



Government of Zimbabwe

*Ministry of Environment, Climate,
Tourism and Hospitality Industry*

Assessment of Learning Needs
and Capacity to Deliver for the
National Climate Change
Learning Strategy
January 2020

1. Capacity to deliver

In order to fully address climate change learning needs within the Zimbabwean development context and framework, there are some important considerations that should be given to the country's priority and focus areas. These are detailed in the various national documents and plans which include the National Climate Policy, National Climate change Response Strategy, the Nationally Determined Contributions, as well as a the Comprehensive Stakeholder Needs Assessment as guided by the National Priority Areas.

1.2 Capacity building needs for priority areas

Climate Learning is an important tool to empowering the country's citizens. It is central to promoting climate-sensitive development in country's broad socio-economic sectors. Learning, education and training packages for climate change also need to be sensitive to gender, youth, children and other vulnerable members of society. The country's formal education sector is increasingly developing and revising curricula to comprehensively cover the knowledge of climate change. In this regard, the Government of Zimbabwe in the National Climate Policy of 2017 noted the following needs and it committed to:

- Develop curricula that mainstreams climate change knowledge in the context of specific learning content or disciplines for primary, secondary and tertiary level education and scale up child's right to education to learn and protect the environment. This has already began for the primary and secondary curricula and some universities and colleges have also began coming up with curricula that incorporates climate change issues.
- Incorporate climate knowledge in the development of climate-resilient infrastructure and formulation of climate-sensitive development policies and legislation.
- Provide training to development practitioners in every local authority responsible for climate sensitive planning, budgeting, public awareness and development.
- Establish mechanisms for training of Government officials, including legislators and judiciary on climate science.
- Promote online climate change education and training.
- Public Awareness and Communication increasing public awareness on climate change and its effects can empower the people to take appropriate climate-sensitive decisions and actions.

A climate conscious society is necessary to increase participation in climate interventions, which would promote the successful policy adoption and implementation of climate mitigation and adaptation projects in the country. The National Climate Policy 2017 also stated that the Government of Zimbabwe will ensure:

- Upscale provision of climate extension services particularly to farming and rural communities largely relying on climate-sensitive livelihoods.
- Support the development and dissemination of simplified meteorological and agrometeorological information for the benefit of farmers, women and people living with disabilities.
- Support formal and informal learning institutions and activities that are designed to raise awareness and teach new values, knowledge and skills, in order to encourage more climate responsible behaviour.
- Put mechanisms for ensuring that media practitioners are educated and trained to enhance their knowledge and skills in communicating climate information to the public.
- Design and strengthen community-based climate information management systems.

The Government of Zimbabwe recognises the utility of IKS in complementing mainstream climate knowledge and practice. The utilisation of indigenous climate knowledge ranges from its application in climate change impact identification; as a decision support tool in agricultural planning and cropping choices; development of local early warning systems against climatic vagaries; coping with extreme weather events, drought and dry spells; to flood mitigation strategies by indigenous communities practising them. to be able to achieve this there is need to:

- Strengthen the documentation of IKS to complement scientific knowledge for climate change forecasting and early warning systems through research institutions.
- Improve the protection and respect of the rights of children, communities and vulnerable groups and their indigenous knowledge systems as a pre-requisite for sustainable development in the context of climate change.
- Recognise the distinct and crucial contribution of indigenous knowledge in diverse local economies towards poverty reduction and sustainable development.
- Promote mainstreaming of IKS as one of the cornerstones of all climate change adaptation and mitigation initiatives.
- Assist to establish synergies between indigenous and scientific knowledge to enable communities to effectively deal with the climate change challenges. Ensure that adaptation and mitigation measures and strategies take into account the diversity of the agricultural systems, IKS and possible co-benefits including socio-economic, environmental and gender aspects.
- Strengthen gender equality and social inclusion to ensure equitable realisation of IKS benefits.
- Identify and promote indigenous technologies, skills and practices relevant in responding to climate change at local levels.
- Strengthen the Civil Protection Department and other institutions to integrate local knowledge in the development of early warning systems in order to enhance their utilisation by communities at risk of climatic events.
- Support co-production of climate information by the Meteorological Services Department and other institutions and indigenous communities to up-scale provision and utilisation of location specific climate information products.

