

# Report of the Validation Workshop of the Climate-Smart Agriculture Manual for Agricultural Education in Zimbabwe

21 April 2017

Cresta Oasis Hotel,  
Harare, Zimbabwe

## Authors

Todd Ngara, PhD  
Raymond E. Zvavanyange  
Desire Nemashakwe  
Elisha N. Moyo  
Francis B. Vengai  
Lovemore Vambe  
Kudzai Ndidzano  
Manyewu Mutamba, PhD  
Sydney Zharare

## Organised by Partners



## **CITATION**

Ngara, T., Zvavanyange, R.E., Nemashakwe, D., Moyo, E.N., Vengai, F.B., Vambe, L., Ndidzano, K., Mutamba, M., and Zharare, S. (2017). *Report of the Validation Workshop of the Climate-Smart Agriculture Manual for Agriculture Education in Zimbabwe, 21 April 2017, Cresta Oasis Hotel, Harare: Climate Technology Centre and Network.*

Proper citation is requested.

## **Contact:**

Todd Ngara, Ph.D., Senior Researcher, Technical University of Denmark, DTU – Department of Management Engineering, UN City, Marmorvej 51, 2100 Copenhagen Ø, Denmark , Email: [todn@dtu.dk](mailto:todn@dtu.dk) ; Telephone (Direct): +45 4533 5291 Website: [www.wunepdtu.org](http://www.wunepdtu.org)

## **Disclaimer**

Opinions stated herein are those of the author (s) and should not be taken to reflect the policies or opinions of Climate Technology Centre and Network, United Nations Environment Programme – Technical University of Denmark (UNEP – DTU Partnership), Donor Agencies, or its Partners. The revealed identities in the report do not in any way seek to undermine the authority and competencies of the individuals, institutions, and Government of Zimbabwe.

## **EXECUTIVE SUMMARY**

The Validation Workshop for the draft Climate-Smart Agriculture Manual brought together senior technocrats in the Government of Zimbabwe Ministries: Agriculture, Mechanization and Irrigation Development and Environment, Water and Climate, with other approved experts to give the final input to the draft Manual.

The work funded by the Climate Technology Centre and Network (CTCN) and with the lead implementer, United Nations Environment Programme – Technical University of Denmark, has brought to the forefront issues that concern agriculture and climate change to the attention of all stakeholders in Zimbabwe.

The draft Manual was approved (with amendments) by the senior technocrats in the Government of Zimbabwe and stakeholders represented. What follows next, is the official launch of the Climate-Smart Agriculture Manual for Agricultural Education in Zimbabwe, followed by the Training of Trainers and concluding work to the year-long Technical Assistance to Zimbabwe.

## ABOUT THE AUTHORS

**Todd Ngara, PhD.**, is a Senior Researcher at the United Nations Environment Programme - Technical University of Denmark (UNEP – DTU). He represents the Lead Implementer in the UNEP – DTU Partnership on Technical Assistance provided to Zimbabwe by the United Nations Framework Convention on Climate Change (UNFCCC) Climate Technology Centre and Network (CTCN) on Developing a Climate-Smart Agriculture Manual for University Level and Professional Level Agricultural Education in Zimbabwe. Contact: [todn@dtu.dk](mailto:todn@dtu.dk)

**Raymond E. Zvavanyange** is the National Coordinator in the UNFCCC CTCN Technical Assistance on Developing a Climate-Smart Agriculture Manual for University Level and Professional Level Agricultural Education in Zimbabwe. He is contracted under UNEP – DTU Partnership. Contact: [zvavanyanger3@gmail.com](mailto:zvavanyanger3@gmail.com)

**Desire Nemashakwe** is the Director of Green Impact Trust. Green Impact Trust is the Request Proponent to the UNFCCC CTCN Technical Assistance on Developing a Climate Smart Agriculture Manual for University Level and Professional Level Agricultural Education in Zimbabwe. Contact: [greenimpactt@gmail.com](mailto:greenimpactt@gmail.com)

**Elisha N. Moyo** is a Principal Climate Change Researcher in the Climate Change Management Department under the Ministry of Water, Environment and Climate. He represents the National Designated Entity in the UNFCCC CTCN Technical Assistance to Zimbabwe. Contact: [enmoyo@gmail.com](mailto:enmoyo@gmail.com)

**Kudzai Ndidzano** is a Climate Change Scientist in the Climate Change Management Department under the Ministry of Environment, Water and Climate. He assists with the work carried out by the National Designated Entity in the UNFCCC CTCN Technical Assistance to Zimbabwe in developing a Climate Smart Agriculture Manual for University Level and Professional Level Agricultural Education in Zimbabwe. Contact: [kudzie013@gmail.com](mailto:kudzie013@gmail.com)

**Lovemore Vambe** is a Chief Agriculture Training Officer in the Department of Agricultural Education and Farmer Training in the Ministry of Agriculture, Mechanisation and Irrigation Development. He assists as a Focal Person to the Directorate and all the Departments in the Ministry of Agriculture, Mechanisation and Irrigation Development pertaining to the UNFCCC CTCN Technical Assistance in developing a Climate Smart Agriculture Manual for University Level and Professional Level Agricultural Education in Zimbabwe. Contact: [vambelovemore@gmail.com](mailto:vambelovemore@gmail.com)

