

# The first year of AgriFoSe2030

# AgriFoSe2030

Agriculture for Food Security 2030

- Translating science into policy and development



January 2016 - January 2017



## Establishing the structures

The AgriFoSe2030 programme, Agriculture for Food Security 2030, a 60 million SEK investment by Sida, was launched at a high-level inauguration event at SLU in Uppsala January 26th, 2016.



Programme Director Professor Ulf Magnusson at the inauguration of AgriFoSe2030.

During this first year, the programme with its four sub-themes and the communication and engagement component, established its governance structure. A programme Steering Committee was formed headed by the Programme Director and consisting of all theme leaders and three external members, Dr. Rita Sharma, Secretary to the National Advisory Council of the Government of India, Mr John K. Mutunga, KenAff, Kenya Nairobi and Mr Moses Osiru, RUFORUM, Kampala.

The four cross-disciplinary themes were busy in establishing their structures for research exchanges, development of knowledge syntheses, meta-analyses, critical reviews and policy briefs. This included administrative and financial routines for research exchanges and efforts linking to relevant partners in key target countries.

## Building capacity and synthesising knowledge

A key component of the programme is the exchange of researchers between research institutions in Sweden and the programme's target countries. During the first year around 15 researchers were part of these research



Ambassador Kajsa B Olofsgård, Swedish Chief Negotiator for the UN Agenda 2030 from the Swedish Ministry for Foreign Affairs, speaks at the inauguration AgriFoSe2030. Other speakers were Ambassadors Lennart Båge and Appolinaire Djikeng, Director of the BecA-ILRI Hub Nairobi Kenya.

exchanges resulting in capacity building and more than 20 scientific review papers, briefs and reports. Most of these will be published and disseminated during 2017.

This first year had a geographic focus on countries in sub-Saharan Africa (SSA), both in terms of research exchanges, capacity building and development of knowledge syntheses. Consequently, the two training courses during the year were held in Nairobi, Kenya:

### Introduction course in meta-analysis

*November 28 - December 2, 2016, Nairobi, Kenya*  
This AgriFoSe2030 training course, developed by Theme 3 and 4, was co-hosted by ICRAF, Nairobi. There were 31 participants from 15 African countries and one Southeast Asian country at the course. The participants were either post-doc researchers or senior researchers from a wide range of agricultural disciplines. Meta-analysis is a powerful statistical methodology for synthesizing and making quantitative analysis of research data and research findings in an objective manner. The main resource person was Professor Julia Koricheva, Royal Holloway University of London, a leading global authority on meta-analysis.

### How to enhance capacity to transform science into policy and practice

*January 22-26, 2017, Nairobi, Kenya*  
This AgriFoSe2030 training course, developed by Theme 1 and 2, gathered around 30 agricultural researchers from SSA to learn how knowledge exchange between researchers, policy-makers and practitioners can be improved. Participants were trained in mapping the policy landscape and its stakeholder models, and

strategies for policy engagement and formulating research-to-policy plans, policy briefs, and policy recommendations for different target groups. Plenary presentations were mixed with practical assignments and group work on different approaches for distilling and communicating key scientific messages and engaging in dialogues with policy-makers and practitioners.

## Communicating and engaging

During the first year the programme also developed a strategy for how to communicate key messages from the different types of AgriFoSe2030 activities including studies, research exchanges and workshops and how to engage stakeholders in target countries. The programme also developed a website and tools for communicating with a growing number of network partners, including policy-makers and practitioners in target countries.

On January 27-28, 2017, the programme arranged a workshop in Nairobi with the title “How to bridge policy and science – fostering dialogue between science, practice and policy”. The workshop brought together roughly 50 participants consisting of agricultural scientists from around SSA, along with policy-makers, representatives of agri-



A stakeholder workshop on how to bridge policy and science in Nairobi, Kenya.

businesses, grassroots organizations and policy studies networks.

