

# Malawi Climate Smart Agriculture Alliance (MCSAA)

## Climate Smart Agriculture Scoping Study

2016



Produced by C12 Consultants

# The MCSAA Steering Committee



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## Acronyms

| NEPAD    | New Economic Partnership for<br>Agricultural Development               | FARA   | Forum for Agricultural Research<br>in Africa                    |
|----------|--|--------|---|
| ADDs     | Agricultural Development Divisions                                     | GIS    | Geographic Information<br>Systems                               |
| ASWAp    | Agricultural Sector Wide Approach                                      | GoM    | Government of Malawi  |
| AEDC     | Area Extension Development<br>Coordinator                              | GHGs   | Green House Gasses  |
| AEDO     | Area Extension Development Officer                                     | GDP    | Gross Domestic Product  |
| CISANET  | Civil Society Agricultural Network                                     | HHs    | Households  |
| CCAFS    | Climate Change, Agriculture and<br>Food Security (CGIAR)               | INGO   | International Non-<br>Governmental Organisation                 |
| CSA      | Climate Smart Agriculture  | KIIs   | Key Informant Interviews  |
| COMESA   | Common Market for Eastern and Southern Africa                          | LRCD   | Land Resources and<br>Conservation Department                   |
| CAADP    | Comprehensive African Agricultural<br>Development Programme            | MCSAA  | Malawi Climate Smart<br>Agriculture Alliance                    |
| CA       | Conservation Agriculture   | MGDS   | Malawi Growth and<br>Development Strategy                       |
| DSA      | Daily Subsistence Allowance  | MoAIWD | Ministry of Agriculture,<br>Irrigation and Water<br>Development |
| DfID     | Department for International<br>Development                            | NAPA   | National Adaptation<br>Programme of Action                      |
| DAES     | Department of Agricultural   | NCATF  | National Conservation   |
|          | Extension Services   |        | Agriculture Task Force  |
| DRM      | Disaster Risk Management   | ODI    | Overseas Development<br>Institute                               |
| DADO     | District Agricultural Development<br>Officer                           | PRA    | Participatory Rural Appraisal                                   |
| DAECC    | District Agricultural Extension<br>Coordination Committees             | PWP    | Public Works Programme  |
| DADO     | District Agriculture Development<br>Officers                           | REC    | Regional Economic Community                                     |
| EPIC     | Economic and Policy Innovations for<br>Climate Smart Agriculture (FAO) | TWG    | Technical Working Group   |
| EPA      | Extension Planning Area  | TLC    | Total Land Care   |
| FISP     | Farm Input Subsidy Programme   | FAO    | United Nations Food and<br>Agriculture Organisation             |
| FFS      | Farmer Field School  | UNFCCC | United Nations Framework<br>Convention on Climate Change        |
| FMNR     | Farmer Managed Natural   | VDC    | Village Development   |
|          | Regeneration   |        | Committee   |
| FRANRPAN | Food, Agriculture and Natural<br>Resource Policy Analysis Network      | WFP    | World Food Programme  |

## **Executive Summary**

The Malawi Climate Smart Agriculture Alliance (MCSAA) was established after the first Malawi Climate Smart Agriculture Inception workshop in 2015. The MCSAA is all-inclusive and governed by a Steering Committee made up of a variety of local partners including government, INGOs, the private sector, farmer's organizations, technical and research organizations and representatives from the Regional Economic Communities. The Malawi country specific alliance came into force when the Alliance for CSA in Africa identified four 'fast-start' countries (Ethiopia, Malawi, Niger and Zambia) to begin operationalizing the Alliance. In order to inform its strategy going forward, the MCSAA commissioned this scoping study to help the MCSAA understand the challenges and opportunities faced in the scaling up of CSA practices. The study builds on work already done by the FAO and other members.

The study collates data from various sources on CSA practices in every district of Malawi. Eight CSA practices were defined during the MCSAA inception workshop in April 2015 and these were included in the scope of this study. The study includes projects that were operational during the period 2013 – 2016. Figures for target HHs for each district level<sup>1</sup> project were collected. A total of 308 separate district level projects are targeting just over 909,000 HHs with CSA interventions. Projects supported by MCSAA steering committee members account for 68% of all target HHs. The average number of CSA practices per project is four with Conservation Agriculture<sup>2</sup> (CA), improved seed and irrigation being the most frequent CSA interventions. GIS mapping of the data showed that projects are predominantly targeting the heavily populated, highly vulnerable, and most poor areas in the southern and central regions. Figures on the incidence of self-adoption of CSA practices were not given in most cases. Where they have been given they indicate very low levels of self-adoption, at just 2.7%.

An analysis of the policy context in Malawi indicates that the government is committed to increasing agricultural productivity using sustainable farming practices. Previous versions of Malawi's Growth and Development Strategy and Agriculture policies highlight this commitment and it is expected the new policies currently being developed will emphasise the importance of CSA. There are a whole host of other policies and plans in relation to CSA that do create the space for CSA. However, the translation of these high level policies into practice on the ground is lacking. In addition weak implementation of related policies such as the Agricultural Extension Policy (by both government and NGOs) and the lack of coordination (in terms of CSA) in relation to other policies, such as the Farm Input Subsidy Programme (FISP) also provide barriers to the scaling up of CSA.

Weak coordination and planning is just one of the many challenges that are faced in scaling up CSA in Malawi. This study assesses the challenges at macro, meso and micro level (National, District and Community/HH levels) respectively. Challenges to scaling up CSA are discussed in

 $<sup>^1</sup>$  In order to obtain accurate data for each district programmes/projects that target more than one district were disaggregated. Every effort has been made to avoid double counting.

 $<sup>^2</sup>$  The definition agreed for use was 'at least two of the three principles of CA being promoted'.

terms of challenges to scaling up individual CSA practices as the CSA approach is quite new (2010). As yet there is no evidence on barriers to adoption of CSA as an approach in its own right.

The study concludes with practical recommendations for the MCSAA on how the challenges to scaling up CSA in Malawi might be addressed. The study recommends targeting scale up interventions in all three of Malawi's regions (Southern, Central and Northern) and all eight Agricultural Development Divisions. It is recommended that targeting shifts from the current practice of targeting a small area of a small number of farms in each community to a '**Total CSA Community**' approach. An initial '**hub**' community should be identified with CSA interventions gradually scaling out from this central community.

The package of CSA interventions to be implemented in each location needs to be flexible. They should be based on a thorough and **participatory community planning process** and must address the issues raised by farmers in this process. The proper implementation of **Farmer Field Schools** will enable farmers to experiment and make decisions on how to adapt the introduced practices to their own context. The CSA practices promoted must address issues of **soil fertility management as a priority** as without improvements to the soil resource there will be no sustainability. Where extreme poor smallholders are being targeted, CSA practices must be designed to ensure there is a **significant return in terms of yield in the first season**.

In order for the proposed approach to scale up CSA to really take hold at the community and district level, the study highlights a set of preconditions that must be in place. CSA requires **leadership** from a senior and high profile figure in government. Significant improvements in coordination are needed. An existing or new institution needs to be established to **coordinate CSA scale up**. The study lists a set of key activities that should be included in the mandate of this institution. They include convening meetings, sharing information, leading on CSA advocacy, developing and managing a communication strategy, developing a funding strategy and monitoring implementation of a national CSA strategy. The development of a **national CSA strategy** is one of the preconditions for scale up. The strategy must have benchmarks at national, district and community level.

Before a strategy can be developed, the 'metrics' for CSA need to be agreed and defined. Currently there is no accepted definition of adoption for any of the eight CSA practices within the scope of this study or for how CSA would be measured as having been adopted at the farmer level. Most CSA practices are not new. What is new is the package of interventions and the proposed approach to scaling up CSA. Training of extension staff on these aspects will be required for scale up to be successful.

The study shows that the challenges to scaling up CSA are well understood and that there is not only broad agreement on them, but also on how they might be addressed. What is needed now is a strategy to scale up, and the leadership to drive this forward. Several studies have shown that farmers are more likely to adapt their farming practices when they have experienced the effects of climate change. With one third of Malawi's population requiring emergency assistance due to drought in 2016 and the serious flooding experienced in 2015, this could be the perfect opportunity for the MCSAA to take the lead in driving the CSA agenda forward.

## Introduction

The Alliance for CSA in Africa was established to support the rapid scaling-up of Climate-Smart Agriculture (CSA) across Africa. The Alliance aims to support the uptake of CSA practices and approaches by at least 6 million farm households by 2021, contributing to the overall African Union vision of supporting 25 million farm households by 2025. CSA is defined as "agriculture that sustainably increases productivity and incomes, enhances resilience (adaptation), reduces/removes green house gasses (GHGs) (mitigation), and enhances achievement of national food security and development goals" (FAO, 2013b). CSA is an approach that includes both traditional techniques, such as mulching, intercropping, pasture and manure management and innovative practices, programs, and policies, such as improved crop varieties, better weather forecasting, and risk insurance.

The Alliance for CSA in Africa was convened by the NEPAD Planning and Coordinating Agency at the 23rd African Union Summit in Malabo, Equatorial Guinea in June of 2014. It was convened as a formal mechanism to scale up CSA in Africa through collaborative efforts and practical on-theground experience of Alliance members in agricultural research and implementation. The Alliance for CSA in Africa is governed on the continental level by a Steering Committee currently made up of 11 partner organizations. NEPAD is the chair of the Alliance and other members include:

- Five international non-governmental organization (INGO) implementation partners; CARE, Catholic Relief Services, Concern Worldwide, Oxfam and World Vision.
- Four technical partners including the United Nations Food and Agricultural Organization (FAO), the Food, Agriculture and Natural Resources Policy Analysis Network (FANRPAN), the CGIAR research program on Climate Change, Agriculture and Food Security (CCAFS) and the Forum for Agricultural Research in Africa (FARA).
- One Regional Economic Community (REC), represented by COMESA.

The Malawi Climate Smart Agriculture Alliance (MCSAA) was established after the first Malawi Climate Smart Agriculture Inception workshop in April 2015 at the side-line of the 2015 Regional Beating Famine Conference in Lilongwe, Malawi. The Malawi country specific alliance came into force when the Alliance for CSA in Africa identified four 'fast-start' countries namely Ethiopia, Malawi, Niger and Zambia to begin operationalizing the Alliance in Africa. The MCSAA is all-inclusive and governed by a Steering Committee made up of a variety of local partners including government, INGOs, the private sector, farmer's organizations, technical and research organizations and representatives from the Regional Economic Communities.

Following a recommendation from the inception workshop in 2015, the MCSAA commissioned this Scoping Study in order to inform a strategy for the way forward. The study maps specific CSA practices and defines who is doing what and where. It also assesses the current policy context and identifies the key challenges to scale up CSA. It concludes with a list of recommendations for the MCSAA on how they might move forward. This study builds heavily on work already done by individual MCSAA members.

## Methodology

This study was conducted by a team from C12 Consultants. Initially the team developed and presented an inception report to the MCSAA. This report highlighted some key points, which needed to be agreed with the MCSAA before data collection commenced. The inception report is included as Annex 1.

The team then compiled secondary data from various sources. Firstly, each of the District Agriculture Development Officers (DADOs) was contacted by phone to gather information on the CSA activities being practiced in their district. Secondly, and concurrently, a comprehensive list of key stakeholders, including MCSAA members, key government departments and NGOs were contacted to gather the same information. Stakeholders were requested to complete the data matrix and return it to the team. Where possible, Key Informant Interviews (KIIs) were also held with these key stakeholders. This was done to gather qualitative data on the successes and challenges being experienced by the stakeholders. A full list of all stakeholders contacted is included in Annex 2. Both data sets were merged to provide a comprehensive dataset. This data was then used to generate maps of Malawi illustrating who is doing what, where.

A comprehensive review of available literature was conducted to assess what has already been done, what lessons can be learned and what challenges have been experienced in the scale up of CSA both in Malawi and elsewhere. The literature review was further contextualized using the information gathered during the KIIs.

## Who is doing what, where?

Every effort was made to get the most comprehensive dataset possible; however, even with extensive follow up and triangulation of the data there are still some gaps in the dataset. Only projects that were active between the years 2013 and 2016 (inclusive) were included in the dataset. Data is for targeted HHs. This figure is over the lifetime of the project so may not yet have been achieved, depending on the timeframe for the project. It is also worth noting that these are target figures and not actual farmers reached. Many stakeholders were aware of CSA projects but were not able to furnish details of target numbers and/or of which CSA practices were being implemented. The team has analysed the available data but it should be emphasised that the data likely under represents the full extent of CSA practices in Malawi. One further limitation is that no data has been collected for those farmers who might be implementing CSA practices without the knowledge of state or non-state actors interviewed during this study. The full database is included as annex 3. According to the data projects with CSA components are currently being implemented in every district of Malawi. A summary of the headline data is presented in table 1.

#### Table 1: Headline Statistics from CSA Database

| Item   | Value   |   | Comment   |
|--|---------|---|---|
| Total CSA Projects at District lev                     | el      | 308   | Data was collected at the district<br>level. If a programme was being<br>implemented in more than one<br>district data for each district was<br>collected separately. |
| Lead Organisations                                     |         | 68  |   |
| Partner Organisations                                  |         | 58  | MoAIWD is a partner in practically<br>all projects but is only counted<br>once.   |
| Projects focused solely on CSA a<br>overall objective  | s their | 14%   |   |
| Projects with CSA as a compone<br>broader programme    | nt of a | 84%   |   |
| Average duration of CSA Projects (years)               |         | 4.1   | The shortest projects last just a year with the longest ones up to 16 years (World Vision).   |
| Total target HHs                                       |         | 909,011   | Not all projects had this<br>information to hand  |
| Total Field staff working on<br>CSA projects           | 500     | DAES staff are only included here where they are the main implementing partner. |   |
| Average proportion of staff time dedicated to CSA work | 86%     | For field staff working on the CSA projects.                                    |   |

Figure 1 details the proportion of projects that included each of the CSA practices included in this study. The definition used for Conservation Agriculture (CA) was 'at least two of the three principles<sup>3</sup>' as opposed to the standard FAO definition that includes all three principles. This definition was agreed at inception with the MCSAA. It was planned to collect information for each of the three principles and collate this, but initial responses were very weak and the database was

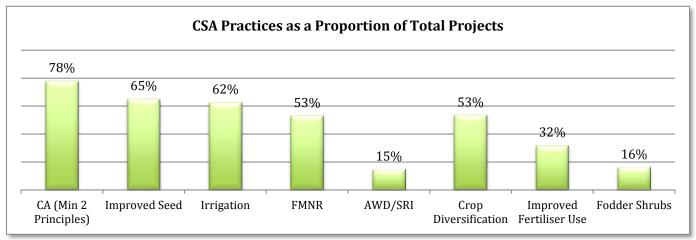


Figure 1: CSA practices as a proportion of total projects

 $<sup>^{3}</sup>$  The three principles are continuous ground cover, minimum tillage and rotation with legumes.

streamlined to maximize the chance of stakeholders completing and returning it within the allocated timeframe. The average number of CSA practices being promoted per project was four, indicating that a package of CSA practices is being promoted by many projects. Of those projects for which information was available, only 10% were promoting just one CSA practice.

#### **CSA Mapping**

The data collected was mapped using Geographic Information Systems (GIS) software. Some of the key maps are reproduced below. The rest of the maps produced can be found in Annex 3.

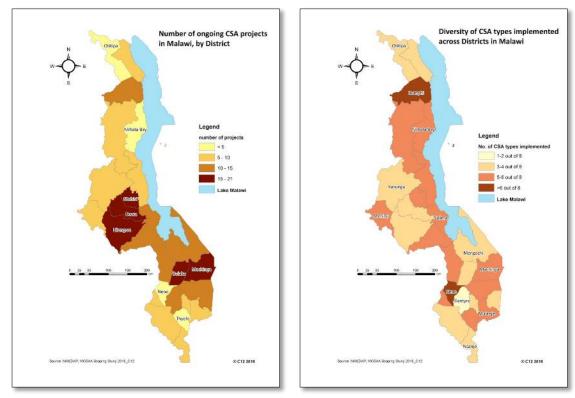


Figure 2: Map of ongoing CSA projects in Malawi by district. Darker colours indicate higher numbers of CSA projects in that district

Figure 3: Map of CSA practice diversity by district. Darker colours indicate a higher diversity of CSA practices in the district

Figure 4 illustrates the proportion of CSA practices being implemented by district level. The capacity of stakeholders to implement CSA was assessed by collecting information on staff allocated to projects and on the total target HHs. This data is illustrated in figure 5. Nationally the staff to farmer ratio was 1:1,785. This does not include government extension staff unless they were listed as the primary implementing partner. As would be expected, staff numbers are higher in districts where target HH numbers are higher.

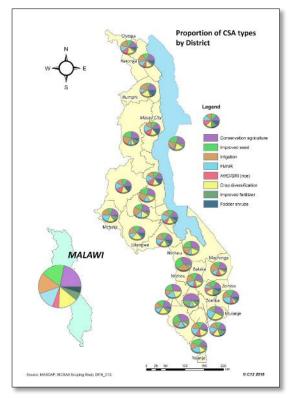


Figure 4: Proportion of each of the eight CSA practices being implemented in each district.

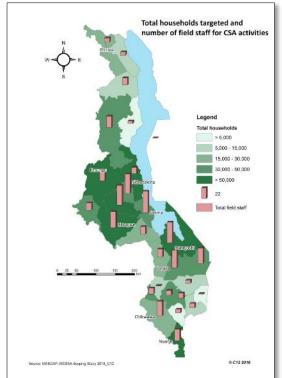


Figure 5: Total HH targeted and number of project staff per district for CSA projects. Darker colours indicate higher target HH numbers (Note that information on staff numbers is not complete and only includes DAES staff where they are the main implementing partner).

