

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

Annexes

Annex 1. Policies for CSA in Zambia, annotated.

| Policy | Year of issue | Policy domain | Are activities promoted in the plan / relevant to CSA pillars? | | | Does the policy promote CSA measures? | Is CSA mentioned? | Does the policy have an M&E system? |
|--|---------------|-------------------------------------|--|----------------------------------|---------------------------|--|---|---|
| | | | Productivity | Adaptation | Mitigation | | | |
| CSA Framework | 2018 | CSA | Yes | Yes | Yes | Yes | Yes | No, but mentions the need of one |
| Seventh National Development Plan (7NDP) (2017-2021) | 2017 | Economic growth; Productivity | Yes | Very swiftly | | No: only in passing, without specific policy intention | No: only in passing, without specific policy intention | Yes (results-based), at district and sub-district level |
| National Policy on Climate Change (NPCC) | 2016 | Climate | | Yes, but as vision not objective | | “CSA measures” mentioned swiftly, without specific policy intention | No: only in passing, without specific policy intention | Not at the time the policy was written |
| Intended Nationally Determined Contributions (INDC) (2015-2030) | 2015 | Climate change; Agriculture | | Yes | Yes. Quantitative targets | Yes: a list of CSA practices | Yes (not defined, but mentioned throughout the policy text) | No. Mentions plans for MRV system |
| National Agricultural Investment Plan (NAIP) (2014-2018) | 2013 | Economic growth; Food security | Yes. Includes targets related to the pillar | Yes. Includes relevant targets | | Yes (without naming them as CSA practices, but rather sustainable land management, etc.) | No | Yes, led by Ministry of Agriculture and Livestock. |
| First and Second National Agricultural Policy (NAP & SNAP) | 2011, 2016 | Agriculture; Food security; Climate | Yes | Yes | | Yes, in SNAP (practices relevant for CSA) | No, but actions promoted relate to CSA | Not yet. |
| Reducing Emissions from Deforestation and Degradation (REDD+) Strategy | 2010 | Climate change; Resilience | | Yes | Yes | Yes (mostly referred to as conservation agriculture (CA)) | Yes, but swiftly defined and not clear | Yes (Zambia National Forest Monitoring System) |

| Policy | Year of issue | Policy domain | Are activities promoted in the plan / relevant to CSA pillars? | | | Does the policy promote CSA measures? | Is CSA mentioned? | Does the policy have an M&E system? |
|---|---------------|---|--|------------|------------|--|--|---|
| | | | Productivity | Adaptation | Mitigation | | | |
| National Climate Change Response Strategy (NCCRS) | 2010 | Climate change; Resilience; Disaster Risk Reduction; Mitigation | | Yes | Yes | Yes. Not specifically named as CSA, but relevant for CSA | No (the term was not coined at the time) | Yes, but unspecific |
| National Adaptation Programme of Action (NAPA) | 2007 | Climate change, resilience | Yes | Yes | | Yes | No | No. Only specifies that all programmes under NAPA will use the same M&E procedures as those used in other programmes financed by Global Environment Facility, with United Nations Development Programme (UNDP) as implementing agency |

Annex 2. Stakeholders' influence and interest in CSA M&E in Zambia.

| | | | |
|--|---------------|--|--|
| Influence on implementation of CSA framework | High | | Ministry of Lands Ministry of Agriculture Ministry of National Development Planning African Development Bank Food and Agriculture Organization of the United Nations |
| | Medium | World Bank Kasisi Agricultural Training School MUSIKA United Nations Development Programme (UNDP) Ministry of Fisheries & Livestock Ministry of Finance | CSA Alliance - Oxfam, World Vision, World Wildlife Fund (WWF), Participatory Ecological Land Use Management (PELUM), Plan International, Concern Worldwide, Catholic Relief Services (CRS), CARE, CGIAR) National Association for Smallholder Farmers of Malawi Conservation Farming Unit (CFU) CRS–Southern Africa Regional Office |
| | Low | Ministry of Gender NWK-Agriservices Zambia | Cotton Board of Zambia |
| | | | |
| | | Low Medium High | |
| | | | Level of interest in M&E of CSA |

Annex 3. Roles in CSA generally, interest in CSA M&E and roles in CSA M&E

| Stakeholder | Roles in CSA support or implementation | | Roles in CSA M&E | | |
|---|--|--|------------------|---|--|
| | <ul style="list-style-type: none"> ■ sets policies or plans for CSA ■ implements CSA policies, strategies or plans ■ ensures finance for CSA Framework and other related policies ■ coordinates among stakeholders in CSA ■ develops/ shares knowledge and information about CSA, incl. training and extension services | <ul style="list-style-type: none"> ■ data collection ■ data management and analysis ■ reporting ■ dissemination of information ■ user of reported information | | | |
| Ministry of Agriculture | ■ ■ ■ | | ■ ■ | | |
| Ministry of Fisheries & Livestock | ■ ■ ■ | | ■ ■ | | |
| Ministry of Lands, Environment & Natural Resources | ■ ■ | | ■ ■ ■ | | |
| Ministry of National Development Planning | ■ ■ | | ■ ■ | | |
| Ministry of Gender | ■ ■ | | ■ ■ | | |
| World Bank | | ■ | | ■ | |
| UNDP | | ■ | | ■ | |
| FAO | | ■ | | ■ | |
| African Development Bank | | ■ | | ■ | |
| CSA Alliance members: World Vision, Oxfam, PELUM, WWF | ■ (Develops national CSA scaling plans) | | ■ ■ | | |
| Conservation Farming Unit (CFU) | ■ (Develops national CSA scaling plans) | | ■ ■ | | |
| NWK Agriservices Zambia | ■ (Develops national CSA scaling plans) | | ■ ■ | | |
| Zambia Agriculture Research Institute (ZARI) | ■ | | ■ ■ | | |
| MUSIKA | ■ (Develops national CSA scaling plans) | | ■ ■ | | |
| National Union for Small Scale Farmers of Zambia (NUSFAZ) | ■ (Develops national CSA scaling plans) | | ■ ■ | | |
| Golden Valley Research Trust (GART) | ■ | | ■ ■ | | |
| Kasisi Agriculture Training Institute | ■ | | ■ ■ | | |
| Academia: University of Zambia, Copperbelt University, Natural Resources Development College, Mulungushi University, Rusangu University, etc. | ■ | | ■ ■ ■ | | |
| Development Bank of Zambia, Zambia National Commercial Bank | | ■ | | ■ | |

