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issues

Better livelihoods for poor people: The role of Agriculture



DEPARTMENT FOR INTERNATIONAL DEVELOPMENT

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Foreword by the Secretary of State

In the year 2000 some 149 countries signed up to the Millennium Development Goals the foremost of which is the elimination of extreme poverty and hunger. That year we produced our Target Strategy Paper on *Halving World Poverty by 2015: economic growth, equity and security*, which set out our approach to increasing the economic well-being of poor people. In May this year we published *Eliminating Hunger*, our strategy for achieving the Millennium Development Goal on hunger. In it we show how hunger is inextricably linked to poverty and vulnerability. Measures to reduce poverty, empower people and create an environment within which markets can work fairly are essential to improve access to food.

This paper on Agriculture looks at a subject that can play an important part in tackling poverty and hunger. This is because three quarters of the world's poorest people (the 1.2 billion living on less than a dollar a day) live in rural areas with their livelihoods one way or another dependent on agriculture. Agriculture provides more than food. It contributes to economic growth, to better livelihoods and to provision of environmental services important to poor people in urban and rural areas.

This paper focuses on agriculture's role in poverty elimination and providing better livelihoods for poor people. It asks what lessons we have learned and what are the challenges. It suggests roles for the international community and development agencies, including DFID. And it outlines our ideas on areas where we still need to find answers – working in partnership with countries and others committed to doing so.

This paper is not a strategy. Agriculture is too diverse a subject to be amenable to such an approach. Rather it is an area where developing countries should take the lead in the context of their own poverty reduction, rural development and sectoral strategies. These will vary from country to country and region to region. Poor people themselves must play a major role in determining the response in any one place. It will require imagination on

the part of policymakers because agriculture is one area where we have a wealth of experience of what does not work in terms of state intervention. But there is a lot of good experience, too, of what works. The challenge is to incorporate this into mainstream policies and approaches.

But poor countries continue to be foiled in their attempts to develop agriculture. Agriculture still suffers from a wide range of distortions and influences that limit its contribution to poverty reduction. We need to have coherent action at all levels. Making agriculture work for poor people requires far more than action in developing countries themselves. Wealthy countries have a responsibility to set their houses in order by tackling the effects of agricultural protection and subsidies. The effects of reforms are not always predictable. This should not deter us. In the longer term it must be right to tackle the myriad of distortions and barriers that limit opportunities for poor producers to benefit from new and expanding markets. If some groups are likely to lose out in the process of change which will bring major benefits to the poor, we must work together to help the losers manage change and develop alternative livelihoods.

Ensuring that agriculture plays its full role in helping achieve the Millennium Development Goals is a long-term challenge. The summits this year, notably the World Summit on Sustainable Development, provide an opportunity for agreement on what is important and to reconfirm our commitment to action. But it is to the follow-up, both in developing countries, with international organisations and in processes such as the post-Doha negotiations, that our efforts need to be directed.



CLARE SHORT

Secretary of State for International Development
August 2002

Abbreviations

CGIAR	Consultative Group on International Agricultural Research
DFID	Department for International Development, UK
EC	European Commission
FAO	Food and Agriculture Organisation of the United Nations
GNP	Gross National Product
HIV/AIDS	Human Immunodeficiency Virus/Acquired Immunodeficiency Syndrome
MDG	Millennium Development Goal
NEPAD	New Partnership for African Development
OECD	Organisation for Economic Cooperation and Development
ODA	Official Development Assistance
OIE	Office International des Epizooties
PRS	Poverty Reduction Strategy
PRSP	Poverty Reduction Strategy Paper
WFS	World Food Summit
WSSD	World Summit on Sustainable Development
WTO	World Trade Organisation

Executive summary

Three quarters of the world's poorest people – the 1.2 billion who live on less than one dollar a day – live in rural areas. One way or another their livelihoods depend on agriculture. Poor people have limited assets – human, social, physical, financial and natural – and if economic growth is to benefit them it must raise the returns to those few assets they hold.

Agriculture has performed well in the past in benefiting the poor. All recorded rapid reductions in widespread poverty started with livelihoods being enhanced through agricultural transformation. Agricultural growth can and does reduce poverty and inequality, making specific contributions as measured by progress towards achieving the Millennium Development Goals (MDGs). Agriculture has ensured that global food production has more than kept pace with human population growth.

However the picture is not universally positive. Per capita productivity and food production have declined in sub-Saharan Africa over the past 20 years, and growth has slowed down in Asia. There are concerns about the future. Poor people engaged in agriculture face many challenges such as access to land, finance and markets and increasing competition for resources such as water.

Through poverty reduction strategy (PRS) processes, developing countries are setting ambitious targets for growth. Agriculture is seen as important but many PRS *papers* do not tell us how to make it perform better in contributing to pro-poor growth. How can agriculture best deliver this?

A range of factors combines to impede the realisation of the rights of the poor. Too often there is discrimination in law, regulation and custom that excludes the poorest from markets, from financial services, from land and from technical information. Public services are often ineffective and there are insufficient incentives for the private sector to service the poor. The rules for international trade in agricultural produce remain largely inimical to the interests of developing countries. Subsidies provided by wealthy countries to their producers result in overproduction and depression of world prices. Along with other trade barriers, this clearly limits opportunity in developing countries.

In this document we propose that DFID and other development agencies should adopt a new role: one that emphasises realising rights through creating opportunities for the poor, especially women. The crucial challenge is to ensure that agricultural growth takes place and small-scale farmers, entrepreneurs and workers on low incomes participate fully in it. We must tackle this at all levels. A specific challenge is to incorporate the lessons of good practice we have learned at the micro-level into mainstream policy and action.

At developing country level the priority for agricultural development is to create a policy and institutional environment that provides opportunities for poor people to derive a better livelihood from agriculture. This is likely to include the reform of policies, institutions and laws to improve poor people's access to land, markets and services. It means creating a climate that encourages private sector investment in agriculture and agricultural services. This includes technology, knowledge and skills development. It may require revitalisation of a whole range of services and it may require reconfiguration of existing public institutions to accommodate a different role for government. It means empowering poor people to influence policy and exercise more effective demand on service deliverers.

At international level it means engaging in international negotiating processes and with international norm-setting organisations. Strengthening developing country capacity to negotiate effectively at this level is important. We need to invest in global public goods such as international agricultural research, encouraging public-private partnerships and greater demand-responsiveness.

Many of the global distortions in agriculture emanate from domestic policy in developed countries. Stronger action is needed to ensure that agricultural and trade policy, formal and informal, is consistent with development objectives and supportive of pro-poor outcomes. This must be taken up and prioritised in post-Doha discussions aimed at reforming OECD domestic support and export subsidies arrangements.

Finally, there are still questions as to whether, in a market-led environment, the various threads 'hang together'

sufficiently to deliver maximum benefit in terms of better livelihoods, sustainable development and poverty reduction. These questions are not going to be answered by policy research by development agencies or the international community. Development of new ideas can

only happen on the ground, supported by regional and international lesson learning. DFID therefore proposes to work with partners, under the leadership of governments committed to poverty reduction, to tackle the issues raised in this paper.

Introduction

1. This paper's **aim** is to stimulate discussion within and outside DFID. Its **purpose** is to demonstrate that there is a case for taking specific interest in agriculture as part of the agenda to tackle poverty and to suggest how DFID might contribute to this.

2. DFID is re-defining its approach to agriculture because:

- Poverty reduction strategy (PRS) processes in developing countries identify the importance of **agriculture** but many PRS *papers* do not tell us how to make it perform better.
- Recent studies by DFID and others have highlighted the crucial role agriculture has the potential to play in promoting pro-poor economic growth, better livelihoods and sustainability, particularly in Africa and South Asia.
- Within the context of progressive urbanisation¹ in Asia, Africa and Latin America we need better to understand how agricultural production relates to poor people's livelihood strategies, rural-urban interaction and prospects for economic growth. How important are viable agriculture-based livelihoods in helping poor people migrate to urban areas out of choice rather than through desperation? How important is the rural base to urban-dwellers?

3. We show that **agricultural growth can and does reduce poverty and inequality**. We outline the several ways in which agriculture can do this, making specific contributions to eradicating poverty as measured by progress towards achieving the Millennium Development Goals (MDGs). We identify opportunities and challenges to developing agriculture in a managed and sustainable way. And we look at the roles of governments and the international community in supporting agriculture and we propose that DFID and other development agencies should adopt a new role: one that emphasises realising **rights** through creating **opportunities** for the poor, especially women. This involves reshaping the political economy and reforming policy and regulatory environments for agriculture, both nationally and internationally.

