



MAIN TECHNICAL REPORT

Making Agri-Food Systems Work for the Rural Poor

in Eastern & Southern Africa

IDRC PROJECT NUMBER	105790-001
RESEARCH ORGANIZATION	ASSOCIATION FOR STRENGTHENING AGRICULTURAL RESEARCH IN EASTERN AND CENTRAL AFRICA (ASARECA)
LOCATION OF STUDY	KENYA, MALAWI AND UGANDA
WRITTEN BY	ASARECA - UGANDA
REPORT TYPE	FINAL TECHNICAL REPORT
PERIOD COVERED	JANUARY 2010 – MARCH 2014
SUBMISSION DATE	10 DECEMBER 2014
RESUBMISSION DATE	JANUARY 2019

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Table of contents

Acro	onyms and observations
1. E	Executive summary
2. 1	The research problem and context
3. F	Progress towards achieving key milestones
9 3	3.1. Regional learning fora
11	3.2. Side event at the 2nd ASARECA General Assembly
12	3.3. Recommendations made to the Business Committee of the GA from the side event
13	3.4. Launching of IDRC Knowledge Management Products
4. 5	Synthesis of Research Results and Developments towards AFS themes
15	4.1. Context
15	4.2. Session outputs
17	4.3. Synthesis of key findings
24	4.4. Moving forward
25	4.5. Ideas for IDRC Programming and Support
27	4.6 . Conclusions and Recommendations
5. 0	Overall research methodology
6. 0	Challenges
7. <i>p</i>	Administrative reflection and recommendation
8. <i>A</i>	Acknowledgement
32	Bibliography



Acronyms and abbreviations

ACODE	Advocates Coalition for Development and Environment
AFS	Agri-food Systems
ARD	Agricultural Research for Development
ASARECA	Association for Strengthening Agricultural Research in Eastern and Central Africa
ECA	Eastern and Central Africa
ESA	Eastern and Southern Africa
FAO	Food and Agriculture Organization
GA	General Assembly
IAR4D	Integrated Agriculture Research for Development
IDRC	International Development Research Centre
KARI	Kenya Agriculture Research Institute
MHPDP	Medium to High Potential with Declining Potential
NARI	National Agricultural Research Institutions
NARO	National Agriculture Research Organization
R&D	Research and Development
SAL	Semi-arid lands
SLM	Sustainable Land Management
SSA	Sub-Saharan Africa
UHP	Unexploited high potential



1

Executive summary

The overall objective of the project 'Making agri-food systems work for the rural poor in Eastern and Southern Africa' was to improve food security and promote sustainable management of natural resources through enhanced adoption of pro-poor agri-food system innovations. To achieve this goal, the project aimed at achieving the following four specific objectives; (i) to identify and promote local innovations and adaptation strategies that work for the poor rural men and women to cope with food security vulnerabilities; (ii) to adapt and scale up technologies and market innovations for promoting orphan crops that enhance food security, increase incomes and ecosystem integrity in selected areas of Malawi, Kenya and Uganda; (iii) to analyze and promote specific policies and governance mechanisms for sustainable agri-food systems; and (iv) to determine mechanisms for scaling up agri-food systems and sustainable agriculture. The project was implemented in 3 countries, Kenya, Malawi and Uganda with the participation of five partner institutions, i.e., National Agricultural Research Organization (NARO), Uganda; Kenya Agricultural Research Institute (KARI), Kenya; Bunda College of Agriculture, Malawi; Advocates Coalition for Development and Environment (ACODE), Uganda; and Tegemeo Institute of Agricultural Policy and Development (TEGEMEO), Kenya. ASARECA's main task was to coordinate regional activities and provide a platform for the participating countries and institutions to share lessons. Over the project implementation period, ASARECA facilitated a series of regional meetings to discuss among other issues a common approach to project implementation, monitoring and evaluation, management of knowledge and communication products and final regional fora to disseminate the research findings. In addition, ASARECA organized two sets of training courses on scientific writing and communication, which were attended by the scientists from the participating institutions. To enable the project partners widely disseminate the research findings, ASARECA provided a platform at its 2nd General Assembly where over 16 papers were presented not only from this particular project but also papers based on findings from other IDRC supported projects in the region (Annex II). Overall, the project has demonstrated that orphan crops have the potential to diversify the farming systems, spread risks, contribute to food security, and provide income opportunities for the most vulnerable and women in particular. .



2

The research problem and context

Sub-Saharan Africa (SSA) continues to face persistent rural poverty, deepening food insecurity, and declining natural resource base and associated ecosystems services. These trends continue to undermine the ability of the rural poor to adapt to varying and changing climatic conditions and these trends may be of concern today and perhaps into the far future unless governments and other partners in the region adopt more aggressive food security enhancement innovations based on existing opportunities. Such opportunities would include the presence of large pool of diversity agricultural crops, agricultural innovations including technologies and management practices, and diversity of ecosystems and associated services. It is estimated that over 315 million or in other words, one in every three persons in SSA live on less than one dollar a day. For example, in Kenya, it is estimated that about 22.2 million persons live below the poverty line (based on a survey conducted in 2014). At the same time, the number of undernourished people in SSA has increased from about 170 million in the period 1990-1992 to over 200 million in the period 2001 - 2003 (FAO, 2008). The other 2 project target countries, Malawi and Uganda are not spared either from these challenges. Malawi has had food insecurity leading to wider spread chronic hunger among the rural poor for several decades, a situation that seems to be worsening due to climate change. However, the country has specifically addressed this issue through massive investment in maize production (through a strong program on farm inputs subsidy) that seems to alleviate the food insecurity the country has faced for many years. It is worthwhile noting that depending on the type of crop to address food security vulnerability under climate change stress may also have its own risks. This is the critical point that this project is intended to address by supporting the diversification of the crops that rural poor may depend on. For the case of Uganda, studies have shown that malnutrition and stunted children under the age of 5 is on the increase. This is directly attributed to inadequate supply of and access to foods of high nutritional value.

It is important to recognize that food insecurity in most parts of Eastern and Southern Africa (ESA) is in most times localized either by geographic locations, by community or even by social groups within a given community. For example, the growing food insecurity in most parts of Uganda, and in particular Eastern and Northern Uganda is partly attributable to dynamic changes in the ecological system, and is largely localized to these areas, since most of Southern Uganda has food abundance. These challenges are aggravated by widespread gender inequalities that disadvantage specific segments of the population such as women and children. Farmers in the food insecure regions face mounting population pressure, increasing food insecurity, declining landholding, and deteriorating natural-resource bases. Gender inequalities also play a significant role in accounting for the region's poor agricultural growth and poverty reduction performance (IAASTD, 2009).



