

ADAPTATION
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HARNESSING ECOSYSTEM BASED APPROACHES FOR
FOOD SECURITY AND ADAPTATION TO CLIMATE CHANGE

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CLIMATE CHANGE AS AN
INTEGRATION ISSUE

By Ed Carr

Contemporary conversations about climate change and development in Africa suffer from a scale problem. Generally speaking, these conversations go one of two ways. Some talk about "African climate change", speaking in sweeping terms about such impacts as lost agricultural production or increased disease burden. Others focus on potential local impacts, sometimes scaling to national impacts. Neither of these foci facilitates thinking about climate change as an integration issue for Africa.

<http://www.afdb.org/en/blogs/integrating-africa/post/climate-change-as-an-integration-issue-12000/>

Private Sector Key to Africa's Adaptation to Climate Change

By Alex O. Awiti



Thinking about our addiction to carbon reminds me of the king of Phrygia and his request to the Greek god Dionysus. King Midas asked that whatever he touched turn into gold. His wish was granted. But the king soon realized that it was a curse. The industrial revolution, powered by fossil fuels has granted our wishes for health, wealth and power on a scale that now threatens to transform our planet into something profoundly inhospitable, especially for posterity.

Climate change caused by our insatiable appetite for carbon and its impact – current and projected – is now almost incontrovertible. There is compelling scientific evidence that climate change is a serious existential issue, which demands urgent action to forestall the risk of damaging and potentially

irreversible impacts on ecosystems, societies and economies. Nicholas Stern, author of “The Economics of Climate Change”, popularly known as the Stern Review, described climate change as “the greatest market failure the world has seen”. It is widely acknowledged that climate change will have a broad-ranging impact on economies and financial markets over the coming decades. The impact of climate change has been accentuated by the tens of billions of dollars in losses due to recent climate-related natural disasters such as the floods and wildfires in Australia, Pakistan and Russia; droughts the Sahel and the Horn of Africa. Read more from <http://www.envidepolicy.org/2013/01/private-sector-key-to-africas.html>

Alex O. Awiti is the Director of The East African Institute (EAI) and Assistant Professor in the Faculty of Arts and Sciences at the Aga Khan University, Nairobi. The EAI is a regional policy think tank which focuses on building an integrated systems approach to policy making. At the Faculty of Arts and Sciences (East Africa) at Aga Khan University, Awiti leads the development of one of the most innovative and integrated undergraduate science curriculum in Africa. The curriculum is modeled on the principles of knowledge integration, complexity and systems thinking.

TOWARDS AN AGROECOLOGICAL APPROACH FOR AGRICULTURE IN AFRICA

Carlo Fadda, Bioversity International, Nairobi.

The Challenge – setting the scene

A key challenge for Africa as a whole in the coming fifty years will be how to produce enough food to feed the fast growing population. Africa population is predicted to reach 1.8 billion people by 2050 from the current 875 million (United Nations, Department of Economic and Social Affairs, 2010). In addition, and as a result of economic growth, people will change their diets and therefore the demand for food will change, including higher demand for meat which has a very high carbon footprint and competing land use to produce biofuels (De Schutter, 2010). Overall, it is expected that food production should increase by 70% to 100%. While this could be seen already as a big challenge, the conditions under which it needs to be achieved are even more severe. Climate is changing, affecting agricultural productivity in a negative way, soils are less productive (it is expected that arid and semi arid land in Africa will increase by 5-8% in the next 60 years, IPCC report, Africa, 2007), water will be a scarce resource, urbanization will encroach on fertile agricultural land and further destruction of ecosystems should be avoided to prevent further loss of biodiversity and deterioration of ecosystems and associated vital ecosystem services. In addition, as a result of global land use change to produce biofuels or animal fodder food prices volatility will increase, as already experienced on the food price crisis of 2007/2008 (Godfray et al., 2010). Levels of malnutrition are still very high with over 1 billion people chronically hungry (Horlings & Marsden, 2011).

Some authors call it the perfect storm.

Potential solutions – the conventional approach

There are different ways to approach the problems highlighted above. In the '60's a model focusing on boosting cereals production called green revolution allowed an increase on average between 150% to 285% in developing world (with Africa lagging behind the rest of the world) while the global population grew from 3 billion to about 6 billion (Horlings & Marsden, 2011). This approach was, therefore, very successful in coping with a fast growing population. The approach based on a package including improved and high yielding seeds,

large use of fertilizers and pesticide to control weeds, pests and pathogens has been criticized in many aspects. From a nutritional point of view the focus on major cereals such as rice, wheat and maize determined a diet which is very rich in carbohydrate and relatively poor in protein and other nutrients essential for adequate diets, thus leading to micronutrient malnutrition in many developing countries (De Schutter, 2010). From a socio-economic point of view many scholars criticized the entire agro-industrial model associated with the green revolution, as it creates inequalities, particularly in Africa where farmers have little access to credit and cannot compete with imports from largely subsidized agricultural systems (Paarlberg, 2006). From an environmental point of view, the approach has been accused of being inefficient in managing water and soil resources and by being high-energy dependent it has a very high carbon footprint: 30% of global green house gas (GHG) emissions are attributed to agriculture (Moss, 2008). In addition, the conventional approach led to a reduction of agrobiodiversity: of the over 80,000 plant species available as food to humans, most of them have disappeared from production systems. Many negative environmental externalities have now been recognized, documented and valued for many countries (Pretty, Toulmin, & Williams, 2011). These externalities altered the capacity of ecosystems to deliver vital services and possibly might have very serious consequences on the capacity to sustain yields in the future.

What is the alternative? – towards an agroecological approach for Africa

If a conventional approach to agriculture is not sustainable, yet the challenge of feeding an increasing African population remains and need to be addressed in a sustainable and resilient way. One alternative approach is called agroecology. Agroecology is defined "as the application of ecology to the study, design and management of sustainable agroecosystems" (Altieri, 2011). This entails the adoption of modern technologies to stretch the ecological boundaries and reduce the negative externalities of the conventional agricultural system. Yet, this approach can be applied weakly,

Continued on page 4

thus addressing the environmental aspect only, or strongly by addressing also the socio-economic negative consequences of the conventional approach and therefore rethinking the whole model of agro-business (Horlings & Marsden, 2011). The differences between a weak and a strong form of agroecological modernization is a very significant one, a different in paradigm. A weak approach offers technological alternatives to reduce negative environmental externalities produced by conventional agricultural practices with everything else left unchanged. On the contrary, a strong approach recognizes the importance of local conditions for technological and ecological gains, which should therefore be demand driven and adapted to local conditions, valorizes the role of farmers and their traditional culture to make their own choices in a synergistic way with nature, and values the importance of relying on local resources.

