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# **Achieving a *Uniquely African Green Revolution***

Report and Recommendations from a high-level conference and seminar  
at the Salzburg Global Seminar 2008

Report by 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’s (AGRA) vision, goals and programs are comprehensive and cut across the entire value chain. It 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 of the Alliance for a Green Revolution for Africa

## 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 the 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. A new approach was required to a move away from the single "silver-bullet" concept, seeking a single "solution" that would fit every context, to 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 new strategic alliances and partnerships be created to ensure success? The Advisory Committee prior to the meetings identified 6 core themes on which to focus the deliberations. The delegates were asked to identify a few key strategic recommendations under each theme. 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 farmer and pastoralist organisations through demand-oriented R&D
- Transform agricultural education and training

### *2. Markets, Trade, and Investment*

- Adopt CAADP Pillar II 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 inventory of, and promote sustainable use of, African agricultural biodiversity

#### 4. *Governance and Policy Processes*

- Improve policy relevance and forums for 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 farmer organisations
- 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 analysis. There needs to be 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, commercialisation, etc.) should be developed for each context that go beyond simple “either/or” oppositions, but offer different options for different groups of people in different places.

This raises questions not only about appropriate technologies and infrastructure investment, but also fundamental social, political and institutional ones. The challenges of technology development and delivery in African agriculture, therefore, demand more than major investments in developing new seed varieties or fertilisers. It also requires bold new programmes and new ways of organising 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 on understanding and influencing processes of agricultural innovation, intervention and policy, not just their technical content. In sum, 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.

## I. 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, reflects 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 streamlined investment, capacity-building, technical innovation and policy change, which 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 that need to be addressed at this time. 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 possibility 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 which consists of a series of linked events that seeks to:

- a) 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 which takes account of institutional, political, socioeconomic and technical prerequisites, and
- b) 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 to 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 (2008 – 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 proposed 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 next year.

## **II. Purpose and Themes for the Initiative**

The main function of the first event, the Conference, held on 30 April-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 which 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 included participants from government, business, academia, donor and nongovernmental organisations. These delegates undertook to examine the emerging agricultural development framework in Africa in which this Green Revolution agenda could be set, identify opportunities for adding value to partnerships, and 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 took place on 3-7 May 2008 and involved nearly half the participants from the Conference as well as a further 23 new contributors from abroad array of mainly African public, private and civil society organisations. 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 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 Initiative events in Salzburg, the strategic action recommendations will be shared with a broad cross-section of stakeholder institutions within and outside of 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 more national and local actors.

### **Guiding Questions and Priority Themes**

There were two overarching questions that 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; and

2. How can these efforts be aligned strategically with other investments and development activities (be they from private donors, public aid, or private business) and new strategic alliances and partnerships be created to ensure success?

The Conference “Towards a ‘Green Revolution’ in Africa?” featured a series of presentations and background papers around 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 which shaped the basis of group discussions at the Conference and informed the ongoing work of the initiative.

The following are abstracts of the six background papers.<sup>1</sup>

- ***Institutions and Innovations*** (by Njabulo Nduli, Agriculture Counsellor, South African Embassy in Rome )

Over the last fifty years, Africa’s traditional farmer and agriculture-based institutions have evolved from being recipients of services to become decision-making institutions. In this briefing paper, Ms. Njabulo Nduli 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.

- ***Markets, Trade and Investment*** (by John Thompson, Research Fellow at the Institute of Development Studies)

Well-functioning agricultural markets have the potential to reduce the cost of food and 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. John 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.

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<sup>1</sup> To view full copies of the presentations related to these papers, including Dr. Baba Dioum’s presentation on *CAADP Pillar II: Presentation on the FIMA*, please see <http://www.donorplatform.org/content/view/100/146/1/1/>

- ***Environmental Sustainability and Biodiversity*** (by K. Atta-Krah, B. Forson, M.R. Bellon, T. Hodgkin, and J. Cherfas, *Biodiversity International*)

There is serious risk of grave food insecurity for Africa as a result of climate change and growing competition with biofuels. In this paper, Dr. Kwesi Atta-Krah and his colleagues describe two broad pathways for “green ethic” interventions of 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 of intensification rather than high levels of intensification.

- ***Governance and Policy Processes*** (by Lindiwe Majele Sibanda, *Chief Executive Officer of Food, Agriculture and Natural Resources Policy Analysis Network (FANRPAN)*)

Sustained growth in agriculture can only happen when all who have a ‘stake’ in the outcomes participate meaningfully in defining the rules of the game, according to Dr Lindiwe 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 participation by a variety of actors including smallholder farmers and women, good governance, capacity building, regional integration, policies for technology, infrastructure, markets and trade, and revisiting the architecture of policy development.