Annex 4. Stakeholders' M&E needs identified through interviews

| Stakeholder name | What does the stakeholder need to know? | How does / would the stakeholder use this information? | Can the stakeholder get this information from existing M&E systems (fully, partially, not at all)? | If the stakeholders can fully or partially get the information, from what M&E system can they get it? | If only partially or not at all, is there an M&E system that could be adapted to provide this information? |
|-------------------------------------|---|---|--|---|--|
| Ministry of Agriculture | Number of organizations/institutions promoting CSA | To plan how CSA can be incorporated in the Ministry's results framework | Not at all | None | None |
| | Number of organizations collaborating on CSA | To plan CSA scaling at country level | Not at all | None | None |
| | Type of CSA activities being promoted | To plan how CSA can be incorporated in the Ministry's results framework | Not at all | None | None |
| Ministry of Fisheries and Livestock | Number of learning institutions incorporating grassland management in their curricula | To plan for CSA upscaling through sustainable animal production | Not at all. The organization does not have an M&E system | None | None |
| | Number of organizational staff trained in grassland management | To determine human capital development in grassland management | Not at all. The organization does not have an M&E system | None | None |
| | Number of grass species conserved | To determine grass species availability | Not at all. The organization does not have an M&E system | None | None |
| | Number of farmers growing quality graze for animal feed | To determine the farmers interest in animal production | Not at all. The organization does not have an M&E system | None | None |
| | Percentage change in animal health | To plan for CSA upscaling through sustainable animal production | Not at all. The organization does not have an M&E system | None | None |

| Stakeholder name | What does the stakeholder need to know? | How does / would the stakeholder use this information? | Can the stakeholder get this information from existing M&E systems (fully, partially, not at all)? | If the stakeholders can fully or partially get the information, from what M&E system can they get it? | If only partially or not at all, is there an M&E system that could be adapted to provide this information? |
|--------------------|---|--|--|---|--|
| | Number of farmers trained in manure management | To plan for CSA upscaling through sustainable animal production | Not at all. The organization does not have an M&E system | None | None |
| Ministry of Gender | Improved capacity of extension providers in gender and climate change | To contribute/assist in the provision of appropriate technologies in the country | Not at all. Lack of adequate resources to promote capacity building activities for extension officers | Ministry of Agriculture Annual Reports | CFU and MUSIKA |
| | Number & percent of women participating in CSA | To share and promote visibility of women in CSA | Not at all. Most of the current reports are not gender disaggregated and most CSA data is not collected and processed | | CFU Outcome Survey Reports and MUSIKA Outcome Survey Reports |
| | Women's increased climate resilience through women economic empowerment programmes | To contribute towards climate-change adaptation and resilience in the targeted communities | Not at all. Project not yet fully implemented by MoG and other NSAs have not focused on this objective. | Not available | Project Annual Reports and DIFD independent Survey reports of CFU and MUSIKA projects |
| | Socioeconomic status of CSA beneficiaries in Zambia | To assess resilience of women and men in the country | Not at all. The activity requires more resources to implement and climate change activities have just been started by some NSAs | | Government of Zambia Living Conditions Survey Report. CFU and MUSIKA |
| | Number of existing early detection/warning system and gender-sensitive disaster management plans at national and community levels | To assist in preparation for disaster management and mitigation measures | Not at all. The Disaster Management and Mitigation Unit lacks resources to conduct this activity and share results with stakeholders | | The Metrological Department weather reports, CFU and MUSIKA |

| Stakeholder name | What does the stakeholder need to know? | How does / would the stakeholder use this information? | Can the stakeholder get this information from existing M&E systems (fully, partially, not at all)? | If the stakeholders can fully or partially get the information, from what M&E system can they get it? | If only partially or not at all, is there an M&E system that could be adapted to provide this information? |
|------------------|---|--|--|---|--|
| | Number and percentage of women participating in preservation of the environment and mitigation of climate change activities | To share and promote visibility of women in CSA | Partially, due to weak monitoring and reporting system | CFU and MUSIKA | CFU Outcome Survey Reports and MUSIKA Outcome Survey Reports |
| | Number and percentage of women and men with increased climate resilience due to uptake of CSA | To understand CSA technology adoption and impacts among women | Partially. MoG is a member of the Council of Ministers and Climate Change Steering Committee where reports are submitted. But the reporting mechanism is still weak. The MoG climate change program is not yet implemented | The one to be designed & launched by Ministry of Lands and Natural Resources' Climate Change Department; MUSIKA and CFU | CFU Annual Progress Reports and MUSIKA Outcome Survey Reports |
| | Changes in availability of and access to agricultural land for women farmers | To contribute to women's increased control over productive resources | Partially. The ministry and some NSAs have implemented projects that address this objective | CFU and MUSIKA | Project Reports of Women's Land Rights Projects, CFU and MUSIKA |
| | Gender-responsive CSA technologies for women farmers (type, number) | To contribute the women and men's adaption and mitigation activities | Partially. There is commitment to achieve this as seen from development of policies and implementation framework by government, but this needs to be rolled out to communities | CFU and MUSIKA | Project Annual Reports and DIFD independent Survey reports of CFU and MUSIKA CSAZ projects |

