

12th May 2015: Through an East African lens



Aims

Sub-Saharan Africa is a critical hotspot of hunger and under-nutrition, and also an area whose food security is expected to be impacted seriously by future climate change. At a pivotal moment for agriculture and food security in East Africa, this meeting picked up themes from previous Forum meetings to explore questions related to the food security and future of agriculture, livelihoods and biodiversity conservation in the region. This meeting was jointly hosted with the Global Food Security Initiative and the Cambridge-Africa Programme.

Witnesses

Liz Watson, a Senior Lecturer in the Department of Geography joined **Tinashe Chiurugwi**, a Research Associate from the National Institute of Agricultural Botany (NIAB) and **Alison Mollon**, the Acting Head of the Africa and Madagascar Regional Programme at Fauna and Flora International.

Research gaps

Liz argued that **the rush to provide new sustainability solutions often ignores the complex realities and needs of those on the ground as well as their values, capabilities and adaptability**. As a result, technological 'fixes' are often mal-adapted to the socioeconomic and cultural context, and the theory on paper looks very different to what actually takes place on the ground. For example, some argue that we need to increase crop yields in Africa through new technologies and investment in infrastructure. However, increasing resilience, reducing risk and providing a stable, if lower, crop yield may be more important to local farmers and it is these characteristics that can often be found in indigenous farming methods/crops. Moreover, the expected outcomes of a system redesign can fall short of expectations and can have unexpected and unintended negative consequences. She ended by saying that **indigenous communities are a valuable resource for food security and future research should both strengthen and support them**.

Tinasche agreed and argued that **there is a critical gap in understanding how to communicate solutions using existing institutions and communication systems**. His work focuses on applying NIAB's expertise and knowledge to an East African context and one of his greatest challenges is to provide mechanisms for farmers to access the information they need, including information about new seed varieties, which varieties best suit the conditions on their land, and sowing rates when using seed saved from the previous season. He argued that information services need to be developed to connect researchers with farmers and that this discussion needs to also involve actors further down the food value chain.

Alison argued that one of the main priorities for future research is to **explore the potential for landscape planning approaches to resolve tensions between food and energy production and biodiversity conservation**. This led her to ask: What are the most appropriate scales at which such planning should be undertaken? One key area within this is the food versus fuel issue, and in particular how to reduce the demand for charcoal – doing so would take an enormous pressure off biodiversity. Another is to develop greater understanding of how the changing physical interface and proximity between protected parks and inhabited areas affects the spread of zoonotic diseases and threats to human health.

Wicked problems and questions generated by the open discussion included:

- **There are often disconnects between discourses around competing demands for land and potential solutions** – why are they so persistent, and what is the best way to build bridges between them?
- **Narratives, success stories and storylines can be as powerful as evidence** and are important in raising people's awareness of the value of natural resources. Focussing on genuine success stories in discussion and evaluation of progress was agreed to be an important part of catalysing change.
- **It is easy to hold conflicting ideas about the situations we are trying to intervene in without thinking about the bigger picture**. In agricultural development we are aware of the need for increasing productivity of existing systems while reducing the environmental impact and preserving the systems' future capacity. In reality however, we do not always stop to think about what this means in practice and the effect it has on the people who live in those production landscapes. There is therefore a danger that sustainable intensification becomes a roof under which different disjointed (and sometimes contradictory) projects /activities are housed without much conversation between them – how can these be connected together?

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Sub-Saharan Africa is a critical hotspot of hunger and under-nutrition, and also an area whose food security is expected to be impacted seriously by future climate change. At a pivotal moment for agriculture and food security in East Africa, this meeting will pick up themes from previous Forum meetings to explore questions related to the food security and future of agriculture, livelihoods and biodiversity conservation in the region.

We're jointly hosting this meeting with the Global Food Security Initiative and the Cambridge-Africa Programme.

