

Governance and Resources

2. Enhance collaboration and partnership with development partners, private sector, civil society and academia to provide financial and technical support for planning, implementation and scaling up of climate change learning programs and initiatives at both national and sub national government level and across sectors.
3. Undertake comprehensive individual and institutional Training Needs Assessment (TNA) to identify skill gaps and develop targeted training programs that are practical, contextual, and gender responsive addressing and strengthening human capacity needs required to enhance implementation of the NDC, NCCAP and NAP.
4. Strengthen the technical, financial and human capacity of institutions already providing climate change training such as TVETs, universities, NGOs, Media Council of Kenya and Kenya School of Government to develop targeted and contextualized climate change training programs to strengthen individual technical and institutional capacity to address climate change.
5. Improve the consolidation of data and information tracking and reporting on funding and activities implemented related to climate change learning programs and initiatives by different stakeholders.
6. Engage with key data providers such as academic and research organizations to collect gender - disaggregated data, undertake research and provide information and innovative approaches that will inform and support the climate change learning integration process.

Curriculum Development

7. Enhance draft guidelines for mainstreaming climate change in curricula at all levels of education to include disaster risk reduction and integration of local and indigenous knowledge. The guidelines should be validated by relevant stakeholders and used alongside other relevant policies in the education sector including Education for Sustainable Development (ESD) to facilitate teacher/facilitator training and contribute to development of relevant locally adaptable and context specific climate change educational materials.

Capacity building of Teachers and Development of Teaching Materials

8. Provide opportunities for specialized accredited climate change training programs for teachers and educators' including TVET trainers to understand and facilitate climate change, sustainable development and disaster risk reduction learning.
9. Consider developing e-learning/online training programs to increase the reach of the programs taking into consideration the current global COVID 19 pandemic. Leverage on already existing climate change e learning expertise such as UN CC:Learn and UNESCO.
10. Design and develop climate change educational and learning support materials, tools and guides that are context specific, age appropriate, gender responsive and locally adaptable and where possible in local languages and disability friendly formats.
11. Climate change learning support materials should also include teacher guides, web-based material, guide books for parents and story books with relevant lessons.

Public awareness, Communication and Stakeholder Involvement

12. Organize climate change public awareness campaigns across sectors and governance levels to promote understanding of climate change leading to enhanced implementation of mitigation and adaptation actions. This includes; political and economic decision makers including policy makers, financial institutions, private sector, education planners, media and other relevant stakeholders.

13. Build on existing online knowledge platforms such as the Kenya Climate Change Knowledge Portal (www.kcckp.go.ke), by adding functionality to include a dedicated online interactive space to engage stakeholders on climate change related capacity building and disseminate relevant information and knowledge, raise awareness and exchange experiences.
14. Broaden the reach and impact of climate change learning efforts by enhancing community awareness through use of resource centres such as the National Climate Change Resource Centre (NCCRC) and Community Education Business and Information Centre (CEBIC) to disseminate information and knowledge, offer climate change training and hold climate change relevant workshops, webinars and expert talks.
15. Use informal and non-formal learning methods such as visits to museum, music and drama festivals, games and sports and linking to the arts through climate change themed competitions such as the Kenya Climate Change Art and Essay Competition. This could involve other forms of artistic impression such as photography, spoken word and use of recycled materials.
16. Tap into indigenous traditional knowledge through informal education networks at community level and integrating them into climate change learning especially for communities most affected by the climate crisis.
17. Organise knowledge exchange visits and provide knowledge sharing opportunities among relevant stakeholders for peer to peer learning and exchange and document and disseminating lessons learnt and best practice, to build and strengthen existing skills and capacities.
18. Use innovative approaches to engage with the youth including; through social media and mobile phones, experiential learning, games, mentoring and developing comprehensive youth-targeted climate change training programs.

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ANNEX 2: UN CC: Learn Climate Change Learning Programme

Terms of Reference

Consultancy for development of a “Background Report on National Climate Change Priorities and Relevant Capacity Development Goals and Initiatives in Kenya”

1. Background

Since 2011, UN CC:Learn has engaged in Climate Change Learning Programmes with developing countries in Africa, Asia and Latin America, with the purpose of strengthening human resources, climate change learning, and skills development to advance the national climate change development agenda in the respective countries. During the 2017-2020 implementation phase, the initiative has expanded, following additional support from the Government of Switzerland, which allows support to be provided to new countries, including Kenya.

Kenya is a leading country in taking action on climate change, having several dedicated national policies (e.g. the National Climate Change Action Plan, the National Determined Contribution (NDC), and the National Adaptation Plan (NAP)), as well as an Education for Sustainable Development (ESD) Policy for the Education Sector. The country is also actively engaged in multiple international initiatives, such as the NAP-Ag and the NAP Readiness Programme “Enhancing Capacity for Planning and Effective Implementation of Climate Change Adaptation in Kenya”, supported by the Food and Agriculture Organization of the United Nations (FAO), the NDC Support Programme and the Low-Emission Climate Resilient Development Project, supported by the United Nations Development Programme (UNDP) as well as the United States Agency for International Development (USAID), and the NDC Partnership.

In this context, UN CC: Learn’s approach will provide added value by contributing to existing processes through an enhanced focus on climate change learning and skills development, supporting the development and implementation of a National Climate Change Learning Strategy aligned with the national NDC and NAP.

The UN CC: Learn project in Kenya will endeavor to facilitate the Climate Change Directorate, Ministry of Environment and Forestry of Kenya with the support of FAO Kenya, through the NAP Readiness Programme to realize the development of the National Climate Change Learning strategy.

2. Objectives of the Background Report

The assignment includes the delivery of a *Background Report on National Climate Change Priorities and Relevant Capacity Development Goals and Initiatives in Kenya*. This is a concise document that features a compilation of national climate change priorities and relevant ongoing and planned capacity development initiatives. It also includes a listing of key organizations which should contribute to the National Climate Change Learning Strategy. The Background Report will inform a multi-sectoral consultation as a basis for the planning and formulation of the Strategy.

The Background Report will take into account the following key aspects:

- Review of relevant national policies, laws, strategies, initiatives, and priorities on climate change learning. Particular attention will be provided to the NDC and NAP.
- Identification of key stakeholders and preparation of a stakeholder analysis.

3. Work Assignments / Scope of Work

Within this context, the Climate Change Directorate, Ministry of Environment and Forestry is seeking the service of a capable consulting team to be engaged to carry out the work, as described above. Working closely with the Technical Team and other key national institutions the consulting firm will undertake the following tasks:

- Conduct a review of existing national policies, programmes and initiatives on climate change and on learning/capacity-development.
- Carry out a review of the status of climate change learning in the country and compile existing learning needs assessment.
- Draw up a list of key stakeholders, including Government Ministries/Agencies, private sector and civil society organizations, education and training institutions, international development partners.
- Prepare a stakeholder analysis highlighting the respective interests in capacity development.
- Prepare the Background Report for review by the Technical Team³⁷.
- Present and discuss the findings at a National Planning Workshop.
- Provide the finalized Background Report after integrating the comments received.
- Support related briefings and reporting to be carried out by the Climate Change Directorate, Ministry of Environment and Forestry of Kenya.

The scope of work aims to:

- Promote a systematic and country-driven approach to climate change learning supporting the implementation of the NDC and NAP of Kenya;
- Ensure that climate change learning is linked to and helps to achieve national climate change adaptation and mitigation objectives;
- Ensure that the UN CC: Learn's support effectively complements and adds values to existing initiatives.

³⁷ The Technical Team will provide initial orientation and information to the consulting team and be responsible for review and providing comments on all deliverables.