

Towards an *African* **Green Revolution**

Report and Recommendations from
High-level Meetings at the
Salzburg Global Seminar 2008

Nalan Yuksel



© Salzburg Global Seminar 2008

Yuksel, N. 2008. Towards an African Green Revolution: Report and Recommendations from High-level Meetings at the 2008 Salzburg Global Seminar. Salzburg, Austria: Salzburg Global Seminar.

Reproduction of the text of this publication for educational or other non-commercial use is authorized without prior permission from the copyright holder.

Towards an *African* **Green Revolution**

Report and Recommendations from
High-level Meetings at the
Salzburg Global Seminar 2008

Nalan Yuksel

Preface

"It is time for Africa to produce its own food and attain self-sufficiency in food production. There is no reason why Africa cannot join the league of net food-exporting regions.

Food insecurity should not be accepted as a normal state of affairs. The situation can and must be reversed. If ever there was a time for an African Green Revolution, it is now.

The time for talk is over. We must implement immediate solutions for today's crisis, and do so in the context of a long-term concerted effort to transform smallholder agriculture, to increase productivity and sustainability, and end poverty and hunger.

To accomplish this we need a sustainable and uniquely African Green Revolution. This Green Revolution must take into consideration the diversity of Africa's agro-ecological environments, develop improved crop varieties for the staple food crops, protect and enrich genetic diversity, improve soil fertility, improve the environment, and assure sustainable food production.

The Alliance for a Green Revolution in Africa's (AGRA's) vision, goals, and programmes are comprehensive and cut across the entire value chain. AGRA covers significant investments in developing improved seeds that are adaptable, improved soil health, irrigation and water management, agricultural extension, market access, and policy development."

Kofi A. Annan, Chairman, Alliance for a Green Revolution in Africa



Contents

Preface	ii
Executive Summary	2
1. Overview	4
2. Purpose and Themes for the Initiative	5
Guiding questions and priority themes	5
3. A Vision for a Uniquely African Green Revolution	9
Conference highlights	9
Government-led efforts to transform agriculture in Africa	11
The European commitment to African agriculture	13
4. Multiple Perspectives on the African Green Revolution Agenda	15
Contrasting visions, competing agendas?	15
Towards a common understanding of a uniquely African Green Revolution	16
5. Common Points of Agreement	17
Food price crisis: short-term focus versus long-term goals	17
Coordination/convergence and alignment/partnerships	17
Making markets (and trade) work for the poor	18
Environment and biodiversity	18
Demand-led processes (farmer in the centre)	19
Data collection and use	20
Building capacity	20
Empowerment and equity	21
6. Recommendations to Advance an African Green Revolution	22
Institutions and innovations	22
Markets, trade, and investment	23
Environmental sustainability and biodiversity	24
Governance and policy processes	26
Equity, rights, and empowerment	27
New threats and opportunities	28
7. New Directions and Opportunities	30
Postscript	33
Further Information	33
Acknowledgements	34

Executive Summary

How can Africa's farmers, scientists, development practitioners, private entrepreneurs and public officials, with the support of the international community, spark a Green Revolution in Africa; one that responds to the region's unique social, political, and ecological conditions? That was the challenge presented to over 113 delegates from 29 countries who attended a set of linked discussions at the Salzburg Global Seminar in late April/early May 2008. The main purpose of the deliberations was to assess the most critical issues and to review, refine, and articulate an agenda for a new sustainable "Green Revolution" for sub-Saharan Africa. The delegates were tasked with answering the question: What are the core elements of a "uniquely African Green Revolution"?

A central message that emerged during the discussions was that moving in a unified direction, with a clear vision and concrete goals, was the key to the future of agriculture in Africa. It was acknowledged that a "one size fits all" solution would not work on the continent. Instead, a new approach was required that would move away from the single "silver bullet" concept, seeking a single solution to every context, and towards a multi-hued "mosaic" approach that went beyond a production-growth focus to include issues of environment, biodiversity, equity, and rights.

The delegates spent the majority of their time in working groups to address the two overarching questions posed at the beginning of the Conference: (i) How can new interest and investment in African agriculture be used to bring about real and sustainable change? (ii) How can these efforts be aligned strategically with other investments and development activities, and how can new strategic alliances and partnerships be created to ensure success? The International Advisory Committee (IAC)

prior to the meetings identified six core themes on which to focus the deliberations. The delegates were asked to identify a few key strategic recommendations under each theme and these are outlined below. These recommendations will continue to be reviewed and refined by delegates and other stakeholders as the initiatives move forward.

1. Institutions and innovations

- Build capacity of farmers' and pastoralists' organizations through demand-oriented research and development (R&D)
- Transform agricultural education and training.

2. Markets, trade, and investment

- Adopt Comprehensive Africa Agriculture Development Programme (CAADP) Pillar II (Improving rural infrastructure and trade-related capacities for market access) for investments in markets and trade
- Invest in management capacity and risk-sharing through agro-enterprises and cooperatives.
- Develop regional and national policies to address constraints in value chain development.

3. Environmental sustainability and biodiversity

- Reverse soil depletion and raise productivity through capacity building and data collection
- Promote integrated community water management mechanisms and other water actions
- Create an inventory and promote sustainable use of African agricultural biodiversity.

4. Governance and policy processes

- Improve policy relevance and forums to allow State and non-State actors to respond to policies
- Strengthen mechanisms to improve accountability of State and non-State actors.

5. Equity, rights, and empowerment

- Promote collaborative partnerships to access innovative financial resources for smallholders.

- Build capacity for smallholder farmers and farmers' organizations
- Promote inclusive two-tier meetings for producer groups at district and national levels.

6. New threats and opportunities

- Adapt long-term solutions for production and marketing systems to address climate change
- Develop real-time climate and weather forecasting information systems
- Reduce short-term vulnerability to climate change through social protection measures.

As many delegates pointed out, because of Africa's unique and complex social, ecological, and economic conditions, policy assessments must always build on context-specific analyses. There is a need for detailed assessments of interlocking sets of constraints to agricultural transformation based on location-specific analyses – both biophysical and socio-political – at local, national, and regional levels. Typologies and scenarios of possible future “pathways” (e.g., diversification, intensification, commercialization, etc.) should be developed for each context that go beyond simple “either/or” oppositions to offer different options for different groups of people in different places.

This raises questions of investment, not only technological and infrastructural, but also fundamental

social, political, and institutional. The challenges of technology development and delivery in African agriculture demand more than major investments in developing new seed varieties or fertilizers. They also require bold new programmes and new ways of organizing and governing the agricultural innovation process. This includes developing an agenda for changing agricultural innovation systems through participatory and inclusive learning approaches.

Central to these possible solutions are critical political, economic, and social factors. Rather than advocating a technocratic approach to driving broad-based development in Africa, a more politically sophisticated stance is required. In particular, greater emphasis needs to be placed on understanding and influencing processes of agricultural innovation, intervention, and policy, not just defining their technical content. In summary, such an agenda demands a cross-disciplinary approach: bringing the best of economic and technical analysis together with insights from socio-cultural and political analysis.

This report presents a summary of a week of intensive and far-ranging deliberations, highlights key points of agreement (while acknowledging areas of divergence), and sets out a number of recommendations for follow-up and future action.

1. Overview

There are good reasons to be undertaking an initiative on the theme of an “African Green Revolution” at this time. The recent launch of several major Africa-wide initiatives, including the Comprehensive Africa Agriculture Development Programme (CAADP) of the New Partnership for Africa’s Development (NEPAD), the Alliance for a Green Revolution in Africa (AGRA), and the Millennium Villages Programme, reflect renewed interest and a willingness to invest considerable resources in African agricultural development. Wisely managed, these efforts could lead to a new era of responsible and streamlined investment, capacity building, technical innovation, and policy change. These in turn could release many millions of Africans from hunger and poverty, setting in motion a virtuous cycle of economic growth and rural regeneration.

At the same time, Africa faces urgent new challenges. The present food price crisis has increased the cost of staple foods in most countries and has adversely affected many poor consumers in Africa and around the world. The Conference and Seminar sought to examine these issues and to identify the specific threats and opportunities for Africa posed by these global events, seeking long-term solutions while acknowledging immediate needs.

To address these issues, the Salzburg Global Seminar, in partnership with the Future Agricultures Consortium and the Institute of Development Studies, has created a multi-year initiative consisting of a series of linked events. The aim is twofold:

- i) To enable proposals for a “Green Revolution” in sub-Saharan Africa to be tested and refined through dialogue between those who support this approach and a wide range of experts drawn from different sectors and regions; and to help proponents of this idea to think it through, engaging in constructive dialogue with their critics and ensuring that their efforts proceed within a broad policy framework, taking account of institutional, political, socio-economic, and technical prerequisites.
- ii) To better define a holistic development framework within which new investments in African agriculture can be positioned and other new efforts and investments in Africa streamlined, so as to help stimulate further investments (monetary and other), and bring about a decisive reduction in poverty as well as a sustainable increase in economic growth and opportunity.

