



Food and Agriculture Organization
of the United Nations

Workshop Summary Report Evidence and Experience on Climate-Smart Agriculture in Tanzania



The Food and Agriculture Organization of the United Nations (FAO) Mitigation of Climate Change in Agriculture (MICCA) Programme, the World Agroforestry Center (ICRAF), CARE International and the Ministry of Agriculture, Food Security and Cooperatives (MAFSC)

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The conclusions given in this information product are considered appropriate at the time of its preparation.

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KEY MESSAGES AND RECOMMENDATIONS TO SUPPORT CLIMATE-SMART AGRICULTURE PROGRAMMING AND IMPLEMENTATION IN TANZANIA

ADOPTION AND UPSCALING OF CLIMATE-SMART AGRICULTURE

- Understanding the drivers and barriers of adoption is necessary to enhance the uptake of Climate-Smart Agriculture (CSA). For example, as many climate-smart practices require long-term commitment, land tenure security is key to adoption of CSA.
- In promoting CSA, contact/champion farmers and farmer trainers have an important role as advisers. Also other extension approaches, such as farmer field schools, demonstrations, exchange visits and farmer groups can be utilised. Strengthening synergies between these and formal extension systems will harmonize the messages.
- Gender/Equity needs to be looked along all elements and gender issues mainstreamed at all levels of CSA. Gender analysis is a prerequisite for any capacity development/training activities and other CSA interventions.

CLIMATE-SMART AGRICULTURAL PRACTICES

- CSA practices potentially suitable for different agro-ecological zones and socio-economic environments already exist, including conservation agriculture, soil and water conservation, resilient crop varieties, crop and grazing land management, livestock management, soil fertility management and agroforestry. The selection, combination and tailoring of these practices need to be based on site-specific agro-ecological, cultural and socio-economic conditions.
- More evidence and monitoring and verification of the climate-smartness of the practices in different conditions are needed
- Adopting an integrated approach and working across systems usually generate more sustainable results, then targeting a single agriculture practice.

POLICY AND GOVERNANCE

- Government commitment to addressing climate change should be reflected in budget allocation.
- In order to enhance accountability, it is necessary to clarify what are the roles and responsibilities within the government institutions for climate change-related administration and mainstreaming. It is also important to align policies and bylaws and increase awareness of national climate change policies and actions at all levels.

- Improved coordination is needed between CSA project implementers and researchers and local government authorities and central government. All relevant ministries should be engaged in CSA development.

CAPACITY DEVELOPMENT

- There is a vast need to develop capacities in climate change issues at all levels and sectors of the society. Target capacity development for different needs at different levels. An assessment of current knowledge and skills is a starting point and a basis for a capacity building plan. This is followed by prioritization of the key actors who need their capacity built first.
- Special emphasis on youth and their needs both as trainers and trainees. Climate change and CSA should be integrated in the school and higher level curricula.
- When planning and delivering capacity building, consider gender, cultural and social norms, farming systems, agro-ecological conditions, and labour dynamics among other variables.

INTRODUCTION AND SCENE SETTING

Over 50 climate change and agriculture experts¹ from research institutions, government, development partners, farming community and NGOs gathered in a national workshop on climate change and agriculture “Sharing Evidence and Experience on Climate-Smart Agriculture” in Dar es Salaam 15 and 16 October, 2014. The workshop was organized jointly by the Food and Agriculture Organization of the United Nations (FAO), the World Agroforestry Center (ICRAF), CARE International and the Ministry of Agriculture, Food Security and Cooperatives (MAFSC). The Objective of the workshop was to:

- Share evidence and experience on CSA (CSA) in Tanzania among stakeholders from research, practice and policy
- Review jointly the results and lessons learned and discuss the policy implications and priorities for accelerating the adoption of CSA, through different mechanisms such as Nationally Appropriate Mitigation Actions (NAMA), National Adaptation Plans (NAPS), and others

This document reflects the presentations discussions and conclusions of the workshop supported by evidence and experience from CSA projects in Tanzania. The main findings are crystallized in the key messages on CSA adoption and upscaling, practices, policy and governance, as well as capacity development. The workshop presentations can be downloaded from: www.fao.org/climatechange/micca/87624

The workshop reiterated the definition of CSA as an integrative approach to address the interlinked challenges of development, food security and climate change. CSA aims to:

1. Sustainably increase agricultural productivity and incomes;
2. Adapt and build resilience to climate change; and
3. Remove and/or reduce greenhouse gas (GHG) emissions, where possible.