The total target HHs engaged in CSA practices equates to about 30% of all farming households in Malawi<sup>4</sup>. The average number of HHs targeted per district level project is 2,960 with an average of about eleven projects per district (c.32,000 target HHs). Total Land Care is by far the biggest player, targeting over 358,000 HHs or almost 40% of the total HHs being targeted for CSA interventions. Taking the MCSAA steering committee members as a block, they account for 618,101 HHs or 68% of all target HHs for CSA interventions and 20% of all farming households in Malawi

The distribution of CSA practices was also assessed in relation to poverty and vulnerability levels in Malawi. This is illustrated in figures 6 and 7. Both base maps were sourced from WFP. For figure 7, district ranking of vulnerability is based on the combined risk of floods, drought and food insecurity. Both maps illustrate that the highest concentration of CSA projects are in areas of higher poverty and vulnerability. This correlates with the data collected from stakeholders indicating that the main objective of 84% of projects that include CSA practices is to improve livelihoods, increase resilience and/or reduce poverty.

<sup>&</sup>lt;sup>4</sup> This assumes about three million farming households in Malawi.

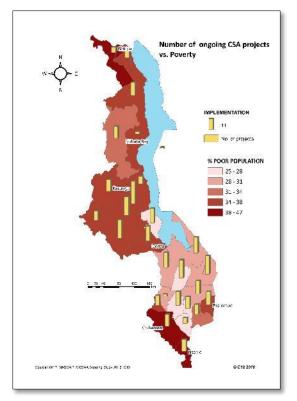


Figure 6: Number of ongoing CSA projects by district poverty status. The darker the colour the higher the poverty levels and the taller the bar, the greater the number of CSA projects.

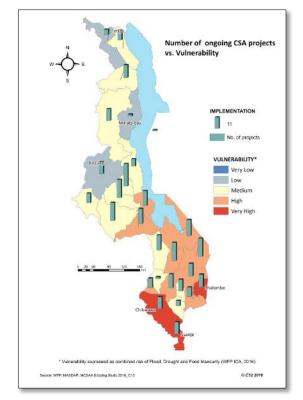


Figure 7: Number of ongoing CSA projects by district vulnerability level.

#### Adoption

In addition to asking practitioners what they are doing and where, they were also asked about adoption of CSA practices and their perceptions on the successes or otherwise of the projects. Only 25 projects were able to provide any figures for farmers who were self-adopting in their target areas. The total number of farmers reported to have self-adopted is 24,558 or 2.7% of the total targeted HHs for all CSA interventions. These figures are drawn from the individual projects. No definitions of adoption were given and the definitions used by different stakeholders will vary. It was noted that none of the MCSAA members provided any data on self-adoption within their projects.

With respect to practitioners' perceptions on adoption they were asked simply to rank the success of their project with respect to adoption of each of the CSA practices on a scale of 1-4, where 1 = poor; 2 = some problems; 3 = good; and 4 = very good. This section was completed for just under 35% of projects (n=308). The average score given was 2.66, indicating that adoption of CSA practices is seen to be somewhere between 'some problems' and 'good'. Disaggregating this data by CSA practice, the practice that is perceived to be performing best is crop diversification with a score of 3.26/4. With limited data on adoption and no clear definition given, it is difficult to determine the most successful projects. However, from the data Balaka and Nsanje seem to have the strongest figures for self-adopters of CSA practices. In Balaka it is reported that there are 6,550

self-adopters. This is 148% of the HHs being targeted for CSA interventions. In Nsanje the figure is 7,427 self-adopters, which is just over 100% of the targeted HHs.

Respondents were also asked to rank the impact of each of the CSA practices in their project using the same scoring system. Data was completed for 31% of projects (n=308). The overall perceived impact score across all projects and CSA practices was 2.88, just below 'good'. Disaggregating the data by CSA practices the CSA practice that is perceived to have the greatest impact is also crop diversification. It was not possible to delve deeper into these responses.

#### CSA Advocacy

While not covered in the data set, it was recognised that many of the CSA projects being implemented include advocacy or coordination components at the national level. TLC are heavily involved in the National CA Task Force and have helped to develop national CA guidelines. Concern Worldwide has been working closely with CISANET on advocating for a national CA strategy and have developed a draft advocacy strategy for CA in Malawi.

The FAO has been working on CSA readiness with the GoM for the past number of years. This has been done mainly through the FAO's Economic and Policy Innovations for Climate smart agriculture (EPIC) programme. Together with the MoAIWD and the Ministry of Lands, Environment and Natural Resources they have screened the Agricultural Sector Wide Approach (ASWAp) to identify those activities that support CSA. Following on from this screening, FAO along with the MoAIWD, have developed a draft National CSA Framework for Malawi and are responding to a government request for assistance in mobilizing additional resources to formulate a larger CSA programme. The framework is not yet officially approved, but does provide details of possible funding streams for national level CSA programmes in Malawi and how these programmes might need to be structured to attain this funding (FAO, 2015 (draft)).

## **Policy context**

Malawi has a small population – 16 million, but a rapid population growth rate of 2.8 percent and a high population density. Economic growth depends on agriculture and is reliant on favourable climatic conditions. Eighty percent of Malawi's workforce is employed in agriculture. The sector contributes about 33% of the Country's Gross Domestic Product (GDP) and close to 90% of export earnings (CIA 2015). The majority of those employed in agriculture are smallholder farmers who are farming about 0.5 hectares on average. Maize is grown by over 90 percent of Malawian farmers. The average national yield is just over 1.4 tonnes/ha<sup>-1</sup> over the past two decades (FAOSTAT, 2012). Considering that hybrid maize varieties developed specifically for the Malawi context have the potential to produce upwards of six tonnes/ha<sup>-1</sup>, there is huge potential for growth. Malawi has faced significant food security crises in the past decade, with major droughts in the 2000/01, 2005/06 and the 2014/15-2015/16 growing seasons. The 2016 drought is the result of the El Nino effect and has left 6.5 million Malawians in need of humanitarian assistance to bridge the hunger gap until next season's harvest.

Given the contribution to GDP, the number employed in agriculture, their poverty status, the

recent droughts and the potential for growth, it is not surprising that the GoM has made clear links between agriculture and climate change and placed great emphasis on sustainably increasing agricultural production as a means to reduce poverty and grow the economy. A case study on Malawi's Agriculture, Climate Change and Food Security (ODI 2015), compiled by the Overseas Development Institute (ODI) for the Department for International Development (DfID) in 2015 includes a comprehensive analysis of the policy context in relation to CSA.

Climate change has been highlighted in the Malawi Growth and Development Strategy (MGDS) I and II (2011-2016). MGDS II focuses on the need to mainstream mitigation and adaptation into all sectors to increase resilience and promote sustainable development. In addition, the National Environmental Policy (2006) highlights the need to reduce the impacts of climate change. Malawi has produced a National Adaptation Programme of Action (NAPA), and two National Communications on Climate Change to the UNFCCC.

Malawi has been in the process of drafting a new, unified agricultural policy for several years, but this is not yet in place. Currently there are several policies directly relating to CSA including: the Malawi Irrigation Policy and Development Strategy (2000); National Land Use Planning and Management Policy (2005); the Food and Nutrition Security Policy (2005); the HIV and Aids in the Agriculture Sector Policy and Strategy (2003); and the recently approved National Climate Change Management Policy.

The Ministry of Agriculture, Irrigation and Water Development (MoAIWD) currently works instead with a number of disparate policies. In 2010, Malawi developed the Agriculture Sector Wide Approach (ASWAp) 2010-2015 to identify key programme and investment areas needed to achieve productivity growth of 6% annually, increases in food security, diversification of crop production and improvements of nutrition and incomes amongst the rural population. The ASWAp is Malawi's priority agricultural investment plan, consistent with the Comprehensive African Agricultural Development Programme (CAADP).

The ASWAp consists of three focus areas: 1) Food security and risk management, 2) Agri-business and market development and, 3) Sustainable land and water management. Key support services include: 1) technology generation and dissemination and 2) institutional strengthening and capacity building. A second phase of ASWAp is currently still in development. Under the umbrella of ASWAp, the Technical Working Group (TWG) on Sustainable Agricultural Land and Water Management, the Land Resources and Conservation Department (LRCD) in the MoAIWD presented a proposal for a national investment program on sustainable land resource management, recognizing the importance of land degradation in the country and the impact of climate change to vulnerable poor farmers. The main objective of the proposal is to reduce dependency of poor vulnerable farmers to external inputs while maintaining, or even, increasing current yields and stabilizing them even in periods of climatic shocks (FAO & MoAIWD 2015, draft).

However, there are critiques that the ASWAp is heavily biased towards the Farm Input Subsidy Program (FISP). In its early years FISP was very successful in increasing agricultural production, but this has not been maintained in more recent years. FISP has been criticised for having "very

little long-term productivity enhancing impact" (Chirwa and Matita 2012; in ODI, 2015) and not being fit to facilitate the fundamental and sustainable agrarian transformation that is needed through fostering research and development, extension and rural infrastructure development in the country (ibid). The current government pledged in their manifesto to continue the FISP. In the 2014/15 season, the government introduced reforms to increase the efficiency of FISP, though implementation remains centralised with government procurement and tenders.

The National Adaptation Plan for Action (NAPA) for Malawi highlights the need to improve crop production through appropriate technologies; increase resilience of production systems through the adoption of sustainable land management techniques; afforest/reforest to improve fuel wood supplies; and improve watershed protection (ibid). NAPA also identifies three priority districts, Karonga, Dedza and Chikwawa, one each in the Northern, Central and Southern regions respectively (MoECCM, 2012). A National Climate Change Response Strategy on Agriculture was produced in 2010.

Malawi was the first country in Africa to launch a National Climate Change Investment Plan (NCCIP) in April 2014. It identifies funding requirements for adaptation projects of USD 460m up to 2018 (ODI, 2015). These represent the best thinking to date on Malawi's climate change planning and highlight a set of investments including:

- Adaptation investments (integrated watershed management; community resilience through agriculture production, climate proofing infrastructure, improved disaster risk management (DRM)).
- Mitigation investments (REDD+; waste management; energy saving technology).
- R&D transfer (adaptation and mitigation technology development and transfer).

The FAO has been working closely with GoM departments to help integrate climate change and agriculture and assist development of an investment framework between the two. This has resulted in a draft CSA Strategic Framework for Malawi and also a CSA Screening of the ASWAp Investment Plan (FAO & MOAIWD 2015), draft).

One important policy not covered in the ODI case study is Malawi's Agricultural Extension Policy. This has evolved from a 'block extension system' in the 1970s and 80s to the current promotion of a pluralistic and demand driven approach. The policy encourages multi-stakeholder participation (NGOs, private sector and government) with district level coordination of services. It also promotes a demand driven service that is responsive to farmers' needs. A policy brief published by the Malawi Civil Society Agriculture Network (CISANET) in 2013 highlights the problems with the current government extension system:

- Lack of capacity among farmers to actually demand extension services.
- Limited in-service training for extension staff.
- Extension staff must pay for their formal training. This results in wealthier trainees who are not as willing to be posted in rural areas for long periods and who have less practical experience in agriculture.
- Competition for staff from the NGO sector.
- Huge staffing and financial resource gaps in the extension service.

- Reducing extension service budgets and focus on FISP registration limits capacity to actually provide extension services.
- Lead Farmer approach has been adopted to address gaps in service provision, but lead farmers have limited capacity and incentives to continue in this role.

In addition to these issues with the government extension service, there are also many issues with the service being provided by NGOs. NGO extension staff are rarely solely focused on providing agricultural extension services. Out of 187 district level projects recorded in this study, only 14% are solely focused on CSA. Programmes/projects are usually aimed at building resilience and reducing poverty. 85% of the CSA projects for which data was available in this study were focused not just on CSA practices, but on livelihoods, poverty reduction and/or resilience. These programmes require a broad package of interventions. Invariably, they focus on increasing and diversifying agricultural production, but also have significant components on marketing, private sector development, women's empowerment, access to credit, nutrition, community development and disaster risk reduction. While these outcomes fall within the broader CSA approach they also require diversified human resources. This limits the capacity of extension staff to achieve scale up of CSA practices. Due to the complex nature of the programmes and the pressure to spread the limited resources to as many communities as possible, District Agricultural Extension Coordination Committees (DAECC) face significant challenges in coordinating the work of extension service providers. This is compounded by the fact that multiple NGO programmes may be requiring support from the same pool of government extension staff, stretching these staff and reducing the potential for scale up through the government's extension service. Across the board, services tend to be top down, rather than demand driven. While programme documents outline very sound theory in relation to the extension approach to be implemented, practice on the ground is rarely uniform or standardised. Data on private sector extension services is less available, but it is likely to be a much smaller component of the overall system, with less of an emphasis on CSA.

It is impossible to discuss agriculture in Malawi without reference to the FISP. The FISP budget accounts for 3-6% of GDP annually and consumes a significant portion of available time for extension staff in carrying out the targeting process. FISP targets about 1.5 million farmers annually with subsidised fertiliser, maize and legume seeds. Recent reforms have reduced these numbers to about 900,000 for the 2016/17 growing season. The programme began in 2005 and initially resulted in significant increases in national yield (Channing *et al*, 2015). In recent years the programme has been called into question as annual yields have stagnated and it has been dogged with inefficiencies. It is estimated that 18% of fertiliser is 'diverted' annually. Even with these issues the programme has significant benefits and studies recommended that improvements to the programme are warranted, rather than scrapping it (ibid). The Malawi Soil Health Consortium estimates that although the average crop yields in Malawi have increased in tandem with the increase in use of fertilizers, the economic and agronomic efficiency of using fertilizer is stuck at less than 50% of actual potential (Mutegi et al, 2015). In layman's terms this means that up to 50% of the potential impact of fertiliser being applied is being wasted. This is due to blanket application of a 'one size fits all' fertiliser as well as sub optimal soil pH, organic matter and

moisture levels. Addressing issues of soil fertility through CSA practices in conjunction with the correct fertiliser being applied has the potential to significantly, and sustainably, increase yields.

In 2015 the major donors succeeded in changing government policy on the use of Daily Subsistence Allowances (DSAs). This was done to curb the 'topping up' of government staff salaries for attending events that were within their job descriptions. In principle the change in policy aimed to ensure staff were not out of pocket for work related expenses, while also ensuring they were not exploiting the system. Implementation of the reforms has been haphazard with many institutions still paying allowances in order to ensure government participation, and thus strengthen the legitimacy of programmes. The overall effect to date of the policy change has been to reduce government buy in and participation in many CSA programmes.

Discussions with key stakeholders indicated that the Public Works Programme (PWP) has recently been refocused on climate change mitigation measures at the watershed level. The PWP provides cash for work for extreme poor HHs at specific times of year. In 2012 the programme reached 500,000 HHs across the country (World Bank, 2015). A shift in focus to watershed management projects highlights the importance the government is placing on integrating climate smart actions into a broad range of development programmes across different ministries and departments.

## **Challenges to adoption**

Data collected for this study indicates self-adoption of just 2.7% and practitioners' perception of successes in relation to adoption rank somewhere between 'some problems' and 'good'. This indicates that even though CSA is being widely promoted, the practices are not being widely adopted.

The challenges faced in scaling up CSA practices are many and varied. The following section synthesises information gathered through literature review, KIIs and the consultants' own experience implementing CSA projects in Malawi over a number of years. To make sense of the varied challenges to adoption and scale up they have been categorised into three distinct levels, **micro, meso and macro**. In some cases the same challenge (such as coordination) is manifest at all three levels, but requires different solutions at each level. Annex 4 contains a summary of the challenges to adoption highlighted across the literature reviewed. Specific recommendations to address the challenges are detailed in the next section.

Currently, there is very little research available on challenges, or barriers, in relation to adoption/scale up of CSA as an approach. This is not surprising given the 'approach' only became mainstream in 2010. There is however, a significant amount of material available on barriers to adoption of specific CSA practices, especially Conservation Agriculture, FMNR and Agroforestry. Barriers to adoption of other practices, such as irrigation, improved fertiliser use and diversification are often generalised from those related to these three practices. It is important to note that while these generalisations may be true in many cases, there are specific barriers that relate either solely or more especially to some CSA practices more than others.

#### Macro Level

**Coordination** on CSA in Malawi is weak. Data collected for this study indicates there are about 187 CSA projects across all districts, targeting over 900,000 HHs<sup>5</sup>, with almost no cross learning between them and no overall plan. Inter-ministerial coordination and coordination between state and non-state actors is weak with most working in their own silo. Coordination between departments within ministries is also weak. Within the MoAIWD alone, the following departments all have a stake in the roll out of CSA:

- The Department of Agricultural Research and Technical Services (DARTS)
- The Department of Animal Health and Livestock Production (DAHLP)
- The Department of Crop Production (DCP)
- The Department of Land Resources and Conservation (DLRC)
- The Department of Agricultural Extension Services (DAES)
- The Department of Planning, Irrigation and Water Development

In its efforts to develop a national CSA Framework and to conduct a CSA screening of the ASWAp Investment Plan, the FAO has been bringing departments and ministries (MoAIWD and Ministry of Natural Resources, Energy and Mines) together over the past two years with some success. The TWG on Sustainable Agricultural Land and Water Management under ASWAp and the National Conservation Agriculture Task Force (NCATF) are two institutions that could be used to coordinate efforts on CSA. The recent establishment of the MCSAA presents another opportunity to enhance coordination. There is good participation from donors and many key players attend the annual ASWAp meetings, but within the technical working groups attendance is inconsistent. Having an actual roll out/implementation plan to coordinate, and reviewing progress and lessons learned regularly would likely increase engagement. As evidenced by the high levels of participation at the MCSAA Inception workshop in April 2015, there is an appetite among CSA stakeholders. What is lacking is a plan they can all get behind.

Among countries promoting CA (not CSA!) Zambia is widely regarded as the most successful. Part of this success is due to the concerted efforts of successive Ministers for Agriculture to champion CA within their own ministries as well as with non-state actors and the private sector. Malawi currently does not have a **CSA champion** to lead from the front in driving the scale up of CSA nationally. The impact of a highly placed champion is evidenced by the relative success of the national project on scaling up the use of fuel efficient stoves in Malawi, which was championed by the previous president, Joyce Banda.

Malawi has several policies that create the space to scale up CSA across the country, but there are no coherent *national level roll out plans or strategies*. As evidenced by the MCSAA's own goal of six million farmers doing CSA by 2021, institutional timelines and funding cycles are usually quite short, while widespread adoption of CSA will require a longer term vision, likely ten years or more. Without coherent long term strategies it will not be possible to convert policy into practice.

<sup>&</sup>lt;sup>5</sup> Not all stakeholders completed the matrix fully so this figure is likely somewhat under reported.