**Francis B. Vengai** is the Deputy Director in the Department of Agricultural Education and Farmer Training in the Ministry of Agriculture, Mechanisation and Irrigation Development. Mr. Vengai assists as a Focal Person within the Directorate and all Departments in the Ministry of Agriculture, Mechanisation and Irrigation Development in the UNFCCC CTCN Technical Assistance on Developing a Climate-Smart Agriculture Manual for Agriculture for University Level and Professional Level Agricultural Education in Zimbabwe. Contact: [fbvengai@gmail.com](mailto:fbvengai@gmail.com)

**Manyewu Mutamba, PhD.**, is the Head of Climate Change at Genesis Analytics based in South Africa. He serves as a consultant with VUNA, a United Kingdom Department for International Development project aimed at building climate resilience among smallholder farmers in Southern Africa. VUNA is co-exploring collaboration opportunities on the Climate-Smart Agriculture Manual. Contact: [manyewum@genesis-analytics.com](mailto:manyewum@genesis-analytics.com)

**Sydney Zharare** is the Country representative under VUNA, a United Kingdom Department for International Development project aimed at building climate resilience among smallholder farmers in Southern Africa. VUNA is co-exploring collaboration opportunities on the Climate-Smart Agriculture Manual. Contact: [s.zharare@vuna-africa.com](mailto:s.zharare@vuna-africa.com)

## **ACKNOWLEDGEMENTS**

We are very grateful to the Government of Zimbabwe for providing the enabling environment for the important work on agricultural education in Zimbabwe. Many individuals, institutions, and partners contributed to the success of the Validation Workshop. Special thanks to Temba Nkomozezi, PhD., who served as the Rapporteur for the day.

## LIST OF ACRONYMS AND ABBREVIATIONS

CIMMYT	International Centre for Maize and Wheat Improvement
CSA	Climate-Smart Agriculture
CTCN	Climate Technology Centre and Network
DTU	Technical University of Denmark
EE	Energy Management
FANRPAN	Food, Agriculture and Natural Resources Policy Analysis Network
MoAMID	Ministry of Agriculture, Mechanisation and Irrigation Development
NDE	Designated National Entity
PhD	Doctor of Philosophy
RE	Renewable Energy
REDD+	Reducing Emissions from Degradation and Forest Deforestation in Developing Countries
SEU	Significant Energy Users
TA	Technical Assistance
UNEP	United Nations Environment Programme
UNFCCC	United Nations Framework Convention on Climate Change
USB	Universal Serial Bus
WII	Weather-based Insurance Index

## TABLE OF CONTENTS

### Contents

CITATION.....	ii
EXECUTIVE SUMMARY .....	iii
ABOUT THE AUTHORS .....	iv
ACKNOWLEDGEMENTS.....	vi
LIST OF ACRONYMS AND ABBREVIATIONS .....	vii
TABLE OF CONTENTS.....	viii
INTRODUCTION .....	1
MORNING SESSION 1 .....	2
Highlights of the CSA Manual’s Productive sector chapters.....	3
MORNING SESSION 2 .....	5
Highlights of the CSA Manual Practices .....	5
Case Studies and the CSA manual .....	8
KEY STAKEHOLDERS’ VALIDATION MESSAGES.....	9
Next Steps On The Project.....	10
Final Comments .....	10
Closing Remarks.....	11
ANNEXES .....	12
ANNEX A: Workshop Programme.....	12
ANNEX B: List of Participants.....	13
ANNEX C: Talking Points for the Director, Department of Agricultural Education and Farmer Training, Ministry of Agriculture, Mechanisation and Irrigation Development, Zimbabwe ...	15
ANNEX D: Talking Points for the Director, Climate Change Management Department, Ministry of Environment, Water and Climate, Zimbabwe.....	17
ANNEX E: Concept Note .....	19



## **INTRODUCTION**

The Climate Technology Centre and Network (CTCN), a technology operational arm of the United Nations Framework Convention on Climate Change (UNFCCC) supports developing countries through Technical Assistance via technical and knowledge capacities in climate technologies and other proven technologies.

Recently, CTCN approved Zimbabwe's request for technical assistance to develop a Climate-Smart Agriculture (CSA) Manual for Agricultural Education to be used by practitioners, students, and professionals. This approval led to the engagement of the United Nations Environment Programme – Technical University of Denmark (UNEP –DTU) Partnership as the lead implementer and recruitment of consultants to draft the chapters in the Manual. Two workshops were held in the capital in July and December 2016, respectively where draft chapters were presented for stakeholder review. The progress achieved to date with the guidance of the Government, as represented by the Ministry of Environment, Water and Climate and the Ministry of Agriculture, Mechanisation and Irrigation Development, and the Request Proponent, Green Impact trust, gave the justification for a Validation Workshop by the senior technocrats in the Government and approved experts, following the completion of the draft Manual.