Given that there is a broad agreement that improving agricultural productivity is crucial in resolving food crises, enhancing food security and accelerating pro-poor growth, agricultural research organisations in the three countries and elsewhere have developed some successful "best bet innovations and technologies" in agriculture and natural resources management that remain unrecognized and not promoted. Studies suggest that some of these technologies and innovations can reach and empower poor farmers and women to access and utilize their resources and institutions and tap into emerging market opportunities. The major concern is how to multiply these fragmented or isolated success stories, to learn from what did not work, and to leverage societal benefits to a scale whereby 'marginal areas' and the men, women and farming households therein, gain the technologies, skills and policy support to largely meet their needs and take charge of their own production bases and destinies. The challenge is how to harness such agricultural and technology initiatives to reach even 'the hardest to reach'. This project is positioned for research to discover ways to scale up technological and institutional innovations and pilot tested approaches such as participatory varietal selection, farmer experimentation, participatory value chain development, community based integrated natural resource management and community-driven governance and policy action research that have potential for improving agricultural productivity and food security with sound environmental management.

While recognizing the complexity of food security challenges, this project focused on five key problem areas that required further research and development efforts.

Firstly, the majority of food security initiatives and research and development efforts tend to focus on promoting new technologies in high potential areas. Yet, resource-poor farmers are often found in large numbers in pockets of low potential areas (that are largely ecologically degraded, lacking basic infrastructure and services, and are poorly linked to markets with little opportunities for value chain development and upgrading). These areas and the associated populations therein have long been left behind in mainstream agricultural research and development efforts, and continue to be bypassed by current "Green revolution" initiatives in many of the countries in the region. This project was therefore positioned for research to learn from what works in some areas, and to test and adapt agricultural technology and institutional innovations to that would facilitate the reaching of even 'the hardest to reach' in marginal areas, and to harness their food security and resilience to vulnerabilities and food shortage. Research is needed to figure out how to scale up and out and also apply technologies and innovations in low potential areas. The project worked in three cluster areas selected based on their vulnerability to food crises and agricultural potential. These include the semi-arid lands (SAL), Medium to high potential areas with declining potential (MHPDP) and those with unexploited high potential (UHP).

Secondly, even in high potential areas, large-scale existing food security initiatives are likely to be captured by the well of farmers who have resources to access improved planting materials, fertilizers, markets and



information. The poorest of the poor, women and the vulnerable often lack the prerequisites underlying participation, which include education, income and market access (Ahmed et al., 2007; Lebel and Faminow, 2009). In the face of food crises and other vulnerabilities, these communities have often had coping strategies to adapt and respond to potential crises, and have developed local innovations. However, most food security research and development programmes tend to neglect local innovations and adaptation strategies used by men and women. We are yet to understand why today, communities are unable to adopt measures and strategies to mitigate the impacts of food insecurity at scale. A central focus of this project was to deepen understanding of the drivers and dynamics of vulnerability, and the adaptation strategies and local innovations used by poor men and women farmers to cope with recurrent food crises and food insecurity. The project therefore aimed at identifying and testing strategies for food security and agricultural growth based on local innovations and strategies that really work well for the poor.

Thirdly, to expand the pathways out of food insecurity, poor rural women and men will have to increase agricultural productivity and increase their income. Such segments of society need to take advantage of opportunities that exist in research and development innovations. However, most food security initiatives tend to focus on a narrow base of key major crops such as maize, cassava, rice and bananas among others. For example, Malawi's "green revolution' has focused on maize, ignoring other crops. The multi-million East African Agricultural Productivity Programme (EAAPP) focused efforts on better-known crops such as cassava, wheat and rice as well as smallholder dairy. However, it is possible that the fight for food security can benefit from research on neglected "orphan crops" or other words underutilized crops, which are locally important for income, food security and nutrition and resistant to climatic shocks. What is now required is to broaden options starting with what farmers do in order to diversify their crop varieties and livelihoods. In the context of this project, orphan crops are a diverse set of minor crops like millets, sorghum, roots and tubers (cassava, sweet potatoes, ginger) indigenous vegetables and some legumes (cowpeas, bambara nuts) that tend to be locally important but receive little or no attention by mainstream research and extension; policy and donor support (Naylor et. al., 2004). Millions of people in rural areas, and in particular women and the poor in Kenya, Malawi and Uganda rely on these crops for their daily sustenance and therefore within these countries the same crops are "valued traditional food crops". With the growing food crisis and high prices of mainstream food crops, there is a growing recognition of the importance of these orphan or minor crops in supporting livelihoods for the poor. The project has demonstrated that these crops have the potential to diversify the farming systems, spread risks, contribute to food security, and provide income opportunities for the most vulnerable and women in particular. This project supported farmer experimentation in adapting and scaling up sustainable innovations for promoting orphan/traditional high value crops.

Fourthly, although there is recognition of the need to design and implement specific policies and governance mechanisms that must be community-driven, the question of governance is notably absent in most initiatives and narratives on food security (Thompson and Scoones, 2009). In Uganda, Kenya and Malawi, the food crisis has led to the formulation of several policies and establishment of several institutions and food security initiatives. However, important questions remain on the extent of participation of local communities and small scale, resource poor farmers and women, in decision-making processes to voice their interests, needs and concerns in the formulation



and implementation of these initiatives. Questions remain on the extent to which these institutions, policies and initiatives respond to the real needs and interests of the poor farmers, and the extent to which they are accountable to local communities. There are also questions on the extent to which these policies, programmes and special initiatives reflect a broader, long term vision and perspectives on agri-food systems.

Fifth and finally, there is a wide scope on social learning from participatory research approaches and community-based natural resources management experiences on how to make food security initiatives more sustainable and relevant to the needs of resource poor farmers. In a synthesis of experiences with participatory research in eastern Africa, Kilelu (2008) concluded that participatory research approaches, tools and methods have not been widely disseminated and mainstreamed in agricultural research organisations to enable wider impacts at scale. The extent to which these approaches have informed better and robust policies and result into better analytical syntheses is still limited. Altieri (2002) observed that one important factor limiting the uptake of participatory approaches is that for most part organisations promoting participatory approaches have not analysed and systematized the principles that determined success or failure, nor have been able to validate specific strategies for scaling up and mainstream participatory approaches. This project aimed at contributing to the identification and synthesis of best practices and approaches for scaling up, and piloting innovative approaches for mainstreaming gender-sensitive participatory research approaches in agri-food systems and sustainable agriculture

This project therefore made considerable attempt in contributing to the attainment of efficient agri-food systems and ecosystem integrity in targeted rural communities and especially for the vulnerable groups and women in selected districts in Kenya, Malawi and Uganda through a number of case studies that allowed comparative analysis, cross-learning and regional syntheses (detailed case studies summarised in submissions made by the participating institutions).

The overall goal of this project is to enhance adaptation of pro-poor agri-food system innovations to improve food security and sustainable natural resource management in Eastern and Southern Africa (ESA) region. The specific objectives are:

- (i) To identify and promote local innovations and adaptation strategies that work for the poor rural men and women to cope with food security vulnerabilities.
- (ii) To adapt and scale up technology and market innovations for promoting orphan crops that enhance food security, increase incomes and ecosystem integrity in selected areas of Malawi, Kenya and Uganda.
- (iii) To analyze and promote specific policies and governance mechanisms for sustainable agri-food systems.
- (iv) To determine mechanisms for scaling up agri-food systems and sustainable agriculture.