The workshop process used interactive approaches, which included plenary sessions, buzz-groups or round table discussions and breakout groups to facilitate participation and group thinking. Participants were given a challenge statement in which they were required to “vote with their feet” along the Lickert scale signifying different opinions; “agree fully”, “agree a bit”, neutral, “disagree a bit” and “disagree completely”. The statement read:

“Climate-smart agriculture is well mainstreamed in agriculture policy in Tanzania.”

Those who “fully-agree” with the statement were of the opinion that CSA is addressed in the national agricultural policy, but using different terms such as Conservation Agriculture and water harvesting. On the other hand those who disagreed with the

¹ The list of participants is attached as Appendix 1.

statement plus the neutral group had major concerns on agricultural community awareness on CSA and lack of coordination. It was acknowledged that the 2013 National Agricultural Policy addresses climate change issues, but there is need for more concerted efforts to raise awareness on CSA. As part of scene setting participants were asked to come up with workshop expectations one for each round table (Table 1)

Table 1. Participants expectations generated in buzz-groups

| | | |
|--|---|--|
| Better understanding of the link between grassroots & policy in relation to climate change | Best-bets CSA practices | Identify scalable CSA technologies compatible with local situation |
| Connecting what we see on the ground with the policy framework | Evidence and experience on CSA initiatives | Difference between CSA and Conservation Agriculture |
| Identify issues for advocacy on CSA | Practicability of integrating CSA in current agriculture activities | CSA mainstreamed into agriculture systems through incentives for farmers |

BACKGROUND ON CLIMATE CHANGE AND CLIMATE-SMART

AGRICULTURE IN TANZANIA

Tanzania is one of the countries that joined the Global CSA Alliance in the UN Climate Summit in September 2014 that aims to achieve food security, climate change mitigation and adaptation, and sustainable natural resources management. Climate change is seen as a global challenge with far reaching national impacts in all sectors, therefore the Tanzanian Government considers very important to participate in global and regional climate initiatives to increase the preparedness for addressing the impacts and tapping the mitigation opportunities. During the past years, the Government has put in place several policies, strategies and plans that are directly addressing issues pertaining to climate change and their impacts on various sectors e.g. the Development vision 2025, National Environmental Policy of 1997, National Agricultural Policy of 2013, National Climate Change Strategy 2012 and National REDD+ Strategy 2013. The concrete tools, including the National Adaptation Plans (NAPs) and Nationally Appropriate Mitigation Actions (NAMAs) are still at an early stage of development. CSA interventions are also a potential strategy to climate change mitigation and adaptation, and a mean for reducing desertification.

A national inventory of the greenhouse gas emissions that was carried out approximately 20 years ago revealed that agriculture, forestry and other land use sectors are responsible for over 90 percent of the emissions. The National Climate Change Strategy lists several opportunities for the agriculture sector to reduce emissions, including from reducing methane emissions from crop production (through irrigation water management, use of improved cultivars and other cultural practices, nutrient management) and reduction of methane emissions from animal production (through improved pasture management and improved breeding). As regards to forestry, land use and land use change, avoidance of deforestation and forest degradation is key for reduced GHG emissions.