| Stakeholder name | What does the stakeholder need to know? | How does / would the stakeholder use this information? | Can the stakeholder get this information from existing M&E systems (fully, partially, not at all)? | If the stakeholders can fully or partially get the information, from what M&E system can they get it? | If only partially or not at all, is there an M&E system that could be adapted to provide this information? |
|--|--|--|--|---|--|
| | Number of organizations implementing CSA in the country | To assist in building of alliances and networks for CSA | Partially. There is weak coordination and collaboration among key stakeholders at all levels | CFU and MUSIKA | The Country CSA Profile Report |
| | Types of CSA activities implemented by stakeholders in different parts of Zambia | To provide this information to needy women and communities | Partially. There is weak coordination and collaboration among key stakeholders at all levels | CFU and MUSIKA | Project Annual Progress Reports, CFU and MUSIKA |
| Zambia Agriculture Research Institute (ZARI) | Number of farmers practicing CSA | To enhance technology dissemination | Not at all | Number of farmers practicing CSA | None |
| | Number of CSA technologies being made available to farmers | To enhance technology assessment/validation | Not at all | Number of CSA technologies being made available | None |
| | Number of CSA technologies developed | To enhance technology assessment | Not at all | Number of CSA technologies developed | None |
| | Percentage change in farmers livelihoods resulting from CSA promotion | To determine the effectiveness and benefits of CSA | Not at all | Percentage change in farmers livelihoods resulting from CSA promotion | None |
| | Number of organizations promoting CSA | To enhance technology dissemination | Not at all | Number of organizations promoting CSA | None |
| | Level of demand for CSA among farmers | To determine the effectiveness and benefits of CSA | Not at all | | None |
| | Areas where CSA is being practiced/promoted | To enhance technology dissemination | Not at all | | None |

| Stakeholder name | What does the stakeholder need to know? | How does / would the stakeholder use this information? | Can the stakeholder get this information from existing M&E systems (fully, partially, not at all)? | If the stakeholders can fully or partially get the information, from what M&E system can they get it? | If only partially or not at all, is there an M&E system that could be adapted to provide this information? |
|---------------------------|--|---|--|---|--|
| Conservation Farming Unit | Number of farmers trained in CSA practices (disaggregated by gender) | To understand individual access to knowledge of each participating farmer and track performance | Fully. Workshop attendance lists are provided for each training | Not known | Not sure. No other studies with CSA focus commissioned outside the project |
| | Proportion of farmer households above US\$ 2.5/day income (by type of adopter) | To assess adoption rates among project beneficiaries | Fully. The assessment reports indicate this information | | |
| | Number of farmers applying herbicides for the control of weeds | To enhance services delivered to farmers and ensure project success | Fully. The farmers are provided with extension services | | |
| | Area of land under minimum tillage, conservation tillage, conservation farming (CF) | To quantify the areas under CSA | Fully. The coordinators measure the farmers' fields | | |
| | Proportion of households above the Livelihood Protection Threshold (by socioeconomic status and adoption rate) | To assess project impacts among beneficiaries | Fully. The M&E reports indicate this detail | | |
| | Margin of difference between the average yield of adopters and that of conventional farmers (by tillage type) | To make a case for CF in the country and influence uptake among other stakeholders | Fully. The monitoring reports and independent evaluation reports indicate this detail | | |
| | Margin of difference between the average production of adopters and that of conventional farmers (disaggregated by tillage type) | To make a case for CF in the country and influence uptake among other stakeholders | Fully. The monitoring reports and independent evaluation reports indicate this detail | | |

| Stakeholder name | What does the stakeholder need to know? | How does / would the stakeholder use this information? | Can the stakeholder get this information from existing M&E systems (fully, partially, not at all)? | If the stakeholders can fully or partially get the information, from what M&E system can they get it? | If only partially or not at all, is there an M&E system that could be adapted to provide this information? |
|------------------|--|---|--|---|--|
| | Margin of difference between the proportion of time women spent on on-farm activities (disaggregated by CSA adopter/non-adopter) | To understand how women are using the newly freed-up time | Fully. The monitoring reports and independent evaluation reports indicate this detail | | |
| | Average soil moisture content in basins and rip lines versus comparative conventional farming alternatives (during rainy season) | To understand how different technologies are affecting soil health | Fully. The monitoring reports and independent evaluation reports indicate this detail | | |
| | Number of independent evaluation publications released aimed at lessons learned/improving implementation | To document lessons learned and share knowledge | Fully. The project commissions periodic studies and evaluations | | |
| | Number of M&E and research publications released aimed at lessons learned/improving implementation | To validate results of the project and make informed decisions | Fully. The project commissions periodic studies and evaluations | | |
| | Number of CFU-CSA communique released | To contribute to knowledge sharing about CSA activities | Fully. Periodic studies and evaluations commissioned | | |
| | Number of rural agrodealer outlets selling CSA equipment | To contribute to the promotion of accessible CSA inputs and equipment in target communities | Fully. Trainings for the agrodealers conducted, registering details on locations, size of business | | |
| | Contribution of private sector to CSA activities | To assess upscaling of CSA activities in Zambia | Fully. The project focusses on private-sector involvement in CSA | | |

