Programme on Climate Change Adaptation and Mitigation in COMESA-EAC-SADC Region

End of Project Report

Period: October 2012 – June 2016

AFRICAN CONSERVATION TILLAGE NETWORK

September 2016
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2. EXECUTIVE SUMMARY

The four-year COMESA-ACT project on Climate Change Adaptation and Mitigation in the COMESA-EAC-SADC Region (CCAM) became effective 5th October 2012. The project is operating in the seven countries of Malawi, Zimbabwe, Zambia, Swaziland, Kenya Tanzania and Uganda. The key implementation partners are National Governments of the host counties, FAO, EAFF, SACAU, FANRPAN and NEPAD. ACT implemented activities using its staff based in Nairobi headquarters, the Southern Africa office in Harare Zimbabwe, and the Eastern Africa office based in Tanzania.

Activities undertaken by ACT during the project period (October 2012 – June 2016) are presented in sections 2 and 3 below. These can be summarised as follows:

1.1.2 To create a database and a network
1.3.1 Stock taking and characterization of climate smart agriculture institutions.
1.3.2 Conduct an impact study on climate change and gender
1.3.4.1 Developing the African Climate Change Information Sharing platform – inclusive of climate change information exchange among stakeholders, construction of the e-library, ACCKN portal and content development strategy.
1.3.4.2 To conduct exchange visits;
3.1.2 Capacity building of NCATFs of Kenya, Malawi, Zimbabwe, Swaziland, Zambia, and Uganda
3.3.2 Support to suppliers of CA equipment.
3.3.5 Piloting CA activities mainly in Mbeya District Tanzania
4.2.2 Convene regional scientific symposium – hosting of 1ACCA

Details of the activities, the indicators, progress as at June 30th 2016 and a self-assessment of performance is summarised in Table 1. A narrative version is presented in section 4; challenges in section 5; conclusions in section 6, and a financial report in Section 7.

As at 30th June 2016, overall funds received were $380,202 (58.13%) of the $654,050 signed grant amount. 100.3% budget utilization was achieved against the realised budget. The partnership has overall been a great success, attaining more than 90% for the planned and funded activities, some of which are summarised by the achievements stated below:

- Hosting of the first Africa Congress on Conservation Agriculture in Lusaka Zambia [http://www.africacacongress.org/](http://www.africacacongress.org/), an event attended by 414 participants from 42 countries, with 10,000 on-line followers through social media and which promulgated the declaration for Africa to reach 25 million farm families by 2025 with climate smart agriculture technologies, dubbed as Lusaka 25by25 CA Declaration. Some of the leading papers and innovations shared at the congress will be shared widely by August 2015 in a scientific book being published jointly with CABI and in a special journal release with Environments [http://www.mdpi.com/journal/environments/special_issues/conserv_agric_Africa#info](http://www.mdpi.com/journal/environments/special_issues/conserv_agric_Africa#info).
- Twenty three (22% females) senior policy makers and practitioners of conservation agriculture from five Eastern African Countries (Ethiopia, South Sudan, Kenya, Uganda and Tanzania) participated in the Regional Conservation Agriculture Tour to Zambia and Zimbabwe in 2013. The resourceful proceedings was produced and shared while a Video and a TV programme were produced and aired by Zambia Broadcasting Corporation/NAIS.
• A needs assessment was conducted for the Malawi NCATF. Preliminary results led to development of the course content for a training course. Training on CA, GIS mapping and others priority subjects successfully conducted for Malawi NCATF and attended by 25 participants (8 female).

• Thirty seven (8 female) CA Equipment Manufacturers’ and distributors from 10 countries attended a workshop and exhibition in Dar es Salaam Tanzania in November 2013. A web portal at http://www.act-africa.org/directory.php?com=85 has currently 70 service providers with contacts to support CA equipment needs.

• The African climate change knowledge network (ACCKN) portal has been developed and is available at http://www.act-africa.org/portal/ccam/index.php?com=83. Construction of the ACCKN e-library/resource centre available at http://www.act-africa.org/library.php?com=5 has been completed. Both web portal and e-library are being populated with data.

• A study on climate change and gender issues was carried out by ACT and partners in May & June 2016. The study which sampled various key informants and 813 smallholder farmers, in eight dry and wet Conservation Agriculture hotspot districts of Zambia, Zimbabwe, Tanzania and Kenya found that 263 (32.3%) of these are women headed households and 535 (65.8%) are practicing CA. Majority of the respondents from Kenya, Zambia, Tanzania and Zimbabwe identified that the agricultural yields have increased as a result of CA technologies; and that adoption of CA increases the adaptation resilience to climate change. Furthermore, majority of CA adopters from Kenya (99%), Tanzania (96%) and Zimbabwe (86%) identified digging planting basins as more laborious than the traditional practice

The coming to an end of the project at 30th June 2016 is untimely. The various users of the ACCKN services have just been awakened to what is available from the hub. While ACT will continue managing theses, another thrust of consolidating the various knowledge products – webpages (including CARWG: http://carwg.act-africa.org/), news alerts, e-library, equipment supply linkages, case studies and scientific evidence – continued partnership between ACT and COMESA would naturally and easily take the existing CSA knowledge products to the next higher level – whereby they are more response to user needs and increased awareness on their existence.

