



ANTI-HUNGER PROGRAMME

A twin-track approach to hunger reduction:
priorities for national and international action



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Executive summary

The world now produces much more food than is required to provide everyone with an adequate diet, yet 840 million people – almost one person in seven – do not have enough to eat. Most of these people live in South Asia and sub-Saharan Africa. That hunger should still be such a massive problem in today's world defies logical explanation. On a global scale the technology exists to enable farmers to produce an excess of food. This, combined with a rapid change in food habits, has caused obesity to become one of the fastest rising health problems in both developed and developing countries. Information systems can pinpoint where food is needed, and the means exist to move food rapidly around the globe.

The existence of hunger in a world of plenty is not just a moral outrage; it is also short-sighted from an economic viewpoint. Hungry people make poor workers, they are bad learners (if they go to school at all), they are prone to sickness and they die young. Hunger is also transmitted across generations, as underfed mothers give birth to underweight children whose potential for mental and physical activity is impaired. The productivity of individuals and the growth of entire nations are severely compromised by widespread hunger. Hunger breeds desperation, and the hungry are an easy prey to those who seek to gain power and influence through crime, force or terror, endangering national and global stability. It is, therefore, in everyone's self-interest – rich and poor alike – to fight hunger.

There is no lack of knowledge about how to fight hunger. Nearly three-quarters of the poor in developing countries live in rural areas, and the rapid increase in urban poverty is in part explained by the decline of agriculture and the rural sector. The rural face of poverty, human misery and hunger is now well established. Many of the rural poor are subsistence farmers or landless people seeking to sell their labour. They depend on agriculture for their earnings, either directly, as producers or hired workers, or indirectly, in sectors that derive from farming. Trading, transportation and processing involve large numbers of small entrepreneurs and are necessary for agriculture but, at the same time, such entrepreneurs depend on farming activities for their survival.

Rapid progress in cutting the incidence of chronic hunger in developing countries is quite possible if political will is mobilized. A twin-track approach is required, combining the promotion of quick-response agricultural growth, led by small farmers, with targeted programmes to ensure that hungry people who have neither the capacity to produce their own food nor the means to buy it can have access to adequate supplies. The two tracks are mutually reinforcing, since programmes to enhance direct and immediate access to food offer new outlets for expanded production. Countries that have followed this approach are seeing the benefits.

A prerequisite for the success of investments under the twin-track approach is the creation of a policy environment, both internationally and nationally, that is conducive to broad-based

economic growth. The creation of such a climate is the responsibility of national governments of the developing countries as well as the international community. At the international level, this implies measures to promote peace, political and economic stability as well as a trading environment, especially for agricultural commodities, that protects and promotes the development and food security interests of developing countries. Nationally, it implies the adoption of macroeconomic policies that provide the stability required to encourage savings and investment. In most cases, this will call for increased budget allocations for agricultural and rural development. Such policies emphasize broad participation in policy decision-making and implementation, combined with institutional decentralization in ways that increase the accountability of governments to their rural populations and strengthen the capacity of communities and local organizations to place effective demands on service providers. Policies that define transparent and secure rights and promote a more equitable access to natural resources, such as land, water and wild animals (including fish), contribute both to their sustainable use and to poverty reduction. Additionally, there is a need for policies that improve access by the poor, especially people living in remote areas, to knowledge and information relevant to their needs and that also empower them to share in the benefits of technological progress. Finally, mechanisms must be developed for social protection, leading to the creation of reliable safety nets for those people who are unable to meet their essential needs, including food needs, through production, purchase or traditional coping systems.