One of the tools of the Tanzanian Government to respond to the challenges of climate change is the new Agriculture Climate Resilience Plan, 2014–2019 (ACRP) which is a response of the agriculture sector to the National Climate Change Strategy of 2013, aiming at addressing the most urgent effects of climate variability and change in the crop sector. The plan aims to mainstream climate change into agriculture policies, strategies, initiatives and plans and building resilience to current crop productivity and future investment. Accelerating the uptake of CSA is one of the priority areas for resilience actions and key investments. The uptake could be enhanced e.g. through building evidence, developing capacities to mainstream CSA at different levels, organizing demonstrations, and addressing also climate risk management issues. The institutional framework and financing strategy already exist: an ACRP coordination unit has been established and a specific CSA Task Force is to be launched. The cost of the

ACRP implementation is approximately USD 25 million per year, however, most of it should come outside the government budget.

In addition to the Global Alliance of Climate-Smart Agriculture, a regional Alliance for CSA in Africa was recently launched in the Africa Summit meeting in June, 2014. The heads of the states' Malabo declaration on accelerated agricultural growth and transformation supported the objective of the Alliance of transforming at least 30 percent of African farmers and pastoral and fisher folk resilient to climate and weather related risks by 2025. To achieve this, the Alliance emphasises that investments need to be increased for resilience building initiatives, including social security for rural workers and other vulnerable social groups, as well as for vulnerable ecosystems. Moreover, there is a need to mainstream resilience and risk management in the national policies, strategies and investment plans. The major aim of the Alliance is to scale up context-specific CSA practices that enhance food security by sustainably increasing the reliability and productivity of agricultural livelihood activities; increase smallholder resilience and adaptation to the likely effects of climate change; and where appropriate for the interests of smallholder farmers to reduce greenhouse gas emissions from agriculture and improve carbon sequestration. The Alliance aims to support the Comprehensive Africa Agriculture Development Programme CAADP to achieve its goals. The founding members of the African Alliance are AU-NEPAD, CARE International, World Vision, Catholic Relief Services, Oxfam and Concern Worldwide, with technical support from GCIAR Research Programme on Climate Change, Agriculture and Food Security (CCAFS), FAO, Food, Agriculture and Natural Resources Policy Analysis Network (FARNPAN) and Forum for Agriculture Research in Africa (FARA).

DEVELOPMENT EXPERIENCE AND SCIENCE EVIDENCE OF CLIMATE- SMART AGRICULTURE IMPLEMENTATION

The pilot project under the FAO Mitigation of Climate Change in Agriculture Programme (MICCA) was implemented in the Kolero area of Morogoro region between 2011 and 2014 as a collaborative effort with ICRAF and CARE Tanzania. The aim of the pilot was to demonstrate how smallholder farmers can contribute to reducing GHG emissions at farm/landscape scales, while increasing their productivity and building resilience to climate change. The focus was on reducing deforestation and forest degradation by promoting agricultural intensification through conservation agriculture, agroforestry, energy saving cooking stoves, and soil and water conservation. The results of both the agriculture extension and research components were presented and discussed in the workshop.

In the agriculture extension component, various approaches were used, including usual training, farmer-led extension, Farmer Field Schools-FFS, demonstration field plots, exchange visits, group formation and participation in the national agriculture exhibition. Trainings were organized in the villages; hence they inspired many to participate. The Farmer Field schools-experiment with new technologies/ farming systems covered entire production cycles. Group work and labor pooling i.e. working collectively for high labor demanding tasks, e.g. making terraces, enhanced people's participation in development activities. The exchange visits enhanced knowledge and skills in CSA practices and helped changing farmers' negative perception on terraces.

During the course of the project it was realized that CSA practices, like any other agriculture practices aimed at mitigating the effects of or adapting to climate change need many years of implementation for farmers to appreciate the benefits and use them sustainably. Therefore, planning long-term projects is very important, since short-term projects can be counterproductive, because they end before farmers realize the benefits.