¹ Forty per cent of people in developing countries live in cities today. By 2020 this will have risen to 52 per cent, mostly in Asia and Africa (Cities in a Globalising World, UN Habitat 2001). Rural areas will contain over half the world's dollar-poor until the year 2035.

Why agriculture matters – its role in poverty reduction

Setting the context

4. Over 1.2 billion people continue to live in absolute poverty below the level of one dollar a day. Double that number survive on less than two dollars a day. These figures define a world characterised by persistent inequality and poverty, co-existing with increasing affluence and progress. The causes of poverty are complex. Concerted action is needed to address it and to provide opportunities for the millions facing lives of desperation and uncertainty. There is growing recognition, supported by strong empirical evidence, that agriculture has a major part to play in these efforts.

5. Agriculture plays four fundamental roles in poverty eradication:

- i) Through contributing to economic growth and the “quality” of that growth in terms of its benefits to the poor;
- ii) As a key basis of livelihood strategies for hundreds of millions of the world’s poorest people;
- iii) As a provider of locally available staple foods for the poor; and
- iv) Through the sustainable management of natural resources.

6. We take **agriculture** to mean the production, processing and marketing of crops and livestock from producer to consumer. Agriculture as defined is a major part of overall natural resource-based activity². Agricultural enterprises range from large, capital-intensive production and processing units to small-scale activities forming only part of poor people’s livelihood strategies. In contrast to industrialised economies the majority of agricultural products in developing countries are grown, processed and

marketed by small family-operated enterprises. Poor farmers may own land and animals or they may rent or share them. They may use common or public land such as forest and roadside verges.

Agriculture as a source of pro-poor growth

7. In order to reduce poverty, economies must grow substantially faster than population.

Agriculture remains a sizeable part of most developing countries’ economies. In Africa, it employs about two thirds of the labour force and accounts for 37 per cent of GNP and one half of exports³. In South Asia, despite rapid urbanisation and economic diversification, agriculture continues to provide employment for over 60 per cent of the population and generate 27 per cent of GNP. Although less in relative terms than the 43 per cent a quarter of a century ago, it remains a significant source of wealth and an important influence on overall economic performance.

8. Reflecting this – and the lack of alternatives (see Box 1) – agriculture remains the most likely source of significant economic growth in many developing countries. Historical experience suggests that agricultural growth and increases in agricultural productivity may be a prerequisite to broad-based sustained economic growth and development. This was certainly the case in virtually all the world’s developed countries. More contemporary experience demonstrates that, with few exceptions, overall economic growth has been most rapid in countries that have experienced significant agricultural growth. Rapid agricultural growth, supported by the public infrastructure investments made to promote it, has provided a powerful motor for growth in **rural non-farm economies**. Where agriculture and public rural investment have been stagnant – as in resource poor areas of Asia and sub-Saharan Africa – this has been much more limited.

² Other linked areas include forestry, fisheries and wildlife; these bring in a wider set of issues not dealt with in detail here.

³ World Development Report 2000; World Bank, Washington DC

Agricultural exports as a source of growth in Africa

Box 1

A study commissioned by DFID on growth in sub-Saharan Africa focused on four sectors: manufacturing, agriculture, tourism and mining. It found that:

- Exporting out of Africa is currently a promising avenue for growth. Africa represents a tiny fraction of world trade and the fact that its exports are in many cases below their level of three decades ago means that the potential for expansion is enormous.
- A dramatic rise of exports may come from manufacturing where long-term rates of growth can be much higher than in agriculture; but
- Not all African countries will become manufacturing export platforms in the foreseeable future. For many, agriculture, tourism and mining offer the best prospects for exports and growth.
- With regard to agriculture, emphasis is given to agricultural technology and marketing institutions. A productivity increase in key export crops and livestock products is essential to ensure the profitability of these products for producers.
- Of equal importance is the need to ensure that producers are able to meet quality and production standards.
- Profitability of all four sectors depends crucially on government policies. Macro stability is a necessary but not sufficient condition for growth.
- Most enabling environment variables vary by sector. Providing a suitable environment for manufacturing growth is in general quite different from doing the same thing for agriculture. Any growth strategy is likely to fail without a supportive sectoral environment.

Source: *Fafchamps et al, 2001*

9. A number of reasons help to explain agriculture's particular importance to growth and development:

- Agricultural growth has increased (in the short to medium term) the **incomes** that poor people receive from their agricultural production and processing enterprises, and/or has raised the **wages** that poor people receive from agricultural employment. A recent survey in India concluded that the average real income of small farmers rose by 90 per cent and that of the landless by 125 per cent due to increases in agricultural productivity⁴. Given that agriculture remains the most important source of employment for poor people in developing countries these gains can translate into widespread impact on levels of poverty.
- Early **industrial development** is frequently based on the processing of agricultural products. The rising incomes of small farmers and agro-processors are typically spent on locally provided goods and services, many of which are supplied by – or employ – poor people. Estimates of the multiplier effect of increases in

farm output on other sectors range from 1.3 to 1.9⁵. In India a 10 per cent addition to the agricultural growth rate has been shown to stimulate a five per cent increase in industrial output growth. This in turn boosts the demand for agricultural produce and hence increases rural incomes – the so-called virtuous circle of **rural-urban** development.

- A further effect of agricultural growth on poverty is through its impact on **food prices**⁶. Food is a major part (over 70 per cent) of both **urban** and **rural** poor people's expenditure (including rural labourers and food-deficit farmers). Local staple food production in areas that are otherwise difficult to reach through markets can have a marked impact on food security. Elsewhere market mechanisms that foster delivery of regular food supplies at lower and more stable prices help create food security and reduce hunger.
- **Agricultural trade** has an important role to play in poverty reduction through more equitable redistribution of the benefits of global economic growth⁷. Millions of

⁴ Dev, S. Mahendra, 1998. Regional disparities in agricultural labor productivity and rural poverty. *Indian Economic Review* 23 (2): 167-205.

⁵ See Irz, X, et al 2001. De Janvry & Sadoulet (2002) have shown similar effects for Africa, Asia and Latin America. They estimate that a 10% improvement in total factor productivity would raise the incomes of the urban unskilled by 6.2%, the landless by 7.2% and small farmers by 5% in Asia.

⁶ Hunger and food security are discussed fully in DFID's paper on the subject *Eliminating Hunger*, published May 2002.

⁷ World Bank suggests that broad progress on equitable agricultural trade could increase poor countries' GDP by an extra \$1.5 trillion by 2015 and lift an extra 320 million out of poverty (*Economist* – Feb 2-8, 2002, p75)

people, mostly living in developing countries, depend in some way on commodities such as cotton, coffee, tea and cocoa for a livelihood. Agricultural trade generates foreign exchange needed for public services e.g. drugs, information technology. Formal and informal cross-border trade in food crops, livestock and fish contribute to regional food security, economic growth and stability.

- Agriculture provides the primary and major source of **domestic savings** crucial to investment and innovation in other sectors.

10. Agricultural growth benefits the poorest.

Strong agricultural growth has been a feature of countries that have successfully reduced poverty such as India, Bangladesh, Indonesia and China⁸. A recent study covering 58 developing countries concluded that **a one per cent increase in agricultural productivity was associated with a reduction by between 0.6 and 1.2 per cent in the proportion of people living on less than \$1 a day**⁹. The relationship holds for sub-Saharan Africa. No equivalent relationship, on this scale, was found for manufacturing and services, in either rural or urban areas.

11. The extent to which the poor benefit from agricultural growth is however dependent upon a number of factors. These include:

- *The relative importance of agriculture* within poor peoples' livelihoods. In many parts of sub-Saharan Africa and South Asia agriculture remains a key component of the livelihood strategies of poor people. Over 70 per cent of people in sub-Saharan Africa and 63 per cent in South Asia are engaged in some way in agriculture. Agricultural growth that is generated by these people will have a significant impact on their livelihoods.
- *Trends and stability in commodity prices* and the benefits accruing to small-scale producers.
- *The pattern of agricultural growth*. Greatest impact on poverty has been seen in countries where small and medium scale agricultural producers have driven agricultural growth. Agricultural growth has not had as much effect in countries where the bulk of increased farm income has accrued to larger businesses, since their owners tend to spend extra income on imported or

capital-intensive goods and services¹⁰. A dynamic small farm sector has other benefits, too. It reinforces social capital formation through greater interaction between households, communities, traders, input suppliers and banks. This can also happen in vertically linked systems such as outgrower schemes.