Setting the scene

On the panel of witnesses, Liz Watson from the Department of Geography will be joining Tinashe Chiurugwi, a Research Associate from the National Institute of Agricultural Botany (NIAB) and Alison Mollon, the Acting Head of the Africa and Madagascar Regional Programme at Fauna and Flora International.

Liz will discuss food production and the challenges it faces in the East African region. Her focus will be on dryland agricultural systems which includes smallholders and livestock managers (pastoralists) and there is also an article about her work in Kenya the [University Research News website](#).

Tinashe is interested in crop development and technology transfer in Africa. One of the projects he is working on is a new Agri-Transfer project in Kenya to support the uptake of new crop varieties by smallholder farmers and promote new agricultural and dissemination technologies ([more details](#)).

FFI's Africa and Madagascar programme covers a wide range of conservation landscapes and critical habitats in sub-Saharan countries and their projects aim to generate the incentives to local communities for sustainable use of sensitive habitats and species, and mechanisms to support the management of communal areas of land, coast and sea. Alison will draw on examples from across these and she recommended that we should look at the FFI website provides an overview of where they work and what they do ([more details](#)).

Full references

Chiurugwi, T. & Buthler, S. 2014. Better seeds, better yields. Unknown.

Srinivasan, S. & Watson, E.E. 2013. Climate change and human security in Africa. In: Handbook on climate change and human security (Ed. by M. Redclift & M. Grasso), pp. 305-333. Edward Elgar, Cheltenham, UK.

Witness profiles

Liz Watson	Senior Lecturer and Pybus Fellow of Newnham College, Department of Geography, University of Cambridge
Tinashe Chiurugwi	Research Associate in the Business Strategy team at the National Institute for Agricultural Botany (NIAB)
Alison Mollon	Senior Programme Manager, West & Central Africa, Acting Regional Manager, Africa at Fauna and Flora International (FFI)

Liz Watson

Liz Watson's research focuses on the relations between livelihoods, institutions, environment and development in the drylands of the Horn of Africa. In Ethiopia, work in Konso examined the production and sustainability of its intensive agricultural terraced landscape, and focused on the nature and significance of indigenous social institutions for governing land and labour.



More recently, research with the pastoralist Boran and Gabra of northern Kenya and southern Ethiopia has explored the dynamic and adaptive nature of mobile livelihoods. In the context of multiple stresses, social, cultural and political developments - as well as 'Development' projects - have often undermined indigenous institutions and have exacerbated exposure to risk and vulnerability. New research, funded by the Royal Geographical Society with IBG Thesiger-Oman International Fellowship, examines one of the local responses to the current challenges, namely the increased preference for camels. Camels are seen by pastoralists as better adapted to a changing climate, as well as potentially more profitable given the changing nature of regional trade and increased urban demands for milk and meat.

Tinashe Chiurugwi

Tinashe Chiurugwi's specialities are crop improvement and technology transfer, having worked on a range of horticultural and arable crops in Zimbabwe and the UK at Pioneer Hi-Bred, Seed Co Ltd, University of Reading, Rothamsted Research and CGIAR (the Consultative Group for International Agricultural Research) Consortium.



As a research associate within the NIAB International Initiative, Chiurugwi develops proposals and fundraising strategies and delivers projects to apply NIAB skills and expertise to agricultural issues in developing countries, including year-long scoping study to determine the feasibility of applying the NIAB Innovation Farm concept (a knowledge exchange/technology transfer hub) in Ghana, Uganda, and Kenya. He is now spearheading fundraising efforts to launch NIAB Innovation Farm in Ghana and Uganda.

In Tanzania, he has also been collaborating with Naliendele Agricultural Research Institute, to identify the facilities, practices and mechanisms that would improve the translation of agricultural research into farming practice in Nachingwea District, Southern Tanzania. In addition, he has been assisting in the management and leadership of a research project that has built a UK-Kenya partnership to support the uptake of new crop varieties by Kenyan smallholder farmers. As part of this, he coordinates participation by NIAB staff to help researchers at the Kenya Agricultural and Livestock Research Organisation to develop knowledge exchange models suitable for smallholder farmers, and in the production and distribution of communication materials.