A continuation of the previously supported activities will also enable ACT to develop capacity and provide needed CSA information to NCATF and others through specialised events like the Second Africa Congress of Conservation Agriculture. An evaluation of work done by ACT and other partners will enable a synthesis of the lessons learning and prioritising on what needs to be changed.

While the shortage of knowledge is a major constraint to the adoption CSA technologies, ACT has also identified poor access by farmers to proper CA mechanisation services and produce markets as major impediments. The proposed approach is a business model that engages business minded farmers as contractors to be supported to acquire hands on operating skills and CA equipment (hand, animal traction and tractor based direct seeders and herbicide applicators) to empower the service providers to provide entrepreneurial mechanised CA services to neighbours on commercial terms. An extended agreement between ACT and COMESA should enable on-the ground piloting of such a model as a scaling up approach.
3. ACKNOWLEDGEMENTS

The African Conservation Tillage Network (ACT) greatly acknowledges and appreciates the technical partnership and financial support of the Common Market for Eastern and Southern Africa (COMESA).

Resulting from this partnership, a substantial amount of awareness creation on managed knowledge on climate smart agriculture has been achieved. The impact, unlikely to be quantified in the immediate future, is starting to emerge, in a strategic way at the higher policy levels, which stands to benefit targeted changes in policy and thus the millions of beneficiaries we desire to reach.
Table 1: Progress towards Results for the project period April 2013 – December 2014

<table>
<thead>
<tr>
<th>Activities</th>
<th>Indicator</th>
<th>Project Target</th>
<th>Progress as at 31st December 2014</th>
<th>Rated Achieved</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.3 Expected Result 3: Climate change mainstreamed in national development plans and strategies</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1.3.1</td>
<td>Stock taking and characterisation of institutions</td>
<td>No. of institutions identified and documented, 1 database created</td>
<td>Profiling of CSA institutions within the COMESA-EAC-SADC Region has captured in a created database some 120 entries; excluding entries of some 70 CA equipment manufacturers and suppliers. Profiling of another 50 stakeholders is in progress.</td>
<td>90% achievement</td>
</tr>
<tr>
<td>1.3.2 Conduct an impact study on climate change and gender</td>
<td>CA adoption impact study segregated by gender</td>
<td>Number of Countries, Districts, Agroecology cones covered and farmers surveyed</td>
<td>Comprehensive survey covering high level policy key informants and 813 smallholder farmers, in eight dry and wet Conservation Agriculture hotspot districts of Zambia, Zimbabwe, Tanzania and Kenya. The districts are Bungoma and Laikipia (Kenya), Mutoko and Shamva (Zimbabwe); Babati and Mbeya Rural (Tanzania); Mpongwe and Mumbwa (Zambia).</td>
<td>998% achievement</td>
</tr>
<tr>
<td>1.3.4.1</td>
<td>Information sharing platform</td>
<td>ACCKN portal developed; ACCKN e-library</td>
<td>Portal developed; available at <a href="http://www.act-africa.org/portal/ccam/index.php?com=83">http://www.act-africa.org/portal/ccam/index.php?com=83</a> being populated; E-library linked to resource centre, available at <a href="http://www.act-africa.org/library.php?com=5">http://www.act-africa.org/library.php?com=5</a>; it is being further populated with data; There are about 450 visitors to the ACCKN between each month</td>
<td>100% achievement</td>
</tr>
<tr>
<td>1.3.4.2</td>
<td>Exchange visits</td>
<td>No. of visits, No. of participants by gender and typology.</td>
<td>Twenty three (22% females) senior policy makers and practitioners of conservation agriculture from five Eastern African Countries (Ethiopia, South Sudan, Kenya, Uganda and Tanzania) participated in the Regional Conservation Agriculture Tour to Zambia and Zimbabwe in 2013. The resourceful proceedings was produced and shared while a Video and a TV programme were produced and aired by Zambia Broadcasting Corporation/NAIS.</td>
<td>100% achievement</td>
</tr>
<tr>
<td>3.1 Expected Result 1: Relevant partner organisations identified and engaged in Member States</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3.1.2 Capacity building of Task Forces (Kenya, Malawi, Zimbabwe, Swaziland, Zambia, Ethiopia, Madagascar and Uganda) – TOT</td>
<td>Established status of NCATF: Needs assessment for Task Forces. Capacity building programmes developed and implemented.</td>
<td>Conduct a NCATF needs assessment</td>
<td>A needs assessment study was conducted for the Malawi NCATF. Preliminary results led to development of the course content for the training course. Training on CA, GIS mapping and others priority subjects successfully conducted for Malawi NCATF and attended by 25 participants (8 female).</td>
<td>85% achievement rate; 100% achievement rate.</td>
</tr>
</tbody>
</table>
### 3.3 Expected Result 3.3: At least 14 minor Investment Projects on CSA are piloted