- *Distributional issues* e.g. access to land and other assets and services. Reforming land policy to reassign, confirm or simply clarify land rights in an equitable way, with attention to women's rights as well as those of men, can have large benefits on agricultural growth and poverty reduction. Work in Egypt points to the positive impact of land re-distribution on subsequent rates of economic growth¹¹. Conversely, inequitable land distribution and registration can undermine the livelihoods of the poor. Commercial banks are reluctant to provide credit to the poor, especially women. However savings and credit schemes, for example those of the Grameen Bank and non-government organisations in Bangladesh, have demonstrated how poor people can respond to the opportunities they offer.

12. **Agricultural growth is not a panacea.** Its relative importance declines as economies grow. As poor people's livelihood strategies diversify – for whatever reason – agriculture becomes just one of the opportunities open to them, but this is often because higher agricultural productivity has stimulated broader development. The rural 'non-farm' economy is providing more and more employment, household income security, alternatives to migration and potential for reducing poverty and inequality¹².

Agriculture and the livelihoods of the poor

Despite rapid urbanisation, an estimated 70 to 75 per cent of the world's poorest people (the 1.2 billion living on less than \$1 per day) live in rural areas with their livelihoods largely dependent on agriculture. Urbanisation will continue but it is unlikely that urban-based development alone will absorb sufficient numbers of people to achieve the MDG target of halving the proportion of people living on less than \$1 per day by 2015. It has not done so to date and there is growing recognition that poverty must be tackled where it occurs. This includes rural areas where agriculture continues to provide the primary basis for livelihoods.

8 See *Human Development Report*, 1997. UNDP: New York.

9 See Thirtle et al, 2002. Correlative association does not imply causality. The relationship is, however, supported by a large body of empirical evidence.

10 See Mellor, 2000.

11 See Quan, J. 2000.

12 See Lanjouw, Jean O. and Peter Lanjouw, 1995; van de Walle, 1993; Hazell and Haggblade, 1993; Adams, 1994, 1999; Reardon and Taylor 1996.

14. In many countries, it is stagnation in the rural economy that continues to drive poor people into towns. In India this accounts for 30 per cent of urban growth. Unmanaged increases in urban populations adversely impact on economic development and urban poverty; they become a focus of intense competition and conflict over land. Poor people living in under-serviced informal settlements bear the brunt of these conflicts.

15. However the distinction between rural and urban is seldom a clear one. More and more people seasonally migrate or commute between rural and urban areas, for example as farmer for one half of the year and textile worker for the other. Furthermore, urban people retain strong links with rural areas and view giving up agriculture as risky. Agriculture is a source of income to urban dwellers and conversely benefits from remittances from urban areas. In Southeast Asia industrial wages have fuelled farm mechanisation and other forms of intensification¹³.

16. Livelihoods strategies of poor people are complex. A **livelihoods perspective** provides further insight into the ways in which agricultural growth can reduce poverty and vulnerability:

- Poor people in rural areas, including those with no land¹⁴, typically derive half their household income from farming. This includes working on the farms of others (see Box 2). The relative importance of agriculture varies with location and wealth, although there are no hard and fast rules as to how. In West Africa and some developing countries in Asia the rural poor depend more on agriculture than do the rural non-poor. In contrast studies conducted in South Asia indicate that poorer households in both favoured and marginal areas

depend more heavily on non-farm income, particularly remittances from abroad¹⁵;

- Agriculture can provide both income (either from wage employment on farms, or through the sale of produce) and food for home consumption. Households that rely on agriculture for self-provisioning represent a particular case in the food security debate 'where consumption is production'¹⁶. Home farm production contributes a greater share of food consumption in Africa than it does in Asia¹⁷;
- Women play a particularly important role in agriculture. They produce 60 to 80 per cent of the food in developing countries, with the highest proportions in Africa;
- Agriculture can help stabilise livelihoods and provide families with a safety net during economic downturns. Many poor people in Indonesia, for example, were able to endure the economic crisis because of family links with agriculture;
- Agricultural growth generates demand for the services of others. The fortunes of local traders, brick-makers, carpenters and food vendors in villages and small towns are closely tied to those of local agricultural enterprises¹⁸; and
- For the urban poor agriculture has become a significant activity – in response to declining employment opportunities and inadequate urban food systems. Agriculture provides other opportunities: much processing of agricultural materials takes place in and around small towns. The Nigeria participatory poverty assessment (2000) found that access to agricultural inputs was a higher priority for urban poor people than it was for rural poor people.

Agriculture and Livelihoods in Bangladesh

Box 2

Recent livelihood studies in the poorest region of Bangladesh – the Northwest – have found that:

- While non-farm employment is increasing, agricultural work is still the primary occupation for most households. Fifty-four per cent of the extreme/always poor rely on agriculture as their primary occupation (44 per cent on agricultural labour and 10 per cent on own production & sharecropping). This compares with better off/occasionally poor households 81 per cent of whom depend on own production or sharecropping.
- Increasingly seasonal migration is an important part of people's livelihood strategies but much of this is for agricultural work in other parts of the country during harvest time.
- Seventy-four per cent of the poorest households own homestead land although the size of the holding is small; they use it to cultivate vegetables that are an important part of household diet and the major source of minerals and vitamins.

These findings highlight the importance of stimulating agricultural growth that generates new employment opportunities.

Source: DFID/CARE Livelihoods Monitoring Project; and Chars studies

¹³ See Rigg, J, 1997. Southeast Asia. Routledge. London.

¹⁴ Many rural (and urban) poor people who do not own land are able to use common or public property, for example keeping dairy cows on roadsides, or goats around vegetable markets.

¹⁵ See Renkow, 2002.

¹⁶ In Burkina Faso and Ghana the statistical category food crop farmers represent both largest and poorest groups amongst the poor (Burkina Faso PRSP 2001; Ghana PRS 2002).

¹⁷ See De Janvry & Sadoulet, 2002.

¹⁸ See Singh, 1990.

17. In the longer-term, it is likely that many of the rural poor will exploit alternative non-agricultural livelihood opportunities¹⁹. This in no way reduces agriculture's importance in helping to achieve the MDGs. A dynamic agricultural sector enables successful livelihood diversification and urbanisation. Strong agricultural growth enables people to make choices about their livelihood strategies from a position of strength rather than weakness or desperation.

Agriculture and environmental services

18. Sustainable agriculture provides **environmental services** that are important to society in urban and rural areas, locally and globally. Agriculture is also the most important user of environmental services, including water, forests, pastures and nutrients, and its sustainability depends on their availability. The way in which land is used can have significant implications for urban water supply and tourism. Well managed, agriculture can conserve soil and water resources, preserve trees and biodiversity and contribute to the locking up of carbon. Poorly managed it

more productive and water efficient farming practices. Exploitation of groundwater may lead to unforeseen problems, such as the current epidemic of arsenic poisoning from contaminated drinking water in Bangladesh.

20. Agricultural intensification is usually portrayed either as an opportunity or as a threat to the environment. This polarisation is too simple. Rather, intensification involves a series of trade-offs, which may have different effects²⁰.

21. Badly managed agriculture has in some places led to serious environmental degradation and reduction in the quality of life. In irrigated rice increased use of pesticides has contaminated ground and surface-water, damaged inland fisheries and affected human health. A study of rice farmers in the Philippines found the health costs of pesticide use completely outweighed the benefits²¹. Conversely, appropriate agricultural management practices can help reduce the incidence of disease. For example, in southern China crop rotation and intermittent wet-dry

Water, irrigation and agricultural growth

Box 3

Irrigation greatly increases productivity and has been associated with growth in local economies and with increased livelihood opportunities. In South Asia, for example, the expansion of irrigation was an important factor behind the rapid rise in agricultural growth. Water availability is a major constraint to agriculture, and is likely to be particularly acute in sub-Saharan Africa. Here only one per cent of the arable area is irrigated (Pinstrup-Andersen et al, 1997). Contrast this with South Asia, where approximately one third of cropland is irrigated and produces two thirds of the region's crops by value (IFAD 2001).

can lead to environmental degradation and pollution, deplete natural resources and compromise biological and food safety.

19. Irrigated agriculture is a major user of **water**. Over 80 per cent of water resources in South Asia are now used in agriculture. But with urbanisation and industrialisation agriculture faces increasing competition: water availability is progressively constraining agriculture's contribution to economic growth (see Box 3). Water use efficiency in irrigation is generally very low and there are major concerns regarding resource depletion. In many countries groundwater is being drawn down at an alarming rate – encouraged by highly subsidised or free electricity. Improving efficiency of water use in agriculture requires sustainable operation and maintenance and development of

irrigation interrupts the life cycle of the mosquito leading to a significant reduction in the incidence of malaria.

