

African Centre for Technology Studies

**ACTS**

*Knowledge for Better Livelihoods*

A young girl with curly hair, wearing a white and green school uniform, is leaning on a concrete wall. In the background, other children are visible in a rural, dusty environment with simple buildings.

**ANNUAL  
REPORT  
2010**

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# **ACTS' Vision**

*Knowledge for better livelihoods*

# **ACTS' Mission**

*To strengthen the capacity and policies  
of African countries and institutions  
to harness science and technology  
for sustainable development*

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## Abbreviations and Acronyms

ACCESA	Adaptation to Climate Change into Sustainable Development Policy Planning and Implementation in Eastern and Southern Africa
ACSAD	The Arab Centre for the Studies of Arid Zones and Drylands
ACTS	African Centre for Technology Studies
AEEP	African European Energy Partnership
AU	African Union
AVU	African Virtual University
CBAA	Climate Change and Adaptation in Africa
CBO	Community-Based Organisation
CCAA	Climate Change Adaptation in Africa Programme
CCAFS	Climate Change, Agriculture and Food Security
CEMA	Capacity Enhancement and Mobilization Action for Energy in Africa
CLACC	Capacity Strengthening in the Least Developed Countries for Adaptation to Climate Change
COL	Commonwealth of Learning
COP	Conference of Parties
CSO	Civil Society Organisation
DfID	Department for International Development
DST	Department of Science and Technology
EAC	East African Community
ECBI	European Capacity Building Initiative
EGM	Expert Group Meeting
ELCI	Environmental Liaison Centre International
Enda-TM	Environment Development Action in the Third World
EPA	Education Partnerships in Africa
ESA	Entomological Society of America
EUEI	European Union Energy Initiative
FAO	Food and Agriculture Organization
GCARD	International Centre for Agricultural Research in the Dry Areas
GNCS	Global Network for Climate Solutions.
GNESD	Global Network on Energy for Sustainable Development
IAASTD	International Assessment of Agricultural Knowledge, Science and Technology for Development

# Abbreviations and Acronyms

ICCCAD	International Centre for Climate Change and Development
ICRAF	The World Agroforestry Centre
IDRC	International Development Research Centre
IFA	International Fertilizer Industry Association
IFAD	International Fund for Agricultural Development
IFS	International Foundation for Science
IGAD	Intergovernmental Authority on Development
IIED	International Institute for Environment and Development
IISD	International Society for the Study of Dissociation
ILRI	International Livestock Research Institute
IPCC	Intergovernmental Panel on Climate Change
IUCN	International Union for Conservation of Nature
IWRM	Integrated Water Resources Management
JIG	Joint Implementation Group
KAIPPG	Kenya AIDS Intervention Prevention Project Group
KARI	Kenya Agricultural Research Centre
KCCWG	Kenya Climate Change Working Group
KESREF	Kenya Sugar Research Foundation
KWS	Kenya Wildlife Service
LDCs	Least Developed Countries
LOCATE	Local Options for Communities to Adapt and Technologies to Enhance Capacity
LVBC	Lake Victoria Basin Commission
LVBDC	Lake Victoria Basin Development Commission
MDGs	Millennium Development Goals
MDMA	Meteorological Department, Ministry of Agriculture
MMUST	Masinde Muliro University of Science and Technology
MOE	Ministry of Energy
MSSRF	Swaminathan Research Foundation
NAPA	National Adaptation Programmes of Action
NGO	Non Governmental Organisations
NRCM	National Research Council of Malawi
NSCT	National Commission for Science and Technology
ODL	Open and Distance Learning
OU	Open University
PISCES	Policy Innovation Systems for Clean Energy Security
PWG	Policy Working Group
RBM	Results Based Management
RIU	Research Into Use
RNRRS	Renewable Natural Resource Research Strategy
RPC	Research Programme Consortium
S&T	Science and Technology
SACRED	Sustainable Agricultural Centre for Research and Development Africa
SCIR	Council for Scientific and Industrial Research
SIWI	Stockholm International Water Institute
SSA	Sub-Saharan Africa
SSNAPP	SouthSouthNorth
STEPS	Social Technological & Environmental Pathways to Sustainability
STPI	Science and Technology Policy Institute
TWAS	Third World Academy of Sciences
TWRM	Transboundary Water Resources Management Training
UCRC	Ugunja Community Resource Centre
UDSM	University of Dar es Salaam

## Abbreviations and Acronyms

UNEP	United Nations Environment Programme
UNEP-DTIE	United Nations Environment Programme Division of Technology, Industry and Economics
UNFCCC COP	United Nations Framework Convention on Climate Change
UNSC	United Nations Security Council
UoE	University of Edinburgh
WCED	World Commission on Environment and Development
WFP	World Food Programme



# Climate Change and Biofuels

*ACTS Executive Director, Prof. Judi W. Wakhungu*

Africa is one of the regions of the world most vulnerable to climate change. This vulnerability and the limitations of poor countries to adapt to the challenges of climate change are now the areas of focus for various organizations that seek to mitigate the effects of climate on the African continent. Reports have established that human activities like burning fossil fuels and changing land-use are modifying the global climate, with temperature rises projected for the next 100 years that could affect human welfare and the environment. Africa is the continent that will suffer most under global warming. Past history gives us lessons on the likely effects of future climate change. Of greatest concern are the large infrequent disturbances to the climate as these will have the most devastating effects. Africa urgently needs more research into the global drivers of climate and



its consequences at local levels. The African Centre for Technology Studies (ACTS) is one of the organizations on the continent which are driving policies that will help move Africa and Africans to adapt to climate change. ACTS is running several projects geared towards helping African countries and institutions put in motion policies that will enhance reaction to and preparedness for the effects of climate change in the short and long term. Such projects as the CBAA, CLACC, and CEMA are leading the way in efforts to mitigate climate change in Africa.

Biofuels are the future. Because of the declining deposits of fossil fuels and the effects of burning the fuels on the environment, Africa must strive to find alternative sources of energy to run its industries and transport sector without harming the delicate connection between land use, food production and the provision of fuel. This is so because there is a need to balance use of land to produce food crops like maize, wheat, rice and other cereals for food and the use of the same land to grow biofuel crops, like jatropha. ACTS, together with four other organizations in three countries and through the project PISCES, committed to policy research, will help balance these issues. In addition, ACTS in collaboration with UNEP carried out a study that led to the publication of a book on agro-climatic and environmental zoning of Kenya, showing the country's biodiversity, variety of land uses and protected areas and sites suitable for biofuel production. The book: *Environmental Suitability and Agro Environmental Zoning of Kenya for Biofuel Production* is available from ACTS Press.

Overall, 2010 has been a year, for ACTS, of reflection and planning. The new Strategic Plan was launched to guide the Centre over the next 4 years. Efforts are being made to develop projects that conform to the new Strategic Plan and development partners, associates and ACTS staff are geared to face its challenges.

As always, our mission and vision remain focused on generating new knowledge for better livelihoods and on strengthening the capacity of African countries and institutions to harness science and technology for sustainable development.

*Professor Judi W. Wakhungu*  
*Executive Director*

## ACTS: An Introduction

The African Centre for Technology Studies - ACTS - is noted for being the first African independent think-tank on the application of science and technology to development. The founders of ACTS envisioned an organisation that would steer Africa from the depths of poverty and dependence on the West to ideas-based development, focusing mainly on development and influencing policies that would help Africa to assert itself in the various fora that discussed emerging new technologies and issues to do with biotechnology, biosafety, climate change and the environment. At the time of its formation, global economic and geopolitical systems were becoming increasingly complex and were marked by unpredictability, particularly as a result of rapid technological change and the beginning of the end to the political cold war.

ACTS was founded in 1988 as a non-governmental organisation based in Nairobi, Kenya. The Centre changed its status in 1997 to an international intergovernmental policy research and outreach institution. According to Article 3 of the ACTS Charter, the objectives of setting up the Centre were to undertake capacity building, to conduct research, to provide advisory services, and to disseminate information on the policy aspects of the application of science and technology for sustainable development. Other notable objectives were to undertake capacity building, to conduct policy research, to provide advisory services and to disseminate information on ways of implementing recommendations of the World Commission on Environment and Development (WCED) and Agenda 21, and also on existing international instruments on environmental governance, with specific emphasis on the needs of African and other developing countries.

### **The founding objectives also included but were not limited to the following:**

- To develop information systems and other analytical tools for the development and management of policy.
- To promote capacity building in the developing countries in the field of policy analysis related to sustainable development.
- To promote, encourage, inspire and undertake technical cooperation activities between and within nations.
- To monitor international trends in science and technology, undertake technology assessment and forecasting and analyze the impacts of new technologies for purposes of providing policy options to developing countries in Africa and elsewhere.
- To conduct, promote, enhance, inspire, study and conduct the building of the institutional framework requisite for the management, assessment, sustainable utilization and conservation of natural resources.
- To organise, support or otherwise participate in conferences, seminars, commissions, symposiums, workshops, lectures, consultations, shows, exhibitions, reviews and appraisals on all aspects of research.
- To foster the exchange of information and networking between the Centre and other governmental and private institutions and individuals that have similar or related interests at the local, national, regional and international levels, with particular emphasis on policy matters.

Since its formation ACTS has worked with like-minded institutions and partners in Africa and in the world in general. These include academic and research institutions, national governments, UN bodies, regional and international processes and NGOs. Several governments have signed the ACTS charter, namely: Kenya, Malawi, Malta, Uganda and Ghana. The World Agroforestry Centre (ICRAF) and the Third World Academy of Sciences are founding organizations of ACTS.