The Third National Communication identified a number of gaps, constraints and related needs in relation to education, awareness, public participation and communication. These components are very essential to Climate Change Learning. The analysis looked at the needs from the formal education systems especially.

Education Gaps

Primary and Secondary

The establishment of climate change parameters in Zimbabwe in relation to the education system:

- Conducting curriculum audits in terms of the content and process of climate change.
- Convening of national workshops to fully integrate climate change into the school curriculum.
- Conducting in-service training workshops for educators on the integrated climate change curriculum.
- Monitoring and evaluation of the teaching and learning of climate change.

Tertiary level

The tertiary institutions are divided into two groups namely technical colleges and universities. Under technical colleges the following needs were identified.

Conducting a needs assessment:

- Preparation of draft IEC and improved curriculum materials based on the findings of the needs assessment
- Reviewing the content of the draft materials for quality and consistency especially in the definition of terms and the understanding of concepts related to climate change
- Pre-testing the materials for suitability in terms of use for training and teaching on climate change
- Editing the draft manuals after a thorough evaluation of the content by educational and climate change curriculum development experts has been done
- Printing and distributing these materials to the teacher and agricultural training colleges for use by new graduates for their certificate programmes
- Production of a teacher's guide to these materials for use in the classroom.

Universities

There is lack of a coherent or integrated curriculum on climate change in all the universities and thus the following gaps need to be addressed:

- Conducting a situational analysis of the courses offered on climate change by all universities in the country

- Standardizing the teaching of courses throughout the country's universities much in the same way as suggested under the section on teacher and agricultural training colleges.

Constraints

- Lack of enough qualified personnel in teachers', technical and agricultural colleges
- Inadequate and outdated teaching equipment in colleges
- Non-availability of financial resources to carry out the necessary training of trainers

2. Stakeholder Needs Assessment

The success of climate change learning in Zimbabwe is premised on the engagement of stakeholders as they play an essential role in achieving sustainability and success of It is of paramount importance to ensure increase in the capacity, skills and competency the various designated learning institutions on issues of climate change and constantly upgrading them to be better poised to provide better training, knowledge transfer and awareness creation. Identifying the key stakeholders is essential and central to the success of the Learning Strategy as the stakeholders play a key role in addressing the technical and financial capacity gaps of implementing institutions and the learning needs of the different groups. Some of the identified stakeholders include key government departments, institutions, and organisations involved in policy making, industry, education and community engagement. These were put into the following categories (though it is not exhaustive):

- The school/academic system includes all three levels of the educational system primary, secondary and tertiary.
- Non-academic National Training Institutions
- Public Entities including Government Ministries, Parastatals, Legislators, etc
- Business and the Private Sector
- Civil Society Organisations, Community Based Organisations and Non-Governmental Organisations,
- Traditional Leadership and Religious Organisations,
- The Media (print and electronic)
- Health Institution and Professional Bodies,

Table 1 below shows some of the broad needs that were identified as common across the different stakeholder groups.