The absence of these plans is not surprising as it is difficult to have plans without something to measure to assess success or otherwise, or even to determine a baseline value.

Currently *definitions and terminology* are not used consistently and there is widespread confusion over the benefits of some of the practices, particularly CA. For this scoping study the definition used for CA (at least two of the three principles) is not the accepted international definition as the MCSAA members themselves were not agreed on this. During the literature review the terms CSA and CA were found to be used interchangeably. There was broad consensus among the members on the CSA practices to be included in this study, though this list has not been officially endorsed and as yet there is no definition of how a 'CSA farmer' will be defined.

CSA is a term used for an approach or a farming system that was coined in 2010. The MCSAAs goals are to get six million farmers in the four priority countries to adopt CSA by 2021, but there are currently no standardised tools for how this will be measured. In order to set realistic national targets for Malawi clear definitions are needed for how CSA will be measured. It is likely that a metric for CSA will require definitions of adoption for various CSA practices. Almost all of the research reviewed (both national and international) highlight the challenges to adoption, but only two papers attempt to give any definitions for adoption (CISANET & Concern Worldwide, 2015 and WRI, 2015 for CA and FMNR respectively). The CISANET/Concern Worldwide paper is focused on CA and describes a farmer as having adopted CA if s/he has 'been practicing all three principles of CA for at least two years without input support and has expanded their plot'. The study builds on the work of other research into adoption and breaks the process into four distinct steps, 1) Knowledge/Persuasion; 2) Practice/Decision; 3) Implementation and; 4) Confirmation. While the definition used for adoption of CA will not be appropriate for all CSA practices designing a metric that enables measurement at the four stages of the process for each CSA practice would enable decision makers at the macro level to allocate resources more effectively. The absence of standard definitions of adoption means that it is currently impossible to accurately compare the successes of one project to another and to learn lessons from implementation. Many projects do not monitor adoption at all.

An issue that came out frequently in key informant interviews and also during the presentation of initial findings was the need to have a relatively *structured national implementation strategy* that clearly defines what needs to be achieved and when, *while having flexibility in terms of the CSA solutions implemented at local level*. All stakeholders and the available literature agree that a one size fits all approach to CSA will not work. The need for flexibility poses further challenges in developing roll out plans and suitable metrics that will be nationally comparable.

The CSA Sourcebook (FAO, 2013b) draws on experiences from across the globe in making recommendations on scaling up CSA. It highlights the fact that for CSA to take hold, a mix of **regulations and incentives** need to be adopted at the national level. Broadly conceived, incentives can include indirect mechanisms, such as laws and regulations, and direct incentives, such as cash subsidies and grants or non-cash subsidies, including technical assistance and other forms of support. In Malawi, by-laws on the tethering of livestock at particular times of year and the burning of mulch material are quite widespread, particularly where CA has been promoted for a

number of years. However, at the macro level the study team is not aware of any laws that promote CSA interventions.

The FISP accounted for 60% of the total MoAIWD budget and 10% of the national budget in 2012/13 (SOAS, 2014). This programme subsidises inputs of inorganic fertiliser and improved maize and legume seeds. This covers three of the eight CSA practices within the scope of this study and has certainly had an impact on increasing the use of improved maize seeds and to a lesser extent has diversified cropping systems with more legumes being grown. However, the blanket recommendations on application of a standardised fertiliser are not in line with the principles of CSA as it is neither sustainable nor efficient without improvements in soil organic matter, pH and moisture content. In the draft strategic framework for CSA the MoAIWD recognises that at medium and high application rates inorganic fertiliser is the largest contributor to GHG emissions in the farming system in Malawi.

To reap the long-term benefits that CSA brings with regard to productivity, resilience and climate change mitigation, farmers and governments need to take advantage of a range of **available financing sources**. The most successful programmes are often a blend of different sources of funding and include a mix of policy support measures (FAO 2013b). A constraint in funding has been the fact that CSA connects adaptation and mitigation and funding for these areas has been strictly separate in the past. The main reason for this separation is the difference in the fundamental rationale behind donor funding. International financing for CCM activities has a "payment for benefits shared by all" logic while CCA financing follows an "indemnity for damages caused by others" reasoning. In drafting the Strategic Framework for CSA in Malawi, the FAO and MoAIWD have identified several global funding opportunities for CSA that might bridge this gap (FAO & MOAIWD, 2015 (draft)).

The draft Strategic Framework for CSA in Malawi recognises that in order to access this funding much **research is needed**. Donors and multilateral funds will need to be persuaded that CSA interventions will lead to significant reductions in GHGs as well as significant increases in sustainable production and reductions in poverty and economic growth. While some initial work has been undertaken on this, placing an accurate value on ecosystem services would be a first step in estimating the economic cost/benefit of widespread roll out of CSA to the national economy. Widespread confusion over the actual benefits of CSA, especially in the early years of implementation is a further research gap that needs to be filled in order to develop sound policies and advocate for increased funding.

#### Box 1: The potential cost of not scaling up CSA in Malawi:

The cost of soil loss alone to the Malawian economy has been estimated at about 1.6% of GDP or US\$54 million annually (GoM/UNEP, 2011). This is based on conservative estimates of soil loss of 20t/ha/year and does not include estimated annual costs to electricity generation of a further US\$10 million on water treatment costs (US\$100,000 per annum in Blantyre alone). It also does not factor in any portion of the estimated US\$215 million in annual unserved energy costs (ibid). The study implies that a failure to tackle soil erosion from poor agricultural land management practices has resulted in more than 1.88 million Malawians remaining below the poverty line over the period 2005-2015.

At their peak in 2008/09, FISP costs accounted for 80% of the public budget to agriculture and 16% of the total national budget, or US\$242 million (Dorward & Chirwa, 2011). In 2012/13 FISP had a total estimated cost of just over or US\$144 million. This equated to 60% of the total Ministry of Agriculture & Food Security budget and 10 % of the national budget. Fertilizer procurement accounted for 77% of the total programme costs (SOAS, 2014). A review of FISP in 2011 highlighted that the yield response to fertiliser was a critical determinant of economic returns on FISP (Dorward & Chirwa, 2011). The Malawi Soil Health Consortium, concurs with this and estimates the economic and agronomic efficiency of using fertilizer is stuck at less than 50% of actual potential (Mutegi *et al*, 2015). Using the 2012/13 figures for FISP and estimating that 77% of the FISP budget goes on fertiliser procurement (SOAS, 2014), it could be calculated that the cost to the state of inefficient application and uptake of fertiliser is a further US\$55.4 million<sup>1</sup> annually. This is not accounting for the wasted costs to the farmer in terms of labour in collecting, transporting and applying the fertiliser. Nor does it include the wasted time in targeting, procurement and distribution of fertiliser by government.

The cost of recovery from the severe flooding that occurred in Malawi in early 2015 was estimated to be US\$494 million (GoM, 2015) and the cost of emergency response to the current drought is estimated to be US\$395 million (GoM, 2016). Though difficult to quantify, there is little doubt that widespread adoption of CSA across Malawi would have significantly reduced the impact of flooding and drought. Taking all of the above factors into account (cost of soil erosion, electricity losses, fertiliser inefficiency, flood and drought responses), It is not unreasonable to state that in the past two years alone the cost of not having widespread adoption of CSA in Malawi may well have been in the region of half a billion US dollars<sup>2</sup>.

<sup>&</sup>lt;sup>1</sup> Total cost of FISP in 2012/13 (US\$144 million) multiplied by proportion of fertiliser costs in FISP (77%) multiplied by proportion of fertiliser wasted due to inefficient uptake (50%) equals US\$55.4 million

<sup>&</sup>lt;sup>2</sup> This is a very rough estimate and needs significant refinement. No account is made here for lost income, malnutrition etc. The various costs highlighted (excluding costs of unserved electricity) are summed up for the past two years and it is estimated that 50% of these could be attributable to the absence of widespread CSA.

#### **Meso Level**

The absence of clear strategies and implementation plans at the national level has a huge impact at the meso level. For the purposes of this study the meso level is taken to mean the district and the Extension Planning Area (EPA) level. Faced with a multitude of individual CSA projects being implemented by various stakeholders using different terminology/definitions and promoting different activities, District Agricultural Development Officers (DADOs) and Area Extension Development Coordinators (AEDCs) face huge **challenges in coordinating CSA activities**. This is compounded by **limited human and financial resources** with an estimated 42% of posts vacant<sup>6</sup> in August 2016. Staff are heavily reliant on donor funded projects for transport to the field as motorbikes and 4x4s are regularly either broken down or have no fuel. Due to the high numbers of CSA (and other agriculture/livelihoods) projects and the requirement of stakeholders to work through or with government structures there is also competition for government staff and consequent issues with implementation of the DSA policy as already mentioned. All of this results in weak coordination at district and EPA level.

Extension services provided by non-state actors are better funded than government services and generally do not want for vehicles/fuel, but staff turnover is often high. As with DAES, extension officers from NGOs generally are not from rural backgrounds and generally see field work as a stepping stone to promotion to office based jobs. While incomplete and likely under representative of the true figure, data collected for this study indicates that there are about 500 non-governmental extension agents working on 187 different district level CSA projects targeting 909,000 farming HHs. This equates to one extension worker to 1,785 farmers. According to the data each of these staff dedicates on average 84% of their time to the CSA project. Face time with farmers is regularly cited as a key determinant in increasing adoption of CSA techniques. Given the high ratio of farmers to extension officers it is unlikely that face time is sufficient. The Lead Farmer/Follower Farmer approach was adopted to address the issue of human resources. With limited follow up even of Lead Farmers and the absence of incentives (particularly after the first few years) for them to continue in their role the sustainability of this approach has been questioned (CISANET & LUANAR, 2014).

**Knowledge and/or capacity of extension workers** is often cited as a key constraint to widespread adoption of CSA. A study by CISANET and Concern Worldwide on CA in three districts in central and southern Malawi (2015) indicated that while extension workers (both NGO and Government) were knowledgeable on both the principles of CA as well as the rationale for each principle, this was not translating into practice by farmers. The study also reported indications of conflicting messages and priorities:

- One fifth of extension workers continue to promote ridging even though 98% promote CA on a daily basis.
- One in ten extension workers are unable to name all three principles of CA when asked.
- 31% claim to be too busy with other tasks.

<sup>&</sup>lt;sup>6</sup> Based on an unofficial communication from DAES in August 2016.

These findings highlight how conflicting messages and the lack of coherent plans at the macro level, combined with the high farmer to extension officer ratios and extensive workloads create challenges to adoption.

**Weak targeting** of interventions places further strain on resources at the meso level. DADOs, AEDCs and NGO project managers are under huge pressure to target as many people as possible. This results in small numbers of farmers being targeted in each community with a 'light touch' instead of adequate sustained face time in communities. This type of targeting is incredibly inefficient with staff often spending more time travelling than they do with farmers. It also negates the synergies that come from implementing several different CSA practices together in the same catchment. The CSA Sourcebook highlights the need for a 'landscape' approach to targeting CSA interventions. This was echoed during the inception workshop for the MCSAA in 2015 as well as during KIIs with various stakeholders and the presentation of initial findings for this study.

A significant barrier to adoption at the meso level that is not mentioned in any of the literature, but is recognised by many practitioners is **weak implementation** on the ground. Project documents often detail sound methods for how CSA practices will be promoted in the field, but fail to acknowledge the face time needed with farmers to achieve the desired outcomes. In practice projects are rarely implemented as per these project documents. This is compounded by the weak targeting outlined above, weak monitoring frameworks (lack of agreed metrics), short project timelines and unrealistic expectations. Systematic supervision of field staff is also limited in most projects. The Farmer Field School is commonly cited as a key activity for promoting new agricultural technologies. These are supposed to be farmer driven centres for learning, but often more closely resemble demonstration plots. Changing the mind-set of extension staff and their supervisors to an advisory and learning approach from the current directive approach will be a significant challenge.

There are significant **information gaps** that need to be filled to ensure the CSA approach promoted is appropriate to the local context at the meso level. These include systematic soil analysis, natural resource mapping and market assessments. Weak analysis of these key variables often affects adoption rates as technologies promoted are not designed to address local challenges and thus do not prove as successful as planned.

#### Micro Level

For the purposes of this study the micro level is taken to be the Village Development Committee (VDC) and individual farmer level. **Quantity and quality of face time** between extension workers and farmers is one of the most commonly cited barriers to adoption (FARA, 2015; Concern Worldwide & CISANET, 2015; FAO, 2013a & b, 2015a & b; ICRISAT, 2010; FANRPAN, 2014). This needs to be adequately planned for and resourced at the meso level and monitored at the micro level. The quality and consistency of messaging being disseminated is a

The majority of projects (84%) have CSA as a component of a broader livelihoods or resilience programme. Few are solely focused on adoption of CSA as their overall goal. This means that the

majority of projects target the extreme poor and most vulnerable farmers. This group is the most **risk averse**. Confusion among implementers on issues such as immediate returns, potential increases or decreases in labour requirements and/or input costs in year one make it less likely that this group will take the risk of implementing CSA practices without input support. Most projects use this as the rationale for the inclusion of subsidised inputs. Those promoting CSA often tend to exaggerate the potential benefits by citing the upper end of the potential benefits. When farmers fail to achieve these results they, and the project staff, are often disheartened.

The **lack of flexibility** in the extension approach leads to farmers and extension staff getting disheartened with CSA practices when they do not achieve the expected results. Structure is needed when planning CSA interventions, but there must be flexibility at the field level to ensure approaches can be adapted to maximise potential in the local context. The current systems of top down/trickle down learning are often ineffective. Extension workers rarely test/experiment adaptations to the set CSA practices with farmers. This has much to do with the extremely limited follow up with farmers and the over reliance on formal/structured trainings and demonstration plots instead of farmer led experiments in Farmer Field Schools.

**Competition for the use of biomass** as fuel, fodder, mulch and compost at the HH level is commonly cited by practitioners in Malawi as a barrier to adoption (FARA, 2015; FAO, 2013b; FANRPAN, 2014). With over dependence on wood for fuel and the resulting rapid rates of deforestation this competition is set to increase. Interventions need to be designed to mitigate these conflicts.

Land tenure has been cited as a barrier to adoption in Malawi and elsewhere (FAO 2013a & b; FANRPAN, 2014; ICRISAT 2010 etc.), especially in relation to CSA practices that are perceived to have medium to longer term benefits, such as agroforestry/FMNR. However some studies indicate that the customary land tenure currently practiced in Malawi may actually be of benefit to CSA adoption. Local chiefs are in a position to allocate land for specific uses and can have a huge influence on uptake of CSA practices. Concern Worldwide's experience of local chiefs allocating significant areas of land to be fenced off for CA in Nsanje is evidence of this.

**Gender** is another issue highlighted in some studies as a barrier to adoption. (FAO, 2015d; FANRPAN, 2014). Women headed households are regularly specifically targeted by programmes whose focus is on poverty reduction as these are often amongst the most vulnerable households. These form a significant proportion of poor farming HHs in Malawi. Where CSA interventions require increased labour or inputs in the first year many practitioners feel that this places disproportionate strain on women headed households compared to male headed or two parent households. Women's access to land is also more limited than for men as is their participation in both community and household level decision making, particularly on land use, even though they have a central role in crop husbandry, food preparation and family nutrition. A study commissioned by Concern Worldwide (2012) indicated that the best yields from CA plots were achieved when female farmers received extension support directly from female extension agents. The extremely limited availability of female extension workers thus hinders the success of CSA projects.

Access to credit and markets can greatly influence the sustainability of CSA projects. Rural Malawi is quite well served with agricultural traders and inputs such as improved maize seed and inorganic fertilisers are widely available, if the farmer can afford them. The diversity of improved seed available is limited especially when it comes to legume seeds (Concern Worldwide, 2014). Promoting varieties of seed which farmers cannot access on their own, or for which there is no easily accessible market will be doomed to failure. To enable farmers to be able to buy the necessary agricultural inputs after projects have ended, many projects include interventions on access to credit either through the private sector (receive inputs on credit or micro finance) or through informal credit systems such as Village Savings and Loans (VS&L) groups, which have been hugely successful in many parts of Malawi.

## **Conclusions & Recommendations**

CSA practices are being promoted by a multitude of stakeholders across all districts of Malawi. The fact that so many stakeholders are promoting CSA practices illustrates the perceived multiple benefits to HH resilience to climate change, increased production and food and nutrition security. With current CSA projects targeting about 30% of Malawi's farmers, it could be perceived that CSA is already widespread and that there is limited need for scaling up CSA in Malawi. This question was raised during the presentation of initial findings. There are however, many reasons why the MCSAA should continue with its aim of increasing the uptake of CSA in Malawi. These include:

- The literature documents the potential benefits of CSA at micro and macro levels. Evidence
  of the actual benefits of the CSA approach, rather than for the individual CSA practices is very
  limited. Much more work needs to be done at the micro level to illustrate the actual benefits
  of CSA as an approach and to quantify these benefits in terms of climate change mitigation,
  increased resilience and increased productivity.
- The data collected for this study details targeted HHs, not HHs that are actually practicing CSA. There are often significant differences between the numbers of HHs targeted by a programme and those actually reached.
- Of all the farmers targeted in ongoing CSA projects only 2.7% of farmers have self-adopted and no definition of adoption is given. Of those projects that recorded data on perception of the quality of adoption the average perception was between 'some problems' and 'good' (2.6/4). Both the figures and practitioner's perspectives indicate that self-adoption and sustainability of CSA interventions is questionable. Previous studies on CA indicate that while practice might be above 30%, adoption may be as low as 1-2% (CISANET & Concern Worldwide, 2015).
- The data illustrates that the current approach to CSA is piecemeal. Various stakeholders are acting in isolation with limited coordination. There are an average of eleven projects per district each targeting about 2,960 HHs. Evidence from various studies and from interviews with MCSAA members indicates that projects often target small numbers of farmers per community and small portions of land on farmer's fields as opposed to entire farms. On

average just four CSA practices are being implemented per project. This does not constitute the landscape and package (of CSA practices) approach that is widely agreed to be the best approach for CSA. The efficacy of extension services and of the lead farmer/follower farmer approach has also been widely called into question.

The absence of coordination means there is no agreement on how to measure CSA. Without
an agreed metric and comprehensive data collection and analysis, it is impossible to
accurately assess baseline values for CSA in Malawi. This study can only indicate the current
scope of CSA nationally.

