



The Role of Agriculture

A review of the leading reports

in Achieving MDG1



WAGENINGENUR
For quality of life

A desk study at the request of the Netherlands' Ministry of Agriculture, Nature and Food Quality (LNV) and the Directorate-General for International Co-operation (DGIS) of the Netherlands' Ministry of Foreign Affairs

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MDG1

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leading reports

The Role of Agriculture in Achieving MDG1

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Scope of the review

Hunger and poverty are issues of concern to all and they are subject to many national and international studies. These studies have led to many different reports with visions, strategies and recommendations to eradicate hunger and poverty. At the turn of the century, hunger and poverty raised specific attention when the United Nations formulated the Millennium Development Goals (MDG's). For each MDG, a Task Force was installed to help achieving the targets. The first Goal (MDG1) deals with hunger and poverty and comprises the task to halve the hunger globally, by 2015. Recently the combined Task Forces, led by Professor Jeffrey Sachs, published their findings in the report 'Investing in Development, a practical plan to achieve the MDG's'. The contribution of the MDG1 Task Force was published under the title 'Halving Hunger: It can be done'. This report was well received and it is the primary reason for the current review.

Although the Millennium Development Goals are global, hunger and poverty are often related specifically to Sub-Saharan Africa where relative (although not absolute) hunger and poverty far exceed those in the rest of the world. Therefore the current study focuses mainly -but not exclusively- on Sub-Saharan Africa.

In the 'Halving Hunger' report, agriculture receives a prominent place. It is reasoned that agriculture can contribute to MDG1 in two ways: (1) By stimulating food production and (2) By kick-starting economic development. Where attention for agriculture in a development context faded over the last decades, MDG1 puts agriculture firmly back on the agenda. As a consequence, agriculture plays an important role in many studies on hunger

and poverty that have been published after the launch of the MDG's. Governmental organizations like DFID and USAID now place agriculture at the heart of any strategy fighting hunger and poverty.

The many reports calling for a pivotal role of agriculture raised the question at both the Netherlands' Ministry of Agriculture, Nature and Food Quality (LNV) and the Netherlands' Directorate-General for International Co-operation (DGIS) whether the Netherlands' development policy needs to be adjusted and what role both ministries may play in view of the changing perceptions. In order to answer this question, both ministries felt the need to have better insight in the debate as fuelled by the various reports. How do the recommendations of the different reports relate, and what is the expert judgement about these recommendations? To answer these questions, a Review Team of Wageningen University and Research Centre was requested to analyse the most-relevant reports, summarize their recommendations, organize expert-meetings within and outside Wageningen and define emerging issues in various domains that need to be addressed. The current report is the result of that Desk Study.

The Review Team consisted of Dr. Huub Löffler (Team Leader), Ir. Wim Andriesse, Prof. Dr. Ken Giller, Dr. Janice Jiggins, Dr. Peter Oosterveer & Dr. Jim Woodhill. Ir. Gerdien Meijerink and Ir. Rogier Verschoor made special contributions. For more information, please contact wim.andriesse@wur.nl.

The reports reviewed

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2. NEPAD (2002). Comprehensive Africa Agriculture Development Programme (CAADP). FAO and NEPAD, Rome, Italy and Johannesburg, South Africa. <http://www.fao.org/docrep/005/y6831e/y6831e00.htm>
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12. World Bank (2007). World Development Report 2008: Agriculture for Development. (To be published in October 2007). The World Bank, Washington, USA. See references at <http://www.worldbank.org>.

Readers' assistance

This Review Report comprises 6 chapters: Chapter 1 provides the Executive Summary of this Desk Study and it summarizes the main conclusions of both, the reports reviewed and the views of the Review Team. Chapter 2 provides the summaries of the reports reviewed. Each summary contains a section 'Scope', describing the background of that particular report, a section 'Analysis', giving the Review Team's analysis of the report and a section 'Recommendations', which summarizes the main conclusions of the report. In this way, the reader may obtain a quick impression of the main messages of each of the reports. It goes without saying that these very short summaries do not suffice for a full understanding of the reports concerned. Chapter 3 contains the minutes and conclusions of three Expert Meetings that were organised in the course of the Review in order to solicit initial reactions from among Netherlands' stakeholders in the general area of agriculture for development. Chapter 4 starts with a description of the Review Team's analysis framework of four domains. For each of these domains a 'Synthesis' section summarizes the major issues as distilled from the reports consulted. Next, in a section 'Emerging issues and questions' the Review Team identifies issues that need to be addresses most urgently on the basis of the reports, the expert meetings held and the Team's own reflection. As opposed to the preceding chapters, this is partly a subjective interpretation of the reports. Chapter 5 provides descriptions of a number of lessons learned. Lastly, in Chapter 6 the Review Team provides its views on possible interventions and, in Section 6.7, on a number of priority options for Dutch policy.

Acronyms used

<i>AU</i> African Union, Ethiopia	<i>MDG</i> Millennium Development Goal
<i>CAADP</i> Comprehensive Africa Agriculture Development Programme of NEPAD, South Africa	<i>MFA</i> Ministry of Foreign Affairs, France
<i>CBSS</i> Community-Based Seed Systems	<i>MVP</i> Millennium Villages Project of the UN Development Group, USA
<i>CGIAR</i> Consultative Group on International Agricultural Research, USA	<i>NARS</i> National Agricultural Research Systems
<i>CSO</i> Civil Society Organization	<i>NEPAD</i> New Partnership for Africa's Development, South Africa
<i>DAC</i> Development Assistance Committee of the OECD, France	<i>NERICA</i> New Rice for Africa
<i>DFID</i> Department for International Development, UK	<i>NGO</i> Non-Governmental Organization
<i>DGIS</i> Directorate-General for International Co-operation, the Netherlands	<i>ODI</i> Overseas Development Institute, UK
<i>EPA</i> Economic Partnership Agreement	<i>OECD</i> Organization for Economic Co-operation and Development, France
<i>FAO</i> Food and Agriculture Organization of the United Nations, Italy	<i>POVNET</i> Poverty Network of the OECD, France
<i>FARA</i> Forum for Agricultural Research in Africa, Ghana	<i>PPP</i> Public-Private Partnership
<i>FO</i> Farmers' Organization	<i>R&D</i> Research and Development
<i>G7/G8</i> Group of (initially seven, currently eight) industrial nations of the world	<i>ROPPA</i> Réseau des Organisations Paysannes et des Producteurs Agricoles de l'Afrique de l'Ouest, Burkina Faso
<i>GDP</i> Gross Domestic Product	<i>SAAP</i> Support for African Agriculture Project of the OECD, France
<i>IAC</i> InterAcademy Council, the Netherlands	<i>SSA</i> Sub-Saharan Africa
<i>ICT</i> Information and Communication Technology	<i>UN</i> United Nations
<i>IDE</i> International Development Entreprises, UK	<i>USAID</i> United States Agency for International Development, USA
<i>IEHA</i> Initiative to End Hunger in Africa of the USAID, USA	<i>Wageningen UR</i> Wageningen University and Research Centre, the Netherlands
<i>IFPRI</i> International Food Policy Research Institute, USA	<i>WARDA</i> West Africa Rice Development Association/Africa Rice Centre, Benin
<i>ILO</i> International Labour Organization of the United Nations, Switzerland	<i>WB</i> World Bank, USA
<i>IMF</i> International Monetary Fund, USA	<i>WDR</i> World Development Report of the World Bank, USA
<i>IPC</i> International NGO/CSO Planning Committee for Food Sovereignty, Italy	<i>WFS</i> World Food Summit, Italy
<i>LNV</i> Ministry of Agriculture, Nature and Food Quality, the Netherlands	<i>WSSD</i> World Summit on Sustainable Development, Johannesburg, South Africa
<i>MAPP</i> Multi-country Agricultural Productivity Programme for Africa	<i>WTO</i> World Trade Organization, USA
<i>MAT</i> Marketing Appropriate Technology Programme of IDE, UK	<i>YCWDR</i> Yellow Cover Draft of the World Development Report 2008
<i>MCH</i> Maternal and Child Health	

1

Executive summary



1.1 Preamble

The international development community is currently giving renewed attention to agriculture and its role in development. Over the last several years a number of multilateral and bilateral development agencies have produced reports on the role of agriculture in pro-poor growth and reducing hunger. In addition, the World Development Report 2008 of the World Bank will focus specifically on agriculture for development. There is now recognition that the decline in donor investments in agriculture over the last two decades has had significant negative consequences for the sector's capacity to contribute to development as well as to realization of the Millennium Development Goals, MDG1 in particular. Against this background, the Netherlands' Ministry of Agriculture, Nature and Food Quality (LNV) and the Directorate-General for International Co-operation (DGIS) of the Netherlands' Ministry of Foreign Affairs requested Wageningen University and Research Centre (Wageningen UR) to review and synthesize the conclusions of these reports. The outcome of this review is to be used as input into these ministries' further discussions on development policy. As part of the review process, which consisted basically of an elaborate desk study, three Expert Meetings were held. These meetings brought together researchers from different disciplines, policy makers and representatives of farmers' organizations, development NGO's and the private sector. The participants were invited to comment on draft versions of the review report. These engagements were generally much-appreciated and their value well-recognized. It is clear that there are diverse perspectives and levels of understanding, each reinforcing the need for, and the value of, such dialogue.

Despite the different perspectives from which the various reports were written, the Review Team found a high degree of consistency in the various analyses made and in the recommendations. Overall, the main emphasis is on creating enabling conditions for market-driven development.

All reports agree that there is no silver bullet for reaching a more-profitable agriculture. Interventions are needed in different domains, at different governance levels and at different time and geographic scales. Most reports, however, argue that concerted actions are needed to make interventions effective. The interventions recommended in the various reports are manifold. For the sake of analysis, the Review Team grouped the recommendations into four main domains: (1) Increased agricultural productivity, (2) Access to resources and services, (3) Markets and (4) Institutions. As visualized in the figure below, the latter domain is cross-cutting, because 'institutions' apply to, and do affect, all the other domains.



1.2 The Reports' Views

In summary, the reports reviewed argue for:

Increased agricultural productivity

- **Productivity must be enhanced** Most reports agree that agricultural productivity in Africa must increase. All studied reports without exception acknowledge the role which

technology can and should play in alleviating hunger.

- **Who will pay?** Many reports call for higher investments in agriculture and in agricultural research. Whereas the international donor community should continue to play its important role, African countries need to intensify their own efforts. Private investments should be stimulated.
- **Priority investments in soil, water and planting material** Many reports call for the restoration of soil fertility. A next generally-recognized priority is water. Last but not least, access to high-quality planting material is needed.
- **Agricultural production must be sustainable** Sustainable use of natural resources and other productive resources must be ensured. This principle is widely acknowledged by most reports.

Access to resources and services

- **No agricultural growth without improved access to resources and services** In the reports many different resources and services are identified, ranging from supply-side interventions to safety nets. Most reports are explicit in stating what needs to be done, but they are less clear in how that can be achieved.
- **Farmers need access to local, regional and international markets** The reports note that international markets in particular are difficult for the poor to access. They also note that developing countries often find it difficult to access international and global trade forums and regulatory negotiations, and to participate effectively in them.
- **Empower the farmers** Most reports emphasize capacity development as essential to developing the demand for services and the realization of access rights. Capacity development asks for institutional reforms as well.
- **Improve access to research and extension** Most reports stress the importance of agricultural research. A focus is required on the current and future generations of scientists in Africa, and on measures to convert the brain-drain into a brain-gain.
- **Ensure rights to natural resources** Privatization of natural

resources is seen as weakening poor people's access rights and livelihoods. Privatization may increase inequity between social classes, generations, men and women and countries.

- **Install safety nets** Most reports stress the importance of strengthening services that provide safety nets for vulnerable groups that will be negatively affected by market-based development and liberalization of agricultural trade.

Markets

- **Markets are essential** In all the reports, markets are considered a major factor in ending hunger and creating economic growth, because markets can and should 'work for the poor'.
- **A chain approach is needed** Most reports do not look at agricultural markets in isolation when discussing their potential contribution to fighting hunger. They broaden their analysis and promote a chain approach.
- **Making markets work for the poor** One approach to make markets work (better) for the poor, suggested in a number of reports, is to improve the linkages between small-holder farmers and existing markets through improved infrastructures and financial services, sound legal and regulatory frameworks, improved market information mechanisms and strengthened small-holder farmer organizations and co-operatives.
- **Access to global markets** The more agriculture is included in global trade systems, the more (rural) people are affected in their livelihoods and food security. Improved access to international markets is thus considered a key ingredient in translating increases in African agricultural productivity into economic growth.

Institutions

- **Institutions are critical in reshaping agricultural development** Across all reports institutions emerge as the critical factor in reshaping agricultural development to meet the MDG's. This concern with institutions reflects a shift in thinking away

from the historical focus on increasing agricultural production to a much broader agenda for agricultural and food system development.

- *Conditions for greater market participation by the poor*
The reports generally recognize that the poor are often excluded from entrepreneurial activity and from accessing new market opportunities (including labour): Their rights are not protected, they lack the specific skills required and they have inadequate access to basic resources and services.
- *More-supportive regional and international trading environments*
Recommendations in this area focus on two main issues: Pro-poor trade-liberalization and development of quality, safety and environmental standards.
- *Improving private sector participation and investment*
All reports argue that entrepreneurial and private sector investment and activities must underpin agricultural development.
- *Internalizing environmental and social costs in the market*
While less well-developed than other themes, all reports recognize market externalities, inefficiencies and failures that have negative impacts on the poor.
- *Redefining the role of the state and developing public-private and civil society partnerships*
Generally the reports adopt the stance that governments should focus on setting the conditions for markets: They should not be market players.
- *Increasing investment in agricultural research and development*
Without exception the reports call for greater investment in demand-driven and participatory-orientated research and development.

1.3 The Review Team's Views

The Review Team endorses the broad conclusion of the reports that market-driven development is key to achieving the Millennium Development Goals. The necessity of adopting a new agenda is

supported as well. The Review Team however, finds it striking that, where the reports make many suggestions about what should be done, they give relatively little attention to how their recommendations can be realized. The agenda being proposed by the reports requires extensive institutional reform, which is essentially a political process. A purely technocratic approach will not deliver the pro-poor market structures and chain relations for which the reports argue - political commitment and action will be required. It is easy, for example, to recommend that the poor should have more secure land tenure. Realising such an objective, however, is a complex and difficult process in which conflict and power struggles are inevitable. Similarly, it is easy to recognize that for the rural poor to participate in new market opportunities, they need access to basic services and infrastructure. Providing such services though, in a context of prevailing poor governance, weak institutions and stagnant economies, remains as big a challenge for development as ever.

The Review Team considers that much more attention must be given to processes of institutional change. Of particular importance is the development of greater analytical, advocacy and negotiation capacities across the public, private and NGO sectors. Such capacities are essential in underpinning the collective actions required to bring about the scale of institutional reform implied by the 'new agenda for agriculture'.

The Review Team recognizes that the market-driven approach to development being called for in the reports brings along significant opportunities as well as considerable risks for the rural poor. The range of strategies being proposed in the reports to support pro-poor market development must be comprehensively implemented. If not, the risks are that only a relatively small proportion of the currently poor will benefit, while the majority are further exposed to exploitive forces they are unable to influence, and that the unsustainable use of natural resources will become more severe. The proposed new agenda implied by the reports requires careful thought and implementation at local, national, regional and global levels.

The Review Team takes the following issues to be of critical importance in any policy directed towards reaching MDG1:

Increased Agricultural Productivity

- *Acknowledge the role of agricultural research and development* Growth in agricultural sectors is a key factor in reaching MDG1. Research and development are at the base of growth of agriculture sectors. The most effective intervention for Dutch policymakers is to acknowledge this simple finding and use it as a starting point for development policies.
- *Acknowledge that there is no single silver bullet* An agro-ecological approach is needed to optimize productivity in various regions under different conditions. The dualism observed in the WDR2008 calls for different research and development for farmers who have access to services and resources than for those without access.
- *Share the responsibilities* Intensified investment in research and development are needed to achieve growth in agricultural productivity. The least-developed countries lag behind considerably in their investments in agricultural R&D.
- *Promote the quadrangle approach* A new knowledge approach is needed, where interdisciplinary teams from the quadrangle of national agricultural research systems, universities, extension services and farmers' organizations be constituted to prepare business plans for both fundamental and applied research.
- *Start priority R&D programmes* Priority should be given to the following topics: Integrated soil fertility management, rain-fed agriculture, high-quality seeds, post-harvest management, mechanization, processing and chain-management.
- *Support SRO's* Institutional strengthening of the research and development is needed at a regional level. Front-end research needs critical mass that cannot be realized by separate small countries. Efforts need to be combined, and this institutional strengthening deserves support of developed countries.
- *Support CGIAR* The CGIAR Institutes have changed focus

considerably over the past decade to working more closely with national and regional research organizations. The CGIAR is well-placed to play a key role in supporting and strengthening research through partnerships with national and regional research organizations in an increasingly devolved way.

- *Empower NGO's* Many different (local) organizations are active in the improvement of agricultural practices in developing countries and are well-equipped to run effectively R&D programmes.

Access to Resources and Services

- *Stimulate capacity building* The international community needs to (continue) placing emphasis on basic, vocational and academic education.
- *Increase donor focus on agricultural research for development* Increased donor support is required to strengthen knowledge infrastructure and innovation systems.
- *Stimulate access to information* Modern forms of communication (e.g. mobile phones and internet) are improving small-scale suppliers' access to market information such as demand and price levels at distant markets/capitals.
- *Deploy the complete range of financial instruments* A range of financial instruments is needed to support and articulate pro-poor agriculture development.
- *Promote access to land in its broadest sense* Access to production facilities including soil, water, vegetation and climate is of paramount importance for any agriculture-based rural development.
- *Create safety nets* Vulnerable groups of subsistence-level poor farmers that may be subject to negative net impacts of trade liberalization and growing market opportunities must be protected by means of social and economic safety provisions.

Markets

- **Support a more equitable distribution of trade and market benefits** Agricultural markets potentially can contribute to fighting hunger, especially if supportive policies are based on an integrated supply chain approach and include the production, processing and marketing of crops and livestock, ranging from primary producer to end consumer.
- **Support local and regional markets** Local and regional markets are a first priority for reaching MDG1. Functioning can be improved through improved infrastructures (electricity, roads, trains, ports) and financial services, sound legal and regulatory frameworks, improved market information mechanisms and strong smallholder farmer organizations and co-operatives.
- **Support access to global markets** To enable developing countries to profit from the 'new agriculture', they should be assisted to meet quality, safety and phyto-sanitary standards, and to strengthen their international negotiating skills.
- **Stimulate payment for ecosystem services** More experimentation is warranted also with the provision of payments for providing ecosystem services related, for example, to waste re-cycling, pollination and pest management, eco-tourism, water conservation, biodiversity conservation, and carbon sequestration.
- **Support diversification in agricultural market products and services** Agricultural production should enlarge beyond the limited range of staple foods and the traditional export commodities and find interesting market opportunities by diversifying.
- **Stimulate input markets** Markets are key to organising the necessary inputs for producing food and other agricultural commodities.

Institutions

- **Promote institutional reforms** The above mentioned activities in the three domains ask for cross-cutting institutional reforms at global, regional and national levels.
- **Establish an enabling policy at the national level** A conducive institutional environment at the National Level is critical for the Agriculture for Development agenda. An effective agricultural development will depend on partnerships between public, private and civil society actors. This implies questioning the balance between budget support and other types of development assistance.
- **Ensure the impact of institutional reforms at local scale** It is at the sub-national and local scale that agricultural and rural development has to be made to work. Without effective implementation at this scale institutional reforms at global and national levels will have little impact. It is critical for Dutch policy to support effective decentralization processes and local government reform.

1.4 Priority Options for Dutch Policy

Many concerted actions are needed in the different domains distinguished in the present report, and most of them require action at specific policy or implementation levels to reach maximum impact. However, in view of the limited availability of resources, priorities must be made. For Dutch policy, the Review Team suggest the following priorities:

- **A coherent policy** Organize 'Sustainability Dialogues' among the Dutch ministries responsible for development cooperation, agriculture and nature management, the environment, international trade, water management and rural infrastructure, to further strengthen the policy coherence that is required to tackle the complex and interrelated global problems.

- **Good Governance** Promote and implement an expanded portfolio of Good Governance initiatives beyond the central governmental level. Good Governance does not stop there, but it applies to civil society as well and their possibilities to control governmental policies. In this respect, strengthening civil society organizations, farmers' organizations and local governments in their institutional development, negotiation skills and implementation capacity for local development interventions is a priority.
- **Co-Innovation in Research for Development** Innovation and research are essential contributors to poverty alleviation, food security, improved livelihoods and greater equity. Support is needed in the following areas: (1) Promote the use of the Netherlands' professional and institutional capacities in research for development for the benefit of developing countries; (2) Promote the quadrangle approach and involve stakeholders in the agenda-setting; (3) Stimulate innovations that increase sustainable productivity in developing countries by supporting priority-programmes in the field of water management and breeding; (4) Focus on horticultural crops and align with the anticipated Challenge Programme on High Value Crops.
- **Markets and Trade** Give priority to local, national, and regional markets and empower trade organizations, farmers' organizations, researchers, environmentalists and health stakeholders to find ways to avoid negative social and ecological impacts. Assist developing countries in accessing the global market for (future) development of commercial and competitive trade.
- **Safety Provisions** Invest in the search for and exploitation of options for poor people in marginal environments that the market will not assist.
- **Capacity Strengthening and Institutional Development** Use the Netherlands' education and extension expertise and infrastructure to support capacity strengthening and institutional development in the South at all levels: basic education, formal vocational and academic training, and tailor-made courses for mid-career professionals.

2

Summaries of the reports reviewed



2.1 Halving Hunger: It can be done

Scope

At the turn of the century, the United Nations formulated eight Millennium Development Goals as challenges for mankind. For each MDG, a Task Force was installed to help achieving the targets set. The first Millennium Development Goal (MDG1) aims at halving the world's poverty and hunger by 2015. The Task Force on Hunger published its report in 2005 under the title 'Halving Hunger: it can be done'. This report was well-received internationally and it placed agriculture firmly on the development agenda. The Halving Hunger report is the primary reason for the current review.

Analysis

The Halving Hunger report states that hunger is both a cause and an effect of poverty. It holds back economic growth and it limits progress in reducing poverty. Therefore, hunger reduction should play a major role in poverty reduction strategies.

Three forms of hunger are distinguished: acute, chronic and hidden. Hidden hunger refers to the lack of essential micronutrients. Although acute hunger problems are receiving much international aid attention, chronic and hidden hunger are much less the subject of global attention and support.

The report concludes that poverty is the major cause of hunger. Despite the low food prices associated with the increase in food production that has been brought about since the Green Revolution, many people still cannot afford to buy sufficient food. Further, low productivity persists in rural areas, in particular if agriculture is rain fed. Finally, areas remote from markets are most seriously affected.

Hungry people are highly vulnerable to crises and hazards. Three key factors -gender inequality, HIV/AIDS and climate change- exacerbate the vulnerability of people in hungry countries. According to the Halving Hunger report, climate change is expected to disrupt ecosystems -and hence, agricultural production- on a

devastating scale in the years ahead. Poor food producers will suffer, and so too will urban consumers as food prices will rise.

Recommendations

The Halving Hunger report calls for the simultaneous actions in seven priority areas. The first one concerns interventions at the global level. The second action concerns national-level interventions. The other five are to be implemented at the level of local communities (see Box 1).

The report quotes the former UN Secretary-General Kofi Annan in calling for a "uniquely African Green Revolution in the twenty-first century". In explaining how, Kofi Annan points at concerted actions capitalizing on existing knowledge to transform the continents' agriculture, nutrition and markets using the pro-poor, pro-women, and pro-environment interventions embedded in the Sachs-report. By doing so Annan defines the Green Revolution much broader than the technology-driven revolution often referred to in the Asian situation.

As for the question "Who will pay?" the report holds national governments accountable for the funding of national programmes to address hunger. The Task Force on Hunger suggests that African countries, in addition to their investments in rural energy, infrastructure, health, education and conservation, invest at least 10% of their national GDPs in agriculture. Also, by 2010 they should invest at least 2% of the agricultural GDP in national agricultural research. To measure the effectiveness of interventions, indicators of progress are needed and should be reported publicly. In order to eradicate the hunger in the world, developed countries must increase their official development assistance, in particular that for agriculture and nutrition, and strengthen their commitment to capacity building. The Halving Hunger report also recommends that the donor community increase CGIAR funding to US\$ 1 billion by 2010. Developed countries should also reform their agricultural and trade policies.