The main objective of the 1-day Validation Workshop was to validate the draft Manual which is now in its final completion phase, pending official launch and operationalisation. This technical acceptance and approval by the Government of Zimbabwe and key stakeholders was therefore critical for this important work. CTCN funded the Validation Workshop with additional funds provided by VUNA, a United Kingdom Department for International Development-funded programme aimed at building climate resilient farmers and communities in Southern Africa.

### **Workshop Objectives:**

- To gather final comments from senior technocrats in the Government of Zimbabwe and approved experts for consolidation into the final CSA Manual.
- To validate the CSA Manual as a suitable vehicle for awareness, education and training in agriculture and climate change for students in colleges and universities as well as agricultural extension workers.

### **Expected Outcomes**

- Acceptance of the draft CSA Manual by the Government of Zimbabwe.
- Consolidation of all comments for individual and complete CSA Manual in preparation of the official launch of the approved CSA Manual.

## **MORNING SESSION 1**

### **FACILITATOR – National Designated Entity, Ministry of Environment, Water and Climate, Mr. E.N. Moyo**

The National Designated Entity (NDE) welcomed the participants, who included experts in agriculture including lecturers and specialists from universities and agricultural colleges; and directors from departments in the Ministry of Agriculture, Mechanisation and Irrigation Development (MoAMID) and the Ministry of Environment, Water and Climate; to the Validation Workshop.

### **Solidarity message from the Head of Climate Change, Genesis Analytics, Dr M. Mutamba**

In his solidarity message, **Dr. Mutamba** said VUNA was excited about its contribution and partnership in the Climate-Smart Agriculture Manual development project. He reiterated that the intervention had a huge potential to have positive benefits in Zimbabwe.

### **Welcome Remarks from United Nations Environment Programme – Technical University of Denmark (UNEP – DTU Partnership) Representative, Dr. Todd Ngara**

Dr Ngara gave an outline of the progress of the project which was incepted in July 2016. He informed the participants that the suggestions, recommendations and comments from the 2 workshops in 2016 had been incorporated in the manual. The edited chapters had reached the proof reading stage after which the layout can be decided on. He pointed out that the project was coming to an end and after the acceptance of the CSA manual draft the next stage of the project would be the manual launch and training of trainers' workshop.

### **Remarks by the Director of the Department of Agricultural Education delivered by his Deputy, Mr Vengai**

The Director of the Department of Agricultural Education Mr Nyamangara sent his apologies and Mr Vengai read a speech on his behalf. He expressed gratitude to the donors for funding the project. He articulated how the MoAMID has great interest in identifying the latest scientific knowledge for climate change mitigation and adaptation. Furthermore, the education of farmers and extension staff that increases the productivity and competitiveness of Zimbabwean agriculture has high priority with the Department of Agricultural Education. The manual is a practical tool that will be used in various awareness campaigns in programs such as Command Agriculture. Finally, the department of Agricultural Education was very grateful for the role VUNA took in the field visits that will make the manual more practical.

## **Opening Remarks**

**Presented by the Director, Climate Change Management Department, Ministry of Environment, Water and Climate, Mr. Washington Zhakata.**

In the opening remarks, Mr. Zhakata said that agriculture was the main focus of this climate change mitigation and adaptation initiative. He emphasized the need for a balance between consumption and environmental integrity in agriculture in Zimbabwe. He pointed out that the industry is facing numerous challenges and is very vulnerable to climate change. The Climate Smart Agriculture Manual in Zimbabwe is a tool that will be used in Agricultural Colleges and various communications including public awareness campaigns to empower communities and assist in poverty alleviation. The manual will also stimulate the collection of data that will be used in early warning systems. The mainstreaming of climate change issues in education and extension is in line with government policy and allows for more productive public private partnerships. In 2016, His Excellency the President of the Republic of Zimbabwe signed the Paris Agreement that encourages the reduction of emissions. Finally, Mr Zhakata expressed his gratitude to partners and stakeholders for their roles in this initiative.

**Description of the CSA development project and objectives of the workshop by the Director of Green Impact, Mr. Desire Nemashakwe**

Mr Nemashakwe gave a description of the CSA manual development project and the objectives of the workshop. In 2015, Green Impact, the proponent observed a need for climate-smart agriculture to be mainstreamed into the agriculture college curriculum in Zimbabwe. Green impact then partnered with the Environmental Management Agency to tour and carry out a baseline survey at selected colleges including Kushinga Phikelela Agricultural College, and Gwebi Agricultural College. The results of the baseline survey confirmed the proponent's observations. Since Green Impact successfully applied for the Technical Assistance, 2 workshops were held and consultants were contracted to develop the chapters of the manual. Finally, the Director pointed out the objectives of the validation workshop to the participants.

## **Highlights of the CSA Manual's Productive sector chapters**

**Presented by the United Nations Environment Programme – Technical University of Denmark (UNEP – DTU Partnership) Representative, Dr. Todd Ngara**

Dr Ngara initially gave a recap of the three pillars of CSA and highlighted that CSA is an approach rather than a set of practises. He then presented the highlights from the 4 chapters on practises summarised below.