| Stakeholder name | What does the stakeholder need to know? | How does / would the stakeholder use this information? | Can the stakeholder get this information from existing M&E systems (fully, partially, not at all)? | If the stakeholders can fully or partially get the information, from what M&E system can they get it? | If only partially or not at all, is there an M&E system that could be adapted to provide this information? |
|------------------|--|---|--|---|--|
| | Number of service providers offering mechanized tillage services and number offering Agricultural Development Programme (ADP) tillage services | To know who is providing services to the farmers and where | Fully. The project keeps a register of service providers in the operational areas and promotes linkages. | | |
| | Number of in-community sales agents (ex-CF lead farmers) engaged by the private sector | To understand the availability of commodity aggregation centres in respective communities | Fully. The project keeps registers of service providers and promotes linkages and knowledge sharing among stakeholders | | |
| | Proportion of farmers that acquired good CSA knowledge following trainings | To determine adoption potentials by trained farmers | Fully. The registered farmers are tracked and met regularly during the project implementation | | |
| | Number of farmers sustainably adopting CF practices following attendance CFU training (disaggregated by new/old) | To establish CSA practices adoption rates among the trained smallholder farmers | Fully. The registered farmers are tracked and met regularly during the project implementation | | |
| | Proportion of households above the Survival Threshold (disaggregated by socioeconomic status and adoption status) | To assess project impact among the beneficiaries | Fully. The results of the evaluations indicate this detail. | | |
| | Number of farmers using ADP and mechanized tillage (disaggregated by draught power) | To establish rate of uptake and demand for mechanized services in the project areas | Fully. There are follow-up activities to assess adoption and use of services | | |

| Stakeholder name | What does the stakeholder need to know? | How does / would the stakeholder use this information? | Can the stakeholder get this information from existing M&E systems (fully, partially, not at all)? | If the stakeholders can fully or partially get the information, from what M&E system can they get it? | If only partially or not at all, is there an M&E system that could be adapted to provide this information? |
|------------------|--|---|--|---|--|
| MUSIKA | Number of smallholder farmers investing in CSA-related inputs and technologies | To determine uptake of CSA activities by farmers | Fully. CFU conducts CSA adoption survey | The organization M&E framework | |
| | Number of farmers exposed to CSA advisory services, messaging and awareness | To know how many farmers are being exposed and taking up CSA | Fully. CFU conducts CSA trainings and knowledge-acquisition surveys | The organization M&E framework | |
| | Number of insurance companies offering weather index insurance (WII) products through the e-voucher initiative | To determine farmers' access to WII | Fully. CFU promotes WII activities for beneficiaries of e-voucher system | The organization M&E framework | |
| | Number of appropriate and marketable WII products developed for smallholder market | To have useful information for clients and CSA stakeholders | Fully. CFU promotes WII activities for beneficiaries of e-voucher system | The organization M&E framework | |
| | Number of smallholder farmers investing in WII (through e-voucher initiative) | To know the level of uptake and adaptation of WII | Fully. CFU promotes WII activities for beneficiaries of e-voucher system | The organization M&E framework | |
| | Number of farmers exposed to WII sensitization and marketing | To promote WII among smallholder farmers | Fully. CFU promotes WII activities for beneficiaries of e-voucher system | The organization M&E framework | |
| | Number of agrodealers trained in CSA | To determine the use and adaptation of CSA | Fully. Input supplier register kept by organization | The organization M&E framework | |
| | Types of CSA inputs available to smallholder farmers | To determine smallholder farmers' access to CSA inputs and technologies | Fully. The organization conducts input suppliers survey | The organization M&E framework | |

| Stakeholder name | What does the stakeholder need to know? | How does / would the stakeholder use this information? | Can the stakeholder get this information from existing M&E systems (fully, partially, not at all)? | If the stakeholders can fully or partially get the information, from what M&E system can they get it? | If only partially or not at all, is there an M&E system that could be adapted to provide this information? |
|------------------|--|--|--|---|--|
| | Number of sales points (agrodealers, input supplier depots, etc.) offering CSA-relevant inputs, advice and information | To determine spread of CSA facilities in the zone of influence | Fully. The organization conducts input suppliers survey | The organization M&E framework | |
| | Number of agrodealers and input suppliers trained in CSA and its relevance to the inputs market | To create more awareness and provide scaling up of CSA | Fully. The organization conducts input suppliers trainings and surveys | The organization M&E framework | |
| | Number of public technical resources trained in CSA to support the programme at field level | To create networks of CSA personnel and refer smallholder farmers to them for advice | Fully. The organization conducts input suppliers trainings and surveys | The organization M&E framework | |
| NWK Zambia | Number of ginners adopting CSA | To determine the level of ginners adoption of CSA | Not at all | None | None |
| | Track numbers of farmers trained in CSA | To plan for CSA upscaling | Not at all. The organization does not have an M&E system | None | None |
| | Number of organizational staff trained in CSA | To enhance human resource capacity in CSA | Not at all. The organization does not have an M&E system | None | None |
| | Number of organizations that have applied for CSA projects | To determine the levels of stakeholder interest in CSA | Not at all. The organization does not have an M&E system | None | None |
| | Number of related projects implementing CSA activities | To determine the levels of stakeholder interest in CSA | Not at all. The organization does not have an M&E system | None | None |
| | Number of lesson platforms established/created on CSA | To determine extent of CSA learning platforms | Not at all. The organization does not have an M&E system | None | None |