Box 1

Halving hunger: It can be done

List of Recommendations

1. *Move from political commitment to action*

- Advocate political action to meet intergovernmental agreements to end hunger
- Strengthen the contributions of donor countries and national governments to activities that combat hunger
- Improve public awareness of hunger issues and strengthen advocacy organizations
- Strengthen developing country organizations that deal with poverty reduction and hunger
- Strengthen accurate data collection, monitoring, and evaluation

2. *Reform policies and create an enabling environment*

- Promote an integrated policy approach to hunger reduction
- Restore budgetary priority to the agricultural and rural sectors
- Build developing country capacity to achieve the hunger Goal
- Link nutritional and agricultural interventions
- Increase poor people's access to land and other productive resources
- Empower women and girls
- Strengthen agricultural and nutrition research
- Remove internal and regional barriers to agricultural trade
- Increase the effectiveness of donor agencies' hunger-related programming
- Create vibrant partnerships to ensure effective policy implementation

3. *Increase the agricultural productivity of food-insecure farmers*

- Improve soil health
- Improve and expand small-scale water management
- Improve access to better seeds and other planting materials
- Diversify on-farm enterprises with high-value products
- Establish effective agricultural extension services

4. *Improve nutrition for the chronically hungry and vulnerable*

- Promote mother and infant nutrition
- Reduce malnutrition among children under five years of age
- Reduce malnutrition among school-age children and adolescents
- Reduce vitamin and mineral deficiencies
- Reduce the prevalence of infectious diseases that contribute to malnutrition

5. *Reduce vulnerability of the acutely hungry through productive safety nets*

- Build and strengthen national and local early warning systems
- Build and strengthen national and local capacity to respond to emergencies
- Invest in productive safety nets to protect the poorest from short-term shocks and to reduce long-term food insecurity

6. *Increase incomes and make markets work for the poor*

- Invest in and maintain market-related infrastructure
- Develop networks of small rural input traders
- Improve access to financial services for the poor and food-insecure
- Provide and enforce a sound legal and regulatory framework
- Strengthen the bargaining power of the rural and urban poor in labour markets
- Ensure access to market information for the poor
- Promote and strengthen community and farmer associations

7. *Restore and conserve the natural resources essential for food security*

- Promote alternative sources of employment and income
- Help communities and households restore or enhance natural resources
- Secure local ownership, access and management rights to forests, fish stocks and range lands
- Develop natural resource-based 'green enterprises'
- Pay poor rural communities for environmental services

At national level, good governance is essential. National poverty reduction strategy processes, including the development of Poverty Reduction Strategy Papers (PRSPs), offer the best possibilities to reduce hunger. The Task Force recommends that all low-income countries integrate the MDG's into their poverty reduction strategies.

At community level, agricultural productivity must be increased. Raising the productivity of crops, vegetables, trees and livestock in small-scale farm holdings is a major priority. In this respect, the restoration of soil health is suggested as the first entry point. Applying combinations of mineral and organic fertilizers can do this. To make fertilizers available, the Task Force recommends targeted subsidy programmes in critical situations. In dry areas, improving water availability is as important as improving soil fertility. Interventions must depend on the social capacity to manage them: technological options alone are unlikely to succeed. Farmers should first attain food security and only then diversify into markets for high-value products. Genetically-superior crops, vegetables, trees and animals can greatly increase the productivity in small farms. The Task Force supports both, conventional plant breeding and transgenic research. Extension services must be revitalized. The Task Force recommends that every village in a 'hunger hotspot' should have a resident extension worker trained in agriculture.

The Task Force observes an inter-generational cycle of malnutrition. To break this cycle supplemental feeding for underweight pregnant and nursing mothers, fortified complementary food for pre-school children and school feeding programmes for school-age children and adolescents are recommended. The role of improved human nutrition in moderating the effects of HIV/AIDS and malaria is acknowledged. 'Productive' safety nets reliant on local and regional production are recommended to address shocks such as years of drought, and to provide a market in years of good production.

Considerable attention is devoted to increasing incomes and making markets work for the poor. This should be achieved through improved infrastructure and financial services, sound legal and regulatory frameworks, improving market information and strengthening local associations. The problem of low rural wages is raised, and it is suggested that promoting alternative sources of employment could address this. Networks of trained rural traders are recommended to provide access to agricultural inputs and links to markets for farmers in remote areas.

Finally, the links between addressing poverty and hunger and the need to restore or enhance natural resources are considered. Mechanisms that are suggested are to secure local ownership, access and management rights to forests, fisheries and rangelands and to develop 'green enterprises' based on natural resources. It is also recommended that payment schemes be developed for environmental services such as biodiversity protection, clean water provision and carbon sequestration to address climate change.

With regard to the implementation of these recommendations, important aspects highlighted include: (1) Prioritization of interventions appropriate for the target county or district; (2) Developing strategies at national level; (3) Human capacity development as a key to success; (4) An inclusive approach in which all stakeholders have a voice, requiring investment in community facilitators; and, of course, (5) Investment. At local level, three synergistic entry points are identified: community nutrition programmes, home-grown school feeding programmes and investments in soil health and water.

The overall message of the report is that "It can be done", given sufficient commitment and investment. The report clearly acknowledges that the effort required is formidable.

2.2 Comprehensive Africa Agriculture Development Programme (CAADP)

Scope

In 2002, the Steering Committee of the New Partnership for Africa's Development (NEPAD) of the African Union (AU) invited FAO to prepare, in a consultative process, a programme to boost the development of agriculture in Africa. The resulting document 'Comprehensive Africa Agriculture Development Programme (CAADP)' promotes interventions that are required to respond to the widely recognized crisis situation of Africa's agriculture. Annually an AU/NEPAD Partnership Platform meeting discusses progress of the implementation of the CAADP.

Analysis

The CAADP document starts with the observation that the majority of the people in Africa are farmers but that the continent is increasingly unable to feed itself and has to import ever-larger quantities of food. This situation is caused by poor political and economic governance, institutional weaknesses, technological stagnation, weak entrepreneurship, poor and non-remunerative internal and external markets, low levels of investment in rural infrastructure and, lastly, a high incidence of HIV/AIDS. It is noted that international markets are difficult to access, for example because of subsidies, falling prices, and quality and quantity requirements.

Despite these problems, agriculture remains essential for Africa, as economic growth can not be realized if large numbers of people remain hungry. Governments should provide a policy and incentives framework as well as institutional and legal dispensations conducive to agricultural growth, put infrastructure in place that enhances the competitiveness of agriculture in domestic and in international markets, and ensure the reliable provision of support services, especially for extension, research and rural finance. This requires a substantial increase in financial investments in agriculture. It also

requires close partnerships between governments and a range of domestic and international partners, including the private sector.

Recommendations

The larger part of the CAADP report is devoted to the identification of four 'Strategic Pillars' for priority investment:

Pillar 1: Land and water management

- Increase the agricultural output. Africa's largely untapped potential should be used through integrated approaches combining increased use of organic matter, mineral fertilizers, hybrid seeds, irrigation and mechanization.
- Increase the area under irrigation through on-farm and small-scale irrigation.

Pillar 2: Rural infrastructure and trade capacities

- Improve rural roads, storage, processing and marketing facilities, and international transport possibilities to reduce costs and to facilitate processing and trade.
- Increase trade-related capacities for improved market access by enlarging the current limited range of export commodities, improving technological capacities, legal and regulatory institutional frameworks, and farmers' access to credit.

Pillar 3: Food supply and hunger reduction

- Develop information on disasters by identifying the causal factors, high-risk groups and long-term strategies based on existing coping mechanisms:
 - Strategic reserves by African governments.
 - Increased African participation in post-emergency relief and rehabilitation.
 - Early warning systems co-ordinated with existing arrangements (FAO, WFP, etc.).
- Create safety nets for the food insecure through school-feeding programmes, food for work, food for training and mother-child nutrition.
- Improve agricultural production
 - Develop FAO-initiated special community-based programmes for food security to improve small farmers' performance.

- Create national food safety strategies; linked with Poverty Reduction Strategy Papers.
- Develop regional African programmes for food security to facilitate trade, coordinate agricultural policies and support national programmes for food security.
- Support longer term food security programmes within Africa together with the international community.

Pillar 4: Agricultural research, technology dissemination and adoption

- Increase investment in currently stagnating research and development.
- Increase share of private investment in research (currently 2%).
- Improve extension services: Increase access to global knowledge and improve linkages between research, extension and (particularly women) farmers.
- Develop a more-sustainable (political, financial, institutional, environmental and social) system of research via SPAAR, NARS, FARA, the ‘Durban Statement’ and CGIAR towards:
 - Integrated natural resource management.
 - Appropriate germplasm: Make farming systems more resilient by using the appropriate mixes of traditional, non-traditional, exotic and indigenous species, varieties and breeds suiting the economic and ecological circumstances of the farms.
 - Sustainable market chains through: Increased access to market information, focus on niche markets and on improved input delivery systems.
 - Sustainable agriculture: Policies toward increased incomes, food security, fair trade and sustainable land use.
 - Scientific capacity building: Interdisciplinary and practice-oriented.

All actions are accompanied by detailed budgets for the investments required. The total amounts to over US\$ 250 billion (2002–2015), including US\$ 4.6 billion for research, technology dissemination and adoption (Pillar4).

2.3 Multi-country Agricultural Productivity Programme for Africa (MAPP)

Scope

The ‘Multi-country Agricultural Productivity Programme (MAPP)’ for Africa is a (draft) proposal to fund agricultural development in Africa. It was developed, in 2004, by the World Bank in collaboration with other donor organizations and development partners. The proposal is based on the principles of the CAADP (see above). Although no final version of MAPP has been published, it is often being referred to in the discussions on Africa’s development. Hence, we have included it in the present review. MAPP is essentially a financial programme intended to fund agricultural research and extension in Africa. It is to be implemented in stages, between 2005-2013, in countries that have demonstrated their commitment to poverty alleviation and to the implementation of institutional and market reforms at national level.

Analysis

Strengthening Africa’s agricultural production to successfully penetrate international markets requires policy reforms and massive investments in infrastructure but also support for agricultural research and technology development. MAPP’s goal, within the CAADP framework, is to improve farmers’ access to technologies that are well-suited to their opportunities and constraints, with special emphasis on the needs of poor and vulnerable groups. The specific objectives are to:

- Strengthen capacities of African agricultural technology systems and increase investments by African governments in technology development and dissemination.
- Foster, and support, the much-needed reform in African research and extension institutions, in markets and in the agricultural policy environment.

- Link national, sub-regional and regional programmes and networks with strong international partnerships to achieve efficiency and effectiveness in technology generation, dissemination and adoption.

Achieving these objectives requires commitment and broad support as well as increased efficiency and accountability based on the following principles:

- Stakeholder participation in the definition of research priorities and in the system governance to ensure that research programmes and results are relevant to stakeholders' concerns, including social and environmental objectives.
- Promotion of pluralistic, competitive systems open to multiple-service providers (universities, NGO's, private sector) and based on competitive contractual schemes for service delivery.
- Increased accountability of technology-generation and transfer institutions through improved internal management information and monitoring and evaluation systems.
- Promotion of cost-sharing agreements with end users according to their capacity to pay, to increase their stake in the efficiency of service provision and improve the financial sustainability of the system.

Central to the MAPP funding system is the rigorous application of the subsidiarity principle: Technology generation and dissemination will be funded and executed at the lowest possible level that is able to efficiently carry-out the relevant activities, taking due account of economies of scale and externalities. In addition, the principle of plurality (of providers in the systems) implies that the lower-level organizations will be able to contract with any provider of services among national, sub-regional, or international institutions.

2.4 Realizing the Promise and Potential of African Agriculture (the 'IAC-report')

Scope

In 2002, the Secretary-General of the United Nations, Kofi Annan requested the InterAcademy Council to present an analysis of how science and technology can be used more-effectively to improve agricultural productivity in Africa, thereby improving food security. Kofi Annan based his request on the fact that, whereas over the last decades, in most parts of the world the available food per person has increased considerably, it has decreased in Sub-Saharan Africa: the overall food security situation is worse now than it was four decades ago. A panel of 18 eminent scientists from around the world, including 7 from Africa did the IAC study. The process involved four consultative workshops with the African sub-regional organizations and national scientists in 2003, and the commissioning of four background papers. The Panel met three times in Africa to deliberate the content of the report and to formulate its recommendations. The final report was published in 2004 and it represents the consensus view of the Panel members.

Analysis

In endeavouring to understand why the Green Revolution did not translate readily to Africa, the IAC report notes that Africa has a number of distinctive features that help explaining why:

- The global Green Revolution was mainly based on three staple crops: maize, rice and wheat. In Africa, there is no dominant food crop. Instead, Africa is characterized by many different farming systems, which are very heterogeneous, and in which livestock plays a key role as well, as it does in food security.
- In Africa, degraded soils prevail that are generally of poor inherent fertility. Moreover, rainfall is erratic. These are two decisively-limiting factors for agricultural production. Endemic plant and animal diseases further aggravate the situation.

- In addition to low land-productivity, labour productivity in African agriculture is relatively low. Its growth is stagnant and mechanization is limited.
 - In Africa, more than elsewhere, women play a key role in agriculture and in assuring household food security.
 - Under-investment in agricultural R&D and in rural institutions and infrastructure is common.
 - Many parts of Africa lack an effective knowledge infrastructure and functional academic institutions. Brain drain prevails over brain gain.
 - There is a lack of functional local and regional markets.
 - Customary land tenure is the prevailing relationship between the people and the land.
 - Economic and political enabling environments are poor.
 - It is difficult for African countries to impact global policies.
- These distinctive features influence the options available to science and technology, and they imply that African agriculture is more likely to benefit from, what the IAC report refers to as, Rainbow Evolutions, rather than from a new Green Revolution. The Rainbow Evolutions will differ in nature and extent among the many and diverse smallholder farming systems. This is in contrast to the Green Revolution in, for example, South-east Asia, where irrigated rice-wheat systems predominate. Accepting that, as the IAC report does, diverse farming systems are the base of African agriculture for generations to come, the inescapable conclusion is that in Africa higher investment is required in agricultural R&D per unit productivity gain than was the case of South-east Asia.

Faced with the reality of limited R&D budgets at national levels and the occurrence of many different farming systems that might potentially benefit from R&D, the Panel endeavoured to quantify the impact of R&D on the various systems. For this, two parameters were used (1) agricultural potential and (2) underweight children. Based on these, four farming systems were denoted as priority systems: Irrigated systems, Maize-mixed systems, Tree-crop systems and Cereals-root crop mixed

systems. The location of these farming systems on the African continent coincides largely with the Hunger Hotspots as defined by the MDG Hunger Task Force (see Chapter 2.1.) and the Pilot Learning Sites of the Sub-Saharan Africa Challenge Programme of FARA (see www.fara-africa.org).

Recommendations

In its assignment, the IAC Panel was requested to concentrate on technological options. The Panel however, took expanded its recommendations into other fields. After all, the Panel firmly believes that a conducive environment is critical for the success of technological options. Recommendations, therefore, come in four domains:

- Technological options that can make a difference.
- Building impact-oriented research, knowledge and development institutions.
- Creating and retaining a new generation of agricultural scientists.
- Markets and policies to make the poor prosperous and food secure.

All recommendations are summarized in the executive summary of the InterAcademy report. The present review elaborates on the major ones only:

- *Adopt a market-led productivity improvement strategy* Such a strategy is required to achieve balance between supply and demand and to provide an incentive for farmers to close yield-gaps. To achieve this, the competitive ability of smallholders should be strengthened, for example by using information and communication technology to timely provide market and price information. ICT can be used also to identify new marketing opportunities. The Panel believes that in the process, smallholder farmer organizations and cooperatives will be promoted.
- *Adopt a production ecological approach with a primary focus on identified priority farming systems* Yield can be defined by

potential yield under optimal physical and genetic conditions. This yield is limited by limiting factors such as water and nutrients and reducing factors such as pests decreases it. Actual yields are lower still as substantial losses occur post harvest. At all levels interventions are possible, with a dominant role for genetic breeding. Classical and modern breeding demands specific additional efforts since Africa, because of its specific situation, can not rely on external developments. These efforts are needed to bridge the genetic divide and to avoid that Africa is left behind where biotechnology is expected to be a major scientific development in the 21st century.

- *Recognize the potential of rain-fed agriculture and accord it priority* Rain-fed agriculture will dominate the African practice for decades to come. Rain-fed agriculture offers the best opportunities for increased productivity. It is the belief of the Panel that water efficiency can be improved by packages of measures that include agronomic measures, fertilization and breeding. Wherever possible, these should be supplemented with small-scale irrigation. Drip irrigation, for example, has proven to be very effective in arid and semi-arid areas.
- *Enhance the use of mechanical energy and power* Improving agricultural productivity deals with both land productivity and labour productivity. Both are important, but as labour is scarce in Africa, labour productivity needs specific attention. In many parts of the world increases in land productivity are impressive, but they are being surpassed by increases in labour productivity. In Africa, this calls for selective mechanization for which local manufacturing should be encouraged. A further effect of mechanization may be that by avoiding handwork more youth might consider farming as a career.
- *Embrace information and communication technologies at all levels* Besides biotechnology, ICT is commonly considered to become a major scientific driver in the 21st century. Africa should benefit from this development in various ways. Decision support systems for example that forecast outbreaks of

diseases can help farmers to take measures timely. Similarly, with the help of ICT, extension services can be based on globally available information. Distance learning will be a major form for capacity building in Africa and in the rest of the world. Access to libraries and scientific publications are available via Internet and should be disclosed for African scientists.

- *Design and invest in national agricultural science systems that involve farmers in education, research and extension* The model linking education, research and extension is widespread, but the Panel postulates that it is too linear, top-down and out-moded and will not be effective in Africa. The Panel therefore recommends adapting the quadrangle approach and involving the farmers as well. Only in this way the setting of research agendas will focus on the real needs of the farmers. For this, community-based farmers associations must be encouraged and strengthened.
- *Increase support to agricultural research and development* R&D is expensive. Yet if agriculture is the motor of economies, R&D is required to kick-start that motor. Investments in agricultural R&D are investments in the own future. In general three sources are available for investment: national governmental budgets, private sector budgets and donor support. Presently, over 40% of the investments in national agricultural R&D is from international donors whereas private investments, especially in subsistence farming, are extremely limited. The Panel recommends decreasing donor-dependency and encourages national governments to enhance the share of agricultural R&D from 0.8 to 1.5 % of the agricultural GDP.
- *Focus on current and future generations of scientists in Africa* More than one-third of all African agricultural scientists is Egyptian. Where agriculture in Egypt flourishes, this figure may not come as a surprise. In many African sub-regions the scientific potential is strongly reduced by brain drain. The Panel recommends efforts to retain African scientists rather than trying to regain the diaspora. Implementing policies that create

more-rewarding opportunities in Africa could do this. This implies better access to modern scientific infrastructure and knowledge, competitive levels of remuneration and professional career opportunities. Further, co-operation with advanced research institutes in the North, sandwich and twinning programmes and exchange programmes for scientists should be stimulated.

- **Invest in rural infrastructure** A recent study of IFPRI shows the impact of such investments in Uganda: investments in agricultural research have the highest cost/benefit ratios in terms of bringing people above the poverty line. Investments in physical infrastructure such as roads however, have attractive cost/benefit ratios as well. The impact of low-grade feeder roads is much larger than that of high-grade murrum or tarmac roads.
- **Reduce the trade barriers with OECD countries** Improved international market access is key in translating increases in African agricultural productivity into economic growth. OECD countries are encouraged to assist African countries to meet quality, safety and phytosanitary standards, and to improve their international negotiation skills.

In summary, the IAC report concludes that a Rainbow Evolution rather than a Green Revolution is the best option to increase agricultural productivity in Africa. It implies that packages of coherent measures are required based on the existing African practices. It also implies that the 'technology on the shelves' is insufficient. R&D must be tailored or new R&D developed. Lastly, R&D will be effective only if applied within an enabling environment. If so, it is very powerful and there is no reason why agricultural productivity in Africa can not be increased as it was in the rest of the world.

2.5 OECD Promoting Pro-Poor Growth: Agriculture (POVNET)

Scope

Promoting pro-poor growth is critical in achieving a sustainable trajectory out of poverty and meeting the Millennium Development Goals, especially MDG1, which targets halving the number of people living on less than one dollar a day. Developing and sharing good practices in advancing this agenda has been the focus of the Development Assistance Committee (DAC) through its Network on Poverty Reduction (POVNET) since 2003. This Network has produced policy guidance for donors on pro-poor growth. This is a 5-volume series of reports, one of which is devoted to agriculture.

Analysis

The POVNET report claims to be taking a fresh look at the contribution of agriculture to pro-poor growth. It argues for a 'new agenda' for agriculture that is holistic and that focuses to a great extent on the institutional constraints to agricultural development (see Box 2). It is framed within the context of the OECD 'Paris Declaration' on aid effectiveness.

Against several decades of declining government and donor support for agriculture, Chapter 1 of the POVNET report provides evidence of the potential contribution of agriculture to pro-poor growth. It emphasizes the critical role that the agricultural sector plays in the economies of developing countries and that two-thirds of the world's poor live in rural areas. The report notes, for example, that in Sub-Saharan African agriculture accounts for 20% of the GDP, employs 67% of the total workforce and is the main source of livelihood for the poor. It also argues that growth in agriculture is more beneficial to the poor than growth in other economic sectors and that few economies have achieved broad-based economic development without agricultural and rural growth preceding or accompanying it. The report claims that there is evidence of the multiplier effects of agriculture on the economy

Box 2

OECD POVNET Report

Differences between the old and the new agenda for agriculture

Views under the traditional agenda	Views under the new agenda
Policies, institutions and investments in agriculture	Policies, institutions and investments in and for agriculture
One rural world	Multiple rural worlds
National markets	National, regional and global markets
Production units	Livelihood units
Agriculture = production	Agriculture = agricultural sector: inputs + production + post-harvest + manufacturing
One work location	Multiple work locations
Single sector approach	Multi-sector approaches
Public sector	Public and private sectors
Food crops	Diverse income streams
Growth only	Growth that minimises risk and vulnerability
Driven by supply	Driven by supply and demand
Fundamentals acknowledged (The fundamentals are science, technology, infrastructure, land policy and education, extension and training)	Fundamentals delivered (The fundamentals are science, technology, infrastructure, land policy and education, extension and training)

being in the order of 1.35 to 4.62. In short, the POVNET report articulates an unequivocal case for the role of agriculture in pro-poor growth.

In this perspective, the case is made that there is a context now for agriculture completely different from the Green Revolution of the 60's and 70's and that this requires a fundamentally different approach. Key aspects of the current context, as outlined in the report, are:

- The declining terms of trade for producers and new standards often leading to poor, small-scale producers not being able to engage in markets.
- That policies for market-based development pursued by the international financial institutions have not succeeded in relation to agriculture.
- That producers lack access to essential services (including finance and knowledge) and that the private sector has not filled this gap due to the risks involved.
- The particularly negative impact of structural adjustment on women.
- The degradation of natural resources, the lower opportunities for irrigation and the disrupting potential of climatic changes.

Recommendations

The principles articulated in the POVNET report that underlie the proposed new agenda are:

- Adapting approaches to diverse contexts.
- Building institutions and empowering stakeholders.
- Supporting pro-poor international actions.
- Fostering country-led partnerships.

In particular the report argues for:

- Understanding agriculture in the context of the overall livelihood strategies of rural people.
- Recognizing that specific agricultural policies must be supported by a broader social development agenda related to education, health and infrastructure.

- Recognizing the great diversity in types of farmers, agro-ecological and economic contexts –implying the need for tailor-made strategies and policies.
- Acknowledging that agriculture-driven pro-poor development requires changes in both global trading arrangements and in the national- and local-level support to agriculture.
- Giving much more attention to the institutional dimensions of agricultural development.
- Considering gender as central to agricultural development issues.