The workshop provided AgriFoSe2030 researchers, policy-makers and practitioners in the region with an arena for dialogue and how to translate the state-of-the-art science in support of knowledge-driven decision-making, improved practices ensuring food security and sustainable development in sub-Saharan Africa. The workshop also gathered African actors involved in capacity building and knowledge brokering to discuss how the AgriFoSe2030 programme can add value to ongoing work and strengthen science-policy-practice dialogues and knowledge co-generation in the region. The workshop identified a number of actions and steps that can make the links between agricultural science-policy-practice stronger in the region. The participants shared useful and practical ideas on how science can become more understandable and accessible for policy-makers, the private sector and others working with agriculture and food security. For workshop proceedings, please visit [www.slu.se/agrifose](http://www.slu.se/agrifose).





## Theme 1 activities

Research exchanges leading to knowledge syntheses were conducted, from mid-November to December at the Department of Human Geography at Lund University, Sweden as a base and included;

1. Jane Mutune from Wangari Mathaai Institute For Peace and Environmental Studies, University of Nairobi, Kenya, producing a knowledge synthesis with the title “Social and Economic Dimensions of Kenyan Smallholder Based Agriculture and Food Security: Gender and Generational Aspects of Sustainable Intensification”.
2. Dr. Charles Recha from Egerton Agricultural University, Eldoret, producing a knowledge synthesis with the title “Local and regional variations in the conditions of agriculture and food safety”.

These knowledge syntheses were focusing on two of the programme’s crosscutting issues; (i) promoting

sustainable intensification of agriculture and (ii) increasing the participation and influence of women and youth within farming.

A policy baseline report giving an overview of the agricultural policies in place in sub-Saharan Africa was also produced. The focus of the report is on Kenya, Tanzania, Malawi and Zambia, identified as Theme 1 African partner countries for AgriFoSe2030. A similar report will be produced during 2017 for Uganda as well as for Bangladesh and Vietnam identified as Theme 1 Asian partner countries.

Publications and policy briefs from all this work will be published in 2017. For more information on outputs in this theme please visit [www.slu.se/agrifose](http://www.slu.se/agrifose).

Theme 1 and 2 also co-organized the training course “How to enhance capacity to transform science into policy and practice”, on January 22-26, 2017, Nairobi (see above).



Raising smallholder productivity, combatting hunger and improving rural livelihoods require interventions to improve technology use, enhance women’s participation and stimulate inclusive and efficient markets.

### **Example of Key messages theme 1**

“....The agricultural sector is performing poorly because of socio-economic, political and climate environment constraints faced by women and youth who are a crucial resource in agriculture and the rural economy. A review of the literature revealed that the participation of youth in the agricultural sector in Kenya is low despite the existence of an enabling policy environment. Women are still faced with inequality, exclusion and asymmetry in the information that pertains to agricultural production and marketing. In my study I make the case that one reason for the perpetuation of food insecurity in many parts of sub-Saharan Africa is the systematic underrepresentation of youth and women in most policy-making processes. Thus, to improve food security in the region I argue that it’s important to formulate policies that support women and youth to better access innovation opportunities, credit facilities and platforms for participation in public affairs and decision-making...”

- Dr. Jane Mutune from Wangari Mathaai Institute For Peace and Environmental Studies, University of Nairobi

## Theme 2 activities

Within this theme two longer research exchanges were conducted:

- Dr. Stephen Mureithi, Department of Land Resources Management and Agricultural Technology, University of Nairobi visited University of Gothenburg, Linköping University and Swedish University of Agricultural Sciences for workshops and writeshops.
- Dr. Eskil Mattsson, Centre for Environment and Sustainability (GMV), Gothenburg University and Chalmers University of Technology visited Peradeniya University in Sri Lanka.