<table>
<thead>
<tr>
<th>3.3.2 Convene at least one regional meeting on Climate Smart Agriculture per year, with the participation of ministry of gender representatives and women’s organisation.</th>
<th>Number of CSA meetings convened annually</th>
<th>One CA Equipment manufacturers workshop conducted</th>
<th>Thirty seven participants (8 female) attended the planned CA Equipment Manufacturers workshop conducted in Dar es salaam Tanzania in November 2013.</th>
<th>100% achievement rate.</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>3.3.5 Piloting</strong></td>
<td>Piloting CA activities: CA project piloted in Igale, Ikukwa, and Tembela wards of Mbeya District Tanzania</td>
<td>Livelihood vulnerability survey conducted, Partners identified and partnerships developed, 10,000 farmers being mobilised</td>
<td></td>
<td>90% of planned achieved; 10% for overall pilot project</td>
</tr>
</tbody>
</table>

### Expected Result 4.2: International program for knowledge transfer on conservation agriculture

| 4.2.2 | Number of scientific publications compiled | Hold the 1ACCA, Lusaka, Zambia, attended by 400 delegates | Twenty one keynote papers were presented in plenary sessions, 63 thematic papers presented in parallel sessions (available at [http://www.africacacongress.org/presentations/book-of-condensed-papers](http://www.africacacongress.org/presentations/book-of-condensed-papers)) and 13 posters were presented. Fourteen exhibitors showcased their CA knowledge, information and achievements in booths. In addition Congress proceedings were streamed live worldwide, and an award ceremony for 10 CA champions was held in a colourful gala night. Field visits involved day-long visits to 6 CA sites. Three side events dedicated to adoption of CA, CA with trees and smallholder CA were also held. | 100% achievement |
| **4.2.3 Support the establishment and capacity building of the African Climate Change Knowledge Network** | Number of organizations that are part of the African Climate Change Knowledge Network and participating | Update the ACT website to host the ACCKN | ACT website has been and will continue to be updated to support on-line information sharing tools. Those installed include: i) A centralized information storage (servers) with content management information sharing platform ii) Search engine optimisation capabilities iii) Social media accounts. CCAM portal opened at [http://www.act-africa.org/portal/ccam/index.php?com=83](http://www.act-africa.org/portal/ccam/index.php?com=83) | 95% achievement of target |

| Content development strategy for African climate change knowledge network | Climate change content development strategy | Teaser strategy developed (attached). To be used to engage stakeholders for inputs before finalising with a writeshop for the M&E and implementation plan | | 70% |
4. DETAILED REPORT PER ACTIVITY

1.3.1 Stock taking and characterization of climate smart agriculture institutions

The stocktaking and characterisation of Climate Smart Agriculture promoting institutions has continued with the final aim of developing a Who Is Who in CSA in Africa. Profiling of CSA institutions within the COMESA-EAC-SADC Region captured data from institutions including: core CSA functions; geographical areas of activity; capacities; vulnerabilities; % of activities that are CA; etc. as captured in figure 1 below. Validity of on-line captured data is to be verified through physical visits as further updating the database is undertaken.

![Figure 1. Checklist and template for detailed characterisation of climate smart Agriculture Institutions](http://act-africa.org/directory.php?com=85)

An initial screening of eligible CSA institutions has been undertaken for Eastern and Southern Africa (SADC). The initial long lists of these institutions are presented at [http://act-africa.org/contacc.php?com=5&com2=89&com3=](http://act-africa.org/contacc.php?com=5&com2=89&com3=). These lists have further been filtered to determine the institutions to be subjected to the detailed characterisation as per the checklist and guide in Annex 2. The detailed characterisation of the Institutions is on-going.

The Conservation Agriculture Equipment Manufacturers and suppliers’ database was finalised and is available on-line at the Climate Change Knowledge Network Hub on the link [http://www.act-africa.org/directory.php?com=85](http://www.act-africa.org/directory.php?com=85). With about 70 service providers added, the growing database is a shared and searchable resource on available Conservation Agriculture equipment by Country, by type, by manufacturer and provides manufacturer contacts.

1.3.4.1 Information sharing platform

The African Climate Change Knowledge Network (ACCKN) portal has been developed and is available at [http://www.act-africa.org/portal/ccam/index.php?com=83](http://www.act-africa.org/portal/ccam/index.php?com=83). Work is in progress to populate the portal, link it to the e-library and related websites including that of COMESA. The new website was advertised through social media and as a result the visits to the ACT website [www.act-africa.org](http://www.act-africa.org) in general have increased by a substantial average of 450, visitors up from 230 before launch of the portal.