The suggested priorities for action are:

- Enhance agricultural sector productivity and market opportunities.
- Promote diversified livelihoods on and off the farm.
- Reduce risk and vulnerability.

2.6 DFID Better Livelihoods for Poor People: The role of agriculture

Scope

Three quarters of the world's poorest people live in rural areas. In one way or another their livelihoods depend on agriculture. Based on this observation, DFID published, in 2002, the policy paper 'Better Livelihoods for poor people; the role of agriculture'. According to the paper, the crucial challenge is to ensure that agricultural growth takes place and that small-scale farmers, entrepreneurs and workers on low-incomes participate fully in it.

Analysis

DFID recognizes that agriculture provides more than food: it contributes to national economic growth, to better livelihoods of people in general and the poor in particular, and to provision of environmental services.

The report clearly builds on the sustainable livelihood approach.

The main line of reasoning is that poor people have limited access to human, social, financial, natural and physical assets and that this determines their poverty situation to a large extent. If economic growth is to benefit the poor, it must improve their access to these assets and their returns to them.

Market oriented and chain development approach

In the report, DFID advocates a market-oriented approach and argues that a fairer distribution of trade and market benefits depends on an enabling and pro-poor institutional environment of policies, institutes and supporting organizations as well as on the market-driven provision of services to the poor. The latter include technical assistance, finance, market information, transport and development of appropriate technologies, knowledge and skills. DFID recognizes that this may require drastic changes of governmental strategies as well as the reconfiguration of public institutions and agricultural service providers.

The DFID Better Livelihoods report goes beyond the narrow definition of agriculture which focuses on production aspects only. The report takes agriculture to be the production, processing and marketing of crops and livestock from the primary producer to the end consumer. In other words, the paper advocates a chain approach to agricultural development. In addition, the report identifies agriculture as being a major component of natural resource based activities, next to forestry, fishery and wildlife management.

The report refers to a study commissioned by DFID which found that agricultural export has been the main source of growth in forerunner African counties and that this is a promising avenue for growth in Sub-Saharan Africa in general. With regard to these agricultural exports, the report states that emphasis should be on agricultural production and processing technologies and on marketing.

Fundamental roles in poverty reduction

According to DFID, agriculture plays four fundamental roles in the reduction of (rural) poverty:

- By contributing to economic growth in general and to this growth's benefits accruing to the poor in particular.
- By providing the basis for the livelihood strategies of the majority of poor people.
- As a provider of locally-available staple foods.
- As a 'manager' of natural resources and a 'provider' of environmental services.

Agricultural growth is not a panacea

The report states firmly that all countries that have been successful in reducing their poverty levels have all featured strong agricultural growth. In fact, it is concluded that the (rural) poor benefit more than proportionally from agricultural growth. On the other hand, the report argues that agricultural growth is not a panacea: the relative importance of agriculture tends to decline with the growth of the economy. In other words, when the poor can opt for more-diversified livelihood strategies, agriculture becomes just one of the opportunities. Moreover, rural non-farm activities are providing increasing employment, household security and alternatives to migration and urbanization. Therefore, agricultural development should not end with the improvement of productivity and food availability, but it should be seen and treated within a supply chain approach.

Recommendations

The Better Livelihoods report concludes that agriculture is pivotal to poverty reduction. This may not be new, but the report argues that the trend in agricultural development must be reversed in a number of aspects. DFID advocates for more focus on the market demand and supply chains away from pure productivity thinking. In that context the report puts strong emphasis on improving the functioning of markets and the access to crucial assets by the poor to be able to engage in markets.

The functioning of markets can be improved through:

- Creating an enabling environment of favourable laws, regulations, institutions and supporting organizations.

- Affective deregulation of controlled (food) markets.
- Removal of public monopolies.
- Establishment of institutions that empower the poor to realize their rights to land, water, common property resources, markets and services.
- Setting minimum labour standards.
- Establishment of institutions to manage uncertainties (e.g. agricultural insurances and price risk management mechanisms).
- Improved effectiveness of public investment s to trigger private investment.
- Reducing the urban bias in public investment and policies.

Improving the functioning of markets has implications for international policies as well, including the need to:

- Address international agricultural trade policies that limit the opportunities for poor countries through tariff and non-tariff barriers.
- Reduce agricultural subsidies in rich countries.
- Stabilize commodity prices and reduction of price volatility.

Based on the recommendations, DFID acts at regional and country level by:

- Supporting poverty analysis, diagnosis and monitoring.
- Supporting government to build capacity beyond the ministries of agriculture.
- Supporting establishment of innovative models for rural and agricultural services.
- Supporting the establishment of an enabling environment for private sector and chain development.
- Building capacity of private sector organizations and civil society.
- Supporting institutions to reduce vulnerability of the poor with regard to agricultural markets.
- Supporting processes to develop integrated natural resource management.
- Supporting governments to integrate HIV/AIDS issues into their agricultural strategies.

Activities of DFID at central programme level are:

- Creating mechanisms for private sector investment in agriculture.
- Creating institutions to improve access of the poor to agricultural assets and markets.
- Investing in the generation and dissemination of agricultural technology through CGIAR and other research organizations.
- Engaging with policy setting institutions like FAO, G7/G8, WTO, WSSD, WFS, etc.
- Supporting initiatives to reduce trade barriers.
- Promoting lessons learned.
- Commissioning research on rural-urban issues and on poor people's livelihood strategies.

2.7 DFID Growth and Poverty Reduction: The role of agriculture

Scope

Agriculture is a key part of DFID's effort to reduce global poverty and achieve the Millennium Development Goals. The 'Better Livelihoods' paper (DFID, 2006. See previous section) builds a good understanding of livelihoods. The present 'Growth and Poverty Reduction' paper (DFID, 2005) describes why DFID believes that agriculture should be placed at the heart of efforts to reduce poverty.

Analysis

In the Growth and Poverty Reduction report, DFID sets out that it has always recognized the importance of agriculture in overall economic development and in the reduction of poverty. However, the report states that the international community clearly needs to do more and particularly more on agricultural development so as to reach the Millennium Development Goals. This report is a formal DFID Policy Paper to reiterate and elaborate DFID's commitment to agricultural development.

The paper builds on the understanding of livelihoods of the (rural) poor and takes the sustainable livelihood approach as the basis for solutions. It focuses on the widening of livelihood options and, thus, strategies for the poor and ultimately improving their livelihood outcomes. DFID states that agriculture should be placed at the heart of all the efforts of the international community and of national governments to reduce poverty as agricultural development. According to DFID, agricultural development is:

- (1) The basis for sustainable livelihood strategies of the poor,
- (2) The engine to wider economic growth and
- (3) The key to food security and natural resource management.

Historical perspective

The paper puts agricultural development in its historical context recognizing that agriculture's share in gross national products tends to decrease when economies grow. On the other hand it is recognized that most countries that have successfully reduced poverty were able to do so as a result of a growing agricultural sector and rural economic development.

The paper also states that today the circumstances for agricultural development have become harsher due to more-difficult market conditions. World prices for example, of important agricultural commodities including staple foods have fallen steadily and the trend is expected to continue. On the other hand, prices of agricultural inputs have fallen less and this has resulted in a relative increase of input costs over overall production costs. DFID points at the growing influence of international supermarket chains and trans-national companies in food markets and agricultural trade in low-income countries. These markets experience increasingly stringent food safety production standards and for protection against plant and animal diseases.

Moreover, the situation of HIV/AIDS presents a growing challenge to agricultural expansion as it limits the availability and capability of labour and impedes the transfer of agricultural knowledge from one generation to the next. Also, it diverts precious resources from governments, the private sector and -not

in the least- from poor households.

The paper also describes changing policies such as the withdrawal of the state from food markets, agricultural marketing and direct provision of agricultural services. Many countries now take export-led agricultural development strategies, which help economic policy reforms and better functioning of national agricultural markets. In many countries also, public expenditure has fallen and this has had serious repercussions on support to the agricultural sector.

Despite the historical perspective, which shows that agricultural development is not a panacea, and despite the current harsher conditions, DFID maintains that agriculture is the key to economic development and poverty reduction. As the report states nicely, half a century ago very few people saw prospects of reducing poverty in Asia. However, significant progress has been achieved there. It is implied that it is the turn of Sub-Saharan Africa, now. Whereas Asia's success was largely based on enormous improvements in irrigated agriculture, the potential for irrigation in Africa is much more limited and could turn out to be much more expensive. Moreover, irrigation practices have entailed problems of salinization of land and overexploitation of ground water. Therefore, DFID puts agriculture at the heart of efforts to combat poverty, but it calls for a new approach to agricultural growth and for better linkages between agriculture and other sectors.

Recommendations

The DFID policy paper gives six guiding principles for agricultural development policies so as to ensure maximum impact in terms of poverty reduction:

- Match with the development stage of the country concerned and reflect the role of agriculture at such development stage.
- Prioritize agricultural sub-sectors or parts of agro-based chains in which significant gains are expected with regard to productivity, income multipliers and forward and backward linkages to other economic sectors in the country.
- Focus on strategies to overcome the main bottlenecks felt

by agricultural producers and other chain actors that impede improvement of productivity, employment and linkages to other economic sectors.

- Rather than focusing on agricultural production, start with -and build on- the market demand for agricultural produce and emerging market opportunities.
- Ensure complementarity of agricultural development initiatives with social protection measures for the vulnerable groups in society.
- Ensure the sustainable use of natural resources and other productive resources. Sustainability is not an optional issue.

Following these principles, the paper recommends that agricultural development in poor countries should focus on seven priority areas:

- Creation of supportive institutional and operational frameworks.
- More-effective targeting of public spending and using public investment to trigger private-sector investments.
- Improvement of the functioning of markets and reduction of market failures.
- Filling the agricultural finance gap by establishing innovative mechanisms and products for rural and agricultural finance.
- Development of appropriate technologies and their dissemination for the benefit of the poor.
- Improvement of poor peoples' access to productive assets, security of property rights and their capacity to use assets effectively.
- Reduction of distortions in international agricultural markets such as tariff and non-tariff trade barriers.

DFID is committed to improving agriculture, particularly in Africa, as a sustainable contribution to poverty reduction. DFID refrains from working individually and prefers to collaborate with local governments, other donor organizations and international institutions. It pro-actively engages in partnership structures such as CAADP, NEPAD and in public-private partnerships.

2.8 FAO The State of Food and Agriculture: Agricultural trade and poverty. Can trade work for the poor?

Scope

The State of Food and Agriculture is an annual FAO document. The 'Edition 2005' focuses on the role of trade in agricultural commodities and other products, on poverty reduction. It examines how the poor are affected by, and react to, agricultural trade.

Analysis

The report starts with a number of statements and trends to reiterate the important role of agriculture in poverty reduction, such as:

- Increased awareness of extreme poverty and hunger being rural phenomena.
- The majority of rural people depend largely on agriculture for their livelihoods.
- While agriculture used to be a sector with a strong local character ('securing local food availability'), it is increasingly being influenced by international trade, global sourcing and complex agro-based supply chains.

The above statements lead to the preliminary conclusion that the more Africa's agricultural sector is being included in global trade, the more the (rural) poor are being affected in their livelihoods and food security. The FAO report analyses the impact of agricultural trade liberalization on poverty in a number of countries. It is clearly concluded that liberalization of trade and markets has the potential to contribute to poverty reduction and to food security. Moreover, strategies of import substitution and industrialization in the recent past have been too urban-biased and did entail urbanization and rural out-migration. Reinforcing the agricultural sector could alter

this and create opportunities for people in rural areas to attain sustainable livelihoods.

Some relationships that were found are:

- Agricultural liberalization is particularly beneficial to low-income countries if it is implemented in combination with reforms in other sectors (i.e. towards full economic liberalization).
- Agricultural liberalization is particularly beneficial to industrialized countries with highly distorted agricultural sectors.
- Low-income countries benefit relatively more from agricultural liberalization as in general the agricultural share in their GDP's is higher.
- Low-income countries are much-less dependent on agricultural exports than they were in the past.
- Markets within and between low-income countries are becoming the most favourable markets for agricultural trade (South-South trade, fast emergence of supermarkets in low-income countries, emerging economies in the South).

In short, the report concludes that there are ample opportunities for low-income countries and that net benefits are promising if these countries manage to effectively engage in agricultural trade and markets. It is argued that low-income countries could become main suppliers of agricultural commodities as well as the sites for (first stage) industrial processing of agricultural products.

The FAO report states that a number of countries have experienced rapid economic growth due to increased agricultural trade. Other countries however, have become more vulnerable and more dependent on imports for their basic needs. The report claims that the major difference in performance of countries lies in the effective development and implementation of trade and agricultural reforms. In fact, the report indicates that institutional reform processes are prerequisites for countries to successfully integrate into the global agricultural market and trade. The report also argues that the timing and sequencing of the reforms is crucial. Premature opening-up to international competition may

seriously undermine a country's agricultural sector and have long-term negative implications on (rural) poverty. Therefore, countries are encouraged to engage in a well-planned reform process where the national economy is steadily being prepared for liberalization. In addition, this reform process requires compensatory public measures targeted at the vulnerable societal groups that will experience the negative effects of liberalization most profoundly.

The report starts from the neo-classical thinking on the functioning of markets and it builds heavily on econometric modelling with computable general equilibrium models. Analyses with these models remain at macro-level and the distribution effects are poorly incorporated in the outcomes. Recommendations following from these models tend to work for the so-called early adapters (or early 'liberalizers') who have the opportunity to trade-off initial negative effects on others. Often, the same recommendations do not hold true for the so-called followers. The increasing power and influence of foreign and trans-national companies over agro-based supply chains in low-income countries is largely disregarded. Yet, this has significant distribution effects in many countries. Moreover, the analysis continues to follow the neo-classical reasoning that trade based on comparative advantages is positive to all trade parties. Trade, however, is determined by competitive performances and this may lead to recommendations opposite from those that the comparative-advantage theories come up with.

Interestingly, the FAO report includes a special contribution by the International NGO/CSO Planning Committee for Food Sovereignty (IPC) 'A view from civil society' which is nothing less than a major critique to the general findings and conclusions of the report. IPC boldly calls for an end to the neo-liberal policies and argues that the liberalization of agricultural trade has enhanced structural causes of hunger and food insecurity as a result of dumping, the subsidized production in rich countries, the privatization of support institutions in the South and the over-exploitation of natural resources and common-property

resources. IPC demands the removal of agriculture (or at least of food items) from trade-liberalization policies and advocates for food sovereignty through more local economic development, local agricultural markets and local food sufficiency (See also Section 2.9 below).

Recommendations

The FAO report argues that liberalization of agricultural trade and markets offers opportunities to low-income countries and has potential to contribute to poverty reduction. Market liberalization for economic growth and public policies for poverty reduction are often seen as opposites. The recommended twin-track approach consists of market liberalization for mainstream economic growth plus complementary public measures to enable the poor to benefit from markets and trade (e.g. investing in people, institutions and infrastructure). This second track also includes safety nets for those vulnerable groups that stand to experience net negative impacts from liberalization in the long run.

2.9 IPC's New Agrarian Reform Based on Food Sovereignty

Scope

The International NGO/CSO Planning Committee for Food Sovereignty (IPC) resulted from the non-governmental and social movement process which developed, in 2002, the Forum for Food Sovereignty, in Rome, Italy. IPC facilitates and promotes the debate between NGO and CSO networks, the UN development agencies and other international development organizations on all agriculture and food-related issues. IPC claims to be the representative of organizations of peasants, family farmers, indigenous people, landless people, artisan fisher folk, rural workers, rural women, rural youth, migrants, pastoralists, forest communities, and of defenders of human rights, rural

development and the environment at large. It should be noted that the review in this section is not based on a specific report, but on the general vision of the IPC as it is being communicated through IPC's website and other media.

Analysis

According to IPC, national governments and the international development community have not been able to effectively combat poverty and hunger in the world. Therefore, IPC calls upon all governments, the UN system -FAO in particular- and other actors in the agriculture and food sectors, to truly commit themselves to a 'New Agrarian Reform based on Food Sovereignty'. Moreover, IPC calls for an end to the mainstream neo-liberal economic policies as promoted and implemented by the WTO, World Bank, IMF, UN system and many rich countries. Furthermore, IPC demands the removal of agriculture and food products from the WTO negotiations. This perception phrased in the New Agrarian Reform is defined as the right of countries and peoples to determine their own agricultural, pastoral, fisheries and food policies, and which are ecologically, socially, economically and culturally appropriate. IPC postulates that the use of natural resources must be for food production, primarily. Other uses should have lower priority. For the poor to obtain a decent living, IPC demands their effective access to, and control over, natural resources and other productive assets. IPC states that the privatization of natural resources and technologies has increased inequity between countries, men and women, classes and generations. In addition to the access to resources and to a life in dignity, IPC also demands that governments and international organizations guarantee access to education, healthcare, housing, social security and recreation for the people that it represents. Moreover, people should have the right to maintain their own cultures and diversity.

Recommendations

IPC's advocacy addresses four priority areas:

- **The right to food and food sovereignty** The NGO's and CSO's grouped in IPC affirm that the right to safe, adequate and nutritious food and healthy water is a fundamental right of individuals and groups. Similarly, food sovereignty is a fundamental right of peoples and nations, just as farmers, peasants and fisher folk have the right to produce food for their own families and their domestic markets.
- **Access to, management of, and local control over, natural resources** Commitment to ensuring that small-holder farmers, pastoralists, fisher folk and indigenous peoples have equitable access to and control over the land, water and genetic resources necessary to maintain their livelihoods in a sustainable manner.
- **Small-scale family and community-based agro-ecological food production** Commitment to prioritizing agro-ecologies as the mainstream sustainable and appropriate production systems for food and farming, livestock rearing and fisheries.
- **Trade and food sovereignty** Commitment to promoting equitable and fair trade systems that are a positive force for development and that do not detract from the realization of any human rights.

Although IPC's 'New Agrarian Reform' does not negate (international) trade, it demands a number of considerable changes in trade and market policies:

- Ensuring adequate remunerative prices for all farmers and fisher folk.
- Exercising the rights to protect domestic markets from imports at low prices (dumping).
- Exercising the right to regulate national production so as to avoid surpluses.
- Abolishing all direct and indirect export supports and subsidies (i.e. those in rich countries!).
- Phasing-out all domestic subsidies that promote unsustainable agriculture.

2.10 USAID Initiative to End Hunger in Africa (IEHA)

Scope

Launched in 2002, the (Presidential) Initiative to End Hunger in Africa (IEHA) is a multi-year effort designed to help increase agricultural income and fulfil the UN Millennium Development Goal of cutting the number of hungry people in Africa in half by 2015. This initiative focuses on promoting agricultural growth and building an Africa-led partnership to eradicate hunger and poverty by investing in agriculture oriented towards small-scale farmers. It should be noted that the current summary is not based on a specific report, but on the general vision of USAID as available from the website (www.usaid.gov/locations/sub-saharan_africa/initiatives/ieha.html) and from other media.

Analysis

USAID recognizes that widespread hunger and the trap of (rural) poverty in Africa are two of the most significant development challenges to the world today. USAID states that agriculture is the most effective driver of economic growth in the poor countries of Africa. USAID takes population growth as an important reason to produce more food and raise agricultural productivity. As a consequence, USAID implements activities in Africa to reduce rural poverty and to enhance food security through agricultural development. The focus of these activities is on raising agricultural productivity in combination with improving conditions for agricultural trade, investment and agribusiness development. The primary objective of IEHA is the rapid and sustainable increase of agricultural growth and of rural incomes in Sub-Saharan Africa.

USAID states that knowledge and the capacity to harness the opportunities is the major driver of the global economic development process. It argues that people without knowledge or capacity to use it, tend to be excluded from benefits of economic development. As a result, IEHA puts a strong emphasis on

local capacity building on agricultural science and technology. Moreover, it encourages the innovative (and thus competitive!) capacity of the sector and countries. On the other hand, USAID does not put much belief into the establishment of safety nets for the poor as they tend to be crisis oriented and could distort market functioning. USAID is a strong believer of technology being able to renew agriculture and make the required change.

IEHA is presently being implemented through three sub-regional platforms, in West, Eastern and Southern Africa respectively, as well as in three individual country programmes: Ghana, Kenya and Zambia. Activities carried out under IEHA include the following:

- Investment in technical assistance and training to agricultural producers and their organizations.
- Investment in science and technology in selected agricultural commodities and in the dissemination of results through training.
- Promotion of trade liberalization.
- Strengthening of national policies and institutional frameworks that enable producers and investors to make use of emerging market and trade opportunities.
- Strengthening producers', processors' and trade organizations and developing effective chain management structures.
- Promotion of institutional structures to protect the most vulnerable groups in society and to manage risks.
- Promotion of institutional structures to protect the natural environment and enhance environmental sustainability.
- Further institutional capacity building with chain actors and other stakeholders in selected supply chains.

IEHA aims to build up global partnerships that can improve the conditions for agriculture and agribusiness. These partnerships comprise national governments, regional organizations, multi-lateral development organizations, universities, the private sector and NGO's. IEHA activities also include building-up physical infrastructure necessary and for the functioning of markets and trade (roads, market places, communication systems, collection centres, etc.). Special activities include the strengthening of the

private sector organizations and supporting institutions such as service providers and input suppliers.

Recommendations

USAID strongly recommends countries to liberalize their agricultural markets and enter into free global trade. USAID is clearly in favour of market-driven solutions to hunger and poverty. This implies that the functioning of agricultural markets and the global food commodity markets in particular need to be improved and liberalized. In addition, USAID stresses the need to change the agricultural sector in many countries for it to become a "new agriculture" with innovative food production and processing techniques: a "new technology revolution". In short, the USAID-recommended direction consists of the liberalization of agricultural trade and markets and the modernization of the agricultural sector through a technology revolution.

2.11 The World Bank: Agricultural Growth for the Poor: An agenda for development

Scope

This World Bank report reviews the role of agriculture in reducing poverty in the context of what is described as an 'entirely new set of conditions for agriculture'. The report intends to strengthen the implementation of the World Bank's 2003 rural development strategy. It argues that where agricultural development has been a key factor in reducing of the share of the world's population living on less than US\$1 per day from 28 to 22%, international support to agriculture paradoxically has declined sharply since the 1980's. The report argues that broad-based agricultural development is essential for realising the MDG's. The report looks at the changing context for agriculture, identifies the policies, strategies and

investments required for pro-poor agricultural growth and then examines how agriculture can be put back on the international agenda. This report is clearly a precursor to the World Development Report 2008 'Agriculture for Development' which is being reviewed in Section 2.12, below.

The report asks whether the world has forgotten agriculture's role in development. It identifies increasing competition for resources, unwillingness to make long-term commitments, the complexity of agricultural issues and limited political influence of rural people as reasons for the decline in support for agriculture. The report makes it abundantly clear that agriculture is the key to achieving the MDG's and it suggests that more attention needs to be given to how agriculture contributes to each of the goals.

It is argued that agriculture has a critical role to play in overall national economic development, poverty reduction, food security, protection of the environment and achieving gender equality. It notes that, depending on the stage of economic development of countries, agriculture has different roles to play. It emphasises the important links between non-farm growth, urban areas and agriculture.

The rapidly changing context for agriculture underpins the report's focus. Demand and supply issues are being assessed. On the demand side the decline in prices for traditional commodities due to productivity gains, static demands and subsidies are noted, while recognising the growing demand for higher value products. The issue of increasing quality and safety standards along the entire food chain is raised, including the implications thereof for small-scale producers. On the supply side the (potential) opportunities of biotechnology are recognized. In addition, the problems of supply continuity -as caused by depleting natural resources-, the HIV/AIDS pandemic, demographic changes and climate change are highlighted.

As with other reports reviewed, this World Bank report recognizes the considerable heterogeneity that exists between countries, agro-ecological zones and market conditions. The

report notes that it is important for the agricultural sector to better communicate its positive impact on economic growth and on the welfare of the poor.