Additional public investment of an estimated US\$24 billion annually, focused on poor countries with large numbers of undernourished people, would make it possible to attain the World Food Summit goal of halving hunger by 2015 on a sustainable basis. Achieving this goal, instead of the smaller reduction in the number of undernourished expected under “business as usual”, is likely to yield incremental benefits worth at least US\$120 billion per year as a result of longer and healthier lives for all those who gain from such improvements. The investment package includes, *inter alia*, an injection of start-up capital, averaging US\$500 per family, for on-farm investment to raise the productivity and production of 4 to 5 million households in poor rural communities. It also covers targeted direct food assistance programmes – at a cost of \$30 to \$40 per person per year – for up to 200 million hard-core hungry people, many of whom are school-aged children. Other components are for the development of irrigation systems and rural roads linking farmers with markets; the conservation and sustainable management of soils, forests, fisheries and genetic resources; and agricultural research, learning and information systems.

It is suggested that the bulk of the required funding for agricultural and rural development be shared between the national government budgets of the countries where hunger is a major problem and international transfers in the form of grants and concessional loans. The implications of the proposed sharing of funds will be a doubling of concessional funding to agricultural and rural development and an overall increase in national expenditures of 20 percent for developing countries. It is not the intention of this publication to seek additional resources for any particular organization or programme.

Introduction

1. Hunger is the most extreme manifestation of poverty and human deprivation. Hunger in a world of plenty is not just a moral outrage; it is an infringement of the most basic of human rights: the right to adequate food. Hunger entails large economic costs, severely compromising the productivity of individuals, the growth of nations and the sustainable use of natural resources. The 1996 World Food Summit (WFS) pledged to halve the number of people suffering from hunger by 2015, a pledge that is echoed in the Millennium Development Goals. But unless purposeful action is taken on a scale commensurate with the size of the problem, the target of halving hunger cannot be met.

2. Sustainable development has little meaning in the presence of large-scale hunger and poverty. Hungry people are unable to work to their full potential, are more susceptible to ill health and lack the capacity to save and invest. Hunger is as much a cause as an effect of poverty. Those who suffer hunger find escape routes from poverty barred. The hungry have every reason to care deeply for the limited resources they use to subsist, but their actions are dominated by the struggle to find the next meal for themselves and their families. Eliminating hunger is an essential ingredient of any strategy for sustainable economic development and sound environmental management.

3. The major challenge is to put in place policies and institutions and to mobilize resources that promote the interrelated goals of agricultural productivity growth, hunger reduction and the sustainable use of natural resources. With few exceptions, the scope for bringing additional natural resources (notably land and water) into agricultural production is limited. The most viable option is sustainable intensification, i.e. increasing the productivity of land, water and genetic resources in ways that do not compromise the future productive capacity of those resources. Sustainable production technologies exist that can improve agricultural productivity while enhancing biodiversity, soil fertility and efficiency of water use and reducing the pressure to clear forests and overexploit wild fish stocks. It is the policy environment that determines whether the technologies applied, and their impact on people and the environment, are indeed sustainable.

4. The paper argues that further research on specific countries and issues is necessary but that insufficient knowledge on how to fight hunger is not a reason for lack of action. It is well known that about 75 percent of the poor and hungry live in rural areas and depend, directly or indirectly, on agriculture for their livelihoods. Therefore, a twin-track approach to hunger reduction is advocated in which measures to increase productivity, especially of resource-poor farmers and landless labourers, are complemented by measures to broaden direct access to food for the most needy.

5. Guided by the twin-track approach, the Anti-Hunger Programme sets out five priority areas for action that should be taken if the WFS target – that of halving the number of chronically undernourished by 2015 – is to be achieved. The paper notes that the benefits of reducing hunger would far outweigh the costs of the proposed Programme. The key actions proposed are fully consistent with the 1996 WFS Plan of Action and in line with the aims of the World Summit on Sustainable Development held in Johannesburg, South Africa in 2002.

6. The paper contains a cost estimate for each of the priority areas and examines how these might be financed by the developing countries themselves and the international community. Of the various conceivable options for sharing the cost of the Anti-Hunger Programme, the one suggested in the paper assumes an equal sharing between the international donor community and recipient developing countries.