22. Intensification can certainly increase environmental stress, threatening agriculture's long-term sustainability. But it may provide incentives to conserve natural resources. Farmers in Machakos, Kenya readily adopted soil conservation practices and reversed environmental degradation when market developments made agriculture profitable²². Environmental degradation is usually driven by poverty; environmental conservation is usually driven by the economic benefits that farmers perceive.

23. Potential trade-offs between economic, equity and environmental policy objectives can be avoided. Small-scale producers adopting diversified farming systems

¹⁹ Research findings from Nigeria, Ethiopia, Tanzania, Congo-Brazzaville, Malawi, Zimbabwe and South Africa provide comparative data on changing economic and social patterns in a wide variety of rural contexts (see Bryceson D, 2000).

²⁰ See Moorehead and Woolmer, 2001.

²¹ See Pingali et al, 1997.

²² See Tiffen, Mortimore, and Gichuki, 1994.

Why agriculture matters – its role in poverty reduction

can usually be more environmentally friendly and productive than large-scale, intensive operations. More sustainable production systems can reduce the expansion of cultivation into environmentally sensitive areas such as

high forest, wetland or marginal and fragile lands. Opportunities for tackling environmental stresses are most likely to occur where farmers have clear economic incentives for changing management practices.

How has agriculture performed?

24. Globally, agriculture has seen remarkable performance over the past half century²³. The spectre of population growth outstripping agriculture's ability to meet human needs has not materialised. Food prices have progressively declined in real terms²⁴. However, this positive global picture masks major regional differences. Chronic hunger and grinding rural poverty persist. In large measure this can be explained by regional divergence in agricultural performance. Whilst for developing countries as a whole per capita agricultural production increased by about 40 per cent between 1980 and 2001, in sub-Saharan Africa it fell by about five per cent²⁵. Growth of agricultural output and employment has slowed sharply between 1970s and the late 1990s in Asia and Africa but often, especially for the poor, without much expansion in alternative livelihood options.

25. The implications of agricultural stagnation in Africa are serious and diverse. Africa is the only continent where the number of hungry people has increased and is projected to increase further. Investment overall has stagnated²⁶.

26. Poor performance has also led to disenchantment amongst development agencies about the ability of agriculture to contribute to development and poverty eradication. With the exception of the major successes in Asia²⁷, much public investment in agriculture has yielded indifferent results. The proportion of ODA directed towards agriculture and rural development has fallen by almost two thirds between 1988 and 1998.

27. Understanding the reasons for past disappointment is critical if adverse trends are to be reversed, particularly in Africa where the need is greatest and the challenges most difficult. While conflict and natural factors such as drought have undoubtedly played a part, a legacy of poor national policies, combined with the impact of rich country agricultural and trade policies, have also been highly influential.

²³ China has quadrupled the value of its output, overtaking the United States as the world's largest producer. India has tripled the value of its output. There have also been specific success stories: Kenya, for example, earned US\$100m from exports of flowers in 2000.

²⁴ It has been estimated that rice prices would be 40 per cent higher were it not for the increased production for which international research, in particular, was critical.

²⁵ The picture in Africa is not universally dismal – there are examples of successful agricultural growth in some parts of Africa, much of which has been driven by access to attractive markets (See Wiggins S, 2000).

²⁶ Gross capital formation in agriculture in SSA fell from 21.9% of GDP in 1980 to 16.5% in 2000.

²⁷ These successes were due to a combination of area expansion; mechanisation; investment in irrigation; fertiliser; and high yielding varieties. There has been much debate over specific poverty impacts but it is indisputable that these developments have allowed countries to meet rising food demands.

Reversing the trend – what have we learned?

28. Development is an evolutionary, not a linear process. The past few decades have seen some trends accelerate e.g. globalisation and technological change, whilst others e.g. the policy and institutional environment in many developing and developed countries, have not kept pace with these changes. The experiences of a few decades ago may no longer be relevant. We must learn from and be able to respond to changing circumstances.

29. From what we have learned and continue to learn it is possible to reach several important conclusions. Agriculture's contribution to economic growth and poverty reduction is greatest in low-income countries where it is an important activity for poor people, and can provide an initial route out of mass poverty. This is still the case in many parts of sub-Saharan Africa and South Asia. However local, regional and global consumer demands are changing the landscape for agricultural producers.

30. Global trends favour large-scale agriculture²⁸. However, in many countries small and medium-scale

enterprises remain more productive than larger farmers and small farms continue to predominate²⁹. Experience has shown that smaller farms can compete and they must be given every opportunity to do so (see Box 4). Only by doing this will agriculture's full potential for growth and poverty reduction be realised. It is where we must focus our attention.

31. Agriculture is predominantly a private sector activity and like all economic activities subject to external influences. It is, however, subject to a particularly wide range of distortions and influences that have limited its potential contribution to poverty reduction. It is also a sector demonstrating strong institutional linkages from the local to the national and the international level. It has multiple connections to economic growth, environment, equity and poverty. Improving agricultural performance, therefore, needs consistency and coherence of policy and action. The institutional linkages of the sector mean that action to address shortcomings will be required at local, national and international levels.

The Future of small scale producers in West Africa

Box 4

The long-term scenario painted by the OECD's West Africa Long Term Perspective Study report (1998) predicts major changes to the agricultural sector over the next 20 years. Overall, it is viewed likely that a small number of larger, commercial farm operators will emerge, able to invest in new technology, sell into world markets and compete with imports from elsewhere. In drier, lower potential areas, patterns of farming and levels of productivity will change less markedly, with increasing diversification into a range of off-farm sources of income, including migration.

The World Bank's recent report – African Poverty at the Millennium, confirms this view: "there must be real doubts about the long-term sustainability of smallholder agriculture in the face of globalisation and liberalisation. This has huge implications for the rural poor: Africa's agricultural future is almost certainly bound up with accelerated commercialisation and development of larger farms, with greater use of modern know-how and lower unit costs" (World Bank, 2001)

However, everyone does not accept such a vision as inevitable. Past experience has shown the enormous dynamism and flexibility of the west African smallholder. The 'traditional' small farmer has been remarkably adaptable and able to exploit new economic opportunities, despite the threats caused by dumping of cheap rice and frozen beef, which have disrupted their markets. The challenge is to find ways of ensuring smallholders face a more level playing field when it comes to accessing markets, inputs, advice, credit and so on.

Source: Ndiougou Fall, IIED Drylands and Sahel programme.

²⁸ These is not because large-scale production is more efficient but because large-scale producers are usually able to acquire preferential access to knowledge and capital, and are better able to meet the costs of compliance with rising food safety standards.

²⁹ Around 50 per cent of the rural small farm population cultivates less than 0.15 hectares per capita in densely populated countries such as Rwanda and Ethiopia, and less than 0.3 hectares per capita in supposedly land abundant countries such as Zambia and Mozambique. See Jayne et al, 2001.

Focusing on demand

32. Previous approaches to agricultural development have focused on increasing agricultural production with little consideration of markets and consumer demand. Experience has shown that productivity increases and investment in value-adding enterprises only take place

33. But there is another aspect to demand. Whilst the performance of mainstream agricultural programmes has often been disappointing, there are many examples of good practice as to how to support policy processes; how to build capacity; how to deliver relevant and effective services; how to improve access to finance and markets; and

Responding to markets in Kenya

Box 5

Poorer households in Embu District, Kenya, cannot meet food needs because of their small land holdings. Instead, they tend to specialise in the production of high value commodities that they trade for staple foods produced more cheaply elsewhere. A livelihoods study found that:

- Wealthier farms are relatively specialised enterprises that focus on staple food crops (mainly maize and beans) sold onto local markets. These farms can afford levels of technology (such as fertilizer) that maximise efficiency.
- Most medium-sized farms pursue a traditional strategy of food production for home-consumption, with occasional surpluses sold into the market. These farms struggle to compete with the 'technology-rich' farms, and are increasingly dependent on off-farm sources of income.
- Poorer farmers are unable to produce sufficient food for their own consumption. They are forced to take risks by diversifying into unconventional but high value agricultural products such as milk, flowers, French beans and snap peas. These goods are sold to middlemen who offer a better deal than the collapsing marketing parastatals. Most food needs are met through purchases from the local market, using cash obtained from the sale of high-value agricultural produce.

Source: Thorne and Tanner, 2001

when driven by market forces. Small-scale producers are strongly market orientated (see Box 5); the challenge is to strengthen their capacity to seize new market opportunities for products for which they have a particular competitive advantage, such as labour-intensive horticultural and livestock goods³⁰.

how to make agricultural research relevant to poor people (see Box 6). Through these examples we have learned that we must give much more attention to strengthening people's ability to demand and have influence over services, as well as strategies that strengthen the supply of services.