Recommendations

Five priorities for public support are identified by the report:

- **Fostering provision of global public goods and services**
Advocacy to level the playing field in agricultural trade; support for agricultural research; More attention to climate change.
- **Accelerating policy reforms** Trade liberalization that mitigates short-term negative effects for long-term benefits; Market reforms for improved efficiency of local markets and private sector functioning; Changing public and private sector roles with more emphasis on private sector and civil society partnerships; Recognising government's role as facilitator and enforcer of rules rather than as market player.
- **Developing institutions to support the private sector**
Appropriate regulatory environments for the private sector to grow; Public support for, and stakeholder engagement in, agricultural innovation systems; Greater involvement of private sector in agricultural finance; Managing risk and vulnerability (insurance and hedge funds); Secured access to land and water.
- **Fostering decentralization and empowerment of the poor** Effective institutions for local empowerment and decentralization; Forming effective producer organizations; Improving accountability of service providers.
- **Investing in core public goods and stimulating market development** Infrastructure investment; Human capacity development; Information technology; Natural resources; Effective public institutions working in partnership with private sector.

In order to get agriculture back on the development agenda the report recommends:

- Involving agricultural stakeholders in policy and investment decisions.

- Tailoring agriculture more closely to financial instruments.
- Reducing processing cost for agricultural projects by scaling up good practice.
- Identifying innovative channels to support direct investments through public private partnerships.
- Maintaining the World Bank programme to enhance quality of lending.

2.12 The World Development Report 2008: Agriculture for Development (Yellow Cover Draft)

Scope

The Yellow Cover Draft of the World Development Report 2008 (YCWDR) looks broadly at the role of Agriculture in achieving the MDG's. It has been developed through a long and broad process of international consultations. The final WDR will be published in October 2007. Consequently, this present summary and analysis of the Yellow Cover Draft may not fully align with the final report. The YCWDR looks at the justification of agriculture for development in different national and regional contexts. It then examines in detail six major areas that require attention for agriculture to play a greater role in contributing to development. Finally the report looks at what is required to implement this agenda.

Analysis

The YCWDR strongly argues that agriculture is critical for development and for realizing the MDG's. The report also argues that over the past decades, agriculture has been neglected by national governments and the donor community with the result that its potential for development has not been realized. The

report makes the case that there are many new opportunities for a market-driven approach to agricultural development. The report's focus is on livelihood strategies and pathways out of rural poverty, for people to follow. The link between agriculture and the (need for) sustainable management of natural resource management and is emphasised strongly in the report. The YCWDR recognizes the global dimensions of environmental degradation and that there should be more focus on environmental services. The dramatic impacts of environmental degradation and climate change on the poor, are also underlined.

The YCWDR analysis recognizes that, between and within countries, there is great diversity in agricultural contexts, each requiring specific and differential policies and strategies. The report makes a broad distinction between three different 'agricultural worlds': (1) Agriculture-based countries (mainly in Africa) with some 400 million rural people, (2) Transforming countries (China, India, Indonesia and Morocco, for example) with some 2.2 billion rural people, and (3) Urbanized countries (Eastern Europe, Central Asia, Latin America) with some 260 million rural people. The emerging dualism between modern agri-business and food retail systems on the one hand and traditional and subsistence agriculture on the other is highlighted in the report.

The YCWDR argues that agricultural growth is driven largely by the private sector but in order to be 'pro-poor' it depends heavily on public support. The report notes that in the countries that are most-dependent on agriculture (i.e. Category 1, above), the state and governance structures are often weakest. While the focus of the report is on agriculture for development it is also acknowledged that poverty impact will require a broad rural and social development agenda that is backed-up by institutional and governance reforms and political commitment.

Recommendations

Four key challenges are identified in the report:

- Dealing with uncertainties related to resource scarcity, energy,

climate and technology.

- Balancing growth in favoured areas with improving livelihoods in less-favoured regions.
- Connecting small-holder farmers to new market opportunities.
- Increasing productivity of subsistence agriculture and creating opportunities for non-farm activities and migration.

These challenges are translated into five pillars that underlie the proposed YCWDR strategy:

- Facilitating market chain development.
- Promoting small-holder competitiveness.
- Accelerating small-holder transitions from subsistence to market participation.
- Improving livelihoods in subsistence farming.
- Facilitating acquisition of labour skills and access to employment and migration.

The main instruments proposed to realize these pillars are shown in Box 3, along with their feasibility in terms of political support, administrative capacity and financial affordability.

The report makes the case for a more pro-poor global trading environment along with a global agenda for achieving justice and equity, managing the global commons, research and development, conserving genetic resources and environmental stewardship.

In addition to the more-technical instruments suggested in the YCWDR report, its last chapters discuss the need for improved governance at national level and the importance of a concerted global agenda. The report argues that implementation of the agenda must focus on multi-sector approaches, empowerment of farmers and producer organizations, effective decentralization, regional co-operation between countries, public-private partnerships and home country structures and initiatives. The latter refer to the need for building and embedding initiatives and structures at the national level, rather than following (international) donor 'directives'.

Box 3

Flagging the feasibility deficits of policy and investment instruments (Source: YCWDR, 2008).

Chapter (in YCWDR)	Instruments	Political support	Administrative capacity	Financial affordability
		++ very high + high 0 neutral - opposed -- very opposed	++ easy + feasible 0 neutral - low -- low	++ cheap + affordable 0 neutral - expensive -- very expensive
4	Price and trade policy	-	++	+
5	Transport infrastructure	++	+	--
	Market rules	0	+	+
	Price Stabilization	+	-	--
6	Land certification	+	-	+
	Land reform	--	-	-
	Fertilizer subsidies	++	-	-
	Rural Finance	+	-	+
	Farmer organizations	-	-	+
7	R&D	0	-	-
	Extension	+	-	-
8	Irrigation	+	-	--
	Environmental services	0	-	+
9	Education	++	+	-
	Food programs	++	--	-
	Rural pension schemes	++	-	-

3

Expert meetings



The Review process included three Expert Meetings, both internal and external Wageningen UR, to discuss the preliminary findings of the Review Team and the domains and issues along which the Team was planning to structure its report. In total the meetings attracted some 120 Netherlands' as well as international experts and stakeholders in 'agriculture for development'¹. Summary reports of these meetings are presented in the sections below.

3.1 First Expert Meeting 'Food Security and Sustainable Development'

(Wageningen, November 16, 2006)

Scope

The Expert Meeting 'Food Security and Sustainable Development' was organized to solicit views and comments in particular from staff of Wageningen UR involved in development-related research and education. Over 30 persons participated in the meeting². Four domains, pre-selected by the Review Team (Agricultural productivity, Access to services and resources, Markets for the poor and Institutions/policy), were discussed in 3 break-out groups.

Analysis (Group 1)

Group 1 started with a general discussion on the analysis framework presented in the plenary session. Although in the opinion of the group not all underlying items were labelled correctly, the group came to the general conclusion that technology options are most prominent and relevant at the local level, that policies and

institutions play important roles at local and national level and that market issues are relevant at all levels, including international. It was also noted that interventions in a single domain will not be successful: concerted actions are needed.

As to the institutions/policy domain, empowerment of farmers' organizations was considered to be the most important intervention. Farmers' organizations are expected to play prominent roles in training and technology transfer, in market issues, in processing facilities (value-adding) and in financial issues, including farmers' access to capital.

Next, the pro's and cons of local versus global markets were discussed. Some argued that local markets play a pivotal role in accessing food where others argued that global trade (agreements) have a prime effect on local agricultural development. This raised the question whether individual countries should be allowed to protect their own (agricultural) sector, or that they have to adhere fully to the WTO-treaties.

The group concluded that agriculture itself is not a target in achieving MDG1: Income generation should be central and agriculture is not-necessarily leading in income generation. To a large extent, rural income must be generated outside agriculture, as actually it is in many rural areas in Africa. Yet, some stated that the onset of economic growth and income generation should find its base in agriculture.

To stimulate agriculture, skill formation and vocational training was considered to be the most important issue. In this way the indigenous knowledge of farmers is combined with new options offered by advanced technologies.

The group had varied opinions about the need for a new Green Revolution in Africa. Some argued that technologies on the shelf are sufficient to stimulate agricultural production. Others stressed

¹ Representatives of the Netherlands' Ministries of Foreign Affairs (BuZa/DGIS), Agriculture, Nature and Food Quality (LNV) and Education, Culture and Science (OC&W) participated actively in these Expert Meetings. It should be noted however, that the outcomes of the meetings do not necessarily reflect the official policy of the Netherlands' Government or its official response to the WDR 2008.

² Participants in this Expert Meeting included staff and students of the Plant Sciences Group (PSG), Social Sciences Group (SSG), Environmental Sciences Group (SSG), Animal Sciences Group, Wageningen International and the Department for Research and Education (O&O) of Wageningen University and Research Centre. Other participants included staff of DGIS/DMW (Directorate Environment and Water) and ICRA (International Course on Research in Agriculture, Wageningen/Montpellier).

that new technologies, if tailored to the African situation, offer the possibilities. All agreed that there is still room for the lowering of production costs. In general, the group considered the term Green Revolution as burdened, conjuring to all sorts of front-end technologies in high-input agriculture, where low-input options may be more appropriate and effective in Africa. The group therefore prefers to speak of a Green Evolution rather than a Green Revolution.

As many African farmers are being –and will continue to be– confronted with disruptive conditions imposed by violence and civil strife, human diseases such as HIV/AIDS and malaria and the effects of climatic change, it was argued that adaptability to such phenomena should be leading in all interventions.

The question was raised how to access new markets. The discussion focused on the potential of ‘eco-system services’ over that of ‘agro-system services’. Africa may be very well placed to offer ecosystem services like biodiversity conservation, carbon sequestration, etc. on a global scale. On the short term however, it is not clear who will pay for these services. If developed countries do, it may result in another form of development aid and care should be taken to avoid new dependencies. If this is taken into account there may be options for Africa in the long term.

Often, legal issues are underrepresented in the development discussion, or even left out. Yet, legislation on land tenure, markets, labour and trade and business agreements –and the implementation thereof– is essential in stimulating local economies. Lastly, the group called for extra attention for animal husbandry as livestock plays an important role in the farming systems of Africa.

Analysis (Group 2)

Group 2 stated that it is crucial to recognize the multiple ways to generate income and access to food: MDG1 has too narrow a focus on food production and agriculture is not-necessarily the sector to start if the raising of incomes is the objective, neither is agriculture the main driver of change. According to the group, the

focus should be on income and not on food production. A focus on income if working with the poor implies working in marginal areas. Africa will be a net food importer for years to come but there are several –currently overlooked– agriculture-based opportunities to generate income, for example through value-adding processes, which could finance the food imports. Whether this will solve the hunger problem depends on the distribution of income opportunities. Value-adding processes include:

- Ecosystem services (including carbon credits through sequestration) involving governments, the private sector and civil society, under the condition that they get translated into local-level perspectives.
- Cash crops and commodities to be sold on regional and international markets (e.g. ornamental flowers).
- Bio-fuel crops: Agricultural technology may be a driver for improvements; wood can be produced using robot harvesting; crop-ethanol conversion to meet non-food needs, production can possibly be extended into marginal lands. However, transparency of regional and international markets is a must. Current EU and other trade rules make it difficult for Africa to trade processed food products.

The issues raised above should support and internalize the boundary conditions for sustainability through enabling market arrangements, appropriate technologies and strengthened and effective institutions. Successful escapes from poverty by means of agricultural development are then possible through strengthened local development-leadership in farmers’ organizations and co-operatives (be aware of negative experiences in the past –corruption, nepotism, etc.– and of current weak governance structures), and by building local capacity for resilience.

It was noted that the very poor and hungry, living in very marginal areas will not profit from such strategies. For them subsidies, safety nets and other redistributive strategies are necessary whereas others may survive on non-farm income or migrate.

Interestingly, the group did not consider ecosystem and climate

challenges critical issues, as they probably will be met by new technology and policy responses that will sustain agricultural output. Current conflicts in Africa are not seen as the outcome of competition over limited resources. Largely, they result from poor governance and unequal distribution of resources.

According to the group, a clearer sense of sequencing is needed, starting from where we are while respecting the heterogeneity and complexity of the problems. One should differentiate between short-term and longer-term policies.

Analysis (Group 3)

Group 3 started with a discussion on what 'agriculture' should include in terms of the varied uses of natural resources.

A broad definition of agriculture would include (reliance on) forestry including non-timber forest products-, fisheries, wildlife management and ecosystem services.

There was strong consensus in the group on the need to take a livelihood perspective in relation to rural development. A livelihoods approach has implications on how we look at higher-level issues, also because of existing diversity in livelihoods. Concepts like 'subsistence-level farmers' versus 'market-oriented farmers' are problematic. In this respect it is necessary to consider the (relative) importance of secure access to land and resources as well as on-farm versus off-farm income opportunities.

Recommendations (All Groups)

- *Empower farmers* to influence policy and to claim their rights at all levels.
- *Focus on pro-poor trade policies* A balance between liberalization and protection is needed, as are differentiated approaches in national, regional and international trade.
- *Focus on broad entrepreneurship rather than on production only* Interventions must be market-oriented:
 - Consider the importance of local and regional markets.

- Develop product and input markets.
- Consider market costs and the need for good infrastructure (roads, ports, etc).
- Stimulate equity in market access.

- *Risk management and safety nets* (The group did not reach consensus on what risks need to be included -economic risks, weather and climatic risks, etc.).
- *Focus on ecological 'modernization' rather than on sustainability or conservation* Issues and uses evolving from ecological management include 'new' ecosystem services, ecological networks, integrated approaches and redesigning ecological systems.
- *Define the focus of interventions* the poorest of the poor -who are often unreachable- or the middle-resource groups? Acknowledge the problems of the 'hidden poor' in areas that seem affluent.
- *Challenge production technologies to ensure sustainable production* in an ever-changing environment (changing demands, technologies and opportunities -e.g. bio fuels-).

3.2 Second Expert Meeting: 'Rethinking Agriculture in Development'

(Kijkduin, December 14, 2006)

Scope

The second Expert Meeting 'Rethinking Agriculture in Development' was organized jointly by Wageningen International and the Review Team to provide a broad platform where experts from Dutch NGO's, the government, (international) knowledge institutions, private companies and civil society could discuss the putative role of agriculture in development. The summaries of the reports subject to the present Review (see Chapter 2) were used

as input for the discussion. These summaries were grouped into two: (1) Report-based observations and (2) Emerging Issues, as perceived by the Review Team. As in the first Expert Meeting, group discussions were arranged around the four domains distinguished by the Review Team: Agricultural productivity, Access to services and resources, Markets and Institutions. Background information and a full report of this Expert Meeting are available at: <http://portals.wi.wur.nl/rethinkingagriculture/>. Below, summaries of the discussions are given, by domain:

Domain 'Agricultural productivity'

Report-based observations

- The productivity of agriculture in Africa must increase.
- Agricultural research and development are important, but they cannot be the driving force.
- Priority R&D investments are required in soil, water and planting material.
- African countries must take their own responsibility, also financially.

Emerging issues

- Livelihoods are leading.
- Market-led sustainable intensification is a key concept for agricultural development.
- From 'silver bullets' to 'best fits'.
- Locally-tailored approaches are needed.
- Capacity building is a 'given' and priority requirement.
- Enabling pricing structures to make agriculture profitable: How realistic is this?

Summary of the discussions

- There is consensus among the group that, in developing countries, agricultural productivity must increase: It stimulates rural development and it helps to feed a growing population.
- Aggregated analyses will not work. For instance, the current increase in labour productivity in Cameroon rivals that in the best-performing OECD-countries. Yet, in Cameroon this does not

lead to economic growth as is often assumed.

- The group strongly supports endogenous growth in agriculture: "It all comes down to the adoption of technology."
- Market-led intensification is not necessarily sustainable, as the cooking-banana example in Uganda shows.
- Reducing transition costs is an important driver to stimulate agriculture: Investments in roads and other physical infrastructure may be more effective than investments in technology or in fertilizer programmes.
- Mineral soil fertilizers are back on the agenda. Yet, much of the effects of fertilizer and its true costs are still unknown and need attention. Other inputs like water are equally important, but they are already on the development agenda.
- Micronutrients are an important soil fertility issue as well: Very poor soils may require specific fertilizers enriched with micronutrients. Adding these may eventually result in better human nutrition.
- Why is it that, in Africa, the private sector market doesn't pick up the fertilizer issue? What are returns on investment?

Critical factors

- Technologies depend on what the rural populations will be addressing.
- Why do we not always see the effects we expect?
- If market-led agricultural intensification is the way forward, why not let markets do the job?
- Collection and interpretation of reliable data is important for analyses, for correcting wrongly-stated conclusions and for support to policy development.

Domain 'Access to services and resources'.

Report-based observations

- Services for market-oriented agricultural productivity and for social protection are complementary.
- Sector integration is essential.
- Sustainability is not optional. It is a guiding principle in the

development of access resources and in service provision.

- Public administration ('governance'), and the efficiency, fairness, and capacity of local justice systems must be improved.

Emerging issues

- Who should develop access to resources and provide services, and how to improve these?
- What are the tensions between market-led development and the sustainable and equitable management of natural resources?
- What is the (new) public role in the development and enforcement of IPR services with regard to the generation of knowledge and innovation by farmers, artisans and communities?
- Who pays, for what?
- Who is responsible for outcomes, at what scales? Are risk management and compensation mechanisms necessary when experimenting with models of service provision and resource access?
- Who bears the risks of market failures, and how should these be compensated?
- How are public goods defined? What kind of services do they require?
- How can inequities in access, control, and management of natural resources be addressed? How might the rights of poor people be sustained?

Introduction to the discussion

In a short introduction to the Group discussion it was stressed that the reports studied are rather generic in their ways of addressing issues related to (access to) services and resources. The reports focus mostly on supply-side interventions: Make provision of services more effective through market-driven interventions and develop tradable rights to access to natural and economic resources.

The reports generally come up with long wish lists of what should be done, including: (i) providing access to land and other natural resources, education, social infrastructure and (ii) support and strengthen services in health, finance and credit, market

information, value-adding technology, research, etc.

The reports signal that international markets are difficult to access for the poor and for poor countries. The latter find it difficult to participate effectively in international trade and regulatory negotiations. NGO's and CSO's as well, are insufficiently represented in such negotiation platforms.

Summary of the discussion

In the discussion the example of (access) to credit was brought forward. It was observed that in many market-oriented development projects credit facilities are hardly incorporated, if at all. In terms of addressing the real needs of farmers, such projects do miss the point also with regard to ensuring sustainability upon termination of the project. The same applies to other services, and the perception is that it is often assumed that such services will be provided through autonomous private-sector initiatives. Otherwise, the perception might be that the public sector would come in if the private sector fails to do so. If this occurs, however, it is generally in settings of poor socio-economic conditions and marginal ecologies where the public sector is inherently weak. This leads to vicious downward spirals.

A second discussion issue was the lack of uptake of technologies provided through the research-extension continuum due to a weak institutional setting. This calls for full inclusion of training, capacity strengthening and institutional development components in development policies, programmes and projects.

A last discussion issue centred on -what was called- 'globally-shared but fashionable and institutionalized insight on new foci for development'. As an example the currently widely-accepted idea that international trade chains are 'good for the poor' and for economic development in poor countries, was mentioned. The group concluded that in developing such chains full attention is needed for their possible local impact on social structures and stability, social-economic equity and ecological quality. Here too, access to (local) services and resources may be at stake.

Recommendations

- In policy formulation and implementation it should be recognized that (access to) services and resources are conditions for development, and need to be taken fully into account.
- Design and apply long-term strategies for development that recognize and address the sequential elements inherent to development processes.
- Possible local impact on social structures and stability, social-economic equity, ecological quality and access to (local) services and resources are dimensions of international chains which should be fully taken into account in project design and implementation.

Domain 'Markets'

Report-based observations

- Farmers' capacities to operate in markets by applying a commodity chain approach must be increased.
- Africa is currently a net food importer. As Africa shifts to producing more non-food products and services, its dependency on imported food will increase even further.
- Markets need to be facilitated through national and international policies.

Emerging issues

- Livelihood frameworks are leading. Livelihood approaches pursue a focus on households and this should include informal activities as well as markets for non-agricultural products.
- Tailored approaches are required. The actual context is crucial, including the various institutions at stake, such as the availability of financial services, formal legislation and informal use of contracts, land tenure regulations, etc.
- Level playing grounds are needed, but how to create them for realizing pro-poor market development?
- What are markets? Market concepts are assumed, not defined. How does market theory relate to reality? How do markets function?

- What are the roles of governments and other public institutions in creating/facilitating pro-poor markets?
- How to address the existing contradictions in market relations at local, national, regional and global level?
- To what extent can profit-seeking market actors be persuaded -or forced- to internalize social and environmental costs?
- In the light of climate change scenarios and geo-political risks, are strategies based on global agricultural trade, or on food imports, secure and sustainable?

Introduction to the discussion

In the introduction to the discussion of the Markets domain, it was stated that all reports reviewed include 'at least something' on pro-poor markets. The focus then, is either on technologies or on markets and market access as drivers of development. Moreover, where the focus is on markets and market access it is done so in the context of the (commodity) chain as a whole, interlinking the different levels and actors. The discussion concentrated partly on the sharing of experiences regarding the critical changes at hand, and partly on the generation of suggestions for policy makers.

Summary of the discussion

- Access to international agricultural markets is relevant only for a small number of people in developing countries and often the risks attached to accessing these markets are higher than the benefits. Market access is relevant if one has something to sell (niche products?), and then only if the selling price is well above production and transaction costs.
- Markets and market access involve broader issues than just international trade, it also includes local and regional markets.
- Critical issues for local enterprises are how to enlarge their markets, for farmers how to organize themselves in order to create a successful collaboration.
- It all comes down to inclusion and exclusion and the distribution -or rather, the concentration- of power in the market chain. The rapid expansion of supermarkets in many developing countries serves as an example. In the end, who is allowed to

supply, who decides on this? Crucial is the empowerment of farmers –through capacity building- to negotiate and participate successfully in markets. Markets should generate fair prices, but currently that is often not the case. In such a perspective the farmer fails to see fair results from market-related negotiations.

- A focus is needed on the diversity in local situations. Often, well-intended interventions do fail because of limited access to land. Rwanda, for example, has a high agricultural production and almost all land is under production. Fragmentation of land is a real danger now, and may lead to dynamics at family-farm level that will generate more poverty.
- Africa's aggregated annual food import amounts to some US\$ 4 billion, next to food aid supplies of US\$ 16 billion: Agriculture should have a firm place in Africa.
- Africa is a food-importing continent, what about non-food production in Africa: Is this a realistic option, or is it simply too risky?
- (Foreign) investments in knowledge and technology development are crucial in triggering market-led development in developing countries.
- More transparency in international trade is required. It is interesting to note that the private sector's involvement in development issues is on the rise. Also, private companies are increasingly taking their responsibility regarding the impact of their operations on development. Interactions in the area private-public-partnerships are growing. An example in case is the collaboration between Oxfam and Unilever in Indonesia, reviewing Unilevers' impact on poverty. Another example is in Mali, where Albert Heijn is actively supporting the supply of quality mango's to the Netherlands.
- In Africa, as elsewhere, farmers often generate their incomes from diverse sources. Their main question is how to generate enough money from these sources, for sending the children to school.
- Agriculture does not only embrace primary production but also agro-processing and trade. Small-scale (agricultural) enterprises

deserve more and specific attention as they generate employment beyond the level of unskilled labour. Moreover, agriculture is physically linked to rural areas. These provide a place to live, the basis for livelihoods, as well as 'green services' to the local population.

- There are examples where developing countries develop their agriculture around other than food crops such as flowers, off-season fruit, and oil seeds. These crops show are higher production increase than food crops. There is a competition between food production and producing for export; generally the support (including subsidies) is mainly orientated towards exports.
- International food prices, such as those for wheat, are simply too low to stimulate local production in developing countries (which have liberalized their markets).
- Exports sometimes imply price increases on the local market, and local consumers suffer.
- There is a contradiction in the fact that governments invested a lot in public-private partnerships whereas the private sector claims that money is not the main problem: It is more about finding reliable partners, developing partnerships and capacities and building effective institutions. Policies should respond to these needs.

Recommendations

- More insight is required in how markets -African markets in particular- function: Presently this is not clear enough.
- Further insight is also required into the process of sustainable market access: How to ensure inclusion of the poor?
- Set light on the economic dimension of decentralization policies.
- How to start successful initiatives in the public-private partnerships arena; How to make these efforts sustainable and how to improve the performance of the schemes?
- Define the roles of government and private actors in public-private partnerships. Stop looking at governments as sources of subsidy. Which approach generates sustainable results?