Midway after its inception, ACTS set up structures of governance that reflected its international character and mandate. A framework of governance was put into place that

included a General Assembly, a Governing Council, Committees of the Council, a Secretariat, a College of Scholars, programmes, projects and divisions or departments. The Governing Council has eventually developed to become the main organ of administration for the Centre.

The secretariat administers the day-to-day functions of the Centre and co-ordinates all activities and programmes at the Centre. The secretariat consists of the office of the executive director and other offices such as the Executive Committee, with advice from the Governing Council, may deem appropriate and necessary.

Throughout the Centre's existence, it has been important to have flexibility to adapt and respond to emerging scientific, technological and environmental developments crucial to Africa's development. With such flexibility, the Centre has been able over the years to develop certain niches of competence while establishing numerous collaborative partnerships and wide networks of individuals and organizations of important stakeholders and contributors working for policies to protect the environment while also improving the standards of living in Sub-Saharan Africa.

## ACTS 2010: A Synopsis

During the year 2010 the African Centre for Technology Studies - ACTS - engaged in policy-related research, analysis and advocacy leading to the formulation and implementation of policies which protect the environment, promote sustainable development, enable people to adapt to climate change, to find alternative sources of energy and to contribute to better living standards for Africa. The year was as exciting as it was fruitful.

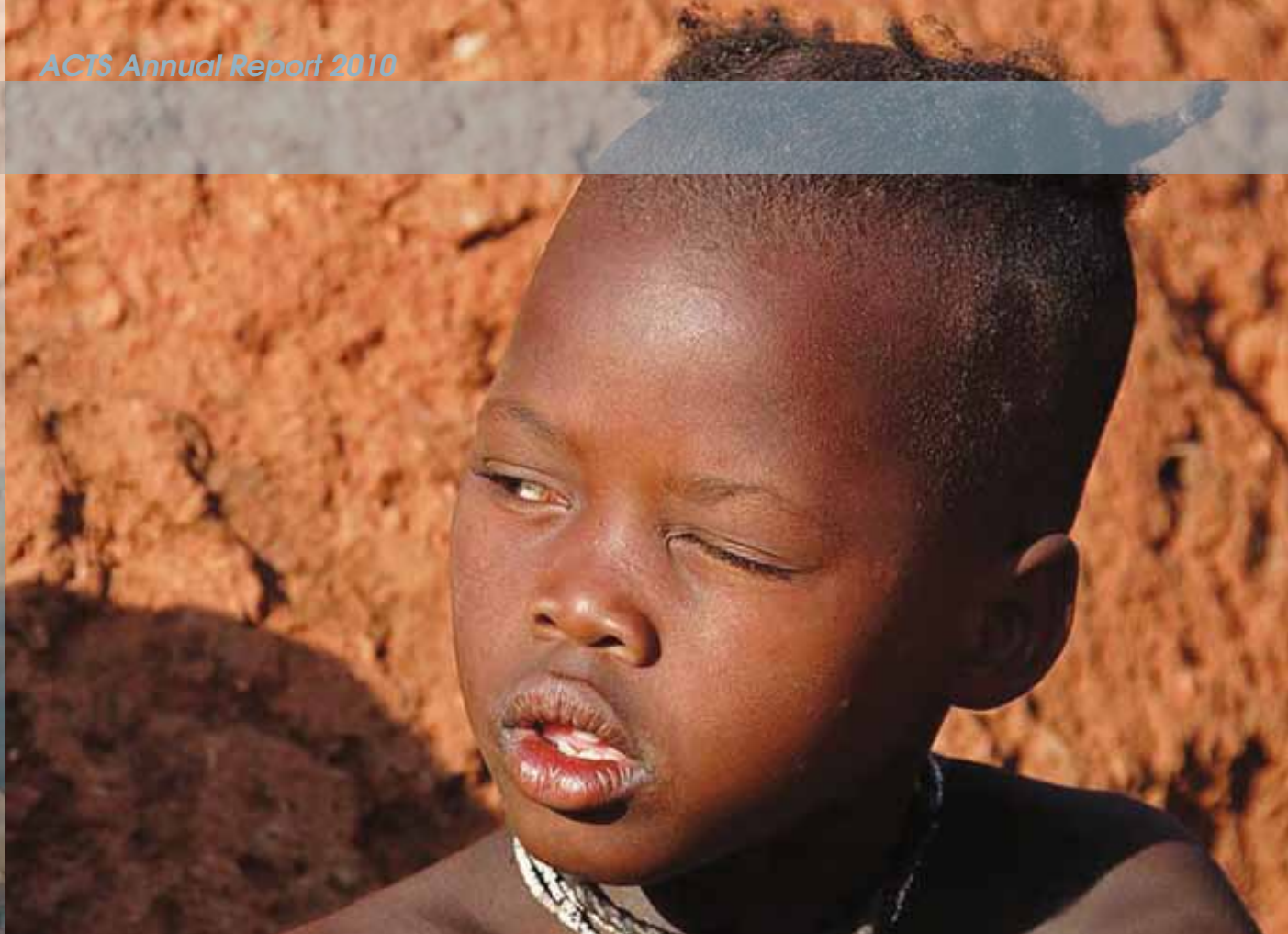
As is the practice, ACTS was involved directly in activities arranged by ourselves or participated in events, workshops, conferences, seminars and training events that were related to our work, arranged by others. These initiatives once again placed the Centre firmly in the first rank of organisations which are pushing the science, technology and innovation-led development agenda for Africa.

The Science and Technology Policy Institute (STPI), the capacity building arm of the Centre, was active in holding training courses aimed at building the capacity of African governments and institutions to face up to the challenges of threatened environments that include climate change, which in turn is a cross-cutting catastrophe that affects all aspects of human life. There was a course entitled "Climate Change and Development," for African academics which focused on designing teaching curriculums for students; and another course which dealt with health innovation in Africa and how to link it to medical access.

The project Policy for Innovation Systems for Clean Energy Security (PISCES) was pre-eminent in this area. This project is co-ordinated by ACTS and has partners in Asia, Africa and the United Kingdom.

The founders of ACTS envisaged an organisation that would steer Africa from the depths of poverty and dependence on the West to ideas-based development, focusing mainly on developing and influencing policies that would help Africa to assert itself in the various forums which discussed emerging new technologies and issues to do with Biotechnology, Biosafety, Climate Change and the Environment.

Large parts of Africa are already affected by extreme climatic occurrences such as droughts, floods and other environmental disasters that afflict Africa without warning. The situation is bound to get worse as not only Africa, but the world at large is sucked into the vortex of the monster that is now generally referred to as climate change. ACTS realized that climate change would impact severely on Africa from the moment that it was formed. Projects focusing on climate change at ACTS are as old as the institution itself. At present, ACTS is the domain for various projects that focus on the mitigation of the impacts of climate change on the African population and other, closely related projects. It is now widely accepted that climate change is a development and environmental challenge not just in Africa but globally. It poses additional problems like degraded environments, high levels of poverty, food insecurity and



HIV/AIDS which are already affecting large parts of Africa.

Unless these issues are faced and addressed urgently, many vulnerable populations could be adversely affected, with their livelihoods and modes of shelter put at risk. This would have a ripple effect globally. In effect, this could mean that many nations would fail to make significant progress in achieving the noble objectives set out in the Millennium Development Goals (MDGs). There is also a risk that development gains thus far may be lost, as climate-related disasters cause damage and result in a myriad losses.

ACTS, fulfilling its mandate as set out in the Strategic Plan 2009 - 2013, engaged stakeholders to discuss pressing issues facing Kenya's food security challenges and to relate them to actions that the country should take in view of climate change and how the country should deal with food deficits. The project, "Pathways In and Out of Maize," carried out in collaboration with the STEPS Centre, dealt with crop development efforts involving maize and other important crops (e.g., horticulture, alternative dryland staples) and examined different types of innovation pathways identified through field studies and advanced by various actors interviewed.

## Outreach

ACTS is well known in Africa for its publications and throughout the period under review, several publications resulting from research projects have been published. Such is the pioneering role for such publications in Africa that ACTS is synonymous with these outputs that are extremely popular in and around East Africa. ACTS has been invited to some workshops and seminars solely because of these publications. Recent examples have been Moi University's 6th International Conference on the theme: "*Knowledge Management and Applied Technological Innovation for Sustainable Development*". Most recently, ACTS Press has been invited to collaborate with the EAC's Lake Victoria Basin Development Commission (LVBDC) in the production of its own publications. To date, ACTS runs three websites that give information on the Centre and its projects.



# Programmes

## Agriculture and Food Security

The Programme focuses on the functioning linkages among research, extension, education and communication in the promotion of agricultural production; policy and legal measures for harnessing agricultural biotechnology for food security; assessing the science content of agricultural policies and development strategies; and improving the state of knowledge on land degradation, land resources tenure and use, agricultural water use and associated best practices.

The main highlight of this Programme was the successful conclusion of the International Assessment of Agricultural Science & Technology for Development (IAASTD) with the publication and distribution of over 4000 IAASTD reports and over 10 high-level outreach meetings. The Lifelong Learning for Farmers (L3F) and Environment Project: Commonwealth of Learning (COL) whose implementation started during the reporting period was also a success.

## International Assessment of Agricultural Knowledge, Science and Technology for Development (IAASTD)

The objective of the International Assessment of Agricultural Knowledge, Science and Technology for Development (IAASTD) was to gauge the impacts of past, present and future agricultural knowledge, science and technology on the reduction of hunger and poverty, on the improvement of rural livelihoods and human health, and on equitable, socially, environmentally and economically sustainable development.