Table 1: Stakeholder Needs Assessment

Stakeholder Group	Capacity Building Need Assessment
<p>Policy makers / regulatory and enforcement institutions / local government practitioners</p>	<ul style="list-style-type: none"> • Training on the effects of climate change on development and how to mainstream climate change into development planning at national and sub-national levels • Set up climate change focal persons for effective climate change communication to all stakeholders • Strengthen climate negotiation and resource mobilisation skills through training and experience sharing • Appropriate, reliable and up to date data to inform decision making, strategy development, planning, and implementation. • Research information on locally appropriate climate change response interventions for uptake by communities. • Relevant information and resources to show evidence of the relationship between climate change and sustainable development in all sectors of the economy • Need to an interface for scientific and indigenous knowledge as a means of tapping, analysing and documenting how communities are working to mitigate and adapt to adverse climate impacts. • Mobilization and access to funds to support climate change initiatives at national and sub-national levels • Development of appropriate MRV systems for mitigation and adaptation initiatives. • Insufficient capacity for grain storage facilities • Insufficient support services for index insurance • Incoherent institutional frameworks (policies) to coordinate disaster risk reduction •
<p>Academia (Formal All levels)</p>	<ul style="list-style-type: none"> • Mainstream climate change into the educational curricular at all levels • Structure relevant course content by identifying thematic/learning areas. • Ensure regular in-service training for managers of educational system, lecturers/teachers to keep them abreast with the emerging climate change issues. • Availability of up to date and reliable data from research • Enhance multi-sectoral, multi-stakeholder approach to research on climate change

Stakeholder Group	Capacity Building Need Assessment
	<ul style="list-style-type: none"> • Training on new and emerging methods and concepts of climate change learning for education planners and practitioners • Funding to support research on the various aspects of Climate Change in Zimbabwe. • Enhance the Teaching and Learning of climate change at all levels of formal education
National Training Institutions (non-formal/ non-academic) e.g Public Service Training Centres,	<ul style="list-style-type: none"> • Access to technical training materials to enhance capacity of trainers • Continuous access to funds for training and education • Develop training and learning methods for continuous professional development for different sectoral professionals and well as non-formal learning. • Training on climate sensitive crop and livestock development and farming practices •
Traditional Leaders and Religious Organisations	<ul style="list-style-type: none"> • Ensure that climate science information is package into simple and easy-to-understand messages that will reach the wider public including translation into vernacular. • Strengthen engagements and involvement of the local communities in climate change initiatives from planning and development through to implementation to foster ownership and sustainability of these initiatives. • Effective and adequate platforms for sharing information on climate change • Development of appropriate and up-to-date early warning systems that incorporates indigenous knowledge • Increase access to training especially for women and youths • Basic and easy-to-understand information on climate- smart farming methods • Advocacy for Climate resilient infrastructure Development
Media	<ul style="list-style-type: none"> • Training media personnel on good environmental reporting including climate change issues • Carry out regular information workshop on the decisions of the Conferences of the Parties and other key climate change agreements and milestones both at the international level and national levels • Access to critical information on climate change so as to keep them abreast with the trends and new emerging issues.

Stakeholder Group	Capacity Building Need Assessment
	<ul style="list-style-type: none"> • Media climate change awareness seminars in all regions for all media houses both print and electronic • Engage media personnel in all climate change forums and national/ international conferences
Business and Industry	<ul style="list-style-type: none"> • Information on how climate change affects business and profit • Capacity enhancement training for business leaders • Information on climate change related business opportunities • Structure attractive and appropriate incentives that attract the private sector investment into climate change related initiatives, and business opportunities • Promotion of climate-smart energy solutions through evidence based research for industry. • Climate change awareness seminars for businesses and industry players
Non-Governmental Organisations / Civil Society Organisation	<ul style="list-style-type: none"> • Training and capacity building on issues of climate change mitigation and adaptation • Training on up-to-date trends in climate change • Development and exchange of information, educational and communication materials and equipment for public awareness on Climate Change • Sharpen advocacy techniques to ensure effectiveness at the national and sub-national levels • Strengthen institutional capacity for providing timely early warning systems
Health Institutions and Professional Bodies e.g Environmental Health Profession Council, Zimbabwe Medical Association, Nurses Council	<ul style="list-style-type: none"> • Access to funds for research into climate related health risks • Training on the effects of climate change on health

3. Outcomes of the Stakeholder assessment

A number of stakeholders were engaged to share insights on some of the capacity and learning needs that they have in their various sectors. There were a number of sectors interviewed as part of the assessment and an analysis was done of the needs.