It is therefore recommended that the MCSAA continue with its plan to scale up CSA in Malawi. The following two sections give recommendations for what needs to be done and how the MCSAA might proceed. It has been broken into three distinct parts. Firstly the available evidence is assessed in terms of where the MCSAA might target scaling up of CSA practices and why. Secondly, recommendations are made on the technical package of CSA practices that should be promoted for scale up and how this might be done. Finally, some preconditions required to be in place before the successful scale up of CSA in Malawi are presented.

#### Where should the MCSAA target interventions?

Currently, CSA projects are concentrated predominantly in the South and Central regions. This closely aligns with poverty and vulnerability mapping which indicate the South and Central regions as being the most densely populated with the highest levels of poverty and vulnerability to flooding and droughts. Given that 84% of CSA projects have an overall objective of poverty reduction, resilience building or livelihoods improvement it is not surprising that these regions are heavily targeted. Both regions have been the worst affected during the current drought and last year's flooding. Table 2 illustrates the distribution of CSA projects by region.

| Region   | District Level CSA Projects |            | Targeted Farmers |            |
|----------|-----------------------------|------------|------------------|------------|
|          | Number                      | Percentage | Number           | Percentage |
| Southern | 144                         | 47%        | 378,949          | 42%        |
| Central  | 124                         | 40%        | 412,366          | 46%        |
| Northern | 40                          | 13%        | 101,206          | 11%        |

#### Table 2: Regional distribution of CSA projects and target farmers

Even though poverty and vulnerability levels are highest in the South, this study argues that **all three regions should be targeted** for CSA scale up interventions. Evidence on the impact of CSA as a package of interventions implemented at the landscape (catchment/watershed/ community) scale is not available anywhere in Malawi. Discussions with key CSA stakeholders highlighted the importance of generating evidence from all three regions that could be compared across the country. Given Malawi's population growth, it is expected that the Northern region will come under increasing pressure over the coming decade. It is felt that targeting this region for interventions might generate the information and buy in necessary to ensure what has already happened in the other two regions does not happen there.

Within each region, where should the MCSAA target interventions? Rather than identify a specific district or TA, this study recommends a set of criteria that could be followed in targeting interventions. CSA interventions will need to be flexible and a one size fits all approach will not work. Resources permitting, the MCSAA should therefore target as many scale up sites as possible across the different agro-ecological zones in each of the three regions. The following selection criteria are proposed<sup>7</sup>:

- 1. **Target all eight of the Agricultural Development Divisions** (ADDs). This will allow for close coordination with the agricultural research stations in each ADD and will enable building on work already done by them.
- 2. Within each ADD identify an ongoing CSA project site that has had some successes in terms of self-adoption, yield increases and/or poverty reduction and target this project for scale up of CSA at the landscape level. The aim will be to design and introduce a package of CSA interventions (discussed in more detail below) that will address the needs of farmers and to get every farmer in the community to practice these 'Total CSA Communities'.
- 3. Over time target neighbouring communities/catchments/mini watersheds. This is the '**hub and wheel**' approach. By scaling out from the centre multiple benefits in terms of logistics, farmer to farmer learning as well as synergies between the CSA practices promoted will be achieved. This also means that as CSA expands from the hub the CSA practices can evolve to suit local agro ecological contexts. It also means that any complementary market based interventions can scale out with CSA.
- 4. If the agro-ecological zones in the ADD are very different, consider targeting sites in each of the different zones as resources permit.

#### What type of interventions should be promoted?

CSA is an approach, not a predefined set of farming practices, and all stakeholders agree that a one size fits all approach will not work. Though there is a need to be flexible at the field level, there is an equal need to have a well-structured CSA strategy whose roll out can be monitored at the national, district, ADD, EPA and local level. All stakeholders agreed that the eight CSA practices included in the scope of this study are relevant in Malawi. It was also agreed that this list is not exhaustive. For these reasons, the study team makes recommendations on the structure and process that CSA scale up interventions might follow, rather than the technical specifications of each of the eight CSA practices.

 Targeting of CSA interventions must change from the current piecemeal approach to the 'Total CSA Community' approach where the aim is to have every farmer and every field in a community/catchments/micro watershed using the CSA approach. This will require a participatory community planning process as the foundation of the CSA intervention. This community planning process should be a part of Participatory Rural Appraisal (PRA) that is a component of any sound livelihoods or resilience programme. The output of this process should be a map of the community detailing what will be done, where and when.

 $<sup>^{7}</sup>$  The study team recognise that resources are finite and that these criteria may need to be refined in light of limited resources.

Decisions must be based on the actual problems faced in the community rather than imposed from the outside. If the community feels that there are weak markets for produce, then the CSA approach adopted must address this issue.

- The planning process will lead to a set of proposed CSA practices to be implemented. In order to ensure these practices are locally appropriate, each CSA scale up site must include a robust **Farmer Field School** (FFS), where farmers themselves can test different solutions to problems and learn from each other. Local level experimentation and learning is critical to engage farmers. FFSs must include gross margins analysis for different experiments and gross margins must include labour contributions. Systematically and jointly assessing the benefits of synergies between CSA practices in terms of productivity and mitigation will be required if farmers are to be convinced of the economic and environmental benefits of CSA.
- When prioritising specific practices in CSA interventions the following criteria should be considered:
  - Soil Improvement: Basic soil testing for pH, moisture content and organic matter content should be conducted at baseline with interventions designed to address these issues. Improving the quality of the soil resource must be the number one priority of any CSA intervention.
  - **Cost:** Low cost interventions will likely be the most sustainable. Assumptions on cost (in terms of labour and financial investment) need to be tested on the FFSs.
  - **Gender implications:** Will the intervention increase demands for women's labour and/or how will it affect women's role as decision makers in the home.
  - Synergies: Does the proposed combination of CSA practices complement each other and contribute to greater impact in terms of yield, HH income and GHG emissions.
  - CSA interventions targeted at extreme poor HHs must be designed to give farmers a **significant return in the first year**. Confusion over whether or not significant yield increases can be achieved in year one and whether or not there are increased labour demands need to be resolved. If poor smallholder farmers do not see a return in year one in terms of reduced labour and increased yields, it is unlikely they will continue with the practice(s) introduced. This is especially the case for CA interventions. Separate studies by Concern Worldwide and Total Land Care in relation to CA would suggest that yields can be increased in year one while decreasing labour requirements. This work needs to be built on and suitable approaches and messaging developed.
- Competition for biomass must be assessed and addressed. If there is not enough biomass available for heavy mulching, fodder and fuel, then CSA practices that increase availability of biomass for must be included. For example, heavy mulching can have a significant impact in terms of yield (moisture retention) and reduced labour (weeding) in the first season, but biomass may not be available to cover large areas. Intervention packages will need to address this issue.

- Farmer Field Schools will generate significant amounts of information that should be documented and used to improve the CSA approaches promoted. While this may be enough at field level **further research is required** to assess and compare the potential impact of different CSA packages to increasing farmer's yields, reducing poverty and reducing GHGs. This work needs to be collated to determine the contribution of CSA to the national economy. It is broadly agreed that the current extension model is not working. Different models should be tested and results documented. In particular models that include incentivising extension workers should be tested. The effect of increased face time with farmers on adoption levels should be a priority for research also. The CGIAR members of the MCSAA would be well placed to do this type of research.
- **Market assessments** should be a part of the initial planning process with communities. The inputs being promoted must be available and accessible to the target farmers after the project is completed. There must be an available and accessible market for farmers produce also.

#### **Preconditions Required for Scale Up**

Criteria for selecting CSA scale up sites and designing CSA intervention packages have been discussed above. In order for CSA scale up to work at the micro and meso levels there are certain preconditions that need to be in place at the macro level.

- 1. **Leadership**: CSA in Malawi needs a champion to drive it forward. This person needs to be at a very senior and high profile level within government and needs to come out in public regularly promoting CSA. The person must have the capacity to influence priorities within the various ministries and departments (especially within the MoAIWD) to push the scale up of CSA.
- 2. **Coordination:** There are many components that need to be addressed here.
  - a. An institution needs to be identified that can coordinate the scale up of CSA at the National level. The MCSAA itself, the TWG on Sustainable Agricultural Land and Water Management under ASWAp or the National Conservation Agriculture Task Force are all options. Whether an existing body is refocused on CSA or whether a new one is established it will be imperative that the institution has a permanent and professional secretariat<sup>8</sup> that can fulfil a core mandate that would include:
    - i. Convening meetings.
    - ii. Collating and sharing information (research, best practice etc.).
    - iii. Developing and managing a communication strategy to promote widespread adoption of CSA.
    - iv. Coordinate and lead on CSA advocacy. This should include a research plan designed to fill information gaps at various levels.
    - v. Develop a funding strategy building on work already done by FAO and MoAIWD.
    - vi. Monitoring roll out of CSA. This might include coordination of *ex poste* independent evaluations of CSA projects.

 $<sup>^{8}</sup>$  This was also a recommendation from the MCSAA inception workshop.

- b. Metrics: Agree and define how CSA will be measured. This must include definitions of adoption for each CSA practice promoted as well as how CSA as an approach will be measured. This should result in a national level baseline value for CSA.
- c. Develop a national CSA strategy that:
  - i. Clarifies the definition of CSA.
  - ii. Clarifies what is meant by 'Adoption' and how to measure it.
  - iii. Outlines how CSA will be operationalized by each department of the MoAIWD (and potentially other ministries as well).
  - iv. Has benchmarks for scaling up CSA adoption at national, district and EPA level.
- 3. **Training on the CSA approach** for extension providers. Extension staff are generally quite familiar with the various CSA practices (CISANET and Concern Worldwide, 2015). What is needed is training on the CSA approach including targeting, participatory planning, monitoring and the FFS approach. Initially this training should be focused on the scale up sites.
- 4. Commitment from implementing agencies to monitor face time with farmers and for donors to allow **greater allocation of resources to extension service provision** as opposed to input distributions. This should include greater investment in coordination at District and EPA level.
- 5. Clarity and coherence on the **DSA approach**. This issue is bigger than just CSA and is a serious impediment to coordinated scale up.
- 6. Continued efforts are required to standardise the **implementation of the current policy** and to hold all stakeholders accountable for implementation. Advocacy efforts by the MCSAA should focus on promoting application of CSA elements in existing policies.

The challenges to scaling up CSA in Malawi are many. However, this study has shown that these challenges are well known and that there is not only broad agreement on these challenges, but also on how they might be addressed. What is needed now is a strategy to scale up and the leadership to drive this forward. Several studies have shown that farmers are more likely to adapt their farming practices when they have experienced the effects of climate change. With almost half of Malawi's population requiring emergency assistance this year and the serious flooding experienced last year, this could be the perfect opportunity for the MCSAA to take the lead in driving the CSA agenda forward.

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World Vision 2015: MCSAA Inception Workshop

## **Annex 1: Inception Report**

#### Introduction

The Malawi Climate Smart Agriculture Alliance (MCSAA) was established after the first Malawi Climate Smart Agriculture Inception workshop in 2015. The MCSAA is allinclusive and governed by a Steering Committee made up of a variety of local partners including government, iNGOs, the private sector, farmer's organizations, technical and research organizations and representatives from the Regional Economic Communities. The Malawi country specific alliance came into force when the Alliance for CSA in Africa identified four 'fast-start' countries namely Ethiopia, Malawi, Niger and Zambia to begin operationalizing the Alliance in Africa. The MCSAA is in the process of establishing country-level engagement strategies.

#### Scoping Study Overview

In order to inform its strategy going forward the MCSAA has commissioned a Scoping Study. This exercise is intended to understand and map current CSA programmes taking place across the country. The mapping exercise will document the type and scale of CSA practices promoted by partners and by other relevant practitioners. This background information will help the MCSAA understand the challenges and opportunities faced in the scaling up of CSA practices and thus, inform its strategy. The study is expected to build upon work already done by the FAO.

The study will utilise a combination of desk review of existing documents and key informant interviews to collate the necessary information. Key informants will be identified, initially using the list of CSA practitioners developed during the MCSAA inception workshop in 2015. The consultants are aware that this list is not exhaustive and every effort will be made to gather as much data as possible for each of the 28 districts of Malawi. It is expected that the District Agriculture Coordinators and District Agriculture Coordination Committees will be key sources of information. The data collected will be analysed and presented in the form of maps and a final narrative report.

#### Objectives and Timeframe

The purpose of the study as specified in the TOR is:

- To understand the scale and scope of current CSA practice in Malawi,
- To identify the challenges and opportunities faced in the scaling up of Climate Smart Agriculture practices (CSA) in Malawi and;
- To make concrete recommendations to the MCSAA on a strategy to increase the scale and impact of CSA, including approaches to be taken at a practical and policy level.

#### Deliverables

The deliverables of the consultancy are:

#### 1. Inception Report

This report will detail the understanding of what is being reviewed and why, showing how the review objectives will be met.

#### 2. Draft Report

To be submitted to MCSAA by the consultants for comments to ensure the review meets the required quality. Draft findings will also be presented for validation.

#### Final Report

SOAS 2014: Ephraim Chirwa & Andrew Dorward The Implementation of the 2012/13 Farm Input Subsidy Programme, FISP Policy Brief 2014 /2, January 2014

World Bank Group, Development Research Group Poverty and Inequality Team 2015: Kathleen Beegle, Emanuela Galasso & Jessica Goldberg: Direct and Indirect Effects of Malawi's Public Works Program on Food

A comprehensive analytical report will be submitted to MCSAA on or before the expiry of the assignment contract. This includes all deliverables as specified In the TOR.

#### Inception period activities

Activities conducted by the consultants during the inception phase included;

- Desk Research
- Development of stakeholder list and data collection tools and as annexes to Inception Report
- Preparation and submission of the Inception Report

#### Inception Outcomes

At proposal stage the consultant's noted some key questions that need to be answered at inception stage. These are discussed in more detail below. It is crucial that each of the below questions are answered before data collection begins.

**1.** Which CSA technologies will fall within the scope of the study? According to the MCSAA Inception workshop, the following specific CSA technologies have been agreed for Malawi. The table proposes some answers but each of these will need to be agreed with the MCSAA.

| CSA Technology  | Clarity Required<br>by Consultants  | Proposed by Consultants   | MCSAA<br>Response |
|---|---|---|-------------------|
| Conservation<br>Agriculture (with<br>trees)   | None  | Use FAO definition. The<br>consultants propose to only<br>count projects that are<br>implementing all three<br>principles together as CA.<br>Organisations promoting one<br>or two principles will have<br>these recorded, but will not be<br>labelled as CA. | -                 |
| Stress tolerant<br>germplasm<br>(improved seed)   | Which crops should<br>be included?<br>Which stress<br>tolerances should be<br>included? | <ul> <li>Any improved seed being<br/>promoted should be:</li> <li>1. Short season</li> <li>2. Flood tolerant</li> <li>3. Disease resistant</li> <li>4. Appropriate to the<br/>agro-ecological zone.</li> </ul>  |                   |
| Irrigation  | None  | It is proposed to collect data<br>on large and small scale<br>irrigation projects.  |                   |
| Farmer Managed<br>Natural<br>Regeneration<br>(FMNR)<br>Alternative<br>Wetting and<br>Drying (AWD) /<br>System of Rice | None<br>Is it Ok to include<br>AWD and SRI?   | Propose the inclusion of SRI<br>here as AWD is a component<br>of SRI.   |                   |

| intensification<br>(SRI) – Rice only.<br>Crop<br>Diversification | How do we measure<br>diversification?<br>Most farmers will<br>plant more than one<br>crop. As this is a<br>once off study it will<br>be difficult to<br>measure crop<br>diversification. | Propose to define this as,<br>"Where seeds are being<br>distributed/promoted, other<br>seeds besides maize being<br>promoted?" This will not<br>exclude maize but ensure it is<br>promoted along with other<br>crops.  |
|--|--|--|
| Improved<br>fertiliser use                                       | What does this term mean?  | It is proposed that any one (or<br>combination of the following)<br>constitute improved fertiliser<br>use:<br>1. Micro dosing<br>2. Fertiliser plus organic<br>matter.<br>3. Fertiliser plus lime<br>Soils in Malawi are<br>predominantly acidic. This<br>seriously limits the efficacy of<br>chemical fertiliser. Addition of<br>organic matter and/or lime<br>can help mitigate this and<br>increase the efficacy of<br>chemical fertiliser. |
| Fodder shrubs  | Which specific<br>shrubs should be<br>included?  | <ol> <li>Gliricidia</li> <li>Faidherbia</li> </ol>   |

#### 2. What timeframe will be assessed?

The consultants propose any CSA projects/programmes that are ongoing or that finished within the last three years. This small timeframe will help to ensure that the data collected is accurate.

#### 3. What is meant by 'capacity of relevant actors on CSA'?

This is a crucial question. The ToR specifies the number of staff, but no more on capacity. An assessment of staff capacity in relation to each of the CSA technologies would require the development and roll out of a comprehensive questionnaire/survey tool. The consultants feel this is outside the current scope of the study and propose to use existing secondary data to infer conclusions on existing technical capacity.

#### 4. What specific vulnerability categories should be included in the scope of the study?

There are a multitude of possible vulnerability indicators that could be used here. For this reason the consultants would like to clarify which specific indicators are required. C12 proposes using composite indicators for:

- 1. Income (poverty status)
- 2. Health and Nutrition
- 3. Risk and vulnerability

a. This final one could be disaggregated by flood risk; drought risk; and total rainfall as these are likely the most important climate factors affecting agriculture across Malawi.

#### Proposed Methodologies

The consultants will utilise a combination of methods in order to achieve the project objectives. It is anticipated that different methods will yield overlapping results, which will be addressed during the analysis phase.

The following are the proposed more specific evaluation methodologies planned during this consultancy:

#### Methodologies Adopted by the Consultants

- 1 Document and data reviews
- 2 Key Informant Interviews
- 3 GIS Analysis (Incorporating a vulnerability analysis)

#### Desk Research (Document and data reviews)

The Consultants reviewed and will continue to review internal and external documents relating to the project. These documents include but are not limited to;

- Relevant government policies
- Previous MCSAA data including reports and presentations from the Beating Famine conference
- Relevant project reports
- FAO EPIC Resources
- Online databases
- Donor strategies (country and regional)

Lessons learnt and findings from the desk review process will feed into the data collection process. The consultants urge the members of the MCSAA to share any documents they may have with the consultants, to ensure important information is not overlooked.