## **Crop Production**

- CSA will enable stronger linkages between research and extension as well as appreciation of the value of local innovations.
- Drought tolerant and high yielding crop varieties and crop diversification are key in reducing food-security risks.
- Crop diversification builds resilience (at least some crops will survive in harsh conditions).
- Incentive schemes for climate resilient products will help accelerate the adoption of CSA innovations.
- Incorporation of CSA into curricula of institutions of higher learning will greatly improve farmers' access to climate-resilient technologies and practices, knowledge and information.

### **Livestock and Rangeland Management**

- The vulnerability of the mixed crop-livestock systems to climate change will be lowered by the addition or substitution of crop and livestock species and breeds that are more heat and drought tolerant.
- Rangeland and feed management interventions increase the overall herd productivity and resilience of rangelands to climate change.
- ICT should be used to improve access to information and prevailing gaps in knowledge about CSA for rangeland based livestock systems.
- Successful adoption of CSA will require mainstreaming of CSA into curricula at institutions of higher learning.
- Institutional and financial support will be needed to transform into livestock and rangeland systems that are CSA-based.

### **Forestry and Agroforestry**

- Understand forests, deforestation, sustained forests management and agroforestry in the context of climate change.
- Analyse drivers of deforestation and how they can be minimised.
- Emissions from forests are largely caused by agriculture - therefore REDD+ is largely to be achieved in the agriculture sector. This implies that climate-smart agriculture should be included in REDD+ strategies and finance.
- Explain how forests help in climate change mitigation and adaptation.
- Identify CSA components relevant to forests, land degradation and agroforestry.

### **Fisheries and Aquaculture**

- Capture fisheries production from natural stocks have been on the decline mainly due to climate change and overfishing
- Aquacultural systems for Zimbabwe require innovations of more affordable fish feed, hatchery techniques and more efficient value addition;

- An enabling environment for CSA in fisheries and aquaculture for Zimbabwe involves financial, technical and policy interventions and an inter-disciplinary approach.

### **Questions, Suggestions and comments**

1. Engineer Chiuswa asked why the manual seemed to focus on drought, leaving out the impact and response to years of high rainfall.
2. Mr. E. Moyo suggested the inclusion of a summarised flip chart for each chapter.
3. A participant noted that the document is voluminous and this could pose a challenge in its uptake. He suggested the manual be put in audio format that the visually challenged could also access.
4. Ms Jakarasi asked if the manual fully addressed management practises and technologies and resilience to outbreaks for crops and livestock in drought conditions. She gave an example of how Thuli crossbreeds are susceptible to disease and pest outbreaks.

### **Responses**

In response to 1, a participant highlighted that the manual mentioned various practises for both drought and flood conditions. The bias towards drought emanates from the various predictions that are made in literature of a future of lower rainfall conditions.

In response to 3, Dr Ngara informed the participants that there will only be a few hard copies for libraries and more copies will be distributed in USB format. Ms Jakarasi suggested that the manual also be uploaded online. Mr Zhakata discouraged compromising quality or content over the volume of the manual as it needs to be comprehensive. Furthermore, the users of the manual can focus only on the chapters they are interested in.

In response to 4, Mr. Ndidzano informed the participants that the manual included numerous practises and technologies for livestock under drought conditions. In addition, Mr Zvavanyange added that the manual had 4 case studies that dwelt on the issue of breeds for livestock in CSA. Another participant added that the manual gives an example of CIMMYT varieties and encourages users to constantly check the market for new developments.

## **MORNING SESSION 2**

**FACILITATOR – Mr. L. Vambe**

### **Highlights of the CSA Manual Practices**

**Presented by the United Nations Environment Programme – Technical University of Denmark (UNEP – DTU Partnership) Representative,  
Dr. Todd Ngara**

Dr Ngara presented the key messages below:

### **Institutional Arrangements and Policy Engagement**

- Identify key institutions that can champion CSA implementation using existing policy instruments that recognise CSA as a technology for improving food security
- Identify all existing entry points for CSA implementation and establish the capacity needs to improve the design and implementation of the programs.
- Identify and list institutional arrangements that can be established in the implementation of CSA.
- Recommend policy statements for input into for the national CSA legal/policy framework

### **Climate Information Services**

- Explain the relationship between CSA and Climate Information Services
- Outline contribution of climate information and extension to the pillars of CSA
- Identify key meteorological service tools for CSA and giving examples and their importance
- Recommend areas for improving climate information dissemination

### **Appendix to Climate Information Services: Weather based insurance Index (WII) - Smallholder Level**

- Weather index-based insurance schemes help to secure farmers' livelihoods.
- In the light of increasing frequencies of droughts, dry spells, storms and other extreme weather events in Zimbabwe WII becomes an attractive alternative to managing weather and climate risks
- This form of insurance is more straightforward since it is based on a measurable and spatial distribution of a single weather element.