- ***Equity, Rights and Empowerment*** (by Pascal Sanginga, *Senior Programme Specialist for the International Development Research Centre in Nairobi*)

The African Green Revolution has the potential to benefit many Africans, but concerns remain that benefits will not reach poor farmers, especially poor rural women. Dr. Pascal 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 not present when policies are formulated, when programmes are developed, when budgets are drawn, or 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.

- ***Responding to New Threats and Opportunities*** (by Kimseyinga Savadogo, *Visiting Professor at the University of Minnesota coming 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, Dr. Kimseyinga Savadogo notes in this paper 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 concluded that there is a need to design mechanisms to mitigate the joint impacts of these threats and maximize the impacts of any possible opportunities.

### III. 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 the Alliance for a Green Revolution for Africa (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 African governments and its international partners”. As food prices escalate at an unprecedented rate and food riots erupt in many African countries, Mr. Annan cautioned the delegates that the economic, social and political costs would 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, fertilizer 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 agriculture and trade policies;
- address the specific needs of the small-holder farmers, with priority attention to women;
- tackle the continent’s increasing exposure to climate risks.

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

The Alliance for a Green Revolution in Africa (AGRA) is a dynamic African-led partnership working across the African continent to help millions of small-scale farmers and their families lift themselves out of hunger and poverty. AGRA programs develop practical solutions to significantly boost farm productivity and incomes for the poor while safeguarding the environment. It is 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 be inclusive and create processes of accountability. AGRA is chaired by Kofi A. Annan, the former Secretary-General of the United Nations. AGRA, with initial support from the Rockefeller Foundation and the Bill & Melinda Gates Foundation. It maintains offices in Nairobi, Kenya and Accra, Ghana. For more information see website - <http://www.agra-alliance.org/>

Setting out the vision for progress of AGRA (Box 1), Mr. Annan stressed that the Alliance could not work alone and called for strategic partnerships with African governments, donors, farmer

organisations and the private sector. In closing, he rallied delegates to work together to make the African Green Revolution a reality: “Failure is not an option. Together we will succeed.”

Dr. Abera Deresa, State Minister, Ministry of Agriculture and Rural Development for the Federal Democratic Republic of Ethiopia, responded with a vote of thanks to Mr. Annan for raising several key challenges facing African agriculture ranging from the current food crisis, climate change and agricultural inputs. He remarked on the commitment by African leaders to improving the livelihoods of millions of Africans through such things 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 MDGs. With these efforts in mind, Dr. Deresa is confident that food aid dependency on the continent can be reversed.

Dr. Deresa concluded with a list of challenges to creating an African Green Revolution, these including:

- Designing and implementing broad-based policies;
- Ensuring gender equity;
- Promoting private sector development;
- Improving capacity to manage risk;
- Increasing the commercialisation of smallholder agriculture;
- Promoting culture and values for pro-poor growth;
- Strengthening institutional and human capacity;
- Examining the benefits and risks of bio-fuels;
- Promoting good governance at all levels; and
- 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 the New Partnership for Africa’s Development (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 rapid economic decline of the seventies and eighties have been reversed or stopped by many of these countries. However, he cautioned that African countries need to further accelerate growth and the rate of poverty reduction if they aim to achieve Millennium Development Goal 1 (Halving Poverty and Hunger) by the year 2015.

The challenge, according to Dr. Badiane, is to build on the recent positive changes to accelerate and broaden the recovery processes and not to lose the focus 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, role of the private sector and embrace the importance of the policy environment.

One such mechanism to help achieve this is the Comprehensive Africa Agricultural Development Programme (CAADP), NEPAD's framework for partnership and policy renewal in African agriculture (Box 2). The CAADP agenda offers a viable framework that: provides for African ownership and leadership; offers a common framework for investment; and, has defined budgetary and growth targets.

**Box 2. Comprehensive Africa Agricultural Development Programme (CAADP)**

The Comprehensive Africa Agricultural Development Programme (CAADP) is an effort by the African governments under the African Union / New Partnership for Africa's Development (AU/NEPAD) initiative to accelerate growth and eliminate poverty and hunger in Africa. The main goal of CAADP is to help African countries to reach a higher path of economic growth through agricultural-led development which eliminates hunger, reduces poverty and food insecurity, and enables 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 the Heads of State and Government to: (1) guide country strategies and investment programs; (2) allow regional peer learning and review, and (3) facilitate greater alignment and harmonization of development efforts.