The research elements of the pilot project conducted by ICRAF aimed to answer the question: is conservation agriculture (CA) 'climate-smart' for maize farmers in the highlands of Tanzania? Until now, the limited information on the mitigation and/or emission reduction potential of CA-based farming systems in Sub-Saharan Africa has constrained efficient interventions. Therefore research was conducted in Kolero in order to better understand GHG emissions from various cropping management systems: thus, elucidating how yield can be increased while GHG emissions can be reduced, thus answering the question on if GHG emissions can be minimized when farmers adopt CSA. Measurements from various plots with different treatments revealed that growing maize with trees (*Gliricidia*) or adding some nitrogen fertilizer had significantly lower global warming intensity than the other treatments. Sustainable intensification with CA

or CA with trees does not seem to pose risk to climate in terms of emissions, and holds potential to stabilize crops production systems against climate variability and address food security needs.

Despite the climate benefits and substantial extension efforts, the adoption rate of some of the CSA practices remained rather low in Kolero. A special study was launched to better understand the constraints, incentives and patterns of adoption to further inform extension, projects and up-scaling. The findings of the study reveal that farmers do adopt new practices but they need longer-term support in order to maintain the practices. Some trends were visible, e.g. women adopt CSA practices more eagerly than men; giving up of slash and burn is taking place; households are adopting improved cooking stoves; and tree planting has also taken place. Productivity payoffs are an important determinant of adoption, also farm and farmer characteristics. Training on CSA seems to reduce shifting cultivation practices. The negative side is that labor demand of many of the improved practices is high and the yield and income per labor unit is lower than in the traditional practices. The households reported that the improved practices improved the household food security, which is a strong motivating factor for adoption.

SUSTAINABLE WATER AND LAND MANAGEMENT WITH CLIMATE

CHANGE ADAPTATION AND MITIGATION BENEFITS

Several interventions by the Government and development partners in Tanzania are testing and promoting CSA. Conservation agriculture, as proved also by the MICCA pilot, can in many contexts be considered climate-smart. It is estimated that CA practices are now adopted by over 10 000 farmers and practiced on 14 000 acres in Tanzania. The area is much larger if plots where only some elements of CA are practiced are taken into account. There is evidence that the use of mechanical tillage for seedbed preparation and weed control has induced deterioration of the quality of soil, decline in soil fertility and destruction of soil structure. CA can help overcoming some of these problems. Yield increases, for example, have been visible: before adopting CA the yield was 3 bags/acre, after adoption it has reached up to 25 bags/acre. In general CA reduces soil erosion, regenerates soil fertility, increases food production, income and food security and improves farmer's livelihood. The Government of Tanzania is of the view that coordinated efforts are needed to promote the adoption of CA and other CSA practices. It is also important to realize that while some soil and water conservation methods require more labor than traditional agriculture, some of the CA methods however substantially reduce the labor demand at least in the longer term.

A concrete example of testing CA and other CSA practices is the FAO project "Strengthening the Capacity for Climate Change Adaptation through Integrated Land and Water Management using the CSA approach in Kiroka Village, Morogoro." As one of the likely impacts of climate change will be water scarcity on the one hand, and flash floods on the other, this project has focused on identifying and promoting practices that reduce the vulnerability of the local communities and their agriculture production to these calamities. The farmers were taught on the use of energy saving stoves, tree nursery establishment, soil and water conservation, and beekeeping. In the lowland areas, special focus was put on systems of rice intensification, which means saving in water use and cutting the number of rice seedlings per acre. This practice is also anticipated to reduce the methane emissions from rice production. The experience from this site was that the majority of farmers and communities accept CSA approaches which look holistically at solving community problems including livelihood issues.

SOCIOECONOMIC ASPECTS OF CLIMATE-SMART AGRICULTURE

Evidence and experiences emphasize that CSA solutions need to be sensitive to local conditions. Without taking e.g. gender relations into account, achieving sustainable results is difficult. It is important to understand for example the dimensions of control of productive resources. While the control often resides on men, it is often women and youth that manage the resources. The cultural traditions, decision-making structures, and ownership of the products will all influence adoption of the practices and in particular women's access to resources, knowledge and information. This all leads to the conclusion that approaches that jointly address the constraints and opportunities are needed. In order to promote CSA, both men and women must be engaged in the initiatives; incentives are needed for men, women, boys and girls; actions need to be made practical; and women's workload has to be taken into account. Many of these principles have been tested with good results in a CARE project in Mtwara.