The main activity of this project in 2010 was the conduct of outreach activities and the dissemination of the five reports produced. ACTS has taken a leading role in the distribution of the reports.

The five reports were published in 2008 and the ripple effects of the study can be discerned from various reports, meetings and references to the IAASTD all over the world and on the internet and websites of several organizations. Clearly, the assessment was a success story with which ACTS is proud to have been associated.

## Climate Change and Adaptation in Africa (CBAA), 2010

This project is being conducted in partnership with colleagues in Eastern and Southern Africa, Europe and South Asia. It is an action research project that seeks to test tools for community adaptation, knowledge generation and capacity building. This three-year project is being implemented with selected vulnerable communities in Kenya, Malawi, Sudan, South Africa, Tanzania, Uganda, Zambia and Zimbabwe.

Through collaboration with relevant stakeholders (particularly meteorological services), communities have been selected using the Local Options for Communities to Adapt and Technologies to Enhance Capacity (LOCATE) methodology formerly known as SouthSouthNorth (SS-NAPP) which specifically targets groups most vulnerable to climate change. In project design, special consideration has been given to women, who are particularly vulnerable to climate change impacts.

Participatory and consultative approaches have been and will continue to be adopted and a "learning-by-doing" approach has been and will continue to be applied to reduce vulnerability to climate change at the community level through the application of the adaptation knowledge, experience and technologies generated by this project.

The project will identify ways of communicating climate information to poor and vulnerable communities and, thereafter, from communities to other stakeholders. Capacity building and support will be given to Non Governmental Organizations (NGOs) and communities through training to facilitate integration of climate change into their plans and

activities. Intermediary NGOs have been identified and are working with, and supporting the implementation of community level activities geared towards adaptation to climate change. The project has generated initial information on community based adaptation to climate change and disseminated it to inform other stakeholders, including researchers, NGOs, national and international policy and decision makers etc.

Through the project, and through greater awareness on climate change, local communities and researchers will be empowered to generate, integrate and act upon information on adaptation to climate change. Greater support for adaptation has been elicited from stakeholders.

The entry point of LOCATE is in the specificity of context and is used in designing community based adaptation to climate change. It uses key concepts and elements of the Sustainable Livelihoods Framework. The methodology emphasizes the relationship between different income streams of different communities and the impacts of climate change while assessing vulnerability and adaptation needs. The four phases suggested in the framework endorse the generic steps suggested in the Third Assessment Report of the Intergovernmental Panel on Climate Change (IPCC).

## Activities

- The 4th International Conference on Community Based Adaptation (CBAA) to Climate change was held between 22nd - 27th February, 2010 at the Blue Pearl Hotel Dar es Salaam, Tanzania. An ACTS researcher was in attendance. The conference's aims were to share and consolidate the latest developments in CBA planning and practice in different sectors and countries amongst the practitioners, policy makers, researchers, funders and the communities at risk. There was also the opportunity to disseminate lessons learnt both at the conference and through conference proceedings. It was an opportunity to share knowledge and experiences to help those most vulnerable to climate change.
- The Consultative Group on International Agricultural Research (CGIAR) and the Earth System Science Partnership (ESSP) initiated a Challenge Program on Climate Change, Agriculture and Food Security (CCAFS). CCAFS will create unique possibilities in the search for solutions to climate change and food security problems. A launch conference was held on Tuesday, 4th May, 2010 to engage with the research and development community on the R&D challenges to be tackled in relation to the linkages between climate change, agriculture, natural resource management and food security. The CCAFS Launch Conference was a one day event which brought together the research and development community, policy makers, public and private research organizations, donors, and development agencies, both governmental and non-governmental. Approximately 300 people participated in the launch conference held at the World Agro forestry Centre (ICRAF).
- A CBAA workshop was held in Kisumu from 27th - 28th May, 2010. Participants included officials from NEMA, KARI, KESREF, the Meteorological Department, the Ministry of Agriculture, NGOs, and CBOs, university lecturers and researchers and a representative from the Kisumu City Council. Key facilitation was from a UNEP representative and the Secretary for the Environment, Ministry of the Environment (MoE).
- A meeting was held at ACTS by the CBAA research team to strategize on the development of the Kenya Climate Change Working Group (KCCWG) work plan and the Kenya Climate Change Bill and Accreditation of the delegates working on the "Road to UNFCCC COP".
- The write shop and final CBAA project meeting was held from 8th - 15th November, 2010 at the Hilton Hotel, Nairobi. Partners got a chance to visit the Kenya pilot project in Kisumu.
- ACTS participated in consultation on the World Bank Group Energy Strategy that took place at the Hilton Hotel, Nairobi on 21st May, 2010.
- Developed and updated a CBAA project website.



- Organised consultative stakeholder workshops
- Organised and co-hosted the first African Conference on Community Based Adaptation held in February 2010
- Participated in relevant national and international meetings
- Monitored and evaluated various projects..
- An ACTS researcher presented a CBAA project at the Kenya Climate Change Working Group (KCCWG), shared experiences on communities adapting to climate change and participated in the KCCWG general meetings in 2009 and 2010
- Monitoring and Evaluation for the CBAA pilot projects in Kenya and some of the country partners was undertaken in May, 2010
- The CLACC regional meeting was held in Nairobi 27th - 29th July, 2010.
- ACTS was represented by a researcher who participated in the International Centre for Climate Change and Development's (ICCCAD's) training on Disaster Risk Reduction & Adaptation to climate change from 22nd - 28th July, 2010 in Bangladesh. The course was tailored to increase participants' knowledge and understanding of how to deal with disasters and climate change, and how to link disaster risk reduction with development in the process of adaptation.
- The International Conference on Biodiversity, Land Use and Climate Change was held from 15th -17th September, 2010 in Nairobi, Kenya. The conference brought together conservation scientists, planners, graduate students, managers and policy makers to coordinate species inventories and map out Kenya's biodiversity. The Executive Director of ACTS coordinated the session on policy implications of biodiversity, land use and climate change and guided the conference on developing a policy framework. ACTS also put up a display of publications and posters at the conference.

## Environmental Change and Maize Innovation Pathways in Kenya

This project is being undertaken in collaboration with the STEPS Centre (Social, Technological and Environmental Pathways to Sustainability) of Sussex University, U.K., the Tegemeo Institute of Agricultural Policy and Development, Egerton University and Centre for African Bio-Entrepreneurship (CABE), Kenya. The project takes maize in Kenya as a lens through which to explore different responses to environmental change. As the primary staple crop and a fundamental part of people's livelihood systems, maize is culturally and politically important and already the focus of major research and development efforts. Developments in maize will provide a starting point from which to trace different types of innovation proposed by various actors. The project is funded by the Economic and Social Research Consortium (ESRC).

Two of the most pressing issues facing Kenya's food security challenge relate to how the country will respond to climate change and how it will meet its food and livelihood requirements through maize and other crops. This project has focused on maize as a window through which to explore different social and technological responses to environmental change. As Kenya's primary staple crop and a fundamental part of many poor peoples' livelihood systems, maize is culturally and politically significant and thus already the focus of major research and development efforts. For these reasons, crop development efforts involving maize and other important crops (e.g., horticulture, alternative dryland staples) provided (EDITOR: Reported Diction) the starting point for discussion, which examined different types of innovation pathways identified through field studies and advanced by various actors interviewed for the project - public agricultural research institutions, government programmes, donors and private companies, as well as those practiced within communities, NGOs and civil society groups, in response to growing risk and uncertainty in the environment. At issue were the varying ways in which people in these different institutional and geographic locations understood and framed 'resilience' and how these framing assumptions shaped their policy agendas and, in particular, steered technical and social solutions, programme designs and resources in certain directions and not others.

A one day, review and planning workshop on Environmental Change and Maize Innovation Pathways was held in Kenya on Monday, 22nd March, 2010 at the Hilton Hotel, Nairobi. The workshop, which marked the end of phase 2 of the STEPS environmental change project was aimed at disseminating research findings to the decision makers and other stakeholders linked to food security and climate change.

## Lifelong Learning for Farmers (L3F) and Commonwealth of Learning (COL)

The Commonwealth of Learning (COL) entered into agreement with the African Centre for Technology Studies (ACTS) to serve as the lead partner to coordinate and facilitate activities with the partner institutions identified to build their capacity in lifelong learning for sustainable livelihoods through the use of open and distance learning (ODL). This project seeks to initiate and coordinate the Lifelong Learning for Farmers activities at the Masinde Muliro University of Science and Technology (MMUST), the Ugunja Community Resource Centre (UCRC), the Sustainable Agricultural Centre for Research and Development Africa (SACRED) and the Kenya AIDs Intervention Prevention Project Group (KAIPPG) in Western Kenya. The project aims to strengthen the horizontal transfer of knowledge through facilitating farmer to farmer learning to achieve a multiplier effect. Another goal is to sensitize the commercial banks and marketing agencies to ensure active collaboration by providing credit support and capacity building for the L3F farmers. The project is funded by the Commonwealth of Learning (COL). Under the agreement, it provides seed funds every three months to facilitate its sustainability in the near future. The project has identified seven community livelihood options in the project site that will enhance the community adaptation to climate change. Secondly, the partners have been

trained on open and distant learning to facilitate knowledge and information sharing among the L3F partners and stakeholders.