Several studies have demonstrated the potential of ecological approaches to address food security issues, including agroforestry, conservation agriculture, permaculture and other multifunctional agriculture, low-input agriculture, and showed that in the south there has been a significant yield increase, particularly when smallholder farmers adopted them. Real case studies described in Africa only at least 20 applications of a variety of agro-ecological approaches in small and large scale farms, irrigated and rainfed based on cereals or root and tubers, with different levels of mechanization and modernization (Horlings & Marsden, 2011). There are evidences that this approach can represent a real alternative to conventional intensification of agriculture, more sustainable and able to

address the challenges of the future.

Conclusions

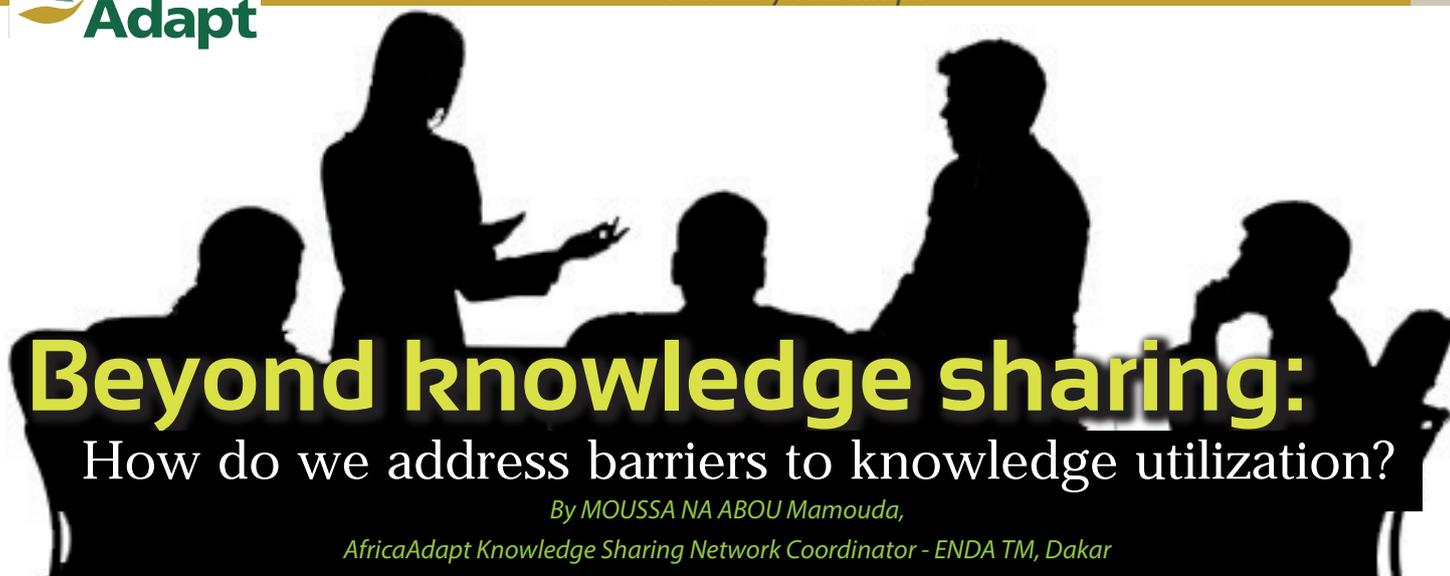
The challenge of future food security is one that requires great attention. Producing more food in a more sustainable way is recognized as a priority by most of scientists and politicians. Yet, what approach to adopt is still matter of discussion. Here we presented two contrasting paradigm, one that call for a continuation of an agro-business approach as we have seen in the past 70 years mitigated by some more ecological practices to reduce negative environmental externalities and another which call for a more substantial change of the whole agricultural practices and systems. There are evidences that a more ecological approach will be able to feed the world but there is a need to better identify when and where it provides the greatest benefit and how to upscale it for application in larger areas. Upscale is certainly complicated by the context specific nature of agro-ecology and the difficulties to compare results from different environments. Yet, at least four major changes are required for the upscale: 1) changes in policies regulating markets, seed laws, subsidies, extension services and educational sector. 2) Recognition that diversity and localization of production is a virtue that calls for a different scientific approach when measuring the role of agro-ecological approach in food security, nutrition and climate change. 3) Adaptation to available technology for crop improvement, including breeding and biotechnology, to contribute to a different diverse based and localized system.

Climate Change Adaptation in Mauritius: Considering the Role of Institutions

Adaptation to climate change is critical in countries like Mauritius that, despite contributing a minute percentage of the world's emissions, are disproportionately vulnerable to their impacts. Rising temperatures are exacerbating the problems of coral reef bleaching, soil and beach erosion, greater risk of flash floods and drought, intensifying tropical storms, sea level rise, and biodiversity impacts. Projections for accelerated warming will only add fuel to the fire,

necessitating a coordinated framework for adaptation governance in Mauritius. The nature of adaptation – that is, a complex, long-term, and interdisciplinary challenge requiring widespread engagement – necessitates effective institutions with shared responsibilities. This paper describes how state and non-state entities have worked to assess impacts and vulnerabilities, facilitate coordination, manage information, and establish priorities to build Mauritius' resilience to

climate change impacts. Recent progress has been made to establish an institutional framework for adaptation governance, but considerable challenges remain, especially concerning coordination, project implementation at the local level, and building capacity among all stakeholders. <http://www.ajol.info/index.php/wiojms/article/view/69640>



Beyond knowledge sharing: How do we address barriers to knowledge utilization?

By *MOUSSA NA ABOU Mamouda,*

AfricaAdapt Knowledge Sharing Network Coordinator - ENDA TM, Dakar

AfricaAdapt is a knowledge-sharing network that promotes and facilitates knowledge sharing for climate change adaptation in Africa, in particular between African communities, their leaders and researchers, across institutional and language barriers, and in ways that ensure African adaptation knowledge and perspectives inform and shape sub-national, national and international debate. The vision of the network is that “The resilience of vulnerable people and socio-ecological systems is enhanced through improved access to and use of knowledge assets on climate change adaptation”

After six years of activities, one of the emerging lessons we’ve learnt is that the sharing of knowledge is not useful if the targeted boundary partners are not able to use this knowledge. We’ve talked about and even addressed barriers to knowledge sharing but what about the barriers to the use of knowledge? Barriers to knowledge sharing encompass inter alia illiteracy, limited access to ITCs or marginalization. AfricaAdapt addressed these challenges for instance by organizing meet & greet events to meet and talk with all relevant stakeholders for the ultimate benefit of the vulnerable groups. The AfricaAdapt Innovation Fund is also designed to support innovative knowledge sharing activities with local populations, in local languages. However, no real changes would occur if the knowledge acquired could not be used. By “use of knowledge” we mean either taking into consideration what we know in our relationship with others or moreover, applying what we know in order to bring positive changes in our day-by-day life.