### **Gender and Social Inclusion**

- To create awareness of the linkages among gender, agriculture and climate change
- To promote mainstreaming and integration of gender in climate change policies and academic curricula
- To create awareness of existing gender transformative climate smart agricultural practices

### **Landscape and Supply Chain Approaches to Climate Smart Agriculture**

- To understand the importance and contribution of Agriculture in African society and economy
- To understand the role of CSA in poverty alleviation and food security in the context of sustainable development goals in the African context
- To understand the concept, challenges and benefits of landscape and supply chain approaches
- To evaluate the tools available for landscape and supply chain approaches in CSA
- To apply the landscape and supply chain approaches to make CSA more inclusive and holistic.

### **Soil and Water Management**

- CSA is not prescriptive about practises but rather is thrust on attaining the 3 pillars supported by key indicators;
- Farmers in Zimbabwe should increase their water-use efficiency through the maintenance and rehabilitation of existing structures and procurement of more efficient irrigation systems;
- Farmers should avoid burning, continuous cropping, repetitive tilling, nutrient mining and increase fallows and rotations;
- Carbon sequestration will play an important role in the mitigation and adaptation of agriculture practices to climate change;
- Tools such as Aquacrop and Cropwat are invaluable in analysing soil and water management systems in CSA;
- The success of CSA in Zimbabwe is hinged on policy and access to incentives.

### **Energy Management in Agriculture**

- To define the terms energy management, energy conservation, energy efficiency and renewable energy
- Understand the role of Energy Management (EM), and Renewable Energy (RE) in Agriculture
- Understand the link between energy use, food production and greenhouse gas emissions
- Know how to identify significant energy users (SEU) as prerequisite for EM interventions
- Identify EM opportunities
- Have an appreciation of the potential application of RE in Agriculture
- Understand typical barriers to implement EE measures and RE technology deployment and uptake and suggest ways to overcome them

- Know regulatory and institutional set up of EM and RE in Zimbabwe

Dr Ngara concluded his presentation with recommendations to policy makers if CSA practices should take off in earnest in Africa.

### **Questions, Suggestions and Comments**

1. Mr Tsiga asked if there was any success of agricultural insurance in Zimbabwe. He added that the approach taken in weather insurance was not popular with farmers.
2. Mr Vengai supported the inclusion of weather insurance in the manual and suggested that it be taken up to formulate a policy document.
3. A reviewer rejected the term “smallholder” in favour of “small-scale” because women and children do not own land in rural areas.
4. Mr Zhakata commented that in agriculture we should focus on market value changes without discriminating between genders as poverty is not selective of gender.
5. A participant suggested that for irrigation systems introduced by the government, there is need for a responsible authority to assist in their operation and maintenance. The lack of maintenance and co-operation etc has led to the demise of many irrigation systems in Zimbabwe.

### **Response**

In response to 1, Dr Mutamba said that lessons were emerging and weather insurance indeed needs to be structured better. He said that insurance in agriculture is not attractive if it stands alone, rather, it can be essential if it is packaged in conjunction with financing, for example. Banks would prefer farmers that are insured. Another participant added that parameters such as rainfall and no rainfall days are largely variable spatially hence the rainfall station networks need improvement for insurance to function fully. Mr E. Moyo added that it would be more practical if government could have a fund created for weather insurance of for example \$10,000,000. This figure would then be distributed in areas that reach the agreed thresholds for example 1,200 mm of rainfall. The source of this funding could be the Green Climate Fund. Mr. Zvavanyange informed the participants that FANRPAN has done a lot of work on weather based insurance and policy issues surrounding it. Mr. Vengai also added that there were many packages of weather based insurance that are in practise in Zimbabwe including those that insure tobacco farmers against hailstorms and other thresholds. Finally, Mr Vengai proposed and Mr Zhakata seconded that the weather based insurance section be included in the manual.

In response to 5, Mr Vengai said that a draft policy that covers such irrigation system operation and maintenance exists and will be publicly available in the near future.

### **Case Studies and the CSA manual**

**Presented by the Head of Climate Change, Genesis Analytics,  
Dr M. Mutamba**



The objective of the case studies was to document local practises that promote CSA and link them to the manual chapters. The case studies were carried out by a diverse team from VUNA, Government and the media. The approach of the case studies involved analysing the context (the nature of climate risk), key interventions from farmer testimonies, climate smart aspects of the intervention and finally prospects for sustainability and scalability. The team visited Hezekiah Village in Gokwe Nembudziya, Zinkondweni Irrigation Scheme in Umzingwane, Guyu in Gwanda, Mr Phiri's plot in Zvishavane, Mr SaPhiri's plot in Mutasa, Mr Ngwerume's plot in Goromonzi and finally Mrs Chionza's plot in Goromonzi. The case studies exposed a numerous practises that can be adopted in the different localities to promote CSA.

### **Questions comments and suggestions**

1. Dr Ngara appreciated the case studies and said that they were a link between what was in the manual and what is on the ground. Mr Nemashakwe commended the interesting study on water harvesting by the late Mr. Phiri.
2. A participant appreciated the case studies however felt that there was need to focus on the 3 pillars of CSA and gave an example of a project in Nemangwe where *Faldherbia albida* is being intercropped with other plants.
3. Mr. Moyo suggested that the case studies should be brought closer by for example technology transfers from one area in the country to another.
4. Mr Vambe inquired on where the case-studies will be integrated in the manual.