## Enset Agro-Processing: Pilot Scale Production of Starch for Industrial and Food Application

Enset (*Enset ventricosum*) is a food crop grown in Southwest Ethiopia as the main source of two staple foods, kocho and bulla. The pseudostem and corm are the edible parts of the plant that accumulate large quantities of starch. Despite the important role it plays in food security and potential industrial use, to date, Enset cultivation has remained confined to Southwest Ethiopia. It is widely distributed in Eastern Africa but no studies have been conducted to map out this distribution. A part from Ethiopia, very little economic use is associated with this species in the other eastern Africa countries. The project is being implemented in four countries Tanzania (University of Dar Es Salaam), Kenya (ACTS), Uganda (National Agricultural Research Organization) and Ethiopia (University of Addis Ababa). The objectives of this study are to: Establish a pilot scale agro-processing plant for the isolation, modification, and hydrolysis of starch from enset; Develop enset starch -- cereal composite flour for the preparation of different foods and drinks and thus increase its potential market; and study the distribution of wild enset in Kenya, Tanzania, and Uganda; determine its starch content; and investigate the possibility for its domestication or introduction in the agricultural system of each country in the future. The project is funded by Bio-EARN. Activities implemented in Kenya included mapping of Enset distribution and carrying out starch analysis of various provenances.

## Main Activities Implemented in 2010 Under The Agriculture and Food Security Programme:

- Outreach and dissemination of IAASTD findings.
- Capacity building workshop for project partners on Multi-Criteria Mapping tool and methodology.
- Multi-Criteria interviews with relevant stakeholders at national and local level.
- Mapping of Enset distribution in Kenya and starch analysis of Enset provenances.
- Organized a training programme in collaboration with MMUST on Open and Distance Learning (ODL) for development.
- Identification of livelihoods options by 3 partnering NGOs.
- Value chain analysis.
- Identification of L3F stakeholders.
- Participated in the sixth Pan-Commonwealth Forum on Open Learn, Kochi, India.
- Dissemination workshops.
- Publication of policy and working briefs.

## Outputs in 2010

- Identify capacity gaps in policies governing biotechnology, trade, food security and food aid identified in the region.
- Established linkages and active collaboration in research, extension, education & communication to promote agricultural production & food security.
- MCM mapping materials developed to be used for the second phase of the maize innovation project.
- Distribution map of Enset in Kenya produced and starch content determined per provenance.
- Framework for environmental sustainability of the livelihood options developed.
- Capacity building for stakeholders on ODL initiated.
- Environmentally friendly livelihood options identified: Garment making, poultry farming, dairy farming, cassava production, tissue culture bananas, groundnut production and orange fleshed sweet potatoes.



- Value-Chain Analysis for the above identified livelihood options was done by respective organisations
- L3F Stakeholders Identified: Ministry of Agriculture, Meteorological Department, local commercial banks (Equity Bank, Kenya Commercial Bank, K-Rep Bank), Horticultural Crops Development Authority (HCDA), local supermarkets and shops, local schools, African Virtual University (AVU)
- Participated in the Sixth Pan-Commonwealth Forum on Open Learn, Kochi, India

## Energy and Water Security

The goal of this programme is to contribute to enlarging the proportion of people with access to safe, reliable, affordable energy and water supply. Climate change, energy and water projects are all executed under this programme. The activities under this theme enabled ACTS to have greater impacts on energy, water and climate change issues in the region and at the UNFCCC. The Centre also sought ways to research and provide information on climate change adaptation with the aim of informing policies on environment and sustainable development in Africa. This Programme was the Centre's most active in 2010 due to the global concern with vulnerability and adaptation to climate change. A major achievement was the development of the Kenya National Biofuel Policy and preparing the government negotiators for COP. The ACTS'-PISCES project is spearheading the drafting of this national policy. Through numerous stakeholders' consultations, the Final Draft Policy has been produced under ACTS leadership.

### European Capacity Building Initiative (ECBI)

The European Capacity Building Initiative (ECBI) was set up in 2005 to overcome some of the limitations of the United Nations negotiations on climate as a consequence of the different experiences evoked by different delegations. The ECBI is divided into three integrated programmes, dealing with three complementary types of capacity and trust building activities that address the different aspects of negotiating capacity (analytic and procedural) and the different user groups (scientific researchers and negotiators). ACTS' role is to organize meetings

for Eastern and Southern Africa negotiators from ministries of finance and the environment. The ECBI aims to promote a more level playing field between government delegations to international negotiations on climate change and to enhance mutual understanding and trust between European and developing countries.

## Activities

An ECBI regional workshop was held in Nairobi, Kenya with participants from Kenya, Ethiopia, the Comoros, Lesotho, Uganda, Mozambique, Zimbabwe, Malawi, Botswana, South Africa, and the United Kingdom. ACTS participated both as a co-host with the government of Kenya and IIED but also used the platform to conduct knowledge sharing and outreach activities. More information about ECBI activities and engagements can be found at: <http://www.eurocapacity.org/homepage.shtml>

## The Way Forward

Participants acknowledged and suggested the following in the wake of negotiations and post COP 15:

- The need to strategise on better and more effective ways of negotiating.
- The need for capacity building amongst negotiators
- The need to hasten the pace of acquiring knowledge amongst key actors by facilitating networking skills amongst negotiators as “the climate change train was running very quickly.”
- The need to set up an institutional framework that facilitates effective participation from ESA negotiators and to arrange more than one meeting a year in order to develop concrete plans to feed into COP sessions.
- The need to have platforms to discuss what was happening in other negotiation blocks in order to understand the differing dynamics.
- The need to institutionalize climate change at the highest levels.
- The need for negotiators to ask themselves hard questions about the implications of the various outcomes for their different countries.
- The pressing need to streamline outcomes from negotiators with existing policies and national strategies, underlining an urgent need to enhance links between negotiators, foreign missions and politicians in order to address existing gaps in problem solving.

## Capacity Strengthening in the Least Developed Countries for Adaptation to Climate Change (CLACC)

The Capacity Strengthening in the Least Developed Countries for Adaptation to Climate Change (CLACC) is a global support programme working in the Least Developed Countries (LDCs), to strengthen their efforts to adapt to the impacts of climate change. CLACC aims to strengthen civil society to enable it to participate effectively in climate change initiatives, including government-led processes such as the National Adaptation Programmes of Action (NAPA). CLACC aims to strengthen the capacity of civil society in the LDCs to adapt to climate change and to foster adaptive capacity amongst the most vulnerable groups. CLACC also aims to establish an information and knowledge system to help countries deal with the adverse impacts of climate change, to integrate adaptation to climate change into the work of key non-government institutions, and to mainstream the NAPA process within these institutions.

## Activities

- To prepare and publish a newsletter.

## Integrating Vulnerability and Adaptation to Climate Change into Sustainable Development Policy Planning and Implementation in Eastern and Southern Africa (ACCESA)

The project aims to reduce the vulnerability of communities to the impacts of climate change, thereby improving their well-being and protecting their livelihoods. It also aims to provide global environment benefits by contributing to the mitigation of land degradation and greenhouse gas emissions. To achieve these objectives it promotes the mainstreaming or integration of vulnerability and adaptation to climate change into sustainable development plans and planning processes through pilot projects in three countries.

### Activities

- Develop concepts and a thorough review of literature on climate change generally, and in particular, of that which focuses on human security.
- Commission and conduct case studies on the impact of climate change on human security in selected countries of the region.
- Hold consultative sessions with policy makers, other stakeholders and local communities to identify and promote specific ways and means of integrating measures to address climate change in current and future conflict/security resolutions.
- Prepare, publish and widely disseminate policy guidelines, reports, proceedings and/or a volume of books based on the project's research to improve understanding of conflicts and insecurities arising from climate related disasters.
- Organise a regional conference on alternative conflict management approaches with an emphasis on the role of climate change information, in collaboration with the African Union (AU) or Intergovernmental Authority on Development (IGAD).
- Conduct training courses for stakeholders on climate change and human security in selected countries.
- Conduct outreach activities at national, regional and global levels (with active engagement and participation in the UNFCCC negotiation process). The activities should be linked to CBAA and CLACC projects.





## Integrated Water Resources Management (IWRM) for Pastoralists in African Drylands: Meeting the Climate Change-Security Challenge

The drylands of the world are among the most vulnerable to climate change. At the same time, the resilience of human and natural systems in dryland areas has been remarkable, especially in the Eastern and Horn of Africa. Climate change is an additional stress to this region that is already experiencing other pressures. A timely signaling of the impacts of climate change on security by the United Nations Security Council (UNSC) is a significant gesture. The pastoralists in the drylands have been classified as a marginalised group, living in fragile ecosystems with multiple stresses. Efforts to understand the effects of climate change and to define successful adaptation strategies are still in their infancy. The development of sector and location-specific technologies and methodologies is needed. The project aims to identify and analyse institutional barriers and opportunities for implementing IWRM among pastoralists in the Eastern and Horn of Africa drylands, and attempts to offer solutions to the barriers in a way that takes maximum advantage of the possibility for corollary contributions to peace-building and climate change adaptation.

### The project will, specifically seek:

- To strengthen policies supportive of IWRM in the pastoral areas.
- To examine existing IWRM initiatives in the region and how they can be applied in the pastoral drylands.
- To expand the body of knowledge and information on the status of IWRM initiatives.
- To widen the understanding of local strategies for managing water conflicts, including innovative uses of institutional implements and drought management technologies.
- To enlarge the participation of local actors in the formation of supportive policy environments.
- To increase local capacities to adopt institutional and technological innovations in IWRM.