The project was initially conceptualised with ASARECA playing a dual role: conducting research and administer



the financial resources. However, the restructuring of the project execution arrangement assigned ASARECA with one key responsibility, that of convening regional meetings and organizing the IDRC side event during the second ASARECA General Assembly held in 2013. The above mentioned technical objectives were therefore executed directly by the other participating organisations, which technically and financially became answerable to IDRC. Further, it was agreed to consider the new ASARECA role of convening regional meetings and the side event as a new objective/output of this particular project.

Overall, this project therefore made considerable attempt in contributing to the attainment of efficient agri-food systems and ecosystem integrity in targeted rural communities and especially for the vulnerable groups and women in selected districts in Kenya, Malawi and Uganda through a number of case studies that allowed comparative analysis, cross-learning and regional syntheses (detailed case studies summarised in submissions made by the participating institutions).





Progress towards achieving key milestones

During the project implementation period, ASARECA provided the necessary periodical progress reports based on its responsibilities. This section therefore summarizes key regional meetings that ASARECA organized, as well as how ASARECA achieved the new goal of convening a side event on "Making Agri-Food Systems Work for the Poor in Sub-Saharan Africa".

3.1 Regional learning fora

In respect to the key mandate of ASARECA, a series of regional meetings were organised to promote learning and experience sharing among the participating institutions. Some of the key meetings coordinated by ASARECA include;

 1^{st} regional planning meeting: The meeting was held in Nairobi on 18 - 19 February 2010 to address the following issues;

- a. Presentation of the country specific annual plans
- b. Consolidation and harmonisation of the country annual plans
- c. Review of the results based management
- d. Confirmation of the study sites and study/data collection tools

The planning meeting was attended by IDRC representative, ASARECA representatives, project partners including Kenya Agricultural Research Institute (KARI), Advocates Coalition on Development and Environment (ACODE), National Agricultural Research Organisation (NARO), Bunda University College, and TEGEMEO. The research sites were confirmed as presented in table 1 below.

Table 1: Study sites for the three countries

Characteristics	Kenya	Malawi	Uganda
Semi-arid lands (SAL), Low Potential Areas	Mbeere (Acute food and Livelihood Crisis)	Kasungu	Tororo (Acute food shortage)
Medium to high potential areas with declining potential	Kirinyaga (Border line food insecure)	Lilongwe	Ntungamo (Moderate food shortage)



Characteristics	Kenya	Malawi	Uganda
Unexploited high potential (UHP)	Nyandarua (Generally food secure, low resilience)	Chikwawa	Mukono (No food shortage)

In respect to Results Based Management (RBM), the following logic was developed to guide the realisation of the project goal and objectives (Table 2).

Table 2: The logic of the ESA Agri-food systems project

Impact	Outcomes	Outputs
Food security Sustainable natural resource management	Adaptation of pro-poor Agrifood system innovations	 To identify and promote local innovations and adaptation strategies that work for the poor rural men and women to cope with food security vulnerabilities. To adapt and scale up technology and market innovations for promoting orphan crops that enhance food security, increase incomes and ecosystem integrity in selected areas of Malawi, Kenya and Uganda. To analyze and promote specific policies and governance mechanisms for sustainable Agri-food systems. To determine mechanisms for scaling up Agri-food systems and sustainable agriculture.

2nd regional planning meeting: This meeting was held in March 2011 in Nairobi with the aim of reviewing progress made and also plan for the year. Specific aspects addressed include:

- a. Country presentation on project implementation progress
- b. Emerging lessons and experiences in project implementation with a focus on base line data collection and analysis, gender issues, moving towards the achievements of the milestones,
- c. Development of research protocols and communication tools
- d. Presentation of 2011 work-plans

The meeting was attended by representatives from all the participating institutions and IDRC.

3rd regional planning meeting: This meeting was convened to review the project implementation progress, share lessons and draw a road map on the next steps given that the project was coming to an end.

Scientific writing and communication training workshop: to enhance communication of project results, a regional meeting was convened and was facilitated by Dr Stephen Tenywa, Dr Mwamburi Mcharo and Dr Vincent Oeba. The focus was on the following aspects;

- a. Design of data collection and analysis tools
- b. Data collection, analysis and presentation



- c. Communicating science/scientific writing
- d. Case studies on communicating science to various stakeholders policy makers, scientific community, farmers, extension agents and planners among others.

3.2 Side event at the 2nd ASARECA General Assembly

As a way of widely disseminating research findings emerging from IDRC supported projects, a key note paper was presented during the plenary on 'making agri-food systems work for the rural poor in ESA' by Dr Immaculate Maina. It is important to note that in attendance during the plenary were about 900 participants including the Ministers for Agriculture for Burundi and Eritrea, Assistants Ministers, senior government officers, private sector, farmer organisations, research institutions and universities.

In addition, the ASARECA GA provided an opportunity for the IDRC supported projects teams to run a 2 days' side event as a sub-theme of the GA- **Making Agri-Food Systems Work for the Poor in Sub-Saharan Africa** and was attended by over 60 participants at any given time.

Context and rationale for the side event: Given that the International Development Research Centre (IDRC) continues to work with the national research and academic institutions and their partners in Eastern and Southern Africa to implement research and development (R&D) projects with a focus on research that fosters sound environmental management policies and long-term economic development there was the need to widely disseminate emerging results and lessons. These research and development initiatives are focused particularly on helping vulnerable communities, smallholders, women and the youth in rural areas. The immediate outcome of this therefore is to counter the effects of chronic and acute food and nutrition insecurity problems in the region. Food and nutrition insecurity in the region is caused by a complex combination of factors including declining soil fertility, degradation of natural resources, inefficient markets, weak institutions and inefficient policies.

Under the sub-theme "Making Agri-Food Systems Work for the Poor in Sub-Saharan Africa" 16 different research teams shared their lessons, challenges, and recommendations from on-going and recently concluded IDRC-funded projects. The projects were implemented by multi-disciplinary, multi-institutional and gender balanced teams of researchers and development professionals across the region in selected sites in Kenya, Uganda, Burundi, Ethiopia, Zimbabwe and Malawi. Many of these R&D efforts continue to generate substantial outputs and outcomes with positive impacts upon the livelihoods of communities in the region. The research studies across 6 countries are all geared towards making a contribution to improving food and nutrition security and sustainable natural resource management in Eastern and Southern Africa.