Domain 'Institutions'

Report-based observations

- Priority for creating enabling conditions for market participation by the poor including the management of risk.
- Priority for creating a more supportive regional and international trading environment.
- Improve conditions for private-sector participation and investment.
- Develop mechanisms for internalising environmental and social costs in the market and responding to climate change.
- Redefine the role of the state and developing public, private and civil society partnerships for pro-poor development.
- Increase the international investment in demand driven and participatory agricultural research and development.

Emerging issues

- Little attention for environmental and social aspects of markets.
- No impact of interventions without institutional reforms.
- How to empower poor producers to the point where they can influence policy.
- How to bring about change in the context of failing states and poor governance?
- How realistic is it to internalize environmental and social costs in markets and what are the examples of success and failure?
- Is the idea of public private partnerships to support pro-poor growth rhetoric or reality?

Summary of the discussion

- Put the Dutch experience in practice: Coherence between policies of LNV and DGIS is required to put agriculture back on the agenda; Create a functional collaboration.
- How to manage political and social contexts? How to develop or change institutions?
- Try to be clear about what you mean by institutions: (i) institutional environment involves the formal and informal laws, socio-political and cultural norms, and (ii) institutional arrangements involve organization, exchange of relations and networks.

- While working on institutional change, it is important to (i) recognize institutions as the result of historical processes, (ii) develop research methodology to learn from changes in institutional environment, and (iii) apply action research that looks for potential for change: “projects that actually achieve something”.
- How can agricultural growth affect the entire institutional environment?
- In the absence of good governance, efforts to change institutional environments require emphasis on joint and interactive learning among actors ('innovation system perspectives') as well as donor insistence on local ownership.
- Institutional constraints may be symptoms rather than root causes.
- Institutional development activities need to be context-specific. Avoid blanket recommendations.

3.3 Third Expert Meeting: 'Commenting on the Yellow Cover Draft World Development Report 2008: 'Agriculture for Development'

(The Hague, April 17, 2006)

Scope

The third Expert Meeting 'Commenting on the Yellow Cover Draft of the World Development Report 2008' was organized within the context and mandate of the Agri-Profocus partnership³. The lead for organizing this event was with Wageningen International⁴, Oxfam-Novib, ICCO and the support office of Agri-Profocus. Some 60 persons representing 21 different organisations⁵ participated. Prior to the meeting background documents had been prepared

on seven themes reflecting key issues in the YCWDR report: (1) Trade and development, (2) Market Inclusion, (3) Food Security and Marginalization, (4) Natural Resources and Climate Change (5) Access to Services, Resources and Assets, (6) Role of Science and Technology and (7) Governance, Policy and Empowerment. These documents served as input to the discussions.

Deliberately, no attempt was made to reach full consensus on the outcome of this Expert Meeting. The intention was to provide a diversity of views from Netherlands-based stakeholders. There was however, much commonality in the perspectives and concerns raised by the participants. A summary of the discussion is presented below. The meeting resulted in a set of recommendations, which were made available to the Chief Editor of the WDR Report (see Section 'Recommendations' below). Background information and a full report of this Expert Meeting are available at: www.agri-profocus.nl/detail_event.phtml?act_id=117&banner=banner2

Summary of the discussion

All welcomed that the WDR 2008 will have its focus on Agriculture for Development. That the neglect of agriculture has been so strongly taken up by the Report is seen as a critical milestone for development and extremely timely. The WDR frames agriculture as part of the solution for poverty reduction, rather than being the problem. The message that, consequently, strong public sector support and investment is required to create the conditions for effective engagement of private and civil society actors was very

strongly supported.

The report gives much information and raises a broad range of issues and angles on agriculture for development, creating a rich mix for policy making. The recognition given in the Report to the importance of issues such as: environment; climate change; role of producer organizations; gender; food security; political economic constraints; governance; market failure; diversity of rural contexts; and empowerment is seen as a fundamental strength of the report. The Report offers a solid basis for further elaboration and analysis. That the report has been developed with considerable consultation was acknowledged and appreciated. There is, however, concern that the strategic implications of the issues raised have not been sufficiently followed through on and not always coherently integrated.

It was recognized as being very important that the Report receives the level of support and acknowledgement required for it to have a strong influence on policy making and drive renewed support for agriculture all levels. The comments given here are very much in the spirit of supporting the focus on the Report on reinvesting in agriculture for development. However, there was wide agreement that the Yellow Cover Draft Report does have a number of significant shortcomings. It is considered important to redress these in the final version to ensure relevance for the key actors whose support will be critical in implementing the reports general thrust. It was noted that, in the Draft Report, the World Bank, with so much wide and long experience on the topic, insufficiently drew on lessons from the successes and failures of

³ Agri-Profocus is a non-governmental partnership organization with membership of over 20 Dutch organizations involved in 'agriculture for development'. These include knowledge institutions, development NGO's, farmers' organizations and credit institutions. Agri-Profocus offers a platform for joint action, joint learning and debate on agriculture and development with a focus on producer organizations. Agri-Profocus is financially supported by the Netherlands' Government.

⁴ Wageningen International is the international office of Wageningen UR and includes the 'Programme for Capacity Development and Institutional Change'.

⁵ Agri-Profocus (see Footnote 3), Agritertra (Development wing of Netherlands' Farmers Organization LTO), Both ENDS (Environment and Development Service-NGO), CIDIN (Centre for International Development Studies Nijmegen, Nijmegen University), Cordaid, DGIS/Netherlands Ministry of Foreign Affairs; ECDPM (European Centre for Development Policy Management); ICCO/Kerk-in-Actie (Inter-church organization for development co-operation); ILEIA (Centre for Information on Low External Input and Sustainable Agriculture); ITC (International Institute for Geo-Information Science and Earth Observation); KIT (Royal Tropical Institute); LNV (Netherlands' Ministry of Agriculture, Nature and Food Quality); LTO-Noord (Farmers' Organization of the Northern Netherlands); MVO (Commodity Board for Margarine, Fats and Oils, the Netherlands); Oxfam-Novib; PSOM/OS; SNV (Netherlands' Development Organization); SOMO (Centre for Research on Multinational Corporations); SOW/VU (Centre for World Food Studies, Free University Amsterdam); WI (Wageningen International); Wageningen UR (Wageningen University and Research Centre); ZLTO (Farmers' Organization of the Southern Netherlands).

investments in agriculture over the last 25 years, since the former WDR on agriculture. A significant concern was that as it stands the Report may not capture the opportunity to more fundamentally challenge the way the world is choosing to tackle poverty, human rights abuses, environmental degradation and climate change and the future risks these problems herald.

Recommendations

The majority of those involved in the Expert Meeting considered that the relevance and influence of the Yellow Cover Draft World Development Report should be strengthened by:

- *Providing an overall conceptual framework* that coherently links the different dimensions of the report and which makes underlying political and economic assumptions more explicit. For a sound conceptual framework the definition of poverty should be further elaborated as it is now overshadowed by the definition of the so-called three worlds.
- *Presenting a more balanced perspective* on the advantages, disadvantages and risks of trade liberalization for agricultural based economies and the poor. In particular, recognition should be given to the counter arguments and evidences of the benefits of trade liberalization. This would ensure space for future debate, policy making and regulation that enables governments and stakeholders to consider wider sets of policy options. The underlying assumptions and limitations of model-based projections for economic development should also be made explicit.
- *Focusing on the entire MDG1*, so as to include issues of food security more comprehensively. In particular this means recognizing that food security is a complex issue that demands a wider set of strategies than just raising household income levels through market driven development. Further, a broader range of technological innovations should be considered that could meet food security.
- *Including a value chain perspective* and consequently giving more attention to the influence of consumers, retailers, the food industry, agribusiness, traders and other actors in shaping the way markets may work for -or against- poverty reduction, human rights and environmental sustainability.
- *Taking the severity of climate change, environmental degradation and resource scarcity much more seriously* including the subsequent potential for massive economic, social and political disruption as well as the investments in adaptation that will be needed. Additionally, be consistent in seeing agriculture as a multi-function activity to make the link between agriculture and biodiversity conservation more evident and to address possible trade-off issues that may emerge.
- *Considering morerigorously how market failures and externalities* could be comprehensively internalized into local, national and global market systems.
- *Further elaboration of the political-economic perspective* in terms of the power, interests and influence of different actors in global markets, the retail sector, food industry and agribusiness in particular. The role of governments in dealing with these interests from the perspectives of sustainable agriculture and protecting people's rights needs to be more explicit.
- *Stronger discourse on the significant potential for future conflicts*, at all scales, driven by resource scarcity, growing inequality and limited access to opportunities. It should be used as a justification for the reform of governance systems at global, national and local levels.
- *Providing a fuller account of the opportunities and constraints facing producer organizations* in meeting the expectations established for them in the report. The conditions and capacities required for producer organizations to play service-delivery, policy-advocacy and empowerment roles need to be more explicitly established. More attention should be paid to producer organizations as democratic forces, being representatives of non-government segments and playing a key role in the production, processing and servicing aspects

of agriculture. Enhancing the effective role of producer organizations should be included in the pillars of agriculture for development.

- *Being more explicit about the potential role of the private sector and public-private partnerships* in service delivery and the necessary conditions and incentives required for private sector engagement in pro-poor development, particularly in highly marginalized areas.
- *Further elaboration of the differentiation approach within countries* (as was done between countries) would provide a more convincing perspective and strategy of how to approach development in marginal areas and for marginalized groups.
- *Elaborating the full gender implications* in terms of household dynamics, market access, changing labour and migration patterns, land tenure issues, trade liberalization and access to financial services.
- *Providing a more-differentiated analysis of the science and technology* needs for the three different worlds and for dualism between subsistence and market-oriented producers. Specify the institutional innovations required to ensure the uptake of science and technology output to support development goals.
- *Giving recognition to the importance of science and technology* for a broader range of overall chain management functions including post harvest management, value-adding processing , environmental management, mechanization and ICT-based market information, rather than the current over-emphasis on genomics. Anchor S&T within an institutional innovation context.
- *Giving more attention to the reform of global governance systems to mitigate global-level social, environmental and economic market failures and externalities* In particular, the constraints of the current global system for reforming governance systems at national and local scales -to be more socially just and environmentally sustainable- need recognition.
- *Deeper analysis of the importance of multi-actor local*

governance systems that can strengthen accountability and bring about bottom-up participatory policy development. While the Report argues for empowerment to influence agricultural policy and service delivery the political and governance implications of this could be further worked out.

- *Stressing the risks and costs of first-generation bio fuel production* and the need to devote R&D and investments in speeding-up developments in second generation of bio fuels. The latter should offer more hope in poverty reduction without the risks of increasing competition between food and fuel and related environmental degradation.

Conclusion

The breadth and range of the issues covered by the YCWDR seem to be both the report's strength as well as its weakness. Many doors are being opened but the policy and strategy implications are not sufficiently followed through or they take a limited perspective. This may leave the report open to the critique that it "uses the right language" while implicitly advocating a "business as usual" approach. The need to deepen the main strategies recommended by the Draft Report was explicitly recognized by the participants of the Expert Meeting, as was the need for an outline of an implementation agenda. Lastly, it was noted that more needs to be done to present the key messages and policy implications of the WDR 2008 in a format and style that will gain the attention of policy makers and of the public at large.

4

Synthesis



4.1 Analysis framework

There seems to be little doubt that agriculture is to play a pivotal role in reaching MDG1. The OECD report shows that the poor benefit more from agricultural growth than from growth in other economic sectors. The OECD report further argues that, historically, agriculture has been the motor for the economies in most of the developed countries. DFID states that agricultural exports have been the major source for growth in forerunner African countries. DFID also suggests that this is a promising avenue for growth to the whole of Sub-Saharan Africa. Next, the African community itself is acknowledging the important role of agriculture: The CAADP report states that any initiative under the NEPAD framework should be supportive of, or compatible with, agriculture given its fundamental role in Africa's economic development. An inventory of USAID summarizes 69 studies (!) dealing with hunger and poverty in the world. The starting point of the USAID study is the importance of agriculture for development, as illustrated by a quote in its introduction:

...“Although in the longer term a broad transformation and diversification of rural economies away from a strong dependence on agriculture is desirable, more immediate gains in the welfare of poor households are more likely to come through the poor overcoming some of the critical constraints they now face in meeting their basic needs through agriculture. Thus, a necessary component in meeting the MDG's by 2015 in many parts of the world is a more productive and profitable agricultural sector (World Bank 2005)”...

This quote points at an important aspect by not focusing on agricultural productivity only, but on agricultural productivity and profitability. This notion is shared by most of the other studies reviewed. Both the OECD and DFID reports emphasize that not agriculture itself, but livelihood is the central issue. In addition,

DFID states that agriculture provides more than food alone: it contributes to national economic growth, to better livelihoods of people -the poor in particular- and to provision of environmental services. In this respect DFID advocates a chain approach, focusing on agricultural productivity, processing and marketing of crops. The three break-out groups in the Wageningen Expert Meeting came to the same conclusions.

Even though agriculture is considered to play a key role in economic development, the DFID report in particular, states that agricultural growth is not a panacea by itself. When an economy develops, the importance of agriculture will decline. This observation further underlines the importance for development policy not to focus solely on agricultural productivity, but to address the entire supply chain.

Various reports warn for an oversimplified general approach. The first guiding principle of DFID states that any intervention should match the development stage of the country concerned and reflect the particular role of agriculture at that development stage. The InterAcademy Council report recommends acknowledging the existing farming systems and tailoring actions for the specific systems.

A recurrent issue in the reports is the need for an 'African Green Revolution' for which in particular the Halving Hunger Report calls when quoting Kofi Annan:

“The Green Revolution (for Africa) would involve, among others, proven techniques in small-scale irrigation, improved food crops, restored soil health, increased rural productivity and access to information technologies. Taken one by one such solutions are bound to remain inadequate”.

Others argue that a variety of interventions are needed and that a Green Revolution is too narrow and too much technology-driven to achieve the necessary break-through. Participants in the Expert Meetings pointed out that the term Green Revolution

is burdened and should be avoided. The term ‘Green Evolution’ or -in the words of the InterAcademy Council- ‘Rainbow Evolution’ is more appropriate as these reflect much better the variety of interventions that are needed.

All reports agree that there is no silver bullet for reaching a more profitable agriculture. Interventions are needed in different domains and at different spatial, time and governance scales. Most reports argue that concerted actions are necessary to make interventions effective. The interventions recommended by the various reports are manifold. For the sake of analysis the Review Team has grouped these recommendations into four different domains: (1) Increased agricultural productivity, (2) Providing access to resources and services, (3) Markets, and (4) Institutions. As visualized in the figure below, the latter domain is cross-cutting, as ‘institutions’ apply to, and do affect, all other domains.



We realize that reality is more complex. Some technology options affect markets directly, whereas some markets, input markets in particular, determine the potential of technology and the need for resources and services. Yet, we are convinced that the framework did help us to structure our analysis. Similar approaches have been followed in most of the studies we have reviewed.

4.2 Domain 1: Increased Agricultural Productivity

REPORT SYNTHESIS

Productivity must be enhanced

Most studies agree that agricultural productivity must increase in Africa and other poor regions. The Halving Hunger report considers raising the productivity of crops, vegetables, trees and livestock of small-scale farming families as a major priority. The report concludes that agricultural productivity must be increased at community level. Most reports also agree that markets should be leading in increasing agricultural productivity. The IAC report recommends adopting a market-led productivity improvement strategy. This strategy is required to achieve balance between supply and demand and to provide an incentive for farmers to close yield-gaps. The OECD report recommends to link enhancement in agricultural productivity with market opportunities. One of the leading principles of DFID is that agricultural development must start with, and build on, the market demand for agricultural produce and emerging market opportunities instead of focusing on the production side.

All the reports that we reviewed acknowledge, without exception, the role which technology can and should play in alleviating hunger. Yet, the extent of the role and the way technology should be implemented varies between the reports. Most studies agree that a technology-driven approach is not suitable. DFID concludes that technology solutions -which were very successful in Asian countries- cannot be transferred to the African situation. While the Asian success was based on improvement in irrigated agriculture, the potential in Africa for such irrigation is limited. OECD argues that the current context for agriculture is fundamentally different from that of the Green Revolution era. OECD advises to prioritize technologies with the greatest potential to reduce poverty through their contribution to economic growth and employment, and to address longer-

term issues including HIV/AIDS, changing market conditions and climate change. In other words: Technologies are essential for reaching the MDG's, but will not be the driving force to do so.

Who will pay?

Many reports call for higher investments in agricultural research and development. R&D is one of the four pillars of the CAADP. The report estimates that an additional US\$ 4.6 billion in African agricultural R&D is needed (2002-2015). The IAC report recommends increasing support for agricultural research and development, but decreasing the donor dependency. Presently, over 40% of the R&D investments in Sub-Saharan Africa come from the international donor community. The IAC report encourages national governments to invest in their own future by enhancing the share for agricultural R&D from 0.8 to 1.5 % of their agricultural GDP. The Halving Hunger report suggests that African countries invest at least 10% of their national budget specifically in agriculture and at least 2% of the agricultural GDP in national agricultural research by 2010. They also recommend that the donor community increase the CGIAR funding to US\$ 1 billion by 2010. DFID recommends increasing the financial support to (public) agricultural research and technology, and work at the same time to improve poor people's access to research findings. So far, R&D in developing countries depends heavily on public funding and private-sector investments in African R&D largely lag behind those in developed countries. OECD observes that producers lack access to essential services (including knowledge) and that the private sector does not fill this gap due to a number of risk factors. CAADP strives to increase the share of private investment in research, which currently amount to some 2% only.

Several reports underline that any technology option should be rooted in the African community itself. MAPP calls for stakeholder participation in the definition of research priorities and in system governance to ensure that research programmes and their results are relevant to the stakeholders' concerns, including social and

environmental objectives. The IAC report recommends building on the indigenous knowledge of African farmers. According to CAADP, R&D should make use of the most appropriate mix of traditional, non-traditional, exotic and indigenous species, varieties and breeds suiting the economic and ecological circumstances of the farmers. R&D should lead to interdisciplinary and practice-oriented capacity building via a sustainable system of research (NARS, FARA and the Sub-Regional Organizations and CGIAR centres). DFID too, recommends investing in the generation and dissemination of agricultural technology through CGIAR and other research organizations.

Priority investments in soil, water and planting material

In general, three major priorities for R&D are highlighted in the reports. Many reports call for the urgent restoration of soil fertility. The CAADP recommends that Africa's largely-untapped agricultural potential should be used through integrated approaches combining increased use of organic matter, mineral fertilizers, hybrid seeds, irrigation and mechanization. The Halving Hunger report suggests restoring soil health as the first entry point. This can be done by applying combinations of mineral and organic fertilizers. To make fertilizers available, the Halving Hunger report recommends targeted subsidy programmes in critical situations. The IAC report observes that there is a predominance of degraded soils of poor inherent fertility and that rainfall is erratic. These are two decisive limiting factors for agricultural productivity. The IAC report recommends reducing land degradation and restoring soil fertility.

A next generally-recognized priority is water. As stated above, the CAADP calls for concerted actions involving water management. They recommend increasing the area under irrigation through on-farm and small-scale irrigation. The IAC report considers large-scale irrigation not feasible in large parts of Africa. They also suggest recognising the potential of rain-fed agriculture and prioritising it. In addition, small-scale irrigation systems, managed by the local community, are helpful. Further, the Halving

Hunger report recommends improving and expanding small-scale water management. DFID is more generic on the water issue, by advising support programmes to improve poor peoples' access to water resources.

The third priority often mentioned is access to high-quality planting material. Breeding has been a strong driving force for the Asian Green Revolution and is considered to have high potential in the African situation as well. DFID recommends improving farmers' access to high-quality seed by supporting initiatives such as the Seeds of Development Programme. The IAC report advises to bridge the genetic divide and ensure that Africa benefits from the opportunities which biotechnology is offering. The Halving Hunger report also recommends improving access to better seeds and other planting materials. Both the IAC and the Halving Hunger reports consider genetically modified organisms as options for Africa. According to the Halving Hunger report, breeding should not only focus on increased productivity, but also on bio-fortification.

A further priority, called for by IAC and CAADP, is mechanization. The interventions listed above focus specifically on increased land productivity. Mechanization primarily deals with increased labour productivity. Although mechanization is most effective in large-scale monocultures, the IAC report points at the importance of current farming systems in Africa and recommends developing small-scale, local mechanization tailored for the current agricultural practice. Mechanization is also important in view of the decreasing labour force due to HIV/AIDS and malaria.

Several reports stress the importance of information and communication technology (ICT). The Halving Hunger report recommends to use ICT for data collection, monitoring and evaluation of the effectiveness of investments in R&D. The World Bank report, the IAC report and the CAADP all suggest that ICT can be used to make market information available to farmers and producers. The IAC report adds that ICT can assist farmers in making correct decisions by providing access to extension services and advanced decision support systems.

Agricultural production must be sustainable

DFID formulates the principle that sustainability is not an optional issue. The sustainable use of natural resources and other productive resources must be ensured. This principle is widely acknowledged by most reports. The Halving Hunger report concludes that the degradation of natural resources -often in combination with loss of biodiversity- directly threatens the food security and income of poor people. The IAC report recommends pursuing a strategy of integrated sustainable intensification, based on agro-ecological principles. The report advises to explore higher-scale integrated catchment strategies for natural resource management. As Africa is still extremely rich in biodiversity, conservation, sustainability and equitable use of biodiversity should be promoted. DFID recommends supporting international efforts to prevent the loss of genetic diversity in important food crops and animals and to ensure bio-safety.

EMERGING ISSUES AND QUESTIONS

Livelihood is leading

There is general consensus among the reports that agriculture must be considered in the framework of the 'extended livelihoods' of the people in rural areas. Alternatives for income generation both within localities (often largely in agriculture) and further afield (often in urban centres) must be considered in relation to future trajectories for farming. Thus, enhancements in productivity must be seen more in terms of 'productive livelihoods' than as increased production in terms of yield per hectare. For instance, labour productivity is a key indicator, although full cognisance of the gender divisions in tasks within households must be taken into account. Further, enhanced productivity must be seen within the broader multi-functionality of (agricultural) land and all of the broader ecosystem services provided that are essential to sustain healthy livelihoods for the rural poor.

Agriculture can play various roles

Vivid discussions arise when the role of agriculture in economic development is addressed. Some argue that increased agricultural productivity is the cause of economic growth, whereas others consider increased productivity as a result of economic growth. The reality is more complicated and depends, among other things, on the nature of the agriculture considered. In many agriculture-based countries, subsistence farming will continue to be the leading practice for generations to come. Increased agricultural productivity will raise income or free time of farmers and thus stimulate off-farm economic activities. Commercial- or market-oriented- agriculture is an attractive option in economically more-advanced countries. It will be clear that this kind of agriculture is stimulated by economic growth.

One of the new challenges for commercial agriculture in developing countries is the increased global need for bio-based products like bio fuels. Prices of commodities may rise dramatically in the years to come, encouraging many countries to invest in the cultivation of bio-fuel crops and aim at self-reliance rather than self-sufficiency. The question how this affects subsistence farming, food production and environmental services may rapidly become urgent and need to be addressed.

From 'silver bullets' to 'best fits'

There is broad consensus that land, water, and labour productivity must be enhanced in Sub-Saharan Africa. Africa's agriculture is highly diverse, with major farming systems matched to the major agro-ecologies. Within each of the broad classes of farming systems, substantial variability exists. Within any given country or region there are also localized agro-ecological gradients, and large differences exist between regions in terms of access to markets. Within every village or pastoral community a wide diversity of farming livelihoods can be found that differ in production objectives and in wealth and resource endowments. In relation to inherent productivity, native soil fertility is less than half that found in Europe, as the vast majority of soils are relicts of 2-billion year old granites, and have few nutrients left. Where younger, volcanic soils occur these are inherently richer in nutrients, but have their own soil fertility problems as they generally fix phosphorus strongly. Soil fertility is also extremely heterogeneous at more local scales: Differences in soil organic matter between the fields of small farms in Kenya or Zimbabwe over distances of only 50-100 m are as large as the differences between the most fertile and least fertile soils at regional or continental scale across Africa.