Experience from another CARE project, in Same district in Kilimanjaro proves that rainfall variability is already affecting rural communities and women and girls are found highly vulnerable. Crop and vegetable production as well as pastures are affected by the rainfall variability. People therefore decide to migrate to other locations with more favorable weather conditions or better availability of casual work. Particularly women have decided to leave to look for land in other places. A water-smart champion farmer approach, learning and practice alliances and demonstration plots have been introduced to promote water use efficiency in agriculture as a solution to the drought problem. Other solutions introduced to farmers are e.g. drought tolerant, early maturing crops, village saving and loan schemes, weather information systems and energy saving stoves. All these practices are expected to help people stay in their land, with no need to migrate to other places. The lesson from this project was that as a short-life project it leaves behind a lot of expectations from the community; therefore long term plan for any project is critical.

A third example was provided by a Reduced Emissions from Deforestation and Forest Degradation (REDD-project) in the Lindi region. One of the major goals of this pilot project is to help participating communities in forest conservation and sell their GHG emission reductions (Carbon Credits) in the voluntary carbon market. The project provided the inputs to promote conservation agriculture because agriculture is the main cause of deforestation in Tanzania, followed by charcoal burning and timber logging. The project introduced CA to farmers and hence helped to reduce carbon emission caused by slash and burn of forest. A new model of putting all remaining forests into conservation, which would allow access to REDD-financing, has been tested. A transparent payment and benefit sharing mechanism for the carbon storing services is critical. It was also learned that improved seeds and agriculture practices, fertilizer use, and linking farmers to markets reduces the need for agriculture to expand to forest areas.

DISCUSSIONS AND CONCLUSIONS

The presentations in the three thematic areas generated good discussions on CSA in the country. Four priority issues were identified for further discussion and generation of policy recommendations in break out groups. Participants voluntarily assigned themselves to the four groups. A summary of the task and outputs from the group work is presented below.

Question 1: What are key elements to promote adoption among the different extension approaches and incentives mechanisms? How to ensure up-scaling and sustainability? What are the gender aspects to consider?

Answers and recommendations from the working group were the following:

Several elements need to be considered in promoting adoption of CSA, e.g. the farmers and community characteristics, practices and technology characteristics, policies and institutions, as well as the landscapes and farming systems. Moreover, the promotion requires utilization a range of different extension methodologies and institutions, incentive mechanisms as well as sustainability considerations. Gender plays an important role as men and women have different resources to support adoption and upscaling of the practices.

- To enhance up-scaling of CSA, farmers e.g. contact/champion farmers and farmer trainers have an important role as advisers. Also other extension approaches, such as farmer field schools, demonstrations, exchange visits and farmer groups can be utilised. Strengthening synergies between these and formal extension systems is important to harmonize the messages.
- Ensure that Gender/Equity is looked along all elements and gender issues are mainstreamed at all levels of CSA. Make gender analysis a prerequisite for any capacity development/training activities and other CSA interventions.
- Involvement of the private sector is essential to support investment and training activities.
- As many climate-smart practices require long-term commitment, land tenure security is key to adoption of CSA.
- Understanding the incentives and barriers of adoption is necessary to enhance the uptake of CSA.
- Changing the prevailing production practices takes time and longer-term commitment on the part of the Government and development partners.

Question 2: What are some of the promising CSA practices and approaches that could be applied in different farming systems and agro-ecological zones in Tanzania? What are the gender issues to consider?