7. The Anti-Hunger Programme does not include the substantial complementary investments needed, for instance, to create conditions of security and peace or to establish systems of government accountable to the poorer members of society, both of which may be critical for ensuring inclusive access to adequate food. The paper does, however, reaffirm that, apart from being justified on moral and humanitarian grounds, investments in hunger reduction generate attractive economic and security benefits and are in the self-interest of rich and poor countries alike. While the Programme aims to ensure access to food by the most needy, both urban and rural, the investment in productive capacity is limited to rural people.

8. The Anti-Hunger Programme is built on the belief that, not only is the attainment of the target still within reach, but it can also be realized within a sustainable development framework. The paper is put forward as an input to an iterative process of consultation aimed at building the necessary commitment among stakeholders and actors in the fight against hunger. At the same time, by eliciting further comments and suggestions, it provides a forum for debate and the exchange of ideas on the ways to bring about rapid hunger reduction.

9. The Anti-Hunger Programme is a proposal to all stakeholders and actors in the fight against hunger. **No additional resources are sought for any particular organization or programme.** The first draft of the paper was unveiled in June 2002 at a side event during the *World Food Summit: five years later*, at which time comments and suggestions were invited. A second draft, prepared to allow further consultation on the occasion of the World Summit on Sustainable Development in September 2002, stressed the critical importance of a supportive pro-poor policy environment to maximize the impact of the proposed investment programme on hunger reduction. This final version addresses some comments and suggestions by reviewers of the document and those of member countries expressed during the 2003 meetings of the Committee on World Food Security and the FAO Council. It re-emphasizes the fact that the proposed investment programme is not derived from a simple financing gap approach but requires a supportive policy environment for its success. Finally it presents clarifications of the

cost-sharing options and financing arrangements, stressing that the cost estimates are meant to indicate orders of magnitude only.

10. The Anti-Hunger Programme forms a central element of FAO's contribution to the Millennium Development Project and the strategy to achieve the Millennium Development Goals. It has also been used extensively in the conceptualization of the agricultural component of "WEHAB" (Water, Energy, Health, Agriculture and Biodiversity), the five priorities proposed for special attention during the World Summit on Sustainable Development. The twin-track approach proposed in the document provides a point of reference for many FAO initiatives, such as the Special Programme for Food Security; the Initiative to Review and Update National Agricultural, Rural Development and Food Security Strategies and Policies; and support to the Intergovernmental Working Group for the Elaboration of a Set of Voluntary Guidelines to Support the Progressive Realization of the Right to Adequate Food in the Context of National Food Security.

11. The eradication of hunger is central to FAO's mandate. The achievement of the target of halving the number of undernourished by 2015 will require a strong, concerted and adequately financed effort by all parties committed and able to contribute to hunger and poverty reduction through sustainable agricultural and rural development. At the international level, key players include the UN system and the international financing institutions. Within civil society, much of the driving force comes from parliamentarians, non-governmental organizations (NGOs), academic institutions and philanthropic foundations, as well as individual citizens. The private sector also has a major role to play, especially given its enormous and growing role in developing new technologies and in managing the flows of international agricultural production.