This heterogeneity in farming systems and potential productivity

Box 4

Market-led sustainable intensification

The increasingly dominant paradigm for enhancing agricultural productivity is that of 'market-led diversification and intensification'. This can happen spontaneously through farmer-based innovations, leading to sustainable new production systems. Linkage to export markets (particularly for cash crops such as cotton, tobacco, etc) also can provide the opportunities for purchasing fertilizers to drive-up productivity. However, not all market-led intensification leads to sustainable production

systems. A good example is the influence of urbanization on developing the market for cooking bananas (matoke) in Uganda. Rapid economic growth, with a concomitant increase in the population of Kampala has led to a rapid expansion of the market for matoke in the city. This results in a one-way nutrient transport in the cooking bananas to the urban centre, as the bananas are produced in traditional systems with virtually no addition of fertilizers. Thus decline in banana production is likely (and already appears to be happening) unless alternative methods of soil fertility management are found.

must be embraced in any approach to enhancing agricultural productivity. It is clear that ‘one-size-fits-all’ or ‘silver bullet’ solutions that are generally applicable simply do not exist. Whereas much of what is written on technology development for enhancing productivity refers to baskets of technologies among which ‘best bets’ can be identified for certain farmer groups in certain regions, a better conceptualization is to think of ‘best fit’ technology options for any given situation. Along this line of thinking, Ojiem (2006)⁶ derived the concept of the ‘socio-ecological niche’ for targeting of technologies, taking cognisance of the need to recognize heterogeneity among and within farms.

A role for GMO’s ?

Much is written on the potential and the problems of GMO’s in food production, resulting in a highly polarized debate. Although most developments in biotechnology to date are more geared towards high-input agriculture systems, some might provide environmental and health benefits for smallholders if dependence on agrochemicals would be reduced and if cost-price ratios are more beneficial than existing practices. Developments around intractable problems, such as the parasitic weed *Striga*, may depend on genetic manipulation approaches to achieve resistance as part of integrated control packages. These developments need to be closely monitored and evaluated in terms of the pro’s and con’s on the basis of individual cases and actual contexts of use. In order for the GM-potential to be realized in the small-scale farm sector major changes in intellectual property rights regimes would be needed.

Limited potential of irrigation

Riverine and ground water resources in Africa are less-widely distributed and less abundant than in other continents. Grazing, forest growth, and farming remain largely rainfall-dependent. Rainfall intensities, occurrence, and timing are highly variable -if not erratic- between and within seasons. Localized opportunities exist for tank or gravity irrigation, in-field water harvesting and

numerous small-scale water conservation measures. Many of these are based on indigenous skills and techniques and they can be further developed. In general however, irrigation is unlikely to play a major role in farming in Sub-Saharan Africa, with the exception of the river systems of the Nile, Senegal, Volta, Niger and Congo rivers, and lakeside cultivation. The current management of riverine and lakeside systems is sub-optimal and associated with serious health and environmental problems.

Many reports recommend small-scale irrigation schemes as a means to enhancing productivity. Such schemes however have a patchy history due to the lack of attention to institutional aspects, whereas some indigenous technologies have proven more durable but remain limited in scope. Water harvesting and irrigation initiatives can be important for the production of high-value crops and particularly vegetables and ornamental flowers.

Integrated soil fertility management is a priority

New approaches to the problem of building soil fertility use the principles of ‘Integrated Soil Fertility Management’ and ‘Balanced Nutrient Management’ recognising that: (1) Neither practices based solely on mineral fertilizers or solely on organic matter are sufficient for sustainable management of agricultural production, (2) Well-adapted, disease- and pest-resistant germplasm is necessary to make efficient use of available nutrients and (3) Good agronomic practices in terms of planting dates, planting densities and weeding are essential to ensure efficient use of scarce nutrient resources. In addition to these principles we recognize: (4) The need to target nutrient resources within crop rotation cycles, going beyond recommendations for single crops and (5) The importance of integration of livestock in the farming systems. Much greater attention is required to the dis-equilibrium in nutrient cycling introduced by increasing intensification of production. Participatory plant breeding approaches have made major advances in the speed of development of new varieties of a range of staple cereal and legume crops. Improved understanding

of seed systems indicates that while the private sector is important for hybrid varieties of cereals, many open-pollinated cereals and self-pollinating crops require local initiatives to enhance availability and uptake of new varieties.

Technologies should address vulnerability to change

There is increasing concern relating to the likely effects of climate change on the predictability and amounts of rainfall in Africa and its geographic distribution. Other major drivers of change throughout Sub-Saharan Africa are rapid urbanization coupled with rapid (though declining) rates of population growth. Although population in urban centres is growing at some 5-6% annually, growth rates generally remain above 3% in rural areas indicating a doubling time of 20 years. In other areas the effects of HIV/AIDS are giving rise to highly skewed demographic structures. The longer-term effects of HIV/AIDS on population trends overall are uncertain but in the worst affected areas already they already have notable negative impact on labour availability and productivity. A new societal feature is the increase in rural households composed of children, especially in eastern and southern Africa, under the impact of HIV/AIDS, who cultivate for their own daily survival.

In many parts of Sub-Saharan Africa sedentary agriculture has been practiced only for the past 50 years and techniques have changed dramatically over this period. Many areas have high numbers of households headed by women, who generally cultivate smaller farms, often -but not always- for household provisioning. Whilst some areas have seen an increase in intensive farming and improved natural resource management under population increase, other areas are becoming empty as people move into towns.

Increasing intensity of competing claims on land for agriculture (both smallholder and large-scale), and the impacts of people and production moving into more fragile and marginal environments,

on areas of conservation importance for wildlife and forests need greater attention. Bio fuels perhaps offer new opportunities by opening up new markets. Additionally, they may lead to better prices for basic commodities as dumping of products into global markets may decrease. Bio fuels, however, could also lead to additional pressure on land.

Farming systems in Africa can thus be seen as 'moving targets'⁷ upon which new constraints such as HIV/AIDS have major impacts through loss of human and social capital, increasing pressure on the earnings of poor households, decreasing availability of labour etc. All of these extra pressures render communities in rural areas highly vulnerable to the effects of climate change.

4.3 Domain 2: Access to Resources and Services

REPORT SYNTHESIS

No agricultural growth without improved access to resources and services

All reports agree that access to resources and services is essential. Many different resources and services are identified, ranging from supply-side interventions to safety nets. When it comes to what needs to be done under these headings, the list is lengthy and familiar. Access is required to: land and land markets, natural resources (soils, water, forests, rangelands, fisheries, biodiversity, landscapes), basic schooling, scientific education, occupational education and social and economic infrastructures. Services are needed to support, strengthen or develop: health, nutrition, HIV/AIDS, finance, managing risk and vulnerability, extension, produce markets and trading networks, communication

⁶ Ojiem, John O., 2006. Exploring socio-ecological niches for legumes in western Kenya smallholder farming systems. Tropical Resource Management Papers 89. 169 pp. Wageningen University, The Netherlands.

⁷ A phrase first used by Simon Maxwell in the 1980s, then at IDS, Sussex, with reference to farming systems research and development.

and market information, organized labour markets, high quality seed markets, R&D (for production, but also for non-agricultural and for post-harvest, and value-adding activities and diverse rural livelihoods), market chain development and agro-processing. Most reports are explicit in what needs to be done, but less clear in how that must or could be achieved.

Access to water is essential

No agriculture without water. Erratic water supply in rain-fed agriculture is a serious threat. The necessity to improve the use of water was discussed above, under the domain 'Increased agricultural productivity'. However, access to water is critical for the poor, as argued by DFID. Both climate change and the call for large-scale commercial agriculture may complicate access to water for the poor and affect subsistence farmers in particular.

Farmers need access to local and international markets

The reports note that international markets are difficult for the poor to access. They also note that low-income countries often find it difficult to access or participate effectively in international and global trade fora and regulatory negotiations. The Halving Hunger report considers the development of rural trading networks, provision of market information services and strengthening of local community and farmer associations as key services. DFID advocates market-driven service provision. It is argued that the sustainability of services is most effectively secured through market-driven suppliers of rural, financial and business services. Market-led growth should be complemented with social protection measures. The FAO report too, advocates market liberalization in service supply plus complementary public measures for social protection of the vulnerable. USAID-IEHA takes a similar position. Its report strongly emphasises public-private partnerships (PPP's) that provide technical assistance and training to producers, processors and traders -and their organizations- as well as technology dissemination through training services. It also argues

for developing the capacity of private sector organizations and agribusinesses, input suppliers and market-driven service providers.

Empower the farmers

The MAPP, IAC, OECD, DFID and IEHA reports emphasise capacity development as essential to developing the demand for services and the realization of access rights. Such capacity development also requires institutional reforms. CAADP emphasises extension, research and rural-financial services. As for extension, the report stresses the need and opportunities to link farmers to global knowledge systems, improve linkages among farmers, researchers and extension staff, and ensure women farmers' access to relevant information and training. CAADP further recommends integrated approaches to service provision. The Halving Hunger report highlights strengthening of local community and farmer associations as a key service. The OECD report concludes that improved access to land, markets and support services requires institutional reforms. Effective farmer organizations and PPP's in matching service demand and supply are strongly emphasized. It is noted that this involves political processes that require the political empowerment of poor farmers. Both the IAC report and the Halving Hunger report identify women's empowerment as a key condition to ensuring their access to services and resources. Education is seen as the main mechanism in achieving women's empowerment.

Improve access to research and extension

The MAPP report highlights the need to reform and re-invest in Africa's public-sector research and extension services. Reform measures include: stakeholder participation in the governance of services to ensure relevance and accountability, multiple-service providers, competitive contractual service delivery, stronger internal accountability mechanisms and cost-sharing arrangements. MAPP recommends establishment of a special funding arrangement for research and extension, operating under the rigorous application of the subsidiarity principle, re-investment

in a new generation of agricultural scientists and support to smallholder farmer organizations and cooperatives. Three service areas receive special attention: small-scale irrigation, mechanical energy and power systems supplied through local manufacturing and information and communication technologies (ICT's) that link rural people to globally available information and distance learning opportunities. The Halving Hunger report strongly advocates the deployment of public, village-based facilitators for promoting community development, nutrition issues and agricultural extension. The establishment of effective agricultural extension services is a key recommendation. Most reports stress the importance of agricultural research. The IAC report recommends a focus on the current and future generations of scientists in Africa, and on measures to convert the brain-drain into a brain-gain.

Ensure rights to natural resources

DFID and IPC take a rights-based approach to access to natural resources. DFID concludes that the realization of access to and the exertion of poor people's rights to natural resources and services require institutional innovations that empower the poor; the innovations also may require a basis in law. The improvement of poor people's access to productive assets, to secure property rights, and the capacity to use assets effectively, is included in the seven priority areas identified by DFID. One of priority areas identified in by IPC is the need to further develop and safeguard a rights-based approach to poor people's access to, management of, and control over natural and genetic resources, based on equity and the necessity of sustaining livelihoods. The privatization of natural resources is seen as weakening poor people's access rights and livelihoods and increasing inequity between countries, men and women, social classes, and generations. The Halving Hunger report acknowledges the importance of environmental services. The report recommends that experimental schemes for payment of such services (such as biodiversity conservation, clean water, carbon sequestration) should be developed.

Install safety nets

The CAAPD, DFID-Growth and poverty reduction, FAO and the Halving Hunger reports stress the importance of strengthening services that provide safety-nets for those potentially negatively affected by liberalization of agricultural trade and market-based development. The CAADP affirms the need for provision of safety nets for the food insecure, through school feeding programmes, food for work, food for training and mother-and-child (MCH) nutrition services. Also the Halving Hunger report emphasises the need for safety nets, including: school feeding programmes, MCH nutrition services, food for work, and food for training. The IPC report argues for greater public investment in public services for production and lives of dignity, including education, healthcare, housing, social security, and recreation.

EMERGING ISSUES AND QUESTIONS

Access to services and resources needs governmental involvement

The reports do not offer consensus on who should ensure access to services and provide them, or who should protect and develop rural people's rights to natural resources. Overall, the reports identify an increasing role for local governments in this agenda, as well as for non-public actors like private commercial companies, input suppliers, trading companies and supermarkets, local entrepreneurs, NGO's, farmer-based and community-based organizations and commercial R&D providers. Yet the Halving Hunger report argues for a continuing strong role for public provision of extension and research services, and for the role of national governments in guaranteeing the provision of basic services and the creation of safety nets relating to education, health, and nutrition, albeit with more room for experimenting through the use of e.g. contractual arrangements. A new service area is brought into focus in a number of the reports, where they point at a stronger governmental role with respect to the monitoring and regulation of the safety of food, animal and

human health and the environment. A continuing role for the public community also was underlined in the Expert Meetings, as commercial engagement in pro-poor development is not yet sufficiently developed to ascertain that the private sector will meet the development needs of the poor. In addition, the Expert Meetings recommended that:

- In policy debates it should be recognized that (creation of access to) services and resources are a condition for development that needs to be taken into account fully for effective implementation.
- Services that promote the sustainability of natural resources are of paramount concern.
- It is necessary to design and apply long-term strategies that recognize and address the importance of processes of institutional evolution that support development and recognize the political nature of creating and sustaining poor people's access to services and natural resources.
- (Dutch) development policy should not assume that value-chain development automatically benefits the poor. Value chains must address social-structure issues, stability, socio-economic equity and ecological quality in order to ensure that also the poor will benefit.

Improve access to services

The reports offer numerous suggestions as to how the market-based or market-driven agenda for service provision might be executed. Mostly however, they avoid discussion of the operational challenges involved. From the reports and the on basis of the Expert Meetings the Review Team identifies an emerging consensus that a shift to market-based services requires:

- Empowering farmer-based and community-based organizations.
- Decentralising and devolving central government powers and budgets.
- Developing new mechanisms and framing policies to hold service providers accountable to the MDG agenda.

- Increasing the level of investment in the provision of services by more, and more diverse, partnerships among public, commercial, and civil society actors.

The Review Team further distinguishes the central aim of service provision as agro-business development and value-adding along market chains. The team sees as a necessary corollary of this aim a new public role in the development and enforcement of intellectual property rights services for farmers', artisans' and communities' knowledge and innovations.

The reports offer no guidance on who pays for what kinds of services, or on how specific payment mechanisms might be implemented in a given context. They are silent also on the accountability for access to services. The Review Team notes that accountability mechanisms are mostly not in place or that they are not enforceable by those most affected. Also, the management of the risks involved in the experimentation with models of market-driven service provision is not dealt with, nor, more broadly, the impacts of market failure on the poor. Further, little consideration is given to defining residual or new public goods (for example in R&D), nor to the kinds of services they might require.

Stimulate access to natural resources and agro-ecosystem sustainability

The Review Team considers that market chain development, and sustainable and equitable area-based natural resource management, can be in conflict. Development policy should not lose sight of the inherently political nature of competing claims to resources. The interests of powerful domestic and international actors do not necessarily coincide with the need for poor people to access natural resources to sustain their livelihoods and cultures. Effective strategies for confronting the powerful, at a range of levels, may take more than the empowerment of farmers and other civil society actors in poor countries. The team further notes that global markets trade the natural resources of poor countries in order to satisfy consumer demand for year-round

supply of products sourced internationally at least cost. This places a responsibility on, for example, Dutch consumers to contribute to the restoration or conservation of agro-ecosystem quality in the sourcing countries. Dutch policy also should drive toward requiring market actors to internalize the social and environmental costs of their activities. Due to the complexity and the international context of this issue, however, no easy results can be expected on a short term.

The inherent -or at least presently-existing- inequity in the quality of access to, control over and management of natural resources can be exacerbated by trade and market-driven policies. Pro-poor market-driven development implies a readiness to address and reform the processes and institutional arrangements that sustain inequity in natural resource access. Conventional responses, such as land titling, may be insufficient to protect poor people's rights, or even harmful (for example, to women, if land is assigned only to men) where broader reforms of the institutional context are not in place.

4.4 Domain 3: Markets

REPORT SYNTHESIS

Markets are essential

In most reports, markets are considered a major factor in ending hunger and creating economic growth, because markets can and should work for the poor. Despite this broad consensus, the opinions differ on how markets should realize this potential contribution and, broadly, three views can be distinguished. Most reports look at technological development as the key driver for growth and consider markets essentially as facilitators in this process. Some of these reports even consider growth in the market for agricultural products as an automatic effect of the growing productivity and improved quality. Other reports see markets as the main driving force for change. Agricultural technology is expected to adapt and follow the process of

market development. Finally, some reports and NGO-statements claim that, under the current international trade conditions for agricultural commodities, opening-up to global markets will only increase hunger and poverty. Therefore, they claim that some form of (temporary) food sovereignty is necessary, at national or regional scale, to fight domestic hunger in a sustainable manner. The following issues emerge when the views and recommendations of the different reports are compared with regard to the role of markets.

A chain approach

Most reports do not look at agricultural markets in isolation when discussing their potential contribution to fight hunger. They broaden their analyses and suggest a chain approach. DFID in particular, advocates to move away from pure productivity thinking towards a market-oriented approach that goes beyond a narrow definition of agriculture to include the production, processing and marketing of crops and livestock, ranging from primary producer to end consumer. Making this approach successful requires a more equitable distribution of trade and market benefits through a pro-poor institutional environment of policies, institutions, services, and supporting organizations as well as through market-driven provision of services to the poor. This may require a drastic change of current government policies and the reconfiguration of public institutions and agricultural service providers to support better functioning of markets and the protection of the most vulnerable. Increased access to market information, focus on niche markets and improved input delivery systems may contribute to this livelihood approach, as CAAPD/NEPAD suggests.

Making markets work for the poor

The need to make markets work (better) for the poor is supported by many reports. OECD for example, observes that a technology-driven change in Africa, a 'Green Revolution for Africa', is no longer a realistic option because the terms of trade for producers are

declining. New quality, safety and phyto-sanitary standards often mean that poor, small-scale producers are not able to engage in markets. The IAC report identifies the lack of functional local and regional markets as one of the distinctive features explaining hunger in Africa. A market-led productivity improvement strategy would provide the necessary incentive for farmers to close yield gaps.

One approach to make markets work (better) for the poor, suggested by Halving Hunger and others, is to improve the linkages between poor farmers and existing markets through improved infrastructures and financial services, sound legal and regulatory frameworks, improved market information mechanisms and strengthened smallholder farmer organizations and cooperatives. Networks of trained (small) rural traders could provide access to agricultural inputs and create links to markets for farmers in remote areas. DFID places strong emphasis on poor peoples' access to crucial assets (realizing their rights to land, water, common property resources, markets and services) if they are to be able to engage in markets. This strategy requires a pro-poor institutional environment of laws, policies, regulations, institutions and supporting organizations to agriculture as well as market-driven provision of (rural) finance and business services to the poor. DFID urges the necessity of the following complementary measures: the effective deregulation of controlled (food) markets, removal of public monopolies, setting minimum labour standards, establishment of institutions that manage uncertainties such as agricultural insurance or price risk management mechanisms, improved effectiveness of public investment triggering private investment and, reducing the urban bias in public investment and policies.

Several reports, such as the FAO, point at the likelihood that not all poor farmers will profit from growing market opportunities. They recommend a twin-track approach consisting of market liberalization for mainstream economic growth plus complementary public measures (i.e. investing in people, institutions and infrastructure) that enable the poor to benefit from markets and

trade. The second track includes the creation of safety nets for those vulnerable groups that, in the long run, are expected to experience negative net impacts from liberalization. In Halving Hunger, the problem of low rural wages is raised, and it is suggested that creating alternative sources of employment form the appropriate way out.

Access to markets becomes a real option only in the presence of adequate physical infrastructures (roads, cars, and trucks, rail tracks, trains, airfields and airlines, harbours, boats and ships), as well as infrastructure for information technology. Information and communication technologies can strengthen the competitive ability of smallholders by enabling them to timely access market and price information and knowledge networks (IAC).

Access to global markets

While agriculture used to be a sector with a strong local character -securing food for the local community- it is increasingly affected by the growth of international trade, global sourcing and complex agro-based supply chains. The more (local) agriculture is included in global trade systems, the more (rural) poor people are affected in their livelihoods and food security. Improved international market access is thus considered a key ingredient in translating increases in agricultural productivity into economic growth in Africa. In the reports, therefore, much attention is devoted to the need to promote the liberalization of global agricultural markets. Nearly all reports criticize the continued presence of agricultural subsidies and tariffs in developed countries because they obstruct exports from developing countries. DFID and Halving Hunger state that tariff and non-tariff barriers severely limit the opportunities for poor countries to export agricultural products. The volatility of agricultural commodity prices on the global market should also be reduced to create more stability. To be successful on international markets, the currently limited range of export commodities should be enlarged (CAAPD/NEPAD). In addition, OECD countries are encouraged to assist African countries to

meet quality, safety and phyto-sanitary standards, and improve their international negotiation skills. FAO, supported by USAID and IAC, claims that liberalization of agricultural markets is particularly beneficial if combined with wider reforms towards full economic liberalization. Nevertheless, as the OECD argues, the timing and sequencing of market reforms is crucial, since opening-up to international competition prematurely can seriously undermine the agricultural sector of a country, with long-term negative implications on (rural) poverty. Countries should therefore engage in well-planned reform processes in which the national economy is being steadily prepared prior to the actual liberalization. Such a reform process will also need compensatory public measures targeted at those groups that tend to experience the negative effects of liberalization most. FAO underlines the existence of favourable opportunities for agricultural trade within and between low-income countries themselves and suggests focusing not only on South-North trade.

The strategy of further opening-up to the global market is criticized by some (IPC and ROPPA for example) as it may threaten a country's capacity to secure its population's access to safe, adequate and nutritious food -which is a fundamental human right. Neither further liberalization of international trade, nor complete food sovereignty are considered objectives on their own but as potential instruments for promoting development and realizing human rights. ROPPA points at the importance of recognising multi-functionality in family agriculture: Modernization of multi-functionality through appropriate agricultural politics is considered essential.

EMERGING ISSUES AND QUESTIONS

Livelihood framework is leading

There appears to be consensus that markets can play an important role in achieving MDG1 if approached within a broader livelihood framework. Dynamic domestic and regional agricultural markets can indeed be promoted, and producers and processors linked, in an efficient and equitable manner to agricultural export markets. Profiting from these opportunities requires raising the productivity of land and labour, without damaging the environment or compromising biodiversity and food safety. This can be brought about largely by facilitating access to technology, information and financial services and well-functioning markets for appropriate agricultural inputs and services. Farmers' access to information about markets should be facilitated through better opportunities to communicate prices as well as quality and safety requirements for particular agricultural products on different markets. Well-functioning infrastructure is an essential but –by itself– not a sufficient driver of change. It is important to identify intermediary options for transport, especially under scenarios of increasing competition for, and price rises in, fossil fuels. However, market-based solutions are unlikely to be the only or the most powerful approach where populations are dispersed and market surpluses are low and variable because of inherent climatic and other constraints.

More attention to the possibilities for local markets

Increased participation in international trade should be balanced with more attention for local markets. Liberalization has differential impacts depending on the specific local conditions. Adequate local governance structures are needed to address problems that might arise and to promote alternatives based on local market opportunities. Detailed and contextualized work on institutional development is necessary to strengthen market intermediaries, promote competition and create transparency in rural people's market access. Getting the institutional environment right matters

because political and institutional stability, as well as factors such as security and legal certainty over contracts and financial services, are essential to facilitate market actors' investments and risk-taking. Equitable markets for labour, inputs and services should be developed although this is complicated by the existing asymmetries and contradictions in market relations at local, national, regional and global levels. The differential power and conflicting interests between actors need to be confronted or reconciled to create better opportunities for the poor.

A level playing field is needed

Getting the prices right is important as higher producers' prices can stimulate the supply of output even under existing technologies. Realization of this suppressed potential is possible only if agricultural and trade subsidies and tariffs maintained by developed countries are substantially reduced and if more room is created on world markets for processed as well as unprocessed agricultural products from low-income countries.

The room for long-term and structural, special and differential treatment for developing countries within the WTO and other international trade agreements needs to be increased. In particular, national governments should be allowed to tackle market failures through national regulations and to take targeted measures to increase the economic capabilities of the poor. Inequalities between different groups of farmers resulting from an increased market orientation should be addressed, as positive trickle-down effects cannot be assumed. Governments should make it attractive for foreign market actors to make the necessary investments but encourage sustainable partnerships for trade while avoiding simple export promotion.

Transparency is necessary on international requirements with regard to sanitary and phyto-sanitary regulations, food quality, environmental safety and traceability for export foods and other agricultural products, as well as on international labour standards.