3.1 Identification of Institutional Capacity to Deliver Learning

Identified Knowledge, Competencies and Skills Needs

Action24

- Gender and development
- Media and information
- Policy expert

African Youths Initiative on Climate Change Zimbabwe

- Capacity Building on Climate variability among communities

Bindura University of Science Education (BUSE)

- Research article writing; grand proposal writing,

Forestry Commission

- Teaching skills
- Knowledge of Carbon tracking and accounting under climate change
- Extension skills
- Knowledge in vulnerability assessments and adaptive decision making
- Modelling techniques
- Mitigation project proposal development
- Estimate emissions reduction potential
- Climate change vulnerability assessments
- GIS and Remote sensing
- Forest Inventory
- MRV
- Carbon tracking and accounting

Ministry of Lands Agriculture water and rural resettlement

- Diploma, degree
- Training has been project focused, therefore targeting specific districts and staff,
- Inadequate Budgetary support

Mkoba Teachers College.

- Knowledge of Climate Change causes (human & natural), Climate Change response (mitigation and adaptation)
- Infrastructural reorientation skills
- Basic carbon sequestration knowledge
- Simple water harvesting skills
- Climate Change-related project planning
- Climate Change project and programme Implementation, Monitoring and Evaluation

Mlezu College of Agriculture

- Trainings of Trainers pertaining to Climate Change
- Training junior staff
- Training the community and Students

NUST

- Expertise in climate change science; Training in REDD
- Research skills in climate science; PhD qualifications

Parliament of Zimbabwe (POZ)

- GHG Emissions, Abatement (mitigation Specialist)
- Adaptation
- Gender and Climate Change
- Climate Finance Specialist

3.2 Specific human resource capacity gaps

African Youths Initiative on Climate Change Zimbabwe

- Insufficient funding/ lack of incentives in most cases, projects and initiatives are privately funded, or sometimes from the staff's own pockets. As a result some of the work needing to be done takes time

Bindura University of Science Education (BUSE)

- Some members lack creativeness and interest on CC issues.
- Others lack financial support to actively participate in Climate Change information dissemination

Forestry Commission

- Academic training of staff not matching performance needs
- Staff lacks knowledge and skills

Mkoba Teachers College

- Lack of awareness of more sustainable options is hampering the progress.
- The professional training backgrounds of the majority of the staff lack the much-needed climate change mitigation and adaptation background which is currently the order of the day.

Mlezu College of Agriculture

- Staff lacks knowledge and skills affecting capacity to deliver climate change related learning to students there by affecting the community engagement and outreach efforts.

NUST

- Insufficient number of staff in the area of climate change
- Limited resources for staff to capacitate themselves on latest climate change issues; Institute does not have enough resources for trainings and basic staff development

Parliament of Zimbabwe (POZ)

- Insufficient number of staff
- Academic training of staff not matching performance needs
- Lack of incentives for staff to upgrade and apply skills

3.3 Other areas of interest that should be considered in the Learning Strategy

African Youths Initiative on Climate Change Zimbabwe

- Informal learning engagements, where we engage with the communities in collaborative approach learning with them as they learn more about our Climate Change Action agenda.
- The level of influence from these engagements, the ones are most reciprocal and effective among these.
- Recommendations – widening the scope from the lessons we have learnt that a collaborative approach is the effective way to learn and teach at the same time so as to develop more receptive and responsible participants.

Bindura University of Science Education (BUSE)

- Climate Change and Food security
- Climate modelling

Ministry of Lands Agriculture water and rural resettlement

- Mainstreaming weather and climate information into extension

Mkoba Teachers College

- There is need to explore if issues pertaining to indigenous knowledge systems (IKS) are practically given any value by the organisation e.g. through the recognition of indigenous climate knowledge (ICK) – in this case it's a NO because IKS is only verbally emphasised but not practically applied. It is thus suggested that institutions of higher learning should be pathfinders and pacesetters in the compilation and implementation of IKS through research on local IKS and finding the niche to apply it.