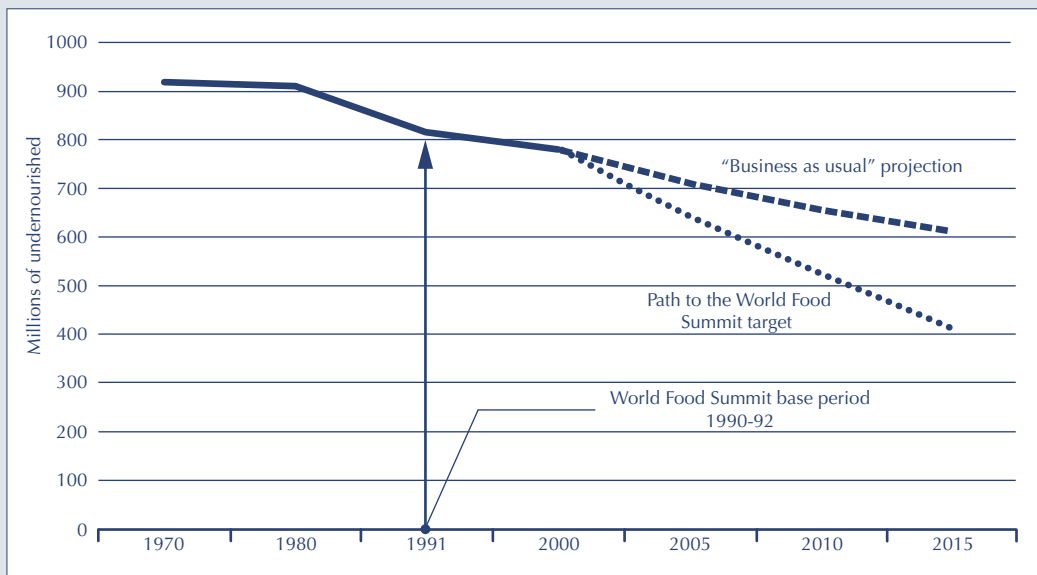
12. As called for in the final Declaration of the *World Food Summit: five years later*, an "International Alliance against Hunger" has been launched to mobilize political will, technical expertise and financial resources to reach the World Food Summit and Millennium Development Goals and national alliances are now emerging in several countries. During World Food Day 2003, the theme of which was the International Alliance against Hunger, several initiatives were launched and joint activities organized between the Rome-based agencies and civil society organizations.

Hunger reduction: a universal commitment

13. It is a moral outrage that 840 million people go hungry in a world of plenty. In this spirit, the international community has repeatedly affirmed its commitment to fighting hunger. In particular, at the 1996 World Food Summit (WFS) in Rome, representatives of 185 nations and the European Community set a goal of cutting the number of hungry people by half by 2015. The United Nations Millennium Declaration reiterated a number of goals set by conferences and summits in the 1990s, including that of halving hunger. The UN General Assembly, at its fifty-sixth session in 2001, subsequently consolidated eight of these goals into the Millennium Development Goals, beginning with a call for halving the proportion of people in extreme poverty and hunger by 2015.

14. There is also a growing international consensus concerning the need to implement the right to food. Although this right was first explicitly stated in the 1940s in the Universal Declaration of Human Rights and the FAO Constitution (the preamble to which gives “ensuring humanity’s

Figure 1
Number of undernourished people in the developing countries: observed and predicted levels relative to the World Food Summit target



The graph compares the changes in the number of undernourished people under two different scenarios: i) the lower line shows the changes in the number of undernourished under the assumption that the WFS target will be met; ii) the upper line shows the changes in the number of undernourished under the best estimates available to FAO of the likely evolution in food availability, agricultural output, population, incomes and many variables related to nutrition. This latter scenario assumes that no extra effort (relative to the past) is made to reduce hunger in the world. It is worth noting that, as time goes by and no purposeful action is taken to reduce hunger, the required reduction in the number of hungry in order to meet the WFS target increases, as does the required effort. It should be noted that while the figure of 840 million in paragraph 13 is for all countries, the graph refers to the number of undernourished people in developing countries only.

freedom from hunger” as one of the principal reasons for the creation of the Organization), there has been little tangible progress towards its implementation. The United Nations Committee on Economic, Social and Cultural Rights has facilitated the task of implementation of this fundamental right by adopting, in 1999, the General Comment on the Right to Food, which specifies how states can meet their obligations to respect, protect and fulfil the right.