The events for the initiative include:

Conference (30 April–2 May 2008): *Towards a “Green Revolution” in Africa?*

Seminar (3–7 May 2008): *A “Green Revolution” in Africa: What Framework for Success?*

Sub-regional meetings in Africa (2009): *Field-testing the African Green Revolution Paradigm.*

This report outlines some of the main perspectives, common points of agreement, and outcomes from the Conference and Seminar and proposes some new ideas and options to improve policy and practice in African agriculture. These will be critically examined in the sub-regional meetings over the coming year.

2. Purpose and Themes for the Initiative

The main function of the first event, the Conference, held from 30 April to 2 May 2008, was to assess the most critical issues and to review, refine, and articulate an agenda for a new “Green Revolution” within a sustainable development agenda for sub-Saharan Africa. In particular, the Conference sought to examine the mental frames and underlying assumptions that guide current policy and practice, with a view to enabling the articulation and implementation of an African paradigm, growing out of African conditions and solutions. In other words, the nearly 90 delegates that participated in the event were asked to address the question: What are the core elements of a “uniquely African Green Revolution”?

The Conference included diverse stakeholders from within Africa and beyond, and participants from government, the business sector, academia, donor institutions, and non-governmental organizations (NGOs). These delegates undertook to examine the emerging agricultural development framework in Africa in which this Green Revolution agenda could be set. They also agreed to identify opportunities for adding value to partnerships, and to recommend specific actions for implementation. Ideas and recommendations for policy adjustments, streamlining practice, and creating strategic alliances were captured and reviewed to identify points of agreement and priority issues for action.

The Seminar, which followed the Conference, took place between 3 and 7 May 2008 and involved nearly half the participants from the Conference as well as 23 new contributors from a broad array of mainly African public, private, and civil society organizations. This follow-on event took up the results and recommendations from the Conference and further refined them, targeting strategic issues and identifying action steps to address

them. The Seminar considered critical issues under the same priority themes that helped shape the Conference deliberations. It sought to build on the momentum of the Conference and to create more concrete action items from the ideas and recommendations emerging from that event. Seminar delegates recommended strategic interventions and actions in the areas of policy, practice, donor activity, capacity building, and resource allocation, identifying concrete next steps as well as indicating areas where stronger leadership by key actors will be critical to achieving goals.

Following these first two events in Salzburg, the strategic action recommendations will be shared with a broad cross-section of stakeholder institutions within and outside Africa and additional feedback and suggestions will be solicited. The recommendations will also be shared through a series of sub-regional meetings in Africa to further test, refine, and contextualize them, working at increasing levels of detail and enabling the participation of additional national and local actors.

Guiding questions and priority themes

Two overarching questions guided the discussions at the Conference and Seminar:

1. How can new interest and investment in African agriculture be used to bring about real and sustainable change?
2. How can these efforts be aligned strategically with other investments and development activities (from private donors, public aid, or private business) and how can new strategic alliances and partnerships be created to ensure success?

The Conference *Towards a “Green Revolution” in Africa?* featured a series of presentations and



Godfrey Bahigwa (left) and Ephraim Chirwa (right)

background papers centred around the six priority themes listed below. Each of these highlighted key issues and challenges related to the realization of a successful African Green Revolution and were used to identify broad lessons, practical examples, and policy implications. These shaped the basis of group discussions at the Conference and informed the ongoing work of the initiative. Abstracts of the background papers are presented here; full text of the presentations are available on the Salzburg Global Seminar website (see Further Information, p.32).

1. Institutions and innovations

Njabulo Nduli, Agriculture Counsellor, South African Embassy in Rome

Over the last 50 years, Africa's traditional farmer- and agriculture-based institutions have evolved from being recipients of services to becoming decision-making institutions. This briefing paper describes how different African institutions have

evolved, and draws out two primary conclusions from the development of these institutions that have relevance for an African Green Revolution: (i) extensive collaboration mechanisms encourage new partners to participate, in particular those who have not been associated with the agriculture sector, e.g. the private sector and the marginalized; and (ii) the exclusion of farmers' organizations from these institutions poses a great threat, and new approaches are needed to reinforce their involvement. Ms. Nduli goes on to argue that institutions must install mechanisms to ensure that farmers' voices are included and that their practices are recognized.

2. Markets, trade, and investment

John Thompson, Research Fellow, Institute of Development Studies

Well-functioning agricultural markets have the potential to reduce the cost of food and the uncertainty of supply, improve food security, and

contribute to economic growth. This briefing paper examines the dynamics of changing “rural worlds” inhabited by a range of agricultural producers and processors. Dr. Thompson identifies three key strategies for meeting the commercial and food security needs and priorities of these different groups: (i) enhancing agricultural sector productivity and market opportunities; (ii) promoting diversified livelihoods on and off the farm; and (iii) reducing risk and vulnerability through effective policies, research, and investments in agricultural production and social protection activities. He calls for greater investment in public research and policy support, to allow rural people to pursue promising income-generating market-based activities, while ensuring household food security requirements are met.



Ummakalthum “Ummy” Dubow

3. Environmental sustainability and biodiversity

K. Atta-Krah, B. Forson, M.R. Bellon, T. Hodgkin, and J. Cherfas, Bioversity International

There is serious risk of grave food insecurity for Africa as a result of climate change and growing competition for land between food crops and bio-fuels. This paper describes two broad pathways for “green ethic” interventions within the African Green Revolution: (i) large-scale intensification; and (ii) diversity-rich smallholder systems. Both pathways include improved adaptation to heterogeneity and moderate levels of intensification, and engage farmers and pastoralists as key actors. The authors suggest that key policy interventions would involve ending subsidies and employing markets and other mechanisms to regulate and generate rewards for agro/environmental services. They argue that improvements in productivity can be achieved through improved adaptation with a moderate level rather than high levels of intensification.

4. Governance and policy processes

Lindiwe Majele Sibanda, Chief Executive Officer of Food, Agriculture, and Natural Resources Policy Analysis Network (FANRPAN)

Sustained growth in agriculture can only take place when all who have a “stake” in the outcomes participate meaningfully in defining the rules of the game, according to Dr Sibanda. Her paper illustrates how the governance and policy environment in Africa faces numerous challenges: exclusionary policy processes, externally defined policy agendas, poor utilization of local experts, knee-jerk policy processes, weak investment in data collection and analysis, limited government capacity, and weak advocacy capacity. Dr. Sibanda states that the challenge lies in crafting appropriate policies that can drive and sustain Africa’s

Green Revolution. Changes to the policy environment should include reform to Africa's governance and policy processes by supporting the participation of a variety of actors (including smallholders, especially women farmers), good governance, capacity building, regional integration, policies for technology, infrastructure, markets and trade, and revisiting the architecture of policy development.

5. Equity, rights, and empowerment

*Pascal Sanginga, Senior Programme Specialist,
International Development Research Centre (IDRC)*

The African Green Revolution has the potential to benefit many Africans, but there are concerns that the benefits will not reach the poorest, especially poor rural women. Dr. Sanginga argues that African women are responsible for most food production on the continent and, therefore, must be at the centre of a Green Revolution for Africa. But he contends that women are too often absent when policies are formulated, when programmes are developed, when budgets are drawn up, and when decisions are made. Dr. Sanginga goes on to stress that existing programmes do not address the gender-specific issues that exacerbate poverty, like

inequality in land ownership and assets, decision-making power, education, and social norms.

6. Responding to new threats and opportunities

*Kimseyinga Savadogo, Visiting Professor at the
University of Minnesota, from the University of Ouagadougou, Burkina Faso*

There is a need to unlock the potential of agriculture to contribute to African development. Even with new opportunities, this paper notes that new factors are challenging progress towards an African Green Revolution. These include: (i) the HIV/AIDS pandemic; (ii) population growth and pressures on the environment; (iii) climate change and pressures on fragile natural resources; (iv) bioenergy and increasing volatility of food prices; (v) civil conflicts eroding livelihoods and resilience of the poor; and (vi) globalization. However, not all farmers are affected equally by these conditions. Yet, in crafting responses to these threats, new opportunities may emerge that can support development and agricultural growth. Dr. Savadogo concludes that there is a need to design mechanisms to mitigate the joint impacts of these threats and maximize the impacts of any possible opportunities.

3. A Vision for a Uniquely African Green Revolution

Conference highlights

Mr. Kofi A. Annan, former Secretary General of the United Nations and current Chairman of AGRA, opened the Conference with the declaration that “if ever there was a time for an African Green Revolution, it is now”. He called for a new Green Revolution that is “supported by bold pro-poor policies, both from Africa’s governments and its international partners”. At a time when food prices are escalating at an unprecedented rate and food riots erupting in many African countries, Mr. Annan cautioned the delegates that the economic, social, and political costs could be very serious. He warned that the current food crisis could threaten to undo the gains that Africa has made in recent years and argued that for decades “African agriculture has been neglected, and the price for this neglect is now glaring.” It is time, he stated, for Africa to produce its own food and attain self-sufficiency in food production.