### **Responses**

In response to 2 and 3, Dr. Manyawu concurred that more work will need to be done. There were negotiations underway where VUNA will collect more information on the good practises that are being implemented by farmers.

In response to 4, Mr Zhakata pointed out that while case-studies are useful; there are more of baseline materials for the manual. He suggested that the case studies be inserted

### **KEY STAKEHOLDERS' VALIDATION MESSAGES**

**Department of Agricultural Education and Farmer Training, Represented by the Deputy Director, Mr Vengai and the Department of Climate Change Management, represented by Mr. Zhakata**

Mr Vengai validated the manual. He said that the manual was area and case specific. The authors presented practical practises that were easily accessible to the majority of Zimbabwean farmers. He added that the document addresses the three pillars of CSA and gives reference to what has been achieved locally. Finally he recommended the addition of a chapter that

addresses weather insurance. Mr Zhakata also seconded the validation of the manual and added that the manual adequately covers the strengthening and upscaling of existing practises.

## **NEXT STEPS ON THE PROJECT**

**Presented by the United Nations Environment Programme – Technical University of Denmark (UNEP – DTU Partnership) Representative,  
Dr. Todd Ngara**

Following the validation by key stakeholders, Dr Ngara presented the next stage of the CSA manual development project as given below:

- a) Incorporate the comments from the workshop and re-check references
- b) Improve the chapter that covers weather insurance
- c) The chapters will be forwarded to a selected proof reader
- d) Discussion of the final layout and printing
- e) Manual launch and 2-day training of trainers workshop

## **Questions comments and suggestions**

1. A participant inquired on the number of copies that will be printed and distributed
2. Mr Zvavanyange inquired on when the stakeholders would meet again.

## **Responses**

Dr Ngara estimated that about 150 hard copies will be printed and distributed. More copies are to be distributed on USB. The modalities of printing were still under discussion, the costs and logistics of printing in Zimbabwe, South Africa and Denmark were being compared. Dr Ngara confirmed that the next meeting for the general stakeholders would be at the launch while the core team will constantly be in touch with each other.

## **Final Comments**

Mr Tsiga supported the idea of distributing the manual on USB despite the challenges of the recipients replacing their contents with other material that had been raised by Mr. Moyo.

Mr Ndidzano estimated that each Agricultural College required at least 10 copies for its library.

The Ministry of Environment, Water and Climate is eagerly waiting to use the manual in their projects which are currently underway.

Mr Chiuswa reiterated the need to focus on poverty alleviation through wealth creation. Small holders in other parts of the world such as the Netherlands or China are not necessarily poor.

Ms Jakarasi said that aquaculture has huge potential and with the suitable policy framework it could assist in nutrition and poverty alleviation.

Mr Nemashakwe was grateful for the assistance Green Impact has received in this project. He reassured the participants that USBs can be protected to only contain the manual.

Mr Vambe said that the department of Agricultural Education was now ready for the manual. He also supported the motion to use the term “small-scale” over “small-holder”.

Rio Tinto college will need 15-20 hard copies and Compact Discs are also viable.

## **CLOSING REMARKS**

**Presented by the Director, Climate Change Management Department, Ministry of Environment, Water and Climate, Mr. Washington Zhakata**

The Director closed with the recommendation that there is need to incorporate practises that are currently in place as entry points for students and extension officers. Mr Vengai added that with Ministry of Agriculture, Mechanisation and Irrigation Development is most satisfied with the manual and its uptake will enable the country to reach “Climate Resilient Status”.

## ANNEXES

### ANNEX A: Workshop Programme

<b>Time</b>	<b>Agenda Item</b>	<b>Speaker / Remarks</b>
08:30 – 09:00	Registration	National Coordinator
09:00 – 09:15	Welcome remarks and self-introductions	CTCN NDE
09:15 – 09:25	Solidarity messages	Representative of the CTCN and VUNA
09:25 – 09:35	Remarks	Director – Agricultural Education and Farmer Training, MoAMID
09:35 – 09:45	Opening Remarks	Director – Climate Change Management Department, MoEWC
09:45 – 10:00	Objectives of the workshop & Description of CSA Manual development project	Green Impact Trust – Request Proponent
10:00 – 10:20	Highlights of the Manual’s Productive sector chapters	Representative of the UDP
10:20 – 10:30	Question and Answer	CTCN NDE
10:30 -10:45	<b>TEA BREAK and Group Photo</b>	
10:45 – 11:15	Highlights of the Manual’s Practice Systems approach and Enabling Environments	Representative of the UDP
11:15 – 11:30	Question and Answer	Representative of the UDP/ CTCN
11:30 – 11:50	Case Studies and the CSA Manual	Representative of VUNA
11:50 – 12:00	Question and Answer	CTCN NDE
12:00 – 12:20	Key Stakeholder Validation Messages (stakeholders’ final input)	Deputy Director – Agricultural Education and Farmer Training, MoAMID
12:20 – 12:30	Next steps on the project	Representative of the UDP
12:50 – 13:00	Closing Remarks	Director – Agriculture Education and Farmer Training, MoAMID Director – Climate Change Management, MoEWC
13:00 -	<b>LUNCH and Departure</b>	