| Stakeholder name | What does the stakeholder need to know? | How does / would the stakeholder use this information? | Can the stakeholder get this information from existing M&E systems (fully, partially, not at all)? | If the stakeholders can fully or partially get the information, from what M&E system can they get it? | If only partially or not at all, is there an M&E system that could be adapted to provide this information? |
|------------------|--|---|--|---|--|
| | Number of collaborations with other CSA stakeholders | To determine the extent of collaboration among CSA stakeholders | Not at all. The organization does not have an M&E system | None | None |
| | Number of hectares under minimum tillage | To determine farmers adopting CA | Not at all. The organization does not have an M&E system | None | None |
| | Number of farmers practicing crop rotation | To determine number of farmers adopting CA | Not at all. The organization does not have an M&E system | None | None |
| | Number of CSA demonstration plots established | To increase farmers' yields and provide platform for farmer-to-farmer learning | Not at all. The organization does not have an M&E system | None | None |
| | Number of female farmers practicing CSA | To increase farmers' income and contribute to closing of gender productivity gap | Not at all. The organization does not have an M&E system | None | None |
| | Number of farmers setting up nurseries | Agroforestry farmers can get increase of land under agriculture | Not at all. The organization does not have an M&E system | None | None |
| | Number of <i>F. albinda</i> standing | To lobby for farmers' carbon market so that there is an incentive for them to practice CSA because they will get premiums | Not at all. The organization does not have an M&E system | None | None |
| | Number of <i>F. albinda</i> seedlings standing | Agroforestry farmers can get increase of land under agriculture | Not at all. The organization does not have an M&E system | None | None |
| | Number of farmers transplanting | Agroforestry farmers can get increase of land under agriculture | Not at all. The organization does not have an M&E system | None | None |

| Stakeholder name | What does the stakeholder need to know? | How does / would the stakeholder use this information? | Can the stakeholder get this information from existing M&E systems (fully, partially, not at all)? | If the stakeholders can fully or partially get the information, from what M&E system can they get it? | If only partially or not at all, is there an M&E system that could be adapted to provide this information? |
|------------------|--|--|--|---|--|
| CSA Alliance | Number of smallholder farmers practicing CSA | To determine the use and adaptation of CSA | Not at all. The alliance does not have CSA M&E system | None | None |
| | Percentage change in the livelihoods of smallholder farmers practicing CSA | To determine the impact of CSA technologies at household level | Not at all. The alliance does not have CSA M&E system | None | None |
| | Number of actors promoting CSA | To determine collaborations institutions of influence on CSA | Not at all. The alliance does not have CSA M&E system | None | None |
| | Number of CSA technologies practiced by smallholder farmers | To plan CSA upscaling | Not at all. The alliance does not have CSA M&E system | None | None |
| | Type of CSA technologies practiced by smallholder farmers | To determine the number of CSA technologies being scaled up | Not at all. The alliance does not have CSA M&E system | None | None |

Annex 5. CSA MRV validated results framework for Zambia

| CODE INPUTS, OUTPUT, RESULTS, ACTIVITIES | VERIFIABLE INDICATORS | TARGETS | MEANS OF VERIFICATION | RISKS | STAKEHOLDERS |
|---|----------------------------------|----------------------|----------------------------------|---|--------------|
| GOAL | | | | | |
| To contribute to the achievement of climate-resilient livelihoods, food & nutrition security and increased incomes among small-scale farmers in Zambia | Poverty levels and income level | Reduce poverty by 5% | Reports/Surveys | Continuing political stability; Stable agricultural markets; No catastrophic natural events, including weather, human disease, livestock disease, crop disease, insect plague, etc.; Continuing secure operating environment; Stable exchange rates; No significant cultural barriers | |
| PURPOSE | | | | | |
| Farmers manage their farm enterprises as business entities and surrounding environment using adopted CSA approach in the face of changing climate | Number of farmers engaged in CSA | 1,000,000 | Reports | | |
| RESULTS | | | | | |
| Participating smallholder farm households have increased yield and reliable agricultural production, improved household nutritional status and increased income | Productivity levels | <20% increase | Reports | | |
| Increased CSA-driven financing and investment in the agricultural sector | CSA activities funded | 25% of financing | Financial and investment reports | | |
| Increased use of CSA interventions with medium- to long-term sustainable consequences on environment and business | CSA technology types adopted | 10 per sector | Reports | | |
| Policy environment has been improved for the uptake & sustained practice of CSA | Policy review and enactments | 5 reviews | Review reports | | |

| CODE INPUTS, OUTPUT, RESULTS, ACTIVITIES | VERIFIABLE INDICATORS | TARGETS | MEANS OF VERIFICATION | RISKS | STAKEHOLDERS |
|--|---|---|-----------------------|-------|------------------------|
| Project is well managed and coordinated | Coordinating meetings | 1 meeting/year | Meeting reports | | |
| ACTIVITIES | | | | | |
| 1.1. INCREASED TECHNICALLY BASED SOCIOECONOMIC OUTPUT | | | | | |
| 1.1.1. Participating farmers improve their livelihoods & resilience | | | | | |
| <ul style="list-style-type: none"> ▪ Households increase incomes ▪ Support different social groups to engage in CSA ▪ Support exchange learning visits among farmers ▪ Promote agricultural shows ▪ Produce learning materials on CSA translated in local languages and made into videos ▪ Promotion of nutrient-dense foods ▪ Promotion of fruit tree cultivation, harvesting and processing, and community nurseries ▪ Promotion of sustainable forest product, harvesting and processing, and domestication ▪ Build capacity in community on gender-sensitive nutrition, including food access, utilization, preparation ▪ Promote local industry development for processed produce, including 'cottage' industries ▪ Build capacity in communities on market and value chain analysis to identify opportunities for household or community post-harvest processing to add value | <ul style="list-style-type: none"> ▪ Number of households increased income ▪ Number of beneficiaries ▪ Number of visits ▪ Number of types of materials ▪ Number of fortified foods ▪ Ha under trees ▪ Number of trainings ▪ Number of value chains ▪ Number of processing plants ▪ Number of value chain analysis | <ul style="list-style-type: none"> ▪ 50% of participating ▪ 35% participants ▪ 1 per group ▪ 5 per result area ▪ 2 food types ▪ 20,000 ha ▪ 1 training per community ▪ 10 value chains ▪ 1 plant per province ▪ 10 value-chain analyses | | | |
| 1.1.2. Increased CSA-based crop production | | | | | |
| <ul style="list-style-type: none"> ▪ Promotion of improved seed varieties | <ul style="list-style-type: none"> ▪ Number of promotions held | <ul style="list-style-type: none"> ▪ 10 promotions in each district | | | Research organizations |