From this perspective, the challenging next step after knowledge sharing would be the effective use of this knowledge to induce positive changes because knowledge without application is useless. For example, communicating

knowledge from a scientist at the International Livestock Research Institute (ILRI) to a Maasai herder group in the Kenyan Maasai Mara may be useless if that Maasai group is not in a position to use this knowledge. But what are the barriers to knowledge utilization? Barriers to knowledge utilization are deeper than those to knowledge sharing because overcoming them needs empowerment and additional capacities of the target groups. From our point of view, a livelihood approach could help assess the obstacles to knowledge utilization. Access to knowledge can lead to utilization of this knowledge only when the recipient has the required capacity to do that. Else, access to knowledge itself cannot make any change. We need to analyze recipients’ livelihood assets to assess their capacity to use a knowledge they have accessed to. These livelihood assets include:

- Physical assets (required infrastructures - limited access to the Internet could pose a problem for knowledge utilization);
- Social assets (utilization of knowledge sometimes needs involvement of the entire society and social networks);
- Human assets (utilization of knowledge sometimes needs minimum skills. Language barriers could be a hindrance);
- Natural assets: (healthy natural resources and ecosystems are the basis of utilization of knowledge to build adaptive capacity);
- Financial assets (utilization of a knowledge sometimes needs money!).

Providing with the first three of the above mentioned assets is also a way of addressing barriers to knowledge sharing. However, to move from knowledge acquisition to its utilization, we need additional assets, which are the natural and financial assets.

Cultivating fields of Change: Collaborative Learning Through Research

This **START** publication brings together the learnings from 16 research projects from 14 African countries on the theme of global environmental change, agriculture, and food security.

[Read more](#)

Mainstreaming climate change resilience into development planning in the Gambia and Kenya

These **IIED** publications summarise Gambia and Kenya's progress towards integrating climate change into development planning in terms of an enabling environment, policies and planning, and projects and programmes. [Read the Kenyan and Gambian report.](#)

Climate change health, agriculture and disaster analysis in Mozambique

This **Kulima** Integrated Development Solutions report presents progress in understanding the health impacts of climate change in Mozambique. It makes valuable recommendations on integrating climate change into public health policy and Mozambique's disaster risk reduction strategy. [Read more](#)

For more information on CDKN's Africa projects and publications, please visit www.cdkn.org/regions/africa

Development and Mitigation Forum: Call for abstracts

Convened and supported by the MAPS Programme, the Energy Research Centre of the University of Cape Town together with the Centre for Policy Research in New Delhi are hosting a Forum on Development and Mitigation in Cape Town in January 2014. The Forum is conceptualised as a platform to share experience on development and mitigation, from a developing country perspective. It is part of a series of collaborative events hosted by southern research institutions to stimulate conversation around global and national governance of development and climate change, both in the context of local planning and in the lead up to negotiation of the 2015 UNFCCC agreement.

Call for Abstracts

The Forum will be run as an academic conference and is intended to facilitate, enrich and expand existing dialogues and collaborations on the broad theme of development and climate change mitigation. We invite abstracts on the following topics under this broad theme:

- Poverty
- Inequality
- The co-benefits approach
- Alternative development paths
- Resource endowments
- Competitiveness
- National planning for a low carbon future
- Process experiences
- Analytic tools
- Energy security

The content of the final programme will be tailored around the themes of the successful abstracts, and the final papers will be published as part of the conference proceedings. The Review Committee will include:

- Navroz Dubash, Centre for Policy Research (New Delhi)
- Fei Teng, Institute of Energy, Environment and Economy, Tsinghua University (Beijing)
- P.R. Shukla, Indian Institute of Management (Ahmedabad)
- Harald Winkler, Energy Research Centre, University of Cape Town (Cape Town)
- Kim Coetzee, Energy Research Centre, University of Cape Town (Cape Town)
- Emily Tyler, independent climate mitigation economist (Cape Town)

Procedures

Abstracts of 300 – 500 words can be submitted via

<http://devmitforumercresources.org.za> up until July 31st 2013. Authors will be notified by August 19th 2013 as to whether their abstract has been accepted. Full papers are due by October 18th 2013 for peer review.

Programme

The Forum programme will include keynotes by Kuben Naidoo, Adviser to the Governor of the South African Reserve Bank and Anand Patwardhan of the Indian Institute of Technology, author presentations of papers, panel discussions, semi-structured discussions, breakaway roundtables to focus on particular issues and ample opportunity for networking and corridor discussion. Highlights of the Forum will be broadcast via twitter, participant blogs and videos. The official proceedings will be published on the MAPS, CPR and ERC websites.

Logistics

The Forum will take place 27-29 January 2014 in Cape Town, South Africa. Limited financial support is available to authors, upon application.

MAPS Facilitator Training Course - Africa: Call for participants

Planning for a low carbon future through a politically legitimate and scientifically rigorous process requires professional facilitation. The Mitigation Action Plans and Scenarios (MAPS) Programme is looking to share its process expertise with colleagues on the African continent. The MAPS approach brings together stakeholders from all sectors of society with researchers in a dialogue that produces data and scenarios of potential future development pathways. These pathways form an evidence base that can, in turn, be used to inform policy. The dialogues are complex and need to be led by facilitators that are neutral and that have the necessary skill, experience and training. For these reasons, the training of facilitators has become a critical part of the MAPS process.

The MAPS Programme, with support from CDKN, is pleased to call for participation in its second Facilitator Training Course with a specific focus on training practitioners from South Africa, Botswana, Ghana, Kenya, Mozambique, Rwanda and Zambia. Travel (return economy class flights to Cape Town, visas, South African airport transfer), accommodation and meal costs for participants will be covered. The course will be delivered at a venue near Cape Town that caters for thinking, conversation, outdoor activity and good food.

Further information:

- MAPS Facilitator Training Course full Call for Participants
- CDKN funded MAPS Africa project page
- www.mapsprogramme.org
- Video of the first MAPS Facilitator Training Course - Latin America: <http://youtu.be/qnAAOfskyeI>

Making Sense of Gender, Climate Change and Agriculture in sub-Saharan Africa

Christine Okali and Lars Otto Naess

Attention to gender and climate change has increased steadily over the last decade. Much of the emerging policy-focused literature resembles to a considerable degree the gender and environment literature from the 1990s, with the nature of women's work being used to justify placing women at the centre of climate change policy. However, in contrast with the portrayal of women in earlier literature as knowledgeable guardians of the environment, the women at the centre of gender and climate change policy are typically portrayed as vulnerable, weak, poor, and socially isolated. Arguably, this is a reflection of the politics of gender rather than the reality of the men and women who regularly experience and deal with changes of various kinds. We argue for a more realistic and nuanced framing of gender that is built on an acknowledgement of social complexity, and an understanding of social, including gender relations, in specific local settings. Such a framing would provide a more valuable starting point for understanding the way

in which both women and men, together and separately in their different, and changing roles, shape the outcomes of external interventions. This shift does not mean that targeting vulnerable women to meet short term needs is not valuable. Rather, the intention is principally, to minimise the risks of policy failure resulting from the adoption of often erroneous but popular assumptions about the different roles that women and men play, and must continue to play, to achieve food security in the face of climate change.