Answers and recommendations from the working group were the following:
CSA practices potentially suitable for different agro-ecological zones and socio-economic conditions already exist, including conservation agriculture, soil and water conservation, resilient crop varieties, crop and grazing land management, livestock management, soil fertility management and agroforestry. All these practices can be divided into several sub-categories. The selection, combination and tailoring of the practices need to be based on site-specific agro-ecological, cultural and socio-economic conditions.

- More evidence and monitoring and verification of the climate-smartness of the practices in different conditions are needed
- Joint efforts of several line ministries are necessary to promote CSA practices
- Instead of targeting single agriculture practices, having an integrated approach and working across systems usually generate better results.

Question 3: What are the policy and institutional constraints, and actions required? Which stakeholders should act? What are the synergies with on-going initiatives? What are the gender aspects to consider?

Answers and recommendations from the working group were the following:
One severe constraint to CSA upscaling is the lack of resources. Currently only limited amount of funds is trickling down for bottom up work. Funding has to be screened at different levels, including farmers own and private sector investments, government budget, and international financing. Farmers' access to financing, including micro-credits, is often constrained by lacking collaterals. This is closely linked to unclear land tenure system. The process of moving from customary rights to more formalized land ownership is on-going, but the progress has been rather slow. Farmers also lack information on available financing.

- Government commitment to addressing climate change should be reflected in budget allocation to reduce budget constraints of district and village level CSA plans and training of policy makers at all levels. In order to enhance accountability, it is necessary to clarify what are the roles and responsibilities within the government institutions for climate change-related administration and mainstreaming. It is also important to align policies and bylaws and increase awareness of national climate change policies and actions at all levels.
- Improved coordination is needed between CSA project implementers and researchers and local government authorities and central government. All relevant ministries should be engaged in CSA development.
- Commitment to implementation of the Agricultural Climate Resilient Plan is crucial to ensure integration of climate change resilience into agricultural policy decisions, influence planning processes and implement investments on the ground

Question 4: What are the capacity development needs and support required at local and national levels? What are the gender aspects to consider?

In general, there is a vast need to develop capacities in climate change issues at all levels and sectors of the society. An assessment of current knowledge and skills is a starting point and a basis for a capacity building plan. This should be followed by the prioritization of the key actors who need their capacity built first. The capacity development should be tailored for different needs at different levels, including the district, ward and farmer levels. The financing questions are very pertinent also in capacity development context, e.g. who is going pay for the technical support of research institutions to training and the actual training events.

Answers and recommendations from the working group were the following:

- Special emphasis on youth and their needs both as trainers and trainees.
- When planning and delivering capacity building, consider gender, cultural and social norms, farming systems, agro-ecological conditions, and labor dynamics among other variables.
- Climate change and CSA should be integrated in the school and higher level education curricula.

APPENDIX 1: LIST OF PARTICIPANTS

| Name | Designation | Institution |
|----------------------|---------------------------|--------------------------------|
| Abdub Jirmo | | WFP |
| Ahmad Abdul | Journalist | Raia Tanzania |
| Amoo Julie | Programme Manager | Farm Africa |
| Asifiwe George | Reporter | MTANZANIA |
| Bakar Hemed | Camera person | STAR - TV |
| Chacha Lucia | PLO | MLFD |
| Chagamba Habiba | Blog's | full habir |
| Deering Karl | CARE | CARE |
| Dulla Hamisi | ACFU-TZ | CFU - TZ |
| Elias Peter | Journalist | Mwananchi |
| Gomezuba Happy | Journalist | Bazei Msema Kweli |
| Hassani Zaituni | Journalist | STAR - TV |
| Kahewanga Patrick J. | Farmer | MOLEMO |
| Kajuna Alex | Sen. Economist | MLHSD |
| Kanegabo Willbroad | Programme Officer | WFP |
| Karttunen Kaisa | FAO Officer | FAO HQ |
| Kashindye Almas | Project Manager | ECOPRC Project, FTI Olomotonyi |
| Kasumua Ludger | Journalist | The Citizen |
| Kauzeni A.S. | Professor | IRA |
| Kigala Ledis | Coordinator | MVIWATA |
| Kilongo Mohamed | Natural Resource Officer | PMO |
| Kimaro Anthony | Country Representative | ICRAF |
| Kisanga David | Journalist | The Guardian |
| Kitalyi Aichi | Facilitator | Independent |
| Kolneli Alfrida | Farmer | LUKANGE |
| Lehel Rosalie | Programme support officer | IFAD |
| Leshalu Maria P. | District Agric. Officer | Morogoro DC |
| Liingilie Abdala | RA | ICRAF - Tanzania |
| Lopa Dostens | Programme Manager | CARE |
| Lugandu Simon | ACTN - C | ACTN |
| Lulela Rashid | AGRO - Officer | PMO |
| Lyimo Sarah | TFA | Tanzania |
| Lyimo. M. Eng | Director | MAFC |
| Maemba Editha | TV Journalist | TV Tumaini |
| Mahoo Henry | Assoc. Professor | SUA |
| Majule Amos | Director - IRA | IRA |