| CODE INPUTS, OUTPUT, RESULTS, ACTIVITIES | VERIFIABLE INDICATORS | TARGETS | MEANS OF VERIFICATION | RISKS | STAKEHOLDERS |
|---|---|--|-----------------------|-------|---|
| <ul style="list-style-type: none"> ▪ Promote drought-tolerant, heat-tolerant, disease-tolerant, and duration (life cycle) of crop varieties, as contextually appropriate ▪ Contextually appropriate agricultural inputs ▪ Promote integrated pest management ▪ Promote selected post-harvest management, processing, and effective household storage options ▪ Promote integrated soil fertility management (ISFM) | <ul style="list-style-type: none"> ▪ Number of varieties released ▪ Number of appropriate agricultural inputs promoted ▪ Number of promotions ▪ Number of post-harvest management promotions ▪ Number and types of ISFM promoted | <ul style="list-style-type: none"> ▪ 20 varieties released ▪ 10 promotions ▪ 10 promotions in each province | | | <p>(national and international) private sector; seed houses, agrodealers NGOs, academia, extension, farmers' unions</p> |
| 1.1.3. Increased CSA-based livestock and fish production | | | | | |
| <ul style="list-style-type: none"> ▪ Promote more resilient and climate-appropriate livestock and fish breeds ▪ Promote sustainable grazing and holistic livestock management, as appropriate ▪ Promotion of improved fodder, feed and forage for livestock ▪ Develop infrastructure for livestock and fish breed maintenance and development ▪ Sustainable livestock manure and other animal waste management | <ul style="list-style-type: none"> ▪ Number of farmers using climate-resilient breeds ▪ Number of communities practicing holistic grazing and livestock management ▪ Number of farmers using sustainable methods of fish production ▪ Ha and types of fodder and forage grown (annuals and perennials) ▪ Number of farmers practicing sustainable manure and other animal waste management | <ul style="list-style-type: none"> ▪ 30% of the target group ▪ 10% of the livestock farmers ▪ 10% of the livestock farmers ▪ >10 infrastructure | | | <p>Pasture seed companies, research organizations, academia, farmers' unions, livestock development, extension, private sectors</p> |

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|---|--|---|-----------------------|-------|---|
| 1.1.4. Well-managed forest | | | | | |
| <ul style="list-style-type: none"> ▪ Train communities in sustainable forest management ▪ Promote technologies on sustainable forest management ▪ Establish community-based Natural Resource Management (NRM) ▪ committees | <ul style="list-style-type: none"> ▪ Number of trainings ▪ Number and type of technologies promoted ▪ Number of communities with NRM committees | <ul style="list-style-type: none"> ▪ One in each participating community ▪ >10% of participating communities | | | Ministry of Environment, academia, research organizations, NGO, private sector, farmer unions |
| 1.1.5. Improved land & water management and use | | | | | |
| <ul style="list-style-type: none"> ▪ Promotion of improved soil fertility through conservation agriculture, composting, manure management, as contextually appropriate ▪ Promotion of water harvesting and integrated water resources management and conservation | <ul style="list-style-type: none"> ▪ Number of practices promoted ▪ Number of farmers harvesting water | <ul style="list-style-type: none"> ▪ >10 practices ▪ >10% of targets | | | |
| 1.1.6. Increased sustainable energy production and use | | | | | |
| <ul style="list-style-type: none"> ▪ Technologies for energy smart foods ▪ Scaling up energy-smart agricultural production ▪ Promotion of renewable energy for food systems ▪ Promotion of renewable energy technologies | <ul style="list-style-type: none"> ▪ Number of technologies ▪ Number of energy-smart foods promoted ▪ Number of targets adopting renewable energy | <ul style="list-style-type: none"> ▪ >5 types ▪ >5 foods ▪ 25% of target group | | | Ministry of Energy, Ministry of Finance |

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| 1.1.7. Improved disaster management and response | | | | | |
| <ul style="list-style-type: none"> ▪ Build capacity among communities on effective WII ▪ Build capacity among communities on assessing, planning, managing disasters and weather-related risks ▪ Establish linkages and build community capacity on e-information networks and platforms on disasters ▪ Support communities and the metrological service to develop effective agroweather information dissemination mechanisms | <ul style="list-style-type: none"> ▪ Number of individuals participating in WII ▪ Number of communities participating ▪ Number of networks ▪ Number of communities accessing weather information | <ul style="list-style-type: none"> ▪ 30% of targets ▪ 2 in each target province ▪ One per target community ▪ > 2 in each province | | | |
| 1.1.8. Improved market access | | | | | |
| <ul style="list-style-type: none"> ▪ Build capacity in communities on value-chain development, assessing value-chain opportunities, product bulking, and community-based finance and insurance ▪ Support communities and national farmers' unions to develop effective market information dissemination mechanisms and processes ▪ Build capacity in communities on effective dissemination and utilization of market information ▪ Build capacity in communities on assessment and negotiation of market products and services, value chain, finance and insurance actors ▪ Establish linkages between communities and market, value chain, finance and insurance actors | <ul style="list-style-type: none"> ▪ Number of value chains developed ▪ Number of unions with developed information market system ▪ Number of participants accessing market information ▪ Number of negotiations training ▪ Number of market linkages ▪ Number of functional cooperatives | <ul style="list-style-type: none"> ▪ Value chains ▪ >2 unions with information system ▪ >30% of participants ▪ >1 per community ▪ One of each participating community | | | |