Mlezu College of Agriculture

- Inventory pertaining to available Training materials and Training Material needs.

Parliament of Zimbabwe (POZ)

- There is need for dissemination of information of to change agents such as teachers, lecturers from the lower education levels to tertiary level as they have influence over knowledge transfer which leads to behavior change.
- Traditional Leaders have an important role as they interface daily with the climate sensitive sectors of the country and economy especially the arid areas, flood and cyclone prone areas so there is need to enhance their capacity as they are the first line of response in times of climate related disasters and the major agents of change in communities.
- Engagement of the extension workers be in in agriculture or health is important as it will help reduce the transaction cost of information and knowledge transfer, so there is serious need to consider the integration of this group of people in the role out of the Learning strategy.

The stakeholders prioritized the some cross-cutting climate change topics and their relevance for their institutions and as a priority for staff learning.

Table xxx Cross cutting climate change topics including some that the stakeholders felt needed to be added.

Learning Priority (3=High, 2=Medium, 1= Low)										
Topic	Institution									
	Action 24	AYIoC C - Zim	BUSE	Forestry Comm	Forestr y	Min. of LAW&	Mkoba TC	Mlezu C of Agric	NUST	POZ
Adaptive and Climate-Resilient Decision-making	3	3	2	3	1	3	3	3	3	3
Climate Change and Disaster Risk Management	3	3	2	3	1	3	2	3	3	3
Green Technologies/Renewable Energies	3	2	2	3	1	3	3	3	3	3
Social Dimensions of Climate Change	3	3	2	3	1	3	3	3	2	3
Fundamentals of Climate Change Science	3	3	2	1	2	3	3	3	2	3
Vulnerability and Adaptive Capacity Assessment	2	3	3	3	1	3	1	3	3	3
Green House Gas Inventory Development	1	3	3	3	1	3	2	3	3	3
Mitigation and Emission Reduction Strategies/NAMAs	3	3	2	3	1	3	1	3	3	3
Green Economy, Growth and Jobs	3	2	3	3	1	3	1	3	3	3
International Climate Change Funding	2	3	3	3	1	3	1	3	3	3
International Climate Change Law and Negotiations	2	3	3	3	1	3	1	3	3	3
Development of a Climate Investment Plan	2	1	2	3	1	3	3	3	3	3
Gender and Climate Change	3	2	2	3	1	3	2	3	2	3
Climate Change and Population Dynamics	3	1	2	3	1	3	2	3	3	2
Carbon Markets and CDM	1	2	3	3	1	3	1	3	3	3
Predicting Climate Change Variability	2	2	3	1	1	3	1	3	3	3
REDD			2	3	1	3	2	3	3	2
National climate change politics							3			
The role of indigenous knowledge in CC adaptation discourse							3			
National climate change funding							2			

Number of staff indicated to potentially benefit from the learning of the prioritized cross cutting climate change topics for learning

Table xxx Number of Employees of the different stakeholders that could benefit from the cross cutting learning areas.

