

Climate-smart agriculture measurement, reporting and verification in the Republic of Zimbabwe



KEY MESSAGES

- Although Zimbabwe has a large number of climate-smart agriculture (CSA) projects underway, outcomes have not been tracked or reported because of inadequate monitoring and evaluation (M&E) systems;
- Stakeholders agree that, given proper levels of funding to pay for infrastructure, staff and capacity building, current data collection efforts could be built out into an effective M&E system;
- A solid CSA M&E system could meet project, national and international reporting requirements and help stakeholders in Zimbabwe improve the effectiveness of CSA promotion.



Photo credit: Sydney Zharare, Vuna

Introduction

The Republic of Zimbabwe recognizes the need to take action to harmonize agricultural development with environmental protection and to reduce vulnerability to climate change. At least 22 unique projects and policies relevant to CSA were underway in 2014, and more have started since then (figure 1). Outcomes from CSA projects, however, have not yet been tracked or reported on in a coordinated or comprehensive way. Indeed, measurement, reporting and verification (MRV) is barely considered in seminal documents such as the recently released Zimbabwe CSA Manual. As a result, the contributions of CSA projects, programmes and policies toward national development and climate goals are not accounted for, and CSA is not explicitly integrated into budgetary processes.

This Zimbabwe Climate-Smart Agriculture Measurement, Reporting and Verification Profile ('The Profile') seeks to provide guidance to improve this situation. A research team comprising staff from Zimbabwe's Department of Agricultural, Technical and Extension Service (AGRITEX), World Agroforestry Centre (ICRAF) and Unique Forestry and Land Use interviewed stakeholders from at least 17 major groups representing government institutions (roughly 50%), development partners, NGOs, institutions of higher learning and research, and the private sector. The Profile synthesizes both those conversations and the content of a subsequent workshop dedicated to creating an action plan. The Profile identifies the needs of various stakeholders; explains the challenges and opportunities of aligning CSA with existing measurement and evaluation (M&E)¹ systems in the country; and recommends actions to strengthen the