| | | |
|-------------------------|---------------------------|-----------------|
| Maoya Michael | Journalist | The Express |
| Masanyiwa Mkoma | Energy Officer | MEM |
| Masoud Thabit | Director NRCC | CARE TZ |
| Massoro Erasto | PFC | CARE |
| Massoy Theresia | Livestock Officer | MAFC-EMV |
| Mavika Leo M. | PAO | PMO - RALG |
| Mbaga Dhanja | TC WASH | CARE - TZ |
| Melele Hussein | Ag. Communication Officer | YUNA |
| Mgimba Shiva | Journalist | Wapo Radio |
| Mkondo Cornelius | Ass.D.PHS | MAFC |
| Mkota Innocent | Treasurer | YUNA |
| Mlula Lucy | Journalist | Guardian |
| Mohamed Allvah | V/Chairman | YUNA |
| Mpanda Mathew | Scientist | ICRAF |
| Mtema Nelly | Journalist | Daily News |
| Murusuri Nehemiah | National Officer | UNDP |
| Mutabazi Khamaldin | Sen. Lecturer | SUA |
| Nkomola Merciana | Blog's | TAYOJO |
| Nyachari Magori | Forester | TFC |
| Omary Chausiku | B. weekly | Journalist |
| Raid Khamis | Mwananchi | MCL |
| Ramadhani R. Mageni | | TAMISEMI Dodoma |
| Rioux Janie | FAO officer | FAO HQ |
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| Rwehumbiza Filbert B.R. | Professor | SUA |
| Salasala Nuhu | Project Officer | IUCN |
| Sheuya Zainabu | Environmental Scientist | MAFC-EMV |
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| Walsh Conor | Country Representative | CRS |
| Yoash Shadrack | Agric. Officer | TFCG/MJUMITA |
| Zimband Leonce | Journalist | Nipashe |