Agricultural Research and poverty reduction

Box 6

Two recent examples of international agricultural research programmes to which DFID contributes are:

- Increased yields of 30 per cent and productivity increases valued at US\$145m annually from sweet potato production in Shandong Province, China. These increases have been achieved from the introduction of a new method of propagating virus-free sweet potato seed roots and vines developed by the International Potato Centre. The seven million growers, mostly poor households growing on average one-tenth of a hectare of sweet potato, have increased their farm incomes by 3–4 per cent. Programmes for virus-free seed, a technology that requires little investment capital and reduces the need for pesticides, are being extended to the major sweet potato producing provinces with potential benefits to all China of around \$1,600 million a year.
- 200 million poor people in Africa are at risk of crop failure and hunger from a crippling disease of cassava, their staple crop. The cassava mosaic virus, transmitted by whiteflies, stunts plant growth and has destroyed one third of production in Uganda since the early 1990s. UK scientists funded through DFID have had a major role in developing control strategies for this disease. New resistant varieties are now planted on 95,000 hectares with an average yield increase of 10 tonnes per hectare, equivalent to 950,000 tonnes of additional cassava production. New investment is extending this work to other countries in East Africa and investigating other approaches to managing the disease and its pest vector.

Source: CIP Annual Report 2000; DFID 'Impact Assessments', 2001

³⁰ Poor people are particularly well adapted to rear livestock that can be fed from common property resources. Demand for livestock products is predicted to double by 2020 as urban incomes rise.

The policy framework in developing countries

34. Agriculture can become a powerful engine for growth and poverty reduction in many low-income countries. The key challenge is to create an environment that enables poor people, particularly those working in small and medium sized farm enterprises, to respond to opportunities presented by growing markets, not least international markets through globalisation.

35. Experience shows that the creation of an appropriate enabling environment to encourage private investment and the provision of services that support agriculture will require the removal of policy and institutional distortions through:

- **Effective deregulation of controlled markets.** Agricultural production and marketing are frequently heavily regulated because of concerns over food security and food safety. However such measures can have unanticipated negative impacts on poor people's opportunities. Price control and excessive regulation can act as significant barriers to growth. Reforms in China, for example, which brought state purchase prices for agricultural commodities close to world prices, are believed to have been a major contributor to the dramatic reduction in rural poverty in the 1990s;
- **Removal of public monopolies.** In some countries the state has retained a strong role in input supply, processing, marketing, research and information. Public monopolies have been justified on the grounds that the private sector is unwilling to service the needs of large numbers of small, poor and relatively inaccessible producers. However, in many countries the quality of state services is poor and the presence of state monopolies has discouraged alternative, often more effective, private and civil society initiatives³¹. Public monopolies may also distort public expenditure by absorbing funds that could be used either more efficiently or to more effect elsewhere;
- **Empowering poor people** to realise their rights to assets, markets and services, particularly to land. In many developing countries poor people have insecure or no rights to the land and the other natural resources they use. Decentralised institutions for resource management

can help strengthen local people's rights;

- Ensuring that employment in agriculture meets **core labour standards** particularly with respect to hazardous work and forced and child labour³²;
- **Improved effectiveness of public investment**, particularly through capacity building and by finding mechanisms that allow poor people to express demand for services;
- Effective markets and systems that help poor people **manage the uncertainties** associated with agricultural production through, for example commodity price risk management mechanisms for small farmers and other forms of social protection, and strategies to improve the efficiency of domestic produce markets;
- Understanding the **dynamic nature of markets** and of farmers' capacity to respond to the changes in demand; and
- Ensuring that **rural-urban** considerations are taken into account in the development of national and sub-national policies affecting agricultural production, markets, land use and urban planning.

36. Delivering against this agenda requires an understanding of the social, political, institutional, economic and environmental factors that shape the livelihoods of poor people highly dependent on agriculture. These factors often combine to impede the realisation of better livelihoods. Too often there is discrimination in law, regulation and custom that excludes the poorest, especially women, from financial services, from land, from membership organisations that increase market bargaining power and from technical information.

The policy framework at international level

37. The "rules of the game" for international trade in agricultural produce remain largely inimical to the interests of developing countries. The stark reality is that in 2001 the EC spent more than six times as much supporting EU agriculture and fisheries as on development assistance (€40.1 billion on agricultural support and €6.3 billion on development assistance)³³. This, along with tariff and other non-tariff barriers, clearly limits opportunity in developing countries³⁴.

³¹ Providing privatisation policies promote competition, and do not simply replace a public monopoly with a private monopoly.

³² The incidence of child labour is on average twice as high in rural as in urban areas and the vast majority of child workers are engaged in agricultural and related activities. See ILO 2002.

³³ See European Commission, 2002.

³⁴ The impact of trade reform on poverty is complex and is likely to create both winners and losers. Predictive models agree that on balance trade reforms will result in a net gain to developing countries (see Von Braun et al, 2002).

38. Agricultural subsidies in rich countries reduce production costs or artificially raise the price their producers receive and lead to overproduction or over-exploitation³⁵. The use of export subsidies or refunds to finance disposal of agricultural surpluses on international markets further depresses world prices. Whilst this may benefit some consumers the overall distortion of domestic markets impacts negatively on poverty and food security in many poor countries (see Box 7). Reducing subsidies is very important and some developed countries are now making proposals for reforming their agriculture support³⁶.

39. The impact of **trade barriers** is enormous. It has been estimated that developing country gains from global liberalisation would be in the order of \$50-60

countries renders them vulnerable to unfair or illegal trade practices such as exceeding agreed fishing quotas.

40. Price volatility and long run price decline are characteristics of many tropical primary agricultural commodity markets⁴⁰. Depressed cocoa prices have been a recent problem for West African countries although the situation has recently improved. The present crisis in coffee, and the hardship this has brought upon poor producers, has captured international attention. The main cause of low commodity prices is oversupply. There are no demonstrably effective mechanisms to manage supply. But it is a concern that so little added value in marketing chains is captured by poor producers and poor countries.

Some Examples of how OECD subsidies Impact on local production

Box 7

“Just about all processed food ingredients used in Kenya are imported. This is because one can get quality goods for a lower price by importing subsidised products in bulk. There is no market for local people. They cannot compete with international subsidies. It's the subsidies that are keeping them poor”.

Association for Better Land Husbandry, Kenya.

“Here in Indonesia US companies are dumping chicken legs onto local markets, causing lots of damage to an already beleaguered poultry industry, and damaging small producers as well. Students are protesting. Export is hindered by rules which they cannot comply with, but there seems to be no means of stopping subsidised imports”.

Professor Bob Orskov.

Source: Comments on the Agriculture Consultation Draft, DFID 2002.

billion annually³⁷. Tariffs imposed by high-income countries on many agricultural goods from developing countries – especially meat, sugar and dairy products – are almost five times those on manufactured goods³⁸. High, complex tariffs together with increasingly stringent formal and informal product and performance standards limit poor countries' access to international markets³⁹. They discourage diversification into higher value products and retard the emergence of domestic agro-processing industries. The weak surveillance capacity of poor

41. According to the World Bank, **global public goods** have represented a growing proportion of investment by the international community, accounting for about US\$2 billion annually by the late 1990s. Funding for health, the environment and peace have grown significantly while that for knowledge generation and dissemination, including agriculture, have stagnated. The CGIAR budget in 2000 was US\$331 million. Demands for funding of global public goods are set to rise⁴¹ and we must ensure that levels of funding for agricultural global

³⁵ According to Wilfrid Legg, “although there has been some shift away from policy measures most closely linked to production, 72 per cent of support to farmers (PSE) is (in OECD countries) still provided through policies that keep producer prices above those on the world market – down from 82 per cent in the mid-1980s” (EuroChoices, Spring 2001, p.31). According to an Economist report, the European Commission has reported that EU countries' fishing fleets are subsidised to the tune of Euro1.1 billion (\$1 billion) each year (The Economist, Too much vigour in Vigo, 30 March – 5 April 2002).

³⁶ For example, the EC's Mid-Term Review of the Common Agricultural Policy of July 2002 outlines proposals including decoupling of payments for production, reducing the value of direct support to farmers and redirecting payments to environmental and rural development concerns. Whilst the value of payments will not be substantially reduced the nature of support proposed should make the regime less trade distorting.

³⁷ See von Braun, J, Wobst, P and Grote, U. 2002.

³⁸ Agricultural tariffs and subsidies cause annual losses of \$19.8 billion for developing countries – equivalent to about 40 per cent of oda in 1998. World Development Report, 2000. World Bank.