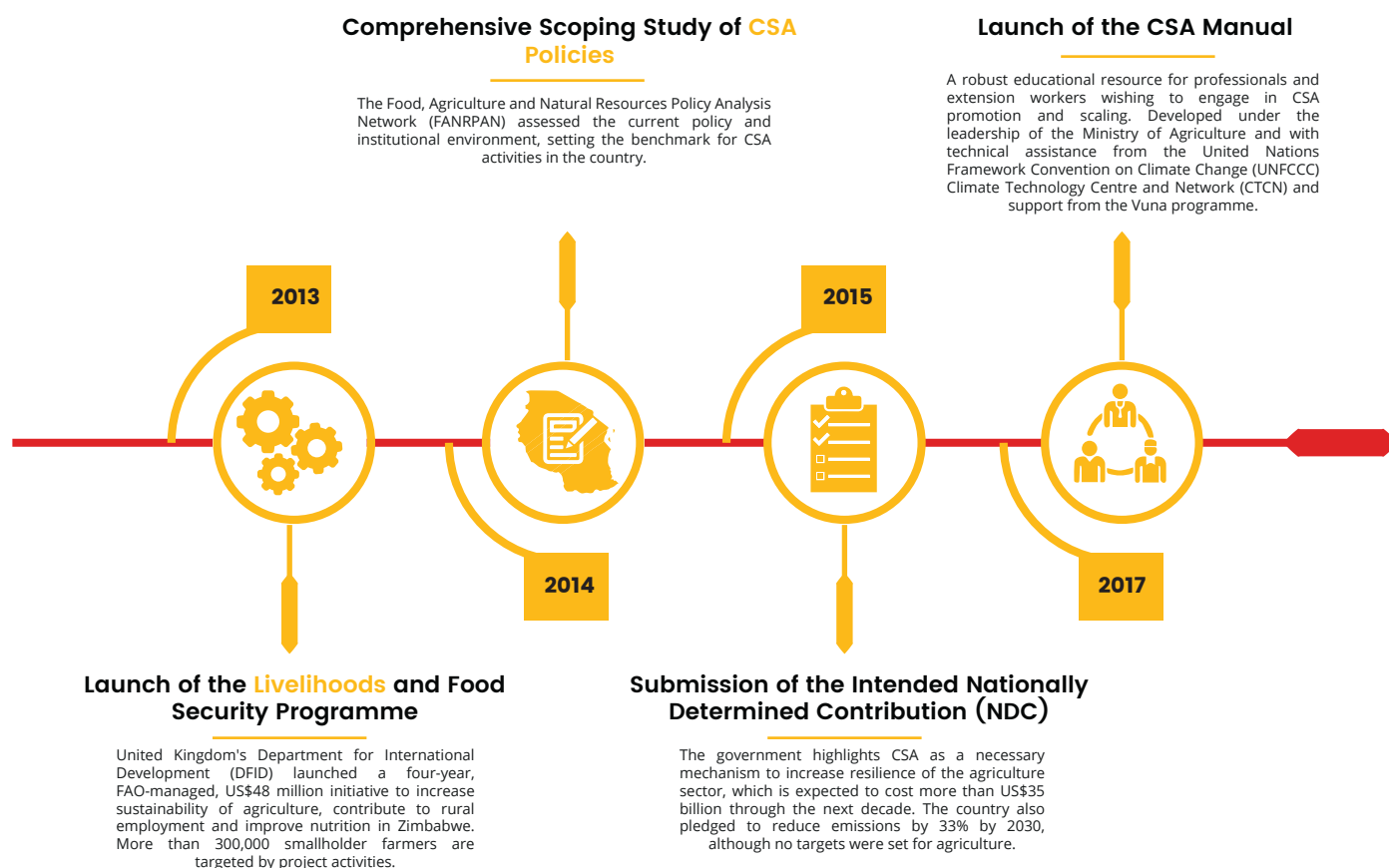
¹ Measurement, reporting and verification (MRV) is a term used within the UNFCCC referring to information flows on countries' progress in meeting the objectives of the Convention. National statistical systems and monitoring and evaluation systems, known as M&E, are the basis for international MRV. Since most stakeholders' information needs refer to domestic policy processes, this profile uses the term M&E, which most stakeholders are more familiar with.

ability of M&E systems to meet stakeholders' information needs.

The Profile is written for three audiences: (i) government institutions seeking to improve M&E and obtain more comprehensive and accurate data at reasonable costs; (ii) development partners targeting support to specific

capacity needs; and (iii) CSA programmes collecting data related to indicators relevant to national objectives and needs. The Profile is also relevant to actors working in the agricultural development and environment sectors more broadly who seek insight on developing coherence in M&E across development initiatives and from the project-level to international scales.

Figure 1. Selected major Climate-Smart Agriculture (CSA) events in Zimbabwe.



Policy and institutional context

Zimbabwe has developed a number of policies, strategies and frameworks to support agricultural development and climate change adaptation and mitigation. An active member in both regional (e.g., Southern African Development Community (SADC)) and international (e.g., UNFCCC) bodies, Zimbabwe has made commitments to international agreements. The National Climate Policy of Zimbabwe references a few such agreements, including the African Union Agenda 2063, SADC Industrialisation Strategy, Paris Agreement and related Intended Nationally Determined Contributions (INDCs), and the Post-2015 Development Agenda. It is, however, unclear what M&E instruments are in place for fulfilling commitments under either national policies or international commitments, such as the Comprehensive Africa Agriculture Development

Programme (CAADP) and the 23rd Ordinary African Union Assembly Decisions and Declaration (Malabo Declaration).

Zimbabwe has several policy initiatives relevant for CSA action. However, the stakeholders interviewed did not explicitly mention many of these policies (see table 1 and [annex 1](#)). Each policy sets out various measures that could be said to contribute to at least one of the CSA pillars. With the exception of the Zimbabwe Agricultural Investment Plan (ZAIP), the policies either do not have specific M&E plans that could be relevant to CSA or have M&E systems that are only partially developed, without clear indicators or targets. The document most directly relevant to CSA, the CSA Manual, was launched in 2017 and developed under the leadership of the Ministry of Agriculture and with technical assistance from the CTCN and support from

the Vuna programme. It is a robust educational resource for professionals and extension workers wishing to engage in CSA promotion and scaling.