### Activities

- Prepare a literature review of national water policies for the various East and Horn of Africa countries to establish their nature and adequacy in promoting IWRM.
- Identify and select project case studies.
- Conduct field studies in each of the selected pastoral areas to identify and inquire into specific policies, by-laws and institutions that either promote or undermine the management of the water catchment areas by associated communities.
- Conduct field studies to review and identify the common water spots used by the pastoral communities and conflicts over the competitive use of the resource.
- Hold consultative sessions with different water project communities, policy makers, stakeholders and pastoral communities on the IWRM, climate change adaptation and peace.
- Prepare and publish policy guidelines on IWRM along with progressive tools such as water demand management and Payments for Environmental Services (PAES).

## Policy Innovation Systems for Clean Energy Security (PISCES)

Policy Innovation Systems for Clean Energy Security (PISCES) is a five year initiative funded by the UK's Department for International Development (DfID). PISCES is being implemented in Kenya, India, Sri Lanka and Tanzania to provide policy makers with new information and approaches which they can apply to unlock the potential of bioenergy to improve energy access and livelihoods in poor communities.

PISCES is funded by the UK's Department for International Development (DfID). It is managed from ACTS with four other members, forming a consortium. The other members are the University of Dar es Salaam (UDSM) in Tanzania, the University of Edinburgh (UoE) in the UK, the Swaminathan Research Foundation (MSSRF), in India and Practical Action UK. Practical Action East Africa and South East Asia is a fifth member of the group.

## Activities

- The Ministry of Energy in collaboration with African Centre for Technology Studies (ACTS), Policy Innovation Systems for Clean Energy Security (PISCES) Project and the United Nations Environmental Programme (UNEP) held a stakeholders' workshop for reviewing the first draft of the National Biofuels Policy from 1st - 2nd February, 2010 at Merica Hotel, Nakuru. The objective of holding the workshop was for stakeholders to review the draft Biofuels Policy and to provide comments.
- The University of Dar es Salaam hosted the PISCES Joint Implementation Group (JIG), meeting which was held at the Snow Crest Hotel, Arusha Tanzania from 1st - 3rd March, 2010.
- The Research Programme Consortium of the PISCES project held a three-day project meeting in Arusha, Tanzania, from 1st - 3rd March, 2010. The meeting was hosted by the University of Dar es Salaam, a partner in the PISCES project.
- The Project Manager attended various Quarterly Policy Working Group (PWG) meetings that continued to take place with good inputs and attendance chaired by the Sustainable Energy (SL) Authority.
- A two day residential Biomass Policy Workshop was held from 14th - 15th May, 2010 with a wider stakeholder group to produce a Policy Brief and roadmap for Bioenergy in Sri Lanka.
- A PISCES JIG meeting was held in Nairobi at the Windsor Hotel. The meeting was held from 21st - 22nd June, 2010. It was hosted by ACTS.
- A PISCES JIG meeting was held in India, Udaipur, Udai Bagh Hotel. The meeting took place from 25th - 26th October, 2010. Day one involved the discussion of the project progress and the log frame, whereas the second day consisted of a workshop with different stakeholders at the Maharana Pratap University of Agriculture and Technology (MPUAT), and thereafter a field visit to the Renewable Energy Centre and to Jhadol which is a village that uses improved cooking stoves.
- ACTS, the PISCES Project and the United Nations Environmental Programme (UNEP) organized an International Workshop on Methodology for Agro-environmental Zoning for Biofuel Production. This event was held in Nairobi from 7th - 9th September, 2010.



## Capacity Enhancement and Mobilization Action (CEMA) for the Africa European Union Energy Initiative (EUEI) Energy Partnership (AEEP)

UNEP/UNEP Risø Centre developed a proposal to support EUEI in connection with Africa-EU Energy partnership. The goal was to improve the capacity of African institutions and stakeholders to participate in the dialogue. Specific objectives of CEMA are: Strengthened capacity of African regional and national institutions; Mobilising and utilising existing expertise, in areas that underpin sound and appropriate energy policies and interventions, in particular participation in dialogue with development partners including EC and EU Member States; Improved capacity of key African energy stakeholders to mobilise financing for energy investments, including the financing opportunities associated with the AEEP. The CEMA project is funded by European Commission. The project runs for 42 months and is in its second year of implementation. The role of ACTS is to contribute to the Project as the Regional Contact Point for East Africa. This project is in line with the ACTS Energy and Water Security Programme that seeks to support the generation and development of policies that enable more people to have better access to safe, reliable, affordable energy and water supply.

### Main Activities

- ACTS consulted with regional institutions and organizations as well as individual experts in the region.
- Collecting information regarding the capacity gap to accelerate access to modern energy services.
- Conducted workshops, in accordance with work package 4.
- Targeted engagement with national and regional stakeholders on their needs for capacity enhancement and mobilization in accordance with work package 5, and
- Assembled project information for the database, in accordance with work package 3.
- The project Manager, attended a regional workshop on "Access to Modern Energy Services in Urban and Peri-urban areas: Policies, Practices and Knowledge Sharing" at the Novotel Hotel in Dakar, Senegal.
- ACTS conducted a Capacity Enhancement & Mobilization Action - Eastern and Southern Africa (CEMA) workshop with regards to the Africa-EU Energy Partnership.
- The Capacity Enhancement and Mobilisation Action - Eastern and Southern Africa workshop was held from 31st August - 2nd September, 2010 at the Silver Springs Hotel in Nairobi.

### Outputs

- Increased knowledge sharing on African and EU energy projects
- Enhanced networking with partners
- Actively participated in a joint Africa-EU partnership forum
- Database for energy stakeholders for Eastern Africa collected and format for CEMA database developed

## Solar Learning: Facilitating South-South-North Transfer of Social and Technological Innovations on Solar Energy

The project is in collaboration between the University of Oslo, Norway, The Energy and Resources Institute (TERI) India, and the African Centre for Technology Studies (ACTS), Kenya. The project is currently at concept stage and seeks support for a workshop within the research project: "Village scale solar systems for development: Transfer of social and technological innovations between India and Kenya" (aka Solar Transitions).

The project aims to contribute to the understanding of success factors and lessons learned in the process of implementation and use of solar power plants in local communities in

the South, well as how such experiences can be transferred and adapted to other communities and countries. This proposal, Solar Learning, is submitted by three of the partners in the Solar Transitions project, representing Kenya, India and Norway.

As part of action research, Solar Learning seeks funding for a workshop in India where researchers and representatives of governments, organisations and local communities in Kenya will be given insights into the diversity of activities that have been carried out within implementation and use of solar energy systems in the Sunderban Islands in West Bengal in India. This will contribute to a process of South-South transfer of lessons between India and Kenya and facilitate the implementation of a solar energy project in the latter.

The Solar Learning workshop will also provide important learning not only for Kenyan but also for Indian, Norwegian and other researchers and practitioners within the implementation and social organisation of solar energy supply.

The proposed workshop is part of an ongoing research project, "Village scale solar systems for development: Transfer of social and technological innovations between India and Kenya", or Solar Transitions, to last from April 2009 to April 2013.

## Activities

- Concept development and proposal writing for Solar Transitions and Solar Learning.

## Transboundary Water Resources Management Training (TWRM)

The objective of the training programme is to develop capacity of relevant professionals and their organisations to support a sustainable development process in the Lake Victoria Region, and to stimulate improved network between professionals in the Lake Victoria Basin. The fourth year of the training programme was conducted in Sweden from 22nd - 28th, February 2010. Presentations of key aspects of transboundary water management were covered: hydro-politics, a decision support tool for water allocation at the transboundary level, strategic communication, stakeholder analysis, and international water law and Implication of Climate change to shared water resources.

ACTS is implementing this project in collaboration with other partners. In 2010, twenty-eight water professionals from East Africa were taken through a training programme that developed participants' negotiation and communication skills through a role play simulating the setting-up of a river basin commission. The project management team liaised with relevant ministries to identify areas of need and participants for training in 2010/2011.

The training programme is financed by Sida and implemented by Ramboll Natura and the Stockholm International Water Institute (SIWI) of Sweden together with ACTS.

## Activities

- Twenty-eight water professionals from the Eastern Africa Countries were taken through the training programme;
- The communication and negotiation skills of participants were developed through a role play simulating the setting-up of a river basin commission;
- The Project Management Team liaised with relevant ministries to identify areas of need and participants for training in 2009/2010.
- Module 2 of the training programme was conducted in Kigali, Rwanda from 25th October - 5th November, 2010.
- Monitoring and evaluation of the training programme was conducted between October and December 2010.
- Introductory workshops were conducted at participant institutions in preparation for Module 2.

## Future Activities

- Prepare for the third phase of the project;
- Follow up on individual projects.
- Prepare a monitoring report;
- Conduct a final, training module in February 2011,

## Training Programme

ACTS together with Ramboll Natura and the Stockholm International Institute held a two-week training programme on Transboundary Water Resources Management, in Eastern Africa. It is recognized that sustainable use of shared water resources can only be realized through cooperation and benefit-sharing. Therefore, it is important for stakeholders in the shared water sector to understand the interrelations of activities and their implications to the Lake Victoria Basin. The objective of the training programme was to develop the capacity of professionals involved in shared water resources and their organisations to support a sustainable development process in the Lake Victoria Region, and to stimulate improved network between professionals in the Lake Victoria Basin.

The second phase in 2009/10 included a field visit to Kagera basin in Rwanda. Prior to this training, a series of introductory workshops were held at participant's institutions to introduce the training programme to participants, their colleagues and their supervisors for the benefit of the institution.