Available online at:

<http://www.eldis.org/cf/rdr/?doc=65144>

Climate communication for Adaptation Joto Afrika issue 12

Farmers and pastoralists, as well as policy makers, development and humanitarian programmes in Africa are searching for the best ways to adapt to the impacts of climate variability and change. Having the adaptive capacity to make informed and flexible decisions for action is becoming even more important to ensure resilience to climate change impacts in an uncertain environment.

Communicating climate information, in ways that users can understand and apply is therefore a critical resource to support effective adaptation to climate change. Seasonal forecasts for example, give probabilities or chances of three different rainfall scenarios, and in the process of understanding how to use these probabilities, adaptive capacity is already strengthened. It helps us plan to spread or take risks in the face of uncertainty, innovate or protect our assets, take advantage of opportunities and make and modify decisions in response.

This Joto Afrika issue includes articles from Kenya, Niger and Ghana. The featured programmes demonstrate how climate information has reached and supported communities to make their own decisions, diversify their livelihood choices and protect their assets.

- Rainfall recording: a community decision making tool in Niger, ALP Niger
- Communities benefit from agro-meteorology advice in Kenya, ICPAC
- Making seasonal forecasts usable in Ghana and Kenya, ALP
- The value of climate forecast information to Mbeere



Farmers in Kenya, Christian Aid

- Impacts of Early warning systems in Garissa, Kenya, ALP Kenya
- The stork Story: Uncertainty, our new friend
- Dissemination of climate information using radio in Kenya, Kenya Met Department, KMD

Find Joto Afrika on:

ALIN Website: <http://www.alin.net/Joto%20Afrika>

CARE Website: <http://www.careclimatechange.org/publications/careclimate-change>

For more information/hard copies availability contact: Sylvia on: alp@careclimatechange.org

Fiona Percy, ALP Regional Programme Coordinator

KNOWLEDGE IS THE KEY TO CLIMATE CHANGE ADAPTATION AND MITIGATION

Extreme weather events and increasingly unpredictable climate patterns are having a dramatic effect across Africa, especially for the people who rely on its land, lakes and seas to feed themselves and earn a living. Africa's response to climate change has so far been hampered by a fundamental lack of knowledge transfer. The AfriCAN Climate project aims to help African communities adapt to and mitigate the effects of gradual change and increasingly frequent extremes of weather. It enables researchers to pool their resources and

provides a one-stop gateway to knowledge for people working to make a difference on the ground. An international project team has created a multilingual web platform that brings together a growing network of researchers worldwide. The portal provides a wealth of case studies and highlights eight principles of good practice. Among other useful resources for understanding the effects of climate change on this diverse continent is a countries section summarising the key climate-related data for each of Africa's 54 nations.

INNOVATIVE RADIO PROJECT WINS FIRST AFRICAN CLIMATE AWARD

To raise public awareness and draw attention to successful climate change adaptation projects, AfriCAN Climate has initiated a series of awards for excellence in the field. The winner of the inaugural AfriCAN Climate Awareness Raising Award was announced in Dakar in April. The first recipient was Nnaemeka Ikegwonu, Executive Director of the Smallholders Foundation, for his work on the "Climate Change on Air" project.

A second call for nominations, for the inaugural AfriCAN Climate Good Practice Award, will be announced in July. Readers who want keep updated are encouraged to visit www.africanclimate.net and sign up to receive the project's bi-monthly newsletter

AfriCAN Climate is an open public forum and depends upon your contribution! Share your knowledge on www.africanclimate.net

"CLIMATE CHANGE ON AIR"



"Climate Change on Air" produced a 20 episode climate risk management educational radio serial drama to educate smallholders living in the south-eastern region of Nigeria on best approaches to mitigate and adapt to climate. The radio drama is broadcasted on public radio stations in the 5 targeted states.

Changes in seasonal rainfall pattern, increased rainfalls which wash away top soil and creates erosion, and increased heat intensity and gradual disappearance of several local crops, are just some of the impacts of climate change presently facing an estimated 15 million smallholders in the 5 Igbo Language speaking states of south eastern Nigeria (Abia, Anambra, Ebonyi, Enugu and Imo States). Whereas the impact is obvious, these small farmers know little about the risks associated with climate change, its impact on their agricultural productivity and household income. To enable smallholders prepare for and adapt to the negative effects of climate change, The Smallholders Foundation with the support of The World Bank initiated an 18 months project "Climate Change on Air" to produce and broadcast a 20 episode climate risk management educational radio serial drama in the local Igbo Language. The educational radio drama educates smallholders living in the south-eastern region on best approaches to mitigate and adapt to climate. The radio serial drama is being broadcasted

on public radio stations in the 5 targeted states, once a week for 6 months broadcast period.

The project aims to strengthen the climate risk management capacity of smallholder farmers in the targeted states and stimulate them to develop indigenous micro climate risks management techniques to secure their livelihood. It increases smallholder's knowledge of climate change, enables them to prepare effectively for mitigation and adaptation, analyzes the effects of climate change on women's and men's agriculture, their abilities and capacities to cope. The project increases smallholders' confidence in their ability to make changes in their community and of the value of organizing themselves to take action against climate change. The project builds a regional momentum that leads to government at all levels taking action that will reduce the vulnerability of smallholders to climate change by engaging them and empowering local communities to implement mitigation strategies.

Read full case study on: <http://africanclimate.net/en/cases/climate-change-air-winner-first-african-climate-award>

FROM THE GLOBAL RESILIENT CITIES FORUM 2013 TO THE LOCAL CLIMATE SOLUTIONS FOR AFRICA CONFERENCE 2013

We have reached a critical threshold in the process to reduce greenhouse gases and prepare for climate change – we have just passed the symbolically and historically important marker of 400 ppm CO₂ in the atmosphere – and are well on our way beyond the safe limits of a 2°C of warming. Cities and local governments are at the forefront of all of this action – why? Because more than 50% of the planet is urbanised, these urban areas cover less than 3% of the surface of the planet, yet consume 75% of Earth’s resources. Cities are where consumption must be reduced and behaviour changed, where development strategies must follow more sustainable, low carbon and resilient pathways. If cities are not invested in now, for both low carbon and resilient interventions, there is little chance we will reduce our global emissions below 350 ppm. Additionally, there is little chance that we will avoid economic devastation, overcome poverty, or reach development goals, when this is where the majority of the global population currently resides.

On the African continent, the urban population is rapidly growing, and whilst it may be slightly below the current global average, is the continent with the most rapid urbanisation rates. The face of medium, large and metropolitan cities are changing literally on a daily basis. Cities such as Dar es Salaam have doubled in population in the space of 10 years from around 2.5 million to 4.5 million. These urban centres of innovation, economic opportunity and activity, drivers of economic affluence and prosperity are stumbling under the weight of rapid urbanisation, whilst also being hampered by increasing climate variability and impacts from disasters. Many such cities are critical to the GDP of the nation, in some cases contributing between 30-50% of GDP. The economic and social well-being of nations hangs in the balance, in some cases, teetering on the performance of one or two Cities. The development challenges facing local governments in Africa are significant: rapidly growing cities with crumbling infrastructure, burgeoning slum areas, imminent and daily health risks from a lack of water and sanitation, an energy crisis, current and potential food security risks, and rife poverty. Add into this mix, increasing climate changes and variability and one can see why urban resilience is one of the fastest emerging areas of development work in the climate change arena.