APPENDIX 2: WORKSHOP AGENDA

Day 1: Wednesday, 15th October

| Time | Presentation | Responsible |
|---|---|--|
| 9:00-9:30 | <i>Registration</i> | |
| 9:30-9:50 | - Welcome - Presentation of stakeholders, agenda and facilitation process | FAO, ICRAF, CARE Facilitator |
| 9:50-10:00 | Objectives of the workshop and background information on CSA and MICCA | FAO |
| 10:00-10:10 | Opening statement by the Ministry of Environment | VPO- Environment |
| 10:10-10:30 | Overview of climate change in Tanzania and status of NAPs and NAMAs | VPO- Environment |
| <i>10:30-11:00 Break and refreshments + Group Photo</i> | | |
| Thematic session 1: Development experience and science evidences of climate-smart agriculture implementation | | |
| 11:00- 11:15 | Extension efforts for climate smart agriculture: Lessons from Koleru and farmers perspectives | CARE/MICCA |
| 11:15-11:45 | Scientific results on climate smart agriculture (yield, land use and GHG fluxes) | ICRAF Tanzania/MICCA |
| 11:45- 12:00 | Barriers to adoption of climate smart agriculture: Results from the field | SUA-FAO/MICCA |
| 12:00-12:30 | Panel discussion: Q&A, and lessons learned from the above experiences to inform CSA programming | Facilitator, presenters and participants |
| <i>12:30-13:30 Lunch break</i> | | |
| Thematic session 2: Sustainable water and land management with climate change adaptation and mitigation benefits | | |
| 13:30- 13:45 | Overview of the Agriculture Climate Resilient Plan in Tanzania | MAFSC |
| 13:45-14:00 | Experience from Conservation Agriculture in Tanzania | MAFSC |
| 14:00-14:15 | Experience and results of adapting to climate change through sustainable rice intensification in Kiroka, Morogoro | FAO-Tanzania/SUA |
| 14:15-14:45 | Panel discussion: Q&A, lessons learned from the above experiences to inform CSA programming | Facilitator, presenters and participants |
| <i>14:45 – 15:15 Break and refreshments</i> | | |
| Thematic session 3: Socioeconomic aspects of climate-smart agriculture | | |
| 15:15-16:00 | Experiences and findings from <ul style="list-style-type: none"> - Integrating gender issues in crop production in Mtwara - Acknowledging the power of champion farmers in promoting water smart agriculture investment in Kilimanjaro. | CARE Tanzania |

| | | |
|-------------|--|---|
| 16:00-16:15 | Linkages between agriculture and deforestation: Results from REDD+ pilot project on payment mechanisms for climate smart land management | TFCG & MJUMITA |
| 16:15-16:45 | Panel discussion: Q&A, Lessons learned from the above experiences to inform CSA programming | Facilitator, presenters and participants |
| 16:45-17:00 | Gathering of key issues/questions for CSA programming | Facilitator |

Day 2: Thursday, 16th October

| Time | Presentation | Responsible |
|---|--|---|
| 9:00-9:15 | Recap of day 1 | Facilitator |
| 9:15-9:30 | Opening remarks and purpose and agenda of the day 2 | Facilitator |
| 9:30-9:50 | Scoping Study on Climate-Smart Agriculture in Tanzania | IRA-FAO |
| 9:50- 10:00 | Overview of CSA African Alliance | CARE |
| 10:00-10:30 | Plenary Session: Summary of the findings, lessons learned and review of proposed key issues/questions for working groups discussions | Facilitator, presenters and participants |
| Thematic session 4: Using results, experiences and lessons from the field to inform climate-smart agriculture programming, planning and policy | | |
| <i>10:30-11:00 Break and refreshments</i> | | |
| 11:00-12:30 | Working groups on questions to inform CSA programming in Tanzania: <ol style="list-style-type: none"> 1. What are some of the promising CSA practices and approaches that could be applied in different farming systems and agro-ecological zones in Tanzania? Gender issues to consider? 2. What are the policy and institutional constraints, and actions required? By which stakeholders? Synergies with ongoing initiatives? Gender aspect to consider? 3. What are key elements to promote adoption among the different extension approaches and incentives mechanisms? And how to ensure up-scaling? And sustainability? Gender aspects to consider? 4. What are the capacity development needs and support required? Local and national levels? Gender aspects to consider? | Working Groups/Reporters will be assigned for each group |
| <i>12:30 – 13:30 Lunch</i> | | |
| 13:30-14:00 | Finalizing group presentations | Working groups |
| 14:00-15:00 | Reporting back from the working groups | Facilitator and reporters |
| 15:00-15:50 | Working group on the policy conclusions and recommendations and formulation of joint messages on the strategies to promote CSA, Reporting in plenary | Working groups/reporters |
| 15:50- 16:00 | <i>Workshop Evaluation</i> | Facilitator |
| 16:00-16:30 | Closing remark | Ministry of Agriculture. Food Security and Cooperatives |
| <i>16:30-17:00 Closing cocktail</i> | | |



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