Responsibilities for implementing and monitoring CSA-related policies rest with various ministries, departments and agencies in the country, including agriculture-sector lead ministries. The Ministry of Environment, Water and Climate (MEWC) is the National Focal Point on Climate Change and the lead responsible for the INDC. The Climate Change Management Department of MEWC is mandated with promoting best practices in climate change adaptation and mitigation strategies to enhance climate resilience (such as

developing climate policies and coordinating climate research and education activities).

The political environment in Zimbabwe is primed for CSA MRV. However, there is little clarity on how the process will move forward. During opening remarks at a workshop convened for this assessment, The CSA Focal Point for Zimbabwe (AGRITEX) clearly stated that CSA MRV would need to consider the work that is already in place in various government departments and be complementary with other international M&E frameworks on climate change to which Zimbabwe is a signatory.

Table 1. CSA-relevant policies in Zimbabwe.

YEAR	POLICY	ARE ACTIVITIES PROMOTED IN THE POLICY RELEVANT TO CSA PILLARS?			DOES THE POLICY PROMOTE CSA MEASURES?	IS CSA MENTIONED?	DOES THE POLICY / PROGRAMME HAVE AN M&E SYSTEM	IS THE POLICY RELEVANT TO M&E OF CSA ACCORDING TO STAKEHOLDERS
		PRODUCTIVITY	RESILIENCE	MITIGATION				
2017	CSA Manual for Agriculture Education in Zimbabwe Climate-Smart Agriculture (CSA)	yes / fully relevant	yes / fully relevant	yes / fully relevant	yes / fully relevant	yes / fully relevant	partially / not always	no / not at all
2016	National Climate Policy of Zimbabwe (NCPZ) CLIMATE CHANGE; RESILIENCE; MITIGATION	yes / fully relevant	yes / fully relevant	yes / fully relevant	yes / fully relevant	yes / fully relevant	no / not at all	no / not at all
2015	Intended Nationally Determined Contribution (INDC)	no / not at all	yes / fully relevant	yes / fully relevant	yes / fully relevant	yes / fully relevant	no / not at all	no / not at all
2014	Zimbabwe's National Climate Change Response Strategy (NCCRS) CLIMATE CHANGE; RESILIENCE; MITIGATION; GENDER	yes / fully relevant	yes / fully relevant	yes / fully relevant	yes / fully relevant	yes / fully relevant	no / not at all	no / not at all
2013	Zimbabwe Agriculture Investment Plan (ZAIP) PRODUCTIVITY; COMPETITIVENESS; FOOD AND NUTRITION SECURITY	yes / fully relevant	yes / fully relevant	no / not at all	partially / not always	yes / fully relevant	yes / fully relevant	no / not at all
2012	Comprehensive Agricultural Policy Framework (ZCAPF) (2012–2032) ECONOMIC GROWTH; FOOD AND NUTRITION SECURITY	yes / fully relevant	yes / fully relevant	no / not at all	partially / not always	no / not at all	no / not at all	no / not at all

 yes / fully relevant
  partially / not always
  no / not at all

Roles, needs and capacity

The analysis identified nearly 20 stakeholders in CSA, of whom three had a high influence on implementation of the national CSA Guideline and a high level of interest in M&E ([annex 2](#)). These four government and research actors MEWC; the Climate Change Management Department; the Department of Research and Specialist

Services; and the Agricultural and Research Council. They use M&E for making policy, providing support or finance, planning, guiding implementation and reporting. Donors, research institutes and NGOs also use information from M&E systems for a range of purposes. High-quality M&E therefore serves a number of purposes for government and other stakeholders ([annex 3](#)).

Needs for CSA M&E

Government stakeholders identified specific information needs that could be met through M&E (see full lists of needs identified by all stakeholders in [annex 4](#)). These needs have been met to varying degrees:

Fully met needs: Out of the 24 needs listed, there seem to be no fully met needs expressed by government stakeholders.

