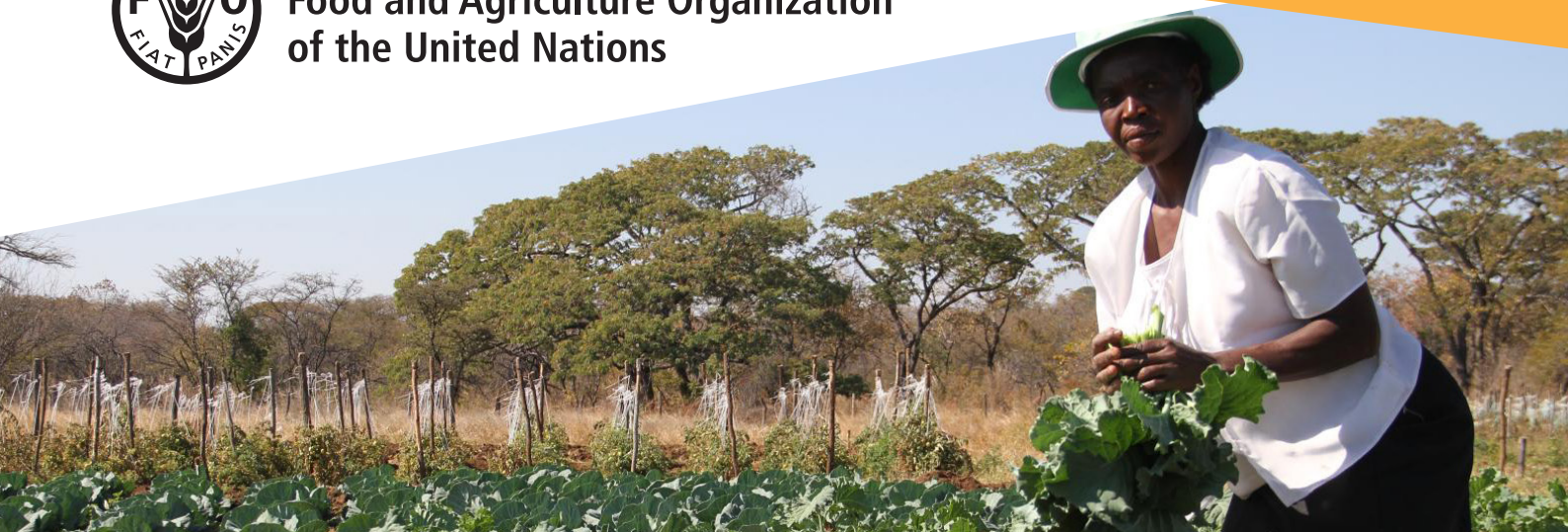
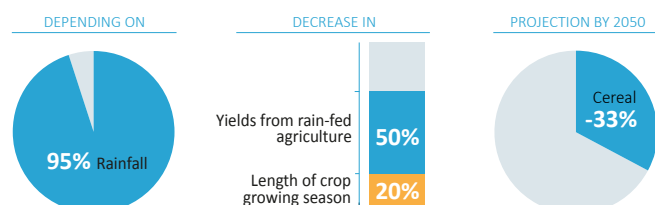




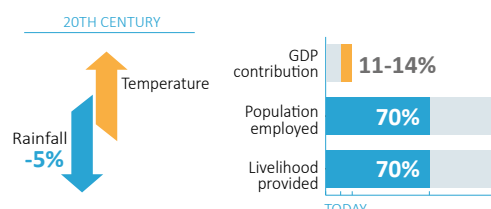
From ambition to action: good practices in implementing agricultural components of the Nationally Determined Contributions

Developing a climate-smart agriculture manual for university
and professional level agricultural education in Zimbabwe

Agriculture in Sub-Saharan Africa



Agriculture in Zimbabwe



SECTORS INVOLVED



The impacts of climate change on agricultural production systems in Zimbabwe are threatening food and nutrition security throughout the country. Extreme weather events such as droughts have become more frequent and intense, causing heat and water stress to natural ecosystems, crops and livestock.

With the overall goal to improve agricultural productivity and enhance national food security, Zimbabwe has set climate change adaptation in the agriculture sectors as a priority in its Nationally Determined Contribution (NDC).

To achieve this goal, Zimbabwe is focusing its efforts on improved irrigation, the promotion of resilient cropping and livestock practices, agroforestry-based adaptation and climate-smart agriculture (CSA), which can also bring mitigation co-benefits.

