AFRICAN CONSERVATION TILLAGE NETWORK

STRATEGIC PLAN 2013-2022

"Turning Conservation Agriculture Knowledge into Action"

DECEMBER, 2012

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ABBREVIATIONS AND ACRONYMS

ACT	African Conservation Tillage network
AGRA	Alliance for a Green Revolution in Africa
ASARECA	Association for Strengthening Agricultural Research in Eastern and Central Africa
AU	African Union
CA	Conservation agriculture
CAADP	Comprehensive African Agricultural Development Programme
CIRAD	Centre de Cooperation Internationale en Recherché Agronomique pour le Development
COMESA	Common Market for Eastern and Southern Africa
EAC	East African Community
EMBRAPA	Brazilian Agricultural Research Corporation
EU	European Union
FAO	Food and Agriculture Organization of the United Nations
GEF	Global Environment Facility
GTZ	German Development Co-operation
HIV/AIDS	Human Immunodeficiency Virus/Acquired Immune Deficiency Syndrome
ICT	Information and Communication Technology
IFAD	International Fund for Agricultural Development
IGAD	Inter-Governmental Authority on Development
IPCC	Inter-governmental Group of Experts on Climate Change
MDGs	Millennium Development Goals
NAES	National Agricultural Extension System
NARS	National Agricultural Research System
NEPAD	New Partnerships for Africa's Development
RISDP	Regional Indicative Strategic Development Plan
SADC	Southern Africa Development Community
Sida	Swedish International Development Agency
UNCBD	United Nations Convention on Biological Diversity
UNCCD	United Nations Convention to Combat Desertification
UNFCCC	United Nations Framework Convention on Climate Change
UNFF	United Nations Forum on Forests
USAID	United States Agency for International Development
WCACARD	West and Central African Council for Agricultural Research and Development

FOREWORD

African countries are endowed with land, water, human resource and favourable climatic conditions capable of sustaining a highly productive agricultural sector. However, the contribution of many of these countries' agricultural sector to growth, attainment of food security and increased prosperity for their people is still lagging behind expectations. African countries have been slow in producing enough, diversified and good quality agricultural products to meet the internal demand for food, and ensure exportation that could foster economic growth.

For the African agricultural sector to improve on its contribution to the overall goal of national economic growth, wealth creation, food security and poverty alleviation, the sector must be transformed from subsistence to a sustainable commercial and profitable business enterprise. However, agriculture in the African countries is faced with major challenges such as low productivity; limited diversification; and continuous degradation of the environment among others. The main reason for this situation is that the form of agriculture that has been promoted over the years is tillage-based farming which is now considered unsustainable. Tillage reduces soil organic matter, destroys soil structure and debilitates soil biodiversity, all of which are important elements in ecosystem functions that creates healthy productive soils and delivers ecosystem services.

Registered as a pan-African not-for-profit membership organization, the African Conservation Tillage (ACT) network has membership from all around the continent, coordinated by three regional hubs that include (i) Southern Africa region; (ii) Eastern Africa region; and (iii) West-Central Africa region. The core mandate of the Network is to promote conservation agriculture principles and practices in Africa. . Membership to the Network is voluntary and brings together stakeholders and players who are (i) dedicated to improving agricultural productivity through sustainable management of natural resources in African farming systems; and (ii) committed to the principles of mutual collaboration, partnerships and sharing of information and knowledge on sustainable natural resource management and drawing on synergies and complementarities.

In the last few years, various developments have taken place in the national, regional and global arena including major changes in the Network's operating and policy environments as well as advances in science and technology. In addition to this, several of the Network's collaborating partners and countries within the region have revised their strategies and development plans, indicating areas of future collaboration. Furthermore, development programmes in the region have gained a higher profile for national and overseas development assistance. These changes have, therefore, necessitated the development of this new Strategic Plan for the period 2013-2022 so as to ensure proper alignment to the developments taking place at the national, regional and international levels.

The new Strategic Plan has been developed within the context and in conformity with new and evolving institutional and policy reforms while taking advantage of current and emerging opportunities to enhance the Network's capacity to be proactive. The Strategic

Plan is aimed at positioning the Network strategically as a key driver in conservation agriculture and sustainable land management in Africa. In this regard, the Strategic Plan has taken into account the achievements and lessons learnt during the implementation of the previous Strategic Plan as well as the challenges experienced in it implementation. In aligning itself to the guiding policies and plans at the national, regional and global levels, the Network has formulated an inspiring Vision "*To be a premier Network of excellence in promoting sustainable agriculture and ecosystem management for improved livelihoods and wealth creation in Africa"*. The Mission statement that expresses the Network's fundamental purpose and business is "*To enhance agricultural productivity, sustainable land management and environmental conservation through promotion of conservation agriculture principles and practices in Africa.*" The Network Vision and Mission statements confirm the Network's commitment to the national, regional and global policies and priorities aimed at creating economic development through agriculture and meeting the Millennium Development Goals of reducing poverty and eradicating hunger.

This Strategic Plan emphasizes the need for ACT to work with partners, collaborators, the farming community and other players along the various agricultural product value chains so as to have a vibrant commercially-oriented and competitive agricultural sector. To be responsive to client demands, and eventually deliver development objectives, there is greater need of true partnerships among key stakeholders within the agricultural sector. This Strategic Plan, therefore, provides a framework and a roadmap for the Network for the next ten years. As a framework, the Strategic Plan provides the guiding principles and basis on which detailed five-year operational plans that are required to operationalize it shall be developed.

The Strategic Plan is the outcome of several months of continuous learning, communication and negotiation by the Network and stakeholders, with the primary objective of building consensus around the Network's strategic areas. In this regard, I wish to thank the members of the ACT Board of Management for their active participation in the planning process; the ACT Executive Secretary for providing overall guidance and coordination of the Strategic Plan development process; and the ACT staff for their commitment and full participation in the development of the Strategic Plan. The contribution of all ACT stakeholders and partners as well as other individuals or groups that assisted in one way or another towards the development of this Strategic Plan is greatly acknowledged. It is my hope that all our stakeholders, collaborators and partners will find the document pragmatic and adequately reflective of their needs and interests.

Reynolds K. Shula
Chairman, ACT Board of Management

PREFACE

The agricultural sector plays a major role in the economic development in Africa and is the source of livelihood for a high proportion of the population actively involved in agricultural-based activities. The performance of agriculture impacts heavily on nearly all other sectors of development and is, therefore, the mainstay of the national economies of African countries by providing the basis for the development of the other sectors. By contributing raw materials to the manufacturing/industrial sector, the agricultural sector has a definite role to play in the progress of many African countries towards becoming food secure and newly industrialized countries. For the agricultural sector to improve on its contribution to the overall goal of national economic growth, wealth creation, food security and poverty alleviation, the sector must be transformed from subsistence to a commercial and profitable business enterprise.

Conservation agriculture has been defined as a farming approach that fosters natural ecological processes to increase agricultural yields and sustainability by minimizing soil disturbance; maintaining permanent soil cover; and diversifying crop rotations and/or associations. This reduces land and water pollution and soil erosion; reduces long-term dependency on external inputs; enhances environmental management; improves water quality and water use efficiency; and reduces emissions of greenhouse gases through lessened use of fossil fuel. Conservation agriculture is the integration of ecological management with modern, indigenous and scientific agricultural production to promote food sufficiency, poverty reduction, and value added production through improved crop and animal production and production in relation to market opportunities. At the continental level conservation agriculture has been incorporated into the regional agricultural policies of the AU/NEPAD as part of the responses to food insecurity and rising food prices, while at the same time, embracing climate change adaptation and mitigation measures by adopting sustainable land management practices.

The African Conservation Tillage (ACT) network is registered as a pan-African not-for-profit membership association that is established adhering to the African Union's (AU) "Code of Ethics and Conduct for African Civil Society Organizations". Principles of transparency, accountability and respect for the rule of law reflect the very character of the Network as an organization. The current ACT core functions of mainstreaming conservation agriculture through stakeholder engagement include (i) Networking, knowledge and information management; (ii) Promotion and dissemination support; (iii) Advocacy and public awareness; (iv) Stimulating and facilitating coalition building and partnerships; (v) Learning-Education and training support; and (vi) Research support.

Given the ACT's strategic direction and Mission, the Network has identified six strategic results that are necessary and sufficient to address the identified critical strategic issues limiting agricultural productivity, sustainable land management and environmental conservation and deliver on the Network's purpose of "promoting conservation agriculture principles and practices in Africa". Attainment of this purpose will contribute significantly to the realization of the overall Network goal of

"Enhancing agricultural productivity, sustainable land management and environmental conservation". The strategic results are designed to position the Network strategically as a leader in promoting sustainable development in Africa and beyond. The six strategic results include (i) Adoption and scaling up of conservation agriculture strengthened; (ii) Sustainable land management and climate change resilience improved; (iii) Capacity building and partnerships enhanced; (iv) Communication, information and knowledge management improved; (v) Entrepreneurship and business development strengthened; and (vi) Network management support functions strengthened.

The six strategic results shall be delivered by thematic areas of focus that correspond to the six Network strategic results. The thematic areas of focus are integrally linked and express a stronger Network commitment to impact as the strategic orientation and positioning of ACT as a leader in promoting sustainable development in Africa and beyond. The thematic areas of focus shall be addressed through nationally and regionally coordinated programmes and projects. The implementation of the Strategic Plan shall incorporate joint planning and participation by all key stakeholders so as to ensure that multiple views, needs and concerns in resolving priority conservation agriculture issues at different levels are taken into account and negotiated. Cross regional and organizational synthesis, networking and sharing of lessons learned shall be used to improve the value of the findings. Under-pinning the Strategic Plan and its implementation are also several crosscutting issues which the Network has made a commitment to address during implementation of this Strategic Plan.

To operationalize the Strategic Plan, the Network shall develop two detailed Operational Plans covering the period 2013-2017 and 2018-2022. In developing the Operational Plans, the Network shall engage its partners in formulating intervention strategies that are necessary and sufficient for delivering the strategic thematic areas of focus and hence the Network strategic results, Mission and Vision. In doing this, efforts will be made to take into account the national, regional and international development aspirations in increasing agricultural productivity, sustainable land management and environmental conservation including the prevailing policy environments. The Operational Plans shall, in turn, be operationalized through rolling Annual Work Programmes in which the necessary and sufficient activities and their respective milestones required to deliver each yearly target shall be specified.

The development of this Strategic Plan has been a highly participatory and consultative process involving key stakeholders within and outside the Network and the region. This was done so as to ensure that it incorporates constructive views and suggestions from all key stakeholders; builds on the current and preceding achievements and strengths and contributes significantly to the development of agriculture, livelihoods and the environment in the region, while ensuring proper alignment at the national and regional levels for better outcome mapping and impact orientation. In this regard, I wish to express my sincere appreciation and gratitude to the chairman and members of the ACT Board of Management for their continuous engagement, guidance and advice that contributed enormously to the overall success of the planning process; the ACT stakeholders,

collaborators and partners for their continuous engagement, encouragement and keen interest in the planning process; the ACT staff for their active participation, dedication and commitment throughout the planning process; Topridas Consultancy Services for providing excellent leadership and technical guidance; and all other individuals or groups that assisted in one way or another towards the success of the planning process.

Eng. Saidi Mkomwa,
ACT Executive Secretary

EXECUTIVE SUMMARY

1.0 Introduction

1.1 Agriculture is the mainstay of the national economy of many African countries and provides the basis for the development of the other sectors. By offering jobs to the majority of working population as well as contributing raw materials to the manufacturing/industrial sector, the agricultural sector has a definite role to play in the progress of African countries towards becoming food secure and newly industrialized. For the agricultural sector to improve on its contribution to the overall goal of national economic growth, wealth creation, food security and poverty alleviation, the agricultural sector must be transformed from subsistence to a sustainable commercial and profitable business enterprise. However, agriculture in African countries is faced with major challenges such as low productivity; limited diversification; and continuous degradation of the environment among others. The main reason for this situation is that the form of agriculture that has been promoted over the years is tillage-based farming which is now considered unsustainable. Tillage-based farming reduces soil organic matter, destroys soil structure and debilitates soil biodiversity, all of which are important elements in ecosystem functions that creates healthy productive soils and delivers ecosystem services.

1.2 Conservation agriculture has been defined as a farming approach that fosters natural ecological processes to increase agricultural yields and sustainability by minimizing soil disturbance; maintaining permanent soil cover; and diversifying crop rotations and/or associations. This reduces land and water pollution and soil erosion; reduces long-term dependency on external inputs; enhances environmental management; improves water quality and water use efficiency; and reduces emissions of greenhouse gases through lessened use of fossil fuel. Conservation agriculture is the integration of locally adapted and ecological management with modern and scientific agricultural production to promote food sufficiency, poverty reduction, and value added production through improved crop and animal production and production in relation to farmers' objectives and market opportunities. At the continental level conservation agriculture has been incorporated into the regional agricultural policies of the AU/NEPAD as part of the responses to food insecurity and rising food prices, while at the same time, embracing climate change adaptation and mitigation measures by adopting sustainable land management practices.

1.3 The African Conservation Tillage (ACT) network is registered as a pan-African not-for-profit membership association that is established at three regional levels that include (i) Southern-Central Africa region; (ii) East and Horn of Africa region; and (iii) West-North Africa region. The core mandate of the Network is mainstreaming of conservation agriculture through stakeholder engagement. Membership to the Network is voluntary and brings together stakeholders and players who are (i) dedicated to improving agricultural productivity through sustainable management of natural resources in African farming systems; and (ii) committed to the principles of mutual collaboration, partnerships and sharing of information and knowledge on sustainable natural resource management and drawing on synergies and complementarities.

2.0 The New Network Strategic Plan

2.1 The African Conservation Tillage network developed its first ten-year Strategic Plan in 2006. Although the period for this Strategic Plan is not yet over, various developments have taken place in the national, regional and global arena in the last few years, including major changes in the Network's operating and policy environments as well as advances in science, technology and farmers' demands. In addition to this, several of the Network's collaborating partners and countries within the region have revised their strategies and development plans, indicating areas of future collaboration. Furthermore, development programmes in the region have gained a higher profile for national and overseas development assistance. These changes have, therefore, necessitated the development of this new Strategic Plan for the period 2013-2022 so as to ensure proper alignment to the developments taking place at the national, regional and international levels.

2.2 The new Strategic Plan is aimed at positioning the Network strategically as a key driver in conservation agriculture and sustainable land management in Africa. In this regard, the Strategic Plan has taken into account the achievements and lessons learnt during the implementation of the previous Strategic Plan as well as the challenges experienced in its implementation. The development of the Strategic Plan has been guided by the various strategic thrusts and initiatives in agriculture, natural resources, environment and climate change in the region.

2.3 The development of this Strategic Plan has been a consultative process involving key stakeholders within and outside the Network and the region. This was done so as to ensure that it incorporates constructive views and suggestions from all key stakeholders; builds on the current and preceding achievements and strengths and contributes significantly to the development of agriculture, livelihoods and the environment in the region, while ensuring proper alignment at the national and regional levels for better outcome mapping and impact orientation.

3.0 Network Strategic Direction

3.1 Critical analysis of the ACT's operating environment lead to the identification of the broad critical strategic issues that need to be addressed in order to solve the major challenges facing the Network's mandate area and take advantage of the available and emerging opportunities and prospects. Addressing the identified broad critical strategic issues is also expected to enable the Network improve its efficiency, effectiveness and impact in contributing to sustainable natural resources management, environmental conservation as well as adaptation and mitigation to climate change challenges. This shall, in turn, enable the Network to position itself strategically to contribute significantly to the regional economic development.

3.2 The ACT Vision that requires the Network and its stakeholders and partners to stretch their future expectations, aspirations and performance is "**To be a premier network**

of excellence in promoting sustainable agriculture and ecosystem management for improved livelihoods and wealth creation in Africa". The ACT Mission statement that expresses its fundamental purpose and business is **"To enhance agricultural productivity, sustainable land management and environmental conservation through promotion of conservation agriculture principles and practices in Africa."**

3.3 The decisions and actions in ACT are consistently based on a set of clear principles outlined here as the Network's Core Values. The ACT Core Values guide actions at all levels when choices are not clear or when there is a gap between intention and reality. The guiding Core Values that the Network and its stakeholders and partners hold in common and endeavour to put into practice while performing their functional obligations include (i) Performance and service orientation; (ii) Partnership, networking and collaboration; (iii) Knowledge and information management; (iv) Regionality and environmental concern; and (v) Integrity, transparency and accountability.

4.0 Network Strategic Results

4.1 Given the ACT's strategic direction and Mission, the Network has identified six strategic results that are necessary and sufficient to address the identified Critical Strategic Issues and deliver on the Network's purpose of **"promoting conservation agriculture principles and practices in Africa".** Attainment of this purpose will contribute significantly to the realization of the overall Network goal of **"Enhancing agricultural productivity, sustainable land management and environmental conservation".**

4.2 The strategic results are designed to position the Network strategically as a leader in promoting sustainable development in Africa and beyond. The six necessary and sufficient results include (i) Adoption and scaling up of conservation agriculture **strengthened;** (ii) Sustainable land management and climate change resilience **improved;** (iii) Capacity building and partnerships **enhanced;** (iv) Communication, information and knowledge management **improved;** (v) Entrepreneurship and business development **strengthened; and** (vi) Network management support functions **strengthened.**

5.0 Network Thematic Areas of Focus

5.1 In order to deliver on the Network's strategic results, functional operations in ACT have been rationalized into five technical and one management support function thematic areas of focus that correspond to the six Network strategic results. These thematic areas of focus express a stronger Network commitment to impact as the strategic orientation and positioning of ACT as a leader in promoting sustainable development in Africa and beyond. The strategic areas of focus are considered as integrally linked and complementary rather than as isolated areas.

5.2 The necessary and sufficient thematic areas of focus required to deliver the Network strategic results include (i) Adoption and scaling up of conservation agriculture; (ii) Sustainable land management and climate change resilience; (iii) Capacity building

and partnerships; (iv) Communication, information and knowledge management; (v) Entrepreneurship and business development; and (vi) Network management support functions.

5.3 Successful implementation of the five technical thematic areas of focus will depend largely on the availability, effectiveness and efficiency of the Network management support functions. ACT will, therefore, need to strengthen its Network capacities and competences. The required capacities and competences will emanate from within the Network and its collaborating partners and shall focus on the human, financial and physical resources and the institutional arrangements that will be required to adequately address the issues highlighted under the technical thematic areas of focus.