How is this to be accomplished? Mr. Annan drew lessons from the Asian and Latin American Green Revolutions that relied on improved seeds, fertilizers, and large-scale irrigation to boost farm productivity. He went on to state that government policies assisted in these efforts and improved rural development and crop yields, but that the results did not always benefit the poor. Africa is different and what is needed, according to Mr. Annan, is a “uniquely African Green Revolution”. In his view, this unique revolution must:

- Address Africa’s great biodiversity and be sustainable
- Focus on wise water resource management
- Revitalize Africa’s soils through an integrated approach to soil fertility management
- Strengthen local and regional markets

- Implement bold pro-poor and equitable agricultural and trade policies
- Address the specific needs of the smallholder farmer, with priority attention to women
- Tackle the continent’s increasing exposure to climate risks.

Setting out AGRA’s vision for progress (Box 1), Mr. Annan stressed that the Alliance could not work alone and he called for strategic partnerships with African governments, donors, farmers’ organizations, and the private sector. In closing, he rallied delegates to work together to make the African

Box 1. Alliance for a Green Revolution in Africa (AGRA)

AGRA is a dynamic African-led partnership working across the continent to help millions of small-scale farmers and their families lift themselves out of hunger and poverty. AGRA programmes develop practical solutions that can make significant improvements to farm productivity and incomes for the poor while safeguarding the environment. The initiative provides a platform for various stakeholders to discuss and implement a uniquely African Green Revolution that is African-owned and led. It emphasizes the need for a diversity of actions to meet the different needs of Africa and, at the same time, to respond to the current food crisis. AGRA advocates for policies across all key aspects of the African agricultural value chain: from seeds, soil health, and water to markets and agricultural education. It will be building on many partnerships and listening to many voices to ensure inclusiveness and create processes of accountability. Chaired by Kofi Annan, AGRA has initial support from the Rockefeller Foundation and the Bill and Melinda Gates Foundation. It maintains offices in Nairobi, Kenya and Accra, Ghana.

See www.agra-alliance.org for more information.

Green Revolution a reality: "Failure is not an option. Together we will succeed."

Dr. Abera Deresa, State Minister for the Ministry of Agriculture and Rural Development of the Federal Democratic Republic of Ethiopia, responded with a vote of thanks to Mr. Annan for raising several key challenges facing African agriculture, including the current food crisis, climate change, and agricultural inputs. He remarked on the commitment of African leaders to improving the livelihoods of millions through such initiatives as the common agricultural development framework, which committed all African countries to invest at least 10% of their national budgets in agriculture and to attempt to achieve 6% consecutive growth annually to meet the Millennium Development Goals (MDGs). With these efforts in mind, he is confident that food aid dependency on the continent can be reversed.

Dr. Deresa concluded with the following list of challenges to creating an African Green Revolution:

- Designing and implementing broad-based policies
- Ensuring gender equity
- Promoting private sector development
- Improving capacity to manage risk
- Increasing the commercialization of smallholder agriculture
- Promoting culture and values for pro-poor growth
- Strengthening institutional and human capacity
- Examining the benefits and risks of biofuels
- Promoting good governance at all levels
- Strengthening sanitary/phyto-sanitary standards.

The Conference continued with Dr. Ousmane Badiane, Senior Research Fellow at the International Food Policy Research Institute (IFPRI) and Senior Research Advisor to NEPAD, offering the delegates a critical look at the progress and outlook for

agricultural growth in Africa. He presented the key agricultural growth trends and prospects for the continent and offered ideas for the future growth agenda and partnerships for growth. Using statistics from IFPRI, he contended that a number of African countries have made significant progress over the last ten years and that the rapid economic decline of the 1970s and 1980s has been reversed or stopped by many of these countries. However, he cautioned that African countries need to further accelerate their rates of growth and poverty reduction if they are to achieve MDG No.1 (halving poverty and hunger) by 2015.

The challenge, according to Dr. Badiane, is to build on recent positive changes and to accelerate and broaden recovery processes while keeping sight of long-term growth during these times of emergencies. Thus, a "uniquely African Green Revolution" must differ from the technology focus of the Asian model and move beyond simply boosting supply to include the dimensions of markets and trade, increasing the role of the private sector, and embracing the importance of the policy environment.

One such mechanism to help achieve this is CAADP, NEPAD's framework for partnership and policy renewal in African agriculture (Box 2). The CAADP agenda provides for African ownership and leadership, offers a common framework for investment, and defines budgetary and growth targets.

Dr. Badiane asserted that the way forward includes advancing the implementation process by accelerating the alignment of strategies and scaling up investments at three levels: (i) regional and national strategy alignment and investment programmes; (ii) partnership and alliance building; and (iii) policy dialogue and review to ensure successful implementation.

Box 2. Comprehensive Africa Agriculture Development Programme (CAADP)

CAADP is an effort by African governments under the African Union (AU)/NEPAD initiative. The main goal of CAADP is to help African countries to reach a higher level of economic growth through agricultural-led development that will eliminate hunger, reduce poverty and food insecurity, and enable expansion of exports. Although it is continental in scope, it is an integral part of national efforts to promote agricultural sector growth and economic development. It is not a set of supranational programmes to be implemented by individual countries. Rather, it is a common framework, reflected in a set of key principles and targets that have been defined and set by Heads of State and government to: (i) guide country strategies and investment programmes; (ii) allow regional peer learning and review; and (iii) facilitate greater alignment and harmonization of development efforts.

See www.nepad.org/2005/files/caadp.php for more information.

Government-led efforts to transform agriculture in Africa

The Conference provided delegates with some evidence of emerging national-level success stories in the area of agricultural development. Highlights were presented of government-led efforts from Benin, Ghana, and Malawi. Many delegates argued that these cases were not unique cases,

but instead exemplified the increasing willingness of African governments to invest in the sector to boost agricultural productivity and increase pro-poor economic growth.

Towards compliance with the Maputo Declaration – Benin

Sunday Pierre Odjo, Agricultural Policy and Trade Advisor for the Conference of Ministers of Agriculture in West and Central Africa, opened his talk by describing the Maputo Declaration, which was the outcome of the Conference of Ministers of Agriculture of the AU, held in Maputo, Mozambique in July 2003. The Declaration acknowledges the importance and urgency of implementing CAADP. In recognition of the decisive role of the agricultural sector to reach the MDGs, the Ministers of Agriculture, empowered by their Heads of State, committed themselves to allocating at least 10% of national budgetary resources for agricultural and rural development within five years. Dr. Odjo explained that although agriculture has always been a key sector in Benin – contributing 36% of gross domestic product (GDP), 75–90% of official export revenues (with cotton as the major export crop), 15% to state revenues, and 70% of employment – it has never been an investment priority for the government. In fact, agriculture's share of the national budget actually declined in real terms until 2006, when the renewed commitment to agriculture began to take effect.

Dr. Odjo reported that agriculture's share of actual public expenditure had increased from 5% in 2004 to 8% in 2006, and that Benin now falls in the middle category of African countries in terms of their budget allocations to agriculture. Agricultural growth has responded well to these public investment efforts, particularly those

targeted at the cotton sector. Dr. Odjo concluded by saying that the country is, in his view, halfway towards achieving the Maputo target and that rapid progress in achieving a Green Revolution in Benin is possible with more public investment in agriculture.

Agricultural-led growth and development – Ghana

The presentation was given by Dr. Adewale Adekunle, coordinator of the Sub-Saharan Africa Challenge Programme for the Forum for Agricultural Research in Africa (FARA), on behalf of Dr. Owusu-Bennoah, Director-General of the Council for Scientific and Industrial Research (CSIR), Ghana. The presentation illustrated how Ghana has recently shown a marked improvement in its macro-economic indicators, reaching an average GDP growth of 4.6% between the years 2000

and 2006, up from 4.4% between 1995 and 1999. According to Dr. Owusu-Bennoah, this expansion was driven largely by significant growth in the agricultural sector rather than by commerce. Agriculture increased its contribution to GDP to nearly 38% in 2006, supported by productivity increases and favourable international cocoa prices. The success of agricultural growth has impacted positively on the economic development of the country and led to poverty reduction. It is expected that with the current agricultural growth path, Ghana will reach MDG No.1 by 2008 or 2009.

Dr. Owusu-Bennoah indicated that a number of factors have contributed to the success of Ghana's agricultural growth. These include political stability and good governance for nearly 25 years; good agricultural policies and programmes supported by development partners that help small-scale farmers to produce staple crops; forward-looking



Betty Kibaara

diversification and private sector development policies; investments in rural areas with improved infrastructure such as feeder roads, markets, rural electrification, and smallholder micro-credit programmes; increased focus on research, science, and technology to improve crop varieties for smallholder farmers; and prudent fiscal policies coupled with a stable micro-economic environment to enable the private sector to access credit and push investment in agriculture, especially in the expanding horticulture sector.