For more information see website - <http://www.nepad.org/2005/files/caadp.php>

Dr. Badiane contended 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 programs; (ii) partnership and alliance building; and (iii) policy dialogue and review to ensure successful implementation.

### **Government-led Efforts to Transform Agriculture in Africa**

The Conference delegates were also provided with some evidence of emerging national-level success stories in the area of agriculture development in the region. Highlights of government-led efforts from Ghana, Malawi and Benin were presented. 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.

#### *Agricultural-led Growth and Development – Ghana*

Emmanuel Owusu-Bennoah<sup>2</sup>, Director-General of the Council for Scientific and Industrial Research, Ghana, presented evidence of how his country has recently shown a marked improvement in its macro-economic indicators. It reached an average GDP growth of 4.6 per cent between the years 2000 and 2006, up from 4.4 per cent between 1995 and 1999. According to Dr. Owusu-Bennoah, this expansion was largely driven by significant growth in the agricultural sector rather than commerce. Agriculture increased its contribution to GDP to nearly

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<sup>2</sup> This presentation was given by Dr. Adewale Adekunle, coordinator of the Sub-Saharan Africa Challenge Program for the Forum for Agricultural Research in Africa (FARA), on behalf of Dr. Owusu-Bennoah.

38 per cent 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 Millennium Development Goal 1 (Halving the rates of poverty and hunger) by the year 2008-2009.

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 to support small-scale farmers in production of staple crops; forward-looking diversification and private sector development policies; investments in rural areas with improved infrastructure such as feeder roads, markets, rural electrification and small-holder micro-credit programmes; increased focus on research, science and technology to improve crop varieties for small-holder 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 characterised by high levels of poverty, small land-holding, continuous maize cultivation, declining soil fertility and heavy dependency on low input maize production. Maize production is not normally sufficient to meet annual consumption needs, which is further hampered by the high variability of maize prices, lowering profitability for deficit households. Malawi suffered a major food crisis in 2004/5 with very poor harvest and subsequent 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 [major evaluation of the AISP](#) which he recently completed with several colleagues, 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 percent more 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 percent in 2004 to 20 percent 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 the vouchers. Private sector involvement and the design of the vouchers are also crucial to the success of the programme. There needs to be clear political commitment and the programme must be driven locally. Finally, there needs to be timely production and market information for all policy makers, private sector participants and farmers.

## *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 African Union, held in Maputo, Mozambique in July 2003. The Declaration acknowledges the importance and urgency to implement the Comprehensive Africa Agriculture Development Programme. In recognition of the decisive role of the agricultural sector to reach the MDGs, the Ministers of Agriculture, entitled by their heads of state, committed themselves to allocating at least 10 percent 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 percent of GDP, 75-90 percent of official export revenues (with cotton as the major export crop), 15 percent to state revenues and 70 percent 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 five percent in 2004 to eight percent 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.

### **The European Commitment to African Agriculture**

On the final day of the Conference, [Mr. 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 the rich and poor countries, which he labelled as “unacceptable”. He reviewed the need for both short and longer term solutions to help solve 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. An increase in agricultural production will be required on the one hand, and on the other hand an improvement of local distribution networks and a better linking of small farmers to their markets. He assured the gathering that the European Union was committed to helping its African Union partners to achieve these goals, noting that in its 10<sup>th</sup> European Development Fund the EU has doubled its commitment to the rural development sector from 650 million to 1.2 billion Euros and is proposing to align future European assistance to agriculture with the CAADP agenda of the AU’s New Partnership for Africa’s Development.

Commissioner Michel pointed out that certain European Commission measures could dampen the effects of the current volatile food prices by setting up: 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(s) concerned. Commissioner Michel concluded with the 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.

## **IV. Multiple Perspectives on the AGR Agenda**

### **Contrasting Visions, Competing Agendas?**

The Conference began with delegates bringing forward their visions for an African Green Revolution. Some delegates came with very strong focus on the need to significantly invest in improving access to agricultural inputs, others focused specifically on rights and equity, while others brought forth a strong emphasis on sustainability.

Following is a list of 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 for a clear focus on increasing food crop production 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 other delegates productivity was not sufficient and they called for a greater emphasis on growth with strong links to improving the markets for small producers. This perspective emphasised the need for investments in agricultural research and development, regional and global trade in commodities to promote economic growth, and infrastructure development for markets, to ensure that agriculture could be the economic engine of growth for the rural sector and for the national economy.