This is why ICLEI – Local Governments for Sustainability is working with numerous partners, national governments, funders and donors to rapidly put in place mechanisms to enable such cities to meet the development and climate challenge simultaneously: for they are two sides of the same coin. The ICLEI Annual Resilient Cities Congress recently held in Bonn, is the premier event for analysing, discussing, sharing lessons and catalysing cross-pollination of ideas across continents on urban resilience (see <http://resilient-cities.iclei.org/>). This year at Resilient Cities there was a strong African continent presence at the conference, with 9 local government representatives taking part from Liberia, Ghana, Tanzania and South Africa. The Executive Mayor of Tshwane, South Africa, took part in two finance and infrastructure plenaries; promoting the city’s comprehensive approach to the green economy. The City of Durban continued to lead the way on the Durban Adaptation Charter for local governments – the largest declaration of mayors and leaders to commit to climate proofing their cities (see www.durbanadaptationcharter.org). The Municipal Corporation of Monrovia, Liberia, presented a session on its approach to promoting urban food security, especially the creation of an urban food market for local farmers. In all their contributions, the local government representatives from our region demonstrated both the significant challenges they face in responding to climate change, but also their sterling efforts and understanding of the opportunities open to them to govern their jurisdictions more effectively and sustainably. A particular highlight was the Dar es Salaam Reality Check Workshop. A team of 3 representatives from Dar es Salaam and the Tanzanian national government, along with their local GIZ partners, engaged in a 3 hour debate with participants on the challenges facing the city and lessons that can be learnt.

The Local Climate Solutions for Africa (LOCS) Conference 2013, to be held in Dar es Salaam from 30 October -1 November, is uniquely placed to build on this strong presence of African local governments at the global Resilience Forum. Hosted by ICLEI Africa and the City of Dar es Salaam the congress aims to provide a platform to network, share cutting edge good practices,

Continued on page 12

catalyse partnerships, connect African local governments with researchers, funders, national government and the private sector – all on the cross-cutting impacts and responses to climate change. This year the LOCS Congress will focus on the underlying challenges of the food-water-energy nexus: the three key resources that shape our future development path. In addition, the event will connect the global climate movement to the voice of African local governments – on the path to Paris 2015 and HABITAT III in 2016. ICLEI along with numerous other local government and city networks and organisations realise that the next three years are critical. In this time the universal Sustainable Development Goals will be developed and the global Climate Change Negotiations must deliver a successor

to the Kyoto Protocol by 2015 in Paris. In Nantes in September, the World Mayors Summit on Climate Change will witness 300 mayors from around the world convene and provide a renewed and strengthened advocacy strategy for support to local level action on climate change. With its strong emphasis on local leadership, financing and accelerated integrated action at the local level, LOCS 2013 will be a key milestone on the journey to a sustainable and climate responsive global support system for local government action.

For more on the LOCS 2013 Congress please visit www.locs4africa.org or email the LOCS 2013 Secretariat at locs4africa@iclei.org Registration is now open! See the website for online registration

Indigenous peoples and climate change in Africa

Authors: Dieckmann,U.; Odendaal,W.; Tarr,J.; Schreij,A.

Through two participatory case studies, this paper examines the impact of climate change on the indigenous peoples of Namibia. The objectives of the case studies are three-fold: to document how the indigenous peoples are affected by climate change; to analyse how they perceive, adapt to and leverage opportunities from climate change; and provide recommendations for strengthening the indigenous peoples' engagement in national and international public climate change policy. The paper begins by explaining the methodology of the study and providing background on the socioeconomic and historical context of study areas. Focusing on the Topnaar and Hai Om people, research methods consisted of a literature review, data collection through household questionnaires, focus groups, expert interviews and participatory approaches, as well as data analysis identifying the successful use of traditional knowledge in climate change adaptation.

A vulnerability and opportunity assessment is presented regarding climate change, governance and socioeconomic conditions in Namibia, before the study comprehensively

outlines the results from the two case studies. The vulnerability and opportunity context, the impacts of climate change on the indigenous people, and the traditional knowledge and adaptation are all explored in each sub-region. The report concludes with recommendations regarding each community. Concerning the Topnaar community, the study finds that their adaptation to arid conditions (a high dependence on Inara plants and livestock) makes them vulnerable to floods, while the poor were disproportionately unable to adapt to recent heavy rains. The study recommends investing in eco-tourism and encourages the diversification of livelihoods.

Available online at: <http://www.eldis.org/cf/rdr/?doc=65157>

APCCC GEZAULOLE COASTAL ADAPTATION PROJECT IN TEMEKE DISTRICT OF TANZANIA

Africa Partnership on Climate Change Coalition is working in Gezaulole, a rural coastal village located in Temeke district of Dar es salaam region in Tanzania. It is located 14 Kms south of Dar es salaam. Gezaulole has a population of 4500 inhabitants. Fishing, cultivation of rice, sweet potatoes, mushrooms, maize and cassava are the main activities in which the villages have traditionally been involved in. The Temeke district with a population of about 771.500 inhabitants with 786.5 Sq Kms (URT 2002).

People live in constant threat of damage to and loss of their possessions due to the weather related events, such as drought, an increase of sea level rise which has caused some people to shift their settlements along the oceanic beaches.

Sea level rise and an increasing frequency and intensity of storms have led to substantial coastal erosion threatening large proportions of this lowland island economy and given way to beach erosion. The main climatic and environmental factors that have contributed to damage to this area are droughts, floods resulting in landslides, increased intensity of precipitation events and tidal waves disrupting the economic livelihoods of the community dependant of fishing, reduced runoffs and increased water stress and disturbances of water dependant activities.

Problems are further enhanced by a prevailing capacity gap among responsible government bodies and policymakers have limited expertise in coastal processes and associated management techniques. Often decisions and recommendations are

poorly targeted and do not provide a long term solution.

Against this backdrop, ecosystem based adaptation approaches are used to address this food insecurity and build resilience of the local communities. The APCCC introduced an EbA approach to solve this problem by implementing EbA activities to increase community resilience and to ensure the recovery and the sustainable future use of the mangrove ecosystem.