Three short term exchanges were also done through the visits of Prof. N.H. Ravindranath, Indian Institute of Science, Bangalore, Dr. Josias Sanou, INERA, Burkina Faso and Dr. Trong Hoan, ICRAF, Vietnam, visiting Gothenburg University to participate in the workshop “Landscape Management and Design for Food, Bioenergy and the Bioeconomy”, 15-16 mars, 2016. Knowledge synthesis work was done in three areas:

- Title “Enclosures in Kenya and Ethiopia”, Dr. Stephen Mureithi, Department of Land Resources Management and Agricultural Technology, University



Cultivating the land for vegetables in a dry-zone homegarden in Sri Lanka. Homegardens cover more than 13 percent of Sri Lanka's land area.

of Nairobi and Dr. Gert Nyberg, Department of Forest Ecology and Management, SLU, Umeå.

- “Parkland agroforestry management for food security in West Africa “ Dr. Josias Sanou, INERA, Burkina Faso and Dr. Gert Nyberg, Department of Forest Ecology and Management, SLU Umeå.
- “Home gardens in Sri Lanka” S.P. Nissanka, Department of Crop Science, University of Peradeniya and Dr. Eskil Mattsson, Centre for Environment and Sustainability (GMV) Gothenburg University and Chalmers University of Technology.

Publications and policy briefs from all this work will be published in 2017. For more information on outputs in this theme please visit [www.slu.se/agrifose](http://www.slu.se/agrifose).

Theme 1 and 2 also co-organized the training course “How to enhance capacity to transform science into policy and practice”, January 22-26, 2017, Nairobi (see above).

### **Examples of Key messages theme 2**

”... Parkland agroforestry systems are important for food security in Burkina Faso, but current forest legislation in the country is a barrier for further development of these systems.....”

- Dr. Josias Sanou, INERA Burkina Faso

“... Our review shows that, although there are many studies on food security aspects of homegardens in Sri Lanka, the interlinkages with other food production and land-use systems including the impacts, trade-offs and synergies from food production remain relatively unexplored. Therefore, long-term transdisciplinary, stakeholder inclusive and data-dense research programs with clear monitoring and evaluation methods are needed to better understand the dynamics of homegardens and their ability to contribute to local food security...”

- Dr. Eskil Mattsson, Centre for Environment and Sustainability (GMV) Gothenburg University and Chalmers; Sweden

## Theme 3 activities

Within this theme four research exchanges were conducted.

- Dr. Shem Kuyah, Jomo Kenyatta University of Agriculture and Technology (JKUAT), Kenya visited Department of Ecology, SLU, Sweden (August-November 2016), producing knowledge synthesis studies under the title “Efficiency in mixed cropping systems with focus on pest, disease and weed control”.
- Dr. Charles Midega från ICIPE, Kenya, visited Department of Ecology, SLU, Sweden (August-September 2016), producing knowledge synthesis studies under the title “Efficiency in mixed cropping systems with focus on pest, disease and weed control”.
- Dr. Leonard Rusinamhodzi, CIMMYT, Kenya, visiting Department of Soil and Environment, SLU, Sweden (October 2016), producing knowledge synthesis studies under the title “Options for crop production intensification and diversification in small-scale farming”.
- Dr. Sigrun Dahlin, Department of Soil and Environment, SLU, Sweden, visited CIMMYT, CIAT, ICRAF and JKUAT, Kenya for three weeks in November, 2016 with the aim of strengthening

### **Examples of Key messages theme 3**

”... Weeds are a major cause of low crop yields in sub-Saharan Africa. Mixed cropping systems offer potential for low cost weed control. A problem is that there has been conflicting reports about the effect of mixed cropping on weed infestation and crop yield. This study is the first global meta-analysis to demonstrate that mixed cropping provide a significant opportunity for improved control of weeds. This is important for smallholder systems, particularly in sub-Saharan Africa where farms are traditionally intercropped...”.

- Dr. Shem Kuyah, Jomo Kenyatta University of Agriculture and Technology, Kenya

Swedish-African research networks and mapping policy issues and knowledge gaps in relation to sustainable increases in productivity and diversity in smallholder cropping systems.