³⁹ For example, the setting of Maximum Residue Levels and Maximum aflatoxin levels in the EU in response to consumer concerns could have serious consequences for developing countries unless support is provided to producers to enable them to meet new certification requirements

⁴⁰ The underlying annual decline in real price for the following commodities in the period 1950 – 2000 has been: cocoa (2.2%); rubber (3.4%); robusta coffee (2.5%) (See LMC, 2002).

⁴¹ The report of the Commission on Macroeconomics and Health recommends spending \$3 billion per year by 2007 on research and development for the diseases of the poor.

Reversing the trend – what have we learned?

public goods are appropriate and used with maximum effect for the benefit of poor people. This may mean reforming the way in which we do research. Part of the answer will be to find ways of encouraging greater private investment in research. Private funding dwarfs public

investment but is directed mainly at the needs of the OECD countries⁴². There are, however, signs of increased private investment in agricultural technology in countries such as China, India, Malaysia and Thailand.

⁴² The life sciences industry spends about \$7 billion annually.

What are the challenges?

42. The crucial challenge we face is to ensure that agricultural growth takes place and small-scale farmers, entrepreneurs and workers on low incomes participate fully in it. This will require improvements in governance and markets and increases in productivity at the farm level. Opportunities are often restricted by insecure or limited access to land, a lack of voice and vulnerability. A specific challenge is to incorporate the lessons of good practice learnt at micro-level into mainstream policy and action.

43. There are no explicit contradictions between the roles of agriculture in promoting broad economic growth, improving the agriculture-dependent livelihoods of poor people and as a provider of environmental services. However, addressing priorities may involve hard choices for governments.

44. Equitable access to assets: The perspective of poor people is that income poverty is closely related to asset poverty: the poor are those with few assets (human, social, physical, financial and natural). They benefit from growth whenever it raises the returns to the few assets they hold. The distribution of land and the policy and legal processes by which poor people, especially women, gain access to and maintain security over land are vital⁴³. The same can be said for other common property resources such as water, forests and rangelands. Too often the rights and entitlements of poor people have been eroded. Ensuring they can benefit fully from growth in the sector will require effective mechanisms for the transparent allocation of rights to land and other natural resources.

45. Strengthening the voice of the poor: Living in poverty means not being listened to and being unable to influence policies, express demand on public services or pay for privately delivered services. Past attempts to tackle rural poverty have concentrated on improving the *supply* of services, with large sums and much effort being invested in rural public services. In some cases this has been accompanied by significant organisational change. Services are better delivered than they once were. But focusing on supply is not enough. Lack of effective *demand* continues to undermine the efficiency, effectiveness and relevance of

public services. A number of countries are starting seriously to tackle this, for example Uganda under its Programme for the Modernisation of Agriculture, which has created a 'market' for public services by giving communities the financial resources to purchase the services they want from the suppliers they prefer. More ideas are needed as to how to involve poor people in policy making and determining what sort of services they get. In several countries the performance of farmers' organisations gives cause for optimism.

46. Making trade work for the poor: Poor agricultural producers and workers are strongly dependent on **domestic markets** for their livelihoods. This is where demand for agricultural products is greatest. Local trade opportunities are strongly affected by weak infrastructure, absence of processing, storage and marketing facilities, perverse transport and market taxes⁴⁴ and distortions created through the importation of artificially cheap agricultural products from OECD countries. Although liberalisation and deregulation have removed some of the internal impediments to trade, considerable challenges remain in removing unfair competition posed by OECD imports, and in improving the access of small-scale producers to processing and marketing chains (see Box 8). Agricultural products also account for a significant part of many developing countries' trade, both imports (especially food) and exports. Compared to other sectors **international agricultural trade** remains heavily distorted and the effects of radical reforms are likely to be far reaching. Whilst opening up trade offers many opportunities, other trends, such as ever increasing standards applied in market chains, risk making life more difficult for small producers in future⁴⁵. International commodity markets pose a particular challenge and there are no quick or easy fixes.

47. Reducing risk: Agriculture is subject to risks that are often unpredictable and outside the control of people practising it. Examples of such risk include weather, commodity price fluctuations, changes in consumer demand, and the occurrence of new pests and diseases. High levels of risk contribute to the vulnerability

⁴³ See DFID 2002. Better livelihoods for poor people: The role of Land Policy. In preparation.

⁴⁴ In Africa transport from the coast to the interior accounts for half or more of the wharf price of internationally traded grains (Byerlee & Morris, 1993)

⁴⁵ As assurance schemes become more common there is a risk that many companies will find it easiest to exclude smallholders from the supply chain.

What are the challenges?

of poor people (see Box 9). Much behaviour by both small-scale enterprises and households can be understood as responses to living in a high-risk environment. Strategies that diversify livelihoods and improve access to new technologies⁴⁶, financial services such as crop

global market share and have seen their agricultural trade balances deteriorate. Whilst agricultural trade has expanded, real international commodity prices have fallen. The situation is most acute in sub-Saharan Africa. Compared to other regions, productivity, profitability and investment are

The challenge of bringing farmers to markets

Box 8

High transportation costs are a particular barrier to trade: for one third of all African countries transportation costs account for more than 25 per cent of the total value of exports; for Uganda they exceed 70 per cent (von Braun *et al*, 2002). Reducing transportation costs through improved infrastructure and reduced movement controls can make a difference to farm-gate prices several times the magnitude of that achieved by, for example, trade liberalisation (Byerlee & Morris, 1993).

Other factors that reduce the effectiveness of markets include:

- The relatively high cost of contracting with large numbers of small producers;
- The absence of grades and standards;
- Poor market information; and
- Weak contract enforcement.

Arrangements that can overcome some of these barriers include the establishment of:

- Commodity exchanges;
- Contract farming;
- Farmers organisations / co-operatives;
- Quality management schemes, traceability systems and codes of practice;
- Local storage facilities to improve stability of food suppliers and overcome boom and bust cycles;
- Capacity of producers to analyse market opportunities for themselves; and
- Franchising of monopoly marketing agencies.

The challenge of risk mitigation in vulnerable areas

Box 9

There are areas where farmers are isolated from markets, where the non-farm economy is not well developed, where risks are high and where subsistence agriculture remains the key livelihood. Here there may be scope to use support to agriculture (primarily through helping to manage risk through, for example, the development of pest/disease resistant crop varieties) as a means of providing a safety net. In such areas investment in agricultural development may be more cost effective in poverty reduction than large-scale expenditure on formal safety nets, even where the challenges to agricultural development are great.

insurance and advisory and animal health services can help poor people manage risk. Recent advances in drought early warning systems can also enable government and farmers to manage risk.

48. Promoting private investment in agriculture:

In spite of agriculture's good global performance countries whose economies are more agriculturally based have lost

stagnant. Private investment is essential for the processing and marketing of agricultural products, the supply of agricultural inputs and the provision of services. Improving the environment for private investment is of critical importance, requiring a combination of regulatory reform, new institutional arrangements to overcome market failures, the promotion of pro-poor investments and complementary physical investments.

⁴⁶ Development of new technologies such as drought and disease tolerant crop varieties help to reduce risk. Integrated Pest Management for example has helped stabilise yield fluctuations caused by pests and diseases (Lenne, 2000).

49. Agriculture is dependent for its growth on **public goods** to complement the efforts of the private sector. Public expenditure on merit 'private' goods such as education, health care and advisory services (including business advisory services) are also essential. Getting a better understanding of what are the most effective elements of public spending is important. Policy reform, institution building and expenditure on infrastructure are all important to growth of smallholder agriculture. However, with tightly constrained public sector resources, priorities must be set and effectiveness maximised by rethinking the way in which services are delivered⁴⁷.