NDC COMMITMENT/GOAL

Zimbabwe commits to promoting adapted crop and livestock development and climate-smart agricultural practices through the following interventions:

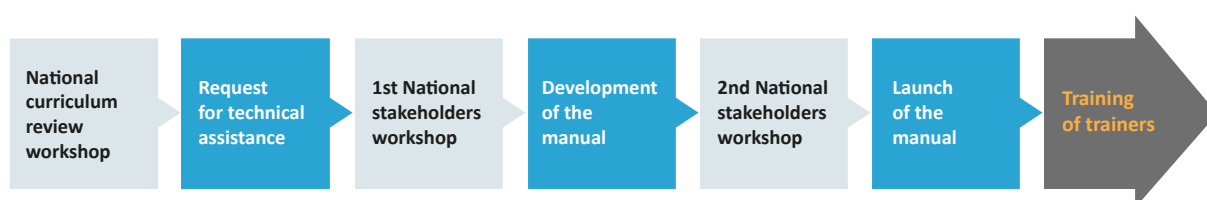
- ▶ Strengthening capacities to generate new forms of empirical knowledge, technologies (including conservation agriculture) and agricultural support services that meet climate challenges.
- ▶ Promoting the use of indigenous and scientific knowledge on drought tolerant crop types and varieties and indigenous livestock that are resilient to changes in temperature and rainfall.
- ▶ Developing frameworks for sustainable intensification and commercialization of agriculture at different scales across agro-ecological zones.

Linking with the overall NDC implementation

The promotion of CSA practices is anchored in the adaptation component of Zimbabwe's NDC. A CSA Manual, developed by the country for university and professional level agricultural education in Zimbabwe, directly contributes to the achievement of this commitment, while also highlighting the potential of mitigation co-benefits. In the medium and long-term, the CSA Manual is expected to:

- ▶ enhance students' active participation in promoting climate-smart agriculture and in the transfer of climate-smart technologies to smallholder farmers across the country;
- ▶ better equip future extension workers, agriculture entrepreneurs and smallholder farmers to increase agricultural productivity and incomes, build resilience to climate change and reduce or remove greenhouse gases where possible; and
- ▶ spread the use of climate-smart agricultural practices such as intercropping with legumes, mulching, crop rotation, greater crop diversity and improved storage and processing.

Process



A presentation by the Green Impact Trust during a national curriculum review workshop for agricultural colleges, organized and hosted by the Ministry of Lands, Agriculture, Water, Climate and Rural Resettlement (MoLAWCRR) Department of Agriculture Education and Farmer Training (DAEFT) in July 2015, revealed major gaps in the curriculum in terms of climate-smart agricultural theories and practices.

On this basis, in November 2015, the Government of Zimbabwe submitted a request for technical assistance to the United Nations Framework Convention on Climate Change (UNFCCC) Climate Technology Centre and Network (CTCN) on behalf of Green Impact Trust. The request was to develop a climate-smart agriculture

manual for university and professional level agricultural education in Zimbabwe. Based on a literature review and consultations with national stakeholders, key topics and themes were identified, reflecting the country's priorities in achieving climate resilience and mitigation in the agriculture sectors.

Subsequently, the lead implementer contracted local, regional and international experts to develop chapters for the CSA Manual. Upon validation by all stakeholders and the Government of Zimbabwe, the CSA Manual was launched in November 2017 at the 23rd Conference of the Parties to the UNFCCC, and in June 2018 during the National Water Resources, Infrastructure and Investment Conference in Zimbabwe.

Key stakeholders

- ▶ Climate Technology Center and Network (CTCN) of the United Nations Framework Convention on Climate Change (UNFCCC) - provider of technical assistance.
- ▶ Green Impact Trust - proponent to the request and core-custodian of the CSA Manual.
- ▶ Ministry of Lands, Agriculture, Water, Climate and Rural Resettlement (MoLAWCRR) - core-custodian of the CSA Manual.
- ▶ Climate Change Management Department - CTCN National Designated Entity (NDE) in Zimbabwe.
- ▶ Department of Agriculture Education and Farmer Training.
- ▶ Department for International Development (DFID) VUNA programme - provider of additional technical assistance.
- ▶ Other key stakeholders include: private sector actors, NGOs, development partners, academia, research institutions, farmers groups, the media, principals of agricultural colleges, extension officers, and authors of the CSA Manual.



Outcome

Chapters in the CSA Manual were categorized into the following:

1. Enabling Environment	2. Practices	3. Systems
Institutional arrangements and policy engagement	Soil and water management	Landscape management
	Crop production	
Climate information services	Livestock and rangeland management	
Weather index-based insurance as a CSA strategy	Sustainable forest management and agroforestry	
	Fisheries and aquaculture	
Gender and social inclusion	Energy management in agriculture	
	Climate-smart agriculture in Zimbabwe - the way forward	

Implementation and long-term sustainability strategy

Currently, the CSA Manual is being implemented through two Green Impact Trust self-financed programmes with the aim of ensuring sustainability:

- ▶ The Students Agricultural Innovation and Development (SAID) programme, which targets students in agricultural colleges across the country and aims to develop CSA innovations in agricultural communities.
- ▶ The Increasing Climate Resilience in Farming (ICRIF) programme, which targets vulnerable and emerging

rural farming households in Zimbabwe by building farmers' institutional capacity to provide essential services for production, marketing and business development to their members.