Agricultural Input Subsidy Programme – Malawi

Ephraim Chirwa, Associate Professor of Economics at Chancellor College at the University of Malawi and Country Coordinator of the Future Agricultures Consortium, presented an assessment of Malawi's Agricultural Input Subsidy Programme (AISP), one of the most hotly debated and closely observed government-led initiatives in Africa. Dr. Chirwa noted that Malawian smallholder agriculture is characterized by high levels of poverty, small land-holdings, continuous maize cultivation, declining soil fertility, and heavy dependency on low-input maize production. Production of maize is normally insufficient to meet annual consumption needs, and these are hampered further by the high variability of maize prices, lowering profitability for deficit households. Malawi suffered a major food crisis in 2004/5, when a very poor harvest was followed by high maize prices. In 2005/6 the Government instigated a targeted voucher programme to subsidize the cost of fertilizer and seed for maize and tobacco farmers.

Drawing on a recent major evaluation of the AISP, Dr. Chirwa noted that over two years (2005/6

and 2006/7), maize output in Malawi increased substantially. The assessment estimated that the total maize production for 2006/7 was 3.4 million tonnes, over 30% greater than the record harvest of 2005/6. Household food security levels also improved as the proportion of households reporting a major shock from high food prices fell from 79% in 2004 to 20% in 2007. Dr. Chirwa observed that there are lessons and opportunities to be learned from the Malawi AISP example. The programme depends on clear policy and programme objectives and consistent coordination with complementary policies and investments in rural development. He noted that there needs to be greater local accountability and clear targeting criteria for allocating the vouchers. Private sector involvement and the design of the vouchers are also crucial to the success of the programme. There should be clear political commitment and the programme must be driven locally. Finally, there is a need for timely production and market information for all policy makers, private sector participants, and farmers.

The European commitment to African agriculture

On the final day of the Conference, Louis Michel, European Commissioner for Development and Humanitarian Aid, offered his perspective on the rising food crisis and drew the delegates' attention to the enormous inequality in food security between rich and poor countries, which he labelled as "unacceptable". He reviewed the need for both short- and longer-term solutions to these problems. He warned the Conference that emergency food aid, however vital in the short term, "does not provide any response to the structural and chronic causes" of the food

security problem. The Commissioner stated that in the longer term, food security can only be ensured by giving priority to agriculture. Increased agricultural productivity must be accompanied by improvements in local distribution networks and better links between small-scale farmers and their markets. He assured the gathering that the European Union (EU) was committed to helping its AU partners to achieve these goals, noting that the 10th European Development Fund doubles EU commitment to the rural development sector from 650 million to 1.2 billion Euros. In addition, the EU is proposing to align its future assistance to agriculture with NEPAD's CAADP agenda.

Commissioner Michel pointed out that certain European Commission measures could dampen the effects of current volatility in food prices

by setting up the following: arrangements for mitigation of price volatility in *filières* (value chains); emergency funds, intervention funds and reserves to secure food security; early warning systems and market information systems; and funds for improving export channels for African agricultural commodities, such as the one developed for the cotton *filière*. He went on to state that Africa needs not one but several different Green Revolutions, with different approaches depending on the region or regions concerned. Commissioner Michel concluded by stating his belief that "to guarantee all humans an adequate and regular food supply is not a moral imperative but a fundamental human right", and it alarms him to see that this right might be pushed aside when the world has the resources to protect it.

4. Multiple Perspectives on the African Green Revolution Agenda

Contrasting visions, competing agendas?

The Conference began with delegates sharing their visions for an African Green Revolution. Some delegates had a very strong focus on the need for significant investment in improving access to agricultural inputs, some focused specifically on rights and equity, and others put strong emphasis on sustainability. This section lists the various priorities articulated by multiple stakeholders during the Conference and Seminar.

Productivity

Drawing on examples and inspiration from the Asian Green Revolution, some delegates strongly

advocated a clear focus on increasing food crop productivity through technological innovation. At the heart of this agenda is the development and distribution of vital agricultural inputs – seeds, nutrients, and water – in the form of hybrid planting materials for both staple and cash crops capable of coping with Africa’s complex and risk-prone environments, major increases in the use of inorganic fertilizers, and improved water management.

Growth

For some delegates productivity gains were not sufficient and they called for a greater emphasis on agricultural growth, which implies improving market opportunities for small-scale producers. This perspective emphasizes the need for investment



in agricultural R&D, regional and global trade in commodities to promote economic growth, and infrastructure development for markets, to ensure that agriculture drives growth in both the rural sector and the national economy.

Rights and equity

Some delegates argued that a successful African Green Revolution must emphasize equity and rights, noting the pressing need to ensure representation of diverse stakeholders. It is paramount that inclusive processes attend to the specific issues of gender and ethnicity. There was consensus that African farmers, many of whom are women, must be at the centre of any successful effort to boost agricultural productivity, and that thus far their voices have not been sufficiently heard or taken into account.

Sustainability

Recognizing fundamental social and environmental concerns raised by critics of the Asian Green Revolution was the preoccupation of some delegates, who advocated different methods of increasing agricultural productivity in Africa. For this group, the sustainability of the Green Revolution interventions took centre stage and they argued for greater environmental protection, conservation of agricultural biodiversity, and assurances that the results would benefit the poor.

Towards a common understanding of a uniquely African Green Revolution

A central message that emerged during the Conference and continued throughout the Seminar was that moving in a unified direction, with a clear vision and concrete goals, was the key to the future of agriculture in Africa. Yet this idea comes with a major caveat: there is no “one size fits all” solution. The approach that will achieve effective agricultural transformation in Africa needs to move away from the single “silver-bullet” concept, seeking a single solution that would fit every context.

What is needed, several delegates suggested, was a “rainbow revolution” with a “green ethic”. This multi-hued “mosaic” approach needs to go beyond a production–growth focus to include issues of environment, biodiversity, equity, and rights.

We can learn from the successes and the mistakes of the past Asian Green Revolution, one delegate succinctly put it, because we have the benefit of hindsight. Under the “rainbow revolution”, Africa’s diversity would be maintained. Only if you have diversity – both biological and cultural – will the continent be able to cope with inevitable environmental, economic, and technological shocks and stresses in the future. Additionally, some delegates reflected that creating the conditions for peace and stability is a fundamental prerequisite for agricultural and economic growth in the region.

5. Common Points of Agreement

During the deliberations, there were several areas where delegates chose to “agree to disagree” (such as on the contentious issue of genetically modified crops) or to limit the debate because of the complexity of the subject (such as the question of land reform). Nevertheless, a number of common points of agreement did emerge on several fronts, along with the recognition that all the elements are required to foster a uniquely African Green Revolution. This section outlines these elements/points of agreement.

Food price crisis: short-term focus versus long-term goals

“The time for talk is over. We must implement immediate solutions for today’s crisis, and do so in the context of a long-term concerted effort to transform smallholder agriculture, increase productivity and sustainability, and end poverty and hunger.”

Kofi A. Annan, Chairman, AGRA.

Against a background of spiralling world food prices, Mr. Annan reminded the Conference delegates that the unfolding world food price crisis may roll back the progress that has been achieved by African countries during the past decade. All delegates recognized that the global community and African governments need to respond to the current food price crisis. The delegates united behind Kofi Annan’s challenge to the global community to support Africa’s own efforts with major new investments to accelerate growth in agriculture and sustain ongoing economic recovery. They agreed that there is an urgent need to address the effects of rising prices on the poor in Africa and to mobilize resources to lessen the negative impacts.

At the same time, concern was voiced that in addressing the current crisis, attention should not be

diverted from the medium- and long-term goals for sustainable development, including the African Green Revolution. Many speakers noted that although in the short term, high food prices were a serious threat to Africa’s poor, including many farmers, they also represented an incentive and an opportunity to boost investment in increased agricultural productivity, to which both government and the private sector must respond. It was recalled that similar conditions in Asia during the 1970s lay behind the increased investment in agriculture that led to the original Green Revolution. Delegates affirmed the importance of the medium-term goal of ensuring smallholders have access to reliable and affordable inputs over the coming growing seasons.

Coordination/convergence and alignment/partnerships

“The basics are there, we know what needs to be done, but we need concrete action, not new frameworks.”

Godfrey Bahigwa, Director, Plan for the Modernization of Agriculture, Ministry of Agriculture, Animal Industry and Fisheries, Government of Uganda.

There was much talk across the group and plenary sessions about the importance of coordination and alignment of initiatives and institutions. Delegates recognized that there were many actors at large and that the challenge lies in linking up their various agendas to make sure all are moving in the same direction and not working at cross purposes. There is a need for coordination and convergence among key processes and initiatives such as AGRA, CAADP, and other public and private efforts. Such coordination and partnership is critical to the African Green Revolution and requires alliances between the public, private, and voluntary sectors.

Some delegates argued that policy processes should enhance the compact and roundtable nature of initiatives and ensure that policy stability, transparency, and coherence are created at national and international levels. It was agreed that strategic partnerships are necessary. These should involve a range of public and private sector actors and ensure good practice by all partners, which includes maintaining transparency, accountability, and efficiency. Ultimately the Conference delegates reminded each other that it was important to include bottom-up (i.e., locally driven) initiatives as well as large-scale, top-down, public and private efforts.