15. Unfortunately, in spite of these commitments, too little purposeful action has been taken towards eradicating hunger. The number of hungry people in the world is not falling fast enough to meet the ambitious but pragmatic goal of the 1996 WFS Plan of Action. The Plan calls for a reduction in the number of undernourished people from 816 million in 1990–92 (the base period) to 408 million by 2015. The latest figures from FAO show that to meet the target, the number of hungry will have to fall by 26 million every year, compared with the average of 6 million a year attained over the last years of the 1990s. Even this slow movement appears to have ground to a halt in the late 1990s, greatly increasing the difficulty of attaining the goal by 2015. The fact that this limited progress was concentrated in a handful of large countries is also a cause for concern. Most developing countries have recorded either an increase or no significant change in the number of undernourished people in their midst.

Fighting hunger to reduce poverty

16. The lack of action in the fight against hunger may have arisen, in part, from a widely held perception that success in poverty reduction, resulting from market-driven economic development, would “automatically” take care of the problem of hunger. However, this thinking does not take into account three points: first, poverty reduction takes time, while the hungry need immediate relief; second, in contrast to many diseases for which cures are either unknown or unaffordable, the means to feed everyone are readily and cheaply available; and third, hunger is as much a cause as an effect of poverty. Unless hunger is reduced, progress in cutting poverty is bound to be slow. A direct attack on hunger will greatly improve the chances of meeting the other Millennium Development Goals, not only for poverty reduction, but also those related to education, child mortality, maternal health and disease.

17. Hungry children cannot grow and learn to their full potential. Hungry adults cannot perform hard physical labour; they fall sick more often and are more likely to die young. They are also unwilling to undertake potentially profitable but riskier investments for fear of the consequences of failure. Even worse, hunger perpetuates itself when undernourished mothers give birth to smaller babies who start life with a handicap. A vicious cycle of hunger and poverty is thus created, from which it is difficult for the poor and the hungry to escape without external help.

18. However, if the cycle were broken, the benefits would be enormous. A rough measure of these benefits is given by the value of the longer and healthier lifespan that would be enjoyed by those who were no longer undernourished, as well as by the general population because it would be better nourished. Preliminary estimates suggest that, if the WFS goal of 408 million undernourished people by 2015 is achieved, instead of the 610 million that will result if “business as usual”¹ continues, the value of the extra years of healthy life should be more than US\$120 billion per year. This is a conservative estimate of the full economic benefits of meeting the goal. In other words, agricultural and rural development in support of hunger reduction has important overall beneficial effects on the economy by creating demand for goods and services, both domestically produced and imported. Similar calculations in the report of the World Health Organization (WHO) Commission on Macroeconomics and Health suggest gains from improved nutrition and health of hundreds of billions of dollars per year if the goal can be met. Thus, fighting hunger is not only a moral imperative, it also brings large economic benefits.

19. Success in reducing hunger is also likely to produce large benefits in terms of sustainable development. The economic prosperity resulting from hunger reduction should create demand

for sustainable use of the environment and of common property resources. This point takes on added resonance in the context of the World Summit on Sustainable Development held in Johannesburg.

20. Finally, while few would dispute that hunger reduction benefits poor countries, the rich countries also stand to gain, as their own welfare is closely linked to that of the less fortunate countries. Better nourishment in the poor countries is likely to increase their incomes, thereby creating a new source of demand for the products of the developed countries. Better nourishment may also reduce the likelihood of conflict. Lifting people out of hunger, the most extreme form of poverty and deprivation, makes it less likely that they will be easy prey for those who seek to promote their own self-interest through conflict and civil strife. Apart from contributing to global stability, hunger reduction may also reduce the world's expenditure on conflict prevention and rehabilitation of war-torn areas.

21. Therefore, halving hunger is not only a valid goal in itself, but is also closely linked to the achievement of other key goals set by the international community, most of which are reflected in the Millennium Declaration.