6.0 Strategic Plan Implementation Arrangements

6.1 The implementation of the Strategic Plan shall incorporate joint planning and participation by all key stakeholders so as to ensure that multiple views, needs and concerns in resolving priority conservation agriculture issues at different levels are taken into account and negotiated. The Strategic Plan thematic areas of focus shall be addressed through nationally and regionally coordinated programmes and projects. Cross-regional and organizational synthesis, networking and sharing of lessons learned shall be used to improve the value of the findings. Under-pinning the Strategic Plan and its implementation are also several crosscutting issues which the Network has made a commitment to address during implementation of this Strategic Plan.

6.2 In order to re-invent and position itself strategically, the Network shall develop and operationalize a mechanism for establishing flexible alliances and innovation platforms that allow the Network to form temporary teams with other organizations including farmers' organizations and groups, research institutions, universities and the private sector and non-governmental organizations to solve priority conservation agriculture problems in specified periods. The formation of such temporary teams would ensure the availability of a critical mass of professionals with the right disciplinary mix to provide multidisciplinary solutions for priority conservation agriculture problems. Particular input will be sought from purposefully formed and supported Conservation Agriculture Communities of Practice (CA-CoPs) of researchers and academia; CA equipment manufacturers and suppliers; CA farmers and their organizations; youths and women in agriculture.

6.3 To operationalize the Strategic Plan, the Network shall develop two detailed Operational Plans covering the period 2013-2017 and 2018-2022. In developing the Operational Plans, the Network shall engage its partners in formulating intervention strategies that are necessary and sufficient for delivering the strategic thematic areas of focus and hence the Network strategic results, Mission and Vision. In doing this, efforts will be made to take into account the national, regional and international development aspirations in increasing agricultural productivity, sustainable land management and environmental conservation including the prevailing policy environments. The

Operational Plans shall, in turn, be operationalized through rolling Annual Work Programmes (AWP) in which the necessary and sufficient activities and their respective milestones required to deliver each yearly target shall be specified.

6.4 One of the most significant reforms being undertaken by most African governments and organizations is the introduction and implementation of a system of performance contracting. An essential feature in performance contracting is the development of a devolved operation style which emphasizes management by outcomes rather than by processes. As an African regional network, ACT shall continue to strengthen performance contracting as a way of organizing and defining its results, responsibilities and tasks to ensure their systematic and purposeful accomplishment. Consequently, the broad intervention strategies to be described in the Operational Plans shall be broken down into specific activities which will form the basis for negotiated and agreed upon annual performance targets with the Network Board of Management. Each year's targets will build upon the previous year's accomplishments and lead systematically to the realization of the Network's Mission.

6.5 ACT will enhance its image as an efficient, effective and relevant regional mechanism for producing deliverable results and adding value to conservation agriculture knowledge management and scaling up of technologies and innovations as a strategy for mobilizing resources to fund the implementation of the new Strategic Plan. Besides this, the Network has to develop and maintain a reputation as an effective regional organization with unquestionable credibility and reputation. Available options to the Network for partnerships and resource mobilization include establishment of a partial Competitive Grants Scheme financed by participating countries and development partners; supporting consortia of research scientists and institutions to fundraise through writing competitive grant research proposals; partnerships with regional and international programmes and other global funding facilities supporting research for development; entering into twinning agreements with regional and national development programmes to coordinate their conservation agriculture activities; and lobbying for institutional contribution in kind to funded projects;

6.6 Monitoring and evaluation (M&E) is an integral part of performance management. The purpose of M&E is to evaluate the progress of planned activities with a view to ensuring that their implementation is proceeding according to plan and the set targets are being met. In order to institutionalize the monitoring and evaluation process, ACT shall develop and operationalize a suitable monitoring and evaluation system/mechanism capable of tracking the implementation of planned activities. The monitoring and evaluation system shall include the use of logical frameworks, work plans, field visits, quarterly and annual reports, mid-term internal evaluations, biannual conferences and end-of-term external evaluation.

1.0 BACKGROUND

1.1 Introduction

The concept of sustainable development is fast gaining popularity in the world over. Sustainable development is defined as the development that meets the needs of the present without compromising the ability of future generations to meet their own needs. Described from an economic point of view, it results in increase in social well-being of a people. Underdevelopment on the other hand is a consequence of many factors including lack of or underutilization of timely and accurate data and information for decision making and to inform policy formulation and implementation. This has led to poor management of resources, food insecurity, environment degradation and pollution and exacerbating poverty in many vulnerable nations particularly developing countries.

Environmental resources are important global wealth that human populations depend on for livelihoods and many other uses. They also serve as habitats for millions of flora and fauna species. Natural resources such as water, forests and land are elements of environmental resources. They provide the basis for social and economic developments of the modern world. Aspirations for sustainable development are intricately linked to the integrity of the natural resources and the environment. Unbalanced utilization of the resources and poor management of the environment have induced severe natural disasters that are becoming challenging factors to well-being of the human beings.

The recent increases in global average temperatures are driving various transformations to Africa's climate and increase in environmental degradation. Rainfall patterns and growing seasons are changing, water stress is spreading, ecosystems are transforming, and the vector ranges of diseases are altering. Many of the disasters occurring in Africa are mostly climate-related that climate change is only further compounding. Additionally, environmental degradation can generate serious repercussions for regional security. The scarcity and depletion of transboundary resources such as agricultural land, water, pasture and minerals among others, driven by climate change and rapid increase in human population, have induced political tensions and conflicts among countries and communities. The security implications are most obvious because a majority of people in Africa depend on the natural environment for basic subsistence.

1.2 Conservation Agriculture

Conservation agriculture (CA) is a farming approach that fosters natural ecological processes to increase agricultural yields and sustainability by minimizing soil disturbance (zero tillage); maintaining permanent soil cover; and diversifying crop rotations and/or associations (FAO, 2008). This reduces land and water pollution and soil erosion; reduces long-term dependency on external inputs; enhances environmental management; improves water quality and water use efficiency; and reduces emissions of greenhouse gases through lessened use of fossil fuel. Construed more broadly, CA also encompasses natural resource management on-farm, village, and landscape scales to increased synergies between food production and the conservation and use of ecosystem services. Conservation agriculture is the integration of ecological management with modern and scientific agricultural production. Conservation agriculture, including agroforestry, specialty crops, and permanent cropping systems, promotes food sufficiency, poverty reduction, and value added production through improved crop and animal production and production in relation to market opportunities

1.3 African Conservation Tillage Network

The African Conservation Tillage (ACT) Network was initiated following a stakeholders' workshop on "Conservation Tillage for Sustainable Agriculture" held in Zimbabwe in 1998 organized by Zimbabwe Farmers Union, German Development Co-operation (GTZ), and the Food and Agriculture Organization (FAO) of the United Nations and the Agricultural Research Council (ARC) of South Africa. Driven by the desire among players to better and share more information and experiences on CA and related aspects, the workshop ratified the initiation of a regional network as a mechanism to stimulate and facilitate cross-cutting and mutually exchange knowledge and information from experiences of CA. In 2000, under project support from GTZ, the Network formally established a full-time secretariat with a steering committee to manage the Network. The Network has since evolved into a neutral platform, stimulating, facilitating and challenging for mutual sharing of information and knowledge on experiences and lessons on applications of CA and expanding to the whole region.

ACT is registered as a pan-African not-for-profit membership association that was initially commissioned with geographical focus on Southern, Central and Eastern Africa. However, the Network has expanded responding to active interest from the rest of the continent to West and North Africa. Existing potential for synergistic collaborations and knowledge sharing, enriched by the diversity, across the continent has justified the Network's reformation into a pan-African establishment with networking value within and between regions.

ACT is established at three regional levels that include (i) Southern-Central Africa Region; (ii) East and Horn Africa Region; and (iii) West-North Africa Region. This enables each region to articulate its main uniqueness, thrust and strengths as basis for inter-regional sharing and interaction. A distinct North Africa region is foreseen in the future. The ACT Network geographical location and focus is shown in Annex 1.

1.3.1 ACT Mandate and Core Functions

ACT is registered as a pan-African not-for-profit membership organization registered in Kenya (Cap 486, Registration No. 132675). Membership is voluntary bringing together stakeholders and players who are:

- Dedicated to improving agricultural productivity through sustainable management of natural resources in Africa's farming systems.
- Committed to the principles of mutual collaboration, partnerships and sharing of information and knowledge on sustainable natural resource management and drawing on synergies and complementarities without necessarily becoming one and allowing each one to pursue aspects for which they have comparative advantage.

ACT has been established adhering to the African Union's (AU) "Code of Ethics and Conduct for African Civil Society Organizations". Principles of transparency, accountability and respect for the rule of law reflect the very character of the Network as an organization. The current ACT core functions of mainstreaming conservation agriculture through stakeholder engagement include the following:

(i) Networking, knowledge and information management.

(ii) Promotion and dissemination support.

(iii) Advocacy and public awareness.

(iv) Stimulate and facilitate coalition building and partnerships.

(v) Learning-education and training support.

(vi) Research support.

(vii) Project implementation services.

1.4 Achievements and Lessons Learnt

The implementation of the last Network Strategic Plan went through a very difficult time occasioned by a fast-changing and complex socioeconomic environment characterized by such factors as declining financial resource availability; a wide range of sector reforms and increased stakeholder awareness; global market liberalization with both positive and negative effects on the agricultural sectors of many African countries; inadequate policy coordination among African countries; high input prices relative to output prices; emergence of new biophysical constraints occasioned by climate change; brain drain due to competition; and political instabilities in some African countries among others. These challenges affected operational implementation of the Network's activities in one way or another leading to limited uptake and utilization of new conservation agriculture technologies and practices. These challenges notwithstanding, the Network was able to achieve the following:

(i) Institutional and organizational growth and presence in the Africa region. The Network registered, legal and functional sub-regional offices in Ouagadougou (for

West and Central Africa), Harare (for Southern Africa), Dar es Salaam (for East and Horn of Africa) and the Nairobi headquarters. The Network has developed functional governance systems including policies and the functional continent-wide Board of Directors. The multi-disciplinary permanent ACT staff numbers have in the meanwhile increased from 2 to 17.

(ii) Increase in numbers, from the 1500 plus members, and diversity of human resource base expertise from the professional and affiliate ACT membership for undertaking the Network's core activities. The number of direct beneficiaries to the Network's services spans across different disciplines of local extension institutions designing and promoting CA in Africa; organized farmers and local non-governmental organizations, private sector CA service providers; policy makers; and implementers at County and National level. An estimated 100,000 smallholder women and men farmers have been reached through direct interventions with partners.

(iii) Partnerships built up to undertake core ACT functions with North, South and national governments in 33 African countries as exemplified by the various programmes and projects undertaken by the Network spanning across East, West and Southern Africa. The Network has a cross section of international partners that include NEPAD, GIZ, FAO, IFAD, EU, AFD, Sida, COMESA, EAC, CIRAD, and EMBRAPA among others.

(iv) Increased awareness of stakeholders on conservation agriculture in climate change adaptation and mitigation and the role of ACT in the promotion and dissemination of CA knowledge in Africa. The involvement and contribution of ACT in national, regional and global events such as the FAO organized Africa CA symposium (Johannesburg February 2011); organization of the III CA World Congress in 2005; and participation in the International Steering Committee for all others, CARWIG, COMESA (sitting in the joint technical committee on agriculture, environment and natural resources) among others.

(v) Experience on CA practices, technology and approaches honed during the last 14 years of the organization's existence. The Network has imparted learning skills on CA and adult learning approaches to more than 500 research and extension officers aimed at revising and focusing the learning materials and approaches. The CA manual for Africa and CA Learning Toolkits are but a few of such materials.

1.5 The Need for a New Network Strategic Plan

The African Conservation Tillage Network developed its first ten-year Strategic Plan in 2006 (ACT, 2006). Although the period for this Strategic Plan is not yet over, various developments have taken place in the national, regional and global arena in the last few years including major changes in the Network's operating and policy environments as well as advances in science and technology. In addition to this, several of the Network's

collaborating partners and countries within the region have revised their strategies and development plans, indicating areas of future collaboration. Furthermore, development programmes in the region have gained a higher profile for national and overseas development assistance. These changes have, therefore, necessitated the revision of the Network's Strategic Plan so as to ensure proper alignment.

At the regional and sub-regional levels, organizations and programmes such as the African Union (AU), the Inter-Governmental Authority on Development (IGAD), New Partnerships for Africa's Development (NEPAD), the Comprehensive African Agricultural Development Programme (CAADP), the East African Community (EAC), the Common Market for Eastern and Southern Africa (COMESA), the Association for Strengthening Agricultural Research in Eastern and Central Africa (ASARECA), the West and Central African Council for Agricultural Research and Development (WCACARD) and the South African Development Community (SADC) have grown in capacity and offer ACT excellent opportunities for collaboration in the areas of agriculture, natural resource management, environmental conservation and climate change for sustainable development. Existing and emerging regional institutions and programmes also provide a platform for the Network to collaborate with more partners.

From the global perspective, the Strategic Plan is in line with the Millennium Development Goals (MDGs), in which majority of the Network's collaborating countries, in their capacities as members of the United Nations (UN), have pledged to reduce extreme hunger and poverty (MDG 1); ensure child and maternal health and combating major diseases (MDGs 4, 5 and 6); promote environmental sustainability (MDG 7); and enhance global partnerships for development (MDG 8) (UN, 2000). The Network has a role to contribute to these efforts and, therefore, needs to proactively act jointly with other United Nations agencies and international research and development organizations to address issues related to livelihoods and food security; natural resource management; environmental conservation; and climate change.

Taking cognizance of the developments taking place at the national, regional and international levels, the Network has developed this new Strategic Plan for the period 2013-2022. The Strategic Plan is aimed at positioning the Network strategically as a key driver in conservation agriculture and sustainable land management in Africa. The Strategic Plan has been developed within the context and in conformity with new and evolving institutional and policy reforms while taking advantage of current and emerging opportunities to enhance the Network's capacity to be proactive. In line with this approach, the Strategic Plan has taken into account the achievements and lessons learnt during the implementation of the previous Strategic Plan as well as the challenges experienced in it implementation. The development of the Strategic Plan has been guided by the various strategic thrusts and initiatives in agriculture, natural resources, environment and climate change in the region. Further, the Strategic Plan has been tailored to position the Network strategically so as to contribute significantly to sustainable development of the African region.

The development of this Strategic Plan has been a consultative process involving key stakeholders within and outside the Network and the region. This was done so as to ensure that it incorporates constructive views and suggestions from all key stakeholders; builds on the current and preceding achievements and strengths and contributes significantly to the development of agriculture, livelihoods and the environment in the region, while ensuring proper alignment at the national and regional levels for better outcome mapping and impact orientation.

2.0 SITUATIONAL ANALYSIS

2.1 Introduction

Many countries in Africa are rich in natural resources. However, they have not been able to effectively harness this ample potential. Currently, the countries are challenged by important scientific and technological developments, which are rapidly transforming the way international trade and business is transacted. The emerging trends will have far-reaching implications for Africa's development and competitiveness attributed mainly to their lack of scientific and technological capacities as well as extremely low investments in technological acquisition and innovation. This state of affairs hampers the region's capacity to utilize its vast natural resources and limits the possibilities for forward and backward linkages. As the parameters of international trade are gradually shifting in favour of science and technology-based competitiveness, the abundance of natural resources and huge reservoir of low cost labour do not necessarily constitute decisive comparative advantages for producers. Technology, particularly new information and communication technology (ICT), is now one of the most important assets that can help develop natural resources through agriculture and related land uses to compete on the world markets.

This situational analysis provides a constructive mechanism for evaluating and rationalizing the decisions to be made by ACT in formulating its new strategic direction. Furthermore, the analysis is expected to increase the Network's understanding of major national, regional and global trends, including the focus on how these trends are likely to affect the future of natural resource management, environmental conservation and sustainable land management in Africa.

2.2 Global Situation

Africa has entered the new millennium with many political, socioeconomic, and environmental challenges with profound implications on its natural resources management and sustainable growth and development. Biodiversity, which underpins the livelihoods of the majority of the rural poor, is being destroyed irreversibly by human activities. Its world-famous abundant species, biodiversity-rich areas, life-supporting

water resources and watershed systems areas are seriously threatened by habitat loss caused by anthropogenic and other factors. The situation is exacerbated by climate variability and change whose effects are already being witnessed in the region in the form of variable water supplies and lengths of growing seasons, extreme weather events and changing habitats.

2.2.1 Multilateral Environment Agreements

At the international level, a number of steps towards establishing standards or norms for environmental protection and sustainable development in the form of Multilateral Environment Agreements (MEAs) have been agreed upon. These agreements also play a significant role in developing countries, either by influencing their domestic policies or by inducing them to follow higher environmental standards and sustainable development agendas. These agreements have a tremendous influence on the economies of the African countries, and offer opportunities that the countries can take advantage of to develop appropriate strategies and policies for sustainable environmental management.

Although many of these agreements relate to the environment, others link environment with trade and sustainable development. The 1992 Rio Conventions which include the Convention on Biological Diversity (CBD); and United Nations Convention to Combat Desertification (UNCCD); and the United Nations Framework Convention on Climate Change (UNFCCC) are particularly important and relate to biodiversity conservation, desertification and climate change adaptation and mitigation. The United Nations Forum on Forests (UNFF) is gaining importance for global forest issues and increasingly in climate change mitigation; while CBD, through the Global Environment Facility (GEF), offers incentives to promote biodiversity conservation by providing financial resources to meet the incremental cost of conservation. In addition, the Kyoto Protocol of UNFCCC and UNCCD provide important frameworks for harnessing financial resources, technology or other conservation-related natural resources management needs in Africa.

2.2.2 Global Developments in Conservation Agriculture

Globally, conservation agriculture (CA) is gaining acceptance in many parts of the world as an alternative to other forms of agriculture. Initially developed as a natural resource saving practice, CA is now widely practiced around the world. Due to increased environmental concerns, there is renewed interest in development of alternative strategies for enhancing development activities including agriculture, that take cognizance of long-term investment in environment sustainability. Today, CA is promoted for its resource saving capacity including maintaining soil fertility, erosion control, desertification and efficient use of the scarce water resources. Currently, CA is being advocated as having the potential to address climate change adaption and mitigation by reducing vulnerability of production systems to extreme climatic conditions, and in drought conditions. CA takes into cognizance the long-term sustainability of agriculture systems focusing on maintaining soil fertility and provides opportunities for farm households to improve their livelihoods.