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| <ul style="list-style-type: none"> Enhance the functioning and operations of cooperatives in CSA | | | | | |
| 1.2. INCREASED CSA-DRIVEN FINANCING AND INVESTMENT IN AGRICULTURE | | | | | |
| 1.2.1. Improved agriculture investment | | | | | |
| <ul style="list-style-type: none"> Increased public-sector share of CSA investments in respective sectors Increased private-sector share of CSA investment Support agriculture investments in CSA Provide incentives for agriculture investments in CSA Provide a conducive CSA environment for agribusinesses Establish agricultural-product preference zones Promote finance along CSA-relevant value chains Increased number of local institutions accessing global climate funds | <ul style="list-style-type: none"> Amounts invested Incentives provided Number of agribusinesses established Number of zones established Value chains financed Number of local institutions | <ul style="list-style-type: none"> >30% of respective sector investment >20% of GDP 4 policy and tax incentives have been passed 10% increase At least 10 products 10 CSA-relevant value chains financed 10 institutions | | | |
| 1.2.2. Improved access to CSA finance by citizens | | | | | |
| <ul style="list-style-type: none"> Promote savings and CSA investment among participants Support reduced tax base Establish financial bank products investment bank for CSA activities Promote rural banking Promote information communication technology (ICT) ICT in financial services | <ul style="list-style-type: none"> Number of savings groups Ruling tax base Bank established Number of rural bankers Number of CSA beneficiaries using ICT finance services | <ul style="list-style-type: none"> 10% savings groups participating in CSA < 10% tax base 1 bank 50% of target 75% of targets | | | |
| 1.2.3. Increased participating financial institutions (FIs) | | | | | |
| <ul style="list-style-type: none"> Engage financial institutions in funding CSA activities | <ul style="list-style-type: none"> Number of FIs funding CSA | <ul style="list-style-type: none"> 30% of existing FIs 10 value chains financed Each community linked | | | |

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| <ul style="list-style-type: none"> ▪ Promote finance along CSA value chains ▪ Link producers & agribusinesses to finance institutions | <ul style="list-style-type: none"> ▪ Number of value chains financed ▪ Number of linkages | | | | |
| 1.3. Increased use of CSA interventions with medium- to long-term sustainable consequences on environment and business | | | | | |
| 1.3.1. Natural resources | | | | | |
| <ul style="list-style-type: none"> ▪ Promote forest preservation ▪ Promote farmer-managed natural regeneration on farms and on community-managed land ▪ Promote agroforestry systems and climate and market-appropriate high-value tree varieties | <ul style="list-style-type: none"> ▪ Number of forests conserved ▪ Number of farmer-managed natural regeneration of land ▪ Ha of high value trees | <ul style="list-style-type: none"> ▪ 20% communities ▪ 20% communities ▪ Increase by 200,000 ha | | | |
| 1.3.2. Emissions | | | | | |
| <ul style="list-style-type: none"> ▪ Civil society supports CSA-related activities as well as the sector goals, improved productivity, enhanced sustainability and resilience, and reduced GHG emission ▪ Private sector engages in CSA-related activities and supports an environment that furthers sector goals, improved productivity, enhanced sustainability and resilience and reduced GHG emissions | <ul style="list-style-type: none"> ▪ Number of civil society organizations (CSOs) engaged in CSA ▪ Number of private sectors engaged in CSA | <ul style="list-style-type: none"> ▪ >20% CSOs ▪ 20 private sectors | | | |

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| 1.4. INSTITUTION AND POLICY OUTPUT | | | | | |
| 1.4.1. CSA coordinated and implemented through secretariat | | | | | |
| <ul style="list-style-type: none"> ▪ Establish a steering committee or board for CSA ▪ Establish a CSA coordinating unit ▪ Develop partnership agreements ▪ Develop constitution for the civil society alliance ▪ Design implementation manual ▪ Establish provincial coordinating committees ▪ Establish district coordinating committees ▪ Develop a directory for organizations engaged in CSA ▪ Strengthen local farmer groups and farmer unions ▪ Support linkage between farmer groups and farmer unions | <ul style="list-style-type: none"> ▪ Steering committee established ▪ CSA coordinating unit established ▪ Number of partnerships ▪ Constitution in place ▪ Manual produced ▪ Number of coordinating committees ▪ Directory in place ▪ Number of members of farmers groups and unions ▪ Paid-up members of unions | <ul style="list-style-type: none"> ▪ 1 committee ▪ 1 CU ▪ 10 partnerships ▪ 1 constitution ▪ 1 manual ▪ 1 per province ▪ 1 per district ▪ >600000 ▪ 25% of members | | | |
| 1.4.2. M&E | | | | | |