Construction of the ACCKN e-library, also termed as Resource Centre has been completed. It is available at the link [http://www.act-africa.org/library.php?com=5](http://www.act-africa.org/library.php?com=5) and the work to populate it with more data continues.
Information sharing and exchange among stakeholders increased during the reporting period as reported above. Information is also being shared through the First Africa Congress on Conservation Agriculture [http://www.africacacongress.org/], monthly news alerts, social media and visitors to the website including the e-library.

Two questionnaire surveys were conducted to generate preliminary information for content development of the ACCKN. Firstly, among institutions, development of a website as an important means of knowledge sharing featured highly, while at community level other media approaches were identified. This suggests that the website will not benefit directly the beneficial communities. Instead the institutions promoting will be the ones that will translate the information on the website to the appropriate communities. A teaser content development strategy has been developed (Annex 4) to be used to engage the wider CSA stakeholders and capture their views on three central issues namely: (a) how best the CSA information they generate can be shared with others; (b) what CSA information do they require and how should it be packaged, (c) what are the most effective and affordable platforms and media for them to access CSA from the ACCKN?

A questionnaire survey conducted during the NCATF ToT training in Malawi with an objective to contribute towards development of the CSA content strategy was assessed. This survey also aimed to provide background information and knowledge towards the development of a knowledge management system that would capture, translate into action points, disseminate, and replicate best practices and models for climate change adaptation and mitigation. The assessment of the Malawi situation reveals as follows:

- Varying degrees of CA practices among communities (60% using hoes, 30% animal traction and 5% tractor based) where 60% practised CA, 10% practising CA with trees (*Faidherbia albida; Gliricidia sepium, Tephrosia spp, Sesbania sesban, Senna spectabilis*), 25% with soil and water conservation, and only 5% practised with grazing land management;

- CA services offered to communities include trainings, inputs for demonstrations (seeds, fertilizers, and herbicides), credit support, farm mechanization services on seeding, herbicide application and transport; produce markets; other services included promotion of village savings and loans so that farmers/communities could be able to raise money by themselves to buy inputs and support their farming activities; elsewhere farmers contribute seeds and are encouraged to revolve the support;

- Identification of CA enablers that included resources, knowledge, inputs, literacy levels, institutional set up and systems; resource enablers identified included having a harmonized CA approach to promotion of CSA by all key departments and ministries involved regardless of limited resources; involvement of all key stakeholders like farmers, Government, NGOs and their willingness and commitment; collaboration between extension workers and farmers and the political will of particularly local leadership; knowledge enablers of awareness of CSA at all levels; timely dissemination of harmonized messages, understanding farmers’ indigenous knowledge and linking this to scientific knowledge; equipping of extension staff with right messages for dissemination to farmers mostly done through trainings; availability of inputs was also considered an important enabler including inputs like agroforestry seeds, equipment such as jab planter and the Chaka hoe; other enablers included the market and labour force, availability of livestock; visibility of CA effects, literacy levels; climate change effects for instance dry spells in the area, low crop productivity of the area; effective and efficient partnership,
Barriers to CSA implementation at farmers’ and implementation levels and at knowledge base were identified; at farmers’ level, the perception that farmers connect practising CA with input support and see CA as a labour intensive practice but compounded by the inadequate knowledge on benefits of CSA; unclear, un-harmonized extension messages amongst players; inadequate land, lack of commitment, not being able to see the benefits of CA, lack of interest by both extension staff and farmers, and community attitude to CSA were some of the identified barriers; at implementation level, lack of evidence based approach, imposing of ideas or technologies on farmers, inadequate front line staff, lack of CA and livestock complimentary especially on the use of maize stovers, burning of stovers; inadequate mulch especially during the first season, CA use of herbicides since without herbicides farmers were sceptical to practice CA, bush fires, wanton tree cutting, high population leading to poor management of natural resources and lack of coordination among players prevented adequate implementation; on the knowledge part, inadequate knowledge, conflicting messages, mixed messages by stakeholders, lack of persuasive CA messages and lack of information sharing by stakeholders; capacity to clearly articulate CA/CSA messages to farmers/communities was also found to be limited and this was mixed with lack of training, lack of networking and collaboration among the players; the most important source of information identified during this assessment was government (including the government agricultural extension system) 30%, with emphasis of the meteorological department; this was followed by media (radio, TVs and newspapers) at 25% and NGOs at 25% respectively; fellow farmers as source of information was at 10%; this implies that for the CSA knowledge network to work effectively, strong linkages and collaborations have to be made with the government information services, the media and NGOs; with the online platforms/new media, websites emerged as the most preferred source, followed by YouTube;

Different uses of the information were highlighted and have been categorized into two, Production related and knowledge based (see Table 2 below).