Publications and policy briefs from all this work will be published in 2017. Apart from the knowledge synthesis and meta-analysis work described above, a book chapter was produced “Regulatory ecosystem services in agroforestry systems”, in the forthcoming book “Agroforestry for Environmental Services, Climate Risk Management & Livelihood Security”, Springer Verlag. For more information on outputs in this theme please visit [www.slu.se/agrifose](http://www.slu.se/agrifose).



Charles Midega is an agroecologist and senior research scientist at the International centre of insect physiology and ecology (ICIPE), in Kenya. He was one of four researchers that participated in an AGriFoSe2030 exchange in 2016.



## Theme 4 activities

Within this theme six subprojects were conducted.

- Improve slaughter hygiene at small-scale slaughter abattoirs in Uganda
- Successful interventions to improve livestock production
- Goat production in Southeast Asia
- Aquaculture for smallholder aquaculture farmers
- Practical breeding program for tilapia
- Insects as food and their added value in the supply chain

From these sub-projects six scientific reviews will be submitted to international peer-reviewed journals in 2017 which will also result in five policy/technical briefs.

Apart from this, two handbooks will be distributed in 2017, 'Best practices for goat producers' and 'Women in insect value chains', and a revision of a book chapter on insects as food will be finalised.

Sub-project 5 also generated the 'Declaration

of Zanzibar' aiming to triple the contribution that aquaculture makes to the economy, and contributed to the establishment of the National Aquaculture and Development Centre (NADC) in Tanzania to help tackle poverty and undernutrition.

There have been two longer exchanges to SLU. The first by Dr. Kokas Ikwap, Makerere University, Uganda who spent one month at SLU in sub-project 1, and the second by Dr. Daovy Kongamanila, National University of Laos, Vientiane, Lao PDR who spent two months at SLU in sub-project 3. In addition to this, there have been more than 15 shorter exchanges between five and 14 days. These exchanges have mainly been related to workshops in the sub-projects 3, 4, 5 and 6 and were South-South based exchanges.

Theme 3 and 4 also co-organized the training course, "Introduction course to meta-analysis", November 28 - December 2, 2016, Nairobi, Kenya (see above).



Food market in Sierra Leone.

### **Examples of Key messages theme 4 from the sub-project "Practical breeding program for tilapia"**

- 1) In order to establish sustainable aquaculture in Tanzania, considerable investments must be made to develop and maintain biosecure hatcheries.
- 2) Development of aquaculture in Tanzania needs to be focused on a limited number of species that are adapted to the local environment. Brood stock development and maintenance must be supported by national and international initiatives for at least 20 years.
- 3) Aquaculture development in Tanzania should consider 'zoning' where aquaculture is restricted to areas where it will not damage local diversity of Tilapia species.
- 4) Research priorities include genetic characterization of current native strains and comparing their performance in an 'open garden' experiment, preferably including exotic Tilapia strains like GIFT or Abassa.

- Dirk Jan de Koning, Swedish University of Agricultural Sciences

## General Programme message

“...AgriFose2030 has now been up and running for one year, We are busy translating science into policy and practice all over the program in our collective effort to contribute to the fulfilment of Sustainable Development Goal 2. Within all the four themes colleagues from Africa, Asia and Sweden have been working together validating, synthesising and communicating the current science on agriculture for food security to support a successful transformation of smallholder agriculture in low-income countries, AgriFose2030 has also successfully arranged courses and workshops – this time in Kenya – on how to synthesise science and communicate to stakeholders. This capacity development is crucial for the longevity of the AgrifoSe2030 effort and a priority for us. So, we look forward to high-quality and easily palatable science-based knowledge to be delivered 2017 in the realm of our crosscutting issues: sustainable intensification, improved market access and strengthening the role of women and youth in agriculture...”

- Professor Ulf Magnusson,  
AgriFoSe2030 Programme Director

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