Making markets (and trade) work for the poor

“To empower smallholder farmers to participate in an African Green Revolution, improvements should be made, both in functioning and performance of agricultural input markets, so that viable smallholders can access inputs at cost-effective prices, and in empowering vulnerable smallholders with purchasing power, so they can participate in the market process.”

Balu Bumb, Programme Leader, Policy, Trade, and Markets Programme at IFDC, an International Center for Soil Fertility and Agricultural Development.

The need to enhance facilitation and coordination to make markets work more effectively for poverty reduction was a key point raised by delegates. They recognized that a basic enabling environment, which pays attention to developing rural infrastructure and supporting agricultural research, is required to ensure markets are effective and to support sustainable agricultural and economic growth. It was acknowledged that improving the enabling environment required government-led interventions.

Greater market coordination and selective state interventions were also seen as important ingredients for a successful outcome. However, it was argued that the focus should not be placed on important staple crops alone, but also on transformation, diversification, and value addition. In some instances, it was argued, supporting focused input and other support programmes is necessary to optimize and ensure long-term sustainability. While the focus should remain on staples for domestic and regional markets, it was argued that emphasis on integrated value chain approaches should be applied to staples as well as to high-value crops and new crops, such as biofuels. Throughout these proceedings, there was a constant reminder that a uniquely African Green Revolution needs to continually address the asymmetries of power and information in the areas of markets and policy setting.

Environment and biodiversity

“Biodiversity is one of the key issues. We need to ensure that we maintain diverse agriculture and not rush to move food to fuel.”

Sunday Pierre Odjo, Agricultural Policy and Trade Advisor for the Conference of Ministers of Agriculture in West and Central Africa.

Agricultural biodiversity was brought up in a variety of different contexts. The issues of sustainability and agro-ecology prompted the question of how to build resilience in diverse, complex, risk-prone environments. Discussion centred not only on ecological components and ecological services, but also on fundamental issues of nutrition, agronomic management, and wealth and well-being. Benefit sharing was seen as crucial to make sure biodiversity was preserved. “Conservation through use” was emphasized as a technique

that can add value to the environment so that people are able to use the resources, realize the benefits, and make the necessary investments in future sustainability. The delegates called for a multiplicity of approaches that address issues of diversity and complexity across a range of different environments and systems throughout the continent.

The delegates agreed that a push for major investment and provision of key inputs (such as improved seeds, organic and inorganic fertilizers, and soil and water management) is needed now to address soil nutrient deficiencies and boost productivity. At the same time, delegates warned of the dangers of getting caught in a programming trap, and advocated a resilience audit be used to avoid getting locked into a single pathway of development. An audit taken to measure the resilience of programmes was seen as crucial to improve efficiency and reduce waste, to check on possible impacts of interventions (including distributional and welfare issues), and to enhance people's ability to cope with shocks and stresses.

Demand-led processes (farmer in the centre)

"Farmers have been left aside from the process we have been debating for more than one year now and we cannot have a revolution, be it green, yellow, or black, without the key players, who are farmers."

*Mamadou Goita, Executive Director,
Institut de Recherche et de Promotion des Alternatives en
Développement (IRPAD), Mali.*

Conference delegates from across the board agreed that farmers and their needs must be placed at the centre of a uniquely African Green Revolution. Much of the discussion running across

the thematic groups focused on building alliances among farmers and their organizations at national, regional, and continental levels. This was seen as absolutely vital to ensuring that priorities are set and funds are spent in ways that meet the farmers' needs. All initiatives must move towards that goal. However, there is an urgent requirement for substantial investment in building capacity.

Delegates believe the skills that are needed go beyond the technical to include "soft" skills. An equitable Green Revolution requires an increased ability to facilitate inclusive approaches in which farmers, especially smallholders and the poor, can access skills training in organization, business management, policy, advocacy, and impact



Susan Kaaria

monitoring. These skill sets were believed by many delegates to be lacking at the moment and they should become a focus for follow-up efforts.

Linking policy and implementation to demand-led processes, which prioritize the interests of farmers and poor consumers, was strongly emphasized by Conference and Seminar delegates. One method proposed to accomplish this is to strengthen the capacity of farmers' organizations and other civil society actors to understand and engage effectively in key national and regional policy processes and research agendas. However, a caveat was posted about the "economics of attention", emphasizing the need to avoid overloading farmers' organizations with too many responsibilities.

Data collection and use

"We don't have reliable data, [and we have] weak analytical skills. We need to invest in data collection and household surveys to understand livelihoods. Evidence is a public good and all citizens should have access to that information."

Lindiwe Sibanda, Chief Executive Officer, FANRPAN.

The absence or poor quality of data on crop productivity and prices was a recurrent theme throughout the Conference and Seminar. Improving collection, availability, and use of quality data to monitor progress, assess impact and outcomes, and reflect on future options was stressed as a key to the future. Reliable and timely data are invaluable for informing policy and encouraging investment in strategic areas. Enlisting the support of universities, research centres, and statistical services was one option put forward to meet the challenge of improving data provision.

Data on agricultural productivity, household income, input and output prices, and broader

patterns of public expenditure were seen as priorities. Such data gathering and analysis will allow progress to be tracked, impact to be assessed, and future options to be modelled as the Green Revolution in Africa unfolds. Methods of improving the efficiency and cost-effectiveness of data gathering and market intelligence systems were discussed, including the use of cell phone calls, short message service (SMS or texts), and the Internet in rural areas. Foresight and horizon scanning were identified as important ways to highlight future threats and opportunities and feed information into the decision-making process.

Building capacity

"There has been a lot of talk at a global level, but we need more talk at the village level. It would be good to see farmers, researchers, and extension workers acting together."

Gem Argwings-Kodhek, Coordinator, Agricultural Sector Coordinating Unit, Ministry of Agriculture, Government of Kenya.

The need to build capacity at all levels, from the individual farmer to the national-level government worker, was a common thread running through the Conference and Seminar. The key component of this debate centred around strengthening "the politics of demand" among farmers and their organizations and other civil society groups by giving them a voice through which they can articulate their priorities and negotiate with the state, the market, and R&D actors. This strengthened voice was seen as crucial to ensure sustainability and as an issue of accountability. However, it remains difficult to ensure that the interests of deficit producers (consumer farmers) are as well represented as those of the larger producers.

The delegates also recognized a need to build the capacity of government representatives in negotiation skills on trade and standards issues. This is vital to enhancing their ability to engage in the Doha trade round. Strengthening the capacity of government agencies to respond to demands from producers and consumers (research, extension, services, etc.) was seen as an important component of the African Green Revolution. While it was acknowledged that there were genuine resource constraints, discussions centred on how targeted investment could make a real and sustainable difference.

Empowerment and equity

“The role of women is very important. In my country, if you are talking about food security, then you must focus on women. Small-scale farmers and women are the bedrock. It is important to focus on women and how best to empower them, because they are the holders of the domestic economies.”

Salome Danso, Acting Director, Ministry of Food and Agriculture, Government of Ghana.

Inclusion was seen as a crucial part of the new agenda for African agriculture. This means taking equity, rights, and power seriously. One issue on which delegates agreed was that women will play a vital part in the success of an African Green Revolution. Kofi Annan stated unequivocally that policies must give priority to women, who make up the majority of farmers in Africa, and throughout

the Conference and Seminar this position was supported time and again. Many delegates agreed that the gender equity issue must be at the top of the agenda, cutting across every theme. Governments, donors, farmers’ organizations, and NGOs must all consider the contribution of women to agriculture and ensure they have access to income and control over land. But a consensus that women are the bedrock of Africa’s agricultural future is not enough. How to achieve equity was discussed during the different sessions and recommendations were put forward for consideration.

Empowerment also relates to ensuring that small-scale farmers (and perhaps consumers too) have a voice in farmers’ organizations. At present, the interests of smallholders, women, and other marginalized groups such as pastoralists are not well represented within farmer groups or catered for by service providers. It was emphasized many times during the Conference that livestock provide a livelihood for many Africans, especially pastoralists, and should not be forgotten within the Green Revolution. Additionally, delegates stressed that giving farmers a voice in the political process is a crucial part of progress towards a more sustainable and equitable future for African agriculture. In addition to assessing the achievements of this Green Revolution in quantitative terms, delegates recommended that qualitative targets be set in relation to empowerment, voice, and inclusion, taking into account a rights-based approach.

6. Recommendations to Advance an African Green Revolution

The delegates spent the majority of their time during the Conference and Seminar in working groups, with the aim of addressing the two overarching questions posed at the beginning of the Conference:

1. How can new interest and investment in African agriculture be used to bring about real and sustainable change?
2. How can these efforts be aligned strategically with other investments and development activities and new strategic alliances and partnerships be created to ensure success?

The goals for the working groups were threefold: (i) to help articulate a uniquely African approach to a new Green Revolution; (ii) to identify opportunities for strategic alliances and partnerships to advance the concept; and (iii) to bring forward key policy and practice recommendations and strategic action agendas focused on achieving the goals. This section provides a brief overview of the discussions held by the six working groups and the recommendations brought forward. The recommendations are set in different phases of development and different degrees of specificity. They will continue to be reviewed and refined by delegates and other stakeholders as the initiatives move forward.