As at 2011, reports estimate that CA was practiced on roughly 125 million hectares worldwide, approximately 9% of the world's total cropland (Freidrich *et al*., 2012). The USA followed by Brazil, Argentina, Australia, Canada and Paraguay are the countries with the largest areas under CA. The largest concentration of CA is in Latin America (Argentina, Brazil and Paraguay) where CA exceeds 60% of the total agricultural land while in the USA, CA accounts for 22.6% of all cropland hectares. Australia, among the top four, CA has been widely adopted by farmers with 17 million hectares of land under no tillage. Canada has 13.5 million hectares under CA. In these countries CA has been promoted by public entities and supported by a favourable policy environment. The success in these countries has been attributed to the multi-stakeholder approach to ensure supporting systems are in place.

Conservation agriculture in Europe is not widely spread and accounts for only 2% of the agricultural land, with Spain, France, Germany, Switzerland and Finland showing notable adoption. In Asia, over the last five years CA has experienced fast development, especially in central Asia in Kazakhstan where the total area under CA is about 1.2 million hectares. China too has experienced dynamic developments in CA, which begun with a research phase in the 1990s, that has grown into a system that has been adopted over 1.3 million hectares and the technology is being extended to rice production also.

In recent times, conservation agriculture has demonstrated its potential in addressing climate change challenges. It has been shown to contribute to climate adaptation and mitigation, biodiversity conservation and ecosystem services. At the international level, CA relates directly to the United Nations Framework Convention on Climate Change, the International Convention on Biodiversity, the United Nations Convention to Combat Desertification and the various agreements on international waters. Under the Kyoto Protocol of the UNFCCC, various initiatives in marketing of carbon under CA are currently working with the international and national markets to develop financial mechanisms that ensure environmental benefits provided by CA are recognized by society at large, and benefits accrue to CA practitioners. These and other future initiatives provide opportunities for environmental payments on "niche products" and have the potential to encourage farmers to shift to CA and other sustainable agricultural practices including significant contribution to reduction of greenhouse gas (GHG) emission.

2.3 Regional Situation

2.3.1 New Partnership for Africa's Development

Realizing that Africa can only take its proper place in the international community if it gains economic strength, African Heads of States and Governments set an ambitious target of 7% annual growth rate in Gross Domestic Product (GDP) over the next 20 years to eradicate poverty, achieve food security and build the foundations of sustainable economic development on the continent. The African Vision by the AU/NEPAD of attaining 6% increase in agricultural growth through to 2015 is of particular interest given that one of the avenues identified to achieve this target is stimulation and promotion of

a culture of sustainable utilization of the natural resources base across Africa. The AU/NEPAD seeks to complement other African initiatives and to use existing frameworks for action, concentrates on priorities organized under two broad themes of peace, security, democracy and political governance and economic and corporate governance. NEPAD intends to mobilize domestic and external resources and to establish new forms of partnership with the domestic and international organizations creating opportunities for regional and sub-regional institutions.

At the continental level, NEPAD hopes to eradicate poverty in Africa and to place its countries on a path of sustainable growth for the next 15 years (NEPAD, 2005). It is a commitment of African countries, both individually and collectively, to the MDGs. NEPAD believes that improvement of the performance of the agricultural sector is a prerequisite in meeting its set targets for economic development. It further recognizes that improving the productivity of agriculture rests on dealing effectively with a number of critical constraints such as climatic variability, poor rural infrastructure, unsupportive policies, and weak institutional and regulatory frameworks. Regional and sub-regional institutions are expected to play a lead role in spearheading science and technology in food systems to address food insecurity and environmental degradation and natural resources management.

2.3.2 Comprehensive African Agriculture Development Programme

The Comprehensive African Agriculture Development Programme (CAADP) was established by the AU/NEPAD in July 2003 as the highest policy level framework for the coordinated development of agriculture in Africa. The overall goal of CAADP is to "Help African countries reach a higher path of economic growth through agriculture-led development which eliminates hunger, reduces poverty and food insecurity, and enables expansion of exports." The CAADP is a growth-oriented agriculture development agenda aimed at increasing agricultural growth rates to 6% per year to create the wealth needed for rural communities and households in Africa to prosper. To achieve this goal, CAADP focuses its interventions in four key pillars to achieve measurable outcomes. These pillars include Sustainable land and water management (Pillar I); Market access (Pillar II); Food supply and hunger (Pillar III); and Agricultural research (Pillar IV).

At the continental level CA has been incorporated into the regional agricultural policies of the AU/NEPAD as part of the responses to food insecurity and rising food prices, while at the same time, embracing climate change adaptation and mitigation measures by adopting sustainable land management practices. Various programmes have been initiated in this respect and key among these is the project on conservation agriculture in Southern Africa which was launched with support of the UN Food and Agriculture Organization and the Norwegian Government. Spearheaded by AU/NEPAD's CAADP Pillar I, the project aims at scaling up the on-going work on CA in Southern Africa; building on existing efforts on CA that are being supported by development agencies such as Norwegian, Swedish and Danish Governments, the United States Agency for International Development (USAID), the European Union and the Terra-Africa initiative.

The aim of these initiatives is to enhance capacity of field technical staff and farmers in the application of CA, farm inputs and farm tools to boost local food security and sustainable land management. This programme is expected to expand to Eastern Africa targeting support to expand CA in this region.

2.3.3 Inter-Governmental Authority on Development

The Inter-Governmental Authority on Development (IGAD) of the AU was established with the mandate of enhancing cooperation and co-ordination of macro-economic policies in the region; promoting sustainable agriculture development and food security; conserving, protecting and improving the quality of the environment; ensuring the prudent and rational utilization of natural resources; cooperating in increased sustainable utilization and development of energy resources in the sub-region, and in the gradual harmonization of their national energy policies and energy development plans; and cooperating in the gradual harmonization of their national policies in scientific and technological research and development, transfer of technology, and their policies on capacity building in science and technology in the sub-region. However, three priority areas selected as immediate entry points for cooperation include food security and environmental protection; conflict prevention, management and resolution; and economic cooperation and integration.

The IGAD region has a wealth of resources with the potential to drive economic growth and social development. Unfortunately, the full environmental and natural resources potential is not being realized for a number of reasons including a fast rate of growth of a largely rural, peasant and heavily natural-resources dependent population; natural disasters; and institutional weaknesses. As such under-development is still evident in the IGAD region, previous efforts notwithstanding. In view of this, there is need for accurate and timely development of intervention strategies.

2.3.4 Southern Africa Development Community

The Southern Africa Development Community (SADC) owes its origin to historical, economic, political, social and cultural factors that have created strong bonds of solidarity and unity among the peoples of southern Africa. The SADC was formed in 1980 with the objective of enhancing economic and social development in the region. To enable it develop its regional development programmes, SADC formulated the Regional Indicative Strategic Development Plan (RISDP) whose Vision is that of a common future, a future within a regional community that will ensure economic well-being, improvement of the standards of living and quality of life, freedom and social justice and peace and security for the people of southern Africa. Its Mission is to promote sustainable and equitable economic growth and socioeconomic development through efficient production systems, deeper co-operation and integration, good governance, and durable peace and security, so that the region emerges as a competitive and effective player in international relations and the world economy.

The RISDP recognizes the importance of science and technology in economic development and increasing competitiveness and has given priority to this area of intervention to develop and strengthen national systems of innovation in order to provide scientific and technological solutions for sustainable socioeconomic development, regional integration and poverty eradication. The Strategy considers environment and sustainable development as a vehicle to ensure equitable and sustainable use of the environment and natural resources. RISDP also recognizes the importance of information as a resource and a tool for development and in providing relevant, timely, accurate and comparable information for planning, policy formulation, implementation, monitoring and evaluation of SADC integration activities.

2.3.5 Status of Conservation Agriculture in Africa

The African continent now accounts for over one million hectares of CA or less than 1% of the total global CA area. During recent years, smallholder farmers have adopted CA over some 600,000 hectares. Conservation Agriculture in Africa is at the point of intensive promotion, with the main focus on capacity building to enhance adoption and setting up of institutional frameworks to support CA. Currently, major countries practicing CA include Algeria, Ghana, Kenya, Lesotho, Malawi, Morocco, Mozambique, South Africa, Sudan, Tanzania, Tunisia, Zambia and Zimbabwe among others. Taking into account the specific context of the region, CA as a climate-smart agriculture offers opportunities to address challenges related to food insecurity, poverty and climate change as well as environmental degradation, labour unavailability and high costs of energy and production inputs.

The key limiting factors on CA adoption and up-scaling are lack of knowledge, expertise, inputs (especially equipment and machinery), adequate financial resources, infrastructure, and poor policy support (Friedrich and Kassam, 2009; Friedrich et al., 2009; Kassam et al., 2009). Conservation agriculture uptake among small-scale farmers in the region, although relatively low, is now increasing and successes are beginning to be documented in many countries such as Lesotho (Silici et al., 2011), Tanzania (Owenya et al., 2011) and Zimbabwe (Marongwe et al., 2011). However, in Eastern and Southern Africa, CA is a growing movement with numerous activities and promotion programmes undertaken by government agencies and civil society alike. In 2010, under support from FAO, twelve countries (Angola, Botswana, Lesotho, Madagascar, Malawi, Mozambique, Namibia, South Africa, Swaziland, Tanzania, Zambia and Zimbabwe) identified Focal Points to promote and coordinate CA activities. Most of these countries have also established national multi-stakeholder task forces to spearhead inclusion of the CA agenda in their policies, and programme planning. Among the countries that have incorporated CA into their activities and programmes include Kenya, Lesotho, Malawi, Mozambique, Swaziland, Tanzania, Zambia and Zimbabwe.

Promotion of CA in Africa has relied mainly on donor support through specific projects that have been time bound. These projects have provided incentives for smallholder participation particularly at vulnerable times, after which CA is soon abandoned on closure of the projects. The focus of CA initiatives has been on food security;

participatory action research for technology development on sustainable production and advocacy. In recent times CA, has received recognition under the Alliance for a Green Revolution in Africa (AGRA), which works to achieve food secure and prosperous African communities through the promotion of rapid, sustainable agricultural growth based on smallholder farmers. Such initiatives are bound to have significant implications for promotion and uptake of CA in the region.

2.4 National Situation

At the national level, Government's decision-making processes are constantly evolving in the region giving rise to institutional arrangements with important relevance to the Network. For example, decentralization of decision-making and devolution of authority is becoming a major trend in many countries in Africa. This will influence the way policies are developed and implemented, especially those related to natural resources and environment management, property rights, poverty reduction, agricultural development, forestry and land use. The trend towards democratic institutions has helped empower local communities, especially women and resource-poor households to participate in the planning processes. This is particularly important, given that the Network supports countries that are among the poorest and most ecologically-fragile, making them hotbeds for strife that is rooted in competition for scarce and dwindling natural resources.

Many countries in the region have started to formulate policies to promote natural resources and environment management, though still using sectoral approaches. Emphasis should be put on creating economic incentives that reward the stewardship effort to individual resource managers. In this regard, policy measures should take three forms that include directing investment in support of an objective; economic measures that change relative prices and create incentives for desired behaviour; and institutional measures including regulations that create opportunities for investors in natural resources management.

2.5 Development Challenges Facing Africa Region

African countries are naturally endowed with land, water, human resource and favourable climatic conditions capable of sustaining a highly productive agricultural sector. However, the contribution of many of these countries' agricultural sector to growth, attainment of food security and increased prosperity for their people is still lagging behind expectations and recognized potential. These countries have been slow in developing most commercial crops despite huge potential for export and diversifying sources of food for human consumption.

From the situational analysis of the agricultural sectors, the challenges and constraints facing the agricultural sectors in Africa vary with respect to country, region and commodities. The effects of some of the challenges and constraints have been accelerated by past worldwide food price crisis and its underlying drivers. The main challenges and constraints limiting the growth of the agricultural sector, as indicated in many national policies and plans of many African countries, occur in the strategic areas of (i) Production

and processing; (ii) Policies, institutions and regulatory functions; (iii) Natural resources and infrastructure; (iv) Public expenditure; and (v) Macroeconomic factors and the external environment. Despite the efforts at the global, regional and national levels, the African region is still faced with various development challenges in the following areas:

(i) Management of scarce water resources: Water scarcity is fast becoming a critical issue for many countries in the region and could lead to a severe water crisis if water productivity is not increased. Water is crucial for the future of the region because it is required to fulfil the increasing demand for food, feed and fibre, associated with increasing population and changing demands; increasing water conflicts that may emerge from poor water governance and cross-boundary demands; and the trade-off in water use with other ecological services such as wetlands.

(ii) Arresting and rehabilitating land and soil resources degradation: Land degradation ranges from soil loss through erosion to habitat loss to soil fertility decline, and can be attributed to the interaction between short-term local and long-term global processes. The regional trends in land degradation suggest that the structure and functioning of ecosystems is changing rapidly as a result of habitat conversion. The major causes of degradation in Africa include growing population and increasing demand for food and cash income; unsustainable intensification of agriculture; improper tillage practices; inadequate use of conservation practices; and lack of support by local governments among others.

(iii) Protecting the fragile forestry and agroforestry resources: The Africa's forest ecosystems are considered among the world's most fragile facing the challenges of deforestation and degradation. Forests and tree crops provide important ecosystem services such as supply of timber and non-timber forest products including wild foods, medicines, pharmaceuticals and genetic resources; regulating services such as flood and climate; cultural services including spiritual, aesthetic as well as recreational values; and supporting services including primary production, nutrient cycling, soil formation and biodiversity conservation among other products and services.

(iv) Arresting degradation and enhancing biodiversity: The biodiversity in Africa is under high degree of threat due to a variety of forces including man-made and natural factors such as natural habitat degradation, social and political unrest, invasion by alien species and inadequate recognition of the value of indigenous and/or traditional knowledge systems. Desertification is rapidly changing plant associations with rapid loss of biological resources. The region's biodiversity has economic, social, ecological and cultural values. There are environmental service functions of biodiversity that include nutrient recycling, soil formation, watershed protection, waste disposal, pollination, climate regulation and carbon sequestration, among others. Value goods are food source, drugs, fiber, resins, dyes, waxes, fuel and timber, while the non-consumptive utilization includes ecotourism.

(v) Enhancing effective ecosystems management: Fragile and dry land ecosystems in Africa are some of the world's most unstable facing the challenge of land degradation. These ecosystems are characterized by limited and erratic rainfall; overused due to intense population pressure; sensitive to climatic shocks; highly erodible soils, increasing population pressure; and populations highly vulnerable to food insecurity. Some of these fragile ecosystems include dry lands, wetlands, water catchment areas (water towers) and biodiversity corridors.

(vi) Reducing population increase: Population growth rates in many African countries are high ranging from 1.6 to 2.7%. These high population growth rates increase the demand for food and natural resources such as land and water. The increased demand for natural resources usually leads to scarcity and consequently triggers conflicts over access and environmental degradation due to excessive use. Consequently, poverty and food insecurity have continued to effect large population in the region. Poverty in both the rural and urban areas is the most complex and daunting challenge facing most countries in Africa.

(vii) Making agriculture sustainable: Agriculture is the major economic activity in many African countries. In almost every country, the rural economy supports most of the agricultural production, water, energy, forestry, fishery and other natural resources. As the dominant economic activity, agriculture provides food and fiber; employs the largest share of the human population; generates income; and provides inputs into other sectors of the economy. Agriculture also provides opportunities for investments in other sectoral development activities. Despite the importance of agriculture in these countries, challenges such as low productivity; limited diversification; continuous degradation of the environment; and recurrent droughts and, in some instances, floods threaten the viability of the agriculture sector. The main reason for this situation is that the form of agriculture that has been promoted is tillage-based farming which is now considered unsustainable. This is because tillage reduces soil organic matter, destroys soil structure and debilitates soil biodiversity, all of which are important elements in ecosystem functions that creates healthy productive soils and delivers ecosystem services.

(viii) Effective resource management: Poor resource management continues to be a major development constraint in many African countries. This situation has negatively affected national development including sustainable land use; environmental degradation; land tenure insecurity; encroachment; unplanned settlements; and loss of revenue among others. Natural resource degradation, low level agricultural productivity, declining share from the global trade and limited success of industrial development have weakened the position of African countries to fulfil the basic needs of their people. As a result, 51% of the population of Sub-Saharan African countries are living below the poverty line and Africa is the only continent in which poverty is expected to rise during the next decades. Breaking the vicious cycle of poverty-environmental degradation-poverty is, therefore, a key challenge in the context of sustainable development in Africa.

(ix) Adapting and mitigating climate change: Climate change and global warming are global phenomena that transcend national boundaries. In the recent years, human development activities have significantly contributed to atmospheric greenhouse gas emissions and hence global warming, with serious consequences for mankind and other life forms. These phenomena have affected performance of the agricultural sector and food security; increased the prevalence of human, crop and livestock pests and diseases; and impeded road transport and the delivery of goods and services at times of need and trade. This is visible in the increasing average air and ocean temperatures, the widespread melting of snow and ice, and rising sea levels. However, the use of information and technologies to adapt to and mitigate against these aspects in the Africa region are minimal resulting in increased environmental degradation and poverty. This situation is made worse by the absence of early warning systems in the region and limited capacity on disaster predictions and management.

(x) Building infrastructure: Infrastructural development is vital for optimizing the productive use of a country's human and natural resources; communicating the country's comparative advantage for investment; promoting investment by reducing investor risk and lowering transaction costs; improving all aspects of governance; and empowering people to directly participate in development. Underdeveloped rural roads and other key physical infrastructure have led to high transport costs for farm inputs and agricultural products to markets. This has continued to reduce the ability of farmers to compete adequately alongside others in the sub region

(xi) Expanding the application of information and communication technology: Acquisition, processing, storage and dissemination of information is vital for sustainable development in Africa. Information and communication technology (ICT) can help solve a wide range of agriculture, health, social and economic problems. By improving access to information and by enabling communication, ICT can play a role in achieving the MDGs. Benefits of ICT are not fully utilized in many African countries. The ICT is often out of reach of the poor and in rural areas due to inadequate infrastructure and human capacity.