## ANNEX B: List of Participants

#	Name	Organisation	Position
1	Washington Zhakata	Climate Change Management Department, Ministry of Environment, Water and Climate	Director
2	Veronica N. Jakarasi	Climate Change Management Department, Ministry of Environment, Water and Climate	Deputy Director
3	Elisha N. Moyo	Climate Change Management Department, Ministry of Environment, Water and Climate	Principal Researcher
4	Kudzai Ndidzano	Climate Change Management Department, Ministry of Environment, Water and Climate	Climate Change Scientist
5	Emily F. Matingo	Climate Change Management Department, Ministry of Environment, Water and Climate	Climate Change Scientist
6	Tirivanhu Muhwati	Climate Change Management Department, Ministry of Environment, Water and Climate	Climate Change Scientist
7	Alois Tsiga	Climate Change Management Department, Ministry of Environment, Water and Climate	Projects Manager
8	Juliet Gwenzi	Ministry of Environment, Water and Climate & University of Zimbabwe	Lecturer
9	Willard Mazimbo	Climate Change Management Department, Ministry of Environment, Water and Climate	Mitigation Officer
10	Francis B. Vengai	Department of Agricultural Education and Farmer Training, Ministry of Agriculture, Mechanisation and Irrigation Development	Deputy Director
11	Lovemore Vambe	Department of Agricultural Education and Farmer Training, Ministry of Agriculture, Mechanisation and Irrigation Development	Chief Agricultural Training Officer
12	Farai Gomo	Department of Agricultural Education and Farmer Training, Ministry of Agriculture, Mechanisation and Irrigation Development	Lecturer
13	Sibongile Chipare	Department of Agricultural Education and Farmer Training, Ministry of Agriculture, Mechanisation and Irrigation Development	Lecturer
14	Damiano Chiuswa	Department of Agricultural Education and Farmer Training, Ministry of Agriculture, Mechanisation and Irrigation Development	Principal

15	Rudo Mbabvu	Department of Agricultural Education and Farmer Training, Ministry of Agriculture, Mechanisation and Irrigation Development	Chief Curriculum Development
16	James Maisiri	Department of Agricultural Education and Farmer Training, Ministry of Agriculture, Mechanisation and Irrigation Development	Lecturer
17	Todd Ngara (PhD)	UDP	Senior Researcher
18	Desire Nemashakwe	Green Impact Trust	Director
19	Bruce Nyoni	Self-Employed	Journalist
20	Temba Nkomozepe (PhD)	Self-Employed	Agricultural consultant
21	Manyewu Mutamba (PhD)	VUNA / GENESIS-ANALYTICS	Senior Specialist
22	Raymond E. Zvavanyange	UNEP – DTU Partnership	National Coordinator

## **ANNEX C: Talking Points for the Director, Department of Agricultural Education and Farmer Training, Ministry of Agriculture, Mechanisation and Irrigation Development, Zimbabwe**

### **Salutations**

- Master of Ceremony
- Representatives from Government Ministries and Parastatals, Here Present
- Principals from Colleges of Agriculture
- Private Sector Representatives
- Civil Society Organisations
- Ladies and Gentlemen

### **Body of Speech**

- The provision of quality technical and advisory services in agriculture is one of our fundamental convictions as a Ministry, and Government.
- A reconfigured agriculture and food sector requires that the methods and strategies we use to provide technical and advisory services also have to change, informed by the latest scientific evidence and knowledge.
- Consultation is a critical part in the quest to profiteer from the sum total of our individual and organizational strengths and weaknesses.
- We recognise the consultation process as facilitated by the Climate Technology Centre and Network (CTCN) in the Technical Assistance to Zimbabwe.
- This Technical Assistance has also challenged us to pay close attention to our curriculum as it always stands to benefit from rigorous processes and products such as the Climate-Smart Agriculture Manual.
- Education is, and has always, taken a central role in what we as Zimbabweans are known for, and for that we place high priority on the education of our farmers, extension professionals, and students. They as individual entities are capable of increasing **“production, productivity and competitiveness of Zimbabwean agriculture”**
- Again, our students in Colleges of Agriculture and those who lead them, Principals, are our prized possessions as a Department. We must diligently teach and equip them to address emergent challenges such as climate change, and also, to apply the knowledge and skills gained intelligently in the development of our country.
- We must provide the students and extension professionals with the necessary tools to be resilient regardless of the inevitable changes in climate and extreme weather events.
- We believe agricultural education helps to address climate change issues, such as through awareness, communication, and capacity building.
- We thank CTCN for its direct support to our Colleges of Agriculture and stakeholders in the agriculture and climate profession.
- We stress that the Climate-Smart Agriculture Manual has to be practical to our students and extension professionals.

- We look forward to the launch of the completed Climate-Smart Agriculture Manual.

## **Conclusion**

- Thank you all for your support of the work that we do as the Ministry of Agriculture, Mechanisation and Irrigation Development.
- Thanks to CTCN, Authors of the Chapters, the Reviewers, and Experts who have taken their time and intellectual resources to help us have this Manual.