Institutions and innovations

This working group began their discussions by examining the three overarching issues of policy, institutional arrangements, and capacity. The discussion on policy centred on an examination of CAADP and its four Pillars as a framework, and how this could be aligned with other initiatives within the African Green Revolution concept. The group agreed that countries must articulate their national

policies, align them with the CAADP framework, and identify the institutions through which these policies will be funded and implemented. At the same time, it was emphasized that relevant actors must keep a focus on the grassroots and bring a people-centred approach to policy formulations within both programme development and alignment.

The second discussion topic on institutional arrangements focused on issues of harmonization and coordination. Participants recommended the creation of formal partnerships at multiple levels, ranging from continental to national and local, and particularly involving alliances between farmers. The third discussion on capacity focused on establishing platforms for multi-stakeholder dialogue, and incentives for innovative learning, information sharing, research mobilization, and alignment of programming goals. It was agreed that new innovative technologies, products, and systems should be designed for the benefit of smallholder farmers and that ways should be found to ensure the new technologies reach those that need them. Delegates also emphasized that more needs to be done to spark innovation and encourage experimentation, both at the farm level and within higher institutions. Many actors could carry out these activities, including university and training institutions, research institutions, agricultural extension services, and farmers' organizations.

At the end of the Seminar the group presented two recommendations:

1. Build capacity of farmers' and pastoralists' organizations through demand-oriented R&D

Participants proposed the establishment of an Africa-wide, farmer-owned and farmer-driven fund

for directing research, innovation, and technology development geared to farmers' needs. This would be an endowment fund supported by government, the private sector, philanthropists, and farmers and it would ensure demand-driven research with farmers in the driving seat. The fund would serve several functions: commission and assess research and information products and services; scale up farmers' own research, innovation, and access to inputs; promote farmer-to-farmer exchanges; and build the capacity of farmers' organizations to articulate demand for research/extension and influence policy. It was proposed that the next step in establishing this fund would be to commission lessons-learned studies on similar farmer-directed research funds. This would help shape the concept, which would then be piloted in a small number of countries. Delegates from Ghana, Kenya, and Mozambique all stated their interest in piloting this approach.

2. Transform agricultural education and training

The second recommendation was to focus on transforming the roles of universities, technical and vocational colleges, and agricultural training to better fit the current needs of smallholder farmers. Such institutions would become active players in the new Green Revolution by introducing curriculum reform and new skills. These would focus on current needs and include ideas for bringing training closer to the community, such as community-based training, rural placements, incentives and scholarships to students living in rural areas, increased engagement in the communities, and better capture of local farmers' knowledge and experience. The goal is to have students and extension officers equipped with greater technical and practical skills; communications, leadership

and other soft skills; entrepreneurial, negotiation and business skills; and other related expertise that enables them to work better with, and learn from, farmers as part of their training and business experience.

Markets, trade, and investment

This working group began their discussions by focusing on four main issues: (i) policy; (ii) assets and risk management; (iii) asymmetry of power, information and knowledge; and (iv) transformation and infrastructure. The first issue on policy centred on the importance of creating an enabling environment within which markets can operate efficiently. There was disagreement on the role of the State versus the private sector, but it was agreed that some circumstances require governments to be proactive, while in others, they need to transfer this role to the private sector. The second issue on assets and risk management revolved around the appropriate policies and incentives required to help poor farmers manage risk, and participants emphasized the importance of differentiating between different areas and markets. They also stressed the need to focus on staple food crops since these will have the greatest impact on the poor. Critical constraints to be overcome include policy instability, weather instability, food price profitability, and input prices, credit systems and insurance mechanisms.

The third issue on asymmetry of power, information, and knowledge delved into two main areas: lack of participation by civil society, farmers' organizations, and women in policy formulation processes; and capacity development of farmers' organizations to participate in the policy process and to engage in the markets. The fourth issue on transformation and infrastructure centred on

the need to support and scale up good practices, increase investments in infrastructure and agro-processing, and improve vertical integration along the value chain by matching supply with demand and financing both ends of the value chain. The working group agreed on two strategic approaches: (i) building competitive access to markets through integrated value chain coordination and improved management and sharing of risks throughout the value chain; and (ii) making public investment in infrastructure and establishing a legal environment for agro-enterprise development through public–private partnerships, business to business alliances, and joint ventures.

At the end of the Seminar the group's three recommendations were as follows:

1. Adoption of CAADP Pillar II

CAADP provides a framework for such activities as improving the competitiveness of farmers, building infrastructure, investing in the value chain, and improving the capacity of farmers and trade associations. The group suggested implementing such programmes through practical trade facilitation and by ensuring quality-control mechanisms for trade. An example given was East Africa's "Maize without Borders" concept. Another suggestion included improving coordination on value chain development to focus on activities such as out-grower schemes, contract farming, and stakeholder platforms. Finally the group proposed creation of a producer-led enterprise development fund.

2. Management and sharing of risk

Participants suggested expanding tested mechanisms (such as loan guarantees) to increase investments in agro-enterprises and cooperatives. They emphasized the formulation of best practices

with regard to mechanisms for sharing risks for agro-enterprise development. The proposal also challenges financial institutions to create innovative services and mechanisms to share investment risks with farmers. It suggests doing this by creating loan guarantees and matching grant funds, public–private price stabilization schemes, and index-based and other insurance for significant variables such as weather.

3. Regional and national policies (with special attention to staple crops and pastoralists in value chain development)

The group recommended that investments and investment mechanisms that can address critical constraints in value chain development should be identified and that more funds should be provided to address the constraints. The delegates suggested that the participation of smallholders and pastoralists in the value chain should be monitored to ensure their full involvement in the process.

Environmental sustainability and biodiversity

This working group created an overarching vision stating that a Green Revolution for Africa should be one that "will create a mosaic of approaches and solutions, including conservation farming, minimum tillage, and judicious use of inputs, with a goal to tap Africa's great diversity – human, cultural, dietary, biological, climatic, and environmental – to ensure productive farming and livelihood systems". This group initially focused on three main issues: agricultural biodiversity and nutrition, soil and water management, and resilience and sustainability. The first issue on biodiversity and nutrition revolved around the potential of global climate change and increased risk of drought to



Cheikh Sourang

affect natural biodiversity and agriculture. The group acknowledged that a high degree of crop diversity was necessary to allow for adaptation and recognized the link between crop diversity and health/nutrition.

The second topic of soil and water management centred on how to overcome the issue of nutrient mining and the need to maintain the physical, biological, and chemical integrity of soil and water. The third issue on resilience led to a recommendation that existing institutions and initiatives have an ecological oversight mechanism and carry out a sustainability and resilience audit, dealing with monitoring, learning, and adaptation. Overall, the group agreed on the need for a holistic approach, which places an emphasis on integrated natural resource management (INRM) for smallholders and pastoralists.

At the end of the Seminar the group presented three recommendations:

1. Reversing soil depletion while raising agricultural productivity

The group recommended that poor farmers' access to organic and inorganic fertilizers should be increased and that organic farming should be better linked to markets to create a greater incentive for its adoption. Capacity building is the key to success, and this includes training farmers in the appropriate use of inorganic and organic fertilizers, with a focus on INRM. It was recommended that data collection on soil (erosion, nutrient loss, and structure), crop nutrients, water sources/management, and reliable annual estimates of crop and animal products should be given top priority. In order for this data collection to happen, additional



support is needed for statistical offices to develop, train, and motivate field-level data collectors and enumerators.

2. Actions on water

The group recommended promoting integrated community-based water management mechanisms, such as watershed restoration and tree planting, rainwater harvesting/storage and management, affordable small-scale irrigation systems, and helping to establish community-based bylaws to regulate and promote appropriate water management. This recommendation also calls for appropriate water pricing, including exploring the role of water pricing in controlling excessive use. In terms of irrigation, this recommendation calls for the support of CAADP Pillar I to elaborate its planned irrigation programme, develop appropriate large- and small-scale irrigation schemes, and introduce incentives for proper infrastructure maintenance.

3. Sustainable use of African agricultural biodiversity

The group called for an inventory of agricultural biodiversity (including crops, animals, and fish) to identify species that have yet to be collected and also to document and promote indigenous knowledge on agricultural biodiversity. The inventory would be used to develop policies to deal with and protect intellectual property rights and access to the resources for poor farming communities. Participants also recommended the establishment of conservation strategies for maintaining diversity at *in situ* and farm levels and the maintenance of livestock stud books. The goal is to increase the productivity of non-marginal land and to reduce pressure on nearby marginal lands. They also called for action to link farmers to gene banks with the

aim of increasing seed multiplication and delivery of seed to poor farmers. And finally, they called for the development of a micro-nutrient policy to increase use of existing sources of biodiversity to reduce child malnutrition.