This side event therefore provided a good forum in which researchers, policy makers, farmers and private sector deliberate on emerging agri-food systems innovations. These innovations have the potential to enhance food and nutrition security; increase capacity and action in post-harvest handling of food for increased food safety and reduced economic losses; improve soil and water management for greater ecosystem integrity and inform policy processes in Eastern and Southern Africa. The objectives of the event were:



- To share research developments and results arising from 16 IDRC-funded projects with the research and development community in ASARECA member countries.
- To provide a platform for dialogue on "Research Quality" and Uptake and scaling up of research results; and provide essential tips for writing effective communication products.
- To develop and share regional synthesis of 5 years of agricultural and food security research results from projects funded by IDRC.
- To generate public awareness in ASARECA research and development community of IDRC's leadership role on food security research and the social and economic impacts of this research.
- To raise visibility of the IDRC and AFS as a strategic programme on agriculture and food security, and increase recognition of importance of applied interdisciplinary research.
- To demonstrate the value of communicating research results to the scientific community through launch of several peer reviewed books and other knowledge management products.

The synthesis paper on the side event is provided as Annex I.

3.3 Recommendations made to the Business Committee of the GA from the side event

Preamble

- 1. Recognizing that food security and nutrition is a growing concern in Eastern and Central Africa,
- 2. Recognizing that food systems management is a complex issue and is related to other factors outside the control of the farming communities,
- 3. Recognizing that the population in Eastern and Central Africa is likely to double by 2050,
- 4. Recognizing the need to double investment and efforts in promoting sustainable and efficient functioning of agri-food systems in ECA;

The participants who attended the side event on 'Making agri-food systems work for the poor in SSA', request the Business Committee to adopt the following recommendations as possible interventions for promoting effective and efficient agri-food systems in ECA;

- a. To promote agricultural mechanization as a way of improving labour productivity in the sector particularly for women and for attracting the youth to participate in the development of the sector,
- b. To promote proven and appropriate agri-business models as enablers to transforming small-holder agriculture
- c. To promote the commercialization of under-utilized crops and livestock through innovative ways
- d. To promote high impact-oriented agricultural research that provides a basis for up-scaling.

It is important to note that the Business Committee of the GA adopted all the recommendations made from the IDRC-supported sub-theme and have since formed part of the priority areas of investment for ASARECA.



3.4. Launching of IDRC Knowledge Management Products

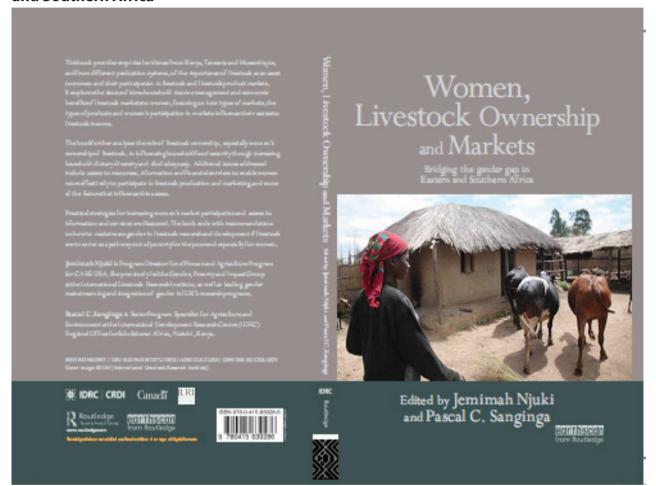
In addition, during the 2nd ASARECA General Assembly, IDRC launched a number of knowledge management products including;

Figure 1: African Crop Science Journal Special Edition focusing on papers developed from IDRC supported research





Figure 2: Women, Livestock Ownership and Markets: Bridging the gender gap in Eastern and Southern Africa







Synthesis of research results and developments towards AFS themes

4.1. Context

Research achievements under the initial four project objectives were reported by various partner organizations in Kenya, Uganda and Malawi. This section builds on the presentations and discussions held during the side event during the 2nd ASARECA General Assembly. The section provides details on the implications of the project results towards meeting the development objectives as well the AFS Themes. The Association for Strengthening Agricultural Research in Eastern and Central Africa (ASARECA) held its 2nd General Assembly and Scientific Conference from 9th to 13th December 2013 in Bujumbura, Burundi. The theme of the high level regional gathering was "Transforming Agriculture for Economic Growth in Eastern and Central Africa". The IDRC supported side event was convened under the sub-theme "Making Agri-Food Systems Work for the Poor in Sub-Saharan Africa". At the event 16 different research teams shared their lessons, challenges, and recommendations from on-going and recently concluded IDRC-funded projects. Lessons were shared under broad thematic areas of project overview, technology and dissemination, going to scale and natural resources governance. This section summarizes the highlights, lessons and recommendations for new design, programming, investment and implementation of pro-poor agri-food systems research.

4.2 Session outputs

This synthesis report recognizes varied outputs from the AFS research projects presented during the side event and proposes a generic framework as well as specific directions for enhancing AFS research through pro-poor targeting and going to scale with technologies and approaches that work for poor smallholder farmers. The following papers were presented:

Project Overview and Design

- 1. Upgrading Women's food Value Chains in Tigrey Region, Ethiopia, *Lemlem. S Mekonnen*
- 2. Scaling Sustainable Land Management Innovations: The African Highland Initiative (AHI) Devolution Model. *Dr Joy. Tukahirwa*,
- 3. Integrated management of wetland resources for improved food security and enhanced livelihoods: Overview of the project, by *Dr. Nelson Turyahabwe*
- 4. Bonne Gouvernance des ressources naturelles collectives by *Sylvain Mapatano* et *Déo Niyunkuru*



Technologies for Productivity and Resilience

- 1. Déterminants de la pérennité des systèmes antiérosifs au Burundi, *Deo Niyunkuru*
- 2. Impact des technologies de gestion de l'eau et de fertilité des sols sur le rendement du maïs dans les régions semi-aride : cas de la plaine de la Ruzizi. *E. Bagula*
- 3. Financial losses due to soil erosion in the Mt. Elgon hillsides, Uganda: a need for action. *Onesmus Semalulu*
- 4. Rice cultivation practices by smallholder farmers in rain fed lowland ecologies of Eastern Uganda areas for potential intervention by *David Nanfumba N. Turyahabwe, J. Ssebuliba and W. Kakuru*

Value Chains

- 1. Understanding pro-poor market dynamics of a traditional crop within a resource poor producer community- *E.M Kihoro, I.Maina, Q. Diba, E. Chelimo , K. Mutea and F. Murithi.*
- 2. Value chain analysis for enhanced commercialization of neglected minor crops among rural poor farmers- *K. Odongkara, B. Mbilingi and A. Nasuuna*
- 3. Analysis of Sorghum Value Chain in Chikhwawa, Lilongwe and Kasungu Districts in Malawi *Joseph Diania*
- 4. The marketability of bag silage among smallholder farmers in Zimbabwe- Nyashanu, R; Mugabe P
- 5. Enhancing adoption of technological innovations for orphan crops among rural poor farmers- *Omadi J.*