### Table 2: Uses of Information

<table>
<thead>
<tr>
<th>Knowledge based</th>
<th>Production</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 Advise and sharing among farmers</td>
<td>Agricultural production estimates</td>
</tr>
<tr>
<td>2 Develop new messages and approaches for reaching farmers with CA technologies</td>
<td>Helps to inform on enterprise selection</td>
</tr>
<tr>
<td>3 Reports and bulletins</td>
<td>Useful for backstopping frontline staff during supervision</td>
</tr>
<tr>
<td>4 Dissemination to farmers, for Disaster Management</td>
<td></td>
</tr>
<tr>
<td>5 Sharing with fellow staff members, Training and Research</td>
<td></td>
</tr>
<tr>
<td>6 Forwarded to farmer groups through field officers</td>
<td></td>
</tr>
<tr>
<td>7 Input in existing programs, Formulation and designing of new programs</td>
<td></td>
</tr>
<tr>
<td>8 Packaging new information in training manuals</td>
<td></td>
</tr>
<tr>
<td>9 Field days to be conducted by districts, EPAs and sectional staff to farmers</td>
<td></td>
</tr>
<tr>
<td>10 Awareness and sensitization of communities</td>
<td></td>
</tr>
<tr>
<td>11 Reference material</td>
<td></td>
</tr>
</tbody>
</table>

- community meetings and trainings/workshops emerged as the most preferred ways of sharing information at 85%, followed by Radio at 50%, Web/Internet at 25% and television 15% respectively;
other methods mentioned included using of local dancers, use of demonstration plots at lead farmers’ fields, and publications; clearly demonstrated is that while at the institutional level websites emerge as the most preferred, at the end user/farmer level community meetings, trainings and workshops emerge as the best methods in knowledge sharing and dissemination; therefore for the knowledge network to function effectively, the different information needs and methods of communication need to be critically thought through from the user perspective; community networks at the community level may function better than online platforms preferred at the institutional level.

- respondents cited different challenges ranging from costly face-to-face meetings to inadequate resources in coordination of knowledge sharing activities; most knowledge related activities are carried out through trainings, tours and field days; inadequate number of extension workers empowered with information sharing it at request were some of the challenges identified; limited methods of dissemination and the knowledge/information not reaching the intended groups of people compounded by low literacy levels and conflicting messages were key challenges; and

- based on the challenges outlined above, respondents suggested that the mass media (e.g. community radios, newspapers) would be some of the best ways of reaching out information, supplemented by trainings, community meetings and lead farmers; other methods proposed were tours and field days, use of mobile phones and localized workshops; other suggestions included harmonized programming and conducting meetings with all development partners, conducting of research on CA concepts, farmer group discussions, puppet shows and video shows, use of theatre for development, agricultural public cinemas, and internet as well as use of government websites.

The analysis shows that for the CSA knowledge network to work effectively, strong linkages and collaborations with appropriate government structures are needed because government extension systems were considered a major source and contributor of information on climate followed by the media and NGOs.

It was however cited that face-to-face meetings are costly coupled with inadequate resources to coordinate knowledge sharing activities given that knowledge transfer was mainly through trainings, tours and field days. Therefore, in order to create an effective CSA content strategy, it would be worth harnessing the different ways CSA knowledge is generated at the community level, developing and using tools that capture such knowledge and use of complementary methods like the radio and mobile phones to ensure that CSA information is effectively generated, shared and disseminated.

1.3.4.2 Exchange visits

Senior policy makers and practitioners of conservation agriculture from five Eastern African Countries of Ethiopia, South Sudan, Kenya, Uganda and Tanzania participated in the Regional Conservation Agriculture Tour to Zambia and Zimbabwe. The multi-disciplinary team comprised of senior CA practitioners from NGOs, Universities, Research and Development institutions, a District Executive Director and the Media. The tour was held in Zambia and Zimbabwe from 22nd to 26th April 2013. Participants had the opportunity to visit and interact with small and medium sized CA farmers, researchers, policy makers, extension workers, academia, and CA equipment manufacturers.

The tour was organized by the African Conservation Tillage Network (ACT) in partnership with the Zambian and Zimbabwean Ministries of Agriculture, Conservation Farming Unit (CFU) of the Zambia National Farmers Union; Golden Valley Agricultural Research Trust (GART); and the Food and Agriculture Organisation of the United Nations (FAO). The tour, exposed participants to a variety of conservation agriculture practices; provided the platform to share personal experiences and the
regional/global trends on CA; and joint strategizing on promoting increased/wider uptake CA in the region. The tour was financially supported by the Common Market for Eastern and Southern Africa (COMESA); the Norwegian Agency for Development Cooperation (NORAD) and FAO Ethiopia.

CA comprises of three principles namely minimum tillage, crop rotations and permanent soil cover together. Full benefits and sustainability from CA are derived when all three principles are applied simultaneously.