Develop new market opportunities and trade options

Agricultural production need not be limited to staple food or commodities and interesting market opportunities can be found by diversifying into other products such as bio fuels, high-value horticultural crops, non-traditional and non-food products, based on profitable opportunities for agro-processing, cold storage, and improved packaging. Provision of ecosystem services related, for example, to waste re-cycling, pollination and pest management, eco-tourism, water conservation, biodiversity conservation and carbon sequestration is another opportunity.

If Africa shifts to producing more non-food products and services, its existing dependency on imported food will increase and different interests will seek to exercise competing claims on the limited natural resources. The potentially negative effects resulting from this trend can be mitigated by:

- Better functioning internal markets (prices, transparency and availability) articulated through increased promotion of domestic produce in urban markets, and increased demand stimulated by raising the incomes of the urban and rural poor.
- Adoption of a wider perspective on potential international markets, including the Middle East, China, India and Latin America.
- Development of stronger regional markets across Africa by strengthening transport infrastructures, economic collaboration and regulation and fundamental adaptations to the EPA's in the ongoing negotiations between the European Union and developing countries.

Steps need to be taken to assure that all market actors are persuaded to internalize social and environmental costs of market-driven growth. This is necessary as, in the longer term, strategies based on global trade in food stuffs and bio fuels, or on food imports, need to be secure and sustainable in the light of climate change and geo-political risks.

Tailored approaches needed

Markets' actual role differs per country and region. The heterogeneity of countries, regions, and people's income status requires a differentiated market strategy and a targeted support to the promotion of (temporary/seasonal) food self-provisioning, off-farm employment, production of non-food agricultural products and food purchases on local markets. Surprisingly, in most reports market concepts and practices are assumed, not defined. The particular characteristics of market practices, institutions, and gender roles in African markets are not recognized. Informal markets are presumed to be inefficient and/or ineffective and/or price distorted, but empirical evidence, clearly demonstrating a much more mixed picture, is largely ignored. In Africa the wide range of staple foods poses a special challenge: staple crops include cassava, yams, maize, sorghum, millet, bananas, beans, wheat and rice. In specific regions and localities a wide variety of indigenous crops may play a larger role, particularly for the poor. Each crop offers different employment, processing and value-adding potential. It is essential to recognize that the ways in which men and women are engaged in food production, processing, storage and trade are also hugely diverse.

The review concludes that the potential role markets can play

in achieving MDG1 should not result in the promotion of a uniform strategy. A market-based approach relevant for the poor should become integrated in a broader livelihood strategy and not be restricted to producing more food for the global market.

4.5 Domain 4: Institutions

REPORT SYNTHESIS

Institutions are critical in reshaping agricultural development

Across all the reports reviewed, institutions emerge as the critical factor in reshaping agricultural development to meet the MDG's. The concern with institutions reflects a shift in thinking away from the historical focus on increasing production to a much broader agenda for agricultural and food system development. This new agenda takes a more holistic perspective that considers diversity and transition in the agricultural sector with a focus on markets, infrastructure, education, value adding and value chains, sustainable natural resources management, off-farm income generation and linkages with other sectors.

To achieve this new agenda it is recognized that policy, legal and regulatory changes are required to 'make markets work for

Box 5

Understanding Institutions and Pro-Poor Growth

Institutions are understood here as the formal and informal 'rules of the game' that shape human and organizational behaviour.

Examples of formal institutions are property rights, contract law, standards. Informal institutions include customs and traditions.

Institutions provide the structures that enable the co-ordination and co-operation necessary for markets and society to function.

It is important to recognise that organizations are institutions but not all institutions are organizations. As far as markets are

concerned, international trade is institutionally highly formalized whereas traditional markets are very informal and often based on trust that is based in customary relationships.

Institutions develop slowly over time and are often taken for granted in the sense that people are not very conscious of the complex web of formal and informal institutions that influence their behaviour. Significantly, institutions can be very hard to change because of their very nature of being the embedded structures that shape social and market interaction.

the poor' and that incentives based in institutional arrangements must drive new partnerships between governments, businesses and civil society. Further, the rural poor must be empowered through formal and informal institutions that ensure secure access to services and resources and that provide space for participation in policy decisions at local and national level. Collectively the reports give over one hundred recommendations for institutional change across the domains of increasing agricultural productivity, access to resources and services and market access and trade. What is striking however, is that relatively little attention is given to how these changes might be brought about. If they were easy, one might assume they would have been implemented already. It is clear that more attention needs to be given to the politics of such change, the vested interests and influence of powerful market players, governance, cultural factors and internal contradictions within the recommendations. All these factors point to the need for a more in-depth understanding of institutions and institutional change (see Box 5).

From the reports, six major areas for institutional reform can be discerned related to pro-poor growth. These are summarized in the sections below. Linked to all these areas of reform two underlying assumptions appear to be prevalent in the reports. One is the importance of a value-chain perspective in connecting local producers to local, regional and international market opportunities. The other is that, overall, trade liberalization can be beneficial for the poor, however liberalization processes need to be carefully managed and sequenced with close attention to the particular situations of specific countries and sectors.

Conditions for greater market participation by the poor

The reports recognize that the poor are often excluded from entrepreneurial activity and accessing new market opportunities (including labour) because their rights are not protected, they lack the specific skills required and they have inadequate access to basic resources and services. The main reforms suggested include:

Land tenure and effective mechanisms for sale and rent of land; Equitable and secure access to water, fish and forest resources; Improved access to financial services in particular by provision through the private sector; Developing rural infrastructure (roads, power, market facilities, etc.) through public-private-partnerships; Facilitating labour conditions that allow participation in off-farm employment; Mechanisms for the poor to cope with risks and crises (e.g. micro-insurance, hedging, buffer stocks and health insurance); Increased access to educational opportunities to develop entrepreneurial and farming skills; Improved access to knowledge and information (production practices and market information); Ensuring basic health, education and food security requirements; Empowering farmers.

More-supportive regional and international trading environment

Recommendations in this area focus on two main issues: Pro-poor trade-liberalization and Development of quality, safety and environmental standards. The main reforms proposed include: Reducing OECD-country subsidies for agriculture and import barriers; Reducing barriers to trade by developing countries in an orderly and structured way; Special conditions for countries and sectors in transition; Enhancing the developing countries' capacities and their producers to meet standards; Ensuring that standards are genuinely risk-based and not driven by protectionist intentions; Enhancing the developing countries' capacities to enter into trade negotiations.

Improving private- sector participation and investment

All the reports argue that entrepreneurial and private sector investment and activities must underpin agricultural development. This requires the creation of environments that are conducive for both micro- and larger-scale business developments. Institutional needs mentioned in the reports include: Tax regimes supportive of enterprise development; Efficient administration by government

agencies; Protection of intellectual property rights; Enabling infrastructure; Effective competition and contract law; Effective and efficient enforcement of laws; Good governance.

Internalizing environmental and social costs in the market

While less well-developed than other themes, all the reports recognize market externalities, inefficiencies and failures that have a negative impact on the poor. There is particular recognition of the environmental dimension in this regard. Institutional options include: Payment for environmental services; Development of green enterprises; Use of guarantees and subsidies for input and output markets.

Redefining the role of the state and developing public-private and civil society partnerships

Generally the reports adopt the stance that governments should focus on setting the conditions for markets and not be market players. While governments should fund core public services, their delivery can be done by the private sector or by NGO's. Increasingly however, it is being recognized that there are many areas where the line between public and private goods can not be easily drawn. This leads to the concept of public private partnerships (PPP's) for pro-poor development.

Increasing investment in agricultural research and development

Without exception all the reports call for a great investment in demand-driven and participatory-orientated research and development. The reports particularly call for more attention to the assessment of risks and vulnerability from natural disasters, political instability and climate change. Specifically the reports recommend: Gathering evidence of the impacts of social protection on productivity and local markets; Ensuring that estimates of impacts of change in EU standards on imports are publicized; Improving data generation and analysis related to

agriculture, food and nutrition security and vulnerability; Better understanding of labour policies; Realising the spill-over benefits of agricultural science and technology; Maintaining international commitment to the CGIAR system.

EMERGING ISSUES AND QUESTIONS

No impact without institutional reforms

Given the inherent breadth of the institutional complexity of rural and agricultural development, as well as the generic nature of most of the recommendations provided in the reports, it comes as no surprise that these recommendations, whether addressing the technology domain, research and development or (access) to resources and services relate to institutional issues. Technical recommendations, for example to 'reduce land degradation and soil fertility' or to 'enhance the use of mechanical power' (viz. the IAC report) clearly cannot be implemented outside of the formal and informal institutional reality. Fertilizer or agricultural machinery must then be available on the market, and must be of good quality, and credit facilities must be in place if a farmer would want to buy these. Also, this same farmer should avail of the skills required to apply such inputs effectively and maintain the implements. It goes without saying that all these requirements can only be put into effect through a process that is strongly dependent on institutional support from the public, private and informal sectors alike. However, the recommendations given, fail to address specifically how to go about their implementation in the prevailing institutional context.

A new agenda for agriculture?

Institutionally the messages and recommendations from the reports can be read in two different ways. From one perspective it can be argued that collectively they do represent a new agenda for agriculture. Certainly while the old agenda is characterized by a focus on technology-driven production increases and on linear models of government-supplied agricultural research and

extension, the new agenda focuses on market-driven processes. The new agenda includes a new role for governments as regulators and enablers of market-based approaches to development, the development of entrepreneurial capacity, private sector engagement and investment and a more holistic understanding of agriculture in people's livelihoods and the wider economy.

From a more critical perspective however, it can be argued that there is not much new in the reports. The endemic problems of equitable economic growth, governance, and aid effectiveness related to implementation of the recommendations are hardly considered. Further, the agenda of creating open markets in a highly competitive global economy driven by the interests of powerful private commercial interests has considerable risks of resulting in even greater asymmetries of economic power if not carefully managed. The need for the poor to be empowered through access to resources and services so as to realize their economic potential is a reoccurring theme. However, the provision of such resources and services is both costly and highly dependent on good governance. Particularly in the African context these remain two major barriers to the sort of reforms being proposed.

The Review Team, building on its own analysis of the reports as well as incorporating the results of the three Expert Meetings, considers the following questions as key to effective institutional reforms for agricultural and rural development:

- What is required to empower poor producers to the point where they can influence policy and demand their rights to information, resources and services? How to bring about change in the context of failing states and poor governance?
- To what degree is there consensus that moderate, 'responsive' and staged market liberalization is the way to go or is there a radically alternative model?
- How significant is the risk that greater market engagement beyond the local level at national, regional and international scales will expose poor producers (and providers of labour) to even more extreme exploiting forces that they, and even their

governments, are unable to control? How can these risks be mitigated?

- How realistic is it to internalize environmental and social costs in markets and what are the examples of success and failure?
- Is the idea of public private partnerships to support pro-poor growth rhetoric or reality? How substantive is the evidence base that this can work?

Little attention for environmental and social aspects of markets

The reports try to balance the argued benefits of trade liberalization and market-driven approaches to development with clear recognition of the need for mitigating market failures and externalities. There is also recognition of the need for a staged transition to more open markets, which ensures that alternative institutional arrangements that protect the poor can be developed. However, little is said either about how to effectively internalize environmental and social costs of market-driven change into markets, nor about the potential reactions against such strategies because of perceived threats to short-term impacts on profits or political interests.

Mechanisms for institutional transformation

Although a broad range of institutional changes are advocated in the reports, considerably less attention is given to how these might be brought about. Broadly, the reports recognize that top-down and bottom-up political commitment and action is required. Four main mechanisms for change emerge from the reports:

- Empowering the poor as economic actors and as citizens, thereby enabling them to have a greater influence on local and national policy, to claim their rights and to hold their governments accountable for the delivery of services, including strengthening the capacities of producer and other local organizations.
- Furthering international commitment to effective aid and equitable global trading arrangements.

- Development of pro-poor national policies and strategies with a high level of participation by the poor.
- Fostering decentralization.

The Review Team considers that much more attention must be given to such processes of institutional change. Of particular importance is developing greater analytical, advocacy and negotiation capacity across public, private and NGO sectors. Such capacities will be essential in underpinning the collective actions required to bring about the scale of institutional reform implied by the 'new agenda for agriculture'.

5

Lessons learned



5.1 Increased Agricultural Productivity

Development and Commercialization of the Treadle Pump in Bangladesh; a case of product marketing on mass scale

In 1984, International Development Enterprises (IDE) launched the Marketing Appropriate Technology Programme (MAT) in Bangladesh. The programme aimed to create a mass market for affordable irrigation technology for small plots of land. In order to stimulate demand for this technology amongst small farmers, IDE used customer-focused marketing techniques that are common among business communities, but rather innovative to the development community ('market-led product development'). The MAT programme comprised a product development component as well as a commercialization component. IDE's own role was that of a market-facilitator. IDE invested donor funds in research and development to adapt an existing foot-operated pump (treadle pump) to the demands of the market: small farmers and private-sector distributors.

IDE undertook extensive promotional and marketing efforts and managed to have impact far beyond the direct partners in the project: At the peak of the trade in treadle pumps, some 75% of the sales was by suppliers that were only indirectly assisted by the MAT program. Total sales of directly and indirectly assisted suppliers totalled US\$ 1.3 million in 1999. IDE facilitated the creation of a vibrant and competitive market for the pumps. Over time, the number of suppliers increased as did the number of pumps, the general price range for irrigation technologies had broadened and the price of the treadle pump had gone down. As a result, the pump moved down-market, reaching more smallholders including some truly marginal farmers. The MAT programme was highly cost-effective. Upon installing treadle pumps (at US\$ 24 per pump) extra earnings per farmer were in the order of US\$ 100 per year. Very-enterprising farmers exceeded this figure by far.

IDE opted for a supply-chain approach and played a crucial role in facilitating the linkages between researchers, public extension

agents, pump producers, pump suppliers (wholesalers, dealers and installers) and farmers. The programme may not have come close to the impact that it produced, without this facilitation. IDE was supposed to have a facilitating role only but -at least initially- it undertook significant interventions to stimulate demand and to create order in the market. IDE also was actively involved in making business linkages and in extensive promotional campaigns. Under the programme, pump suppliers and business service providers assume the costs and risks of producing, selling and servicing the pumps. Moreover, market information is passed up and down the supply chain from customer to installer, from installer to dealer, and from dealer to manufacturer.

NERICA: New Rice for Africa

Numerous conventional breeding efforts have been made to improve the performance of upland rice for use in African farming systems. These efforts have been limited in their success, partly because the Asian rice varieties (*Oryza sativa*) that are generally grown, lack the resistance or tolerance to many of the typical African stresses including soil acidity and iron toxicity. In 1992, building on earlier work of a farmer and a researcher, the Africa Rice Center (WARDA) and its partners started work on interspecific hybridization in an attempt to combine the useful traits of the cultivated rice species *O. sativa* and *O. glaberrima*. This led in 1999 to new interspecific lines, named New Rice for Africa (NERICA). To date NERICA is considered one of the major advances in the field of rice varietal improvement of the past decades. Some facts and figures are:

- NERICA presents several advantages over traditional varieties. It is not just one variety but several hundred family lines have been generated.
- NERICA varieties have proven to be high yielding, early-maturing (75-100 days), weed competitive, drought, pest and disease tolerant and tolerant to soil acidity and iron toxicity.
- Grains of over 70% of the NERICA's tested, have higher protein

contents than their parents. Protein contents of NERICA's are up to 25% higher than some imported rices.

- Farmers were exposed to NERICA varieties through Participatory Varietal Selection (PVS) and Community-Based Seed Systems (CBSS).
- NERICA varieties appear frequently among the top most-preferred varieties by farmers. The potential adoption rate is up to about 70%.
- NERICA is popular among farmers and has the potential for high impact on their livelihoods. Today, over 150,000 ha of land in Africa is under NERICA production.

The cultivation of NERICA varieties also has a positive effect on schooling rates of children. This effect partly results from NERICA's shorter growth-cycle and higher weed-competitiveness. These alleviate the labour burden put on children in farm households. Indirectly, the higher yields and better quality of the NERICA's account to the higher schooling rates as well.

5.2 Access to Resources and Services

The Relationship of Willingness-to-pay and Demographics for Agricultural Information Services; Case study from Rwanda

The National University of Rwanda in collaboration with the Texas A&M University have been implementing a study to identify factors that influence the willingness-to-pay for agricultural information amongst cooperative coffee farmers in Rwanda. Some of the major findings were:

- Farmers in Rwanda depend largely on the extension service for agricultural information delivery as they did thirty years ago.
- The reduction of investments in the public extension service implied a severe lack of information delivery to farmers. Public agencies were by far not able to provide adequate extension

programmes to farmers, in particular in remote areas.

- Farmers continue to depend on information and technologies offered (for free) by the public agencies through the formal extension system and tend to have a poor culture of contributing to extension or other information delivery, for example through co-operatives.
- In other words, the willingness-to-pay for agricultural information and technology is low amongst farmers, even amongst those who are organized in co-operatives.
- The willingness-to-pay amongst farmers did not significantly vary with length of their membership of the co-operative, the height of their income derived through the cooperative, or their farm size.
- Farmers were aware of the inadequacy and irrelevance of the information obtained through the formal extension system.
- Farmers do realize that they need to contribute to information and technology delivery (subsidized price of services).
- Farmers face difficulties in having to pay up for extension services. They are more inclined and willing to pay when they actually sell their produce.
- It was recommended that the formal extension system re-initiate the information and technology delivery while requesting a financial contribution from the farmers.

Making Mass-Media Work for the Poor: The experience of ILO-FIT in small enterprise media in Africa

The DFID-funded ILO-FIT project in Uganda built on earlier experiences in developing radio programmes and media focused on information and knowledge for small producers and entrepreneurs. The aim of the FIT project was to establish commercially viable and sustainable media services for the poor. The role of the project changed from being -in the beginning- a direct provider of services, to being a commercial service partner to other media actors and, ultimately, to being a facilitator promoting the needs of poor producers and entrepreneurs.

The project had tested information services through business

newspapers, information sheets and magazines, but it was recognized that FM radio offered far better opportunities to reach the target groups. In 1999, the first radio programme on agricultural and business issues was launched, with just two commercial sponsors - a mobile phone company and a rural development bank. The programme ran twice a week and it soon became a success. With the success (i.e. the number of listeners and being seen as reference point) more sponsors came in.

The main challenge for the media has been to seek the right balance between the business interests of sponsors and those of small-scale farmers and entrepreneurs. In other words, information and knowledge provided by the sponsors had to be externally reviewed and tested. In fact, the programme slowly received recognition of being a neutral provider of highly-relevant information and knowledge for poor producers and entrepreneurs. According to ILO-FIT, media can be drivers of change in rural development. Moreover, the FIT project has shown that the media can initiate long-term self-sustainable processes of change and contribute to improvement of poor people's access to information, knowledge and contacts.

Bringing Knowledge to Vegetable Farmers: Improving embedded information in the distribution system

KATALYST is a multi-donor project, which started in 2002 to enhance economic growth through market-driven business services in Bangladesh. The vegetable sector in Bangladesh is seriously hampered by low productivity due to a general lack of knowledge and information about the crops. A pilot project in Rangpur had shown that improving access to agricultural information and knowledge embedded within the vegetable supply chain could significantly enhance vegetable production and family income derived from this sector.

The KATALYST project focused on training retailers of agricultural inputs in order to make them more effective providers of embedded services, i.e. providing the required information and knowledge on

vegetable seeds and other inputs to farmers. KATALYST strongly kept a market-oriented approach and built the embedded service provision on business arguments. Farmers interact regularly with retailers, who then can be seen as the best supplier of information and knowledge. In return, the retailers experienced increased sales as a result of providing relevant information and knowledge to farmers. In fact, the returns were that positive that retailers who were not involved in the project also sought the training and started to provide embedded services themselves.

A major achievement of the project was the active engagement of Syngenta, one of the most important producers of inputs for the vegetable sector in the area. At first, the costs for a 3-day training of the network of Syngenta retailers were shared among KATALYST and Syngenta. Later on Syngenta continued the training without much financial contribution by the project. Other positive results were:

- Farmers' perceptions of the retailers improved considerably.
- Retailers gained confidence; they became more farmer-oriented and placed more emphasis on embedded information and sharing of knowledge instead of sales only.
- Syngenta's sales increased considerably while other input suppliers joined in and started to provide training to their retail network.

5.3 Markets

Business Services Market Development: Experiences and lessons

The Business Services Market Development Project in Uganda (BSMD) was designed to alter the core problem of weak business linkages in the rural economy of Uganda. The project helped to better embed small producers and entrepreneurs in markets and supply chains. Some of the lessons learned are:

- Micro and small businesses, including small producers, develop more effectively if they specialize and link-up with long lasting

supply chains; this implies the establishment of intensive and long-term strategic relationships with other chain actors. The same applies if they base their production strategies on market demand, rather than on production-oriented and supply-driven thinking).

- Many development organizations and international agencies distort the longer-term market and chain development and damage the interests of small-scale producers and entrepreneurs.
- As a result of direct service delivery by development organizations or governmental subsidies, the provision of embedded services is often being hampered rather than promoted.
- There is place in the agricultural market for commercially viable and paid business and technical services. Yet, these services need to be well packaged and adapted to the target groups.
- In many cases chain actors (input suppliers, traders, supermarkets and exporters) are interested and willing to work out and invest in the delivery of embedded services to the poor.
- The agribusiness sector could develop more vigorously if it would adjust its mode of operation from being individual and opportunistic towards being market-driven and placed in a chain management perspective and structure.

5.4 Other Lessons

The Millennium Villages

The 'Millennium Village' approach draws upon the village-level components of the UN Millennium Project's bold science-based action plan to fight poverty. It aims to identify the practical ways in which impoverished villages in Africa and elsewhere can adapt and implement the interventions. The Millennium Village approach recognizes the interdependence of the various MDG's and stresses the need for simultaneous investments across agriculture, health, education, environment and infrastructure -all critical for success. It is being implemented in a time-bound

manner with clear targets and goals. In this way, the Millennium Village project, which is being implemented jointly with the Earth Institute at Columbia University and with financial support from the Government of Japan, offers a model for fighting poverty at the village level. The research project identifies and tests practical ways in which the international political commitment to ending poverty can be translated into community-level action in Africa.

Two villages (in Sauri, Kenya and Koraro, Ethiopia) have already begun their MDG-focused programmes and after only a few months of work, tremendous gains were visible. In Sauri, crop yields have quadrupled over the last seven months through the simple use of fertilizers, improved seeds and improved planting techniques. In Koraro, for the first time, fruit trees are growing along side maize fields and enough bed-nets will be distributed to ensure that every child is protected from malarial mosquitoes at night.

Although supported by part of the donor community, the Millennium Villages Project also meets criticism, as formulated by the Overseas Development Institute (ODI), which is asking for a critical understanding of the project, stating that:

- The Millennium Villages Project (MVP) usefully draws attention to under-investment in rural areas where, still, the majority of the poor are located.
- Yet, conceptually, the MVP is characterized by a number of tensions –important among these is MVP's claim to be 'bottom up', despite being underpinned by a blueprint.
- The blueprint is driven by a campaign approach –easy enough on a pilot scale, but the longer the period and larger the scale, the greater will be the need to engage with markets, with policy prioritization in economic, social and environmental spheres, and with issues of aid absorption.
- At any scale above that of a few villages, big pushes generally have to be replaced by carefully sequenced initiatives that exploit complementarities and that lie within the capacities of local administration.

- As a number of earlier initiatives, including Integrated Rural Development and Sasakawa Global 2000, have discovered, big pushes are inappropriate where much local adaptation is needed (as in agriculture, for example) if innovations are to be adopted widely and sustainably.
 - It remains unclear how far the MVP will be integrated into larger African-owned initiatives such as the CAADP of NEPAD.
- In addition to ODI's comments, others question the ethical aspect of focusing on a few villages while leaving the vast majority of the poor untouched.