Alison Mollon

Alison joined FFI in April 2014 after returning from the Democratic Republic of Congo where she was the Programme Manager for the Frankfurt Zoological Society. From early 2011 Alison was based in the headquarters of the Virunga National Park and was responsible for multi-donor project implementation including the GEF National Parks Network Rehabilitation Project. Focussing on protected area management, Alison also oversaw projects that supported the Maiko and Upemba National Parks and led on programme assessment, development of the national strategy and the resulting project design. Alison also became experienced in developing and leading operations in conflict zones. She specialises in species population estimates and has contributed to analysis of sampling methodology of great apes in Central Africa and has advised the government of St Lucia on best practice management and monitoring of the St Lucia Parrot.



Alison is currently leading the FFI Africa Regional Team to address threats to species and habitat conservation focussing on different protected area management systems, sustainable use of forest and forest related resources and engagement with business. Alison previously worked as a Project Manager for the GSMA, managing mobile money projects.

Key points

We often hold conflicting ideas about the situations we are trying to intervene in that we do not think about the bigger picture. In the end, sustainable intensification becomes a roof under which different disjointed (and sometimes contradictory) projects/activities are housed and go on without much conversation between them.
Tinashe Chiurugwi

- The importance of respecting 'indigenous' views, customs and practices in agricultural development projects
- In the rush for new solutions to sustainability problems, the values, capabilities and adaptability of indigenous people are often overlooked. As a result, technological 'fixes' are often mal-adapted to the socioeconomic and cultural context, and the theory on paper looks very different to what takes place on the ground.
- There is a critical gap in understanding how to communicate solutions (e.g. improved seeds) using existing institutions and communication systems.
- One of the main priorities for future research is to investigate the potential for landscape planning approaches to resolve tensions between food and energy production and biodiversity conservation. What are the most appropriate scales at which such planning should be undertaken? One key area within this is the food versus fuel issue, and in particular how to reduce the demand for charcoal – doing so would take an enormous pressure off biodiversity. Another is to develop greater understanding of how the changing physical interface and proximity between protected parks and inhabited areas affects the spread of zoonotic diseases and threats to human health.
- The power of narratives, success stories and storylines – these can be as powerful as evidence and important in disenfranchising communities from local resources.
- Focussing on genuine success stories in discussion and evaluation of progress
- Bridging disconnections between discourses and narratives - why are the disconnects between discourses around competing demands for land and potential solutions so persistent, and what is the best way to build bridges?
- Being wary of unintended consequences when searching for solutions
- The movement towards cities and creating alternative rural livelihoods to farming
- Education and raising people's awareness of the value of their natural resources

Introductions by the witnesses

Liz Watson, working on pastoralist systems in dryland areas of East Africa

In the rush for new solutions to sustainability problems, the values, capabilities and adaptability of indigenous people are often overlooked. As a result, technological 'fixes' are often mal-adapted to the socioeconomic and cultural context, and the theory on paper looks very different to what actually takes place on the ground. The most important way forward is to strengthen and support indigenous communities, who are a valuable resource for food security.

Liz: In the rush to provide new solutions to problems, we are overlooking indigenous knowledge. Our assumptions are that we need to increase yields in Africa and that can be helped through new technologies and investment in infrastructure. However, increasing resilience, reducing risk and providing a stable, if lower, crop yield may be more important to local farmers and it is these characteristics that can often be found in indigenous farming methods/crops. Moreover, the expected outcomes of a system redesign can fall short of expectations and can have unexpected and unintended negative consequences.

- I realise that is really a whole bunch of points, so if you want one, I would say: "The rush to provide new solutions often ignores the complex realities and needs of those on the ground."