Going to Scale

- 1. Processus d'évaluation des incidences de la gouvernance des ressources naturelles par la méthode « matrice d'influence » au Burundi et sud Kivu. *Serge Ngendakumana*
- 2. Devolution A mechanism for scaling adoption of sustainable land management in Eastern Africa highlands. *J. Nakanwagi*,
- 3. Innovation platforms for the establishment and management of community nurseries in the central highlands of Ethiopia *Yosef Ameha, Kassahun Bekele, Mehari Alebachew*
- 4. Trade-offs to Wetlands Control and Management in Uganda: a Multi-Objective Decision Analysis Approach- *Willy Kakuru*
- 5. Farmer perspectives on scaling up orphan crops in Malawi Farmer perspectives on scaling up orphan crops in Malawi *Frank Tchuwa, Lilongwe University of Agriculture and Natural Resources (Bunda Campus)*
- 6. Determinants of Wide Adoption of SLM Technologies on the slopes of Mt. Elgon J. Bushoborozi
- 7. Drivers of the Agricultural Systems of the Rural Poor: A Synthesis of Lessons from Malawi *Daimon Kambewa and Mayamiko N. Kakwera*
- 8. Enhancing adoption of technological innovations for orphan crops among rural poor farmers- *Omadi*J. R



Natural Resource Governance

- 1. Community participatory sustainable land management bylaw formulation in the Highlands of central Ethiopia *Chilot- Yiqa*
- 2. Land care by laws can increase adoption of soil erosion control technologies: evidence from Mt Elgon highlands in eastern Uganda
- 3. La dynamique de gouvernance des ressources naturelles collectives au Burundi. Astère Bararwandika
- 4. La dynamique de la gouvernance des ressources naturelles dans la région des grands lacs *Paulin Polepole*
- 5. Enhancing coping and adaptation to food insecurity among Small Scale Rural Farmers in Uganda Bwambale Mbilingi, Odongkara K, Omadi R, Nasuuna A, Mutenyo H, Mugimbi A
- 6. Trade-offs to Wetland Control & Management in Uganda: a Multi-objective Decision Analysis Approach
 Willy Kakuru and Mwrifsteam
- 7. Implications of market access on soil and water conservation investment in the highlands of eastern Uganda- *R. Gidoi, Dr. F. Mugagga, Prof. M. Buyinza, Dr. W. Wagoire*
- 8. The Users' Led Process: a brokerage mechanism to build multi-stakeholder partnerships in ARD *Jonas Mugabe*.

4.3 Synthesis of key findings

The lessons obtained from the side event in turn are useful in defining impact pathways and intermediate research and development outcomes for poor smallholder farmers. The synthesis report identifies five main findings, from which it derives specific and corresponding recommendations for individual researchers, research organizations, ASARECA, IDRC, other finding agencies and players in the AFS research and development arena. Examples are also listed from some of the research projects. These findings are highlighted below.

Main Finding 1: Understanding and Actualizing Agricultural Research for Development

In order for Agricultural Research for Development (AR4D) to be closer to smallholder farmers, it must be conceived as a system comprised of not only the research protocols and also socio-economic and ecological elements prevailing at the community level and beyond. This is principally because research must provide solutions tor challenges of poverty and hunger. Transforming agri-food systems will thus require a transformation of agricultural research to deal with the complexity of the challenges facing farming systems. The side event appreciated that:

Agri-food systems research must allow solving a specific problem in a given area. "Research should not be for the purpose of research or for publication" and also not only be content to bring new technologies to farmers, it must also support and promote local innovations since the complexity of the challenges requires multiple responses based on an integrated and participatory approach.



- It makes sense to involve the farmers as they are continuously engaged in unique local and independent research process that have safeguarded crop species, preserved and enhanced hybrid vigor and performance of crop varieties and animal breeds through selection and management
- Information flow is best facilitated between research and farmer and other actors in agricultural value chains.

The papers presented, to varied degrees, capture some aspects of integrated agricultural research for development. In particular the lessons indicated that projects were designed to integrate the perspectives, knowledge and actions of different stakeholders around the common theme of pro-poor agri-food systems. Most projects used a broad working alliance to enhance chances of influencing poverty and food security desire by stakeholders. The projects were also conceived to allow learning that stakeholders by working together. There remain difficulties in project coordination to achieve a realistic social learning process. The learning has remained at the level of partners working together rather than on tangible solutions to the research and development challenge targeting the poor which is easily scalable. There also exist unclear procedures of instigating and monitoring learning at various levels- individual, organizational and institutional levels. Even weaker are the mechanisms that researchers put for learning by communities or farmers.

It emerged in discussion sessions that research tailored to the needs of poor households and self-motivated farmers' groups has the highest probability of success in terms of real change in food security and income status, uptake by other farmers and access to markets. For AFS research to deliver tangible outputs leading to adoption of improved technologies and policies in the region, the design and implementation modalities should be assessed against the alternatives for achieving broad development. Research that also supports broadening poor farmers' asset base as a predicate of livelihood support and provides access to market is key to achieving rural poverty alleviation. This will in turn stimulate demand for and adoption of new agricultural technologies, inputs and advisory services. Investment in this kind of research is viable even for governments and private sector. The sessions had discussions on where ASARECA, NARIs and IDRC focus in research investment for maximum pro-poor benefits and development outcomes. The discussions concluded that tracking change among the poor will be gauged well if research is informed by the collection and analysis of up-to-date and contextual datasets on key variables for socio-economic profiling of the poor living in specific agro- ecological/geographic areas, knowledge about the agricultural value chains and farming systems as well as other household livelihood activities. There is also need to capture infrastructure and market information coupled with the realistic prospects for the research raising agricultural productivity under these conditions.

Main Finding 2: Project Design

To make research significant, researchers must identify specific outcomes that their research has influenced in order to map variables and dynamics that are significant in the outcome- impact pathway. By so doing, the research will capture succinct quantitative and qualitative data to support documentation of outcomes to build a dataset over time in a way that represents the broader emerging pattern analytically and encourages researchers to consider how they can intentionally contribute to the most profound transformation possible including addressing the pervading issue of food security. Projects must be designed to achieve integration



and broaden opportunities for target groups to realize development aims. Specifically the design issues include:

- Adapt approaches to diverse contexts for ease of going to scale.
- Building institutions and empowering stakeholders.
- Supporting pro-poor local, national and international actions by policy makers, private sector, researchers, academic institutions and other service providers.
- Fostering farmer-led partnerships at different levels.

The lessons also revealed that AFS research will not work for the poor unless they promote household level agricultural productivity and market opportunities as well as diversified livelihoods on and off the farm and reduce risk and vulnerability.

The design of research projects supported under AFS program, on paper had intention to address the main constraints to pro-poor growth. The designs of most projects however – failed to bridge the persistent gap between poor rural households and public and private institutions for research, extension, marketing and finance. Better designs are needed for effective roles to be played by value chain actors and address weaknesses in institutional arrangements that continue to limit the extent to which poor people can be engaged in AFS. Also evident is the inappropriateness of research designs whose development outcomes depend on agricultural service locations (finance, information, markets, inputs) and stakeholder capabilities not resident in lead institutions or research teams. Working partnerships should be deployed to create opportunity to leverage capacities and linkages within projects to address these shortcomings.