Governance and policy processes

The group working on governance and policy processes began their discussion by looking at the five key goals of capacity building of State and non-State actors; strengthening of gender-sensitive policy processes; transparency in financial and policy processes; capacity to collect, analyse, interpret, and use data; and improved policy alignment and coordination. Throughout their discussions they emphasized that farmers must be in the drivers' seat over the full policy cycle and that they should be the ones defining their own needs and issues. Improved data collection, analysis, and use would help farmers to interact at different levels of the policy process. Women were also central to the group's discussions and they agreed on the need to ensure that women and their specific needs were represented in the four areas of capacity building, data analysis, policy alignment, and transparency.

At the end of the Seminar the group presented two key recommendations:

1. Policy relevance and responsiveness of State and non-State actors

The group called for initiatives to strengthen forums that would allow State and non-State actors to become involved in the policy process through greater capacity building and better analysis and documentation of good practices. The participants also recommended actions to strengthen the capacity of actors to interact in the process and

to assist farmers in building associations and co-operatives. They emphasized that periodic policy reviews are necessary to make policy relevant and responsive and that this would require improved data availability and independence of data collection. Finally, strengthening the media was seen as vital to ensuring that the processes are transparent and to help ensure policies are relevant and responsive to the needs of poor farmers.

2. Accountability of State and non-State actors

The group proposed establishing and strengthening mechanisms for performance review and accountability. This could be accomplished through collaboration between civil society groups and policy “watchdogs”. It also recommended that countries define and adopt accountability and governance indicators in the agriculture sector through the establishment of a multi-sector stakeholder group that can help create and adapt the indicators. Finally, the group called for the generation of credible data and strengthened capacity for analysis through training of researchers, media, farmers’ organizations, and NGOs.

Equity, rights, and empowerment

The group’s deliberations began with a critical examination of the inequities of the Asian Green Revolution and suggested that the results were imbalanced in terms of gender and income distribution. The group went on to consider the issues of access to land and credit, particularly those of women’s access. The group also discussed access to resources and to farmers’ organizations, and posed the question: Who is left out? The group came up with a mission statement to “Empower women, marginalized groups, and pastoralists

to actively and effectively engage in producer organizations”.

Discussions centred on four key issues. The first was the need to ensure that measurable targets are set for gender and equity, and the group suggested having action programmes designed specifically to ensure access for women and marginalized groups. The second revolved around the needs of grassroots organizations for basic skills (e.g., organizational and business skills) and leadership (to influence policy and negotiations). The third suggested that strengthening horizontal and vertical linkages and partnerships/networks with other organizations would help avoid asymmetric relationships, create greater information flow and accountability mechanisms, and put funds in the hands of small-scale farmers and marginalized groups. Finally, the group discussed how to increase access to resources and services for marginalized groups through pro-active processes, subsidies to the poorest, access to new technologies and knowledge, collective marketing services, and equitable land policies.

At the end of the Seminar the group presented three recommendations:

1. Accessing financial resources

There is a need for collaborative partnerships between producer organizations, governments, NGOs, banks and microfinance, and international organizations to: (i) test new products, such as agricultural loans and insurance schemes; (ii) build capacity through enterprise development training; (iii) create business incubation centres and value-addition and agro-processing activities; (iv) collect credible evidence based on successful models of village banks to determine which models work for pastoralists and poor people;

and (v) build gender-sensitive infrastructure, such as improved water systems and storage to allow women more time for enterprise development activities.

2. Capacity building

The group recommended commissioning comparative analysis studies of various organizations to determine their needs for capacity building and also who is served by these organizations and whether they are addressing issues of equity. There is also a need for greater focus on, and promotion of, technology and innovation through capacity building of farmers and farmers' organizations.

3. Taking the message to Africa

The group called for two-tier meetings for producer organizations within Africa, which could be created by establishing a district forum and a national forum. Participants should include producers (farmers), NGOs, governments, local micro-finance institutions, extension service providers, and regional research centres.

New threats and opportunities

The working group began their discussions by setting out three key principles. The first principle stated the need to use existing technologies while also developing new ones, as required. Science and technology will be crucial to an African Green Revolution, but networking will be paramount, taking account of what is currently available, distributing it quickly, and linking with as many partners as possible. Researchers and others must be allowed to move freely across borders and the technology must be relevant to local situations. The second principle centred on the importance of alignment, acknowledging that there is limited

capacity for implementation and that effectiveness will be increased through greater alignment of activities and programmes. However, it is important that local capacity is not displaced, nor put into a "project mode", which may affect the sustainability of progress (since the limited time-span of a project will not encourage the building of local capacity). The last principle focused on issues of technology, noting that building capacity is a long-term process, and that all actors (from national and international agricultural research centres) must form strategic partnerships around key technologies, both traditional and emerging. In this stream, technology should be oriented along the value chain and stakeholders need to find better ways of delivering technology services.

The group discussed four potential threats and opportunities: HIV/AIDS and the emerging food crisis; climate change and conflict as it relates to land; climate change and its effects on water; and biofuels.



Mary Kamau

At the end of the Seminar the group presented three recommendations:

1. Adaptation of production and marketing systems to climate change (long-term)

The group dealt with issues of livelihood pathways, intensification, and commercialization. The participants argued for the need to develop stress-tolerant seed varieties for different agro-ecological conditions and championed a focus on major staples, such as cassava, millet, sorghum, and others, not forgetting animal feed and fodder crops. The group also emphasized that similar efforts must be made for the livestock sector, including provision of breeding and veterinary services to facilitate adaptation to climate change, with special emphasis on pastoralist systems. Two sets of actions were proposed: (i) scale up pro-poor “seed alliances”, with additional countries and products becoming part of these alliances. In addition, the demand-side pull requires strengthening to increase access to new stress-tolerant varieties through such methods as subsidies, grants, and marketing; and (ii) develop equivalent “livestock adaptation alliances”.

2. Agricultural climate and weather information (medium-term)

The group recommended developing and strengthening real-time climate and weather forecasting information systems. Group members highlighted the need to strengthen and draw on lessons learned from existing regional, national, and local initiatives in providing better weather information that allows producers to respond to increasing ecological uncertainty and complexity. This recommendation also included a proposal to expand weather and crop insurance for smallholder farmers.

3. Social protection (short-term)

This recommendation included actions to reduce vulnerability through a range of social protection measures, including credit guarantees and matching grants (e.g., through vouchers and targeted seed adoption), conditional cash transfers, post-harvest storage systems, school feeding, food/cash/seed for work programmes, and community radio. The group emphasized the link between the above list of measures and access to “climate-resilient” technologies and adaptive farming practices and training.

7. New Directions and Opportunities

Summarizing the main lessons emerging from such a rich and varied set of debates and discussions is a difficult, if not impossible task. Nevertheless, several common threads ran through the week-long deliberations:

- Avoid generalized diagnosis and prescription. Instead, recognize real-life complex dynamics and diversity
- Understand dynamic interactions between economic, social, and political processes
- Locate change processes in distinct agro-ecological and social contexts
- Focus on politics and avoid simple technical “fixes”
- Recognize multiple pathways to more sustainable agriculture-based livelihoods and negotiate trade-offs between them
- Avoid reinventing the Green Revolution wheel.

As many delegates pointed out, because of Africa’s unique and complex social, ecological, and economic conditions, generic policy assessments are less useful than commonly thought for agricultural policy formulation and implementation. Thus, policy assessments must always build on context-specific analysis. Specifically, detailed assessments of interlocking sets of constraints to agricultural transformation on the continent must be developed from location-specific analyses – both biophysical and socio-political – at local, national, and regional levels. Typologies and scenarios of possible future pathways (e.g., diversification, intensification, commercialization, etc.) should be developed for each context and these should go beyond simple “either/or” oppositions, to offer different options for different groups of people in different places. Methodological development



Members of the advisory committee confer with a delegate



Bara Gueye, with Lindiwe Sibanda in the background

for such work – including building the capacity of researchers, policy makers, and civil society actors to undertake such analysis themselves – requires serious investment, both from within Africa and from donor countries.

The international and national agricultural establishment must be encouraged to think more creatively about the problem-solving process in African agriculture and their place within it. Tough questions must be asked about power, equity, and rights: Who frames the questions? Whose knowledge counts? What models of innovation and policy formation are most appropriate? Whose capacity is enhanced in the development of new solutions and policies? How is impact defined and

measured, and how is learning from the assessment demonstrated?

This raises questions about appropriate investment, not only technological and infrastructural, but also fundamental social, political, and institutional. The challenges of technology development and delivery in African agriculture therefore demand more than major investments in developing new seed varieties or fertilizers. They also require bold new programmes and new ways of organizing and governing the agricultural innovation process itself, from upstream research to downstream implementation. This includes developing an agenda for changing agricultural innovation systems through participatory, inclusive

learning approaches combined with more energetic and organized “politics of demand”. Among other things, this will require investing in farmers’ organizations and federations to strengthen their capacity, enhance their ability to negotiate with powerful public and private actors, and improve their ability to influence key policy agendas.