Partially met needs: The analysis revealed that more than half of all needs expressed by government stakeholders (14 out of 24) are partially met. For most of the partially met needs, data is available through sources such as crop and livestock assessment surveys or progress reports from the Ministry of Lands, Agriculture and Rural Resettlement (MLARR), but is not as useful as it could be. For instance, there are various projects tracking and reporting CSA adoption. However, the number of farmers adopting CSA is usually inferred from the number of project beneficiaries. When adoption is tracked, farmers who are not direct beneficiaries are usually left out. Stakeholders also identified partially fulfilled needs relating to production inputs (e.g., number of tractors), knowledge (e.g., farmers' prefer-

ence in terms of CSA practices), outputs (e.g., area under tillage) and outcomes (e.g., percent increase in productivity among households adopting CSA).

Unmet needs: Several of the government's information needs are entirely unmet (7 out of 24) (table 2). Government stakeholders primarily need M&E for domestic policy purposes, so improvements in the availability of data on CSA could lead directly to policy improvements. The consultations in Zimbabwe also involved donors (or donor projects), NGOs and research institutes. In comparison to government agencies, a greater proportion of donors' information needs relate to outputs, especially the extent of CSA adoption by number of beneficiaries and total area covered. Donors also expressed a strong interest in evidence on the outcomes of CSA. Better availability of M&E data collected by government would therefore help donor agencies build the case for and target their investment support. Many of the M&E needs expressed by government agencies were also cited by the non-government stakeholders and research institutes. In particular, all need better data regarding production conditions (such as number and type of farm machinery used and levels of livestock production) as well as information on current CSA projects and the extent of adoption of CSA among farmers ([annex 4](#)).

Table 2. CSA information needs that are currently not met by existing M&E systems.

Domain	Suggested indicators to cover unmet information needs	Stakeholders interested	Benefits of having better data from M&E
Inputs	Number of indicators to track in CSA	Climate Change Management Department (MEWC-CCMD) of the Ministry of Environment, Water and Climate (MEWC),	Reporting at policy level and to the NDCs
Activities	What CSA projects are being implemented	AGRITEX Zimbabwe	No benefit identified
	How the country's efforts on CSA issues fare compared to regional counterparts	Department of Livestock and Veterinary Services of the Ministry of Lands, Agriculture and Rural Resettlement (MLARR),	Management purposes
Outputs	Area under reduced tillage and disaggregated on the basis of power source—tractor, animal, manual	Department of Mechanisation of the Ministry of Lands, Agriculture and Rural Resettlement (MLARR)	To obtain a global picture in terms of mechanisation
	Energy—distribution of solar pumps and biogas plants		
Outcomes	Percentage change in incomes of households adopting CSA	AGRITEX Zimbabwe	To assess progress towards the use of clean energy sources
	Number of households with increased resilience as a result of CSA uptake		To assess the impact of adopting CSA on household incomes
			To assess progress towards building resilience to climate change

Existing systems for M&E of CSA

Most of the available information about the agricultural sector in Zimbabwe is generated through the country's Annual Crop and Livestock Assessment/Survey Reports. The design of data collection tools is done at the

head-office level with input from provinces and districts. Data collection tools are customized by agricultural extension workers, with assistance from the province and district levels. Extension workers are responsible for collecting data in their areas of operation. Data quality is controlled by supervisors and district officers, who conduct random checks. Data entry and analysis is conducted at the district level with support from the

national team. There are three rounds of assessments, which report on time-relevant aspects of production, such as the following: round 1: season quality, planting dates, crop and livestock conditions, area planted, quality of grazing lands and availability of water for animals; round 2: expected yields; round 3: post-harvest assessment of actual yields.

Stakeholders expressed some concerns about capacities to conduct the surveys, for a number of reasons. First, guidelines and procedural requirements are unclear, raising concerns about data quality. Second, although the human resources are available through AGRITEX, the staff members may lack the necessary skills; recently there has been a move toward digital data collection via phones and tablets, but the necessary devices have not been acquired. Lastly, the responsibility for data analysis and management falls to technical agricultural staff, who have not been trained specifically for M&E. Although some stakeholders pointed to these potential gaps in capacity, others suggested that both budgets and capacities for M&E are in place.