Tanashe Chiurugwi, working on seed systems in East Africa

Applying NIAB's expertise and knowledge to the East African context through Innovation Farm and other approaches. One of the greatest challenges is to provide mechanisms for farmers to access the information that they need, for example on new seed varieties, which varieties best suit the conditions on their land, and sowing rates when using seed saved from the previous season. Information services need to connect researchers with farmers, but are also relevant right along the food value chain.

Tinashe: There is a critical gap in understanding how to communicate solutions (e.g. improved seeds) using existing institutions and communication systems.

Alison Mollon, leading the work of FFI in Africa

One of the main priorities for future research is to investigate the potential for landscape planning approaches to resolve tensions between food and energy production and biodiversity conservation. What are the most appropriate scales at which such planning should be undertaken? One key area within this is the food versus fuel issue, and in particular how to reduce the demand for charcoal – doing so would take an enormous pressure off biodiversity. Another is to develop greater understanding of how the changing physical interface and proximity between protected parks and inhabited areas affects the spread of zoonotic diseases and threats to human health.

Alison: There is a need for landscape-level planning, particularly around water resources.

Key points people took away from the witnesses in the Original Forum

After the meeting, everyone was asked to outline the three things that they took away from the discussion and what aspects of they found most interesting. These included ideas or questions that they would like to explore more or those we didn't talk enough about.

The power of narratives, success stories and storylines

Storylines can be as powerful as evidence and the importance of particular narratives in disenfranchising communities from local resources.

Focussing on genuine success stories in discussion and evaluation of progress: most of what we talk about in our discussions of sustainable development and the environment revolves around the negative things that we wish could be changed. It struck me (when someone mentioned it) that we often fail to cite the positive aspects and genuine improvement that has come from human intervention, be it from outsiders or locals. We try to do this in our work at NIAB but it is challenging to understand other cultures or find local project partners who are bold enough to help in that respect because of constant race towards ever approaching project deadlines.

The power of ideas and viewpoints: I realised that, as someone pointed out, we often hold conflicting ideas about the situations we are trying to intervene in without thinking seriously about what that means for us and what alternative story we would like to portray. In agricultural development, for example, we are aware of the need for increasing productivity of existing systems while reducing the environmental impact and preserving the systems' future capacity, we have even come up with the term 'sustainable intensification' to describe this goal. In reality however, we do not stop to actually think about what it means for the work that we do and the landscapes in which we work are so complex and often under perverse political and economic control that we do not have sufficient headspace to divert our attention from achieving our stated goals and think about the bigger picture. In the end then, sustainable intensification becomes a roof under which different disjointed (and sometimes contradictory) projects/activities are housed and go on without much conversation between them. This cross-fertilization of ideas, I think, is what we got going at the meeting on Tuesday.

There are many beneficiaries from the ways of lives of the people in Africa. These usually perpetuate misleading information in favor of their benefits, leading to speculation e.g Poaching still goes on because the most expensive products from poaching have markets outside Africa. The beneficiaries of the food (cereals like barley, maize and rice) sold in Africa are outside Africa. If correct information about Africa is well articulated, more people will become well informed about the resources they have, & many solutions that are sustainable will arise.

Bridging disconnections between discourses and narratives

Why the disconnects between discourses around competing demands for land and potential solutions (e.g. forest conservation and agriculture) are so persistent, and what is the best way to build bridges.

There needs to be a greater connection between discourses, e.g. between food security and forest conservation. Joining up the dots is challenging and one often has to face some hard facts. One example was

the question of how to resolve projected increases in food demand, with zero deforestation targets, in countries such as Ethiopia and Tanzania.

There is a disconnect between what is said in international meetings and what is going on at the ground in terms of addressing food security challenges therefore there is need to harmonize the two scenarios

I thought Phil Franks' points about parallel discourses of forest restoration and increasing agricultural outputs across East Africa was very interesting, and the discussion that followed on how, and what would happen if, those advocating each of these conflicting notions were forced to engage one another.