IDRC and ASARECA should create capacities and support research programming that address these weaknesses through fundamental realignment of the institutions that support and conduct AFS research related to services to poor rural households. More innovative institutional arrangements are needed, including partnerships among public, private and civil society organisations within the research set-up. The arrangement should be matched with research processes and tools that encourage practitioners and researchers of those organisations to work with poor households and to build their capacities to do adopt and continuously use the technologies generated while supported doing to scale.

AFS research designers must be cognizant of the fact that poor rural households are further constrained by the degraded natural resources that they depend on. Research should ensure productivity gains alongside adaptive capacities to stall further degradation. Therefore AFS must, of necessity, pay greater attention to sound stewardship of environmental goods and services.



Main Finding 3: Pro-poor technology generation, dissemination and use

Discussions around the studies and related AFS projects revealed some critical elements that should be addressed for pro-poor AFS and technology generation, dissemination and wider uptake. There are:

- 1. Careful and context based definition of target group (the poor) as a pre-requisite for AFS research projects and programmes that hope to benefit the poor and alleviate poverty. A clear differentiation and characterization of the poor should be embedded in the research design to allow even more subtle targeting so that research addresses their specific needs, involves special groups in research activities and adequately meets their dissemination requirements.
- 2. Appropriate mainstreaming of gender through more explicit address to gender inequality in design, implementation and dissemination of AFS research and development initiatives.
- 3. Scaling up the involvement of the poor in AFS research project design. Relevant stakeholders (including the poor) should take part in research design to stimulate participatory technology generation. By introducing mechanisms that allow small holder (poor) farmers to influence AFS research via channels like organised consultations, representation of the poor in research groups and dissemination for a and introduction of research funds that specifically target and involve the poor.
- 4. Improving access by the poor to AFS research results in terms of information, knowledge, skills, materials, facilities, infrastructure, markets and finance.

The technology generation and use aspects of the side event papers did indicate the goal of most research projects was clear on pro-poor outcomes but the above elements for pro-poor AFS research were only addressed to a limited extent and not fully translated into the implementation and communication strategies. Only a few countries included comprehensive components that relate to targeting the poor, gender inequality, involvement of the poor and access to information and technologies.

The session discussion generated suggestions for transforming the plight of the poor via agri-food systems research. The generation, dissemination and use of such technologies is critical in this regard. The technology generation process in agri-food systems research should, according to Spielman (2007), at the very least:

- Build platforms to identify opportunities, assign roles and responsibilities.
- Commit resources to both, the project activities and coordination efforts.
- Create formal and informal strategies to manage and mitigate project risks.
- Design mechanisms to facilitate knowledge exchanges and resolve conflicts.
- Develop benchmarks and decision-points to evaluate progress and choose to continue or terminate.
- Ensuring Impact and Going to Scale
- **Explicit** analysis of the impact pathways through which projects affect poverty.



In conducting research with technologies generated targeting the poor, it is important to consider how the technologies will be adopted. Whether poor households benefit from research outputs depends on many underlying socioeconomic conditions that should be factored in research and other technology developed processes. Such enabling conditions include an equitable distribution of land and income, secure ownership and tenancy rights, efficient input and output markets that serve all farmers, research and extension systems that are geared toward small and large farms, and scale-neutral technologies (Collier and Dercon, 2009). Although AFS research cannot directly influence this strategy, relevant actors should take into consideration the above factors in the research design, implementation processes, partnership arrangement, communication and dissemination efforts.

Main Finding 4: Going to Scale with AFS research and development

The side event gathered many lessons that explain why many research projects fail to go to scale. Impacts of present research efforts remain isolated and far-between due mainly to lack of purposeful design and implementation strategy that directs efforts toward going beyond piloting. There is an urgent and critical growing need for up/out-scaling based on increasing understanding of models and concepts. As discussed in the side event scaling up should be understood to a collection of strategies and plans for wider dissemination of a new techniques, prototype product, practices or processes; "growing" of results from small to bigger and new levels; and translating a small scale initiative into a spatially expansive scale and wider government policy. Important in this regard is for Agri-food systems research to be clear on: the model, innovation or project to be scaled up – what is being scaled up; the methods of going to scale – the how of scaling up; the organizational roles involved in scaling up – the who of scaling up; the dimension (s) along which scaling up occurs –the "where" of scaling up.

IDRC has been funding a wider array of research and development. The main components of research and development projects funded by IDRC and other donors in their category include – pilot (or R&D) projects, demonstration projects, capacity building projects, and campaigns. It should be a requirement to have in the design of the project strategies, plans and budget for going to scale with the research findings regardless of its type.

The elements of successful scaling up were noted in the discussions including the length and planning during lead-up time during which locally effective and appropriate technologies and processes are refined. Other factors relevant to the success of scaling-up efforts include determined efforts at simplification and documentation of lessons in order to demonstrate the project's effectiveness as a "best practice". The approaches to mapping the progress of going to scale in different dimensions are based on documented evidence and application (Figure 1).



Transfer of Experience: applying information in a State of new setting practice: **Factors for** evidence and Scaling Up applicability Factors for Contextual **Efficiency** Internal Factors for Contextual **Effectiveness** Internal Replicating, spreading Contextual out institutionalizing for wider impact Internal Better use of Expansion Context for Efficiency innovation Local impact **Effectiveness** source of idea, Expanding experience: Innovations Internal Learning Scale: numbers, area

Figure 3: Factors influencing technology scaling

Source: Jim Hancock (2012)

Lessons from presented papers indicate narrow understanding and application of going to scale for wider impact. The main dimension of scaling up prominent in the papers is expansion geographically. Scaling up, however, goes beyond the geographical scope. Research should be designed and implemented in such a way that lessons are gathered to scale it out to othe geographical areas as well as other dimensions including: extending services and technologies to more farmers within the original community (breadth of coverage); sharing detailed agri-food systems knowledge and information (depth of services); widening the target population to include, for instance, all vulnerable groups living in water stressed ecosystems (client type); or applying the approach to address other issues other than the original problem (problem definition).

The design of scaling up models should bear in mind the following issues:

- Ability to replicate and expand the institutional characteristics that were key to the outcomes achieved
- Acceptance and realization of the need for the up-scaling model by the relevant stakeholders, potential partners, and intended target group
- Clarity of inherent and apparent economies or diseconomies of scale
- Documentation of the model, including the process component, and assessment of its cost-effectiveness



- Does needed funding exist for replicating the model on a large scale?
- Understanding of the prevailing special or unique social or political context or general circumstances of the research project including cultural, ethnic, or religious values/ characteristics; distribution of power; homogeneity; economic conditions that would catalyze the replication.