(xii) Inadequate knowledge and information access: A major challenge across Africa is varying capacity of institutions dealing with access, management, analysis and dissemination of the huge amount of knowledge and information that is continuously being generated through various development activities. This state of affairs has resulted into uncoordinated activities leading to duplication of efforts and wastage of scarce resources.

***(xiii) Reduced effectiveness of research and extension services*:** The effectiveness of research and extension services in many African countries has declined over the years due to inappropriateness of models pursued, delayed adoption of alternative models and sharp reduction in operational budgets. Use of modern science and technology in production is still very limited. While lack of affordable credit has partly contributed

to this situation, equally important is the inadequate research-extension-farmer linkages and lack of demand-driven research.

(xiv) Lowering the high cost and unavailability of inputs: The cost of key agricultural inputs has remained too high and cases of adulteration and other forms of dishonesty have increased, leading to reduced use of some of these inputs by farmers. In addition to this, there are high levels of waste due to pre- and post-harvest losses occasioned by pests and diseases and lack of proper handling and storage facilities. Smallholder farmers and pastoralists are unable to cope with pests and diseases mainly due to lack of finances, and in many cases, unavailability of the inputs and lack of information, reflecting weaknesses in the extension services system.

***(xv) Appropriate legal and regulatory framework*:** The existent of outdated legal and regulatory frameworks have continued to constrain agricultural development, trade and effective competition in Africa. Cooperatives and farmers' organizations are vital for good performance of the agricultural sector by giving farmers advantages of economies of scale in dealing with credit and marketing of inputs and outputs. However, poor governance and corruption in key institutions supporting agriculture has led to the collapse of most of these institutions or has weakened them in terms of finances and manpower. In addition to this, there is no comprehensive land policy covering use and administration, tenure and security, and delivery systems of land in many African countries. This has resulted in low investment in the development of land leading to environmental degradation.

***(xvi) Strengthening markets and marketing infrastructure*:** Agricultural marketing information and infrastructure are poorly organized and institutionalized in many African countries. The domestic markets are small and fragmented and lack effective marketing information system and infrastructure. The dependence on a few external market outlets makes agricultural exports very vulnerable to changes in the demand for agricultural products and unexpected imposition of non-trade barriers by foreign markets. In addition to this, farmers have been subjected to multiple taxes as they transport or market their farm produce. This has contributed to the reduction of net farm incomes and created distortions in marketing structures.

(*xvii*) *Sufficient budgetary allocation and credit availability:* In 2003, African countries committed under the Maputo Declaration, to allocate 10% of their Governments' budget to agriculture but many of these countries have not yet achieved this. Insufficient budgetary allocation to the sector is a key constraint and has reduced human resources and service delivery by government institutions. In many of these countries, the bulk of Government spending in sector ministries is used on salaries and other emoluments for staff leaving little for operations, maintenance and delivery of programmes. This situation is made worse by the limited availability of affordable credit, particularly to small-scale farmers.

***(xviii) Favourable macroeconomic factors and external environment*:** A stable macroeconomic environment is vital for sustained growth and investment. Although in the recent past many African governments have made considerable progress in stabilizing the macroeconomic environments in their countries, persistent large public sector borrowing requirements, high lending interest rate and volatile exchange rates have continued to discourage investment in the agriculture sector.

***(xix) Decreasing incidence of diseases and drug abuse*:** The increasing incidence of HIV/AIDS, malaria and waterborne diseases as well as drug and substance abuse and the corresponding deaths have resulted in the loss of productive agricultural personnel and manual labour force for sustained farming knowledge and diversion of investible resources to the treatment and management of the diseases.

2.6 ACT Internal and External Environment Analysis

The core mandate of ACT is to promote the adaption and adoption of conservation agriculture technologies and innovations/principles and practices that are needed to spur growth and development of the agricultural sector in Africa. In order to identify its capability in fulfilling this set mandate, the Network 's internal and external environment analysis was carried out.

The internal environment analysis was aimed at identifying the Network 's strengths and weaknesses in relation to its set mandate. Through this analysis, the Network aimed at identifying its requirements with the view of assessing its current capacity to deliver on its mandate. Since ACT is a knowledge and information producing Network, the most relevant aspects that were analyzed were those related to the availability, utilization and management of inputs (human, financial and physical/infrastructural resources); the processes carried out to transform the available inputs into outputs; and the products (knowledge, information and technology) produced.

With respect to the ACT's external environment, a situational analysis was carried out to:

- Study the relationships between the Network and its relevant external environment in terms of current and emerging opportunities and threats.
- Provide the Network's management with the capacity to respond to critical questions from the external environment.
- Explore future scenarios of the external environment so as to include them in the decision-making processes.
- Identify and prioritize emerging opportunities and threats to effectively devise strategies to address them.
- Build a vision for the Network based on indications given by the emerging realities in the external environment.
- Understand market dynamics in order to develop need-driven customer-oriented services and products.

The analysis of the opportunities and threats was guided by the principle dimensions of the Network's general and operational external environments that include Political, Economic, Sociocultural, Technological, Institutional, Legal and Environment (PESTILE) dimensions.

2.6.1 Existing Strengths

The existing strengths that allow the Network to take advantage of the available opportunities and those that protect it from external threats occur in the following areas:

(i) ***Human resource capacity:*** Over the years, the Network has invested in the development of a critical mass of skilled and experienced technical and support staff with the capacity and capability to carry out its mandate. This strength is enhanced by collaboration mechanisms that allow the Network to partner and collaborate with other reputable organizations as well as qualified and competent consultants.

(ii) ***Financial support:*** The Network has access to basic financial resources from development partners and other sources to support promotion of adaption and adoption of CA principles and practices.

(iii) ***Physical and infrastructural capacity:*** The Network has basic infrastructural and equipment capacity for supporting promotion of CA and sustainable land management in the region.

(iv) ***Client orientation: The regional and national capacity of client-orientation*** gained by the Network staff and partners through many years of exposure to CA and land management for sustainable development in Africa provides a good base of enhanced focus on client needs.

(v) ***Donor support and confidence:*** The Network has developed a culture of accountability, transparency and impact orientation leading to building of confidence and credibility among development partners.

(vi) ***Regional and international reputation:*** As a result of its extensive collaboration with partners, the Network continues to maintain a regional and international reputation of excellence in CA and land management for sustainable development.

(vii) ***Partnerships and collaboration:*** The Network has over the years established strategic partnerships and collaboration with other reputable institutions within and outside Africa in CA and sustainable land management.

(viii) ***Products and services:*** The Network has accumulated experience in CA and sustainable land management technologies, products and services offered over time which it can leverage upon to respond to different client demands.

(ix) ***Network capacity:*** The existing potential for synergistic collaborations and knowledge sharing across the continent has justified the Network's reformation into a pan-African establishment with networking value within and between regions.

(x) ***Political goodwill:*** The Network enjoys good political will with the host country government as well as other country governments that enables it to transact business as a recognized regional network.

(xi) ***Community support***: As a recognized regional network, ACT has gained strong community support that provides a good base of enhanced focus on community needs.

(xii) ***Network governance and management:*** The Network has a dedicated Board and Management structure that spans across the continent, at headquarters and sub-regional offices.

2.6.2 Current Weaknesses

The current weaknesses that are likely to prevent the Network from taking advantage of the available opportunities and those that do not protect it from external threats occur in the following areas:

(i) ***Human resource capacity:*** Currently, the Network is operating below the optimum staff level in terms of numbers, skills and disciplinary mix required to enable it realize its mandate.

(ii) ***Financial resource:*** Due to dependence on development partner contributions, financing of the Network's core mandate have been inconsistent leading to inadequate service delivery and challenging its financial sustainability.

(iii) ***Strategic links with development partners:*** The Network does not have well-developed strategies and mechanisms to reach out to development partners to harness financial and support resources.

(iv) ***Coordination and linkage mechanisms:*** There are inadequate coordination and linkage mechanisms of the different regional programmes and projects which affects efficiency and productivity of the Network.

(v) ***Total quality management:*** Internal processes have not been accredited to International Standards Organization (ISO) which provides quality systems requirements and frameworks, potentially posing challenges in the competitiveness of the Network's products and services regionally and internationally.

(vi) ***Intellectual property rights****:* Currently, the Network lacks an Intellectual Property Right (IPR) policy to spell out issues of ownership rights, disclosure and management mechanisms, distribution of royalties, commercialization strategies and other pertinent issues that would make it possible to apportion benefit to deserving recipients.

(vii) ***Communication and marketing*****:** Lack of appropriate communication and marketing/promotional strategy has contributed to low demand, awareness and uptake of the Network's services and products.

(viii) ***Access to modern technologies:*** The Network has not taken full advantage of the available modern technologies to enhance its efficiency and effectiveness in research and development of products and services.

(ix) ***Planning, implementation and management:*** The Network's overall planning, implementation and management is inadequate leading to inadequate promotion of adoption and adaptation of CA.

2.6.3 Available and Emerging Opportunities

The available and emerging opportunities and prospects that are likely to have a significant impact on the Network's operational and business environment over the next five years are likely to occur in the following areas:

(i) ***Information and communication technology:*** Advancement in ICT paves way for the Network to benefit from achievements by other organizations worldwide, while sharing its own achievements with them.

(ii) ***Government policies and regulatory frameworks***: The policies and regulatory frameworks being put in place by many African governments are increasingly recognizing the role of sustainable land management including CA in the development of the agricultural sector and the overall national economic growth, thereby widening the potential for increased demand on the Network's products and services.

(iii) ***Agricultural modernization and commercialization:*** The ongoing review of policy frameworks in many African countries that are supporting increased investment in agricultural modernization and commercialization offers opportunity for investment in conservation agriculture and sustainable land management.

(iv) ***Emerging regional markets****:* The markets made possible by regional integration and the opportunities to develop service hubs in the areas of processing, quality control and export provides an excellent opportunity as this has not been exploited effectively.

(v) ***Expanding domestic market****:* The expanding domestic market for agricultural commodities and products with a high income elasticity of demand provides excellent trading opportunities leading to increased demand for appropriate technologies by farmers and other stakeholders in order to compete in the wider regional and international markets.

(vi) ***Availability of natural resources:*** The unexploited natural resources base, abundant sources of surface and underground water and existence of several agroecological zones presents an unlimited opportunity for expansion and diversification in agricultural development activities.

(vii) ***Farming as part of the national culture:*** Farming is a way of life among the majority of African population and is likely to get better if agriculture is made increasingly profitable.

(viii) ***Growth of agribusiness:*** The development of private agribusiness and large-scale farming enterprises is likely to create potential opportunities for strategic partnerships between them and smallholder farmers leading to sharing of knowledge and information.

(ix) ***Technological advances****:* Globally, there are technological advances that can be tapped and adopted to improve productivity including indigenous technical knowledge (ITK) that can be modernized and packaged.

(x) ***Partnerships and strategic alliances:*** There is increasing demand for the formation of beneficial partnerships and strategic alliances with national, regional and international as well as research institutions, non-governmental organizations, the agroindustry, commercially-oriented farmers and development agencies on issues of mutual interest to the Network's mandate.

(xi) ***Environment and climate change:*** Environmental degradation and climate change provide the Network with opportunities to engage in the development of appropriate mitigation measures to reverse/arrest these situations.

(xii) ***Political goodwill:*** The impact orientation of the Network in the adaptation and adoption of CA technologies coupled with the increasing awareness in the significant role of these technologies in sustainable national and regional development has enabled it to continue enjoying good political will from many African governments.

(xiii) ***Skilled labour and capacity:*** There is a mass of well-trained professionals and technicians in the Network mandate area of operation in the Government agencies and universities and an emerging vibrant private sector, all of whom the Network can partner with in the delivery of diverse timely and quality products and services needed for sustainable national and regional planning and development.

(xiv) ***Government and donor funding:*** There is increased Government and donor funding for Africa which the Network can tap from by aligning its programmes and projects to priority areas of focus and establishing strategic consortia alliances.

(xv) ***Strategic location****:* The current location of the Network headquarters and subregional offices provides adequate coverage to the region and easy communication.

2.6.4 Current and Emerging Threats

The current and emerging threats that are likely to have a significant negative impact on the Network's operational and business environment over the next five years are likely to be experienced in the following areas:

(i) ***Economic liberalization:*** The global trend of market liberalization has both positive and negative effects on the agricultural sectors of many African countries. Some of the negative effects include dumping of cheap agricultural commodities and products from developed countries which could suppress local production.

(ii) ***Policy coordination:*** Inadequate policy coordination among African countries and between different agricultural sector ministries and other service providers can undermine promotion of adaptation and adoption of CA technologies and practices.

(iii) ***Cost of farm inputs:*** High input prices relative to output prices could discourage the uptake and utilization of new CA technologies and practices.

(iv) ***Climate change:*** New biophysical constraints will emerge as a consequence of changes in the global climate, thus posing new challenges such as droughts, floods and emerging pests and diseases**.**

(v) ***Brain drain due to competition:*** Some other institutions are able to provide better incentives which could lead to the Network's professional staff leaving or make it difficult for the Network to attract and retain qualified staff.

(vi) ***HIV/AIDS pandemic and malaria, drugs and substance abuse:*** These have continued to severely affect rural household labour and skilled manpower in various fields and disciplines, impacting negatively on sustainable management of the environment and natural resources in the region.

(vii) ***Political instability:*** Recurrent political instabilities in some of the African countries can affect operational implementation of the Network's Activities.

2.7 Stakeholder Analysis

In carrying out its functional obligations, ACT interacts with many internal and external stakeholders. These stakeholders can either provide opportunities for the Network to enhance its efficiency and effectiveness or present threats that are likely to have a significant negative impact on the implementation of the Strategic Plan. The purpose of stakeholder analysis shown in Table 2.1 is, therefore, to identify the interests, roles/ responsibilities, comparative advantages and contribution of the various stakeholders in the development and implementation of the ACT Strategic Plan.

Table 2.1 Broad stakeholder categories and their expected contribution in the implementation of the Strategic Plan

Stakeholder Category	Potential contribution to the implementation of the Strategic Plan
1. Country agricultural sector and other related ministries	• Collaboration in programme development, implementation, coordination and provision of quality and efficient extension services, policy guidelines, synergies and capacity building, market information and access. • Formulation of collective action policies, community mobilization for collective action, agricultural products input and output markets, access to credit and other financial arrangements.

Stakeholder Category	Potential contribution to the implementation of the Strategic Plan
2. Private sector	• Partnership in adaptation and adoption of CA, resource mobilization, entrepreneurship development, investment in facilities development, fabrication of equipment, research in collaboration with research institutions, establishment and management of agricultural research and extension endowment fund. • Provision of quality agricultural inputs, credit facilities, capacity building, dissemination of current technologies, awareness creation, and provision of additional research funding.
3. Agricultural and natural resources research institutions, universities and colleges	• Provision of expertise, professionalism, capacity building and promotion of science, technology and innovations, and collaboration/partnerships in the development and implementation of conservation agriculture programmes and projects. • Capacity building for professional and technical extension and research personnel in agricultural training institutions.
4. Regional and international research and development organizations	• Collaboration in the areas affecting CA, environment and natural resource research, implementation of agreements and treaties, capacity building, resource mobilization, international lobbying and technical support. • Collaboration in policy formulation and guidance, technical and financial support.
5. Development Partners	• Provision of technical and financial support, capacity development and consultancy.
6. Country infrastructure development and other related ministries	• Provision of power, roads, telecommunications and early warning systems. • Setting health standards and collaborative work to minimize health hazard from agricultural related activities. • Facilitation of marketing, provision of inputs and services.

Stakeholder Category	Potential contribution to the implementation of the Strategic Plan
7. Local and international non-governmental organizations	• Mobilization of resources and communities, scaling up technologies, products and services, capacity building, lobbying and advocacy. • Collaboration and partnership in the development and implementation of conservation agriculture programmes and projects.
8. Community- and Faith-Based Organizations	• Community empowerment, awareness creation, capacity building, resource mobilization, advocacy, networking, linkages, lobbying and advocacy, and technology/information dissemination.
9. Farming communities and farmer organizations	• Local knowledge, resource ownership, goodwill, participation in technology development, adaptation and uptake of CA, lobbying and advocacy.
10. United Nations organizations and agencies	• Collaboration in the areas affecting sustainable development, implementation of agreements and treaties on agriculture, climate, environment and natural resource management; capacity building; resource mobilization; international lobbying; and technical support.
11. Country parliaments and regulatory bodies	• Enactment of agricultural policies and legislations and approval of budgets and bills. • Provision of quality advisory and regulatory services and setting of standards.
12. Financial Institutions	• Provision of financial facilities, saving and credits, investment and capacity building.
13. Electronic and print media and ICT organizations	• Dissemination of information through their wide coverage and communication networks and awareness creation. • Development and maintenance of relevant databases, innovative packaging and dissemination of information.
14. Professional bodies	• Assurance of professionalism and best practices in research and development, provision of technical expertise, ethics and standards.

3.0 ACT STRATEGIC DIRECTION

3.1 Critical Strategic Issues

Following the critical analysis of the ACT's operating environment, the broad critical strategic issues that need to be addressed in order to solve the major challenges facing the Network's mandate area and take advantage of the available and emerging opportunities and prospects were identified. Addressing these broad critical strategic issues is also expected to enable the Network improve its efficiency, effectiveness and impact in contributing to sustainable natural resources management, environmental conservation as well as adaptation and mitigation to climate change challenges. This shall, in turn, enable the Network to position itself strategically to contribute significantly to the regional economic development. The identified broad critical strategic issues include:

(i) Development and operationalization of appropriate mechanisms for effective and efficient regional and sub-regional coordination of CA initiatives.

(ii) Strengthening of the Network's internal capacity and capability in provision of CA technical guidance and advice.

(iii) Development and operationalization of effective and efficient strategic links with development partners for assistance in funding conservation agriculture programmes and projects.

(iv) Establishment and operationalization of effective and beneficial partnerships and collaboration with other relevant national, regional and international institutes and organizations.

(v) Improvement of the Network's financial sustainability coupled with the development of efficient financial management system.

(vi) Development and operationalization of appropriate mechanisms for transforming the culture and attitude within the Network to be more performance-oriented.