#### *Key Informant Interviews*

The Consultants will begin data collection through a series of Key Informant Interviews with relevant stakeholders. It is anticipated that KII informants will comprise of representatives from:

- Members of MCSAA
- Donor Agencies and Development Partners
- Other identified CSO's working on CSA projects
- Relevant Government Departments
- District Agricultural Development Office representatives

Information will be gathered using tools outlined in Annex C and consolidated into a matrix using categories indicated in Annex D. It is anticipated that the majority of development partners, CSOs and national level government departments will be met in person for KIIs. District level engagement will take place using telephonic interviews where possible.

Where possible, the consultants will aim to take a 'top down' approach initially starting with donors and development partners and national level government agencies. It is anticipated that this will enable capturing data for multiple projects and will guide the rest of the data collection exercise. In this way, the consultants will subsequently prioritise those institutions and districts for which there is no data.

#### GIS Mapping of Information

The main objective of GIS-based analysis and mapping will be to produce a map showing the location of ongoing CSA projects across Malawi. Depending on the quality of GIS data collected from primary sources (in the field) and secondary sources (document review, statistics, base maps), other maps will be created to visually represent CSA practices and vulnerability data in the existing agro-ecological context. Secondary data will be sourced from the Department of Surveys, Malawi Spatial Data Portal (MASDAP), FAO, the World Bank and other Development Partners. Some of the available datasets include: boundary layers (down to TA level of disaggregation); villages; agro-ecological zones; water bodies; land use; soils; hydrogeology; flood risk; precipitation data and other potentially relevant layers.

At the core of all the maps to be created is the need to represent and store data in a way that supports meaningful and accurate analysis of project information. Data collected will need to have enough depth, range and consistency to allow it to be represented in a useful and practical way to the final user.

The mapping component will be executed through a geodatabase rather than the folder system of organizing files. For this purpose, we will create a new file geodatabase and populate it with relevant spatial and attribute data – feature datasets, feature classes, attribute fields in feature class tables, non-spatial tables into which data is organized and images (raster data). A geodatabase is the native data storage format for a GIS platform. It will allow modelling, analysing, managing, and maintaining GIS data for this project and any necessary upgrades and expansion for future projects and needs. It will allow creating GIS features that mimic real-world feature behaviour, applying desired rules and relationships between features, and centralized access of the data collected for the project.

## I. The first stage in executing the mapping component will be to build the pilot geodatabase, which will be planned out through the following steps:

*Evaluating data*: Data available from a variety of sources often comes in different formats and incompatible with a particular GIS processing suite. Datasets compiled from different agencies such as FAO or the World Bank or open source portals such MASDAP will be reviewed for the types of data formats used and if they are in a format that can be easily migrated to the geodatabase. Formats such as Esri shapefiles and MS Access dBase tables will be preferable.

**Determining the coordinate system**: Next, we will determine the appropriate coordinate system to use for the feature classes in the geodatabase. Coordinate systems for the existing data will be compared to see which ones are used most often. Two most likely coordinate systems encountered will be GCS\_WGS\_1984, Geographic coordinate system used by most GPS data collection units or WGS 84\_UTM zone 36S, Projected (Transverse Mercator) Coordinate System, often used in elevation datasets with a limited geographic extent. Because most of the maps for this project will represent country-wide data, datasets will most likely be defined under the GCS\_WGS\_1984 coordinate system.

**Organizing the data**: The next step will be to plan how to organize the data. The data on CSA activities may include point data on project locations and types of activities practiced. This data may be organized in a feature dataset called 'CSA'. Other relevant data include existing datasets on agro-ecological zones, soil types and waterways which

affect the type of CSA activity practiced. These will be imported into the geodatabase as separate feature classes and organized in a feature dataset 'Geophysical'. Data collected in the field will be used to create new feature datasets. The working draft of the MCSAA geodatabase is as follows:

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#### II. The second stage will be the Selection of vulnerability criteria

The ToR's note that "Vulnerability criteria will be agreed upon depending on the availability of data and conceptual framework being applied by the MCSAA." A range of vulnerability indicator data (function of exposure, sensitivity and adaptive capacity) is currently available for Malawi. It includes the following datasets in table format:

- *Exposure* Drought exposure; flood frequency; precipitation trends; fire exposure; earthquake frequency
- *Sensitivity* Soil organic carbon; population count; malnutrition; malaria stability; infant mortality rate
- *Adaptive capacity* Literacy level; market access; irrigated areas; anthropogenic biomes; health infrastructure; building material

Furthermore, the consultants may incorporate synthesized indicators from multiple sources on:

- Poverty; income levels, consumption, poverty gap, Gini coefficient
- Health and nutrition; minimum acceptable diet, stunting rates, food deficit months, food insecure population
- Vulnerability; projected population density, combined drought and flood risk, poor/borderline food consumption, MVAC statistics

The most relevant 'raw' indicators to the MCSAA framework will be selected for further processing to develop spatial indices that, together with CSA data can be used to illustrate practical information on the map. The indicators can be used individually or as a group used to develop a composite index which can then be mapped. In both cases absolute values of the raw indicators will be 'normalized' (standardized) to values between 0 - 100, because indicators will have different minimum/maximum values and will need to be brought to a common data scale.

The indices will then be exported to the GIS platform by joining the indicator attribute table to the mw centroids point shapefile and then rendering it as a raster file. These will subsequently be added to the geodatabase.

#### III. The third stage will be to synthesise datasets to create maps.

After testing the pilot geodatabase using a planned schema and populating it with the selected data from different sources, we can proceed to implement the final, planned geodatabase from which we'll use selected datasets to create informative maps for end users. Maps will be produced by choropleth depiction of indicators, indices, hotspot analysis, thematic overlays and other mapping techniques, as required. For examples of the maps to be produced, see Annex A.

Limitations

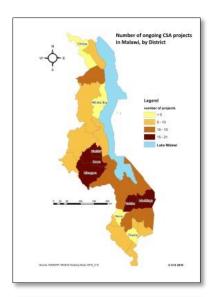
- 1. Availability of Stakeholders for KIIs: The data collection methodology assumes that organizations and representatives will be receptive and dedicate a short amount of time for the KII and data collection process. The consultants have a period of three weeks to collect and consolidate data. While concerted attempts will be made to reach all targeted organizations, it is possible that some may be omitted due to logistical reasons.
- 2. Availability of district agricultural representatives: District representatives will be contacted telephonically, it is anticipated that there may be challenges in conducting interviews in this manner and ensuring that all districts are appropriately covered.
- 3. Mapping and vulnerability data: GIS mapping will utilize existing datasets. While vulnerability indicators may be synthesized into a geodatabase at district level, there may be restrictions on outcomes due to data unavailability.

| Annex 2 | : KII | <b>Stakeholder List</b> |
|---------|-------|-------------------------|
|---------|-------|-------------------------|

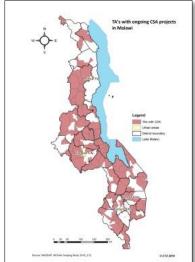
| Donors, NGO's and Government Representatives Consulted |                      |  |  |  |  |  |  |  |  |
|--|----------------------|--|--|--|--|--|--|--|--|
|  | KII Interviewee      |  |  |  |  |  |  |  |  |
| Donors & Development Partners                          |                      |  |  |  |  |  |  |  |  |
| DfID   | Dr Teddy Nakhumwa    |  |  |  |  |  |  |  |  |
| Irish Aid  | Lingstone Chiona     |  |  |  |  |  |  |  |  |
| European Commission                                    | Jenny Brown          |  |  |  |  |  |  |  |  |
| MCSAA Members  |                      |  |  |  |  |  |  |  |  |
| CARE International                                     | Lemekeza Mokiwa      |  |  |  |  |  |  |  |  |
| Concern World Wide                                     | Frank Tembo          |  |  |  |  |  |  |  |  |
| Catholic Relief Services                               | Norias Kayira        |  |  |  |  |  |  |  |  |
| Oxfam  | Chimwemwe Kachepa    |  |  |  |  |  |  |  |  |
| World Vision   | Ausward Zidanajere   |  |  |  |  |  |  |  |  |
| FAO  | George Phiri         |  |  |  |  |  |  |  |  |
| Total Land Care (TLC)                                  | Zwide Jere           |  |  |  |  |  |  |  |  |
| Other Implementing NGOs and Programmes                 |                      |  |  |  |  |  |  |  |  |
| Trócaire   | Violet Moyo          |  |  |  |  |  |  |  |  |
| CADECOM  | Yusuf Mkungula       |  |  |  |  |  |  |  |  |
|  | Wyclef Kumwenda,     |  |  |  |  |  |  |  |  |
| NASFAM   | Frazer Mataya, Eluby |  |  |  |  |  |  |  |  |
|  | Kanyenda             |  |  |  |  |  |  |  |  |
| Christian Aid  | Geoffrey Singini     |  |  |  |  |  |  |  |  |
| Concern Universal                                      | Esther Mweso         |  |  |  |  |  |  |  |  |
| Action Aid   | Chikondi Chabvuta    |  |  |  |  |  |  |  |  |
| СООРІ  | Ondine Tsaconas      |  |  |  |  |  |  |  |  |
| GOAL   | Hetherwick Mandere   |  |  |  |  |  |  |  |  |
| Save the Children                                      | James Lwanda         |  |  |  |  |  |  |  |  |
| VUNA   | John Cantrill        |  |  |  |  |  |  |  |  |
| LEAD   | Sophie Mahonya       |  |  |  |  |  |  |  |  |
| Government Departments                                 |                      |  |  |  |  |  |  |  |  |
| Department of Land Resource Conservation               | John Mussa           |  |  |  |  |  |  |  |  |

### District DADO's Offices / Dept of Land Conservation Representatives Consulted in the following districts:

| Balaka     | Kasungu  | Nkhotakota | Zomba |
|------------|----------|------------|-------|
| Blantyre   | Lilongwe | Nsanje     |       |
| Chikwawa   | Machinga | Ntcheu     |       |
| Chiradzulu | Mangochi | Ntchisi    |       |
| Chitipa    | Mchinji  | Phalombe   |       |
| Dedza      | Mulanje  | Rumphi     |       |
| Dowa       | Mwanza   | Salima     |       |
| Karonga    | Mzimba   | Thyolo     |       |

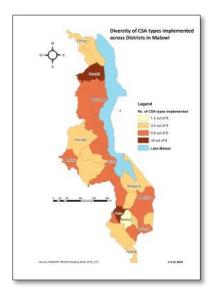


#### Annex 3: Detailed Maps & Explanations 1. Number of CSA projects by District District Sum of all the reported CSA projects, showing "concentration" of projects



#### 2. TA's with ongoing CSA projects

Based on projects which have specified target TA's (70% projects have specified); shows only location, not the concentration of projects (the remaining 30% either not specified as implementing CSA projects or have no active CSA projects)



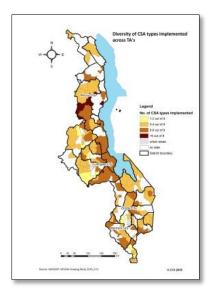
#### 3. Diversity of CSA by District

Shows how many out of the total 8 activities are being implemented in the district Calculated as:

%X=[sum] implemented projects in Dist/[count] total project locations in Dist\*100

then reclassified as:

0-25% = 1-2 out of 8 25-50% = 3-4 out of 8 50-75% = 5-6 out of 8 >75% = > 6 out of 8



#### 5. Diversity of CSA by TA

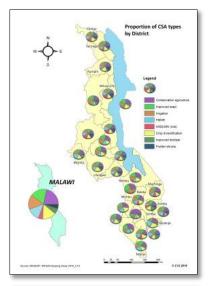
Shows how many out of the total 8 activities are being implemented in each of the reported TA's targeted for CSA

Calculated as:

%X=[sum] implemented projects per activity in TA/[count] total project locations in TA\*100

then reclassified as:

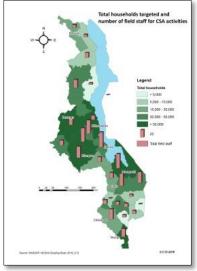
0-25% = 1-2 out of 8 25-50% = 3-4 out of 8 50-75% = 5-6 out of 8 >75% = > 6 out of 8



#### 6. Proportion of CSA types by District

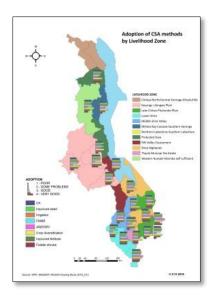
Shows the proportion of each CSA activity implemented out of the all the CSA activities surveyed, expressed as percentage out of 100% Calculated as:

%X=[sum] implemented projects per activity in Dist/[sum] total implemented projects in Dist\*100 then the % of all activities comprising 100%, mapped as pie charts for each district



#### 7. Total households and field staff by District

District Sum of targeted number of households, number ranges mapped in choropleth District Sum of field staff allocated for CSA activities, mapped as bar graph



8. Adoption of CSA by District (36% of projects reported adoption scores) Calculated as average of adoption scores (1-4) per activity per district Adoption averages of all activities mapped as composite bar graph, overlaid on top of livelihood

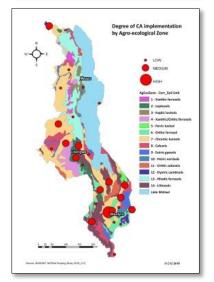
composite bar graph, overlaid on top of livelihood zones map, based on WFP ICA – Integrated Context Analysis.



9. **Impact of CSA by District** (33% of projects reported impact scores)

Calculated as average of impact scores (1-4) per activity per district

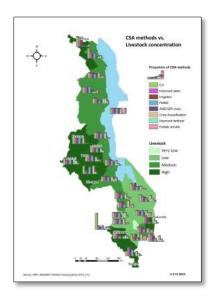
Impact averages of all activities mapped as composite bar graph, overlaid on top of livelihood zones map.



10. **Implementation of CSA type by Agro**ecological zone (soil type classification) (each type - CA, IS, FMNR, AWD/SRI, etc. is depicted in separate map) Shows degree of CSA type implementation overlaid with agro-ecological zones to explore correlation of type of CSA activity with soil type Calculated same as #5

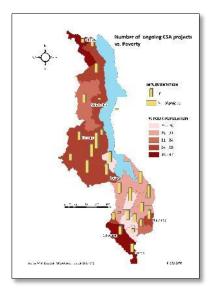
#### %X=[sum] implemented projects per activity in Dist/[sum] total implemented projects in Dist\*100

Then reclassified into three classes LOW, MEDIUM and HIGH degree of implementation, represented as graduated circles



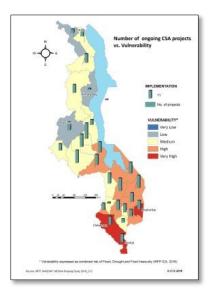
# 11. CSA method vs. Livestock concentration

Concentration of livestock based on proxy indicator 'livestock sales' by district, mapped as choropleth ranges reclassified into 1-Very low to 6-Very high Proportion of all CSA methods by district mapped as composite bar graph (same calculation/data source as #5)



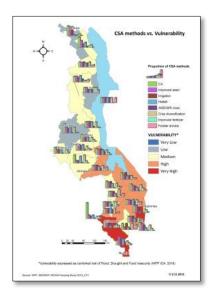
## 12. Number of ongoing CSA projects vs. poverty

Poverty levels, expressed in % (based on WFP ICA 2016 – integrated context analysis) mapped in choropleth, overlaid with concentration of CSA projects (District Sum)



13. Two versions of this map:

A. **District level vulnerability** (combined risk of flood, drought and food insecurity) based on WFP ICA 2016 mapped in choropleth, Very low – Very high range, overlaid with concentration of CSA projects