The major output of this training programme was the emergence of high-level officers trained in transboundary water issues, particularly international water law, benefit sharing, hydropolitics, transboundary water negotiation skills, among many other skills. The training programme contributed to the Centre's Strategic Plan outputs. The project is funded by Sida through Ramboll Natura. The core intellectual and technical input was provided by ACTS' in-house research staff and associates.

## Activities

Activities that were influenced by this work included the publication and launch of the book *Challenges and Prospects for a New Nile Water Agreement*. The book addresses current concerns over the Nile waters. It points out the core problem on the issue of inequitable allocation of rights and obligations over the beneficial utilisation of the waters of the Nile by all riparian states.

Eventually, the training programme will contribute to the development of better policies and institutional frameworks on water services. It will also lead to improved understanding and awareness among relevant stakeholders in transboundary water use and management.

## Capacity and Strengths

ACTS successfully partnered with Ramboll Natura in organising various training workshops and field visits under this project. ACTS has also identified and engaged key resource people in the training sessions. The training facilitated the sharing of experiences in water management among countries of the Lake Victoria Basin.



# Biodiversity and Natural Resource Management

The purpose of Biodiversity and Natural Resources Management Programme is to develop and promote policies for sustainable management of biodiversity, environmental governance, domestication of multilateral environmental agreements, and understanding the linkages between ecology, conflicts and peace building. Apart from concept note development, no activities were carried out during the reporting period because of inadequate funding.

## Main Activities

- Impact of community forest management in Mt Kenya area (supporting a PhD student).
- Coordinated Policy Working Group during the 2010 Kenya International Biodiversity, Landuse & Climate Change conference, 15th - 17th September, 2010.
- Developed a proposal on *Prosopis* spp management.

## Output

- Build capacity on biodiversity and natural resource management by supporting PhD.
- Policy brief & recommendations.
- Developed a concept note for stakeholder involvement in comprehensive management of *Prosopis* spp in Kenya.

## Beneficiaries

- Target communities
- Government agencies involved in natural resources management, e.g. KFS, KWS, etc NGOs, CBO.
- Private sector.
- Research institutions and Universities.

## Challenges

- There has been little financial flow in this programme in the last few years.

## Gender and Environmental Consideration

ACTS supported a female PhD student to study the impact of community forest management in Mt Kenya area.

The Institute is sensitive about gender considerations in its pedagogy, and maintains a gender balance in all its courses. This was demonstrated by the fact that, out of 200 participants trained in the scheduled courses over 100 have been women.

## Science and Technology Policy Institute (STPI)

ACTS' Science and Technology Policy Institute (STPI) is a training institution that focuses on providing training programmes on two broad areas; science and technology literacy, and related policy issues. The Institute has developed in two phases. Phase one mainly involved planning activities like capacity building for the institute, staff recruitment, curriculum development, initial marketing of the Institute and establishing links with universities. A pilot programme consisting of two short courses with about twenty Kenyan students for each was conducted in September and October 2005. In the second phase beginning 2006, ACTS worked towards commercializing the Institute. In this phase, participants were sourced from all ACTS' member states. The future plan was to bring on board other African countries based on the results of the second phase implementation.

In year three (2007), the institute revised its curriculums, as necessary, based both on participatory evaluations of previous courses, changes in technology and international environmental governance frameworks. In years 2008 and 2009, the Training Institute has been built up more strategically and systemically to enhance and complement the programme work carried out at the centre. The Institute's activities have been integrated into regular research work to ensure better overall coherence, synergy and quality assurance of all capacity-building carried out in order to impact ACTS as an organisation. The Institute is currently revising the business plan for 2009 - 2013. The design of the training programmes is akin to the Short Course or Executive Programmes format, with a post-graduate curriculum accredited by internationally acclaimed universities, coordinated and hosted by ACTS.

The courses are targeted at technical and management staff in NGOs' government ministries. Research is accredited by a number of overseas universities. The objective this is to provide academic credibility and to enable universities themselves to play a more direct role. On the international front, the current candidate bodies are Penn State University (US), Harvard University (US), and Strathclyde University (UK). This initiative is critical and timely and comes at a time when the role of science and technology (S&T) in economic development is increasingly being recognized not just in the developed world, but in developing countries as well. More than ever, development institutions, not least the World Bank, are increasingly accepting and demonstrating strong correlations between the percentages of GDP spent in research and development and GDP per capita. Furthermore, S&T is increasingly becoming part of the agenda of both the international community and policy makers in developing countries. These strengthen prospects for the viability of the STPI and for ACTS to realize its vision of "Knowledge for better livelihoods." The strategic expectation here is that through the Institute, ACTS is better placed to influence change and complement other strategies adopted by the African governments to realize the Millennium Development Goals (MDGs).

The secretariat has undertaken further market research and participated in other relevant programmes. It found that though there are many capacity building courses across the Sub-Saharan (SSA) Region, most of these are designed as fairly narrow activities dealing with provision of specific skills. As it is, there are no programmes dealing systematically with policy analysis capacity. Thus, ACTS decided to establish the Institute to meet the same need but in a more cost effective manner.



# Annex 1

## ACTS Staff, 2010

**Prof. Judi Wakhungu**  
Executive Director

**Thomas Ogaga**  
Procurement Officer

**Benard Muok**  
Director of Programmes

**Millie Mwangi**  
Communications Assistant

**Charles Tonui**  
Research / Project Assistant

**Simon Ihumba**  
Office Assistant / Caretaker

**Joan Kungu**  
Research Fellow

**Susan Murunga**  
PA to Director

**Harrison Maganga**  
Publications/Public Relations Officer

**Mary Muthoni**  
Administrative Assistant/Publications

**Fridah Nkirote**  
Finance & Administration Manager

**Andrew Adwera**  
Research Fellow

**Gloria Nyawira**  
Research / Project Assistant

**Dorothy Moraa**  
Administrative Assistant

**David Njenga**  
Project Accountant

**Michael Mbugua**  
Office Driver / Office Assistant



## Annex 2

### ACTS Finance and Administration Report

## Human Resources Report

During the year, human resource management was enhanced by development and improvement of a number of policies and systems. The Staff Performance Management System was improved and the new system was operationalized from January 2010. The Staff Development Policy was also developed and implemented during the year. ACTS maintains a regular staff of about 18 at any one given time. The Centre periodically hosts interns, consultants and temporary staff in the various programmes and projects.

David Njenga Kiereini and Michael Mbugua Muchiri joined ACTS at the beginning of September 2010. David Njenga is Project Accountant with overall responsibilities of preparing timely, economic and accurate accounting and financial management information necessary to manage the Centre and meet both internal and donor reporting requirements.

Michael Mbugua is the Driver/Office Assistant and his overall responsibilities are undertaking official driving duties and clerical work in the office.

Dorothy Moraa Osoro, who left ACTS is back on board and serves as the Administrative Assistant responsible for overseeing administrative duties. She joined ACTS in June 2010.

Gloria Nyawira Muhoro who served as an intern at ACTS from May 15, 2009 was confirmed as a Research/Programme Assistant in May 2010. Her overall responsibility is to assist in providing research and administrative support.

Richard Kibet served as an intern from May 10, 2010 to August 9, 2010. Mr. Kibet conducted research and organized logistics for PISCES and CBAA projects. He left the Centre to complete his undergraduate degree.

Shadrack Kirui left ACTS to pursue further studies in August 2010. Ronald Ajengo and Johnson Njenga also left the Centre in 2010.

## Governing Council Annual Meeting

The ACTS Governing Council held its 13th session of the Annual General Meeting and the 9th Donors meeting respectively from 20th - 22nd January, 2010 at the Lord Erroll in Nairobi, Kenya.

The Programme Committee and Nominations Committee met on Wednesday, 20th January, 2010 from 10.00 a.m. This meeting was followed by a joint GC and Donors' session on Thursday, 21st January, 2010. The major activities during the GC donors meeting were to review the programme and project activities in 2009, review and approve the Programme of Work 2010 and Budget. There was a short seminar on the same day on "Highlights of the Draft Biofuel Policy" by Faith Odongo of the Ministry of Energy. The GC concluded its business on Friday, 22nd January, 2010.

## Governing Council & Donors' Meetings, 2009-2010

The 13th Session of ACTS Governing Council (GC) and 8th ACTS Donors' Meeting were held from the 20th - 22nd January, 2010 in Nairobi. The GC received the Report of the Programme Implementation for 2009, approved the Programme of Work and Budget for 2010, and received the Report from the Chair of Executive Committee and Chair of the Nominations Committee.

## Governing Council Members' Activities

1. Dr. Henderson Chimoyo was appointed as Director General of the National Commission for Science and Technology (NSCT). NSCT is a semi-autonomous parastatal organization which was formed as a result of the merging of the Department of Science and Technology (DST) and the National Research Council of Malawi (NRCM). Dr. Chimoyo replaced Mr. Alick Manda on the Council in January 2010.

2. Dr. Michael Stahl retired as the Director of IFS (in full) in September 2010. Dr. Graham Haylor (UK) is now the new Director, effective October 2010.

During Dr. Stahl's eight year tenure at IFS their program expanded in terms of activities and funding. IFS prepared a five year program with a number of innovative elements which were successfully implemented. Dr. Stahl's greatest satisfaction comes from the fact that from mid-2002 to mid-2010, close to two thousand young scientists were awarded research grants and more than three thousand five hundred young scientists attended IFS courses, workshops and other events and as a result got the opportunity to embark on scientific careers.