50. Improving productivity: Small-scale agriculture is labour intensive, a resource that is becoming increasingly scarce in many places, exacerbated in some areas by the HIV/AIDS pandemic. Productivity increases are needed to allow farmers to respond to new opportunities and market

51. Sustainability: Agricultural practices are closely linked to the environment. Systems that allow intensification using mainly locally available resources ('sustainable agriculture') play an important role in poverty reduction. But policies have often favoured systems that make greater use of external inputs such as chemicals, artificial fertilizers and mechanisation. Sustainability must be seen in its widest context. It is not just a matter of the ecology of agricultural systems themselves but the impact these systems have on the lives and opportunities of others, particularly poor consumers and producers. Sustainability of one system cannot be at the expense of sustainability in others. For example measures to promote environmentally sustainable agriculture in developed countries may still have the potential to impact negatively on opportunities for poor producers in developing countries. All countries

The challenge of increasing productivity in sub-Saharan Africa

Box 10

In sub-Saharan Africa the success of agricultural growth strategies will depend critically on measures to maintain soil fertility and prevent land degradation. The Green Revolution in Asia, based on plant breeding for a single crop (rice) for an irrigated ecosystem, cannot be replicated in Africa, where food staples are more diverse and dryland ecosystems less productive. Consequently, Africa's Green Revolution has failed to materialise. Re-capitalising Africa's soils will require innovative use of organic matter technologies to substitute for expensive inorganic nitrogen. Low external-input agriculture based solely on organic nitrogen may only be feasible for high-value horticulture. Improving nitrogen supply through a mix of organic and inorganic sources seems the most appropriate strategy

Scoones and Toulmin, 1999

demand. Levels of productivity are low and there are huge opportunities for improving it through application of technology that allows small farmers to take maximum advantage of their particular asset endowments. Small scale producers have, for example, been able to increase yields by 93 per cent through the adoption of improved management practices⁴⁸. But maintaining and increasing productivity in the medium term, particularly in the face of wider trends, will require investment in knowledge and technology systems now. It will require a re-orientation of international, national and local research and development activities around the needs of small-scale producers. It will require a greater emphasis on niche products that small producers have a particular advantage in supplying, on output marketing systems and sustainable agriculture, including soil fertility and more efficient water use and management (see Box 10).

need to promote policy measures that will enable farmers to make use of their natural advantages. The use of market-based instruments, such as organic labelling, should also be promoted.

52. Longer-term influences: While human population increases against a relatively static land area (and already largely exploited marine resources), a number of other trends are important. Environmental change (including climate change), urbanisation and HIV/AIDS, will affect future productive capacity:

- *Global warming* poses a huge threat to agriculture in the arid and semi-arid tropics, notably increasing the frequency and intensity of drought, and new patterns of pests and diseases. Desertification, water shortage, changed growing season patterns, new threats from disease and pests and more extreme weather events will

⁴⁷ Publicly financed services do not have to be delivered by the public sector. The private sector can be used to deliver public services either on contract to government, or through government vouchers distributed to the clients of the services.

⁴⁸ Research funded by DFID with Essex University.

What are the challenges?

present new challenges to agriculture. Loss of biodiversity will accelerate owing to environmental and land use change. These changes will increase the climatic and environmental risks associated with agriculture, particularly in more marginal environments where resource-poor farmers are concentrated.

- *HIV/AIDS* is already having a major effect in countries with high prevalence rates, for example in southern Africa. The reality is that whatever measures are taken on prevention, care and treatment, demographic changes are already in train that will have potentially devastating consequences for services, food security and livelihoods. Mitigating the effects of HIV/AIDS must be a major focus of attention.

- *Urbanisation* can create markets and so make a positive contribution to agricultural growth, but urbanisation also increasingly competes with agriculture for water, land and labour.
- *The long-term trend in declining agricultural prices* means that farmers must increase productivity even faster and/or diversify into niche market value produce.

While new technology and management practices can significantly reduce these risks, these trends pose significant long-term challenges that must be addressed in a holistic manner at national, regional and global levels.

A role for donors and the international community

53. Agriculture's institutional landscape offers key points of engagement for governments and the international community.

At national level in developing countries

54. The priority for agricultural development is to create a policy and institutional environment that empowers poor people to derive a better livelihood from agriculture. This is likely to include the reform of policies, institutions and laws to improve the realisation of poor people's rights to land, markets and services. It means creating a climate that encourages private sector investment in agriculture and agricultural services. This includes technology, knowledge and skills development. It may require revitalisation of a whole range of services from standard setting to information such as weather forecasting. It may also require a reconfiguration of existing public institutions to accommodate a different role for government. This needs real political commitment – there are some hard decisions – and many countries remain ambivalent about the tougher aspects of civil service reform, decentralisation⁴⁹ and increasing the influence of poor people on how resources are used.

55. Many stakeholders, including major private sector players, have an interest in agriculture. Few areas of policy are uncontested. Donors can play an important role by supporting national and regional policy processes, and helping build capacity to explore and pilot new approaches involving government, civil society and the private sector. This should include strengthening national capacity, including that of civil society, to engage in international agendas such as agricultural trade, intellectual property rights and bio-safety regimes.

56. Many donors, including DFID, are increasingly transferring ODA in ways that have the best effect on outputs as measured by progress towards the MDGs. This requires close engagement with recipient countries, usually based on a Poverty Reduction Strategy – or equivalent statement of commitment – backed by a sound medium term expenditure framework and improved public sector financial management. An expanding proportion of

financial aid is therefore being disbursed through national budgets, thereby helping build the capacity and accountability of local systems, increasingly in the form of direct budget support.

57. Compared to health, education, water or transport, agriculture is not one of the big 'public spenders': it typically accounts for 5-10 per cent of discretionary public spending. In many cases this is still tied to outmoded and ineffective service delivery structures⁵⁰ that do not respond to farmers' requirements. Convincing arguments can be made for public investment in infrastructure services to improve productivity and market access; and in research and knowledge transfer to assure the next generation of technology, but such investment needs to be accompanied by new approaches to the delivery of publicly financed services⁵¹. Agricultural development may require less not more state sectoral involvement. Public funding, including donor resource transfers, is important, but it must stimulate and complement rather than displace private sector activity and be consistent with countries' macroeconomic and fiscal policies.

58. Social capital building is important for more effective management of natural resources. Of equal, if not greater, importance is the need to strengthen civil society so that the poor or their representatives can play a more active role in policy and institutional reform processes at national and local levels and engage on more equal terms with service providers and marketing chains. Focusing on strengthening the rights and voice of poor people requires influence at a political level and engagement in broader issues of governance.

At international level

59. We need to engage in international negotiating processes such as WTO (see Box 11) and with international norm setting organisations such as the FAO to ensure a poverty perspective is taken. Strengthening developing country capacity to negotiate effectively within international fora is also an important part of our work, and an area where we see a strong role for the UN organisations. We will also continue to champion the Doha commitments within the EU and with others.

⁴⁹ Decentralisation is the basis for local self-government and has the potential to contribute to more efficient delivery of public services. Where it works it can increase representativeness and accountability and bridge the gap between the state and civic groups. See Matovu G, 2002.

⁵⁰ Agricultural extension systems in various countries are described as failing, moribund, in disarray or barely functioning. See FAO, 2001.

⁵¹ Public services do not necessarily serve the poor well: the poorest farmers tend to receive the poorest service. New approaches to service delivery that empower poor people as consumers of services (through, for example, the use of vouchers or payment on delivery of results) can greatly improve the quality and impact of publicly financed services.

The DOHA commitments

Box 11

Addressing the external dimensions of developed countries' agricultural and trade policies is fundamental to economic development and poverty eradication in the developing world. This is recognised in the Doha Ministerial Declaration, which reconfirms the long-term objective agreed in the WTO Agreement to establish a fair and market oriented system through a programme of fundamental reforms. This includes strengthened rules and specific commitments on government support and protection for agriculture with the aim of correcting and preventing restrictions and distortions in world agricultural markets. Without prejudicing the outcome, member governments committed themselves at Doha to comprehensive negotiations aimed at:

- Improving market access for agricultural products;
- Substantial cuts in export subsidies on agricultural goods with a view to their eventual phase out; and
- Substantial cuts in domestic agricultural support mechanisms that distort trade.

It was further agreed that negotiations – which will end by 1 January 2005 – should recognise the need for special and differential treatment for developing countries to enable them to take account of their development needs, including food security and rural development. Doha reconfirms the importance of agricultural trade liberalisation to the developing world and provides the framework for negotiations to take this forward.

60. Agricultural growth relies on the continual generation of new technology to maintain and improve production. As with major human health issues this is dependent on global public goods such as plant genetic research that require capital and human investment at international level⁵². International research takes time if its products and technologies are to be appropriate, safe and affordable. It may be especially costly where cutting edge science is employed. We are identifying new ways in which we can improve the focus and efficiency of our investments in research, through the establishment of public/private sector partnerships that bring together complementary skills, ideas and resources, and outcome-based funding arrangements that encourage the efficient delivery of appropriate technologies to poor people⁵³.

61. The use of natural resources for agriculture is a potential cause of regional conflict. Three thousand of the world's river basins are shared by two or more countries

and more than 20 countries depend on the flow of water from other nations. Water – much of it for agriculture – is an important dimension of the ongoing Middle East conflict and there are fears of further serious disputes between Iraq, Turkey and Syria. Major programmes of irrigation development may add to regional tensions. The development of water sharing agreements has the potential for very significant contribution to peace and economic development.