B. District level vulnerability overlaid with Proportion of all CSA methods by district (composite bar graph)

## Annex 4: Challenges to Adoption Summary Matrix

|   |                      |                           | Challeng                                       | es/Barriers t                 | o Adoption   |                      |  |
|---|----------------------|---------------------------|--|-------------------------------|--|----------------------|--|
| Source  | Labour<br>costraints | Information/<br>Knowledge | Input<br>Availability /<br>Susidised<br>inputs | Lack of<br>capital/<br>credit | Financial<br>viability / low<br>yielding<br>varieties. | Inadequate<br>Policy | Weak<br>Extension<br>Services / Face<br>time with<br>farmers |
| Barriers, incentives and benefits in<br>the adoption of climate-smart<br>agriculture Lessons from the MICCA<br>pilot project in Kenya - FAO | V                    | √                         | √  | ~                             | √  |                      |  |
| Barriers to scaling up/out CSA and strategies to enhance adoption in Africa – FARA/NORAD/NEPAD  | V                    | √                         | √  | √                             |  | ~                    | $\checkmark$   |
| CA Situation Analysis - Concern WW /<br>CISANET   |                      |                           |  |                               |  | √                    | $\checkmark$   |
| CSA Sourcebook - FAO  |                      | $\checkmark$              |  | √                             |  | √                    | $\checkmark$   |
| EPIC - Emerging Evidence from Malawi<br>– FAO   |                      |                           |  |                               |  |                      | ✓  |
| Climate-Smart Agriculture? A review of current practice of agroforestry and conservation agriculture in Malawi and                          | $\checkmark$         |                           | ✓  | ✓                             |  |                      | $\checkmark$   |
| Zambia – FAO  | $\checkmark$         |                           | $\checkmark$                                   | •                             | •  |                      | •  |

| Smallholder productivity under<br>climatic variability: Adoption and<br>impact of widely promoted agricultural<br>practices<br>in Tanzania - FAO, EPIC Tanzania                  |              | √            |              | √ |              |              | ~            |
|--|--------------|--------------|--------------|---|--------------|--------------|--------------|
| Livelihood diversification<br>and vulnerability to<br>poverty in rural Malawi - FAO  |              |              |              |   |              |              | √            |
| Perspectives on Climate-Smart<br>Agriculture from Across the Globe: A<br>Case Study of Malawi - FANRPAN<br>DRAFT   | $\checkmark$ | V            |              | • |              | V            | ~            |
| Pigeonpea Groundnuts and poverty –<br>ICRISAT  | -            | $\checkmark$ | $\checkmark$ | ✓ | $\checkmark$ | $\checkmark$ | •            |
| POLICIES AND PRACTICES FOR<br>CLIMATE-SMART AGRICULTURE IN<br>SUB-SAHARAN AFRICA<br>A Comparative Assessment of<br>Challenges and Opportunities across<br>15 countries - FANRPAN | •            | V            | √            | - | -            |              | V            |
| SCALING UP REGREENING:<br>SIX STEPS TO SUCCESS<br>A Practical Approach to Forest and<br>Landscape Restoration - World<br>Resources Institute                                     |              | V            |              |   | V            | V            |              |
| MALAWI CSA STRATEGIC FRAMEWORK<br>- Draft January 2015 - FAO/MoAIWD  | $\checkmark$ | √            | •            | ~ | •            |              | $\checkmark$ |

|   | Challenges/Barriers to Adoption                              |   |                |                         |                                       |                                      |   |  |   |  |  |
|---|--|---|----------------|-------------------------|---------------------------------------|--------------------------------------|---|--|---|--|--|
| Source  | Age of<br>farmer<br>(older<br>less<br>likely<br>to<br>adopt) | Access to<br>Markets /<br>Marketability | Land<br>tenure | Land<br>Holding<br>size | Access<br>to CSA<br>specific<br>tools | Limited<br>short<br>term<br>benefits | Weak<br>Physical<br>infrastructure<br>(e.g<br>irrigation) | Weak Social<br>Infrastructure<br>(e.g. WUGs) | Lack of<br>flexibility in<br>approaches | Low<br>volumes of<br>biomass /<br>competition<br>for biomass |  |
| Barriers, incentives<br>and benefits in the<br>adoption of climate-<br>smart agriculture<br>Lessons from the<br>MICCA pilot project<br>in Kenya – FAO |  |   |                |                         |                                       |                                      |   |  |   |  |  |
| Barriers to scaling<br>up/out CSA and<br>strategies to enhance<br>adoption in Africa –<br>FARA/NORAD/NEPAD  |  |   | √              | V                       | √                                     | ~                                    | V   | V  | √                                       | √  |  |
| CA Situation Analysis<br>- Concern WW /<br>CISANET  |  |   | -              |                         |                                       |                                      |   |  |   |  |  |
| CSA Sourcebook –<br>FAO   | -  |   | ~              |                         |                                       |                                      | $\checkmark$  | $\checkmark$                                 | $\checkmark$                            |  |  |
| EPIC - Emerging<br>Evidence from<br>Malawi – FAO  |  |   | √              |                         |                                       | $\checkmark$                         |   |  |   |  |  |
| Climate-Smart   | $\checkmark$   | $\checkmark$                            | √              | √                       |                                       | $\checkmark$                         |   |  |   | √  |  |
| Agriculture? A review<br>of current practice of<br>agroforestry and   | -  |   |                |                         |                                       | √                                    |   |  |   | ✓  |  |

| conservation<br>agriculture in Malawi<br>and Zambia - FAO   |   |              |   |   |   |   |  |   |
|---|---|--------------|---|---|---|---|--|---|
| Smallholder<br>productivity under<br>climatic variability:<br>Adoption and impact<br>of widely promoted<br>agricultural<br>practicesin Tanzania -<br>FAO, EPIC Tanzania |   |              | 1 |   |   |   |  |   |
| Livelihood<br>diversification<br>and vulnerability to<br>poverty in rural<br>Malawi – FAO   |   |              |   |   |   |   |  |   |
| Perspectives on<br>Climate-Smart<br>Agriculture from<br>Across the Globe: A<br>Case Study of Malawi<br>- FANRPAN DRAFT  | - |              |   | √ | √ | ~ |  | ~ |
| Pigeonpea<br>Groundnuts and<br>poverty - ICRISAT  | - | $\checkmark$ | ~ | √ |   |   |  | √ |
| POLICIES AND<br>PRACTICES FOR<br>CLIMATE-SMART<br>AGRICULTURE IN<br>SUB-SAHARAN<br>AFRICA<br>A Comparative<br>Assessment of   |   | ~            | ~ | - | ~ | - |  |   |

| Challenges and<br>Opportunities across<br>15 countries –<br>FANRPAN  |   |   |   |   |   |   |  |
|--|---|---|---|---|---|---|--|
| SCALING UP<br>REGREENING:<br>SIX STEPS TO<br>SUCCESS<br>A Practical Approach<br>to Forest and<br>Landscape<br>Restoration - World<br>Resources Institute |   | ~ | √ | - | ~ |   |  |
| MALAWI CSA<br>STRATEGIC<br>FRAMEWORK - Draft<br>January 2015 -<br>FAO/MoAIWD   | - | ✓ | √ | • | V | √ |  |

|   |   |   |   | Challer                      | nges/Barr  | riers to A          | doption                     |                         |  |   |  |
|---|---|---|---|------------------------------|------------|---------------------|-----------------------------|-------------------------|--|---|--|
| Source  | Risk<br>Aversio<br>n /<br>Povert<br>Y<br>Status | No roll<br>out plan /<br>Weak<br>institution<br>al<br>framewor<br>k | Lack of<br>incentive<br>s/<br>subsidies<br>/ climate<br>financing | Low<br>Germinati<br>on rates | Gend<br>er | Soil<br>Qualit<br>Y | Rainfall<br>variabili<br>ty | Policy<br>Coheren<br>ce | Donor<br>Preferance<br>s for short<br>term / high<br>cost<br>interventio<br>ns | Definitio<br>ns of<br>Adoption<br>Given | Comments                                 |
| Barriers,<br>incentives and<br>benefits in the<br>adoption of<br>climate-smart<br>agriculture<br>Lessons from the<br>MICCA pilot<br>project in Kenya<br>– FAO |   |   |   |                              |            |                     |                             |                         |  | No                                      |  |
| Barriers to scaling<br>up/out CSA and<br>strategies to<br>enhance adoption<br>in Africa –<br>FARA/NORAD/NEP<br>AD   | √   | -   |   |                              |            |                     | -                           |                         |  | No                                      | Hardware<br>and<br>Software<br>Barriers  |
| CA Situation<br>Analysis - Concern<br>WW / CISANET  |   | √   |   |                              |            | -                   | -                           | -                       |  | Yes                                     | Bottom up<br>and top<br>down<br>approach |

| CSA Sourcebook –<br>FAO   | $\checkmark$ | √ | - |   |   |              |   |   | No |   |
|---|--------------|---|---|---|---|--------------|---|---|----|---|
| EPIC - Emerging<br>Evidence from<br>Malawi – FAO  |              |   |   |   |   |              |   |   | No |   |
| Climate-Smart<br>Agriculture? A<br>review of current<br>practice of<br>agroforestry and<br>conservation<br>agriculture in<br>Malawi and<br>Zambia – FAO | V            |   | V | 1 | V |              |   |   | No | Agrofrestry<br>in Malawi -<br>S. sesban<br>not suitable<br>on steep<br>slopes.<br>Longer term<br>benefits for<br>F. albidia.<br>Pigeon Pea<br>and<br>Gliricidia are<br>likely the<br>two best<br>options. |
|   | -            |   | • | • | • | $\checkmark$ | • | • | No | CA in<br>Zambia -   |
| Smallholder<br>productivity under<br>climatic<br>variability:<br>Adoption and<br>impact of widely<br>promoted<br>agricultural                           |              |   | - |   | - | ~            |   | - | No |   |

| practices<br>in Tanzania - FAO,<br>EPIC Tanzania   |   |              |   |   |   |   |   |    |   |
|--|---|--------------|---|---|---|---|---|----|---|
| Livelihood<br>diversification<br>and vulnerability<br>to<br>poverty in rural<br>Malawi – FAO | - | $\checkmark$ | - | ✓ | - | ~ | - | No | Focuses on<br>the<br>constraints<br>forcing<br>diversificati<br>on, and the<br>enabling<br>conditions<br>that<br>incentivize<br>diversificati<br>on by<br>farmers.<br>Low rainfall<br>= push,<br>higher<br>rainfall =<br>diversify<br>into non<br>farm. |

| Perspectives on<br>Climate-Smart<br>Agriculture from<br>Across the Globe:<br>A Case Study of<br>Malawi -<br>FANRPAN DRAFT                     | ✓ | √ | V | - | √ |   |   | - | No | Focuses on<br>CA without<br>saying it.<br>Gives a<br>decent<br>policy<br>overview<br>from the<br>Climate<br>Change<br>perspective,<br>rather than<br>ag<br>perspective. |
|---|---|---|---|---|---|---|---|---|----|---|
| Pigeonpea<br>Groundnuts and<br>poverty - ICRISAT  |   |   |   |   | - |   |   |   | No | Aflatoxin for<br>gnuts<br>hinders<br>exports  |
| POLICIES AND<br>PRACTICES FOR<br>CLIMATE-SMART<br>AGRICULTURE IN<br>SUB-SAHARAN<br>AFRICA<br>A Comparative<br>Assessment of<br>Challenges and |   | √ |   | - | √ | - | V |   | No | Specifically<br>looks at<br>policy<br>environmen<br>t. Some<br>good<br>summary<br>information<br>here.  |

| Opportunities<br>across 15<br>countries –<br>FANRPAN   |   |   |   |   |   |   |   |                |   |
|--|---|---|---|---|---|---|---|----------------|---|
| SCALING UP<br>REGREENING:<br>SIX STEPS TO<br>SUCCESS<br>A Practical<br>Approach to<br>Forest and<br>Landscape<br>Restoration -<br>World Resources<br>Institute |   | ~ |   |   |   | V | V | Yes/Sort<br>of | FMNR in<br>particular. 6<br>steps,<br>similar to<br>EPIC<br>steps?<br>Adoption<br>occurs when<br>climatic<br>conditions<br>have gone<br>too far and<br>farmers see<br>the need for<br>change. |
| MALAWI CSA<br>STRATEGIC<br>FRAMEWORK -<br>Draft January<br>2015 -<br>FAO/MoAIWD  | ~ | ~ | ~ | - | - | ✓ |   | No             | Good<br>summary of<br>how CSA fits<br>within<br>ASWAp.<br>Tries to<br>compare<br>ROI of<br>different  |

|  |  |  |  |  | CSA<br>practices. |
|--|--|--|--|--|-------------------|
|  |  |  |  |  |                   |
|  |  |  |  |  |                   |
|  |  |  |  |  |                   |

| Region  | District | ТА            | Organisation                    | Partner   | Project Name<br>(If not indicated, assumed to be<br>internally funded projects)  | Donor                  |
|---------|----------|---------------|---------------------------------|---|--|------------------------|
| Central | Dedza    | Kamenyagwaza  | Action Aid                      |   |  |                        |
| Central | Dedza    | 2 Tas         | CADECOM                         | Trocaire  | GPAF project   | DFID                   |
| Central | Dedza    | Chilikumwendo | CADECOM                         |   |  |                        |
| Central | Dedza    | Chauma        | Concern Universal               |   |  |                        |
| Central | Dedza    | Chilikumwendo | Evangelical<br>Lutheran Service |   |  |                        |
| Central | Dedza    | Chilikumwendo | ICRAF                           |   |  |                        |
| Central | Dedza    |               | Total Land Care                 | Ministry of Agriculture,<br>Irrigation and Water<br>Development | Building Resilience to Climate<br>Change (BRCC)  | DFID                   |
| Central | Dedza    | Kachindamoto  | Total Land Care                 |   |  |                        |
| Central | Dedza    | Kachindamoto  | Trocaire                        | CADECOM Dedza   | Increasing community resilience<br>to food security, household<br>income and gender equality in<br>central and Southern Malawi | GPAF/DFID/I rish Aid   |
| Central | Dedza    | Kachindamoto  | Trocaire                        | CADECOM Dedza   | Contribute towards resilience to<br>food security, household income<br>and gender equality in southern<br>and central Malawi   | GPAF/Irish Aid         |
| Central | Dedza    | Kachindamoto  | World Vision                    | MoAI & WD   | 40 Hour Famine Food Security<br>Project  | World Vision Australia |
| Central | Dedza    | Kachindamoto  | World Vision                    | ICRAF   | Empowering Forest Dependent<br>Communities through<br>Commercialization of Small-Scale<br>Project (EFDCCSSFP)                  | EU and DfID            |
| Central | Dedza    | Tambala       | World Vision                    | MoAIWD, Vision Fund,<br>Concern Universal                       | Tchesa MHFS & R  | World Vision Korea     |
| Central | Dedza    | Tambala       | World Vision                    | MoAI & WD, Vision Fund,<br>Concern Universal                    |  | World Vision Australia |
| Central | Dowa     | 1 TA          | CADECOM                         | Caritas Australia   | Australia Africa Engagement<br>Scheme  | Caritas Australia      |
| Central | Dowa     | Chakhaza      | CADECOM                         |   |  |                        |

### Annex 5: Full Project List

| Central | Dowa     | Dzoole   | CARE MALAWI          | ICRISAT   | Pathways to Secured Livelihoods  | Bill & Melinda Gates     |
|---------|----------|----------|----------------------|---|--|--------------------------|
| Central | Dowa     | Chiwere  | CARE MALAWI          | Mponela Aids Information<br>and Counselling Centre<br>(MAICC) | Women Empowerment<br>Improving Resilience and Food<br>Security (WERISE)                                      | DFAT – Australia         |
| Central | Dowa     | Chiwere  | CARE MALAWI          | TOTAL LAND CARE   | Drought Mitigation through<br>Irrigation Promotion and<br>Conservation Agriculture<br>Extension              | USAID / OFDA             |
| Central | Dowa     | Mkukula  | DAPP                 |   |  |                          |
| Central | Dowa     | Dzoole   | Kusamala             |   |  |                          |
| Central | Dowa     | Chakhaza | MoA_Masaf 4          |   |  | World Bank               |
| Central | Dowa     |          | NASFAM               |   | Transfer and Extension Project   | IFPRI                    |
| Central | Dowa     | Chiwere  | ТАРР                 |   |  |                          |
| Central | Dowa     | Mkukula  | ТАРР                 |   |  |                          |
| Central | Dowa     |          | Total Land Care      |   | Management for Adaptation to<br>Climate Change (MACC II)   | Norwegian Embassy        |
| Central | Dowa     | Chakhaza | Total Land Care      |   |  |                          |
| Central | Dowa     | Kayembe  | World Vision         | MOAI&WD   | Chisepo Greenfields  | World Vision Australia   |
| Central | Dowa     | Chakhaza | World Vision         | MOAI&WD   | Kasangadzi MHFS & R  | World Vision Korea       |
| Central | Dowa     | Kayembe  | World Vision         | MOAI&WD   | Lipiri 40 Hour   | World Vision New Zealand |
| Central | Kasungu  | Kaomba   | CADECOM              |   |  |                          |
| Central | Kasungu  | Mwase    | CARE                 |   |  |                          |
| Central | Kasungu  | Simlemba | Heifer International |   |  |                          |
| Central | Kasungu  |          | ICRAF                |   |  |                          |
| Central | Kasungu  |          | NASFAM               | Kasungu   | Enhancing smallholder<br>productivity and returns through<br>climate smart agriculture<br>practice in Malawi | Irish Aid                |
| Central | Kasungu  | Chulu    | NASFAM               |   |  |                          |
| Central | Kasungu  | Kawamba  | OXFAM                | CIDOD   | Social economic empowerment<br>of small holder producers in rural<br>malawi                                  | Scottish Government      |
| Central | Kasungu  |          | Total Land Care      |   | SURELIVES  | Altria                   |
| Central | Kasungu  |          | Total Land Care      |   | Reforestation Project (JTG)  | Japan Tobacco Group      |
| Central | Lilongwe | Chiseka  | CADECOM              |   |  |                          |
| Central | Lilongwe | Chiwere  | CARE MALAWI          | Mponela Aids Information<br>and Counselling Centre<br>(MAICC) | Women Empowerment<br>Improving Resilience and Food<br>Security (WERISE)                                      | DFAT – Australia         |

| Central | Lilongwe | Malili     | CBF                  |   |  |                                   |
|---------|----------|------------|----------------------|---|--|-----------------------------------|
| Central | Lilongwe | Chiseka    | Good for Goods       |   |  |                                   |
| Central | Lilongwe | Chiseka    | Good Neighbours      |   |  |                                   |
| Central | Lilongwe | Kabudula   | Heifer International |   |  |                                   |
| Central | Lilongwe | Chiseka    | Inter-Aide           |   |  |                                   |
| Central | Lilongwe |            | NASFAM               | Lilongwe North IPC  | Enhancing smallholder<br>productivity and returns through<br>climate smart agriculture<br>practice in Malawi               | Irish Aid                         |
| Central | Lilongwe |            | NASFAM               | Lilongwe South IPC  | Norway   | Norad                             |
| Central | Lilongwe | Chimutu    | OXFAM                | CADECOM National<br>(implemented by<br>Lilongwe)  | Improved Livelihoods for 3000 poor farmers and their families in Malawi  | Scottish Government               |
| Central | Lilongwe |            | Total Land Care      |   | SURELIVES  | Altria                            |
| Central | Lilongwe |            | Total Land Care      | Ministry of Agriculture,<br>Irrigation and Water<br>Development                         | Sustainable Agriculture<br>Production Program (SAPP)   | IFAD                              |
| Central | Lilongwe |            | Total Land Care      |   | Reforestation Project (JTG)  | Japan Tobacco Group               |
| Central | Lilongwe | Kalolo     | Total Land Care      |   |  |                                   |
| Central | Lilongwe | Mazengera  | World Vision         | MoAIWD  | Chigodi 40 Hour  | New Zealand                       |
| Central | Lilongwe | Mazengera  | World Vision         | Vision Fund, Farm Concern<br>International  | THRIVE Malawi  | World Vision USA                  |
| Central | Lilongwe | Chitekwere | World Vision         | Y-Malawi, Evangelical<br>Association of Malawi,<br>MoAIWD                               | Nkhoma MHFS & R  | World Vision USA                  |
| Central | Lilongwe | Chitekwere | World Vision         | Vision Fund, Farm Concern<br>International  | THRIVE Malawi  | World Vision USA                  |
| Central | Mangochi | Makanjila  | COOPI MALAWI         | CONCERN UNIVERSAL,<br>GOAL MALAWI, SELF HELP<br>AFRICA, CLIOMA,<br>SOLARAID, CUMO, CEPA | Developing Innovative Solutions<br>with Communities to Overcome<br>Vulnerability through Enhanced<br>Resilience (DISCOVER) | DFID, NORWEGIAN GVT, IRISH<br>AID |
| Central | Mangochi | Makanjila  | Total Land Care      |   |  |                                   |
| Central | Mchinji  | 1 TA       | CADECOM              | CRS   | Solicitation of Nutrition and<br>Agriculture Programme   | CRS                               |
| Central | Mchinji  |            | NASFAM               | Mnchinji  | Improved livelihoods for<br>smallholder groundnut farmers<br>through strengthening the<br>business, marketing and          | Twin                              |