The EbA approaches employed were Henna growing, mangrove reforestation, growing of fast growing drought tolerant nontraditional crops, encouragement of and adoption of energy saving stoves, integration of climate change and awareness creation, sensitization. These community-based and community-led interventions helped enhance the adaptive capacity, resulting in the establishment of switching to drought tolerant crop of Henna directly benefiting 12 households (60 people), and Kalimata kijai women group in mangrove reforestation including

involvement in the mangrove nurseries

The APCCC intervention has increased climate change resilience to local community of Gezaulole through:

- Women and men who previously relied on fishing in the sea for their livelihoods, do henna farming (Kalimata Kijai women group) as an opportunity to overcome the dwindling catches in the fishery activity and are now connected through Fair Trade to Finnish market in Finland.
- Henna farming has helped reduce deforestation of mangroves at the local level.
- The out come of this intervention has helped in contributing information and data for the government and donors especially the Adaptation foundation and Green watch in Germany.
- Families that once solely relied on fishing for livelihoods are now involved in Henna farming as well as selling products from these activities abroad through the Fair Trade.
- The Mangrove is a nursery for many marine species, most of which are important for food like fish, crabs and shrimps.
- Reforestation of mangrove is boosting the functioning of this ecosystem which in turn has improved fishery productivity.
- The government of the United Republic of Tanzania through the Climate Change Desk office is using this valuable data to develop adaptation projects on the coast like the just concluded Adaptation workshop in Dar es salaam on 21st June 2013

BUILDING NIGERIA'S RESPONSE TO CLIMATE CHANGE

Nigeria's diverse ecological and socioeconomic conditions makes it a classic case in the challenges of climate change confronting humanity. The diverse ecosystems include islands and the southern coastal communities dotted along the low lying coastline. The Coastal region merges into the Rainforest region which transits into the drier Savanna region- including derived, Guinea and Sudan Savanna before meeting the arid Sahel region in the far north. These ecosystems are home to equally diverse cultural and socioeconomic systems, with a high proportion of communities depending on rain fed agriculture for livelihoods and survival.

The impacts of changing temperature, rainfall regimes, greater frequency of extreme events, rising sea level, coastal erosion and salt water intrusion in the coastal areas are all being felt in Nigeria. In the more arid central and northern regions, the impacts of increasing aridity leading to desertification and sand dune encroachment are also being felt. Climate change impacts are affecting many sectors; including agriculture and food security, health, energy and infrastructure, biodiversity, forest resources and settlement patterns; among others.

Nigeria's Environmental Study/ Action Team (NEST), A national NGO in Nigeria embarked on a project - Building Nigeria's Response to climate change (BNRCC), which was funded by the Canadian International Development Agency (CIDA). This project was implemented by NEST along with the Canadian partners, Cuso International and ICF Marbek. The BNRCC project followed an earlier NEST project, Canada-Nigeria Climate Change Capacity Development Project (CN-CCCDP), also funded by CIDA and implemented with Canadian partners. CN-CCCDP focused on, and largely succeeded in, raising awareness, educating the public, building capacity and strengthening government institutions on climate change, but did not appear to have left much on the ground, literally, as a footprint, for the effort. There was a dire need to demonstrate that climate change was real and impacting on livelihoods and vulnerable communities, yet, there was the need also to demonstrate that the problem could be addressed by community action, beginning with small-scale pilot projects from which lessons could be learned, and which could be scaled up to other communities to sustain the response. Hence, when the opportunity came, community-based Adaptation pilot projects readily formed a major component

in the design of the BNRCC project.

The "community-based adaptation" (CBA) pilot projects were conducted in order to understand the impacts of climate change in all eco-zones and to test adaptation strategies to address these challenges. The pilot projects were meant to contribute to the knowledge and understanding of how local people can implement effective adaptation and livelihoods strategies in light of changing climate.

These projects were executed in collaboration with seven local partner organizations in 15 vulnerable communities. It started with community engagement, which included a participatory needs assessment and the community-based selection of adaptation options based on need as well as feasibility and impact. (Social analysis tools were employed for the community entry). The Adaptation pilot projects options tried in those communities included alternative livelihoods options, water supply systems, trials of improved varieties of crops, testing fuel efficient wood stoves, providing tools for weather forecasting and planting trees for sand dune stabilization.

There were many useful lessons learned and documented from the pilot projects implemented in the 15 rural communities across the Nigeria's three main eco-zones: the Sahel, Savanna and Coastal/Rainforest. The experiences came from all stakeholders involved in implementing the pilot projects: from the implementing organization, NEST; intermediary local partner organizations; Project Implementation Committees formed at the community level; as well as from grassroots community members themselves. The evidence-based results of these projects informed the development of National Adaptation Strategies and Plan of Action on climate change (NASPA-CCN) in Nigeria.

For more information and publications, visit www.nigeriaclimatechange.org

UNDP-UNEP POVERTY-ENVIRONMENT INITIATIVE (PEI)

AFRICA ADAPTATION NEWSLETTER

Mauritania replicates PEI tools and increases public funds to address Poverty-Environment-Climate nexus

In 2012 PEI Mauritania supported the development of a National Strategy on climate change and a specific focus on Nouakchott, the city most likely to be seriously affected by climate change impacts through the Agenda 21 Nouakchott initiative. In line with the prioritization of Poverty-Environment-Climate mainstreaming, the Government of Mauritania started implementation of the Green Belt movement and invested over 2 million USD public funds to protect the capital city from the advancement of dunes as well as a rise in the sea level. To complement this work, PEI also supported over 50 officials from the Ministries of Finance, Economy, Environment and Rural Development (along with university professors in collaboration with international experts) to develop a series of Poverty-Environment mainstreaming tools such as the Agenda 21 for the city of Nouakchott plus a cost benefit analysis on the likely long impact of climate change on the city of Nouakchott and proposed measures for adaptation. These public officials have reported increased capacity to conduct these complex studies by replicating the PEI methodology in similar studies without PEI support, for example, in Nouadibou and Rosso.

Rwanda's Parliament approves the first National Fund for Environment and Climate Change

In 2012 the proposal for Rwanda's National Fund for Environment and Climate Change (FONERWA) was finalized and approved by the Cabinet and Parliament, with the Government highlighting how PEI support was a key factor in the establishment of the fund. Key stakeholders, including DFID, have pledged their support for implementation. The Ministry of Economy and Finance (MINECOFIN) is fully involved in the management of the FONERWA and has requested PEI support cost-benefit studies to generate addition, programme and sector specific evidence to generate additional budget and donor allocations for investment in pro-poor environmental sustainability. Following these positive results DFID is committing funds towards FONERWA in 2013 ensuring the budget for poverty-environment related projects.

Mozambique's Ministry of Women and Social Affairs presents Gender & Climate Change Strategy

PEI Mozambique supported the training of more than 50 planners at the Ministry of Women and Social Affairs (MMAS)

at national and provincial level on mainstreaming gender and pro-poor environmental sustainability perspectives in their planning processes. During the training, the following relevant issues were identified and discussed: strategies for women's empowerment by reducing natural resource dependency through income diversification and access to credit; plus how the links between gender equality, vulnerable groups, poverty and the environment can be better integrated into the Economic and Social Plans (PES) for 2014. As a follow up to the training, MMAS identified equitable distribution of natural resources with greater focus on vulnerable groups with a view to reducing poverty as one of its strategic objectives and presented their draft strategy of gender and climate change.