The methodology of the tour involved (i) provision of awareness/evidence materials on CA; (ii) plenary presentations followed by discussions of CA at specific zone, country and regional level experiences; (iii) field visits and interactions – including doing CA - with CA practitioners; and (iv) individual/institutional planning on the way forward actions. The tour methodology enabled participants analyse what really matters in scaling out and benefiting from CA and zooming on the strategic entry points. It was the general opinion of the mission that tillage based farming by hand hoe, oxen or tractor plough, as now widely practised cannot adequately respond to increased food needs, degrades the environment and in the overall thwarts efforts to respond to weather proofing food production and elimination of climate change risks. Alternative ways through which farmers can attain higher levels of productivity and profitability while improving soil health and the environment were witnessed in visited farmers’ fields.

Impressive highlights of CA adoption from the tour included: the numerous CFU CA champion farmers who have transformed their lives with increased production and productivity translating to more assets demonstrated by new houses and cars through CA; long term visions, investments and achievements in pioneering domestication of Faidherbia albida by GART; the systemic extension and inputs support for CA by the MoAL services (case of Monze district); the model CA Centres of
Excellence in generating and disseminating scientific evidence for farmers and researchers - Gwebi Agricultural College in Zimbabwe and CIMMYT Trial Research site at Monze FTC in Zambia.

Change in mindset, weed control, availability of functional and affordable CA equipment, all year round retention of soil cover, innovative cropping systems and farm power were some the key identified constraints. The main drivers that make CA visible and interesting to farmers and development partners are continued yield decline, as a result of soil degradation, high costs of external inputs and vagaries of climate change, namely unpredictable amounts/timing of rainfall.

The following were identified as next steps and actions for policy and decision makers to take: Reactivating and/or establishing CA platforms; Selection of pilot areas, projects and partners to upscale CA; Mainstreaming CA in Agricultural Extension Systems and secondary school curricula; Preparation of Guidelines on CA field implementation; Training and experience sharing; Generate more empirical evidence for specific sites; Linkages to funding for CA programmes implementation; and Need to influence policy makers.

3.1.2 Capacity building of Task Forces
(Kenya, Malawi, Zimbabwe, Swaziland, Zambia, Ethiopia, Madagascar and Uganda) – TOT.

(i) Conduct a Needs Assessment of the Malawi NCATF

A needs assessment study was conducted for the Malawi NCATF. This was to ensure that capacity building efforts are tailored and deliver on felt needs of the taskforces. The needs were identified through an initial appraisal that resulted to developing the programme for the training course. In addition to the regular CA requirements, special needs were also expressed on Land use planning in CA, and GIS-based monitoring in CA. A more systematic study was also made using a structured questionnaire; the results are presented under 1.3.4.1.

(ii) Conduct Training Courses on CA - Training of NCATF ToTs, Mponela, Malawi.
The Conservation Agriculture Training of Trainers’ course was organized and conducted in partnership with the Malawi CA taskforce. Twenty-five participants (8 female) attended the course.

The participants were mostly district level managers and supervisors from Government Departments (Land Resources Conservation, Animal Health and livestock, Agricultural Extension Services, and Planning Departments); NGO partners (WVI, CRS, Christian Aid, Concern Worldwide, Evangelical Lutheran Development Services,) and farmer organizations (NASFAM, Farmers Organization Ltd).

The main objectives of the course were to enhance the capacity of the Malawi CA Taskforce and implementing agencies on CA, to share CA information, and to promote the use of GIS tools in monitoring implementation and adoption of CA technologies. The expected outputs were to increase the number of CA trainers and improve monitoring of CA which should ultimately impact positively on the area put to CA in the country.

Although many benefits of CA have been observed, the promotion of CA as a standalone technology may reduce these benefits, especially in the face of climate change effects. The course therefore
took an inclusive approach that included other climate smart agriculture approaches that could enhance the impact of conservation agriculture. The use of land and water management principles, AF technologies, and GIS tools in CA promotion were some of the many potential approaches presented during the course, which was conducted over a five-day period, and comprised power point presentations, plenary and group discussions, practical sessions and an interaction session with farmers in their CA fields.

The discussions during the course identified issues of high labour demand in hand-hoe based CA systems, residue management and the absence of adequate knowledge and skills among field extension officers and farmers as critical areas that need to be addressed. The exclusive promotion of hand-hoe based CA systems that excludes other more mechanized CA options was also a major challenge.

The workshop was opened by Mr. Nyandule Phiri, Controller of Agricultural Services and Institutions, on behalf of the Permanent Secretary in the Ministry of Agriculture and Food Security. In his remarks, the Guest of Honour conveyed his gratitude to COMESA, ACT and the Department of Land Resource Conservation for successfully partnering with the Malawi Conservation Agriculture Task Force, which culminated in the hosting of the course.