- **Rights and Equity**

Some delegates argued that to ensure the success of an African Green Revolution it must emphasize equity and rights, noting the pressing need to assure 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 in Africa, 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 of delegates the sustainability of the Green Revolution interventions took centre stage and they argued for greater environmental



protection, conservation of agricultural bio-diversity and assurances that the results would benefit the poor.

### **Towards a Common Understanding of a Uniquely AGR**

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 required to 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 benefits 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.

## V. Common Points of Agreement

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

### 1. Food price crisis – short-term focus versus long-term goal...

*“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 of the Alliance for a Green Revolution for Africa

Against a background of spiralling world food prices, Mr. Annan reminded the Conference delegates that the unfolding world food crisis may roll back the progress that has been achieved by African countries in the last decade. There was recognition by all the delegates 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. There was agreement of an urgent need to address the effect of rising prices on the poor in Africa and to mobilize resources to lessen the negative impact.

At the same time concern was voiced that this should not divert attention from the medium and long-term goal for sustainable development and a Green Revolution. Many speakers noted that, while in the short term high food prices were a serious threat to poor people in Africa, even including many farmers, they also represented an incentive and an opportunity to boost investment in increasing agricultural productivity, to which both governments and the private sector must respond. It was recalled that similar conditions in Asia in the 1970s lay behind the increased investment in agriculture which had produced the original Green Revolution there. There was a call to make sure that the medium term goals of ensuring access to reliable and affordable inputs for smallholder farmers were reached over the coming growing seasons.

### 2. 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 Bahiigwa, Director, Plan for the Modernisation 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. It was recognized that there were many actors out there and now the challenge lay in linking up various agendas to make sure we are moving in the right direction and not working at cross purposes. There is a need for coordination and convergence among key processes and initiatives, such as CAADP, AGRA, and other public and private efforts. Such coordination and partnership is critical to the African Green Revolution and requires alliances between the public, private sector and voluntary sectors, the Conference heard.

Some delegates argued for the need to ensure that policy processes enhance the compact and roundtable processes of these initiatives and ensure that policy stability, transparency and coherence are created at national and international levels. It was agreed that strategic partnerships were necessary that involved a range of public and private actors, which espoused good practice by all partners, including transparency, accountability and efficiency. Ultimately the Conference delegates reminded each other that it was important not to forget bottom-up (i.e., locally driven) initiatives, as well as large-scale, top-down, public and private efforts.

### **3. Making markets (and trade) work for the poor**

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

Balu Bumb, Program Leader, Policy, Trade, and Markets Program  
at the International Fertilizer Development Center (IFDC)

The need to enhance facilitation and coordination to make markets work more effectively for poverty reduction was a key point that was raised by delegates. It was recognised that the basic enabling environment, such as rural infrastructure (roads, electrification), research and irrigation, was a necessary precondition to ensure effective markets and ensure sustainable growth. It was acknowledged that improving the enabling environment required government-led interventions.

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

#### **4. 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. Dealing with issues of sustainability and agro-ecology, brought in the question of how to build resilience in diverse, complex, risk-prone environments. Discussion centred not only on ecological components and ecological services, but fundamentally on issues of nutrition, agronomic management, and wealth and well-being. Benefits-sharing was seen as crucial to make sure biodiversity was preserved. “Conservation through use” was emphasised as a technique to add value to the environment so that people are able to use the resources, see benefits and make the necessary investments. The delegates called for a multiplicity of approaches to establish links to diversity and complexity, across a range of different environments and systems throughout the continent.

The delegates agreed that a push for major investments and key inputs is needed *now* – such as improved seeds, organic and inorganic fertilisers, and soil and water management – to address nutrient deficiencies and boost productivity. Yet delegates warned of the dangers of getting caught in a programming trap, and advocated for a ‘resilience audit’ to be used to avoid ‘locking in’ to 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 enhance ability to cope with shocks and stresses.