(vii) Development and implementation of market-responsive and client-oriented CA programmes and projects that generate and disseminate demand-driven, problem solving, profitable and environmentally sound technologies and innovations.

(viii) Improvement of the linkage between research, extension, farmers/stakeholders in identification of challenges and constraints facing the agricultural sector/ conservation agriculture, finding the resources to generate appropriate technical solutions and making stakeholders aware of the solutions.

(ix) Promotion of linkages, partnerships and collaboration among various categories of service providers in the conduct and financing of CA programmes and projects.

(x) Establishment and operationalization of aggressive Network marketing strategies, functional and beneficial linkages, partnerships and collaboration among relevant stakeholders in the development, application and dissemination of conservation agriculture technologies, products and services.

(xi) Review and realignment of the Network's mandate, core functions, structure, staff competence and culture aimed at improving the Network's effectiveness and efficiency so as to play a key role in CA nationally, regionally and globally.

(xii) Development and operationalization of appropriate strategies to promote the use of information and communication technology.

(xiii) Strengthening of research and development in CA for sustainable natural resource management, environmental conservation as well as adaptation and mitigation to climate change challenges in collaboration with national institutions and international collaborators and partners.

(xiv) Development and operationalization of innovative delivery pathways for promoting the dissemination and utilization of CA technologies, products and services.

(xv) Continuous lobbying and advocacy for formulation and implementation of appropriate environmental and land use policies and legislation frameworks for sustainable environmental and natural resources management for development.

(xvi) Institutionalization of a paradigm shift aimed at transformation from "technology push" to "societal benefit pull" supported by an appropriate feedback mechanism for assessing the usefulness and impact of its products and services.

(xvii) Development of strategies to mainstream different challenges brought about by crosscutting issues such as HIV/AIDS, malaria, gender and drug and substance abuse in all the Network's programmes and projects.

3.2 Network Strategic Focus

3.2.1 Strategic Vision

The ACT Vision that requires the Network and its stakeholders and partners to stretch their future expectations, aspirations and performance is "**To be a premier network of excellence in promoting sustainable agriculture and ecosystem management for improved livelihoods and wealth creation in Africa".**

3.2.2 Mission Statement

The ACT Mission statement that expresses its fundamental purpose and business is **"To enhance agricultural productivity, sustainable land management and environmental conservation through promotion of conservation agriculture principles and practices in Africa."**

3.3 Guiding Core Values

The decisions and actions in ACT are consistently based on a set of clear principles outlined here as the Network's Core Values. The ACT core values guide actions at all levels when choices are not clear or when there is a gap between intention and reality. The guiding Core Values that the Network and its stakeholders and partners hold in common and endeavour to put into practice while performing their functional obligations include the following:

(i) Performance and service orientation: The Network believes that the stakes in improving productivity, sustainable land management and environmental conservation are extremely high and will, therefore, remain focused on quality service delivery, innovativeness and adherent to ethics and standards so as to meet and exceed clients' expectations.

(ii) Partnership, networking and collaboration: The Network will pursue productive and beneficial partnerships and strategic alliances with clearly defined roles, responsibilities, governance and supportive mechanisms so as to ensure effective collaboration and synergies that have a direct bearing to the Network's Mission.

(iii) Knowledge and information management: The Network is committed to nurturing a strong culture in the generation, sharing and application of CA knowledge and information for promoting improved productivity, sustainable natural resource management, environmental conservation and adaptation and mitigation to climate change challenges in Africa and beyond.

(iv) Regionality and environmental concern: The Network is an African regional network committed to the achievement of economies of scale and scope while ensuring optimal availability of CA technologies, products and services while maintaining the quality of environment and responding to the challenges of climate change.

(v) Integrity, transparency and accountability: The Network upholds virtues of integrity through honesty, fairness and professionalism in all its operations while remaining committed to effective and efficient utilization of all resources entrusted to it in the most transparent, accountable and cost-effective manner.

3.4 Network Strategic Results

Given the ACT's strategic direction and Mission, the Network has identified six strategic results that are necessary and sufficient to address the identified Critical Strategic Issues and deliver on the Network's purpose of **"promoting conservation agriculture principles and practices in Africa".** Attainment of this purpose will contribute significantly to the realization of the overall Network goal of **"Enhancing agricultural productivity, sustainable land management and environmental conservation".** The strategic results are designed to position the Network strategically as a leader in promoting sustainable development in Africa and beyond. The six necessary and sufficient results

are as shown in Table 3.1. The basis for objectively verifiable indicators for the strategic results is outlined in the Network Level Result Framework shown in Annex 2.

Table 3.1: The ACT strategic results

Results	Statement
Result 1	Adoption and scaling up of conservation agriculture **strengthened.**
Result 2	Sustainable land management and climate change resilience **improved.**
Result 3	Capacity building and partnerships **enhanced.**
Result 4	Communication, information and knowledge management **improved.**
Result 5	Entrepreneurship and business development **strengthened.**
Result 6	Network management support functions **strengthened.**

3.5 Network Thematic Areas of Focus

In order to deliver on the Network's strategic results, functional operations in ACT have been rationalized into five technical and one management support function thematic areas of focus that correspond to the six Network strategic results. These thematic areas of focus express a stronger Network commitment to impact as the strategic orientation and positioning of ACT as a leader in promoting sustainable development in Africa and beyond. The thematic areas of focus shown in Table 3.2 are considered as integrally linked rather than as isolated areas. The necessary and sufficient thematic areas of focus required to deliver the Network strategic results are as follows:

Table 3.2: The ACT thematic areas of focus

Themes	Statement
Theme 1	Adoption and scaling up of conservation agriculture.
Theme 2	Sustainable land management and climate change resilience.
Theme 3	Capacity building and partnerships.
Theme 4	Communication, information and knowledge management.
Theme 5	Entrepreneurship and business development.
Theme 6	Network management support functions.

4.0 NETWORK THEMATIC AREAS OF FOCUS

4.1 Introduction

As outline in section 3.5, the functional operations in ACT have been rationalized into five technical and one management support function thematic areas of focus that include (i) Adoption and scaling up of conservation agriculture; (ii) Sustainable land management and climate change resilience; (iii) Capacity building and partnerships; (iv) Communication, information and knowledge management; (v) Entrepreneurship and business development; and (vi) Network management and support functions. This chapter goes further to elaborate on each thematic area of focus in terms of its rationale and justification; the challenges facing the thematic area; and the strategic focus to be followed in order to address the identified challenges and contribute to the achievement of the overall network purpose.

4.2 Adoption and Scaling up of Conservation Agriculture

4.2.1 Rationale and Justification

Scaling up is a process of increasing the productivity, socioeconomic and human development impact of interventions. This is achieved through replication, spread, or adaptation of techniques, ideas, approaches and concepts resulting into an increased scale of impact. Institutional scaling up that involves influencing higher level institutions is considered the most effective approach for scaling up agricultural knowledge and technologies. Institutional scaling up is based on the recognition that actions are required from many institutions for effective adoption of technologies by target beneficiaries. In this context, scaling up is where efforts are made to communicate and share knowledge, especially the underlying principles with higher up institutions and to bring in other stakeholders such as manufacturers, policy makers and investors from community or local level, to national and even global level. Uptake, acceptance and internalization of technology at higher levels increase the chance that these institutions will support and invest in scaling it out. However, experience has shown that even when there is goodwill in higher level institutions, scaling up can remain a challenge.

The models and approaches for delivery of agricultural technology and advice to farmers in most of the African countries have undergone considerable experimentation in the form of institutional reform since early 1980s with little significant outcomes and impacts to show. In most cases, the reforms have taken the form of importation of extension models from outside. The reforms have included downsizing of the extension service through concepts such as decentralization, participation, pluralism, outsourcing/contracting and cost recovery (Gemo *et al*., 2005). However, extension managers and policy makers in most African countries do not know which of the models being advocated are appropriate or would be effective in their country situations and contexts.

There is, therefore, a need to focus on developing effective monitoring, documentation and learning systems within conservation agriculture projects and then using these in the evaluation of best practice. This can include various areas or aspects such as farmer organization for improved access to information, inputs and/or output markets, most effective extension methods, value addition, consumer awareness programmes, and market structure and demand analyses. However, in all these, the principle focus needs to be on assessing approaches that focus action on research approaches to innovation. Integral to the validation of approaches and methods is development and assessment of tools for monitoring the steps in the development and implementation of sustainable land management and CA platforms and a monitoring system for evaluation of outcomes.

In addition to this, there is need for aggressive promotion of utilization of the scaling up approaches and methods. This will naturally intersect with best practice in terms of ensuring exposure to alternative methods, the formation of sustainable land management and CA platforms, facilitation skills and evaluation of market chains and profitability constraints at different stages. As suggested, effective facilitation of these platforms will require an adequate conceptual understanding, some basic analytical skills, and effective facilitation skills. Most of these skills will be attained through the implementation of different intervention strategies aimed at facilitating learning by doing.

4.2.2 Challenges

Some of the major challenges facing adoption and scaling up of CA in most African countries are experienced in the following areas:

(i) Enhancing recognition of the role of research system in scaling up*:* Although most available government and organization policies, strategies and programmes put a lot of emphasis on accelerating increased impact on livelihoods and economic growth, these policy thrusts have not been turned into action mainly because of two barriers that include a generally low accessibility, poor distribution, and untimely dissemination of the various policy and strategy documents to the agriculture sector managers and researchers; and inadequate monitoring and evaluation of impact of investments in the agriculture sector research and development programmes and projects.

(ii) Strengthening linkages among agricultural stakeholders: Currently, there are distinct policy statements on division of labour between research and extension systems

in most African countries. In some of these countries, there exist separate policies for National Agricultural Research System (NARS) and National Agricultural Extension System (NAES), which sharpen the division between research and extension. This leads to reduced effectiveness in promotion of uptake and scaling up of agricultural knowledge, information and technology.

(iii) Developing and implementing effective communication and knowledge management plans for promotion of uptake and scaling up: Although many policy and strategy documents of most African country Governments recognize and put a lot of emphasis on ensuring that agricultural technologies and innovations reach the farmer, most of them lack a comprehensive plan of action for managing knowledge, ensuring effective communication, uptake promotion and effective scaling up. Basically, the goodwill stated in policy documents has not been exploited and converted into action.

(iv) Facilitating the utilization, uptake and evaluation of CA-based knowledge: Most research and development programmes and projects are rarely evaluated for communication, uptake and utilization of knowledge, information and technology. Furthermore, the terms of reference for these evaluations are often guided by annual plans of the programmes and projects being monitored. As is often the case, the programmes and projects annual plans do not include communication, promotion of uptake and impact targets. Therefore, monitoring and evaluation guided by such plans will definitely have no basis for monitoring and evaluating these aspects.

(v) Allocating adequate budgets and resources for promotion of uptake and scaling up: Annual work plans of most research and development programmes and projects do not include communication, promotion of uptake and impact targets because they are perceived to be the responsibilities of the extension. Because of this, only a limited amount of time and budgets are allocated to project activities concerning communication, promotion of uptake and scaling up of research results. For this reason, results from these programmes and projects are rarely packaged for different clients, and are mostly presented in the form of technical reports and papers for scientific conferences and journals.

(vi) Creating adequate capacity for promoting uptake and scaling up: The poor promotion of uptake of research results has been blamed on lack of training of researchers, extension and education personnel in communication and uptake promotion of research results. The source of this problem could be attributed to the training curricular in universities and agricultural training colleges in most African countries. Most of the postgraduate curricular do not cater for communication and promotion of uptake of research findings, monitoring, evaluation and impact assessment of projects nor do they offer in-service training courses for the already employed.

(vii) Linking reward and incentive systems to delivery of outcomes and impact: In most research institutions, including universities, the reward and motivation schemes for researchers are too low. In most cases, the researchers are not rewarded for delivery

of outputs. The evaluation criteria in most of these institutions are based on academic qualification and scientific publications in internationally refereed journals and scientific conference proceedings.

(viii) Ensuring effective mobilization of end-user engagement: Many research and development initiatives do not involve end-users sufficiently. Sufficient involvement of farmers and other end-users ensures that the technological packages being generated and promoted are relevant and appropriate, and strategies for addressing challenges that affect utilization are employed. However, in most cases, end-users such as farmers and agri-businesses are not adequately empowered to play an effective role in these initiatives. The result is that in many African countries, the needs of farmers and agribusiness often do not sufficiently drive the agenda of agricultural research and extension services, causing lack of relevance and in turn impact.

(ix) Strengthening extension systems and technology dissemination processes: Weak and ineffective public agricultural extension system is one of the key factors contributing to low uptake and scaling up of agricultural technologies and innovations. The ineffectiveness of extension systems is both tied to the issue of relevance and responsiveness of the processes of generation and dissemination of technologies to farmers' needs.

4.2.3 Strategic Focus

In order to facilitate effective promotion of CA principles and practices in Africa and beyond, this thematic area will focus on development of appropriate strategies and mechanisms for effective and efficient adoption and scaling up of CA. In this regard and considering the need to contribute significantly to the attainment of the overall Network purpose, the adoption and scaling up of CA thematic area shall focus on the following subthemes:

(i) Identification and promotion of appropriate approaches, methods and tools for scaling up conservation agriculture.

(ii) Strengthening farmer institutions and service providers to participate effectively in scaling up of conservation agriculture.

4.3 Sustainable Land Management and Climate Change Resilience

4.3.1 Rationale and Justification

All African countries face many sustainable development challenges in attempting to realize their sustainable development objectives. One of these challenges is the sustainable management of natural resources and environmental protection which are the very foundation upon which the socioeconomic development of each country depends. These countries experience persistent economic crises which, to a large extent, have roots in the severely degraded natural resources and poorly managed environment. This situation is made worse by the recurrent droughts and other natural and man-made disasters leading to perpetual poverty and under-development which in turn accelerate the degradation of natural resources and mismanagement of the environment, thereby closing the vicious cycle. There is, therefore, an urgent need for African countries to break the vicious cycle by specifically ensuring environmental sustainability in their economic and social activities.

Environmental, social and economic opportunities fit very well with the concept of sustainable livelihoods. Unfortunately, the full environmental and natural resources potential is not being realized for a number of reasons including a fast rate of growth of a largely rural, peasant and heavily natural resource-dependant population; natural disasters; and institutional weaknesses. In view of this, an environmentally sustainable livelihoods strategy must create gainful employment for income, production and recognition; lead to poverty reduction; improve the well-being and capabilities of people; encourage livelihood adaptation and reduce vulnerability through resilience; and promote sustainability of the natural resources base.

Land degradation is a severe problem particularly in densely populated areas in Africa. Soil erosion resulting from cultivation on steeply sloping terrain, mining of soil fertility due to continuous cultivation with limited application of inorganic or organic sources of soil nutrients, and deforestation and overgrazing of rangelands are among key factors causing low agricultural productivity, widespread poverty, and food insecurity in the

region. In addition, insufficient nutrient replacement in agricultural systems on land with poor to moderate potential results in soil degradation. Whereas soil moisture stress inherently constrains land productivity, soil fertility degradation now places an additional serious human-induced limitation on productivity. Thus soil fertility degradation has been identified as the single most important constraint to food security in sub-Saharan Africa.

Past research has generated a number of soil fertility technologies with potential for increasing rural incomes and food production. However, uptake and utilization of these technologies has been low and often in piecemeal hence leading to very low benefits by farmers. In addition most of these technologies are now out of date and hence need updating and improvement. The approach of Integrated Soil Fertility Management (ISFM) is largely focussed on tillage-based farming and is not adequately and extensively documented for CA systems and hence calls for more research. Conservation agriculture has tremendous potential for achieving sustainable yield increases by improving growth conditions for crops and the efficiency of input and reversing soil degradation processes and building up soil fertility by facilitating better infiltration of rainwater and enabling the recharge of groundwater which reduces erosion and leaching and, in turn, water pollution.

In Africa, climate change is a threat to economic growth due to changes in natural systems and resources, long-term prosperity, ecosystems and unique biodiversity as well as the survival of already vulnerable populations. Consequences of this include persistence of economic, social and environmental vulnerabilities particularly for the economic and livelihood sectors. Climate change and variability is the single most important atmospheric phenomena in sub-Saharan Africa likely to cause a number of effects that most governments and other institutions are least prepared to face. According to the Fourth Assessment Report of the Inter-governmental Group of Experts on Climate Change (IPCC) established in 2007, Africa is one of the world's most vulnerable to climate change. The continent's economic development is dependent on agriculture which is one of the most climate-sensitive sectors.

Projections of climate change scenarios for sub-Saharan Africa show that temperatures are expected to increase while rainfall will decrease in some parts and increase in others. Temporal and spatial variability of climate, especially rainfall, is a major constraint to productivity, competitiveness and commercialization of the region's agricultural sectors. A major drought affecting several countries is recorded in different parts of the region at least every 5-10 years with amazing irregularity. Beyond the traditionally-held categorization of climate change as an environmental issue, it is clearly also a development issue that is directly linked to poverty reduction, food security, economic, health, human rights, governance and equality within the context of Millennium Development Goals (MDGs). The changes in climate have adverse implications on agricultural productivity and equally affect natural resources management. These changes in climate have affected crop yields particularly in the arid, semi-arid and semi-humid zones leading to

food deficits and therefore, present significant threats to the achievement of the MDGs related to eliminating poverty and hunger and promoting environmental sustainability.

Agricultural practices such as improved land husbandry practices and CA that increase carbon stock, biodiversity and water resources have the potential of improving livelihoods of practising communities through enhanced crop productivity, income generation, improved environmental services and consequently improved resilience to climate change. Conservation agriculture has been shown to enhance soil structure leading to increased water holding and retention capacity making agriculture more resilient to extreme weather events such as heavy rains and drought. The increase in moisture conservation in dry climates can limit soil erosion, as well as make agricultural lands more resilient to changes in climate.

4.3.2 Challenges

Some of the major challenges facing sustainable land management and climate change in most African countries are experienced in the following areas:

(i) Adapting to climate change variability*:* With increasing variability in climate change, various reports indicate that agriculture will be affected both by long-term trends in mean temperature, precipitation and winds, and therefore associated with greater frequency and severity of extreme events such as droughts and floods. Changes in the hydrological cycle will affect agriculture in general and food production specifically. Over time, this may lead to cumulative reductions in income and food security. Conservation agriculture is considered to be climate-smart because of its adaptability to climate change in terms of offering greater productivity and stability but also reducing risks of drought failure and floods due to extreme events.