At developed country level

62. Many of the global distortions in agriculture emanate from domestic policy in developed countries. Stronger action is needed to ensure that agricultural and trade policy, formal and informal, is consistent with development objectives and supportive of pro-poor outcomes. This must be taken up and prioritised in post-Doha discussions aimed at reforming OECD domestic support and export subsidies arrangements.

⁵² International level research should complement national and regional level research by focusing on global research issues that require a level of funding and human resources that can only be provided on an international scale.

⁵³ Such arrangements need to be low cost, minimise risk and carry small trade offs.

How can DFID help reduce poverty through agriculture?

63. Many of the conditions required for agricultural development are not unique to agriculture. Poverty reduction through agriculture requires a supportive macro-economic and investment environment; improved access by poor people to infrastructure, education, health and financial services; secure property rights; and fair and transparent systems of governance. These are areas where DFID is already engaged.

64. But to maximise benefit to poor people additional actions are required to allow agriculture to play its part. These include:

At regional and country programme level

- Supporting poverty reduction strategy processes to further refine poverty analysis, diagnosis and monitoring. This should take account of rural, peri-urban and urban contexts and particularly the linkages and mechanisms through which policies and investments affect poverty reduction at the micro-level. Efforts are also needed to strengthen regional and international dimensions, including analysis of how agricultural and trade policies affect sustainable livelihoods; assess trade-offs from different patterns of economic growth; and systematically incorporate poverty considerations into sectoral policies and programmes.
- Supporting governments and building capacity to develop a vision for agriculture that goes beyond the 'Ministry of Agriculture'. This should address issues of governance, the reform of policy and legislation, the creation of incentives for private-sector investment and reconfiguring the role of government in agriculture. This would include local, municipal and national levels of government.
- Supporting establishment of alternative models for rural services such as technology, knowledge, finance, insurance and business advice, and rural infrastructure, including irrigation. These must be delivered at the right scale, be affordable and client driven. Successful models are likely to be those that have greater involvement of the private sector and civil society, with government taking less of a delivery role.
- Supporting development of an enabling environment for private sector development taking into account the needs of agriculture based development objectives and supportive of pro-poor outcomes. Initiatives such as the

Business Linkage Challenge Fund can also play a role in encouraging private sector investment in small-scale agriculture.

- Building capacity and supporting advocacy of civil society groups and the private sector, including farmers' organisations, as a means of building voice in political, institutional and policy reform processes (such as land reform processes). Producer or user groups play an important role in enabling poor people to manage common property resources, to access services, including financial and business services, and to overcome entry barriers into markets and increase their negotiating power and to help meet new market standards.
- Supporting initiatives that reduce vulnerability of agricultural market participants to risk through development of appropriate instruments such as price risk management, insurance etc.
- Supporting initiatives to address structural problems, such as the lack of human capacity and quality control systems to meet product (sanitary and phytosanitary or SPS) and other market performance standards that impede livelihood diversification; or that reinforce continued dependence on primary agricultural commodity exports e.g. adding value through exploitation of niche markets such as organic or fair trade markets.
- Supporting processes to develop integrated water and natural resource management to ensure efficient and equitable allocation to increase agricultural productivity.
- Supporting governments to implement HIV/AIDS mitigation strategies that take account of agriculture, and agricultural and rural poverty strategies that take full account of HIV/AIDS.

At central programme level

- Creating mechanisms that stimulate private sector investment and participation in small-scale agriculture in poor countries, as providers of technologies and services and as purchasers of agricultural products for high-income markets. The recently launched Emerging Africa Infrastructure Fund provides one model for public/private sector partnerships; there may be others.
- Creating appropriate conditions and incentives to increase access by poor people to new technologies and

How can DFID help reduce poverty through agriculture?

approaches to sustainable management of natural resources, with greater emphasis on participatory or demand led technology development and involvement of the private sector.

- Investing in the generation and dissemination of agricultural technology through the CGIAR and other parts of the global research system.
- Engaging with organisations that set policies, rules, standards and norms that shape agricultural opportunities for poor people. We will work with Whitehall, the European Commission, international standard-setting organisations such as the FAO and OIE, and other members of the G7/G8 to focus on poverty; to promote a greater coherence between domestic and developmental agendas; and to work towards more equitable rules.
- Extending programmes of support to strengthen the participation of developing countries at WTO agriculture negotiations e.g. to develop and present a case for special and differential treatment within a new agreement on agriculture⁵⁴; and to integrate trade issues into PRS processes e.g. through the Integrated Framework for Trade-Related Technical Assistance.
- Exploring practical avenues to establish the precise nature and magnitude of trade and non-trade barriers facing potential agricultural exports from developing

countries; of the factors constraining in-country value-adding; and of factors limiting production responses involving poor people.

- Supporting initiatives that advance the cause of better remuneration for poor agricultural producers and workers.
- Promoting lesson-learning and developing tools to help policy makers (donors and governments) to take forward a vision of agricultural development taking account of the dynamic changes being experienced e.g. rapid urbanisation, through poverty reduction strategy processes.
- Commissioning research on rural-urban migration, in order to better understand the socio-economic and political characteristics of migrants, and the impact of these trends on agricultural development.
- Promoting in international fora such as the World Food Summit: five years later (WFS:fyl) and World Summit on Sustainable Development (WSSD) approaches to poverty reduction and agriculture that are founded on an understanding of poor people's livelihoods.
- Taking forward at WSSD and other international fora agreements reached at Doha towards greater liberalisation of trade, especially within developed countries.

⁵⁴ See OPM, 2002. This study commissioned by DFID suggests that developing countries have a case for concessions on grounds of S&DT, but indicates that proposals submitted to date are weak.

After the Summits

65. Agriculture has been debated at a series of events and fora this year: the WFS:fyl; the NEPAD process; the WSSD; and other regional technical events.

66. Experience has taught us a great deal about how agriculture can best help to eradicate poverty through contributing to the MDGs. This year's international conferences offer an important opportunity to take this forward. But there are still questions as to whether, in a market-led environment, the various threads 'hang together' sufficiently to deliver maximum benefit in terms of greater realisation of rights of the poor, improved livelihoods, sustainable development and poverty reduction. These issues may be harder to deal with where they appear to challenge conventional wisdom about market failure, the role of the state and the role of agriculture in livelihood security.

67. Questions that need addressing include:

- **Levels of investment:** what do we know about optimal levels of public and private sector investment in agricultural and rural enterprise? We know that in Africa development assistance and public expenditure on agriculture have declined. This reflects the withdrawal of the state from direct involvement in production and marketing and a perception that the impact of past public expenditures has been disappointing. But what about private investment? Are levels 'adequate' to achieve poverty goals? If not, why not and what actions are needed to encourage greater private investment?
- **Markets and services:** the observation in sub-Saharan Africa is that the withdrawal of direct involvement by the state has led to the fragmentation of input and output markets. How far, and under what circumstances, will markets be relied upon to achieve growth and poverty reduction? Under what conditions has the private sector responded to market deregulation? How can the state intervene to improve poor people's access to markets in a way that reduces their vulnerability?
- **Moving to a global economy:** Some of the trends associated with globalisation (for example the ever increasing quality standards and norms in export markets) are making life more difficult for small-scale

farmers. What does this mean for the future of small-scale agriculture and rural enterprise, will it survive? What are the consequences if it does not?

■ **Market forces and environmental sustainability:**

Even in the developed world these are often two competing issues. How can market opportunities be opened to the poor whilst ensuring sustainability and minimising environmental impact in what are often already highly stressed regions?

68. We will encourage thinking, research and debate on these and related issues. This will require more than policy research by central departments or the international community. Development of new ideas needs to happen on the ground and be supported by regional and international lesson learning. For example countries may wish to experiment with, pilot and eventually replicate at scale new initiatives on service delivery; on information and technology; on marketing; on private sector development that links small, medium and larger businesses; on tackling vulnerability; on addressing sustainability; and increasing poor people's voice. Such support would complement resource transfer that increasingly is being channelled through national systems.

69. DFID therefore proposes to work with its partners, under the leadership of governments committed to poverty reduction to tackle the issues raised in this paper. We do not intend to 'pick' countries from the centre. They will emerge from ongoing dialogue at country level between governments, DFID and other donor partners. Countries where we are already engaged in agricultural and rural reform processes include Bangladesh, Cambodia, Ghana, India, Kenya, Malawi, Mozambique, Nepal, Nigeria, South Africa, Tanzania and Uganda.

70. Progress will depend on coordinated action by a wide range of stakeholders. Some bold testing of ideas will be necessary. Country-level work will need to be backed by regional and international level action. Owing to the strength of its country and international relationships, DFID is well equipped to help develop this process.

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