#### **5. 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 of the Institute for Research and the  
Promotion of Alternatives in Development (IRPAD), Mali

Conference delegates from across the board agreed that farmers and their needs must be placed at the epicentre of a uniquely African Green Revolution. Much of the discussion, running across the thematic groups, focused on building alliances of farmers and their organisations at national, regional and continental levels. This was seen as absolutely key for insuring that priorities are set and funds are spent in a way that meets the needs of farmers. The direction of initiatives must all move toward that goal. However there is an urgent requirement for substantial investment in building capacity. Delegates believe the skills that need developing go beyond the technical to ‘soft’ skills. An equitable Green Revolution requires an increased ability to facilitate inclusive approaches in which farmers, especially the small-holder and the poor, can access skills training

in organisational, business management, policy, advocacy and impact monitoring, delegates said. These skill sets were seen by many delegates to be lacking at the moment and should be a focus for follow up efforts.

Linking policy and implementation to demand-led processes, which prioritizes the interests of farmers and poor consumers, was strongly emphasised by Conference and Seminar delegates. One method proposed to accomplish this is to strengthen the capacity of farmer organisations and other civil society actors to understand and engage effectively in key national and regional policy processes and research agendas. However, there was one caveat posted regarding the ‘economics of attention’ which emphasised the need to avoid over-loading all these responsibilities on farmers’ organisations.

## **6. Data collection and use**

*“We don’t have reliable data, [and have] weak analytical skills. We need to invest in data collection-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 lack of data and information on crop productivity and prices, and the poor quality of the data that does exist was a recurrent theme throughout the Conference and Seminar. Improving collection and availability and use of quality data to monitor progress, assess impact and outcomes and reflect on future options was stressed as key to the future. Producing reliable and timely data will be invaluable in appropriately informing policy and investments in strategic areas. The challenges to improving the quality and reach of data and information through the support of universities, research centres and statistical services were emphasised.

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 the tracking of progress, the assessment of impacts, as well as the modelling of future options as the Green Revolution in Africa unfolds. The importance of efficient and more cost-effective systems for data-gathering and market intelligence were discussed, including the use of text, cell phone and internet systems in rural areas. Foresight and horizon scanning to identify future threats and opportunities were flagged as important components to recognise and factor in to the decision-making processes.

## **7. Building capacity**

*“There has been 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 of the Agricultural Sector Coordinating Unit,  
Ministry of Agriculture, Government of Kenya

The common thread running through the Conference and Seminar was the need to build capacity at all levels, from the individual farmer on the farm to national level government workers. The key component of this debate centred around strengthening *‘the politics of demand’* among farmers and their organisations and other civil society groups by giving them ‘voice’ to 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, there remained the difficulty to ensure that the interests of deficit producers (consumer farmers) were well represented and not just the usual focus on larger producers.

At the same time, delegates recognized the need to focus on building the negotiating skills of government representatives on trade and standards issues as vital for enhancing ability to engage successfully in the Doha trade round. Strengthening government agencies’ capacity to respond to demands from producers and consumers – research, extension, services, etc. – was seen as an important component of the African Green Revolution. It was acknowledged that resource constraints were genuine, but discussions centred on how targeted investment could make a real and sustainable difference.

## **8. 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 crucial to the new agenda for African agriculture, taking equity, rights and power seriously. One issue that delegates agreed on was that women are key to 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, farmer’s organisations, NGOs, must all consider women’s contribution to agriculture and ensure access to income and control over land. But a consensus that women are the bedrock of Africa’s agriculture future is not enough. How to achieve equity of distribution was discussed during the different sessions and recommendations put forward for consideration.

It should also be ensured that smallholder farmers and consumers have a voice in farmer organisations. At present, the interests of smallholders, women and other marginalised groups, including pastoralists and livestock groups, are not well represented by farmer groups or service providers. It was emphasised many times during the Conference that livestock (both small and large) are fundamental to livelihoods for many African people, especially the pastoralists, and should not be forgotten within the Green Revolution. Additionally, delegates stressed that listening to farmers in the political process is crucial to 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 to define goals in relation to empowerment, voice and inclusion, taking into account a rights-based approach.

## **VI. Recommendations to Advance an African Green Revolution**

The delegates spent the majority of their time during the Conference and Seminar in working groups to address the 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. Following is a brief overview of the discussions had by the six working groups and the recommendations brought forward. The recommendations are 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 three overarching issues: (i) policy; (ii) institutional arrangements; and (iii) capacity. The first discussion topic on policy centred on an examination of CAADP and its four Pillars as a framework and how there could be alignment with this framework and other initiatives around the African Green Revolution concept. The group agreed that countries must articulate their national policies, align them with the CAADP framework, and identify those institutions through which these policies will be funded and implemented. At the same time it was emphasized that the relevant actors involved must come with a focus on grassroots and a people-centred process in the policy formulations, within programme development and within the alignment to CAADP.