(ii) Arresting and rehabilitating land degradation: Land degradation ranges from soil loss through erosion to habitat loss to soil fertility decline, and can be attributed to the interaction between short-term local and long-term global processes. The root cause of degradation in Africa is the tillage-based agriculture with exposed soils and sub-optimal cropping systems include growing population and increasing demand for food and cash income; intensification of agriculture; inadequate use of conservation practices; and lack of support by local governments among others.

(iii) Strengthening development and availability of appropriate technologies and innovations: Sustainable land management and climate change are emerging issues and the region has yet to develop suitable and/or adapt technologies to suit specific circumstances of the continent. There is limited research to develop appropriate technologies to address challenges of climate change.

(iv) Increasing stakeholder awareness on the impacts of climate change: Climate change is a phenomenon that has only recently been brought to attention as having consequences on development, agriculture included. Unfortunately the level of awareness on climate change and its impacts among various stakeholders including the

rural farming communities is low and therefore, there is need for a focused awareness campaign on its causes and effects of climate change and how to manage it.

(v) Improving documentation and scaling up of climate-friendly CA practices: Despite the fact that significant work on various issues related to agriculture and sustainable land management have been done, there are very limited successful experiences in the region that have been documented, which could be adopted for scaling up to address climate change challenges. Scaling up climate-friendly practices has been impeded by difficulties in adopting best practices in measuring and monitoring agriculture-related emissions.

(vi) Enhancing policy and institutional support for sustainable land management and climate change: A number of existing policies need to be updated or formulated in order to support strategies and activities in CA that can significantly contribute to addressing issues of climate change. Reforms of agricultural policies at national and regional levels (particularly in the areas of land tenure and support for agricultural inputs) and international trade policies are necessary in order to prevent market distortions.

(vii) Coordinating approaches to address sustainable land management and climate change: There are many initiatives within the region and internationally on the potential and benefits of CA in sustainable land management and in adapting and mitigating against climate change. However, these are implemented in isolation due to lack of coherence and targeted approaches leading to poor scaling up of successful cases. In addition to this, there has been limited effort to identify these initiatives and assessment of how they can complement and build on synergies.

4.3.3 Strategic Focus

In order to facilitate effective promotion of conservation agriculture principles and practices in Africa and beyond, this thematic area will focus on promotion of appropriate conservation agriculture technologies and innovations for sustainable land management and climate change resilience. In this regard and considering the need to contribute significantly to the attainment of the overall Network purpose, the sustainable land management and climate change resilience thematic area shall focus on the following subthemes:

(i) Promotion of Conservation Agriculture in sustainable land management.
(ii) Promotion of Conservation Agriculture in climate change adaptation.
(iii) Promotion of Conservation Agriculture in climate change mitigation.

4.4 Capacity Building and Partnership

4.4.1 Rationale and Justification

Capacity has been defined as "the ability of individuals, institutions and systems to make and implement decisions and perform functions in an effective, efficient and sustainable manner" (GEF, 2001). In simple terms, capacity is the ability of individuals, organizations and systems to achieve results or the ability to perform effectively and efficiently. Capacity building has been defined by many practitioners as the process through which individuals, organizations and societies obtain, strengthen and maintain the capabilities to set and achieve their own development objectives over time. It is about improving performance of individuals, organizations and systems.

Capacity at the systemic level is concerned with the creation of "enabling environments" that include policies and plans, economic, regulatory and accountability frameworks within which institutions and individuals operate; the relationships that exist, both formally and informally, between institutions; and the distribution of institutional responsibilities. It represents the broad context within which organizations operate. Capacity at the organizational level focuses on the overall performance and functional capabilities as well as access to human, finances, information, technology, infrastructure and other resources, including its organizational structure and its ability to adapt to change. Capacity development at this level aims at developing the organization as a total system, including its constituent individuals and groups as well as its relationship to the outside. The individual capacity, on the other hand, refers to specific attributes enabling individuals to perform functions, make decisions and ensure these are implemented in an effective, efficient and sustainable manner. The individual level of capacity assessment considers the individual's competency to function efficiently and effectively within an organization and within the broader environment.

A partnership has been defined as a dynamic relationship among diverse actors, based on mutually agreed objectives, pursued through a shared understanding of the most rational

division of labour and resources based on the respective comparative advantages of each partner. Over several decades, partnerships have occurred most often under the auspices of research and development ventures, technical exchanges and technology transfer agreements and arrangements. Partnerships are often mutually sought-after collaborations emphasizing and combining particular strengths in an effort to overcome the weaknesses or deficiencies of each organization if it were acting alone. Partnerships are also sometimes used as interim modes intended to allow one partner to learn the other partner's capabilities.

There are many reasons to form partnerships. In broad terms, partnerships can permit organizations to combine the appropriate strengths of all partners and enhance all partners' competitive positions. Partnerships usually require less capital and also allow organizations to respond to dynamic changes in the operating environment and technological advances, putting partners on course to new objectives more quickly. In general, partnerships are intended to allow members of the alliance to attain common goals in a more efficient and timely manner than if the members were acting alone and, in some instances, to attain goals that the members would not be able to achieve using only their own resources. In partnerships, both sides may want to gain some advantage more efficiently achieved through a joint effort, such as access to untapped opportunities and resources, the sharing of costs or other risks or the sharing of technology.

In agricultural research and extension, partnerships have been grouped into the following three main categories:

***(i) Project based partnerships*:** This is the most common form of partnership in which a number of institutions come together to implement mostly a donor-funded project. The main function of this type of partnership is to generate the project outputs, outcomes and impacts outlined in a project document. These types of partnerships are normally specific, time bound, focusing on implementation of specific activities described in a project document. Their duration is determined by the length of the project but longer-term partnerships can also arise from good collaborations at this level. The main mechanisms used in managing these partnerships include Memorandums of Understanding (MoUs), contracts, grant or sub-grant agreements.

(ii) Strategic partnerships: Strategic partnerships are long-term agreements forged to achieve specific complementary roles and greater impact. The main purpose of strategic partnerships is to carry out mutually agreed tasks/activities that are relevant to the mandates of the partnering institutions. Strategic partnerships are implemented through either MoUs or legal agreements.

(iii) Contractual partnerships: Contractual partnerships occur in cases where organization subcontracts certain activities to another partner(s). This type of partnership is common in linking research institutes and programmes with local service providers such as extension agent and non-governmental organizations. The private sector companies also use this type of partnership to contract researchers to test their products.

4.4.2 Challenges

Some of the major challenges facing capacity building and partnerships in most African countries are experienced in the following areas:

(i) Building sustainable capacity to build capacity: Capacity strengthening is a continuous and dynamic process. There is, however, limited attention to building of sustainable capacity to build capacity of those stakeholder groups engaged in sustainable land management and CA in most African countries.

(ii) Integrating research-based learning outputs into the curricula of learning institutions: Learning institutions can make a significant contribution in building the capacity of the practitioners of sustainable land management and CA. However, the curricula of most institutions are not designed to respond to emerging challenges and needs of these practitioners because of failure to convert research and project results into learning outputs and disseminate them to the learning institutions to facilitate their integration into the learning curricula of universities, colleges and farmer training institutes.

(iii) Training of trainers and development of training materials: Given the limited resources available to institutions, it is not feasible for them to be directly involved in training of various stakeholder groups. One efficient way to address this issue is training of the trainers designed to create not only a sustainable capacity, but also an efficient multiplier effect. However, there are limited on-going initiatives in the development of training materials and training of trainers.

(iv) Improving participation in external capacity strengthening initiatives: Many organizations and institutions involved in sustainable land management and CA do not take advantage of the many capacity building initiatives mainly due to lack of awareness and financial resources.

(v) Developing, testing and implementing innovative and cost-effective training materials, approaches and delivery mechanisms*:* There is limited development, testing and implementation of innovative and cost-effective training materials, approaches and delivery mechanisms as well as development and dissemination of research-based training materials. The revolution of ICT technologies and their increased access in many African countries has not been utilized effectively to facilitate capacity building and knowledge sharing.

(vi) Developing need-based monitoring and evaluation system*:* Accountability, transparency and impact orientation should be one of the guiding principles in the development and implementation of capacity building initiatives. However, there are no established need-based, functional monitoring and evaluation system which can assist in tracking resources allocated as well as outputs and outcomes of capacity building initiatives, assure quality and provide the necessary feedback to learn from experiences.

(vii) Strengthening capacity for changing mindset, institutional arrangements and focus: The greatest challenge to agricultural development in the African region is how to change the current mindsets of most agricultural policy makers, planners, research leaders, managers and researchers. Successful technology development, use and impact require a much more holistic approach and forging successful partnerships with different institutions. Bringing accelerated agricultural development to the region will, therefore, require a change in mindset and a completely new institutional arrangements and focus to agricultural research for development.

(viii) Strengthening capacity on formation and management of successful partnerships: Many institutions involved in sustainable land management and CA have engaged in different types of partnerships in Africa. Many of these have been successful but others have had varying degrees of success. The failure of these partnerships has been attributed to lack of clear definition and complementarities of roles and responsibility and the rule of the game; inadequate building of commitment and trust among partners; lack of good interpersonal relationships, effective communications, coordination and governance systems; irregular planning and review meetings; and absence of enabling environments and support from the partner institution among others.

(ix) Enhancing capacity for institutionalizing and catalyzing partnerships: Many partnerships, at both strategic and project levels, have been initiated on basis of individual personal contact and trust. Sometimes when the person leaves, the relationship collapses. In some cases, personalities have interfered with partnerships, and too often conflicts emerge which tend to undermine the relationship. The biggest challenge has, therefore, been on how to institutionalize and catalyze partnerships.

(x) Ensuring effective coverage of legal issues: In many partnerships, legal issues related to partnership development and management are not adequately covered in the MoUs or related agreements. Partnerships MoUs and agreements should, among others, address issues such as commitments, delivering of results, benefit sharing and conflict resolution mechanisms. Incentives and reward system could be a major factor in encouraging partnership development and management.

(xi) Allocating adequate resources for implementing and managing partnerships: Resources for implementing partnerships are big constraints in most African institutions. Most partnerships in the region are based on short-term projects funded by donors and very few are based on long-term strategic partnerships. The implication of this is that many partnerships are donor-dependent.

4.4.3 Strategic Focus

In order to facilitate effective promotion of CA principles and practices in Africa and beyond, this thematic area will focus on development of the required capacities and partnership arrangements. In this regard and considering the need to contribute significantly to the attainment of the overall Network purpose, the capacity building,

networking and partnerships thematic area shall focus on the following subthemes:

(i) Strengthening of institutional, individual and community capacities for uptake and utilization of conservation agriculture.

(ii) Establishment and management of beneficial partnerships and strategic alliances.

4.5 Communication, Knowledge and Information Management

4.5.1 Rationale and Justification

Communication is the ability to ensure that a thought, memory, an idea, historical facts or other forms are conveyed between any two entities. In the agricultural sector and CA in particular, the need for communication is to convey the knowledge and information that will contribute to alleviating poverty, improving livelihoods and having a positive effect on the national economics. Information communication technology (ICT) which continues to revolutionize all facets of life in the world has the potential to improve communication in the agricultural sector and CA products and services.

Knowledge management is characterized by the desire to develop and apply knowledge from an abundance of data and information. Important concepts have been developed in the process, leading to a working definition of knowledge management as a conscious strategy of getting the right knowledge to the right people at the right time in ways which improve utilization of what is already known. Many practitioners increasingly see "knowledge sharing" as a better description. Others would prefer to emphasize "learning", since the real challenge in implementing knowledge management is less in the "sending" and more in the "receiving", particularly the processes of sense-making, understanding, and being able to act upon the available information. Whatever term is used to describe it, knowledge management in the agriculture sector should be about the systematic connecting of stakeholders/people to the best practices, knowledge and expertise they need to create value by supporting:

- The creation or acquisition of knowledge relevant to opportunities and constraints.
- The synthesis and learning from such knowledge.

- The sharing through better communication and networking.
- The utilization through promotion of uptake and scaling up.

Viewed this way, knowledge management in the agricultural sector and CA would then be expected to focus on knowing what needs to be done to solve agricultural sector problems or to exploit opportunities; how it can be done; the source of knowledge needed to succeed; and who can do it. This is then followed by employment of appropriate networking mechanism to assemble the best expertise needed to implement the necessary tasks.

Information management is acquiring, processing, storing, organizing and disseminating information. That information may be processed data or repackaged knowledge that is shared and decoded by recipients. Information management can be viewed as the supporting base for knowledge management. However, to be able to communicate the knowledge within a thematic area of interest such as conservation agriculture, there would be a need to describe the information to be collected. Information management deals with the processes, systems and tools that deal with explicit knowledge that can be captured in database, searched, manipulated and formatted. Communication tools and techniques are vital in the process of transferring knowledge-tacit to tacit, explicit to explicit and explicitly to tacit. Viewed in this perspective, knowledge management encompasses both information management and communication.

In CA knowledge management and information system for innovation, people and institutions should be linked together to promote and enable mutual learning and generate, share and use agricultural-related knowledge including indigenous knowledge, skills and information. The system should integrate all stakeholders involved in the production to consumption continuum. The system should be about the systematic connection of stakeholders and institutions to the knowledge they need by supporting the creation or acquisition of knowledge relevant to opportunities and constraints; the synthesis and learning from such knowledge; the sharing through better communication and networking; and the utilization through promotion of uptake and scaling up by the right people at the right time in the right place.

4.5.2 Challenges

Some of the major challenges facing communication, knowledge and information management in most African countries are experienced in the following areas:

***(i) Ensuring critical analysis of communication stakeholders and their knowledge needs*:** Stakeholder analysis is used to identify the interests of stakeholders in relation to the problems that need to be addressed. With respect to CA knowledge management, such analysis is used to identify those with whom the generators of CA knowledge and information should communicate with, as well as all those who want to communicate with them.

(ii) Identification and definition of the purpose for communicating with stakeholders: Without effective communication, key stakeholders in CA may miss out on vital knowledge and information and may not understand why change is needed. The identification of the CA products and services; past and future stakeholders; and intended target audience are all important factors in any communication initiative. However, the most critical factor on which effective communication depends is the identification of what is hoped to be achieved through this communication.

(iii) Ensuring critical analysis of stakeholders' knowledge, attitudes and practices: The CA stakeholders are varied in terms of educational, socio-cultural and economic status. As a result, their knowledge base, attitudes and practices on the various CA technologies, products and services are varied and therefore, need to be analyzed for better targeting.

(iv) Identification and development of actual and anticipated knowledge products and services: The stakeholders involved in the agricultural sector and CA are many and are usually at different levels of understanding and sophistication. The requirement for CA knowledge products and services by each stakeholder category vary across stakeholders and over time. Therefore, continuous needs assessment is necessary to find out the target audiences' interest in knowledge, perceptions of, and behaviour concerning the actual and anticipated products and services.

(v) Identification and utilization of media and channels for communicating with different stakeholders: Understanding who the target audience are, where they stand in terms of knowledge of, and interest in the agricultural sector and CA products and services and what media they are used to, as well as clarifying the reason for communicating with them is prerequisite to choosing the appropriate media for them.

(vi) Monitoring and evaluation of the effectiveness of the knowledge management system: It is important to develop and establish an effective monitoring and evaluation system for ensuring that the communication materials contain relevant information; are in an appropriate and understandable language and are accessible at the right time, place and cost to those with whom the agricultural sector wish to communicate with. A feedback loop should form an integral part of the monitoring process to improve future communication efforts.

4.5.3 Strategic Focus

In order to facilitate effective promotion of CA principles and practices in Africa and beyond, this thematic area will focus on development of appropriate strategies and mechanisms for facilitating effective communication and management of CA knowledge and information. In this regard and considering the need to contribute significantly to the attainment of the overall Network purpose, the communication, knowledge and information management thematic area shall focus on the following subthemes:

(i) Improvement of communication and sharing of regional conservation agriculture knowledge and information.

(ii) Establishment and operationalization of integrated regional conservation agriculture knowledge and information acquisition and management system.

4.6 Entrepreneurship and Business Development

4.6.1 Justification and Rationale

Entrepreneurship in agriculture plays a vital role in making agriculture economically viable and successful. For CA, it is a necessary precondition, critical for creating a vital and sustainable livelihood option for many of rural farmers. It is a major requirement among farmers, in order to survive successfully in a dynamic business environment. Most of farmers in Africa are 'subsistence farmers', and produce just barely enough for their immediate food needs with hardly any surplus for sale. In addition, majority of those engaged in agricultural production do not have acceptable levels of income and, therefore, there is need to enhance their entrepreneurial skills to enable them take full advantage of the existing and emerging market opportunities. Entrepreneurship needs to be given greater recognition as a means to revitalize rural economies. In order for this to succeed, farmers need strategic management and co-operation/networking as well as technical skills to recognize market opportunities and capitalize on them. For CA this, therefore, demands setting a new perception and mindset among the value chain actors to recognize conservation agriculture as a concept that incorporates business aspects as well.

ACT aims at promoting the entrepreneurship ideology to ensure that CA farmers earn significant incomes to improve their social well being. As an initial step in achieving this objective, there is need for the Network to establish a unit that promotes entrepreneurship among conservation agriculture practitioners. In addition to this, promoting entrepreneurship will require effective policies and regulations; access to appropriate financing; input and output markets; market information; and good infrastructure. Equally important are the skills and know-how of the CA practitioners to successfully

develop and apply innovative methods in product development and marketing and in adopting a business orientation. As agribusiness entrepreneurs, CA farmers need access to proper equipment and maintenance services, investment capital, how to add value to their products and access to markets. In this regard, CA shall be promoted not just as a sustainable land management practice but also as an attractive and beneficial sustained source of livelihood for the people of Africa by relieving them of poverty, hunger and dependency.

4.6.2 Challenges

Some of the major challenges limiting the development of CA related entrepreneurship and business in African are experienced in the following areas:

(i) Promoting CA as a commercial venture: The current ACT structure does not provide support for entrepreneurship and business development in CA and, therefore, there is need to establish and build this capacity to play an active role in evolving conservation agriculture as commercial ventures.