As delegates reiterated at several key points during the two events, there is of course no “silver bullet” for the problems of African agriculture; and no technical, market, institutional, or policy “quick fix”. Despite the urgency of the current food crisis, the ideas that emerged from the Conference and Seminar support the case for looking carefully at context and particular settings before jumping to conclusions about what to do. It is important, therefore, to go beyond recycling redundant ideas and to learn from past failures and near misses. This is not to say that well-worn ideas have no use. The collection of solutions suggested by participants in the Salzburg meetings included some very old, tried and tested ideas (e.g. improved infrastructure, irrigation systems, post-harvest storage, input subsidies, training and capacity strengthening at all levels, INRM practices), but, importantly, these were qualified in new ways.

It was acknowledged that critical political, economic, and social factors are central to all these possible solutions. Thus, rather than advocating

an expert-led, technocratic approach to driving broad-based development through agricultural innovation in Africa, a more politically sophisticated stance is required. In particular, greater emphasis needs to be placed on understanding and influencing the processes of agricultural innovation, intervention, and policy, not just their technical content. Such an agenda demands a cross-disciplinary approach, bringing the best of economic and technical analysis together with insights from socio-cultural and political analysis.

As mentioned earlier, this agenda requires a thoroughly grounded understanding of local realities, rooted in context-specific constraints analysis, allowing for scenarios and options to be elaborated and debated by multiple stakeholders. This suggests many challenges for all involved: policy makers, extension workers, educators, researchers, funding organizations, private sector corporations, and, of course, farmers and their own organizations.

Change will require genuine collaboration and partnerships at all levels; not just lip-service to “platforms”, “alignment”, and “coordination”, but also between the key actors seeking to spark a real revolution in African agriculture; one that brings about genuinely equitable and sustainable growth and development.

Postscript

The Salzburg Global Seminar, Institute of Development Studies, and the Future Agricultures Consortium continue to work with the International Advisory Committee and key stakeholders to help advance the agenda for a more equitable and sustainable “uniquely African Green Revolution”. The organizers will be collaborating with a number of institutions in Africa and donors to support, in particular, the inclusion of farmers’ organizations into critical decision- and policy-making forums. Through their efforts, the organizers seek to support capacity building efforts, promote more effective alignment of policies and approaches, and to advance more inclusive processes, in keeping with the core recommendations proposed in Salzburg. Updates and outcomes from the next phase of the initiative will be provided through the organizers’ web sites (see back cover).

We encourage you to share the recommendations set forth in this report with other interested parties and stakeholders, and to act on those that are directly relevant to the mission and focus of your own institution. It is only through joint action and shared commitment to the long-term goals of sustainable development and poverty alleviation through more inclusive processes, with an emphasis on empowerment and equity, that true progress will be achieved.

Further Information

Kofi Annan’s presentation:

www.salzburgseminar.org/mediafiles/MEDIA40093.pdf

Alliance for a Green Revolution in Africa (AGRA):

www.agra-alliance.org/

Comprehensive Africa Agricultural Development Programme (CAADP):

www.nepad.org/2005/files/caadp.php

Malawi’s Agricultural Input Subsidy Programme (AISP):

www.future-agricultures.org/pdf/MalawiAISPFinalReport31March.pdf

Maputo Declaration:

www.donorplatform.org/component/option,com_docman/task,doc_view/gid,432/Itemid,98/

Presentation by M Louis Michel, European Commissioner for Development and Humanitarian Aid:

www.salzburgseminar.org/mediafiles/MEDIA40225.pdf

Dr. Baba Dioum’s presentation on CAADP Pillar II: Presentation on the FIMA:

www.donorplatform.org/content/view/100/146/1/1/

Acknowledgements

Our deep appreciation extends to the donors who have supported various aspects of the work and events described in this publication. These include: Bill and Melinda Gates Foundation, William and Flora Hewlett Foundation, The Kilimo Trust, The Rockefeller Foundation, and UK Department for International Development (DFID).

The initiative is coordinated by the Salzburg Global Seminar and the Institute of Development Studies (IDS), with leadership from Edward Mortimer and Nancy Smith of the Salzburg Global Seminar and John Thompson of IDS. The initiative has been guided by the expertise of an International Advisory Committee (IAC). The organizers would like to thank the members of the IAC for contributing discussion papers, formal presentations, and assistance as chairpersons, recorders, and rapporteurs at both the Conference and Seminar:

Adewale Adekunle, Forum for Agricultural Research in Africa (FARA), Ghana
Akin Adesina, Alliance for a Green Revolution in Africa (AGRA), Kenya
Gem Argwings-Kodhek, Future Agricultures Consortium (FAC) and Agricultural Sector Coordinating Unit (ASCU), Ministry of Agriculture, Kenya
Ousmane Badiane, International Food Policy Research Institute (IFPRI), USA
Ephraim Chirwa, Future Agricultures Consortium (FAC) and Chancellor College, University of Malawi, Malawi
Mamadou Bara Guèye, Innovation environnement et développement (IED), Senegal
Susan Kaaria, Ford Foundation, Office for Eastern Africa, Kenya
Amdissa Teshome, Future Agricultures Consortium (FAC) and A-Z Consult, Ethiopia
John Thompson, Future Agricultures Consortium (FAC) and Institute of Development Studies (IDS), UK
Ann Tutwiler, William and Flora Hewlett Foundation, USA
Grace Wasike, East Africa Farmers Federation (EAFF), Kenya
Gwen K. Young, Bill and Melinda Gates Foundation, USA.

Thanks also to the additional people who contributed to the Conference and Seminar presentations and discussion sessions:

Kwesi Atta-Krah, Bioversity International, Italy
Louis Michel, European Commissioner for Humanitarian Development and Aid
Njabulo Nduli, South African Embassy, Italy
Sunday Pierre Odjo, Conference of Ministers of Agriculture in West and Central Africa, Senegal
Emmanuel Owusu-Bennoah, Council for Scientific and Industrial Research (CSIR), Ghana
Pascal Sanginga, International Development Research Centre (IDRC), East and Southern Africa Regional Office, Kenya
Kimseyinga Savadogo, University of Ouagadougou, Burkina Faso
Lindiwe Sibanda, Food, Agriculture and Natural Resources Policy Analysis Network (FANRPAN), South Africa

Also to our communications partner, WRENmedia, and to Herman Seidl for the photos.

The organizers would like to offer special thanks to Kofi Annan for providing the keynote speech and his special commitment to these issues.

About the Author

Nalan Yuksel is currently a PhD candidate at the University of Sussex, UK, with a focus on the African Green Revolution. She recently returned from Kenya, where she worked as a senior research specialist in agriculture policy and agri-business for the Millennium Development Goals Centre in Nairobi. She has previously worked as one of the lead authors for the United Nations Millennium Project's Task Force on Hunger, as well as an agricultural policy analyst at the Canadian International Development Agency (CIDA). Ms. Yuksel earned a Bachelor of Commerce degree from the University of Alberta and an MA in international affairs from Carleton University, Canada.

Credits

Editing/design/layout: Green Ink Publishing Services Ltd. (www.greenink.co.uk)

Photos: Front cover photos by Neil Palmer/WRENmedia; inside photos by Herman Seidl, TIREZ electronic images™, for the Salzburg Global Seminar

Printing: Information Press, UK

The Salzburg Global Seminar (www.SalzburgGlobal.org) has 60 years of success in convening individuals and institutions from diverse countries, professional sectors, and viewpoints, engaging them in issue-focused dialogue that broadens thinking, provides new insights and understanding, finds common ground and language, and builds strong relationships across often striking differences. The Seminar excels in creating and implementing programmes that bring people together across multiple boundaries and broadening their knowledge of the issues examined. Through these programmes, successful practices are disseminated and adapted to new contexts, new policy approaches and practices are conceived, problem-focused endeavours are generated, and progress is achieved in addressing difficult global issues.

The Future Agricultures Consortium (www.future-agricultures.org) aims to encourage critical debate and policy dialogue on the future of agriculture in Africa. Through stakeholder-led policy dialogues on future scenarios for agriculture informed by in-depth field research, the Consortium aims to elaborate the practical and policy challenges of establishing and sustaining pro-poor agricultural growth in Africa. Current work focuses on four core themes: (i) Policy processes; (ii) Growth and social protection; (iii) Agricultural commercializations; and (iv) Science, technology, and innovation. As part of its work, Future Agricultures convenes major events to debate key policy issues at local, regional, and international levels.

The Institute of Development Studies (IDS) (www.ids.ac.uk) is a leading global organization for research, teaching, and communications on international development. Founded in 1966, IDS enjoys an international reputation based on the quality of its work and its commitment to applying academic skills to real world challenges. Its purpose is to understand and explain the world, and to try to change it; to influence as well as to inform. IDS hosts five dynamic research teams, eight popular postgraduate courses, and a family of world-class knowledge services. The Institute is home to approximately 100 researchers, 70 information staff, 65 support staff and about 150 students at any one time. The IDS community encompasses an extensive network of partners, former staff, and students across the development community worldwide.