The second discussion topic on institutional arrangement focused on issues of harmonization and coordination and recommended creating formal partnerships at multiple levels ranging from continental to national and local – particularly looking at alliances between farmers. The last discussion topic on capacity focused on establishing platforms and incentives for innovative learning, information sharing, research mobilization within a multi-stakeholder dialogue and alignment. It was agreed that there was a need to find a way to ensure that new innovative technologies, products and systems are designed for the benefits of the smallholder farmers and that the proper technology actually reach those that need them. It was also emphasised that more needs to be done to spark innovation and encourage experimentation both at the farm level and higher institutions. There are multiple actors that could carry out these activities ranging from university and training institutions, research institutions, agricultural extension services, and farmer organisations.



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

### *1. Build Capacity of Farmer and Pastoralist Organisations through demand-oriented R&D*

Participants proposed the establishment of an African-wide, farmer-owned and farmer-driven fund for directing research, innovation and technology development towards farmers' needs. This would be an endowment fund supported by government, private sector, philanthropists and farmers to 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, innovations and access to inputs; promote farmer to farmer exchanges; and build farmer organisations capacity to articulate demand for research/extension and to influence policy. It was proposed that the next steps in establishing this fund would be to commission lessons learnt studies on similar farmer-directed research funds to help shape the concept and then to pilot this in a small number of countries. Delegates from Mozambique, Kenya and Ghana all stated their interest in piloting this approach in their own countries.

### *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 small-holder farmers. The purpose behind this initiative is to engage and transform universities and training institutions to be active players in the new Green Revolution through curriculum reform which focussed on current needs and new skills such as community-based training, more appropriate rural placements, greater incentives and scholarships to live in rural areas, increased engagement in the communities, better capturing the knowledge and experience of farmers, and bringing the training closer to the community. 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 enable them to better work with, and learn from, the farmers as part of their training and business experience.

## **Markets, Trade, and Investment**

The working group on Markets, Trade and Investment 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 for markets to operate efficiently. There was disagreement on the role of state versus the private sector, yet it was agreed that some areas require governments to be proactive and other circumstances where 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 that are required to help poor farmers manage risk, but emphasized the importance to differentiate between different areas and markets. It also emphasised the need to focus on staple food crops since it would have the largest impact for the poor. Critical constraints to 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 issues: (a) lack of participation by civil society, farmers' organizations and women in policy formulation processes; and (b) capacity development of farmer 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 through matching supply/demand and financing both ends of the value chain. The working group agreed on two strategic issues (i) build competitive access to markets through improved coordination in value-chain integrating smallholders, and improved management and sharing of risks; and (ii) public investment in infrastructure and establishment of 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 focused on:

### *1. Adoption of CAADP Pillar II*

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

### *2. Management and Sharing of Risk*

Participants suggested expanding tested mechanisms (such as loan guarantees) to increase investments in agro-enterprises and cooperatives. They emphasised the development 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 creating index-based and other insurance for significant variables such as weather.

### *3. Regional and National Policies (with special attention to staple crops, pastoralists in value-chain development)*

It was 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 be monitored to ensure their full involvement in the process.

## **Environmental Sustainability and Biodiversity**

The group on Environmental Sustainability and Biodiversity created an overarching vision which states that a Green Revolution for Africa should be one that “will create a mosaic of approaches and solutions, including conservation farming, minimum tillage, 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: (i) agricultural biodiversity and nutrition; (ii) soil and water management; and (iii) resilience and sustainability. The first issue on biodiversity and nutrition revolved around the recognition of global climate change and the increased risk of drought that will affect natural biodiversity and agriculture. It was recognised that a large degree of crop diversity was necessary to allow for adaptation. This also led to recognition of the link between crop diversity and health/nutrition.

The second issue on 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 the soil and water. The third issue on resilience recommended that existing institutions and initiatives have an ecological oversight mechanism and carry out a sustainability and resilience audit, which deals with monitoring, learning and adaptation. Overall the group agreed that there needs to be a holistic approach which places an emphasis on integrated natural resource management (INRM) for smallholder farmers and pastoralists.