(ii) Increasing awareness and skills in business orientation among CA practitioners: Most CA practitioners are either small-scale farmers or small and medium enterprises who lack entrepreneurship and business skills to commercialize their farming and, therefore, operate at sub-optimal levels with no incentives for further investment in growth of their business operations.

(iii) Reducing the cost of technological and production inputs: Adoption of improved agricultural technologies among small-scale farmers is low due to the high costs of technologies and low returns from sale of commodities. Land preparation, cropping, harvesting and handling is largely done by hoe, cutlass and bare hands, and mostly by women. Fertilizer, pesticides and herbicides use is low due to high prices and lack of commercial markets for fertilizable commodities. Use of improved seeds for all commodities is also low, and consequently, crop yields remain low.

(iv) Improving availability of appropriate technologies and innovations: Despite the availability of CA and sustainable land management technologies, majority of these are yet to be taken up and commercialized by business entrepreneurs. As a result, these technologies have not been fully availed and adopted to CA farmers to enhance productivity and efficiency of farming systems.

(v) Formulating and implementing supportive policies for promoting CA: Inappropriate land policies covering use and administration, tenure and security and delivery systems in many African countries has resulted in low investment in the development of land leading to environmental degradation. Policies that encourage high use of inputs and introduction of modern farming equipment pose a threat to adoption of CA among farmers.

***(vi) Improving infrastructure to facilitate exploitation of available opportunities*:**

The poor quality of rural roads, transport, markets, energy and electricity hinder the productivity of farming, particularly commercial farming and therefore, acts as a disincentive to the private sector. This has limited economic activity in rural areas and has inhibited agricultural growth**,** limited opportunities for marketing of products and promotion of rural economy.

4.6.3 Strategic Focus

In order to facilitate effective promotion of CA principles and practices in Africa and beyond, this thematic area will focus on development of appropriate strategies and mechanisms for facilitating effective establishment of entrepreneurial and business development thrusts to advance business practices and actions within the Network and CA practitioners. In this regard and considering the need to contribute significantly to the attainment of the overall Network purpose, the entrepreneurship and business development thematic area shall focus on the following subthemes:

(i) Establishment of conservation agriculture entrepreneurship and business thrusts.

(ii) Promotion of development and access to conservation agriculture inputs and services across value chain.

(iii) Advocacy and lobby for establishment of conservation agriculture supportive policies and legislations.

4.7 Network Management and Support Functions

4.7.1 Rationale and Justification

The success of any organization depends on its ability to mobilize and utilize all kinds of resources to meet the objectives set as part of its planning process. Increasingly, revelations of deterioration in quality and transparency have called for adoption of internationally accepted 'Best Practices' which gave rise to 'Corporate Governance'. In corporate governance, organizations need to position themselves to access global pools of capital; attract and retain the best human capital; form beneficial partnerships and strategic alliances; and live in harmony with communities. Unless an organization embraces and demonstrates ethical conduct, it will not succeed in the current highly competitive world.

Corporate governance is the processes and related organizational structures by which organizations are directed, managed and held to account. It influences how the objectives of the organization are set and achieved, how risk is monitored and assessed and how performance is optimized. It is a system of structuring, operating and controlling an organization with a view to achieve long-term strategic goals to satisfy stakeholders and employees while complying with legal and regulatory requirements, apart from meeting environmental needs.

The management of CA programmes and projects requires a balance between flexibility to encourage creativity and direction to ensure that both the Network and programme mandates are effectively and efficiently delivered. In addition to the usual human resource development and management tasks of planning, staffing, development, compensation and evaluation, the Network management will need to understand staff motivation as well as management of interpersonal and group behaviour through effective leadership, team building, improved communication and conflict and crisis management. In order to succeed in the attainment of its mandate, therefore, the Network will need to develop and effectively manage the required capacities and competences. The development of the Network capacities shall focus on human, financial, facilities and institutional

arrangements that are required to adequately address priority issues highlighted under the technical thematic areas of focus. The projected budgetary requirement for implementing the Strategic Plan is shown in Annex 3 while Annex 4 shows the current Network staff establishment.

4.7.2 Challenges

Some of the major challenges facing the Network management support functions are experienced in the following areas:

(i) Establishing appropriate incentives for attracting and retaining skilled and motivated human resources: The Network endeavours to maintain a lean efficient and skilled work force that balances with its financial capabilities. While this approach might serve the Network's immediate needs, to attract and retain highly skilled human resources that form the core staff would require a substantial investment in terms of compensation benefits. In the absence of resources for this, the Network will continue to face a challenge to get the required skilled individuals.

(ii) Developing and implementing skills development and utilization strategy: By not having a clear skills and competency development strategy to ensure the hiring, placement and utilization of personnel commensurate of the performance needs of the Network has resulted in the inability to implement critical project activities. It is, therefore, vital to have a comprehensive job analysis and a strategy for matching and developing competences in line with the job's skill demands.

(iii) Establishing objective performance evaluation mechanism: The absence of a robust and objective performance management system to guide and support the implementation of the strategic results of the Network, while at the same time informing the recognition, motivation and reward of good performance, has resulted in the inability to link individual performance with organizational results.

(iv) Developing and implementing appropriate human resource policies: While commendable work has been undertaken to review and implement staff rules and regulations that are an embodiment of human resource policy, work still remains to develop human resource policies related to staff acquisition, career development, motivation, reward and retention, in order for the Network to remain competitive in the labour market.

***(v) Strengthening Network corporate communication*:** The Network's corporate communication is currently weak. As a result of this, some of the clients and partners may not be fully aware of the Network's mandates, products and services. The Network's sustainability and effective contribution to the promotion of CA principles and practices depends, to a large extent, on the corporate image projected to stakeholders. It is, therefore, essential to possess a highly visible corporate identity and image through development and implementation of appropriate communication strategies for effective outreach to stakeholders and clients.

(vi) Strengthening resource mobilization: The Network's resource mobilization is currently weak. There is, therefore, a need to put in place a clear strategy and supportive mechanism to ensure that the Network is able to mobilize critical resources in a resource-constrained environment in order to support the achievement of its objectives.

***(vii) Strengthening internal audit, planning, monitoring and evaluation systems*:** The weak monitoring and evaluation mechanism has limited the tracking of achievements and accountability of results as one way of building organizational credibility. Alternative arrangements used have not fully addressed the matching of result achievements with resources needed for programme implementation. Although regular audits have been carried out, there is still a need for further strengthening of the internal controls in line with modern corporate governance principles.

4.7.3 Strategic Focus

The successful implementation of the technical thematic areas of focus shall depend largely on the establishment and operationalization of effective and efficient Network management and support functions at its Headquarters and replicate it at regional offices. In view of this, and considering the need to be effective and efficient, the Network shall require to develop and adopt a style of leadership and management which allows a diverse group of highly trained and potentially creative individuals to work individually and collectively to achieve the Network and programme goals and objectives. In order to contribute significantly to the attainment of the Network's purpose, the Network management and support functions thematic area shall focus on the following subthemes:

(i) Strengthening financial resource management and procurement services.
(ii) Strengthening human resource management, administration and corporate governance.

5.0 STRATEGIC PLAN IMPLEMENTATION ARRANGEMENTS

5.1 Management and Structure Implications

The implementation of the new Strategic Plan is expected to have major implications on many facets of the Network's management systems as well as institutional capacity, culture and structure. This shall require the Network management to build a corporate culture through strengthening of performance management and development of a comprehensive human resource management and development strategy. The approach shall also be expected to put emphasis on analysis of the tasks that the Network needs to carry out as a basis for determining its human resource requirements. Staff will then benefit from skill enhancement programmes, multi-tasking, rewarding of good performance in order to increase their participation in broad areas of decision-making and hence their individual stake in the achievement of the Network's Vision and Mission. The commitment to achievement and impact coupled with taking full responsibility for marketing its technologies, products and services to the point of adoption and application will be the foundation of the Network's organizational and management structure. The current Network organizational and management structure is shown in Annex 5.

5.1.1 Network Organizational Values

During the Strategic Plan period, the Network shall nurture an organizational culture that puts a premium on scientific achievement and capacity for effective teamwork and collaborative partnerships that should be reflected at all levels of the Network's operations. This culture shall be strengthened by appropriate incentives and a participatory system of monitoring and evaluation that provides constant feedback to all levels of staff on progress towards achievement of mutually agreed results and targets.

5.1.2 Performance Contracting

One of the most significant reforms being undertaken by most African governments and organizations is the introduction and implementation of a system of performance contracting. An essential feature in performance contracting is the development of a devolved operation style which emphasizes management by outcomes rather than by

processes. As an African regional network, ACT embraces performance contracting as a way of organizing and defining its results, responsibilities and tasks to ensure their systematic and purposeful accomplishment. Consequently, the broad intervention strategies described in this Strategic Plan will be broken down into specific activities which will form the basis for negotiated and agreed upon annual performance targets with the Network Board of Management. Each year's targets will build upon the previous year's accomplishments and lead systematically to the realization of the Network's Mission.

5.2 Implementation Approach

This ten-year Strategic Plan has been developed within the context of a fast-changing and dynamic socioeconomic environment characterized by factors such as declining resource availability; a wide range of government-led public sector reforms aimed at improving efficiency and effectiveness in the management of the public service; and increased agricultural sector stakeholders and clients awareness. In order to re-invent and position itself strategically, the Network has identified six strategic results that are necessary and sufficient to deliver its purpose. In order to facilitate this, there is need to create and operationalize a mechanism for establishing flexible alliances and innovation platforms that allow the Network to form temporary teams with other organizations including farmer's organizations and groups, research institutions, universities and the private sector and non-governmental organizations to solve priority CA problems in a specified period. The formation of such temporary teams would ensure the availability of a critical mass of professionals with the right disciplinary mix to provide multidisciplinary solutions for priority conservation agriculture problems.

The implementation of the Strategic Plan will further incorporate joint planning and participation by all key stakeholders so as to ensure that multiple views, needs and concerns in resolving priority CA issues at different levels are taken into account and negotiated. The Strategic Plan thematic areas of focus shall be addressed through nationally and regionally coordinated programmes and projects. Cross regional and organizational synthesis, networking and sharing of lessons learned shall be used to improve the value of the findings. Under-pinning the Strategic Plan and its implementation are also several crosscutting issues. These invariably affect and influence the implementation and direction of CA, and have been recognized nationally, regionally and globally. In view of this, the Network has made a commitment to address these crosscutting issues during implementation of this Strategic Plan. This commitment draws on and aligns the Network Strategic Plan with the strategic plans of other relevant regional and global organizations.

5.2.1 Promotion of Pro-Poor Economic Growth

Not all economic growth benefits the poor and often they can be adversely affected. Technologies that have economies of scale can focus on the wealthy and when too little attention is paid to the division of labour and resources, yield or profit enhancing

developments can adversely affect the welfare of women and other disadvantaged groups. the Network shall endeavour to ensure that the CA technologies and innovations it promotes are pro-poor or at least scale-neutral, and that they strengthen the resilience of individuals and households to withstand adverse events. Important measures include employment generation and micro-finance that can reduce vulnerability while contributing to agricultural growth, improved livelihoods and wealth creation.

Agriculture-related legislation and regulation should ensure that growth promotion does not come with unacceptable increased risk and vulnerability. The promotion of technological change should promote diversification of agriculture in ways that spread risk among different enterprises. Agriculture and sustainable land management interventions involve trade-offs between yields and vulnerability but, for the poor, care must be taken not to sacrifice too much on sustainability at the expense of increasing production and productivity. Lessons learnt should be communicated to policy makers for incorporation in poverty reduction strategy papers and other poverty-reducing initiatives.

5.2.2 Gender Mainstreaming

Women in African countries produce up to 70% of basic foodstuffs for household consumption and for the market. Women in rural areas provide most of the labour for land preparation, post-harvest activities, taking responsibility for storage, handling, stocking, processing and marketing. Beyond the farm, women play a key role in land and water management in all developing countries. Women are most often the collectors of water, firewood and fodder. They have access to a store of local knowledge and have been in the forefront of soil conservation programmes. Given the extensive participation of women in all aspects of agricultural production, the mainstreaming of gender into conservation agriculture shall be a key strategy for the Network, not only for the promotion of equality between men and women but also for sustainable agricultural production and environmental conservation. Some of the approaches the Network shall use in mainstreaming gender include:

- Ensuring that women's needs are addressed in the development and dissemination of conservation agriculture technologies and policies.
- Enabling women to fully participate in and benefit from conservation agriculture innovation processes.
- Ensuring women farmers receive the training they need to be fully competitive in their work.
- Ensuring capacity building for both women and men features gender issues prominently.

5.2.3 HIV/AIDS, Malaria, Drug and Substance Abuse

The Human Immunodeficiency Virus/Acquired Immune-Deficiency Syndrome (HIV/AIDS), malaria, drug and substance abuse pandemic can reduce the potential of the Network and its partners in making significant contributions towards meeting the Millennium Development Goals. Medical and funeral costs and the loss of productive

family members have permanent negative consequences. In a livelihoods context, there may be significant losses in financial capital as well as the irreplaceable loss of social capital as children lose their parents and mentors and have to fend for themselves. Women are particularly badly affected by the diseases because they are more susceptible to infection and they bear most of the burden of care for infected family members. Affected rural households cannot produce sufficient nutritious food, aggravating the impact of the diseases.

the Network shall ensure that HIV/AIDS, malaria, drug and substance abuse is treated as both an emergency and a long-term development issue that requires proactive leadership and a long-term multi-sectoral commitment for all. Increased awareness of the importance of agriculture in national HIV/AIDS, malaria, drug and substance abuse strategies is needed, particularly with respect to the rural poor, given the role of agriculture in food and nutrition security as factors in managing the diseases. The role of agriculture in poverty reduction is also crucial to the recovery of HIV/AIDS-affected families and their achievement of self-sufficiency.

5.3 Operational Plans

This ten-year Strategic Plan has outlined clear strategic results and strategic thematic areas of focus that can only be realized through sound implementation plans. To operationalize the Strategic Plan, therefore, the Network shall develop two detailed Operational Plans covering the period 2013-2017 and 2018-2022. In developing the Operational Plans, the Network shall engage its partners in formulating intervention strategies that are necessary and sufficient for delivering the strategic thematic areas of focus and hence the Network strategic results, Mission and Vision. In doing this, efforts will be made to take into account the national, regional and international development aspirations in increasing agricultural productivity, sustainable land management and environmental conservation including the prevailing policy environments.

In order to ensure proper alignment and harmonization with the new Strategic Plan, the Operational Plans shall be developed using a nesting approach that links the strategic results from the Network level through the strategic thematic areas of focus for better outcome mapping and impact orientation. In this nesting approach, therefore, the preparation of the Operational Plan for operationalizing the Strategic Plan shall take over the planning process from the subtheme level. Each subtheme shall then be discussed in terms of its rationale and justification, challenges and strategic focus. Each challenge and strategic focus section shall conclude with the identification of the necessary and sufficient intervention strategies required to deliver the subtheme. This information shall be summarized into Implementation Plans and Financing Plans for each of the strategic growth area of focus.

5.3.1 Annual Work Programmes

The Operational Plans shall be operationalized through rolling Annual Work Programmes (AWP) in which the necessary and sufficient activities and their respective milestones required to deliver each yearly target shall be specified. The AWPs will be linked to the staff annual Performance Contract (PC) targets. The adoption of the rolling AWPs shall be expected to facilitate review and adjustment of planned activities in the context of emerging priorities and funding opportunities. The AWPs shall be expected to provide full details on the outputs and their respective intervention strategies, activities, milestones, operational budgets and collaborating institutions and organizations.

5.4 Resource Mobilization Strategies

The most critical strategy for mobilizing resources to fund the implementation of the new Strategic Plan is for ACT to enhance its image as an efficient, effective and relevant regional mechanism for producing deliverable results and adding value to conservation agriculture knowledge management and scaling up of technologies and innovations. Besides this, the Network has to develop and maintain a reputation as an effective regional organization with unquestionable credibility and reputation. Some of the resource mobilization strategies available to the Network include:

- Establishment of a partial Competitive Grants Scheme and exploring the possibilities of acquiring contributions from the participating countries and development partners to finance the scheme.
- Building capacity of the participating and collaborating research scientists and institutions to fundraise through writing competitive grant research proposals.
- Establishing beneficial linkages with relevant regional and international programmes and other global funding facilities supporting research for development.
- Development of multi-country and institutional consortia to formulate projects on behalf of the Network to deliver its regional agenda and obtain funds for their implementation.
- Entering into twinning agreements with regional and national development programmes to coordinate their conservation agriculture knowledge and information, scaling up of technologies and innovations, and capacity building activities.
- Lobbying for institutional contribution in kind to funded projects where participating institutions can, for example, provide staff time as well as land, research and training facilities to the Network projects at no or reduced cost.
- Leveraging of funds that have already been allocated to support the Network agenda through, for example, the implementation of some aspects of its priority activities through graduate students who are already sponsored with research bursaries.

5.5 Monitoring and Evaluation

During the implementation of the different activities, a continuous participatory and rigorous self-monitoring and evaluation will be encouraged. To monitor and evaluate progress during the implementation, the Network and the collaborating institutions and organizations shall also undertake internal and external reviews during the Strategic Plan period and the results of the reviews widely circulated to the participating countries, collaborating institutions and organizations, development partners and other relevant stakeholders.