Malawi demonstrates increased commitment to poverty-environment-climate funding and launches a National Environmental and Climate Change Communication Strategy

The UNDP Administrator, Helen Clark, opened the Post-2015 Environmental Sustainability Thematic Consultation Leadership Meeting in Costa Rica making reference to findings from the PEI Malawi supported study that showed that unsustainable natural resource use is costing the country the equivalent of 5.3% of GDP each year, more than the total funding allocated to education and health in the 2009 national budget. "The study also revealed the untapped potential of the country's wealth of natural resources for tackling extreme poverty. Soil erosion alone reduces agricultural productivity by 6%, and if this yield was recovered, an additional 1.88 million people would be lifted out of poverty by 2015¹.

For the first time, the costs and benefits of sustainable and unsustainable natural resource management in Malawi were quantified and compared in four areas, forestry, fisheries, wildlife and soils in 2011. Government and development partners highlighted that the study marked a turning point and in the next five years the Government is planning to allocate 19,028 million kwacha (ca. US\$ 59 million) to environmental programs and ensuring that all sectors prepare themselves and adapt to a changing climate. While this figure is still much smaller than by spending on other sectors, it marks a

Continued on page 16

¹ Economic Study – Economic Analysis of Sustainable Natural Resource Use in Malawi, January 2011, PEI and Government of Malawi

Continued from page 15

significant turning point for a government who had previously not invested significant funds in the environment as a means of tackling poverty.

Evidence of the increased Government commitment to ensure increased funding towards Poverty-Environment issues is reflected in the integration of these issues in the Guide to Executive Decision Making Processes in Malawi. A Climate Change and Environment Natural Resource Management (ENRM) Sector Wide Approach plan (SWAp) is being explored as financing and funding mechanism based on results from a study on a Conceptual Framework for a Climate Change ENRM SWAp carried out in 2012. The Budgets Division of the Ministry of Finance in Malawi has now instructed the Ministry of Economic Planning and Development (MEPD) to ensure that all projects being submitted for Public Sector Investment Programme are

Environmental Impact Assessment (EIA) guidelines compliant as part of the economic tools package supported by PEI during the scale up.

Also in 2012 the Minister of Environment and Climate Change Management launched the National Environmental and Climate Change Communication Strategy in August to support this work and to raise awareness among various stakeholders. The Minister stated that “we in the Ministry visualize a Malawi that is well-informed about environment and climate change. The strategy seeks to break barriers of communication by engaging people and transforming them from unclear understanding about causes of environmental degradation and climate change to a situation where they will make informed choices and decisions.” The Strategy was developed under Government leadership, in synergy with the Africa Adaptation Programme (AAP) and FAO.



Ms. Jenifer Chilunga Minister of Environment and Climate Change at PEI side event Governing council.



Rwanda – Children and Water - PEI

Uganda Red Cross Integrated Climate Change Adaptation Project

This project is funded by Germany's Federal Ministry for Economic Cooperation and Development through the German Red Cross, and is being implemented by the Uganda Red Cross Society (URCS). It promises to radically change the way humanitarian agencies use climate information to reduce the impact of storms, floods and droughts. The project will support the long-term reduction of disaster-risk based on climate change projections, such as elevating houses to reduce waterlogging from heavy rainfall. It also includes a second funding mechanism for disbursement in response to a weather or climate forecast.

Attaining Sustainable Services from Ecosystems through Trade-off Scenarios - ASSETS

ASSETS is a new interdisciplinary, four-year project that aims to undertake world-class research on how ecosystem services provided by forests interconnect with poverty alleviation, food security and adaptation to climate change. It is funded by Ecosystem Services for Poverty Alleviation (ESPA - www.espa.ac.uk), a UK multi-agency funding programme.

The overall goal of our highly motivated researchers from the Universities of Southampton, Dundee, Rhodes and Malawi as well as Conservation International, LEAD South East Africa, WorldFish, International Centre for Tropical Agriculture (CIAT) and BC3 Basque Centre for Climate Change is to explicitly quantify the linkages between the natural ecosystem services that affect – and are affected by – food security and nutritional health for the rural poor at the forest-agricultural interface. The project will deliver data from a range of sources and in various formats to inform policies affecting the lives of 2 million poor people living in three regions of Malawi, Colombia and Peru. It is hoped that our work can serve as an effective model to help 550 million people living in similar environments around the world. Find out more from www.espa-assets.org

IISD's Mainstreaming Climate Risk in Agriculture Value Chains

An innovative new pilot project in Uganda seeks to manage the impacts of climate risk at all levels of the coffee value chain. The Ministry of Trade, Industry and Cooperatives (MTIC), Makerere University and the International Institute for Sustainable Development (IISD) will work together through August 2013 to provide a platform for dialogue on climate risk management among actors along the coffee value chain — from producers to exporters. The overall goals of the project to support the mainstreaming of climate risk management into agriculture value chains and promote the sustainable and equitable growth of agriculture sub-sectors in Uganda. The initiative will also include a national workshop, organized as a means to disseminate the findings, serve as a planning forum to prioritize issues and guide the development of a proposal for the second phase of the project. This second phase could support the implementation of the results and apply lessons learned to other agricultural value chains in Uganda. see http://www.iisd.org/pdf/2013/eblast_mainstreaming_climate_uganda_2013.pdf

Global Climate Change Alliance, Strengthening the Resilience of Rural Populations

The overall objective of this project is to contribute to the sustainable improvement of livelihoods and food security of the rural populations in Uganda. The specific objectives are to strengthen the resilience of rural populations and agricultural production systems in the central part of the cattle corridor (more specifically, the districts of Nakasongola, Nakaseke, Luweero, Kiboga, Mubende and Sembabule, which are particularly vulnerable to drought and climate variability); and build the capacities of communities, commercial farmers and the Government of Uganda to cope with climate change.

The project budget is €11,000,000 and it is implemented by the Ministry of Water and Environment, Ministry of Agriculture, Animal Industry and Fisheries and UN Food and Agriculture Organisation (FAO). It started in July 2012 and is expected to end in July 2016

NEWS BRIEFS!

Levelling the playing field of climate change negotiations

OneWorld asks how the United Nation's decision to make its climate conferences "paperless" will affect the negotiating abilities of poorer nations with less access to information and communication technologies than wealthier countries

Read more <http://cdkn.us2.list-manage1.com/track/click?u=ce4f6dcfaf76cfd2d648b4bab&id=31e1d7ebca&e=2f7e4b242a>

Media essential in communicating climate change responses

"The global effort to combat the impacts of climate change can be realized if the media clearly educates and informs the general public and policy makers on the various adaptation and mitigation measures."

This was said at the first Eastern and Southern Africa Climate Change Media Conference in Kampala, Uganda. "The media is an important constituent that no one can afford to ignore as a partner to development," Uganda's Water and Environment Minister, Ms Flavia Munaaba said, adding that a number of initiatives are being pursued at the national, regional, continental and international level to address the impacts of climate change.