Be wary of unintended consequences when searching for solutions

The following arose in chats afterwards, rather than during the group discussion: There is a rush to provide solutions and we regularly hear that it needs to be scaleable and "how do we achieve that at scale?". However, each of the witnesses also spoke of the impossibility of being certain that there will be no unintended negative consequences, particular when solutions are devised by those who are not embedded within the particular socio-political system. **There is, therefore, a tension and risk that our efforts to achieve results at scale will be thwarted by complex socio-political processes that produce unexpected results.**

There are too many solutions being offered by different stakeholders in Europe targeting Africa and some of these interventions have not been extremely carefully thought out. Is Africa being rushed into rapid urbanization? Is it that we are tackling the symptoms of the problem rather than the root cause of food insecurity?

Commitments to zero deforestation by some does not tally with commitments/needs to increase food production by (e.g.) 80% unless we can achieve sustainable intensification on existing agricultural land rapidly and across large geographic areas. This conflict is likely to disenfranchise resource-poor farmers with insecure land tenure who may not be focused on maximising food crop yields.

The movement towards cities and creating alternative rural livelihoods to farming

Rural-urban migration and assumption that the youth will inevitably gravitate to ever larger cities. There was some suggestion that while the youth want to get out of farming it should not be assumed that the only alternative is going to the city in search of work

Finding ways to allow people to remain in rural societies but without having to be a (subsistence) farmer seems to be a way to appeal to people's aspirations but also to provide the means to stimulate innovation at a manageable scale that would not need so much (if any) outside intervention. So micro-financing, increasing educational attainment, etc, could be done with only minor input and allow things to develop hand-in-hand with local skills/expertise

Solutions need to come from the ground, not from outside.

It might be a slower and messier process, but working with indigenous communities is by far the best way forward. Narratives about such communities 'not being up to the job' or not resilient, need challenging.

The importance of respecting 'indigenous' views, customs and practices in agricultural development projects, particularly as most of them have developed over time and have ensured sustainability and resilience in the systems we seek to improve.

For the first time I attended a meeting where facts about solutions to challenges of Africa were well articulated (Liz) and opened up for discussion. The adaptation from cattle to camels exhibit the Darwinism survival for fittest, a response from pressures an environment that is not productive enough to one that is productive.

Very few People from outside Africa understand Africa but continue to influence a lot what go on there. Many people in Africa have not yet recognized the importance land and its resources but are usually misled through policies that cause them to loose land and its resources. The policy makers are a product of an education system that does not value what people have around them. So the policy makers will promote such policies (thinking they are beneficiaries while those whose land has been 'grabbed' loose.

To use the term 'Africa' seemed too all encompassing and there must be as many different problems/solutions as there would be in different European countries.

Avoiding the imposition of solutions from outside would have several advantages not least empowering people to take responsibility for their own actions and also adapt solutions to suit their own circumstances and preferences.

Liz Watson's research into adaptation to climate change within traditional pastoral communities is an area I found fascinating.

I found Henry Busulwa's comments about the competing advice / support for different schemes coming to East Africa from different donors and institutions pertinent. The fact that people who live in the region aren't given space and power to conduct research and make informed decisions is an issue that needs to be tackled.

The importance of education and raising people's awareness of the value of their natural resources

There are the dual problems of misinformation (e.g. when discourses get hijacked) and missing information (on ecosystem values, appropriate new technologies). These issues are tackled by projects such as those looking at mobile phone usage for farm extension services, and Smart Villages, which promotes off-grid electricity supply including sharing experience between communities.

I was also struck by Henry from Uganda, who said that in the last 50 years, the knowledge of people for the plants and other organisms in the locality had diminished sharply and this has led to the problems with people selling off their land for only a small amount. This goes counter to the received view that poor subsistence farmers are in tune with nature.

The need for more evidence from on the ground

Apparently Africa is still lacking in evidence hence there are glaring gaps in research.

It was not very clear to me how climate resilient the efforts to introduce new crop breeds are as this is an important phenomenon that could interfere with success of such interventions.