In addition, the Government is in the process of developing a climate-smart agriculture framework to strengthen the promotion of climate-smart agricultural practices.

Next steps

- ▶ Develop a CSA policy and strategy or framework (ongoing activity).
- ▶ Mobilize funding for ICRIF and SAID, Green Impact Trust flagship programmes.
- ▶ Develop CSA demonstration centers in all government-run agricultural colleges across the country.
- ▶ Develop CSA demonstration centers in traditional chief's homesteads.
- ▶ Develop a climate-smart village as a model for rural development.

Success factors and lessons learned

Why is this activity good practice?

- ▶ Agricultural colleges produce over 70 percent of Zimbabwe's agriculture extension and advisory services. By mainstreaming the CSA Manual in education, specifically targeting agricultural colleges, this workforce will have an understanding of theories and practices related to climate-smart agriculture.
- ▶ The CSA Manual was developed through an inclusive

process that brought together local, regional and international experts who contributed to the publication. Men and women participated equally and took up the roles of facilitator or trainer at the Training of Trainers workshop. A chapter of the CSA Manual is dedicated to gender and social inclusion and highlights the fact that "solutions developed to support women farmers will need to consider access to resources, assets and decision-making at the household level".



Success factors

- ▶ The designation of the Ministry of Lands, Agriculture, Water, Climate and Rural Resettlement as the UNFCCC CTCN National Designated Entity was commendable as it ensured that international standards in delivery and the implementation of nationally-focused products would be observed.
- ▶ The technical assistance provided an opportunity for updates and cross-learning among local, regional and international experts on climate change mitigation and adaptation.
- ▶ At the national level, multiple policy documents such as the Zimbabwe Agenda for Sustainable Socio-Economic Transformation (ZIMASSET), the National Climate Policy, the National Climate Change Response Strategy, and Zimbabwe's Nationally Determined Contribution, highlight the need to enhance teaching and learning about climate change at all levels of education (formal and informal). This priority was clearly addressed through the development of the CSA Manual and the subsequent training of trainers.

Lessons learned

The development of the CSA Manual is a good case of multi-stakeholder collaboration for climate action at the national level.

The Zimbabwean government was fully involved in each of the activities, including liaison with the staff in the different colleges of agriculture. Additionally, the collaboration between the Climate Change Management

Department and the Department of Agriculture Education and Farmer Training was effective in breaking silos in addressing national challenges.

The principals and lecturers of the agricultural colleges fully supported every step of the process, which was critical, as the colleges are the primary entry points for implementation of the CSA Manual through the training of students and agricultural extension workers.

The assistance provided by the communications team at CTCN to promote the Training of Trainers gave more visibility to the event as it allowed participants from different countries to follow the work in Zimbabwe.

Recommendations to other countries

- ▶ It is essential to link the effects of climate change to economic growth and development. For example, in Zimbabwe, agriculture is the backbone of the economy and is responsible for the survival of 70 percent of the country's population, located in rural areas. Agriculture is the most climate sensitive sector in the economy and a great contributor to the country's GDP. Understanding these contextual elements helped in the formulation and implementation of an activity that was appropriate and effective in meeting the country's needs.
- ▶ Public-private partnerships are a sustainable strategy towards achieving national priorities. For example, the collaboration between Green Impact Trust and the Zimbabwean government resulted in the development of a CSA Manual that is inclusive, country-driven and country-owned.

KEY RESOURCES

- ▶ Developing a Climate-Smart Agriculture Manual for Agriculture Education in Zimbabwe
<https://www.ctc-n.org/technical-assistance/projects/developing-climate-smart-agriculture-manual-agriculture-education>
- ▶ Launch of the Climate-Smart Agriculture Manual for University and Professional Level Agriculture Education in Zimbabwe
<https://www.herald.co.zw/president-reassures-investors-as-water-infrastructure-indaba-opens/>
- ▶ Social media site and engagement in relation to the launch of the CSA Manual
<https://twitter.com/GreenImpactt/status/1004352381302312960>
- ▶ Climate-Smart Agriculture Manual for Agriculture Education in Zimbabwe
https://www.ctc-n.org/system/files/dossier/3b/climate-smart_agriculture_manual_final.pdf
- ▶ Zimbabwe's Nationally Determined Contribution
<http://www4.unfccc.int/ndcregistry/PublishedDocuments/Zimbabwe%20First/Zimbabwe%20First%20NDC.pdf>

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