|         |            |             |                               |   | agricultural extension systems of target producer organisations in Malaw                   |                         |
|---------|------------|-------------|-------------------------------|---|--|-------------------------|
| Central | Mchinji    | Dambe       | OXFAM                         | CARD  | Improved Livelihoods for 3000<br>poor farmers and their families<br>in Malawi              | Scottish Government     |
| Central | Mchinji    |             | Total Land Care               |   | SURELIVES  | Altria                  |
| Central | Mchinji    | Mavwere     | World Vision                  | MOAI&WD   | Bua Mtete MHFS & R   | Korea                   |
| Central | Mchinji    | Mavwere     | World Vision                  | MOAI&WD   | Bua Mtete Economic<br>Development  | Korea                   |
| Central | Mchinji    | Mavwere     | World Vision                  | MOAI&WD   | Likasi MHFS & R  | World Vision Taiwan     |
| Central | Mchinji    |             | Total Land Care               |   | SURELIVES  | Altria                  |
| Central | Mchinji    | Mavwere     | World Vision                  | MOAI&WD   | Bua Mtete MHFS & R   | World Vision Korea      |
| Central | Nkhotakota | Kafuzira    | ARET                          |   |  |                         |
| Central | Nkhotakota | Kafuzira    | Concern world wide            |   |  |                         |
| Central | Nkhotakota |             | NASFAM                        | Nkhotakota  | Norway   | Royal Norwegian Embassy |
| Central | Nkhotakota | Kafuzira    | NASFAM                        |   |  |                         |
| Central | Nkhotakota |             | Total Land Care               | Ministry of Agriculture,<br>Irrigation and Water<br>Development | Sustainable Agriculture<br>Production Program (SAPP)                                       | IFAD                    |
| Central | Nkhotakota | Kafuzira    | Total Land Care               | · ·   |  | IFAD, Norway            |
| Central | Nkhotakota |             | Total Land Care               |   | Management for Adaptation to<br>Climate Change (MACC II)                                   | Norwegian Embassy       |
| Central | Ntcheu     | Ganya       | CADECOM                       |   |  |                         |
| Central | Ntcheu     |             | NASFAM                        | Ntcheu  | Norway   | Royal Norwegian Embassy |
| Central | Ntcheu     | Ganya       | NASFAM                        |   |  |                         |
| Central | Ntcheu     | Makwamgwala | NASFAM                        |   |  |                         |
| Central | Ntcheu     |             | Total Land Care               | LUANAR, ISS, CIAT   | Acting Together Now for Pro-<br>Poor Startegy against Soil and<br>Land Degradation (AGORA) | BMZ                     |
| Central | Ntcheu     |             | Total Land Care               | Ministry of Agriculture,<br>Irrigation and Water<br>Development | Building Resilience to Climate<br>Change (BRCC)  | DFID                    |
| Central | Ntcheu     | Champiti    | Total Land Care               |   |  |                         |
| Central | Ntcheu     | Ganya       | Total Land Care               |   |  |                         |
| Central | Ntcheu     | Makwangwala | Total Land Care               |   |  |                         |
| Central | Ntcheu     | Champiti    | Training Support<br>Programme |   |  |                         |

| Central | Ntcheu  | Mpando    | Training Support<br>Programme |  |  |                    |
|---------|---------|-----------|-------------------------------|--|--|--------------------|
| Central | Ntcheu  | Ganya     | Trocaire                      | CADECOM Dedza                              | Contribute towards resilience to<br>food security, household income<br>and gender equality in southern<br>and central Malawi | GPAF/Irish Aid     |
| Central | Ntchisi | Chilooko  | NASFAM                        |  |  |                    |
| Central | Ntchisi | Kalumo    | NASFAM                        |  |  |                    |
| Central | Ntchisi | Vuso Jere | NASFAM                        |  |  |                    |
| Central | Ntchisi |           | NASFAM                        | Ntchisi                                    | Enhancing smallholder<br>productivity and returns through<br>climate smart agriculture<br>practice in Malawi                 |                    |
| Central | Ntchisi | Kalumo    | ТАРР                          |  | •  |                    |
| Central | Ntchisi |           | Total Land Care               |  | Management for Adaptation to<br>Climate Change (MACC II)   | Norwegian Embassy  |
| Central | Ntchisi |           | Total Land Care               |  | Protecting Ecosystems and<br>Restoring Forests in Malawi<br>(PERFORM)  | USAID              |
| Central | Ntchisi | Chikho    | Total Land Care               |  |  |                    |
| Central | Ntchisi | Chilooko  | Total Land Care               |  |  |                    |
| Central | Ntchisi | Kalumo    | Total Land Care               |  |  |                    |
| Central | Ntchisi | Kasakula  | Total Land Care               |  |  |                    |
| Central | Ntchisi | Nthondo   | Total Land Care               |  |  |                    |
| Central | Ntchisi | Vuso Jere | Total Land Care               |  |  |                    |
| Central | Ntchisi | Kalumo    | World relief                  |  |  |                    |
| Central | Ntchisi | Vuso Jere | World relief                  |  |  |                    |
| Central | Ntchisi | Nthondo   | World Vision                  | ICRAF                                      | Empowering Forest Dependent<br>Communities through<br>Commercialization of Small-Scale<br>Project (EFDCCSSFP)                | EU and DfID        |
| Central | Ntchisi | Nthondo   | World Vision                  | MOAI&WD                                    | Nthondo MHFS & R   | World Vision USA   |
| Central | Ntchisi | Kalumo    | World Vision                  | MOAI&WD                                    | Mpherere MHFS & R  | World Vision Korea |
| Central | Ntchisi | Nthondo   | World Vision                  | Vision Fund, Farm Concern<br>International | THRIVE Malawi  | World Vision USA   |
| Central | Ntchisi | Nthondo   | World Vision                  | MOAI&WD                                    | Empowered Biblical World View  | World Vision USA   |
| Central | Salima  | Kambwiri  | AG CARE                       |  |  |                    |

| Central | Salima | 1 TA      | CADECOM                        | Cordaid   | Community Managed Disaster<br>Risk Reduction Project  | Cordaid                           |
|---------|--------|-----------|--------------------------------|---|---|-----------------------------------|
| Central | Salima | Kambwiri  | CARE MALAWI                    | TOTAL LAND CARE   | Drought Mitigation through<br>Irrigation Promotion and<br>Conservation Agriculture<br>Extension   | USAID / OFDA                      |
| Central | Salima | Kalonga   | COOPI                          |   |   |                                   |
| Central | Salima | N/A       | COOPI MALAWI                   | N/A   | Building Resilience: Support<br>vulnerable population to<br>mitigate the negative effect of El<br>Niño in Salima and Mangochi<br>District, Repubblic of Malawi. | AICS                              |
| Central | Salima | Kalonga   | COOPI MALAWI                   | CONCERN UNIVERSAL,<br>GOAL MALAWI, SELF HELP<br>AFRICA, CLIOMA,<br>SOLARAID, CUMO, CEPA | Developing Innovative Solutions<br>with Communities to Overcome<br>Vulnerability through Enhanced<br>Resilience (DISCOVER)                                      | DFID, NORWEGIAN GVT, IRISH<br>AID |
| Central | Salima | Kambalame | COOPI MALAWI                   | N/A   | Strenghtening emergency<br>preparedness and resilience of<br>hazard-exposed communities in<br>Salima and Mangochi Districts -<br>Republic of Malawi             | ECHO                              |
| Central | Salima | Msosa     | OXFAM                          | CURE  | Enhancement access to markets<br>by smallholder producers<br>especially women   | OXFAM                             |
| Central | Salima |           | Total Land Care                |   | Management for Adaptation to<br>Climate Change (MACC II)  | Norwegian Embassy                 |
| Central | Salima | Kalonga   | Total Land Care                |   |   |                                   |
| Central | Salima | Kalonga   | We Effect-Malawi<br>Lake basin |   |   |                                   |
| Central | Salima | Kambalame | World Vision                   | MOAI&WD   | 40 Hour Famine Food Security<br>Project   | World Vision Australia            |
| Central | Salima | Kambwiri  | AG CARE                        |   |   |                                   |
| Central | Salima | Kuluunda  | COOPI MALAWI                   | AGRICANE  | Rehabilitation and expansion of<br>medium scale rice irrigation<br>scheme in salima district and<br>improvement of farmers' access<br>to markets.               | EUROPE AID                        |

| Central  | Ntcheu     | Ganya  | CARE MALAWI              | TOTAL LAND CARE   | Drought Mitigation through<br>Irrigation Promotion and<br>Conservation Agriculture<br>Extension | USAID / OFDA                         |
|----------|------------|--|--------------------------|---|---|--------------------------------------|
| Central  | Ntcheu     | Makwangwala  | CARE MALAWI              | TOTAL LAND CARE   | Drought Mitigation through<br>Irrigation Promotion and<br>Conservation Agriculture<br>Extension | USAID / OFDA                         |
| Central  | Lilongwe   | Kabudula; 2<br>Chitukula                             | Concern World wide       |   | Food Income & Markets<br>(FIM II) Program   | Irish Aid                            |
| Central  | Lilongwe   |  | Concern World wide       |   | Expanding Conservation<br>Agriculture and Creating Farm<br>Businesses                           | Accenture                            |
| Central  | Mchinji    | 1. Mduwa; 2<br>Simpasi; 3.<br>mkanda                 | Concern World wide       |   | Restoring Livelihoods Enhancing<br>Food Security (ReLiEF)                                       | ECHO                                 |
| Central  | Nkhotakota | Mwansambo;<br>Mwazama;<br>malengachanzi;<br>kanyenda | Concern World wide       |   | Food Income & Markets<br>(FIM II) Program   | Irish Aid                            |
| Central  | Nkhotakota | Mwansambo;<br>Mwazama;<br>malengachanzi;<br>kanyenda | Concern World wide       |   | Expanding Conservation<br>Agriculture and Creating Farm<br>Businesses                           | Accenture                            |
| Northern | Chitipa    | Nthalire   | Actionaid                | Chitipa Women Forum   | Main Ationa Aid work  | Child Sponsorship (internal funding) |
| Northern | Chitipa    | Misuku   | CADECOM                  |   |   |                                      |
| Northern | Chitipa    | Kameme   | Lusubilo                 |   |   |                                      |
| Northern | Chitipa    |  | Total Land Care          | Ministry of Agriculture,<br>Irrigation and Water<br>Development | Sustainable Agriculture<br>Production Program (SAPP)  | IFAD                                 |
| Northern | Chitipa    | Misuku   | Total Land Care          |   |   |                                      |
| Northern | Karonga    | Wasambo  | Every Home for<br>Christ |   |   |                                      |
| Northern | Karonga    | Kilipula   | Focus                    |   |   |                                      |
| Northern | Karonga    | Kawira   | Livingstonia Synod       |   |   |                                      |
| Northern | Karonga    |  | NASFAM                   | Karonga IPC   | Karonga Smallholder Farmers'<br>Association Rice Project  | Scottish Government                  |

| Northern | Karonga | Kilipula     | NASFAM             |   |   |   |
|----------|---------|--------------|--------------------|---|---|---|
| Northern | Karonga |              | Total Land Care    | Ministry of Agriculture,<br>Irrigation and Water<br>Development | Building Resilience to Climate<br>Change (BRCC)   | DFID  |
| Northern | Karonga | Kyungu       | Total Land Care    |   |   |   |
| Northern | Karonga | Mwirang'ombe | World Vision       | ICRAF   | Empowering Forest Dependent<br>Communities through<br>Commercialization of Small-Scale<br>Project (EFDCCSSFP) | EU and DfID   |
| Northern | Karonga | Mwirang'ombe | World Vision       | Ministry of Agriculture,<br>Irrigation and Water<br>Development |   | Lupembe AP  |
| Northern | Kasungu | Kaomba       | CARE MALAWI        | ICRISAT   | Pathways to Secured Livelihoods   | Bill & Melinda Gates  |
| Northern | Kasungu | Kaluluma     | CARE MALAWI        | CADECOM & HEIFER  | Enhancing Community Resilience<br>to effects Climate change   | British Department of<br>International Development<br>(DFID), Irish Aid and the<br>Norwegian Government |
| Northern | Likoma  | Mkumpha      | Min of Agriculture |   |   | aswap, ort  |
| Northern | Mzimba  | 2 Tas        | CADECOM            | Caritas Australia   | Australia Africa Engagement<br>Scheme   |   |
| Northern | Mzimba  | Chindi       | Find Your Feet     |   |   |   |
| Northern | Mzimba  |              | MOA                | African Institute for cooperate citizenship                     | Malawi_Zambia Partnership   | Development Fund of Norway  |
| Northern | Mzimba  |              | NASFAM             | South Mzimba IPC  | Enhancing smallholder<br>productivity and returns through<br>climate smart agriculture<br>practice in Malawi  | Irish Aid   |
| Northern | Mzimba  |              | Total Land Care    | Ministry of Agriculture,<br>Irrigation and Water<br>Development | Building Resilience to Climate<br>Change (BRCC)   | DFID  |
| Northern | Mzimba  |              | Total Land Care    |   | Management for Adaptation to<br>Climate Change (MACC II)  | Norwegian Embassy   |
| Northern | Mzimba  |              | Total Land Care    |   | Protecting Ecosystems and<br>Restoring Forests in Malawi<br>(PERFORM)   | USAID   |
| Northern | Mzimba  |              | Total Land Care    |   | Sure Lives  | Washington State University   |
| Northern | Mzimba  | Jaravikuba   | Total Land Care    |   |   |   |

| Northern | Mzimba     | Mzikubola      | World Vision                                       | ICRAF   | Empowering Forest Dependent<br>Communities through<br>Commercialization of Small-Scale<br>Project (EFDCCSSFP) | EU and DfID             |
|----------|------------|----------------|--|---|---|-------------------------|
| Northern | Mzimba     | Mpherembe      | World Vision                                       | Ministry of Agriculture,<br>Irrigation and Water<br>Development | Mutendere MHFS & R  | World Vision USA        |
| Northern | Nkhata Bay | 1 TA           | CADECOM  | Cordaid   | Community Managed Disaster<br>Risk Reduction Project  | Cordaid                 |
| Northern | Nkhata Bay |                | NASFAM   | Nkhata-Bay  | NASFAM/LISAP Chintheche<br>Agribusiness Project   | Help a Child            |
| Northern | Rumphi     | Chikulamayembe | Action Aid   |   |   |                         |
| Northern | Rumphi     |                | Actionaid  | Women Forum   | Ready for Anything  | Dfid                    |
| Northern | Rumphi     | Chikulamayembe | Actionaid  |   |   |                         |
| Northern | Rumphi     | Chikulamayembe | Actionaid  |   |   |                         |
| Northern | Rumphi     | Mwahenga       | African Institute for<br>Coorperate<br>Citizenship |   |   |                         |
| Northern | Rumphi     | Mwalweni       | African Institute for<br>Coorperate<br>Citizenship |   |   |                         |
| Northern | Rumphi     | Mwalweni       | African Institute for<br>Coorperate<br>Citizenship |   |   |                         |
| Northern | Rumphi     | 2 TAs          | CADECOM  | Trocaire  | Livelihood and Humanitarian<br>Rsponse project  | Trocaire                |
| Northern | Rumphi     | Chikulamayembe | Find your Feet                                     |   |   |                         |
| Northern | Rumphi     |                | NASFAM   | Rumphi IPC  | Norway  | Royal Norwegian Embassy |
| Northern | Rumphi     | Chikulamayembe | OXFAM  | CADECOM National<br>(implemented by Mzuzu)                      | Improved Livelihoods for 3000<br>poor farmers and their families<br>in Malawi                                 | Scottish Government     |
| Northern | Rumphi     | Chikulamayembe | Total Land Care                                    |   |   |                         |
| Southern | Balaka     | Amidu          | ASWAP  |   |   | World Bank              |
| Southern | Balaka     | 3 Tas          | CADECOM  | Oxfam   | Improved ivelihoods project   | Oxfam                   |
| Southern | Balaka     | Chanthunya     | Concern Universal                                  |   |   |                         |
| Southern | Balaka     | Amidu          | COVAMS   |   |   | JICA                    |
| Southern | Balaka     | Nkaya          | GOAL   | GOAL  | Irish Aid Programme Funded<br>(IAPF)  | Irish Aid               |

| Southern | Balaka   | Nkaya      | Goal Malawi                      |   |  |                        |
|----------|----------|------------|----------------------------------|---|--|------------------------|
| Southern | Balaka   | Amidu      | MASAF 4                          |   |  |                        |
| Southern | Balaka   |            | NASFAM                           | Balaka IPC                                      | Enhancing smallholder<br>productivity and returns through<br>climate smart agriculture<br>practice in Malawi<br>Smart Subsidies for Catchment<br>Conservation in Malawi<br>(Agglomeration) | Irish Aid; IFPRI       |
| Southern | Balaka   | Nsamala    | OXFAM                            | Blantyre Synod health and development comission | Building the resilience and<br>enhancing the adaptive capacity<br>of women and men to Climate<br>Change and Climate Variability in<br>Malawi   | OXFAM                  |
| Southern | Balaka   | Amidu      | Project Concern<br>International |   |  |                        |
| Southern | Balaka   |            | SAPP                             |   |  | IFAD                   |
| Southern | Balaka   | Kalembo    | Self-help Africa                 |   |  |                        |
| Southern | Balaka   |            | Total Land Care                  | MOAI&WD   | Sustainable Agriculture<br>Production Program (SAPP)   | IFAD                   |
| Southern | Balaka   | Amidu      | Total Land Care                  |   |  |                        |
| Southern | Balaka   | Kalembo    | Trocaire                         | CADECOM Mangochi                                | Increasing community resilience<br>to food security, household<br>income and gender equality in<br>central and Southern Malawi   | GPAF/DFID<br>Irish Aid |
| Southern | Balaka   | Kalembo    | Trocaire                         | CADECOM Mangochi                                | Contribute towards resilience to<br>food security, household income<br>and gender equality in southern<br>and central Malawi   | GPAF/Irish Aid         |
| Southern | Balaka   | Kachenga   | WFP                              |   |  |                        |
| Southern | Blantyre | Kapeni     | Anglican Diocese                 |   |  |                        |
| Southern | Blantyre | Kunthembwe | Anglican Diocese                 |   |  |                        |
| Southern | Blantyre | Kunthembwe | Blantyre Synod                   |   |  |                        |
| Southern | Blantyre | 2 TAs      | CADECOM                          | CRS   | Solicitation of Nutrition and<br>Agriculture Programme   | Govt. of Australia     |
| Southern | Blantyre | Kunthembwe | COVAMS                           |   | -  |                        |
| Southern | Blantyre | Kunthembwe | DAPP                             |   |  |                        |