Although this assessment was unable to focus on other M&E systems because of time constraints, such systems do exist. For example, M&E systems mentioned in the INDC include: (1) the government’s results-based management system, which is coordinated by the Office of the President and Cabinet; (2) accounting and monitoring of the policy by the existing INDC National Steering Committee and the Climate Change Management Department; (3) international best-practice guidelines on developing adaptation plans; (4) the Zimbabwe Vulnerability Assessments facilitated by the Zimbabwe Vulnerability Assessment Committee; (5) performance matrices from the Climate Change Response Strategy; (6) the Drought Mitigation Strategy; (7) Zimbabwe National Statistics (ZIMSTAT)

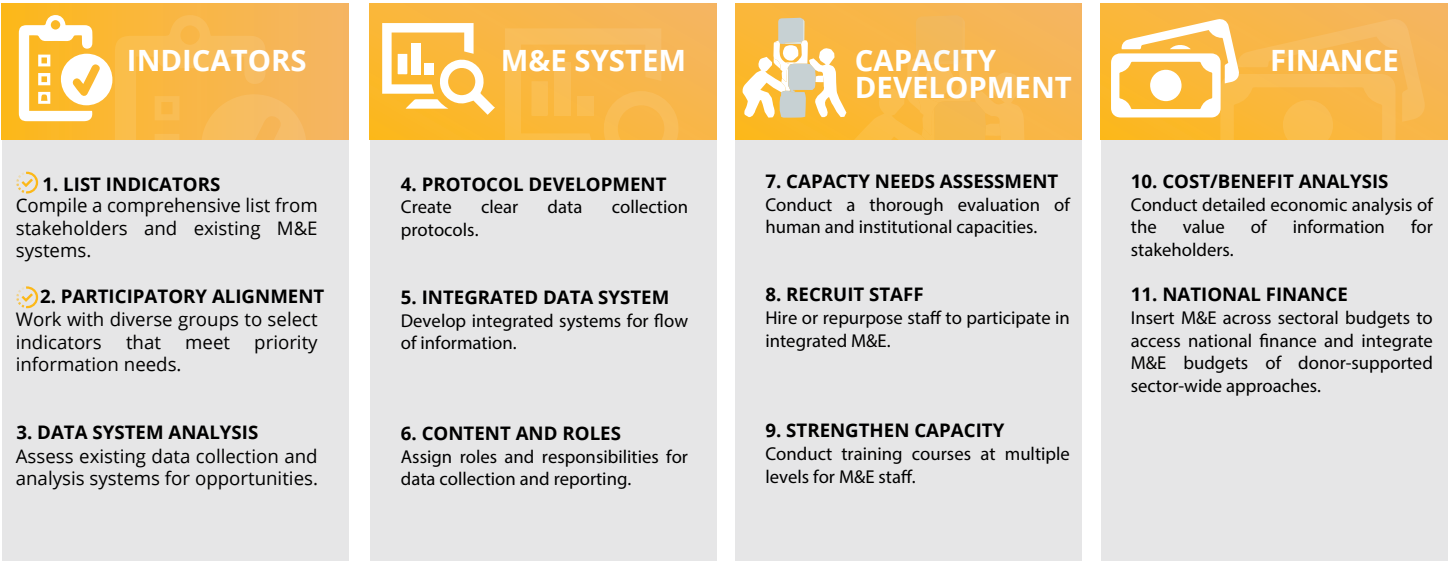
surveys of livestock and crops; (8) the CAADP and ZAIP monitoring frameworks; and (9) the Disaster Risk Management Bill. Assessment of these systems and others not yet identified will be a critical step in moving CSA M&E forward.

Towards a national integrated system for CSA MRV

During the assessment, stakeholders repeatedly suggested that a national CSA M&E platform is needed. Some diversity of opinions emerged regarding whether such a system could be based on existing systems such as the annual crop and livestock surveys or those named in the INDC, or whether a standalone system should be designed and implemented. Creating a standalone system would be financially difficult because CSA is not itemized for budgetary allocations by the Ministry of Finance. Multiple stakeholders suggested a need to link international MRV requirements with local-level M&E of projects and national reporting. Potential actions to further develop a CSA M&E system discussed with stakeholders principally fit into one or more of the following categories: indicators, M&E systems, capacity building and finance. Key action areas emerging from stakeholder consultations would help to create effective systems by deciding on a limited set of key indicators that can be monitored; creating a database that could be integrated with existing systems to track progress; building the human capacity to collect the required data and operate the M&E systems; and securing reliable sources of financing so that the crucial information can be collected and analyzed (figure 2).