He noted that the Government of Malawi and partner institutions were promoting conservation agriculture as a means for resilience and adaptation to the effects of climate change. Further that, while the Government recognized the efforts of the many partners involved in promoting CA, some studies by UNDP have revealed the lack of knowledge and skills on CA among field officers and farmers as a major constrain to the adoption of CA. In conclusion, the Guest of Honour emphasized the importance of creating synergies and partnerships in order to successfully promote CA, recognizing the presence of several partners in this and previous two Training of Trainers courses organized by the Malawi CATF and partners. The proceedings of the training course are available at [http://www.act-africa.org/file/20140509_malawi_ca_training_of_trainers_course.pdf](http://www.act-africa.org/file/20140509_malawi_ca_training_of_trainers_course.pdf)
Expected Result 3.3: At least 14 minor Investment Projects on CSA are piloted

Activity 3.3.2 Convene at least one regional meeting on Climate Smart Agriculture per year, with the participation of ministry of gender representatives and women’s organisation.

(1) Support CA Inputs Suppliers & Manufacturers
A two-day Conservation Agriculture (CA) Equipment Manufacturers, Suppliers and Service Providers (CA-MSSP) workshop was held at the Protea Courtyard Hotel, Dar Es Salaam, Tanzania from the 28 - 29th November 2013. The workshop drew 37 participants (8 F and 29 M) from 10 different countries (2 Brazil, 2 India, 8 Kenya, 3 Malawi, 1 Mozambique, 1 Namibia, 1 South Africa, 9 Tanzania, 3 Zambia and 7 Zimbabwe).

Results-oriented objectives of the workshop were:
(i) Key lessons on CA equipment manufacturing and supply highlighted and shared as a basis for COPMSSP knowledge sharing and networking;
(ii) Guidelines for manufacturers and importers of CA equipment on compliance to standards, principles and clients (with reference to those of FAO) for prequalifying to quality assurance by peers and international tenders shared and discussed;
(iii) The possibility of the formation and networking of a CoP for CA equipment manufacturers, suppliers and service providers (COPMSSP) explored and the benefits of COPMSSP discussed;
(iv) A practical CA Equipment Manufacturers Climate Change roadmap developed; and
(v) Business opportunities secured through the Tanzania Trade Fair and role of ACT to help nurture the business opportunities defined.

A web portal at http://www.act-africa.org/directory.php?com=85 has been developed to serve the community of practice of manufacturers and primarily to support those in need of CA equipment to know what is available from which manufacturer. Currently there are 70 service providers with contacts to support CA equipment needs.

3.3.5 Piloting CA activities
A livelihood vulnerability and adaptation to Climate Change survey was carried out in the representative Shongo and Shibolya communities of Mbeya District. The aim was to provide the
piloting of the COMESA-SADC-EAC supported CA activities in the District by understanding the
current status of agricultural production, livelihood vulnerability to climate change and coping strategies, institutions on the ground and identification of existing opportunities and entry points for CA practices.

The shared report from the study confirms the extreme vulnerabilities, particularly of women and children, to climate change inclusive of erratic rains, cyclonic wind, drought, heavy rains (El-Niño), and outbreaks of crop, human and animal diseases. Women and children are the most affected groups in the community with the effects including loss of life to livestock, food shortage, and decline in soil fertility and insecure access to markets.

Following the livelihood survey, three wards of Ikukwa, Igale and Tembela in the Mbeya District were selected for the CA activities. Some 10,000 farmers (5,000 women) have been earmarked as active participants and beneficiaries from this intervention for 2015.

**Expected Result 4.2: International programme for knowledge transfer on conservation Agriculture**

4.2.2 *Convene at least one regional scientific symposium per year*

The African Conservation Tillage Network (ACT) and the Government of the Republic of Zambia, in collaboration with partners hosted the 1st Africa Congress on Conservation Agriculture (IACCA) from 18th to 21st March 2014 at the Intercontinental Hotel, Lusaka, Zambia. Foundation sponsors were the Common Market for Eastern and Southern Africa (COMESA) and Norwegian Agency for Development Cooperation (NORAD). Platinum and Gold sponsors were Centre for Coordination of Agricultural Research and Development for Southern Africa (CCARDESA), International Centre for Research in Dry Areas (ICARDA), Alliance for a Green Revolution for Africa (AGRA) and Food and Agriculture Organisation (FAO). Partners include the Conservation Farming Unit (CFU), Golden Valley Agricultural Research Trust (GART), French Agricultural Research Centre for International Development (CIRAD), International Maize and Wheat Improvement Centre (CIMMYT), European Union (EU) and New Partnership for African Development (NEPAD).