## **ANNEX D: Talking Points for the Director, Climate Change Management Department, Ministry of Environment, Water and Climate, Zimbabwe**

### **Salutations**

- Director of Ceremonies
- Representatives from Government Ministries and Parastatals
- Principals from Colleges of Agriculture
- Representatives from the Private Sector
- Civil Society Organisations
- Distinguished Experts
- The Media
- Ladies and Gentlemen

### **Body of Speech**

- The country has experienced an increase in hot days, hot nights, and hottest days and a decrease in extreme cold days and cold nights in recent decades – in short, increased vulnerability to climatic changes, and climate change.
- The effects of climate change are already evident across Zimbabwe’s economic sectors, including, agriculture.
- This calls for serious ‘climate action’ – mitigation and adaptation, policy and advocacy, and capacity building – of our citizens.
- Our Ministry’s mission is **“to promote sound and sustainable climate change, adaptation, mitigation strategies and actions.”**
- We thank you as our stakeholders for your active participation in the Technical Assistance to Zimbabwe and other initiatives by the Government of Zimbabwe.
- The Ministry’s mission is to have a climate-resilient economy and Zimbabwe.
- We recognise the importance of the contribution of agriculture to our people’s livelihoods, incomes, and fortunes.
- Agriculture employs over 70% of Zimbabwe’s formally employed population and contributes about 17% of export earnings (Ministry of Economic Planning and Investment Promotion, 2012).
- The agriculture sector is a focus area in our Ministry’s mitigation and adaptation actions.
- This Validation Workshop, as has been the two other Workshops, in June and December 2016, respectively, are all within the framework of the Technical Assistance provided to Zimbabwe by the United Nations Framework Convention on Climate Change, technology arm, Climate Technology Centre and Network.
- We thank partners such as VUNA for seeing an opportunity in the Technical Assistance and seeking for guidance from the Lead Implementer, United Nations Environment Programme – Technical University of Denmark.
- We are open to partnerships with any organisation committed to the social and economic development of Zimbabwe using the environment as an entry point.
- This work is for all of us, and let us give it our very best in terms of inputs, as this work is consolidated.

## **Conclusion**

- We encourage you to keep in touch with our staff and prepare for the Official Launch of the product – the Climate-Smart Agriculture Manual for Agricultural Education in Zimbabwe.

## **ANNEX E: Concept Note**

### **Validation Workshop of the Climate-Smart Agriculture Manual for Agriculture Education in Zimbabwe**

#### **1.0 INTRODUCTION**

The Climate Technology Centre and Network (CTCN), a technology operational arm of the United Nations Framework Convention on Climate Change (UNFCCC) supports developing countries through Technical Assistance via technical and knowledge capacities in climate technologies and other proven technologies.

Recently, CTCN approved Zimbabwe's request for technical assistance to develop a Climate-Smart Agriculture (CSA) Manual for use in the Agricultural Education to be used by practitioners, students, and professionals. This led to the engagement of the United Nations Environment Programme – Technical University of Denmark (UNEP –DTU) Partnership as the lead implementer and procurement of consultants to draft the manual. Two workshops were held in the capital in July and December 2016, respectively where draft chapters were presented for stakeholder review. The progress achieved to date with the guidance of the Government, as represented by the Ministry of Environment, Water and Climate and users such as the Ministry of Agriculture, Mechanisation and Irrigation Development, and the Request Proponent, Green Impact trust, gives the basis for the need of a Validation Workshop by the senior technocrats in the Government and approved experts, following the completion of the draft.

The main objective of the 1-day Validation Workshop is to validate the draft manual which will move the project towards completion, launch and operationalisation. This technical acceptance and approval by the Government of Zimbabwe and key stakeholders is therefore critical. The official launch of the approved CSA Manual is expected in the months ahead following the Validation Workshop. CTCN funded this project, with additional funding for this Validation Workshop being provided by VUNA, a United Kingdom Department for International Development-funded programme aimed at building climate resilient farmers and communities in Southern Africa.

#### **2.0 OBJECTIVES OF THE VALIDATION WORKSHOP**

- To gather final comments from senior technocrats in the Government of Zimbabwe and approved experts for consolidation into the final CSA Manual.
- To validate the CSA Manual as a suitable vehicle for awareness, education and training in agriculture and climate change for students in colleges and universities as well as agricultural extension workers.

### **3.0 EXPECTED OUTCOMES**

- Acceptance of the Draft CSA Manual by the Government of Zimbabwe.
- Consolidation of all comments for individual and complete CSA Manual in preparation of the official launch of the approved CSA Manual.

### **4.0 PARTICIPANTS**

Government of Zimbabwe (Ministry of Environment, Water and Climate; and Ministry of Agriculture, Mechanization and Irrigation Development); UDP/CTCN; Green Impact Trust; VUNA and FAO.

### **5.0 LOCATION AND TIME**

Cresta Oasis Hotel, Harare, Zimbabwe, starting at 0900 – 1400hrs.

#### **Resources:**

Web link with the project document

<https://www.ctc-n.org/technical-assistance/projects/developing-climate-smart-agriculture-manual-agriculture-education>