Main Finding 5: Governance of AFS

Governance remains a critical issue in AFS research in so far as it influences value of research. Governance dictates the interceding influence of enabling conditions for poor farmers to access and use agricultural research technologies and the natural resource base. Agri-food systems research should also provide answers to governance questions and especially guide decision making at all levels. Lessons on natural resource governance must be intentionally captured in AFS research owing to the importance of natural assets and their management to the poor. It is imperative to address any gaps in policy frameworks and institutional arrangements for natural resource governance even as agri-food systems research is designed and implemented. The use of natural resources as basis for agricultural production demand clear strategies within the research and out-scaling models that address issues of governance of natural resources. This should be in order to promote cooperative solutions for efficient management and equity with respect to socio-economic benefits over scale, time and space as well as covering vulnerable and poor people.

Future research should be designed to address current shortcomings in inclusion of natural basis to ensure more lessons are compiled on what dictates who accesses to and use of household and community water, land, forests and other resources. Integration of governance studies and development influence in future research must be a seamless coupling not through current isolated approach by "governance experts and organization". Further research and support is also necessary on the role of non-local decision making entities as well as processes and power structures in relation to different political, social, economic and administrative systems that affect poor farmers need for accountability of for the sake of food security and other outcomes of research. These governance issues play out as context factors that usually trigger or deter wider adoption and sustainable utilization of resource management.



4.4 Moving forward

Innovating AFS research

Pertinent and persistent issues for making AFS research work for the poor still remain and should be addressed by researchers, research organizations at national and regional levels and by research funders/partners like IDRC. The issues if well integrated in design, implementation, funding and monitoring of AFS research procedures will undoubtedly improve research quality for impact and ease of going to scale with projects that directly benefit the poor in terms of food security improvement and wealth creation. The issues include capacity building, approaches to scaling up, out-come-output orientation and models for research management, business promotion, scaling up and general agricultural transformation.

A couple of critical emerging research foci and issues for investment emerged:

- a. Research, capacity building and development initiatives to continue to promote the understanding of and increase in labour productivity through mechanized and ICT-propelled agriculture at all levels with special focus on engaging the youth and women in agriculture.
- b. Determination of appropriate business model that can attract the youth to profitably and competitive engage in agriculture value chain learning from successful models such as the expansion and proliferation of the *boda boda*, cell phone and other emerging models.
- c. Scaling up and increasing the wider commercialization of under-utilized crops through innovative ways that incentivise small scale farmers' engagement.
- d. Impact orientation, understanding the missing links, identify specific innovations to make a difference, how the results will be used, project should have clear partnerships across sector and disciplines, clear graduated outcomes, learn from models that have worked to learn how to scale up, sustainability as part of project design environmental and implementation sustainability.

It also emerged that innovation is not necessarily what is new but that which presents new opportunities for pro-poor prospects through the 3 l's: Ideas, Innovations and Impacts. There is need for, where resources allow, project PIs to conduct quick survey to assess outcome and impact level results. This should be factored in the research design and budget. Researchers should design simple tracking tools to ensure continued monitoring and enable the results and outcomes from the projects to be shared widely to influence policy and practice. Sustainable transformation is hinged on institutional aspects such as local value system, markets, policy, social capital and stakeholder capacity to adapt technologies. Projects should innovatively incorporate transformational channels in the conduct and dissemination of research for development. At the regional level there is need for bringing to scale emerging positive results, the need to take seriously some of the emerging terminologies – innovations, up-scaling to regional research issues.



Other issues to address include:

- Action-oriented research going to scale
- How to address external supply of more preferred foods which may be a driver to undermining some of the local foods.
- Research on institutional frameworks that create a market-oriented small-scale holders taking into consideration environmental sustainable basis, nutrition, involvement of youth, creation of jobs for the youth, business incubation perhaps to be conducted in the same sphere youth engagement, business incubation, wealth creation, involvement of the rural poor.
- Research that is regional in nature, defined landscape, based on clear value chain
- Seed system focused on underutilized high value crops, linking farmers to the markets, promote diversified food reserves – going beyond maize

A number of strategies can be deployed to realize innovative research: these include interrogating new approaches and best practices for integrated sustainable intensification. The use of market-oriented productivity-improvement research and value chain models will strengthen the competitive ability of smallholder farmers in general and the poor in particular. Land as the basis of agricultural production should be factored in pro-poor AFS research. This will continue to require integration of research and communication strategies that reduce land degradation, replenish soil fertility and also address land tenure and related socioeconomic issues like gender. The use of integrated catchment strategies for natural resource management in research design, implementation and scaling up is equally instrumental and can be integrated in research processes. The application of mechanical power, and embracing information and communication technology at all levels especially if the largely underutilized youth population in the region is to be deployed.

4.5 Ideas for IDRC programming and support

Research funding by IDRC should continue the focus on "useful research for development" by ensuring and supporting the design, implementation and communicating in ways that heightens the reach to those who can use (farmers, service providers and policy makers) and other stakeholders. Support should also be given to ensure researcher design for procedures to track and evaluate the extent of research influence. As partnerships are designed and research usefulness for development is planned, quality aspects should not be lost. This is with respect to the scientific process including research design, methodology for data collection, analysis and presentation. AT the same time the IDRC supported research should further continue to emphasize the impact and relevance of research beyond ordinary outputs and consider outcomes. Special attention and components of the research should be paid to how research influence or changes practice and policy as well as continues to socio-economic and ecological changes. Participants were however concerned with the over-emphasis of impact at the "expense of research quality". This was concluded to be non-issue as there exist sound research pathways that can indicate contribution to impact on poor farmers while still maintaining scientific rigour.



The model used by IDRC to support research in the region still remains relevant. Its focus on food security and pro-poor research for development will continue to be vital for the socio-economic transformation of the region. While agriculture will remain for some time the main window for poverty eradication and food security enhancement, emerging and new research agenda should be considered for an even more engaging IDRC support. The approach used by IDRC of constant engagement and direct partnership with scientists and research organizations should be maintained and strengthened by lessons gathered from the side event and other follow-up activities.

There are however many missing links in the research-impact pathway. More support and capacity building should target the efforts to realize the impact contribution of AFS research. This includes research design, partnership composition and management, communication strategies and research outcome monitoring. The inclusion of baseline setting and appropriate reviews and evaluation systems will become more useful. Efforts need to be made to adopt a phased approach to action research, impact orientation and scaling up.

Failure to go to scale and demonstrate impact remains a major area of concern. The deployment of appropriate models (this was not apparent in all research papers) will ensure research findings are brought to scale. Past, current and future success cases and their findings can be modelled to trigger action by wider communities, private sector and other actors to multiply the benefits and even commercialize to scale.