Future Agricultures

Future Agricultures is a DFID-funded consortium comprising the Institute of Development Studies, the Imperial College London and the Overseas Development Institute. The Consortium aims to encourage critical debate and policy dialogue on the future of agriculture in Africa. The Consortium is a partnership between research-based organizations in Africa and the UK, with work currently focusing on Ethiopia, Kenya and Malawi. Through stakeholder-led policy dialogues on future scenarios for agriculture, informed by 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:

- *Policy processes* What political, organizational and budgetary processes promote or hinder pathways to pro-poor, agriculture-led growth? What are the roles of different actors, including Ministries of Agriculture, in this?
- *Growth and social protection* What are the trade-offs and complementarities between growth and social protection objectives?
- *Agricultural commercialization* What types of commercialization in agriculture can promote growth and reduce poverty? What institutional and market arrangements are required?

- *Technology development and innovation* How can agricultural technology be made to work for the poor? What are the implications for technology choice and priority setting mechanisms?

The Support for African Agriculture Project (SAAP)

Agriculture plays a prominent role in the economies and societies of most countries in Sub-Saharan Africa: Discounting figures for South Africa, 65% of the active population is involved in agriculture, and it generates about 27% of the GDP. Africa has the natural and human resources needed for strong and sustainable agricultural development and African governments generally put agriculture at the top of their development priorities. However governments frequently lack the statistical information and analysis needed to assess the performance of existing policies and the impacts of policy reforms under consideration. These observations prompted the International Fund for Agricultural Development (IFAD), the French Ministry of Foreign Affairs (MFA) and the Organization for Economic Co-operation and Development (OECD) to initiate the SAAP project which aims at helping African governments improve the design and effectiveness of their policies for agriculture and rural development.

The current exploratory phase of the SAAP is devoted to achieving an in-depth understanding of the agriculture sector and its role in promoting development of the rural and national economies of three African case studies (Cameroon, Ghana, Mali) focusing especially on:

- Identifying major constraints to agriculture and rural development.
 - Analyzing domestic and international agriculture policies.
 - Studying macro-economic and rural policy.
 - Understanding relations between agriculture and others sectors, aid, household income, food security, economic growth.
- The OECD Global Forum on Agriculture in May 2007 will evaluate the progress to date and examine options for a potential second phase.

6

Possible interventions



6.1 General

Most reports reviewed in this study are strong in their analyses of the problems underlying hunger and poverty. They are less explicit however, and in fact rather weak in how to reach the respective goals. As stated in various reports, this is due to the complexity and diversity of the issues involved. Most reports call for concerted action and warn against a one-size-fits-all strategy. Within and between continents the conditions differ to such extents that tailored actions are required. Further, actions are needed at various scales. Interventions at the agronomic level will only be effective if supported by changes in policy, and vice-versa. The recommendations given in the different reports depend strongly on the vision the various studies have on the future of agriculture in developing countries.

We embrace the dual role of agriculture reflected in the (draft) World Development Report 2008 (WDR2008). This report identifies challenges and opportunities for agriculture in developing countries. The rapidly increasing demand for agricultural products, and especially for products with added value, offers great potential for countries with agriculture-based economies. The WDR2008 foresees that developing countries can boost their economies by implementing this 'new agriculture' and claim a role at a global level based on their agricultural commodities, but with value-added. On the other hand, the WDR2008 acknowledges that this option is open only for those with access to markets, resources and services. The majority of small-scale farmers lack these fundamental assets and infrastructure. Special attention is needed to improve the livelihood of these farmers and to stimulate a transition that will open pathways to the 'new agriculture' on a longer term. Recognizing the dual role of agriculture leads to two approaches. In the first place, subsistence-level farming must be improved to reach Millennium Development Goal 1 of halving hunger and poverty. For this, higher land and labour productivity, access to

(local) markets, access to resources, access to services and empowerment of stakeholders are pivotal and need to be improved. In the second place, a conducive climate must be created for the new agriculture. Access to global markets, fair trade policies, high added value products, value-addition by processing and access to front-end science and technology are needed. This will enable developing countries to enter the global economy and progressively convert into an urbanized economy as defined by the World Development Report.

Different views exist on how to achieve the various goals. Easterly (2006) in his book 'The White Man's Burden', distinguishes 'planners' from 'searchers' (See Box 6). Planners design a blueprint for a desired development and try to implement this blueprint. Searchers find future concrete solutions to specific problems by trial-and-error search for what works on the ground. In this view, the actions recommended in the 'Halving Hunger Report' are a recent example of the 'planners' approach and meet with criticism directly due to the approach. Some argue that the 'Millennium Villages Project' is doomed to fail because the organizational set-up is too much centralized and uses 'blueprint' thinking. Others emphasize that the Millennium Villages will act as pilots, demonstrating practical ways out of poverty and hunger that can be replicated elsewhere, in future. It is clear that this approach does not directly address the multiple and complex economic and institutional constraints at national, regional and international levels.

We conclude that, although a central vision is required, too much emphasis on blueprints will not do justice to specific local problems, situations and contexts, opportunities and challenges. Tailored solutions can only be reached through an intensive interaction with local stakeholders. We suggest intervention at three levels. In the first place, coherent policies are needed at the global level, that should be consistently spread by representatives of the various relevant (inter-)national donor and development organizations. In this way policymakers will help creating a conducive environment to make agriculture effective in reaching

Box 6

The Sachs–Easterly debate

The Task Force on Hunger chose to formulate concrete strategies to achieve MDG1, because, as its main author Jeffrey Sachs explained in *The New York Review of Books* (2006, Vol. 53, No. 20), much is known about how to help the poor and what has worked and failed in the past. ‘Development assistance based on proven technologies and directed at measurable and practical needs –increased food production, disease control, safe water and sanitation, schoolrooms and clinics, roads, power grids, Internet connectivity, and the like– has a distinguished record of success. Life-saving and poverty-reducing measures raise the productivity of the poor so that they can earn and invest their way out of extreme poverty, and these measures do so at an amazingly low cost. Success is possible if a small fraction of the money spent on military interventions were directed at development approaches and save millions of lives and set entire regions on a path of economic growth’.

Through these statements, Sachs reacted on comments his proposals received in different media from authors such as William Easterly. In his book, *The White Man’s Burden* (Penguin, 2006), Easterly criticizes foreign development aid through ‘Big Plans’ because empirical findings undermine optimistic thinking about their impacts. Donating large sums of money does not result in starting up the development process. Although aid may boost the recipient country’s exchange rate, it makes its exports less competitive and undermines local manufacturing. Also, high levels of aid can lead to more corruption and worse government. “Poverty in Africa is the outcome of political elites who seek to protect their own position, dysfunctional institutions like corruption and lack of property rights, and a long history of exploitation and meddling from abroad (the slave trade, colonial depredations, the creation of artificial states, military interventions)” (Easterly, 2006. *The Lancet*, Vol. 367, Issue 9519; pp. 1309/10). “The end of poverty will only come as a result of home-grown political, economic, and social reformers and entrepreneurs that unleash the power of democracy and free markets.

The focus should not be on the amount of aid given but by trial-and-error for what works on the ground” (Easterly, 2007. *The New York Review of Books* Vol. 54, No. 1). So, detailed attention should be given to develop concrete effective measures through better monitoring and learning from past results. “It is better to aim small and piecemeal, making progress one gradual step at a time. Aid should be without plans but filled with searchers, looking for piecemeal progress” (Easterly, op cit.).

Although Easterly may oversimplify when contrasting planners and searchers –because, as Sen comments, “the empirical picture is much more complex” (Sen, 2006. *Foreign Affairs*, April/March)– his arguments could yield an illuminating perspective on how and why things go wrong in the global efforts to help the world’s poor. Countries may differ significantly in essential variables and it is even more difficult to establish cause-effect relationships.

Different responses are required to address different types of economic problems and solutions can not always be most efficiently delivered through aid. Perverse effects from aid may not only result from too much and too large scale planning, but can also have economic, technological or political causes. Most experts would agree on the fact that aid may help, but that trade and private investments are more important. As the critic Nicholas Kristof put it in the *New York Review of Books* (October 5, 2006): “Aid isn’t the preferred path to development”. Sachs, however, argues that one should not only focus on the failures of aid programmes, but conclude from the successful efforts, that there are “practical solutions to pressing problems” (Sachs, 2005. *Washington Post*, March 27, p. BW12). And “the combination of a sound technology, a plan for large-scale implementation, adequate financing, and steadfastness over several years can make huge inroads against disease, poor health, and hunger even in the poorest settings. Bold plans have been part and parcel of those successes” (Sachs, 2006. *The Lancet*, Vol. 367, Issue 9519; pp. 1309/10). The MDG’s, according to Sachs, offer an excellent framework for such an approach.

the MDG's. Next, the agricultural infrastructure in developing countries needs to be supported. This requires institutional improvements at national and regional levels. Third, interventions at local farmers' level are needed to enhance agricultural productivity, to improve the livelihoods of farmers and to boost economic development. Many NGO's are active at local level. These NGO's may be more effective in implementing targeted programmes than governments and they may well be the natural partners for development agencies. In the following paragraphs these three levels are addressed one by one, by domain, as was done in the previous section of the Review Report.

6.2 Possible Interventions for Increased Agricultural Productivity

Global level

1. *Acknowledge the role of Agricultural Research and Development*

The studies reviewed agree that growth in agricultural sectors is a key factor in reaching MDG1. Further, most studies agree that research and development is at the base of growth of agriculture sectors. The most effective intervention for Dutch policymakers is to acknowledge this simple finding and use it as a starting point for development policies.

2. *Acknowledge that there is no single silver bullet* The reports make very clear that concerted actions are needed to reach their respective goals, and that these must be tuned to the specific needs of the various regions. An agro-ecological approach is needed to optimize productivity in various regions under different conditions. Further, the dualism observed in the WDR2008 calls for different research and development for farmers who have access to services and resources than for those without access.

3. *Share the responsibilities* Intensified investment in research

and development are needed to achieve growth in agricultural productivity. The least-developed countries lag behind considerably in their investments in agricultural R&D. Although private investment should be stimulated, public investment is needed to bridge the gap between subsistence farming and commercial farming. The donor community should play an important role, but African countries specifically need to intensify their own efforts.

4. *Promote the quadrangle approach* The linear knowledge model, where knowledge flows from research via extension and education to end-users, is outdated. Instead, a new approach is needed, where interdisciplinary teams from the quadrangle of national agricultural research systems, universities, extension services and farmers' organizations be constituted to prepare business plans for both fundamental and applied research. This calls for empowerment of farmer organizations. It is not necessarily the best strategy to organize this on governmental level. NGO's may be better suited to empower farmers and organizations like Agri-Profocus in the Netherlands may well play an important role. To fully tap the potential of agriculture, countries need access to front-end research. This requires concerted efforts at a regional scale and a strengthening of the national or regional agricultural research systems.

National and regional level

5. *Support regional research organizations* Institutional strengthening of research and development is needed at regional level. Front-end research needs critical mass that cannot be realized by separate small countries. Efforts need to be combined, and this institutional strengthening deserves support of developed countries. African countries pick up this challenge as laid down in their CAADP program. In realizing this plan, the sub-regional organizations already play a key-role and should be encouraged to do so. These organizations therefore should be supported and empowered.

6. *Support the CGIAR* CGIAR institutes have changed focus considerably over the past decade to working more closely with national and regional research organizations. The CGIAR is well-placed to play a key role in supporting and strengthening research through partnerships with national and regional research organizations in an increasingly devolved way. Research institutes and universities in developed countries continue to play important roles as well, particularly in capacity building of national researchers, to enable them to be increasingly responsible for their own problems.

Local level

7. *Empower NGO's* Many different (local) non-governmental organizations are active in the improvement of agricultural practices in developing countries and, largely, they are well-equipped to run development programmes effectively. These organizations may be reinforced to help in reaching the objectives of Dutch policy. The Dutch research infrastructure can be mobilized to fuel such organizations scientifically, to assist in capacity building and to provide backstopping services. In collaboration with the relevant organizations priority R&D programmes need to be developed.
8. *Start priority R&D programmes* Priority should be given to the following: Integrated soil fertility management, rain-fed agriculture, high-quality seeds, farm mechanization, post-harvest management, processing and chain management.

6.3 Possible Interventions for Access to Resources and Services

Global level

1. *Stimulate capacity building* The international community needs to (continue) placing emphasis on capacity building with -and empowering of- (individuals in) farmers' and community based organizations. As empowerment of people and organizations starts with (the quality of) basic education. This should continue to be a prime area of development support. It is to be complemented by additional support to education in the agricultural education domain, both at vocational and academic levels.
2. *Increase donor focus on agricultural research for development* Increased donor support is required to strengthen knowledge infrastructures and innovation systems. This applies to the local or national level (NARS) and the international level (CGIAR centres and knowledge institutes in the North) as well as to regional and national multiple-stakeholder fora in agricultural research for development that group farmers, civil society organizations, the private sector, policy makers and researchers.

National and regional level

3. *Stimulate access to information* Modern forms of communication (e.g. mobile phones and internet) are improving the access of small-scale suppliers to market information such as demand and price levels at distant markets or capitals. They are also instrumental in increasing co-operation between farmers, thus empowering their position in (inter-) national supply chains. Strong support to further these developments is warranted.
4. *Deploy the complete range of financial instruments* A range of financial instruments is needed to support and articulate pro-poor agricultural development. These include cash transfers and social insurance for the vulnerable, as well as micro-finance

and other bank initiatives to overcome the high barriers to market entry for many small-scale producers. In this respect explicit recognition of women's roles in agricultural production, trade and food systems is required and development support should be targeted accordingly.

Local level

5. *Promote access to land in its broadest sense* Access to production facilities including soil, water, vegetation and climate is of paramount importance for any agriculture-based rural development. This applies both in terms of short-term food production and food security, as well as in terms of long-term investments in land that are conditional to the sustainable management of the natural resource base. In this respect, continued focus on land reform and land tenure issues is a must for effective rural development policies and requires strengthening of capacities for their implementation at the local level in particular.
6. *Create safety nets* Vulnerable groups of subsistence-level poor farmers that may be subject to negative net impacts of trade liberalization and growing market opportunities must be protected by means of social and economic safety provisions.

6.4 Possible Interventions for Market Access

Global level

1. *Support more-equitable distribution of trade and market benefits* Agricultural markets potentially can contribute to alleviating hunger, especially if supportive policies are based on integrated supply-chain approaches, including the production, processing and marketing of crops and livestock, ranging from primary producer to end consumer.

2. *Support access to global markets* To enable developing countries to profit from the 'new agriculture', they should be assisted to meet quality, safety and phyto-sanitary standards, and to strengthen their international negotiating skills. Global agricultural markets present complex challenges to smallholders' participation, related to the large economies of scale in provisioning food processors and supermarkets and to the increasingly stringent sanitary and phyto-sanitary requirements set by international regulations, specific markets and private commercial actors.
3. *Stimulate payment for ecosystem services* More experimentation is warranted in the provision of payments for the provision of ecosystem services related, for example, to waste re-cycling, pollination and pest management, eco-tourism, water conservation, biodiversity conservation and carbon sequestration. These arrangements may well involve forming novel relationships between rural inhabitants and towns and cities, and between producers and industries. The organization of these diverse markets varies significantly and each of them requires adequate and focused policies.
4. *Reduce unfair competition* Tariff and non-tariff barriers in high-income countries that restrict imports from low-income countries should be substantially reduced. Governmental support to the agricultural sector in high-income countries should not be allowed to out-compete smallholders in poor countries. Some system of regulating agricultural exports of high-income countries is needed to stabilize international agricultural commodity prices at levels that allow farm progress in low-income countries.

National and regional level

5. *Support local and regional markets* Local and regional markets are a first priority for reaching MDG1. The specific forms that pro-poor market concepts and practices take should not be based on particular theoretical economic assumptions about how the world (should) work. The particular characteristics

of practices, institutions and gender roles in agricultural markets that work for the poor in specific contexts should be recognized. Empirical evidence on informal markets clearly demonstrates these are not-necessarily inefficient, ineffective or price-distorted. Their functioning can be improved however, through better infrastructure (electricity, roads, trains, ports) and better financial services, sound legal and regulatory frameworks, improved market information mechanisms and strong smallholder farmer organizations and co-operatives.

6. *Support diversification in agricultural market products and services* Agricultural production should enlarge beyond the limited range of staple foods and the traditional export commodities and find interesting market opportunities by diversifying. Potential opportunities may be found in products such as bio fuels provided technological improvements are achieved and sustainability impacts, such as biodiversity, carbon emissions and the incomes and diets of the poor, are carefully monitored. High-value horticultural crops, non-traditional products and non-food products, based on profitable opportunities for agro-processing, cold storage and improved packaging should be actively encouraged under a range of PPP's. The anticipated CGIAR Challenge Programme on High-Value Crops should be supported. Also, processing facilities leading to off-farm employment and off-farm market opportunities should be supported.

Local level

7. *Stimulate input and output markets* Markets are key to organizing the necessary inputs for the production of food and other agricultural commodities. Increased access to assets such as land, water and human capital for the poor should be realized while being sensitive to the differential needs and opportunities characterized by gender, age and ethnicity. Adequate institutional arrangements should be in place to allow considerations of sustainability and equity to play a role in such input and output markets.

6.5 Possible Interventions for Institutional Arrangements

Institutions are a crosscutting theme in the analyses. As indicated in the synthesis section on institutions (Section 4.5), all reports reviewed put significant emphasis on the need for a diverse range of institutional reforms and changes to enable and support interventions in the other domains.

Global level

1. *Identify priority issues at a global level* The key institutional issues at a global level that should be a focus of Netherlands intervention include: (1) Developing pro-poor global trading conditions for agriculturally related products, (2) Ensuring equitable intellectual property rights, (3) Establishing global mechanisms for ensuring ethical and socially responsible practices by global corporations, (4) Creating incentive mechanisms for public-private partnerships and investments for development, (5) Stimulating on-going harmonization of the global aid architecture and (6) Supporting reform of global institutions including UN agencies, IMF and World Bank to enable the key issues highlighted.

National and regional level

1. *Identify priority issues at a regional level* In terms of trade and cross-boundary natural resource management, the regional scale is increasingly important. It is important for Dutch policy to ensure sufficient attention is given to the following issues and developments at this scale: (1) Regional trading agreements, (2) Regional market development, (3) Regional development strategies and (4) Cross-border national resources management policies and strategies.
2. *Establish an enabling policy at the national level* A conducive institutional environment at the national level is critical for the 'agriculture for development' agenda. Key roles for

Dutch interventions include: (1) Support ministries to have the necessary resources and capacities for effective policy development, (2) Encourage participatory process in policy development and implementation and (3) Support good governance and transparency. It is clear that effective agricultural development will depend on partnerships between public, private and civil society actors. Providing resources in ways that enable establishment and operation of such partnerships is important. This implies questioning the (im-)balance between budget support and other types of development assistance.

3. *Identify priority issues at a national level* Specific attention is needed for: (1) Renewing national strategies for agricultural development, (2) Rebuilding the capacity of Ministries of agriculture but with redefined roles and responsibilities, (3) Developing the legal frameworks and institutional capacity to develop, meet, monitor and enforce quality and safety standards, (4) Continuing the agenda of good governance and (5) Empowering producers' and civil society organizations to influence national policy and hold government accountable for the delivery of agreed results.

Local level

1. *Identify priority issues at the local level* Specific attention is needed for: (1) Effective provision of services (extension, finance, business and market services), (2) Infrastructure development, (3) Access to information technology, (4) Implementation of national-level policy regarding access to natural resources, (5) Developing the capacity of producer organizations to both support their members and to influence government and (6) Creating conditions for effective and practical public, private, civil society partnerships for development.

2. *Ensure the impact of institutional reforms at local level* It is at the sub-national and local scale that agricultural and rural development has to be made to work. Without effective

implementation at this scale institutional reforms at global and national levels will have little impact. It is clear that very often development assistance resources do not make it to this scale. It is critical for Dutch policy to support effective decentralization processes and local government reform. Active civil society engagement at this scale, in particular from producer organizations, is essential to achieve good governance and accountability. Dutch policy needs to ensure that its interventions are enabling effective development at this scale. Participatory budget development and monitoring and important initiatives to support in this regard.

6.6 Priority Options for Dutch Policy

Many actions are needed in the different domains distinguished in the present review, and they need to be coherent. Most of them require action at specific policy or implementation levels to reach maximum impact. However, in view of the limited availability of resources, priorities must be set. In the opinion of the Review Team, for Dutch policy the most effective interventions are those based on the specific position, competencies and expertises of the Netherlands. In this respect, specific strengths of the Netherlands, relevant to rural development at large, include (in no specific order):

- An agricultural sector with a strong focus on high added-value crops (horticulture).
- Effective approaches to integrated water management.
- A front position in global trade and trade logistics.
- A well-developed and effective capacity and infrastructure for (international) education, knowledge generation and circulation that is being implemented in organized and empowered producers and stakeholder platforms.
- A highly-developed private breeding and seed-propagation sector.
- Operational expertise in integrated multiple-scale, system and chain approaches.

Based on these notions, the Review Team suggests the following priority actions for Dutch policy:

1. *A coherent policy* Organize ‘Sustainability Dialogues’ among the Netherlands’ ministries responsible for development cooperation, agriculture and nature management, the environment, international trade and water management and rural infrastructure, to further strengthen the policy coherence that is required to tackle the complex and interrelated problems associated with globalization and with rural development in particular.
 2. *Good Governance* Promote and implement an expanded portfolio of Good Governance initiatives beyond the central governmental level. Good Governance does not stop there, but it applies to civil society as well and their possibilities to control governmental policies. In this respect, strengthening civil society organizations, farmers’ organizations and local governments in their institutional development, negotiation skills and implementation capacity for local development interventions is a priority.
 3. *Co-Innovation in Research for Development* Innovation and research are essential contributors to poverty alleviation, food security, improved livelihoods and greater equity. Support is needed in the following areas: (1) Promote the use of the Netherlands’ professional and institutional capacities in research for development for the benefit of developing countries, (2) Promote the quadrangle approach and involve stakeholders in agenda-setting, (3) Stimulate innovations that increase sustainable productivity in developing countries by supporting priority-programmes in the field of water management and breeding and (4) Focus on horticulture and align with the anticipated Challenge Programme on High Value Crops.
 4. *Markets and Trade* Give priority to local, national and regional markets and empower trade and farmers’ organizations, researchers, environmentalists and health-stakeholders to find ways to avoid negative social and ecological impacts.
5. *Safety Provisions* Invest in the search for and exploitation of options for poor people in marginal environments that the market will not assist.
 6. *Capacity Strengthening and Institutional Development* Use the Netherlands’ education and extension expertise and infrastructure to support capacity strengthening and institutional development in the South at all levels: basic education, formal vocational and academic training, tailor-made courses for mid-career professionals and exchange of educational and research staff.

Assist developing countries in developing a commercial and competitive trade sector for successful access to the global market.

Invest in the search for and exploitation of options for poor people in marginal environments that the market will not assist.

Use the Netherlands’ education and extension expertise and infrastructure to support capacity strengthening and institutional development in the South at all levels: basic education, formal vocational and academic training, tailor-made courses for mid-career professionals and exchange of educational and research staff.

Colophon

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Wageningen University and Research Centre (Wageningen UR) provides education and generates knowledge in the field of life sciences and natural resources. Wageningen UR aims to make a real contribution to the quality of life.

To us, quality of life means both an adequate supply of safe and healthy food and drink, as well as the chance to live, work and play in a balanced ecosystem with a large variety of plants and animals.

Based on the notions in this report, the Review Team suggests the following priority areas for Dutch policy:

- **A coherent policy**
- **Good governance**
- **Co-innovation in research for development**
- **Local, regional and international markets and trade**
- **Safety provisions**
- **Capacity strengthening and institutional development**

MDG 1



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Over the past few years, many policy reports have been published which call for new attention as to the pivotal role of agriculture in (rural) development. These reports raised the question at both the Netherlands' Ministry of Agriculture, Nature and Food Quality (LNV) and the Netherlands' Directorate-General for International Co-operation (DGIS) whether the Netherlands' development policy needs adjustment and what role both ministries might play in view of the changing perceptions. In order to answer these questions, the ministries felt the need to have better insight in the debate as fuelled by the various reports: "How do the recommendations of the different reports relate, and what is the expert judgment about these recommendations?" To answer these questions, a Review Team of Wageningen University and Research Centre was requested to analyse the most-relevant reports, summarize their recommendations, organize expert-meetings within and outside Wageningen and define emerging issues in various domains that need to be addressed. This report is the result of that Review.



agriculture, nature
and food quality

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