The Congress theme was “Conservation Agriculture (CA): Building Entrepreneurship and Resilient Farming Systems”. The aim of the Congress was to share and expose experiences and lessons and facilitate alliances to unblock hindrances to expanded and scaled-up adoption of conservation agriculture especially among the smallholder farming systems and related industry in Africa. The Congress was officially opened by Hon. Robert Sichinga, Minister for Trade, Commerce and Industry, and outgoing Minister for Agriculture and Livestock, and officially closed by Hon. Luxon Kazabu (MP) Deputy Minister for Agriculture and Livestock. The Congress brought together 414 delegates from 42 African and other countries of the world. They included 93 women (22.5%) and came from NGOs and Extension workers (23.9%); Researchers and the Academia (22.2%); Smallholder CA Farmers (19.8%); Media (11.8%); Development partners (8.2%); National Governments (8.0%); Private-Public CA Investors (2.7%). In the minority were financial institutions and large scale CA farmers.
The methodology provided for several within-the-congress events to facilitate learning and sharing of CA information/experiences across and within the different stakeholders. Foremost, the congress put “farmers first” and at “the centre” of all congress discussions. Outputs from the “farmers’ forum” were to be addressed in all subsequent sessions. All other participants – being service providers in their various disciplines and stakes were required to identify a niche value adding service to assist farmers adapt and adopt profitable CA in their millions. During the Congress a successful Farmers’ Forum was held with speakers from Morocco, Kenya, Tanzania, Mozambique, Zimbabwe and Zambia. Twenty-one keynote papers were presented in plenary sessions, 63 thematic papers presented in parallel sessions and 13 posters were presented. Fourteen exhibitors showcased their CA knowledge, information and achievements in booths. In addition, Congress proceedings were streamed live worldwide, and an award ceremony for 10 CA champions was held in a colourful gala night. Field visits involved day-long visits to 6 CA sites. Three side events dedicated to adoption of CA, CA with trees and smallholder CA were also held.

At the end of the Congress, 1ACCA Declaration was drawn, adopted and promulgated as a part of the closing ceremony. Excerpts of the 25by25 Lusaka CA Declaration available at http://www.africacacongress.org/ are presented herein below.

- The congress recognised the African Governments’ efforts in support of sustainable agriculture intensification. However, more efforts to create a more conducive environment for the adoption of CA are needed. The need to strengthen partnerships, communication and information flow within the CA community of practice at national and regional levels was evident. New knowledge and experience exchange are an important resource for uptake and spread of CA. The crucial need to upscale mainstreaming of education on the science and practice of CA in existing educational systems at all levels was highlighted. The importance of South-South cooperation, in the form of exchange of expertise, information and experience was also recognised. CA has significantly positive impact on practicing farmers across Africa in their incomes, livelihood, and well-being and on empowerment of women.
farmers. The roles of women and the youths in the accelerated upscaling and adoption of CA needs to be recognised. CA gives farmers the choice to apply CA principles to a range of production systems including, agroforestry and crop-livestock integration amongst others.

- In order to achieve the CAADP goal of 6% growth of the agricultural sector CA stakeholders called for policy and political commitment and leadership; private sector engagement especially to proactively support up scaling of CA through further innovations and increased investments financing in appropriate CA technologies and related services and training, extension, research and innovation, and knowledge support. To realise the calls, for example, National and international stakeholders have to support the up-scaling of CA to reach at least 25 million farmers across Africa by 2025 – coined as 25by25. Governments have to create conducive environment for the adoption and development of CA. Support to CA farmers and their organizations is necessary. Governments have to create enabling policy environment to allow investment financing, and technological development. Support from development partners to CA programmes need be increased. Quality assurance system for accredited agricultural training institutions that provide CA training certificates has to be in place. CA adopts farmers have to be supported to be champions and educators for their counterparts. Agricultural training institutions have to take up CA as an integral part of their training programmes and farmer sensitization and training efforts. Research and extension on CA should be farmer-focused and responsive to the needs of farming communities. The need to supporting knowledge management by stakeholders, including the CA task force is vital.


For details refer to [www.africacacongress.org](http://www.africacacongress.org)
5. IMPLEMENTATION CHALLENGES

Substantial lead time, of up to six months, is required to organise major international events such as an international congress or workshop. Manufacturers’ need the lead time to ship their prototype equipment for the intended parallel expos. Confirmation on the go-ahead of planned events needs to be provided at such an advanced timing to ensure desired success of such events.

Funds earmarked for some of the planned and agreed activities were not released at the time required. This reduced success rate of otherwise perfect plans.

6. CONCLUSIONS

The sub-grantees communication e.g. the workshop held in Chisamba, Zambia, was a good initiative that made participants in the project know and interact with one another and bringing focus on project content.

Whilst constrained by inadequate resources to implement some of the activities planned, all planned activities were accomplished with an average of over 90% implementation rates achieved.

Operationalization of the IACCA is proceeding well. An Africa wide concept note has been developed and work is underway to develop investment proposal for five first phase Africa Countries.

The second ACCA is planned for West Africa in 2017. ACT is desirous to engage with COMESA in provision of Strategic Leadership for CA in Africa.

Traffic to the ACCKN is on the increase after the huge awareness created by the First Africa Congress on Conservation Agriculture and opening of the e-library cum resource centre.

The impact survey conducted in eight district of four countries confirms that Conservation Agriculture increases productivity (producing more with less), saves labour for all – with special benefits to women - and increases resilience to climate change.