| Southern | Blantyre | Kapeni     | FISD                                    |   |  |                        |
|----------|----------|------------|---|---|--|------------------------|
| Southern | Blantyre | Kunthembwe | OXFAM                                   | Blantyre Synod health and development comission | Building the resilience and<br>enhancing the adaptive capacity<br>of women and men to Climate<br>Change and Climate Variability in<br>Malawi | OXFAM                  |
| Southern | Blantyre | Kapeni     | Save the children                       |   |  |                        |
| Southern | Blantyre | Kunthembwe | Stephanos                               |   |  |                        |
| Southern | Blantyre |            | Total Land Care                         | EAM, CADECOM, ADRA                              | Strengtherning Communty<br>Resilience to Climate Change  | FAO                    |
| Southern | Blantyre |            | Total Land Care                         | MOAI&WD   | Sustainable Agriculture<br>Production Program (SAPP)   | IFAD                   |
| Southern | Blantyre | Kapeni     | Total Land Care                         |   |  |                        |
| Southern | Chikwawa |            | AISP                                    |   |  |                        |
| Southern | Chikwawa | 5 Tas      | CADECOM                                 | CRS   | United in Building Advanced Life<br>Expectations programme   | CRS                    |
| Southern | Chikwawa | Chapananga | CARLA                                   |   |  | ADB                    |
| Southern | Chikwawa | Kasisi     | EAGLES RELIEF                           |   |  | UKAID                  |
| Southern | Chikwawa | Chapananga | Evangelical<br>Association of<br>Malawi |   |  | UKAID                  |
| Southern | Chikwawa |            | Total Land Care                         | MOAI&WD   | Building Resilience to Climate<br>Change (BRCC)  | DFID                   |
| Southern | Chikwawa | Lundu      | Total Land Care                         |   |  |                        |
| Southern | Chikwawa | Ngabu      | Trocaire                                | CICOD   | Increasing community resilience<br>to food security, household<br>income and gender equality in<br>central and Southern Malawi               | GPAF/DFID<br>Irish Aid |
| Southern | Chikwawa | Ngabu      | Trocaire                                | CADECOM Chikwawa                                | Increasing community resilience<br>to food security, household<br>income and gender equality in<br>central and Southern Malawi               | GPAF/DFID<br>Irish Aid |
| Southern | Chikwawa | Chapananga | Trocaire                                | CADECOM Chikwawa<br>CICOD                       | Contribute towards resilience to<br>food security, household income<br>and gender equality in southern<br>and central Malawi                 | GPAF/Irish Aid         |
| Southern | Chikwawa |            | World Vision                            | ICRAF   | Empowering Forest Dependent<br>Communities through   | EU and DfID            |

|          |            |         |   |  | Commercialization of Small-Scale   |   |
|----------|------------|---------|---|--|--|---|
|          |            |         |   |  | Project (EFDCCSSFP)  |   |
| Southern | Chiradzulu | Chitera | ASWAP   |  |  |   |
| Southern | Chiradzulu | 2 Tas   | CADECOM   | CRS  | Solicitation of Nutrition and<br>Agriculture Programme   | CRS   |
| Southern | Chiradzulu | Likoswe | DAPP  |  |  |   |
| Southern | Chiradzulu | Chitera | Evangelical<br>Lutheran<br>Development<br>Service |  |  |   |
| Southern | Chiradzulu |         | NASFAM  | Zomba IPC  | Enhancing smallholder<br>productivity and returns through<br>climate smart agriculture<br>practice in Malawi | Irish Aid   |
| Southern | Chiradzulu | Likoswe | OXFAM   | CAVWOC - Center for<br>alternatives for victimised<br>women and children | Sodcial economic empowerment<br>of small holder farmers in rural<br>malawi                                   | Scottish Government   |
| Southern | Chiradzulu | Chitera | SAPP  |  |  |   |
| Southern | Chiradzulu |         | Total Land Care                                   | MOAI&WD  | Building Resilience to Climate<br>Change (BRCC)  | DFID  |
| Southern | Chiradzulu |         | Total Land Care                                   | MOAI&WD  | Sustainable Agriculture<br>Production Program (SAPP)   | IFAD  |
| Southern | Chiradzulu | Likoswe | Total Land Care                                   |  |  |   |
| Southern | Chiradzulu | Mpama   | World Vision                                      | MOAI&WD  | Mpama MHFS & R   | World Vision Canada   |
| Southern | Machinga   | Ngokwe  | Action Aid  |  |  |   |
| Southern | Machinga   | 2 Tas   | CADECOM   | Trocaire   | GPAF project   | DFID  |
| Southern | Machinga   | Nyambi  | CADECOM   |  |  |   |
| Southern | Machinga   | Chikweo | CARE MALAWI                                       | EMMANUEL<br>INTERNATIONAL  | Enhancing Community Resilience<br>to effects Climate change  | British Department of<br>International Development<br>(DFID), Irish Aid and the<br>Norwegian Government |
| Southern | Machinga   |         | Concern Universal                                 |  |  |   |
| Southern | Machinga   |         | Concern Universal                                 |  |  |   |
| Southern | Machinga   | Chikweo | Emmanuel<br>International                         |  |  |   |
| Southern | Machinga   | Chamba  | LEAD SEA  | FRIM & Worldfish   | Lake Chilwa Basin Climate<br>Change Adaptation Programme<br>(LCBCCAP)  | Royal Norwegian Embassy<br>(RNE)  |

| Southern | Machinga | Chamba   | Lead-Sea                         |                                   |   |                        |
|----------|----------|----------|----------------------------------|-----------------------------------|---|------------------------|
| Southern | Machinga |          | MOA                              | UNDP                              | Climate Proofing  |                        |
| Southern | Machinga |          | NASFAM                           | Balaka IPC                        | Enhancing smallholder<br>productivity and returns through<br>climate smart agriculture<br>practice in Malawi; Smart<br>Subsidies for Catchment<br>Conservation in Malawi<br>(Agglomeration) | Irish Aid; IFPRI       |
| Southern | Machinga | Chikweo  | Project Concern<br>International |                                   |   |                        |
| Southern | Machinga |          | Total Land Care                  |                                   | Protecting Ecosystems and<br>Restoring Forests in Malawi<br>(PERFORM)   | USAID                  |
| Southern | Machinga | Kawinga  | Total Land Care                  |                                   |   |                        |
| Southern | Machinga | Nkalo    | Trocaire                         | CADECOM Zomba                     | Increasing community resilience<br>to food security, household<br>income and gender equality in<br>central and Southern Malawi  | GPAF/DFID<br>Irish Aid |
| Southern | Machinga | Sitola   | Trocaire                         | CADECOM Mangochi<br>CADECOM Zomba | Contribute towards resilience to<br>food security, household income<br>and gender equality in southern<br>and central Malawi  | GPAF/Irish Aid         |
| Southern | Machinga |          | World Vision                     | ICRAF                             | Empowering Forest Dependent<br>Communities through<br>Commercialization of Small-Scale<br>Project (EFDCCSSFP)   | EU and DfID            |
| Southern | Mangochi | 3 Tas    | CADECOM                          | SCIAF                             | Kulima project  | SCIAF                  |
| Southern | Mangochi |          | CADECOM                          |                                   |   |                        |
| Southern | Mangochi | Chimwala | COOPI                            |                                   |   |                        |
| Southern | Mangochi |          | COOPI MALAWI                     |                                   | Building Resilience: Support<br>vulnerable population to<br>mitigate the negative effect of El<br>Niño in Salima and Mangochi<br>District, Republic of Malawi.                              | AICS                   |
| Southern | Mangochi | Chimwala | COOPI MALAWI                     |                                   | Strenghtening emergency<br>preparedness and resilience of<br>hazard-exposed communities in  | ЕСНО                   |

|          |          |           |  |               | Salima and Mangochi Districts -   |   |
|----------|----------|-----------|--|---------------|---|---|
|          |          |           |  |               | Republic of Malawi  |   |
| Southern | Mangochi | Chimwala  | FISH   |               |   |   |
| Southern | Mangochi |           | Malawi Lake Basin  |               |   |   |
| Southern | Mangochi | Chimwala  | MOA  |               | Climate Proofing  |   |
| Southern | Mangochi |           | NASFAM   | Namwera       | Norway  | Royal Norwegian Embassy   |
| Southern | Mangochi |           | NASFAM   | Balaka IPC    |   |   |
| Southern | Mangochi |           | Total Land Care  |               |   |   |
| Southern | Mangochi | Makanjila | World Vision   | MOAI&WD       | Ching'anda MHFS&R   | World Vision USA  |
| Southern | Mangochi |           | Total Land Care  | MOAI&WD       | Building Resilience to Climate<br>Change (BRCC)   | DFID  |
| Southern | Mulanje  | Juma      | ADRA   |               |   |   |
| Southern | Mulanje  | 2 Tas     | CADECOM  | Oxfam         | Improved livelihoods project  | Oxfam   |
| Southern | Mulanje  | Chikumbu  | CADECOM  |               |   |   |
| Southern | Mulanje  | Chikumbu  | CARD   |               |   |   |
| Southern | Mulanje  | Chikumbu  | LRCD   |               |   |   |
| Southern | Mulanje  | Mabuka    | Mulanje Mountain<br>Conservation Trust                                     |               |   |   |
| Southern | Mulanje  |           | NASFAM   | Zikometso IPC | Enhancing Community Resilience<br>through Functional Literacy and<br>Integrated Livelihood Support<br>Initiaities | Egmont  |
| Southern | Mulanje  |           | Total Land Care  | MOAI&WD       | Building Resilience to Climate<br>Change (BRCC)   | DFID  |
| Southern | Mulanje  | Njema     | World Vision   | MOAI&WD       | Njema MHFS & R  | World Vision Hong Kong  |
| Southern | Mwanza   | Govati    | ADRA   |               |   |   |
| Southern | Mwanza   | 1 TA      | CADECOM  | CRS           | Solicitation of Nutrition and<br>Agriculture Programme  | CRS   |
| Southern | Mwanza   | Govati    | CARE MALAWI  | ADRA          | Enhancing Community Resilience<br>to effects Climate change   | British Department of<br>International Development<br>(DFID), Irish Aid and the<br>Norwegian Government |
| Southern | Mwanza   | Govati    | CEPA   |               |   |   |
| Southern | Mwanza   | Govati    | Community<br>Vitalisation<br>Afforestation in<br>Middle Shire<br>(COVIAMS) |               |   |   |

| Southern | Mwanza   | Govati    | Evangelical<br>Association of |                  |  |  |
|----------|----------|-----------|-------------------------------|------------------|--|--|
|          |          |           | Malawi                        |                  |  |  |
| Southern | Mwanza   | Kanduku   | Red Cross                     |                  |  |  |
| Southern | Mwanza   |           | Total Land Care               |                  | Nyika Transfrontier Conservation<br>Area (Nyika TFCA)  | World Bank, Royal Norwegian<br>Embassy |
| Southern | Mwanza   |           | WESM                          |                  |  |  |
| Southern | Neno     | 1 TA      | CADECOM                       | CRS              | Integrated Food Security project   | CRS                                    |
| Southern | Neno     | Symon     | World Vision                  | MoAIWD           | Midzemba MHFSR   | World Vision Hong Kong                 |
| Southern | Nsanje   | Chimombo  | Action Aid                    |                  |  |  |
| Southern | Nsanje   | 2 Tas     | CADECOM                       | Trocaire         | GPAF project   | CRS/Trocaire                           |
| Southern | Nsanje   | Mbenje    | CARD                          |                  |  |  |
| Southern | Nsanje   | Chimombo  | CARE MALAWI                   | CRS & SAVE       | United I Building and Advancing<br>Life Expectations (UBALE)   | USAID                                  |
| Southern | Nsanje   | Tengani   | CARE MALAWI                   | CRS & SAVE       | United I Building and Advancing<br>Life Expectations (UBALE)   | USAID                                  |
| Southern | Nsanje   | Chimombo  | CARE Malawi                   |                  |  |  |
| Southern | Nsanje   | Malemia   | Concern Universal             |                  |  |  |
| Southern | Nsanje   | Mbenje    | GOAL                          | GOAL             | ECHO ReLiEF  | ECHO                                   |
| Southern | Nsanje   | Mbenje    | GOAL                          | GOAL             | Irish Aid Programme Funded<br>(IAPF)   | Irish Aid                              |
| Southern | Nsanje   | Dzuunde   | Goal Malawi                   |                  |  |  |
| Southern | Nsanje   | Ndamera   | Trocaire                      | CADECOM Chikwawa | Contribute towards resilience to<br>food security, household income<br>and gender equality in southern<br>and central Malawi | GPAF/Irish Aid                         |
| Southern | Nsanje   |           | C oncern World<br>wide        |                  | Food Income & Markets<br>(FIM II) Program  | Irish Aid                              |
| Southern | Nsanje   |           | C oncern World<br>wide        |                  | Expanding Conservation<br>Agriculture and Creating Farm<br>Businesses  | Accenture                              |
| Southern | Phalombe | 1 TA      | CADECOM                       | FAO              | Community Resilience Buiding<br>project  | FAO                                    |
| Southern | Phalombe | Chiwalo   | CADECOM                       |                  |  |  |
| Southern | Phalombe | Nkhulambe | CARD                          |                  |  |  |
| Southern | Phalombe | Mkhumba   | Concern Universal             |                  |  |  |
| Southern | Phalombe | Kaduya    | Evangelical<br>Lutheren       |                  |  |  |

|          |          |           | Development                              |                  |   |                                  |
|----------|----------|-----------|--|------------------|---|----------------------------------|
|          |          |           | Service                                  |                  |   |                                  |
| Southern | Phalombe | Chiwalo   | FAO                                      |                  |   |                                  |
| Southern | Phalombe | Chiwalo   | LEAD SEA                                 | FRIM & Worldfish | Lake Chilwa Basin Climate<br>Change Adaptation Programme<br>(LCBCCAP)   | Royal Norwegian Embassy<br>(RNE) |
| Southern | Phalombe | Nazombe   | Lead-Sea                                 |                  |   |                                  |
| Southern | Phalombe | Chiwalo   | LRCD                                     |                  |   |                                  |
| Southern | Phalombe | Chiwalo   | Malawi<br>Environment<br>Endowment Trust |                  |   |                                  |
| Southern | Phalombe |           | NASFAM                                   | Zikometso IPC    | Enhancing Community Resilience<br>through Fucntional Literacy and<br>Integrated Livelihood Support<br>Initiaities                             | Egmont                           |
| Southern | Phalombe | Kaduya    | World Vision                             | MoAI & WD        | Mkhumba MHFS & R  | World Vision German              |
| Southern | Thyolo   | 3 Tas     | CADECOM                                  | Cordaid          | Community Managed Disaster<br>Risk Reduction Project  | Cordaid                          |
| Southern | Thyolo   | Chimaliro | CARD                                     |                  |   | Irish Aid, Ukaid and Norwergiar  |
| Southern | Thyolo   | Not Sure  | Concern Universal                        |                  |   |                                  |
| Southern | Thyolo   | Chimaliro | Ministry of<br>Agriculture               |                  |   |                                  |
| Southern | Thyolo   |           | NASFAM                                   | Zikometso IPC    | Enhancing Community Resilience<br>through Fucntional Literacy and<br>Integrated Livelihood Support<br>Initiaities                             | Egmont                           |
| Southern | Zomba    | Mwambo    | AICC                                     |                  |   |                                  |
| Southern | Zomba    | 3 Tas     | CADECOM                                  | CRS              | Integrated Food Security project  | CRS                              |
| Southern | Zomba    | Malemia   | LEAD SEA                                 | FRIM & Worldfish | Lake Chilwa Basin Climate<br>Change Adaptation Programme<br>(LCBCCAP)   | Royal Norwegian Embassy<br>(RNE) |
| Southern | Zomba    |           | NASFAM                                   | Zomba IPC        | Enhancing smallholder<br>productivity and returns through<br>climate smart agriculture<br>practice in Malawi<br>Smart Subsidies for Catchment | Irish Aid                        |

|          |       |         |  |                    | Conservation in Malawi<br>(Agglomeration)               |                  |
|----------|-------|---------|--|--------------------|---|------------------|
| Southern | Zomba | Chikowi | NASFAM                                     |                    |   |                  |
| Southern | Zomba | Chikowi | Save the Children                          |                    |   |                  |
| Southern | Zomba | Mlumbe  | Shire River Basin<br>Management<br>Project |                    |   |                  |
| Southern | Zomba | Nkapita | Shire River Basin<br>Management<br>Project |                    |   |                  |
| Southern | Zomba |         | Total Land Care                            | MOAI&WD            | Building Resilience to Climate<br>Change (BRCC)         | DFID             |
| Southern | Zomba |         | Total Land Care                            | EAM, CADECOM, ADRA | Strengthening Community<br>Resilience to Climate Change | FAO              |
| Southern | Zomba | Chikowi | Total Land Care                            |                    |   |                  |
| Southern | Zomba | Mlumbe  | World Vision                               | MOAI&WD            | Chingale MHFS & R                                       | World Vision USA |