We wish Dr. Stahl the best in his retirement. He will, however, continue to serve on the ACTS Governing Council as Chair of the Programme Committee.

## Annex 3

### Training Programmes

#### **Health Innovation in Africa: Linking Innovation and Access to Medicine**

Health Innovation in Africa: Linking Innovation and Access to Medicine, 16th - 18th February, 2010, Nairobi Kenya. ACTS and the Science and Technology Policy Institute (STPI) in collaboration with INNOGEN Centre based in the UK conducted the Health Innovation in Africa: Linking Innovation and Access to Medicine. The course brought together stakeholders and actors from health sectors and non-health sectors in East Africa. A unique aspect was engaging a set of various disciplines and actors with direct and indirect interests in the sector.

#### **Research into Use Training Course**

Research into Use Training Course, with a focus on the 'Best Bets', from 15th -17th March, 2010, in Nairobi, Kenya. ACTS' STPI, as the RIU Focal point in Africa conducted a training course that focused on the Best Bets RIU programme components. The RIU programme began in July 2006 as a follow up to DFID's 220million pounds investment in Renewable Natural Resource Research Strategy (RNRRS).

#### **Translating Health Research into Policy and Practice**

ACTS participated in a scientific workshop held in Naivasha from 29th March - 1st April, 2010. The workshop was an ongoing project led by University of Nairobi, school of infectious diseases and other key partners working in and around health delivery related issues in Kenya. The workshop aimed at consolidating ideas that will guide the contributing of innovative policies for health deliveries. ACTS participation here was due to its continued leadership and pioneering of the health innovation executive training courses that it has continued to provide to practitioners in the region.

#### **Training course on Climate Change and Development**

A Training Course on Climate Change and Development for African academics on designing teaching curricular for students was held from 2nd - 8th May, 2010. The course was conducted in collaboration with International Centre for Climate Change and Development, based in Dhaka, Bangladesh and IIED-UK was aimed at providing the basic scientific background on climate change, then look at the issues of adaptation that are relevant for African countries. Later, the course converted into designing courses to transmit that knowledge and build

capacity of staff and students. The course had certain objectives; namely: to provide basic scientific background on climate change, then to look at the issues of adaptation that are relevant for African countries and, finally, to elaborate on how to design courses to transmit that knowledge and build the capacity of staff and students.

### **Online Training Workshops conducted by ACTS and Open University (OU)**

Online Training Workshops were conducted within the ACTS-OU online training course (T890) for Innovation in Agriculture, Health and Energy in Kenya, on June 2010 and a follow up workshop in October 2010. The ACTS Institute in collaboration with the Open University (UK) successfully completed the six-month, postgraduate distance learning course on "Technology Policy and Innovation Research" financed by a grant from the British Council under its Education Partnerships in Africa (EPA) Programme in a special project to support employability has enhanced the innovation skills of those wishing to work in, or currently working in, relevant occupations. The aim of the training was to test the use of OU materials to enhance the analytical, practical and investigative skills of those employed, or wishing to be employed, in social and technological innovation. The training took place, with a small group of participants from organizations working in the agriculture, health and energy sectors. The participants studied a postgraduate distance learning module in Technology Policy and Innovation Research with the OU, and were then involved in workshops to see how they could use their learning for wider dissemination and training opportunities. Two of these workshops took place in June and October, in Nairobi.

### **The Science Café**

ACTS was represented by the research and communication department at the Kenyan Science Cafes on 23rd January, 2010, that looked at the topic "Does Kenya care about Science?" This also gave ACTS an opportunity to conduct an outreach activity for those attending the discussions. The event was hosted at the Nairobi National Museum. A "Grand Debate" is envisaged, as an honest discussion between Kenya's best minds on matters of science, religion, policy making and the media in the presence of members of the public about the state of Science and Technology in Kenya.

### **Strategising Professional Training in Technology Policy and Innovation Research workshop**

The African Centre for Technology Studies - ACTS - in collaboration with the Open University conducted training from 5th - 6th October, 2010 at Southern Sun Mayfair Hotel, Nairobi. In Kenya there is growing public and private expenditure on R&D activities. This provides an opportunity for economic growth and targeted social benefits if R&D efforts are focused where they are most needed. However, in order for the best use of these funds to be made and to maximise resulting output, key skills are needed by staff working within both the private and public sectors which are in addition to the scientific and technical knowledge required. These skills relate to evaluating the capabilities and needs of research and industrial sectors i.e. understanding the innovation environment and the key drivers and obstacles to fostering innovation.

## Annex 4

### The Executive Director's Diary

GCARD Seminar on Assessments, projections and foresights was held from 25th - 26th February, 2010 at Wageningen. The purpose of the workshop was to focus on an analysis of recent assessments, projection and foresight exercises related to agricultural research and their input in setting up agricultural priorities. The ACTS Executive Director attended the workshop at the Hotel Agropolis.

The Executive Director, attended the World Bio-energy General Assembly Meeting on 3rd February, 2010 in Washington D.C, USA.

Prof. Judi Wakhungu attended the 44th Board of Trustees Meeting of the WorldFish Center, in Penang, Malaysia, from 14th - 18th March, 2010 at the Hotel Equatoria in Penang. Prof. Wakhungu is on the board of trustees. She had previously attended the WBA board meeting and general assembly in Washington DC.

The Executive Director was also present at the Alumni Citation - St. Lawrence University, USA on 5th June, 2010.

### Building a Better World: New Horizons

The Executive Director presented a paper from 20th - 22nd March, 2010 at the World Congress of Muslim Philanthropists' Third Annual Conference on "Building a Better World: New Horizons - Sound Strategies". The paper was titled: "Sustainable Solutions to Global Hunger" and focused on the major conclusions of the IAASTD, with specific focus on the role of smallholder farmers, the importance of local knowledge, and issues of social and environmental sustainability in the design of agricultural programmes, particularly in areas of the target countries (Bangladesh, India, Ghana, Kenya and Ethiopia) that are experiencing intensified drought as a consequence of climate change. The meeting was at the Ritz Carlton, Doha and was organized by ACTIONAID, US.

### GCARD 2010 meeting

From 28th - 31st (**EDITOR: MONTH?**), 2010, there was a GCARD 2010 - Foresight/Assessment working Group meeting in Montpellier, France. The meeting's focus was on analysis of recent assessments, projection and foresight exercises related to agricultural research and their input in setting up agricultural priorities. ACTS Executive Director attended the meeting.

### STEPS' "New Manifesto"

The Executive Director, Prof. Judi Wakhungu was a speaker at the STEPS Centre in London on 15th June, 2010. The event was connected to the STEPS Centre project "Innovation, Sustainability, Development - A New Manifesto"

### Global Network for Climate Solutions (**Date?**)

At the recommendation of Dr. Joyce Moock (formerly of the Rockefeller Foundation), Anne Hammill (of IISD), and Dr. Cheryl Palm, the Earth Institute (through the Director, Dr. Shiv Someshwar) invited ACTS to participate in the Global Network for Climate Solutions (GNCS). Hosted by the Earth Institute, Columbia University, and overseen by Dr. Jeffrey Sachs, the GNCS is an open architecture, on-line network of research centers and institutes around the world that seek to influence international climate negotiations by grounding them in shared research and consensus focused on concrete adaptation and mitigation solutions. The Adaptation Program of the GNCS is working with developing country institute partners to facilitate the development of practical solution-oriented Adaptation.

### **Global Change Information Management and Assessment Workshop**

The Executive Director attended a Workshop on Global change Information Management and Assessment which was organized by The Royal Society and the Department for Environment, Food and Rural Affairs (Defra) and was held from 28th - 29th July, 2010 at the Kavli Royal Society International Centre, UK. The workshop brought together experts from a range of disciplines to examine the pros and cons of the proposed 'wiki' (an interactive web-based system) which focused on scientific issues rather than the technical details of the system. The 'wiki' is a web-based system for the organisation and presentation of peer reviewed literature on climate, biodiversity and ecosystem services which would integrate and assess the range of multi-disciplinary knowledge in these areas. It could provide decision-makers with a 'one-stop shop' for peer review, synthesise information and facilitate assessments in issues such as climate, environment, and water and food provision.

### **African Green Revolution Forum 2010**

The Forum was held from 1st to 4th September, 2010 in Accra, Ghana and was chaired by Mr. Kofi A. Annan and brought together African heads of State, Ministers of Agriculture, CEOs of major agribusinesses, farmers and farmer association leaders, scientists, NGOs and civil society, multilateral and bilateral donor institutions, to discuss and develop concrete action plans for achieving the green revolution in Africa. It was hosted by H.E. John Atta Mills, President of Ghana. The Executive Director spoke in two parallel session discussions on 'Empowering women for the Green Revolution' and "Mitigation and adaptation to climate change"

### **The 5th World Bioenergy Symposium**

ACTS' Project Manager represented the Executive Director at the symposium that was held in Suzhou, China from 15th - 17th September, 2010. It was hosted by Tsinghua University, China and US Minnesota Department of Agriculture. The symposium concentrated on biofuels and other bio-products. The meeting discussed opportunities, challenges and advances in technological and production world wide, merging research and development, successful legislation and value-added agriculture. The Project Manager spoke on "An African perspective on large scale Bioenergy development in Africa".

### **STEPS' Advisory Committee Meeting, United Kingdom**

As a member of the Advisory Committee of STEPS, the Executive Director attended the the STEPS Symposium, 2010: 'Pathways to Sustainability: Agendas for New Politics of Environment, Development and Social justice' and STEPS Advisory Committee Meeting that was held in the United Kingdom from 23rd - 24th September, 2010.