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| <ul style="list-style-type: none"> ▪ Publish an M&E manual ▪ Conduct baseline survey ▪ Conduct impact assessment ▪ Hold collaborative meetings ▪ Produce activity (monthly, quarterly and annually) | <ul style="list-style-type: none"> ▪ Manual published ▪ Baseline done ▪ Impact assessment done ▪ Number of meetings ▪ Number of reports | <ul style="list-style-type: none"> ▪ 1 manual ▪ 2 baselines ▪ 1 assessment ▪ 1 each quarter ▪ Ongoing | | | |
| 1.4.3. Policies formulated on CSA | | | | | |
| <ul style="list-style-type: none"> ▪ Review and harmonize existing policies to fit in CSA ▪ Build capacity in communities on Citizens Voice in Action for policy engagements ▪ Harmonize policies to fit in CSA ▪ Build in policy awareness in major extension service training | <ul style="list-style-type: none"> ▪ Number of policies reviewed and harmonized ▪ Number trainings, communities sensitized ▪ Number of policy sensitizations done at all levels | <ul style="list-style-type: none"> ▪ 5 policies reviewed ▪ 1 policy ▪ 1 per community ▪ 1 process completed ▪ Major agricultural training curricula updated | | | |
| 1.4.4. Research services and infrastructure to support CSA | | | | | |
| <ul style="list-style-type: none"> ▪ Commitment to CSA research ▪ National budgetary allocation to research on CSA ▪ Collaborative research among multiple stakeholders ▪ New technologies for CSA ▪ Infrastructure with CSA technology embedded developed ▪ Publish and disseminate key findings and lessons learned through | <ul style="list-style-type: none"> ▪ CSA research reports ▪ Percent allocation ▪ Stakeholders engaged ▪ Number of new technologies ▪ Number of infrastructure | <ul style="list-style-type: none"> ▪ 1 per quarterly ▪ 2% of national budget ▪ >5 stakeholders ▪ >20 technologies ▪ 20% of new infrastructure ▪ >30 published per year ▪ Farmer field schools for each technology ▪ >10 indigenous knowledge confirmed | | | |

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| <ul style="list-style-type: none"> ▪ journals, media, farmer-friendly media, etc. ▪ Conduct on-farm trials and farmer field schools for farmer appreciation of research results ▪ Establish scientific basis for indigenous knowledge & technology | <ul style="list-style-type: none"> ▪ Number of dissemination workshops ▪ Number of on-farm trials ▪ Indigenous knowledge upgrade | | | | |
| 1.5. WELL-MANAGED CSA PROGRAMME | | | | | |
| <ul style="list-style-type: none"> ▪ Stakeholder meetings held ▪ Interaction with community and districts ▪ Established local and international partnerships ▪ Engagement of NSA ▪ Collaboration with regional and global bodies ▪ Audited financial reports | <ul style="list-style-type: none"> ▪ Number of meetings ▪ Number of meetings ▪ Number of partnerships ▪ Engagement with NSA ▪ Number of meetings ▪ Unqualified audit reports | <ul style="list-style-type: none"> ▪ 1 per quarter ▪ 1 per month ▪ >10 partnerships ▪ >40 NSAs engaged ▪ Collaborate with >5 bodies ▪ Audited reports each year | | | |
| OUTCOMES | | | | | |
| <ul style="list-style-type: none"> ▪ Producers adopt appropriate CSA technologies and inputs such as seed, fertilizer, pesticides and risk-management tools ▪ Producers demonstrate improved knowledge of the costs, benefits and tradeoffs of adopting CSA ▪ Policymakers monitor & oversee CSA compliance ▪ Institutions cooperate in developing and disseminating information ▪ Producers adopt income improvement strategies | <ul style="list-style-type: none"> ▪ Number of technologies adopted ▪ Number of tradeoffs done ▪ Number of monitoring reports ▪ Number of reports on information dissemination ▪ Number of trainings on improved financial instruments | <ul style="list-style-type: none"> ▪ >20 technologies ▪ Tradeoffs for each technology ▪ 1 monitoring report per month ▪ >1 report per year ▪ 1 training for each community ▪ >4 per district per year ▪ 1 link for each community ▪ >5 incentives ▪ >1 per 10 abrogations ▪ >5 agreements ▪ >1 network ▪ 2% of GDP ▪ >50% of activities ▪ >20 private sector players | | | |

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| <p>(diversification, etc.) and access improved financial instruments</p> <ul style="list-style-type: none"> ▪ Producers engage with extension services ▪ Producers integrate into new markets and engage with value chains ▪ Policymakers engage with diversity of instruments, information and stakeholder inputs for creating incentives and building capacity of producers to implement CSA ▪ Policymakers establish an institutional framework for CSA implementation ▪ Government agencies aid implementation of, enforce, monitor & evaluate CSA policies ▪ Government commits to regional and global agreements and mechanisms to support climate-change adaptation and mitigation ▪ Government engages international partners on CSA ▪ Extension workers engage in bilateral knowledge sharing ▪ Consumers support CSA practices in consumption decisions ▪ Civil society supports CSA-related activities as well as the sector goals improved productivity, enhanced | <ul style="list-style-type: none"> ▪ Number of engagement with extension ▪ Number of extension created linkages ▪ Number and type of incentives provided ▪ Number of stakeholders engaged ▪ Number of deterrent measures meted for policy abrogation ▪ Regional and global agreements domesticated and signed ▪ Number of partnerships created and maintained of networks ▪ Number of plans developed and implemented ▪ Amount spent on CSA products purchased ▪ Number of CSO-supported CSA activities | | | | |

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| <p>sustainability and resilience, and reduced GHG emission</p> <ul style="list-style-type: none"> ▪ Private sector engages in CSA-related activities and supports an environment that furthers sector goals, improved productivity, enhanced sustainability and resilience, and reduced GHG emissions | <ul style="list-style-type: none"> ▪ Number of private sector participating in CSA | | | | |