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

### *1. Reversing Soil Depletion while Raising Agricultural Productivity*

It was recommended that poor farmers’ access to organic and inorganic fertilizer should be increased. Actions to link organic farming to markets to serve as motivation for active participation by farmers should be undertaken. Key to these actions is capacity building and training of farmers in the appropriate use of inorganic and organic fertilizers, with a focus on INRM. It was recommended that data collection on soil (erosion, nutrition loss and structure), crop nutrients, water sources/management, and reliable annual estimates of crop and animal products 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, making available affordable irrigation mechanisms; and helping to establish community-based by-laws 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 support

of CAADP Pillar I to elaborate its planned irrigation program, develop appropriate large and small scale irrigation schemes, and introduce incentives for proper scheme maintenance.

### *3. Sustainable Use of African Agricultural Biodiversity*

The group called for an inventory of agricultural biodiversity (crops, animals, fish) to identify species that are not yet collected and also to document and promote indigenous knowledge on agricultural biodiversity. This inventory would be used to develop policies that will deal with and protect intellectual property rights and access to these resources by poor farming communities. It also recommends establishing conservation strategies for maintaining diversity at in situ and farm levels and maintenance of livestock stud books. The goal is to increase productivity of non-marginal land to reduce the pressures on nearby marginal lands. It also calls for actions to link farmers to gene banks for increasing seed multiplication and delivery of seed to poor farmers. And finally, it calls for the development of a micro-nutrient policy which uses varieties of existing bio-diversity to reduce child malnutrition.

## **Governance and Policy Processes**

The working group on Governance and Policy Processes began their discussion by looking at five key goals: (i) strengthen capacity building of state and non-state actors; (ii) ensure women-focused policy capacity building; (iii) ensure transparency in financial and policy processes; (iv) increase capacity to collect, analyse, interpret and use data; and (v) improve policy alignment and coordination. Throughout their discussions it was emphasised that farmers must be in the drivers' seat over the full policy cycle and they should be the ones to define their own needs and issues. This would also involve improved data collection, analysis and use in working with the farmers so they could interact at different levels of the policy process. Women were also central to the group discussions and it was agreed that there was a need to ensure that women and their specific needs were represented in all four areas of capacity building, data analysis, policy alignment and transparency.

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

### *1. Policy Relevance and Responsiveness of State and Non-state Actors*

The group called for initiatives to strengthen forums for state and non-state actors to become involved in the policy process through greater capacity building and better analysis and documentation of good practices. It also recommends actions to strengthen the capacity of actors to interact in the process and to assist farmers in building associations and cooperatives. It emphasises 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 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 recommends 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 recommendation calls for the generation of credible data and strengthening the capacity for analysis through training of researchers, media, farmer organisations and NGOs.

### **Equity, Rights and Empowerment**

Discussions of Equity, Rights and Empowerment working group began with a critical examination of the inequities in the Asian Green Revolution and suggested that the results were imbalanced in terms of gender and income distribution. The group went on to consider access to land and credit and effects on women. The group also discussed issues of access to resources and to farmers’ organisations, and posed the question of who is left out? The group came up with a mission statement which looked to “Empower women, marginalized groups, and pastoralists to actively and effectively engage in producer organisations”.

The group discussion centred on four key issues. The first centred on ensuring that measurable targets are set for gender and equity, and suggested having affirmative action programmes for women and marginalised groups. The second revolved around capacity building of grassroots organisations for basic skills (e.g., organisations and business skills) and leadership (to influence policy and negotiations). The third suggested strengthening horizontal and vertical linkages and partnerships/networks with other organisations to avoid asymmetric relationships, creating greater information flow and accountability mechanisms, and putting funds in the hands of small scale farmers and marginalized groups. And finally, the group discussed increasing 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 for:

#### *1. Accessing Financial Resources*

There is a need for collaborative partnerships between producer organisations, governments, NGOs, banks microfinance, and international organisations 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 what 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 recommends commissioning comparative analysis studies of various organisations to determine their needs for capacity building and determine who these organisations are serving and whether they are addressing issues of equity. It also calls for a greater focus on, and promotion of, technology and innovation through capacity building of farmers and farmer organisations.

## *3. Taking Message to Africa*

The group called for two-tier meetings for producer organisations within Africa by creating a district forum and a national forum. The stakeholders that should participate include producers (farmers), NGOs, governments, local micro-finance institutions, extension services providers, and regional research centres.