### **Brainstorming seminar on science/policy interface bodies, FAO, Rome**

A brainstorming seminar was held for panelists to share lessons learned from existing Science - Policy interface initiatives at international level and was held in FAO (Rome) on 27th September, 2010. The objective of this seminar was to draw some lessons from international bodies at the interface of expertise and decision-making which could be useful for the efficient functioning. This seminar was organized at the initiative of France together with other Member States (Argentina, Brazil, Germany, possibly US). Other organizations (FAO, IFAD, Bioversity International, Cirad, Iddri,) also associated to the event which was targeted to the Permanent Representatives of the three Rome-based UN agencies in order to build a common understanding on the newly created High Level Panel of Expert on Food Security and Nutrition. The Executive Director was in attendance.

#### **Expert Group Meeting, Paris, France**

The Executive Director presented a paper on "Gender Dimensions of applying science and technology for development from an African perspective during the Expert Group Meeting (EGM) on "Gender, science and technology" that was held in Paris from the 28th of September to the 1st of October. The meeting was organized by the United Nations Department of Economic and Social Affairs (Division for the Advancement of women).

#### **Kenya's Biodiversity, Land Use and Climate Change Conference**

The conference was held at Intercontinental Hotel, Nairobi, from 15th - 17th September, 2010, and brought together conservation scientists, planners, graduate students, managers and policy makers to assess the state of our Biodiversity and coordinate research and conservation strategies. The Executive Director, together with Dr. Kasili of KWS and Ali Kaka of IUCN nominated and picked panelists for the discussion section. ACTS presented a paper under the Ecosystems Services Session on "Biomass and other renewable energy Sources – Energy for Sustainable Development". The Executive Director is the Chair of the Policy Implications of Biodiversity, Land Use and Climate Change session. A group of 20 to 30 participants drawn from the interagency planning and coordination committees for the conference, from government agencies and policy bodies, deliberated on the policy implications of the workshop and charted the way forward.

#### **World Fish Centre Board Meeting**

The Executive Director, who is a member of the World Fish Centre board, attended the World Fish Centre Board of Trustees Meeting in Zambia from 15th - 23rd November, 2010.

#### **6th Annual Moi University International Conference**

Two staff members from the Communications Department attended and disseminated ACTS publications at the 6th Annual Moi University International Conference at the Moi University Main Campus from 7th - 11th September, 2010. The theme of the conference was "Knowledge Management and Applied Technological Innovations for Sustainable Development". ACTS had a poster presentation and publications booth.

#### **Lake Victoria Basin Commission (LVBC)**

The Communications department visited the Lake Victoria Basin Commission (LVBC) in Kisumu. The discussions centred on the need for ACTS and LVBC to collaborate on research around Lake Victoria as ACTS has experience in this area and publications. It was mutually agreed that ACTS and LVBC would collaborate in the production of several publications and the LVBC Annual Report.



## Annex 5

### ACTS Publications

- Agnes G. Mwakaje. PISCES Policy Brief No. 4 June 2010. Bioenergy Policy Review in Tanzania.
- Wakhungu, J.W., Huggins, C., Nyukuri, E., Lumumba, J. Approaches to Informal Urban Settlements in Africa: Experiences from Kigali and Nairobi, June 2010.
- Wakhungu, J.W., Nyukuri, E., Ongor, D and Tonui, C. Oyola and Wakesi in Kenya: Locals Adapting to Effects of Climate Change. 2010, Wakhungu, J.W *et.al.* CBAA project. 2010.
- Nanduddu, S. Lived Experiences: Adaptation to Climate Change in Gogonyo Sub-county, Palisha District, Uganda. 2010, Wakhungu, J.W *et.al.* CBAA project.
- Zvigadzwa, S., Mharadza, G., and Ngenya, S. Communities and Climate Change: Building Local Capacity for Adaptation in Goromonzi District, Munyawiri Ward, Zimbabwe. 2010, eds. Wakhungu, J.W *et.al.* CBAA project.
- Koelle, B. Oettle, N, Parrington, S, Lissel, A and Kotze, D. Farmers Moving Towards Resilience Suid Bokkeveld Case Study on Climate Change Adaptation, South Africa. 2010, Wakhungu, J.W *et.al.* CBAA project.
- Scale up and commercialization of improved cook stoves in Sri Lanka, 2010. PISCES Project.
- BioEnergy in Sri Lanka, 2010. PISCES Project.
- Socio-Economic Baseline Report, Kenya. 2010. PISCES Project.
- Anagi Working Brief. 2010. PISCES Project.
- Promoting Sustainable Charcoal Production and Marketing in Kenya. 2010. PISCES Project.
- Bioenergy Policy Review in Tanzania. 2010. PISCES Project.
- Bioenergy and Poverty in Kenya: Attitudes, Actors and Activities, Working paper May 2010. PISCES project.
- Bioenergy in Sri Lanka: Resources, Applications and Initiatives. Working paper May 2010. PISCES project.
- Gender Dimensions of Science and Technology: African Women in Agriculture: Policy Brief by Judi Wakhungu. Paper presented at the Expert Group Meeting on gender, Science and technology in Paris, France. September 2010.
- International Assessment of Agricultural Knowledge Science and Technology for Development (IAASTD): The Process Re-visited by Judi W. Wakhungu. Policy Brief: Panel discussion by Judi W. Wakhungu in Rome, Italy. September 2010.
- Climate Change: An African Response. Keynote Address presented by Judi Wakhungu at the African Green Revolution Forum 2010 in Accra, Ghana. September 2010.
- PISCES Policy Brief No. 5: Bioenergy Advance Market Commitments (AMCs) in Sri Lanka - 2010
- Status Report on Use of Fuelwood in India - 2010
- Bioenergy Resource Status in India - 2010.

## Annex 6

### Collaborating Institutions

Action Group for Renewable Energies and Sustainable Development (GED), (CLACC) Mozambique  
Africa Virtual University (AVU)  
AMADE-PELCODE, (CLACC) Mali  
AMBERO-IP with Deutsche Gesellschaft fuer Technische Zusammenarbeit (GTZ) - Mozambique  
Bangladesh Centre for Advanced Studies (BCAS), (CLACC) Bangladesh CARITAS Bangladesh, (CLACC)  
Centre for Innovations and Technology Transfer (CITT), Kigali Institute for Science and Technology (KIST) - Rwanda  
Centre for International Climate and Environmental Research (CICERO), (CLACC) Norway  
Centre for Science and Technology Innovations - Kenya  
Commonwealth of Learning (COL)-Funder (seed funds)  
Coordination Unit for the Rehabilitation of the Environment (CURE), (CLACC) Malawi  
Development Network for Indigenous Voluntary Association (DENIVA), (CLACC) Uganda  
Energy and Environmental Concerns for Zambia (EECZ) (CLACC)  
Environmental Development Action in the Third World (ENDA), (CLACC) Senegal  
Environmental Protection and Management Services (EPMS), (CLACC) Tanzania  
Equity Bank  
German Watch  
INNOGEN Centre - Resource persons  
Institute of Development Studies, Sussex, UK  
International Institute for Environment and Development (IIED), (CLACC) UK: [www.iied.org](http://www.iied.org)  
International Institute for Sustainable Development  
Kenya AIDS Intervention Prevention Project Group (KAIPPG),  
Local Initiatives for Biodiversity, Research and Development (LI-BIRD), (CLACC) Nepal  
London School of Hygiene and Tropical Medicine (LSHTM), (CLACC) UK: [www.lshtm.ac.uk](http://www.lshtm.ac.uk)  
M.S.Swaminathan Research Foundation (MSSRF)  
Makerere University - Resource Persons  
Masinde Muliro University of Science & Technology (MMUST) Millennium Institute - Resource Persons  
Organisation des Femmes pour la Gestion de l'Énergie, de l'Environnement et la promotion du Développement Intégré (OFEDI), (CLACC) Benin.  
Plan International, Kenya  
Potsdam Institute for Climate Research (PIK), (CLACC) Germany  
Practical Action Consulting South Asia  
Rangpur Dinajpur Rural Service (RDRS), Bangladesh: [www.rdrsbangla.net](http://www.rdrsbangla.net)  
Royal Society for the Protection of Nature (RSPN), (CLACC) Bhutan: [www.rspn-bhutan.org](http://www.rspn-bhutan.org)  
SACRED Africa  
Stockholm Environment Institute- Oxford, (CLACC) UK  
Sudanese Environment Conservation Society (SECS), (CLACC) Sudan  
Sustainable Agricultural Centre for Research and Development Africa  
TENMIYA, (CLACC) Mauritania  
Ugunja Community Resource Centre (UCRC),  
UHA! Lakes Forum – (CBO-CBAA Project)

UNFCCC, CLACC

United Nations Environment Programme-Global Environment Facility - UNEP - GEF

University of Dar es Salam (UDSM)

University of Edinburgh

Zimbabwe Regional Environmental Organization (ZERO), (CLACC) Zimbabwe: [www.zeroregional.com](http://www.zeroregional.com)

Kenya Agricultural Research Institute (KARI)

Kenya Department of Metriology

Department of Resource Survey and remote Sensing (DRSRS)

Kenya Forestry Research Institute (KEFRI)

Kenya Wildlife Service (KWS)

Pipal Ltd

Practical Action - East Africa

United Nations Environment Programme - Division of Technology, Industry and Economics.

UNEP DTIE

World Agroforestry Centre (ICRAF)

CABI

Real IPM Company Ltd

Makerere University