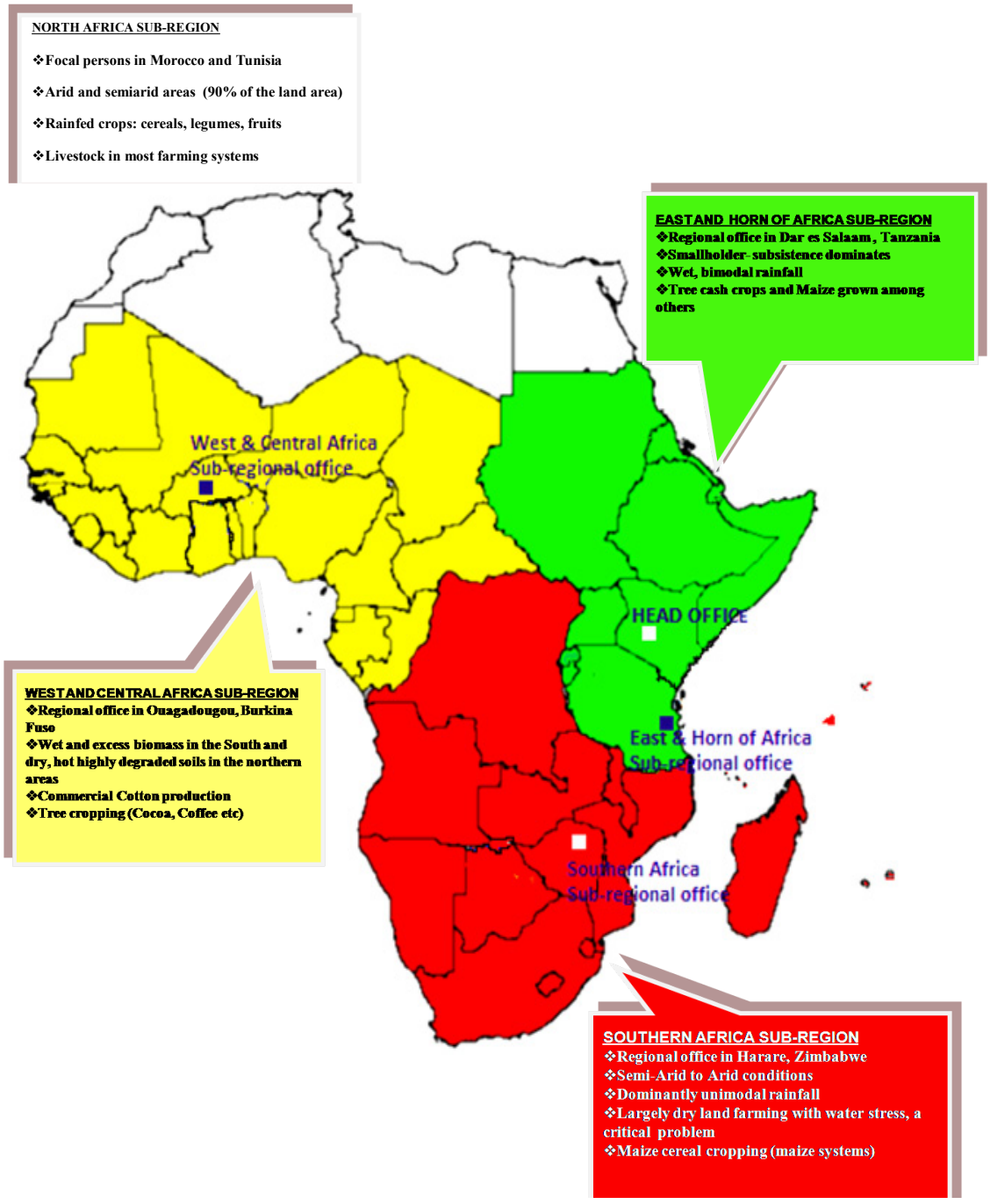
In order to institutionalize the monitoring and evaluation process, the Network shall develop and operationalize a suitable monitoring and evaluation system capable of tracking the implementation of the planned activities. The monitoring and evaluation system shall include the use of result frameworks, work plans, site/field visits, semi-annual and annual reports, mid-term internal and external evaluations, conferences and end-of-term external evaluations. The abridged version of the semi-annual reports shall form annual reports which will in turn feed into the mid-term internal and external evaluations. The mid-term evaluation results will, in turn, assist in the external evaluation whose results will form a major input in the preparation of the subsequent strategic and operational plans.

Outputs of all the Network's activities undertaken will be consolidated into annual reports and shared among participating countries, collaborating institutions and organizations, development partners and other stakeholders. The results obtained will also be presented in conferences, symposia and published as journal articles for wider information and knowledge sharing. In addition, all data captured will be appropriately stored for ease of retrieval and will form the basis for subsequent impact evaluation of programmes and projects. The Network Level Result Framework shown in Annex 2 indicates the basis for objectively verifiable indicators for the strategic results.

REFERENCES

1. **ACT, 2006.** African Conservation Tillage, Profile and Strategic Plan, December, 2006
2. **FAO, 2008**. What is Conservation Agriculture. in: Conservation Agriculture website of FAO, http://www.fao.org/ag/ca/1a.html
3. **Friedrich T., Derpsch R. and Kassam A., 2012**. Overview of the Global Spread of Conservation Agriculture. Field Actions Science Reports, Special Issue 6, 2012. URL: http://factsreports.revues.org/1941.
4. **Friedrich T., Kassam A. H., 2009**. Adoption of Conservation Agriculture Technologies: Constraints and Opportunities. Invited paper at the IV World Congress on Conservation Agriculture. 4-7 February, 2009, New Delhi, India.
5. **Friedrich T., Kassam A. H., Shaxson F., 2009**. Conservation Agriculture. In: Agriculture for Developing Countries. Science and Technology Options Assessment (STOA) Project. European Parliament. European Technology Assessment Group, Karlsruhe, Germany.
6. **GEF, 2001.** A Guide for Self-Assessment of Country Capacity Needs for Global Environmental Management, September, 2001.
7. **Gemo, H., Eicher, C. K. and Teclemariam S., 2005**. Mozambiques experience in building a national extension system.
8. **Kassam A. H., Friedrich T., Shaxson F., Pretty J., 2009**. The spread of Conservation Agriculture: Justification, sustainability and uptake. International Journal of Agriculture Sustainability, 7(4): 292-320.
9. **Marongwe L. S., Kwazira K., Jenrich M., Thierfelder C., Kassam, A.H., and Friedrich T., 2011**. An African success: The case of conservation agriculture in Zimbabwe. The International Journal of Agricultural Sustainability, 9(1) 153-161.
10. **NEPAD, 2005.** The new partnership for the development of Africa. A policy statement on the implementation of the Comprehensive Africa Agricultural Development Programme. Accra, Ghana 2005.
11. **Owenya M. Z., Mariki W. L., Kienzle J., Friedrich T. and Kassam A.H., 2011**. Conservation agriculture (CA) in Tanzania: The case of the Mwangaza B CA farmer field school (FFS), Rhotia Village, Karatu District, Arusha. The International Journal of Agricultural Sustainability, 9(1) 145-152.
12. **Silici L., Ndabe P., Friedrich T., and Kassam A.H., 2011**. Harnessing sustainability, resilience and productivity through conservation agriculture: The case of likoti in Lesotho. The International Journal of Agricultural Sustainability. 9(1) 137-144.
13. **United Nations, 2000.** Millennium Development Goals. United Nations. New York. USA. Http://un.org/millenniumgoals/ .

Annex 1: ACT Network Geographical Location and Focus



Annex 2: ACT Network Level Result Framework

Intervention Logic	Basis for staged Objectively Verifiable Indicators by 2017	Means of Verification	Assumptions
Overall Goal To enhance agricultural productivity, sustainable land management and environmental conservation.	**1.1** Percentage improvement in soil health, land productivity and environmental resilience due to application of CA practices in Africa. **1.2** Percentage improvement in livelihoods and wealth creation among smallholder farmers in Africa attributed to CA adoption.	**1.1** Regional and National economic and impact assessment reports. **1.2** Regional and National agricultural development reports. **1.3** Environment and natural resources assessment reports.	**1.1** Political stability will continue to prevail in African countries. **1.2** Relevant regional and national policies favourable to agricultural growth, sustainable natural resources management and environment conservation will prevail.

Purpose To promote conservation agriculture principles and practices in Africa.	**1.1** Percentage increase in CA adoption and scaling up. **1.2** Percentage improvement in CA related soil health and reduction in crop yield variability. **1.3** Percentage increase of partners and partnerships with organizational and institutional capacity for promoting CA **1.4** Percentage improvement in effective CA communication, information and knowledge management. **1.5** Percentage increase in CA related entrepreneurship and business development. **1.6** Percentage improvement of the Network management and support functions.	**1.1** Regional and National economic and impact assessment reports. **1.2** Country Governments reports. **1.3** Collaborating Institutional reports. **1.4** External evaluation and impact assessment reports.	**1.1** Agriculture will continue to be a major driver of sustainable national economic development of African countries. **1.2** Enabling policy environment for increasing agricultural productivity, commercialization and competitiveness of the agricultural sector will prevail.

Network Level Results			
1.0 Adoption and scaling up of conservation agriculture **strengthened.**	**1.1** Number of appropriate approaches, methods and tools for scaling up CA identified, promoted and adopted. **1.2** Number of strengthened farmer institutions and service providers participating effectively in scaling up CA. **1.3** Percentage increase in farmers adopting CA in the target areas. **1.4** Percentage increase in area under CA in the target areas.	**1.1** Regional and National economic and impact assessment reports. **1.2** Country Government's reports. **1.3** ACT and Collaborating Institutional reports. **1.4** External evaluation and impact assessment reports.	**1.1** Agriculture will continue to be the major source of livelihoods and wealth creation for majority of the population. **1.2** African governments will continue to support agricultural development. **1.3** Development partners will continue to support agricultural development in Africa.

2.0 Sustainable land management and climate change resilience **improved.**	**2.1** Number of CA related sustainable land management technologies and practices identified, promoted and adopted. **2.2** Number of CA technologies and practices for adapting to climate change identified, promoted and adopted. **2.3** Number of CA technologies and measures for mitigating against climate change identified, promoted and adopted.	- Do -	- Do -
3.0 Capacity building and partnerships **enhanced.**	**3.1** Number of CA related institutional, individual and community capacity strengthening needs identified and prioritized. **3.2** Percentage of identified priority CA related institutional, individual and community capacity strengthening needs addressed. **3.3** Number of beneficial partnerships and strategic alliances established and effectively managed.	- Do -	- Do -

4.0	Communication, information and knowledge management **improved.**	**4.1** Number of CA communication stakeholder categories and their communication needs identified and documented. **4.2** Number of CA knowledge products and services for addressing identified stakeholder needs developed and availed. **4.3** Number of pathways for communicating CA knowledge products and services to different stakeholder categories developed and utilized. **4.4** Number of integrated regional CA knowledge and information acquisition and management system established and effectively managed.	- Do -	- Do -
5.0	Entrepreneurship and business development **strengthened.**	**5.1** Number of CA related entrepreneurship and business thrusts established and effectively managed. **5.2** Percentage increase in the development, access and utilization of CA equipment and other inputs. **5.3** Number of CA supportive policies and legislations identified, lobbied and advocated for.	- Do -	- Do -

6.0 Network management and support functions **strengthened.**	**6.1** Percentage improvement in the Network human resource development and management. **6.2** Percentage improvement in the Network financial resource mobilization and management. **6.3** Percentage improvement in the Network administration and procurement services, procedures and processes. **6.4** Percentage improvement in the Network corporate governance.	- Do -	- Do -

Strategic Thematic Areas of Focus and their Respective Subthemes
1.0 **Adoption and scaling up of conservation agriculture.**
1.1 Identification and promotion of appropriate approaches, methods and tools for scaling up conservation agriculture.
1.2 Strengthening farmer institutions and service providers to participate effectively in scaling up of conservation agriculture.
2.0 **Sustainable land management and climate change resilience.**
2.1 Promotion of conservation agriculture in sustainable land management.
2.2 Promotion of conservation agriculture in climate change adaptation.
2.3 Promotion of conservation agriculture in climate change mitigation.
3.0 **Capacity building and partnership.**
3.1 Strengthening of institutional, individual and community capacities for uptake and utilization of conservation agriculture.
3.2 Establishment and management of beneficial partnerships and strategic alliances.
4.0 **Communication, information and knowledge management.**
4.1 Improvement of communication and sharing of regional conservation agriculture knowledge and information.
4.2 Establishment and operationalization of integrated regional conservation agriculture knowledge and information acquisition and management system.

5.0	**Entrepreneurship and business development.**
5.1	Establishment of conservation agriculture entrepreneurship and business thrusts.
5.2	Promotion of development and access to conservation agriculture equipment and other inputs.
5.3	Advocacy and lobby for establishment of conservation agriculture supportive policies, legislations.
6.0	**Network management and support functions.**
6.1	Strengthening financial resource management and procurement services.
6.2	Strengthening human resource management, administration and corporate governance.

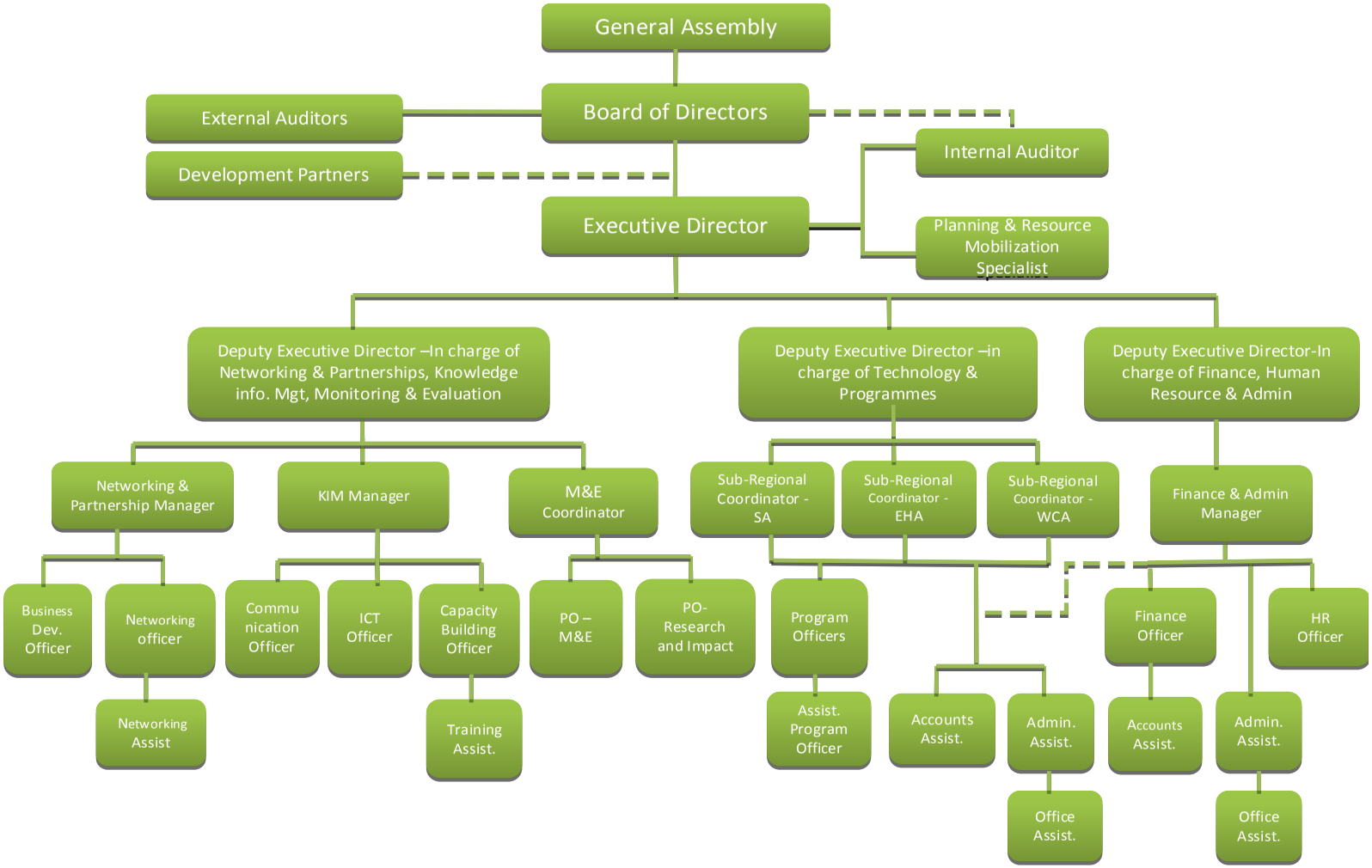
Annex 3: Summary of Network budgetary projection for the period 2013-2017

Technical and support functions strategic thematic areas of focus		Indicative yearly budgetary requirement (USD, 000)					Five Year Total
		2013	2014	2015	2016	2017	
1.0	Adoption and scaling up of conservation agriculture	895.0	1,167.0	1,459.0	1,824.0	2,280.0	**7,625.0**
2.0	Sustainable land management and climate change resilience	481.0	614.0	768.0	960.0	1,200.0	**4,024.0**
3.0	Capacity building and partnerships.	410.0	492.0	614.0	768.0	960.0	**3,244.0**
4.0	Communication, information and knowledge management.	874.0	1,167.0	1,459.0	1,824.0	2,280.0	**7,604.0**
5.0	Entrepreneurship and business development.	469.0	614.0	768.0	960.0	1,200.0	**4,011.0**
6.0	Network management and support functions.	1,591.0	2,089.0	2,611.0	3,264.0	4,080.0	**13,635.0**
Grand Total Budgetary Requirement		**4,719.0**	**6,144.0**	**7,680.0**	**9,600.0**	**12,000.0**	**40,143.0**

Annex 4: Current Network Staff Complement - 2012

Position	Office	Location
1. Executive Secretary	Headquarters	Nairobi, Kenya
2. Sub-Regional Coordinator	East and Horn of Africa	Dar es salaam, Tanzania
3. Sub-Regional Coordinator	West and Central Africa	Ouagadougou, Burkina Faso
4. Sub-Regional Coordinator	Southern Africa	Harare, Zimbabwe
5. Knowledge and Information Manager	Headquarters	Nairobi, Kenya
6. Monitoring and Evaluation Coordinator	Headquarters	Nairobi, Kenya
7. Finance and Administration Manager	Headquarters	Nairobi, Kenya
8. Program Officer	East and Horn of Africa	Dar es salaam, Tanzania
9. Program Officer	Headquarters	Nairobi, Kenya
10. Administration Assistant	Headquarters	Nairobi, Kenya
11. Administration Assistant	East and Horn of Africa	Dar es salaam, Tanzania
12. Administration Assistant	West and Central Africa	Ouagadougou, Burkina Faso
13. Administration Assistant	Southern Africa	Harare, Zimbabwe
14. Information Communication Technology Officer	Headquarters	Nairobi, Kenya
15. Accounts Assistant	Headquarters	Nairobi, Kenya
16. Accounts Assistant	West and Central Africa	Ouagadougou, Burkina Faso
17. Office Assistant	Headquarters	Nairobi, Kenya
18. Office Assistant	West and Central Africa	Ouagadougou, Burkina Faso

Annex 5: Proposed ACT Network Organizational and Management



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