<http://www.necjogha.org/news/2013-06-04/comesa-meet-recognizes-importance-media-combating-climate-change-Africa>

Radio Listeners Clubs as Change Agents for Malawi

To date, the RLC project has recorded 15 programmes, and in the last year 7 of those have been produced and aired.

Moses Phulusa, a rice farmer and Chairman of the Chikala Radio Listeners Club (RLC) based in Mposa, sat down with two of the LEAD staff in late October, 2012 to tell the story of one of the most successful RLC programmes that has aired in Malawi: "Phukusi lamoyo" (nobody can keep your life safe but yourself). The RLC was created by the Lake Chilwa Basin Climate Change Adaptation Programme (LCBCCAP) in collaboration with Malawi Broadcasting Corporation (MBC) in September 2011, who trained

12 volunteer representatives from 6 different communities on how to use recorders, how to make radio programs, how to approach communities etc, and included education regarding climate change, adaptation and development. Further to this a Population Action International funded project studying the linkages between Population, Reproductive Health, Gender and Climate Change in 2012 had trained the Radio Listeners Clubs on population, reproductive health and gender issues.

Over 17,000 rescued from flood-induced hunger in The Lake Chilwa Basin, Malawi

An estimated 17,000 people faced with the risk of hunger from the three districts of Machinga, Phalombe and Zomba in Malawi were saved the ordeal when LEAD Southern and Eastern Africa came to their rescue in the just ended 2012/13 cropping season. The challenges faced by these farmers started in 2011/12, when some parts of Lake Chilwa Basin were hit by prolonged dry spells. In 2012/13, smallholder farmers in some parts of the basin lost their houses, belongings and crops due to floods. Responding to these challenges, LEAD Southern and Eastern Africa, through the Lake Chilwa Basin Climate Change Adaptation Programme supported 3,702 smallholder farmers with

sweet potato vines to provide the energy food requirements lost to the flood. Estimates by the Malawi National Statistical Office show that there are approximately 5 people per household in the basin. According to a crop scientist from Bvumbwe Research Station where the planting materials were sourced, "the cassava cuttings and potato vines were high yielding, fast maturing and free from pests and diseases" thus providing the much needed cushion of energy food reserves during the lean period of the year – normally January – March,

NEWS BRIEFS!

Addressing uncertainty in adaptation planning for agriculture

by Sonja Vermeulen, Andrew Challinor, Philip Thornton, Bruce Campbell, Nishadi Eriyagama, Joost Vervoort, James Kinyangi, Andy Jarvis, Peter Läderach, Julian Ramirez-Villegas, Kathryn Nicklin, Ed Hawkins and Daniel Smith. 2013. Proceedings of the National Academy of Sciences (PNAS) vol. 110 no. 21. <http://dx.doi.org/10.1073/pnas.1219441110>

Adapting to drought in the West African Sahel

Batterbury, S.P.J. and Mortimore, M.J. 2013 in press. In S. Boulter, J. Palutikof, D. Karoly, and D. Guitart (eds.) Natural Disasters and Adaptation to Climate Change. Cambridge University Press. <http://www.simonbatterbury.net/pubs/batterburyandmortimore.pdf>

Climate action in Kenya: New national plan launched

<http://ccaafs.cgiar.org/blog/Action-climate-Kenya-New-plan-launched>

Intercrop innovations may help build resilience in semi-arid areas

<http://ccaafs.cgiar.org/blog/Intercrop-innovations-build-resilienc.....>

African farmers turn to climate coping strategies

<http://www.scidev.net/global/news/african-farmers-turn-to-climate-coping-strategies-1.html>

Increasing Local Resilience to Impacts of Climate Change through Adaptation in Malawi!

Climate change is threatening Malawian communities in a variety of ways such as increased occurrence of floods or droughts, strong winds and increase in temperature. This has caused significant damage to crops, livestock and infrastructure such as roads and houses leading to food insecurity, increased expenses on infrastructure development and maintenance, loss of property and lives in some cases. The local communities have felt the impact most due to the low adaptive capacity as a result of extreme levels of poverty and over reliance on natural resources which are vulnerable to climatic hazards. Furthermore, the country depends on rain fed agriculture which is susceptible to climatic variability such as delayed onset of rains, erratic and unpredictable rains and dry spells.

In view of this, the Government of Malawi through the Ministry of Environment and Climate Change Management embarked on various adaptation programs to support community resilience to these impacts. Resilience to climate change implies that the communities are being helped to absorb the climate change disturbance and return to stability. In Malawi, the programmes are getting funding from various development partners namely; Japanese Government, World Food

Programme (WFP), United Nations Development Programme (UNDP), Food and Agriculture Organisation (FAO) and United Nations Environment Programme (UNEP) through the African Adaptation Programme (AAP) and Climate Change and Development Adapting by Reducing Vulnerability (CCDARE) Programme. At the local level the projects aim at building mechanisms for promoting resilience to climate change through implementation of measurable and demonstrable adaptation projects.

The programmes are being piloted in seven districts of the country namely; Nsanje, Chikhwawa, Mulanje, Zomba, Salima, Kasungu and Karonga. The adaptation interventions includes; irrigation cropping, planting of alternative food crops, afforestation, capacity building, river-line and stream rehabilitation, waste paper recycling, construction of fish ponds and fish smoking kilns, water infiltration improvement, local production and use of energy saving stoves and irrigation weir construction.

<http://www.nccpmw.org/>

MALAWI GOVERNMENT LAUNCHES DECENTRALIZED ENVIRONMENTAL MANAGEMENT GUIDELINES

By: *Walusungu Kayira and Welton Phalira*

26th June 2013 marked another milestone in the environmental history of Malawi when the Ministry of Local Government and Rural Development launched the Decentralized Environmental Management Guidelines (DEMG), which is a tool for spearheading bottom-up planning, implementation, monitoring and evaluation of environment and natural resources management in the Country. Speaking during the launching ceremony of the Guidelines at a function that was held at Capital Hotel in Lilongwe, the Secretary for the Ministry of Local Government and Rural Development, Mr. Kester Kaphaizi said the "Decentralised Environmental Management Guidelines will be a catalyst in addressing the gaps and inconsistencies from the previous Decentralised Environmental Management Manuals (DEMM) and in

the process, facilitate the integration of environmental issues in District Development Plans across the country".



Malawi is among the Southern African countries that continue to suffer horrendously from the negative impacts of environmental degradation that have resulted in significant loss of soil fertility, serious deforestation, water

pollution, depletion and degradation, and loss of biodiversity amongst others. This scenario has negatively impacted the lives of the majority of Malawians who rely on subsistence agriculture for a livelihood. The country's economy is predominantly agro based; hence the negative impact of environmental degradation might have a significantly negative bearing on social and economic growth. In order to mitigate the current situation, the Government of Malawi, through the Malawi Growth and Development Strategy II (MGDS II) has prioritised the management of climate change, natural resources and the environment as vessels for sustaining and accelerating economic growth in the country.

A copy of the guidelines is available online from: www.nccp.mw.org and www.unpei.org/malawi

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Coordinator, UNEP

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