Particular attention should be paid to the transformation of agriculture via youth involvement in taking up results of studies through incubation approaches and other models, partnerships and ICT driven innovations should be supported as well. As part of scaling out, research for development could embody models to target the masses (youth, women, poor, people living in fragile ecosystems, vulnerable communities across state boundaries, small farms and others through research and development interventions that also have education, food security, market access and other challenges as entry points for going to scale. Despite the much needed divestiture into new research and development frontiers, concentration on crops, livestock, agro-food systems and commodities and technologies that have quick fix returns to investment and benefits to poor households should be maintained. All in all research supported must demonstrate in both design and implementation conscious stimulation of maximization of farmers' benefits and natural resource protection in the value addition processes. Other key areas for which innovative research should be targeted and supported include:

- 1. Mechanization to increased labour productivity at all stages
- 2. Business model to get the youth to be involved in agriculture to actualize transition and impact on smallholder farmers
- 3. Nutrition as an entry point for promotion of research and productivity in underutilized crops
- 4. Documentation of working models for scaling up

It should remain a major requirement that new research initiatives must demonstrate the difference they will make in terms of propelling the transformation of the region's agriculture and its drivers. There must also be



a demonstration of equitable, environmentally sensitive productivity/food security results. In future, projects have to address the missing links that constrain agricultural transformation and innovations in ways that are practical for the farmers' context.

4.6 Conclusions and recommendations

Although the research projects under the IDRC support targeted the poor as beneficiaries, the presentations did not explicitly demonstrate that this was realized. The design of projects should directly target the poor (by ensuring that ARD results are relevant for and applicable to their specific requirements), or by using ARD to benefit other target groups, but with secondary benefits to the poor (such as reduced food prices and increased food availability).

IDRC should work with partner institutions and their researchers to ensure they are more explicit in their choice of strategy and systematically monitor whether the desired prop-poor outcomes are achieved. Whenever agri-food systems research targets the poor directly, their agro-ecological, socio-economic and geo-political contexts should be considered in designing their participation and outcomes. This works best by involving the poor in research priority setting, design, implementation and monitoring so that research outputs become relevant to the poor. The configuration of the poor should also be considered with special reference to gender and vulnerability to climate change and other socio-economic changes. Women and youth involvement in agri-food systems research processes is particularly important to this end in order to improve accountability of research programmes to the poor.

It is also critical to make research outputs available to the poor through accessible dissemination channels. The poor are less able to access and use research findings due to poor connectivity (by road, media or interpersonal contact with intermediaries such as extension agents and traders) and resource endowment. They also have limited access to modern ICT platforms increasingly used by researchers. Special efforts should be made to ensure that the channels for research dissemination and uptake environment are conducive to the poor. This requires appropriate infrastructure and policies that enhance the utility of dissemination mechanisms by catering for the specific needs of the poor.

For future research programming and funding, the following are recommended:

- Identifying more explicit IAR4D agenda and funding modalities that accommodate strategies and interventions that are directed at the poor. This should include an operational definition of the poor.
- Ensuring that including and tackling food systems challenges of women and the youth become a core part of AFS research.
- Ensuring that research targets the poor much more specifically in the dissemination of results with messages, media, materials, inputs and services that are tailored to their specific needs. ICTs can specifically be very attractive to the rural youth.



- Development aspects of IAR4D should include capacity building for the poor to organise themselves and actively take part in agricultural value chains as well as in platforms that shape the AFS research agenda.
- As a requirement research proposals must include ex-ante analysis of expected impact on poverty, and independent ex-post analysis of whether this has been achieved through broad-based analysis of social, economic, political and technical context in which the project is to operate, and influence impact on poverty and food security.

Over and above these recommendations, the mind sets of researchers must be shifted by raising awareness about demand-led and pro-poor research approaches and the development of "soft skills" (communication, negotiation, facilitation) and capacity building on the use of qualitative research methods that complement other research techniques for addressing needs of the poor. There may be a need to design good practice guidelines for making AFS research results work for the poor. Specific attention should be paid to supporting learning among researchers and other AFS actors as well as other involved in planning and implementing pro-poor AFS research and development programmes to share experience from clear field examples, where emphasis is given to the "how to", in terms of approaches and tools used against the prevailing context and costs.

In responding to the need for AFS research to work for the poor, IDRC funding should target programmes that specifically enhance research utility by the poor and other agri-food systems actors. This should involve any new areas of new research and scaling up of current and past research findings. The merit of AFS research should be gauged by extent of reaching diverse users including the poor and policy/decision makers. The side event provided some directions for making AFS work for the poor: a) Making existing information more accessible to the poor; b) Analysing and synthesising research to provide tailored information services; and c) More harmonised and effective communication of research. There is also a need to track outcomes and learn lessons from AFS research conduct and communications activities. Adequate support should target mainstream research communication work or mainstreaming of communications and scaling up within other R&D initiatives.





5. Overall research methodology

This project was implemented in three countries, Kenya, Uganda and Malawi. The selection of research sites in participating countries was based on the food security classification and vulnerability analysis as well as agricultural potential. Each country had three cluster sites that represent the different food security situations as well as agricultural potential (see Table 1 above). Detailed descriptive information on selected study sites was provided in technical reports from respective country teams. Overall, the sites represented the semiarid lands (SAL), Medium to high potential areas with declining potential (MHPDP) and the unexploited high potential (UHP). In selecting the SAL, consideration was made to areas with high food deficit with a poor natural resource base, with potential for improved production through use of appropriate and available technologies such as high yielding drought tolerant varieties of crops/livestock. In the MHPDP, focus would be on formerly high potential areas that are facing the immediate and continuing threat of degradation. With regard to UHP regions, there are pockets in which the potential is either underutilised or locked so the focus would be in facilitating optimal production. Within each of the identified study sites, specific research activities were undertaken, partnerships with local communities and local institutions established and appropriate linkages to policy and decision making structures developed. Research activities were implemented in a participatory action research process in order to trigger needed institutional, policy and administrative reforms, adoption of appropriate innovations and the building of effective governance structures that empower communities to demand for institutional performance and accountability.

Particular to the two-day side event on "Making Agri-Food Systems Work for the Poor in Sub-Saharan Africa", it was organized in both parallel thematic sessions and panel discussions in plenary sessions. In addition, country synthesis reports were prepared and presented to the plenary session. Lastly, a set of recommendations were made to the Business Committee of the ASARECA General Assembly.





Challenges

Given the number of participating institutions and spread across the region, it was not quite smooth harmonising the operations and hence insure that all the anticipated results were achieved at the right time. However, constant enrichment in ideas and guidance from Dr Pascal Saginga ensured that the project achieved its main goal across the participating countries





Administrative reflection and recommendation

Based on ASARECA experience in implementing the project 'Making Agri-food Systems Work for the Rural Poor in Eastern and Southern Africa', it is recommended that in the future IDRC maintains the agreed project management and implementation arrangements to avoid duplication in reporting among participating institutions. In case of substantial changes in partners' roles during the course of research execution, the Grant Agreement should be altered to clearly reflect each organization's mandate and reporting system.



Acknowledgement

ASARECA does sincerely acknowledge the financial and technical support provided by IDRC towards the implementation of this project and other projects where ASARECA has played a role.



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TECHNICAL REPORT

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in Eastern & Southern Africa

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