Number of staff									
Topic	Institution								
	Action 24	AYIoC C - Zim	BUSE	Forestry Comm	Min. of LAW&	Mkoba TC	Mlezu C of	NUST	POZ
Adaptive and Climate-Resilient Decision-making	4	10	360	150	4500	40	74	18	2
Climate Change and Disaster Risk Management	5	10	360	50	4500	45	74	18	
Green Technologies/Renewable Energies	5	10	360	150	4500	45	74	18	
Social Dimensions of Climate Change	4	10	390	150	4500	63	74	14	
Fundamentals of Climate Change Science	4	10	360	300	4500	63	74	14	6
Vulnerability and Adaptive Capacity Assessment	3	10	480	150	4500	10	74	18	2
Green House Gas Inventory Development	1	10	540	50	4500	5	74	18	
Mitigation and Emission Reduction Strategies/NAMAs	4	10	360	150	4500	5	74	18	
Green Economy, Growth and Jobs	5	10	480	150	4500	5	74	18	
International Climate Change Funding	3	10	540	100	4500	8	74	18	
International Climate Change Law and Negotiations	3	10	540	20	4500	8	74	18	
Development of a Climate Investment Plan	3	10	390	50	4500	40	74	18	
Gender and Climate Change	6	10	360	150	4500	63	74	14	
Climate Change and Population Dynamics	4	10	360	150	4500	10	74	18	
Carbon Markets and CDM	2	10	540	150	4500	8	74	18	
Predicting Climate Change Variability	2	10	480	50	4500	10	74	18	
REDD			360	150	4500	20	74	18	
National climate change politics						63			
The role of indigenous knowledge in CC adaptation discourse						63			
National climate change funding						20			

There were also indications from the stakeholders of the areas that they are already offering and some that they feel they could offer in the future as part of the climate change learning strategy. Table xx below shows the cross cutting climate change topics

Table xxx Cross Cutting Climate Change Topics already offer or that could potentially be offered.

Already Offered/Future Interest													
Topic	Institution												
	Action 24	AYIoCC- Zim		BUSE		Mlezu College of Agriculture		NUST		Parliament of Zimbabwe		Development Reality Institute	
	Already offered	Already offered	Future Interest	Already offered	Future Interest	Already offered	Future Interest	Already offered	Future Interest	Already offered	Future Interest	Already offered	Future Interest
Adaptive and Climate-Resilient Decision-making	Yes	Yes		Yes		Yes	Yes	No	Yes	Yes		Yes	Yes
Climate Change and Disaster Risk Management	Yes	Yes		Yes	Yes	No	Yes	Yes	Yes	Yes		Yes	Yes
Green Technologies/Renewable Energies	Yes	Yes		Yes	Yes	A bit	Yes	No	Yes	Yes		Yes	Yes
Social Dimensions of Climate Change	Yes	Yes		Yes	Yes	No	Yes	Yes	Yes	Yes		Yes	Yes
Fundamentals of Climate Change Science	Yes	Yes		Yes		Yes	Yes	Yes	Yes	Yes		Yes	Yes
Vulnerability and Adaptive Capacity Assessment	Yes	Yes		Yes	Yes	Yes	Yes	Yes	Yes	Yes		Yes	Yes
Green House Gas Inventory Development	No	Yes		No	Yes	No	Yes	No	Yes	No	No	No	Yes
Mitigation and Emission Reduction Strategies/NAMAs	Yes	Yes		Yes	Yes	Yes	Yes	No	Yes	Yes		No	Yes
Green Economy, Growth and Jobs	Yes	Yes			Yes	No	Yes	No	Yes	No		Yes	Yes
International Climate Change Funding	Yes	Yes			Yes	No	Yes	No	Yes	yes		No	Yes
International Climate Change Law and Negotiations	Yes	Yes			Yes	No	Yes	No	Yes	Yes		No	Yes
Development of a Climate Investment Plan	Yes		Yes		Yes	No	Yes	No	Yes	No	Yes	No	Yes
Gender and Climate Change	Yes		Yes	Yes	Yes	No	Yes	Yes	Yes			No	Yes
Climate Change and Population Dynamics	Yes	Yes		Yes	Yes	No	Yes	No	Yes	No	Yes	No	Yes
Carbon Markets and CDM	No		Yes		Yes	No	Yes	No	Yes	No		No	Yes
Predicting Climate Change Variability	No	Yes		Yes		No	Yes	No	Yes	Yes		No	Yes
REDD	Yes			No	Yes			No	Yes	No		Yes	Yes