Indicators: Stakeholders have identified a set of indicators to support the expected results identified in the CSA Framework (annex 5, 6). This set builds on but is not limited to the specific indicators named in the

Figure 3. Steps towards nationally integrated CSA MRV in Zimbabwe. Activities can run simultaneously.



Notes: 🔄 = Steps where some progress is being made.

Zimbabwe CSA Manual. From this point of departure, participants at the national workshop conducted as part of this Profile identified 48 indicators to support the 10 expected results. A clear next step would be to determine which of the indicators are already being collected in some capacity, who is collecting them and what are the protocols for collection. It is very likely that a non-trivial number of them may already be covered, such as number of farmers with access to technologies, number of farmers engaged in post-harvest processes, and number of private-public partnerships. It will then be important to map the proposed indicators against other existing frameworks. Table 2 illustrates how indicators may map against the inputs, activities, outputs and outcomes in a results framework. This may be a useful way to structure indicators for tracking policy and programme effects. Given the interest among some stakeholders in linking domestic M&E to international reporting, it would also be important to map the indicators against international reporting requirements. For example, guidelines for UNFCCC national communications state that countries “are encouraged to provide information on and, to the extent possible, an evaluation of, strategies and measures for adapting to climate change.” Such a mapping could thus help ensure that information collected primarily for domestic stakeholders’ needs also help meet international reporting requirements.

M&E systems: Despite the diversity of needs and uses, stakeholders expressed interest in building one national M&E system. This would require the development of new M&E partnerships and collaborative networks to foster coordination at all levels. Examples of systems where capacities exist and could be built upon include ZIMSTAT, which has the personnel capacity to collect and manage data and already has strong partnerships with MLARR. AGRITEX has a comprehensive, ongoing crop and livestock assessment exercise that could be the basis for CSA M&E, and the CSA Framework lays out how the CSA Unit in the country could have the responsibility for coordinating CSA M&E efforts. Some questions, however, remain unanswered, such as how to link project-level M&E with national M&E. Zimbabwe’s CSA community needs to conduct a detailed assessment of existing M&E systems that includes technical infrastructure, human capacity and the roles and responsibilities of various actors. This detailed assessment will be an important foundation for moving forward.

Capacity building: Many stakeholders raised concerns over capacity to conduct M&E and produce high-quality

data. Targeted capacity building will be needed both at the front line with extension agents and other programme staff who collect data in the field, and also at the back end with district and project staff who compile and analyze information. Building multi-stakeholder platforms for sharing data and experience may help to create institutional trust and collaboration. Stakeholders emphasized that success relied in large part simply on having enough staff members to conduct the processes. Thus, it will be important to increase the number of staff members with M&E responsibilities, reinforce capacities and create mechanisms for cross-institutional exchange.

Financing: Nothing will happen without adequate financing to cover the costs of staff, equipment, meetings and other needs. Although all units require such information, M&E is often the last unit to receive funds. Prioritizing this information could help target which steps should be improved first and clarify the benefits of doing so.

Outlook

Development of a fully functional national CSA M&E system in Zimbabwe will take time and money. It will be important to take a phased approach to iteratively design, develop and deploy necessary components in a participatory way. This Profile provides a benchmark, a first appraisal, to this end. The assessment identified key actions on indicators, M&E systems, capacity building and finance that together outline a pathway for implementation. Now is the time to move forward in the development of a CSA M&E system that can meet project, national and international requirements in cost-effective ways while at the same time helping stakeholders in Zimbabwe improve the effectiveness of CSA promotion.

Acknowledgements

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Contact Us

Todd Rosenstock
t.rosenstock@cgiar.org
www.worldagroforestry.org
<http://p4s.ccafs.cgiar.org>