## **New Threats and Opportunities**

The working group on New Threats and Opportunities began their discussions by setting out three key principles. The first principle stated the need to ensure the use of existing technology while also developing new ones as needed. Science and technology will be crucial to an African Green Revolution, but we must work in a network-mode to take into account what is currently available, distribute it quickly and link with as many partners as possible. This principle also emphasised the need for people and researchers to be allowed to move freely across borders and that technology has to be relevant to local situations. The second principle centred on the importance of alignment. This principle acknowledged that there is limited capacity for implementation and that effectiveness will be increased through greater alignment. However, it must make sure not to displace local capacity, nor put it in a “project mode”, which will affect the sustainability of the progress. The last principle focused on issues of technology, noting that capacity is a long term issue, and that all the actors (both 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 we need to find better ways of delivering technology services. The group discussed four potential threats and opportunities: (i) HIV/AIDS and the emerging food crisis; (ii) climate change and conflict as it relates to land; (iii) climate change and its affects on water; and (iv) bio-fuels.

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

### *1. Adaptation of Production and Marketing Systems to Climate Change (Long-term)*

The group dealt with issues of livelihood pathways, intensification and commercialisation. It 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/fodder crops. The group also emphasised in this section that similar efforts must be made for the livestock sector, including breeding and veterinary services to deal with adaptation to climate change, with special emphasis on pastoralist systems. The

recommendations focused on two sets of actions: (i) scale up pro-poor “Seed Alliances”, with more countries and more products becoming part of these alliances and strengthening the demand-side pull 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. It suggested the need to strengthen and draw on lessons learned from existing regional, national and local initiatives in providing producers with better weather information to enable them to respond to increasing ecological uncertainty and complexity. This recommendation also included a proposal to expand weather and crop insurance for small-holder farmers.

### *3. Social Protection (Short Term)*

This recommendation proposed actions to reduce vulnerability through a range of social protection measures. These measures include credit guarantees and matching grants (for example, through vouchers and targeting seed adoption), conditional cash transfers, post harvest storage systems, school feeding, food/cash/seed for work programmes, and community radio. The recommendation emphasised the link between the above list of measures to access to ‘climate resilient’ technologies and adaptive farming practices and training.

## VII. New Directions and Opportunities

Summarising 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:

- a) avoid generalised diagnosis and prescription – recognise complex dynamics and diversity;
- b) understand dynamic interactions between economic, social and political processes;
- c) locate change processes in particular agro-ecological and social contexts;
- d) focus on politics and avoid simple technical “fixes”;
- e) recognise multiple pathways to more sustainable agricultural-based livelihoods and negotiate trade-offs between them; and finally,
- f) 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, commercialisation, etc.) should be developed for each context that go beyond simple “either/or” oppositions, but offer different options for different groups of people in different places. Methodological development for such work – including the building of 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. We must ask tough questions 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 the learning from the assessment demonstrated?

This raises questions not only about appropriate technologies and infrastructure investment, but also about 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 fertilisers. It also requires bold new programmes and new ways of organising 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 a more energetic and organised “politics of demand”. Among other things, this will require investing in farmers’ organisations 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 magic bullet for the problems of African agriculture: 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 make the case for carefully looking at context and particular settings before jumping to conclusions about what to do. We must therefore go beyond recycling redundant ideas and learn from past failures and “near misses”. This is not to say that well-worn ideas have no utility. The collection of ideas suggested by participants of the Salzburg meetings included some very old, tried-and-tested ideas (e.g. improved infrastructure - irrigation systems, post-harvest storage, etc., input subsidies, training and capacity strengthening at all levels, integrated management practices, and so on), but, importantly, these were qualified in new ways.

It was acknowledged that central to all these possible solutions are critical political, economic and social factors. Thus, rather than advocating an expert-driven, 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 on understanding and influencing 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 was 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 organisations, private sector corporations, and, of course, farmers and their own organisations. ***This will require genuine collaboration and partnerships at all levels – not just lip-service about “platforms”, “alignment” and “coordination” – 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 organizing institutions 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 core recommendations set forth in Salzburg. Updates and outcomes from the next phase of the Initiative will be provided through the organizers’ web sites (indicated on the last page of this report).

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.

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- 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;
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#### **DISCLAIMER:**

This report reflects many of the points raised and issues discussed during two international multi-stakeholder meetings, but is not an exhaustive exploration of the themes nor does it purport to reflect a consensus amongst the participants on the issues and recommendations presented. The report seeks to reflect and summarize the multi-layered, nuanced and complex discussions that took place. The report does not claim to reflect the views of the donors, the author, nor does it necessarily reflect the views of the organizing institutions themselves.

## Organisers

The **Salzburg Global Seminar** ([www.SalzburgGlobal.org](http://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](http://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 commercialisations; 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** ([www.ids.ac.uk](http://www.ids.ac.uk)) is a leading global organisation 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.