Enough is known about how to fight hunger

22. If hunger is considered morally unacceptable and imposes such large costs on society, why has so little been done to fight it? It is argued here that this is because political will is lacking and, as a result, the resources to fight hunger have not been mobilized to the extent required. It is possible that political will is lacking because of a number of popular misperceptions about hunger: that hunger reduction involves a simple welfare transfer, that the abundance of food in the world is a sign that everyone is properly fed, or that hunger is a phenomenon associated only with emergencies and calamities. It is also likely that the economic and social costs of global hunger are often ignored or underestimated.

23. Be that as it may, lack of knowledge about how to fight hunger is not an acceptable reason for lack of action. This is not to deny the usefulness and relevance of further research on specific countries and issues, but the general lines along which action should be taken to fight hunger are reasonably clear. What is needed is a strategy for fighting hunger that recognizes the complexities of the challenge and addresses them in a forthright manner. All too often there is an attempt to deal with “the hunger problem” but not to deal with hungry people.

24. The 1996 WFS Plan of Action, after calling for “the progressive realization of the right to food”, went on to lay out a comprehensive framework for fighting hunger, which stressed the need for combining agricultural and rural development with measures to broaden access to food. Evidence to date shows that several countries have successfully reduced hunger within this framework. The details can be found in successive editions of *The State of Food Insecurity in the World*, published annually by FAO.

25. It is hardly surprising that emphasis was given by the Plan of Action to agricultural and rural development. In developing countries, 70 to 75 percent of the poor and hungry live in rural areas. Farming is, therefore, at the heart of their livelihood strategies, as demonstrated by the International Fund for Agricultural Development’s *Rural Poverty Report 2001* and reiterated by the new World Bank Rural Development Strategy. Moreover, worsening standards of living in rural areas drive desperate people to the cities, thereby exacerbating urban poverty as well. The reverse does not often happen. Hence, agricultural and rural development must play a central role in strategies to reduce hunger and poverty, not only because agriculture is a source of food but also because agriculture and rural off-farm activities provide employment and income for the rural poor. Improvements in the conditions of small-scale farmers, both women and men, are especially important since, paradoxically, they produce much of the food while accounting for a high proportion of the poor and hungry.

26. An increase in agricultural productivity opens opportunities for improving the quality of subsistence consumption and raising farm incomes. Where the resulting agricultural growth benefits small-scale farmers and rural labourers, the additional income is spent largely on food and on basic non-farm products and services in rural areas, which tend to be produced and provided locally. Non-farm enterprises offer the poor a potential escape route from poverty, since they usually require little capital or training to set up. The extra income from agricultural growth can create demand for these goods and services, creating a virtuous cycle in which agricultural and rural off-farm income grow and sustain each other's growth – and often that of the whole economy. Such broad-based development opens up new opportunities for reducing poverty and hunger.

27. Thus, growth in agriculture and rural off-farm activities creates opportunities for the poor to raise their incomes. Yet, the extent to which they are able to take advantage of these opportunities depends on whether they are well nourished, in good health and literate. It also depends on their access to assets, technologies and credit and savings services, and on ensuring that they are not excluded by social custom or government fiat from income-earning activities. Improvements in nutrition are a prerequisite for the poor to take full advantage of the opportunities created by development. This is not to deny the importance of measures to increase the capital – human, financial, physical, natural and social – available to the poor. It is simply to say that improving nutrition comes first, not merely in order of importance but in temporal sequence.

28. In summary, a twin-track approach is required for quick success in reducing hunger and poverty. One track would create opportunities for the hungry to improve their livelihoods by promoting development, particularly agricultural and rural development, through policy reform and investments in agriculture.

29. The other track would involve direct and immediate action to fight hunger through programmes to enhance immediate access to food by the hungry, thereby increasing their productive potential and allowing them to take advantage of the opportunities offered by development. Direct action to target the hungry is also necessary because economic growth takes time to have a significant impact on hunger. Hungry people cannot wait, however, so direct and immediate action is required.

30. Rural women are key actors in both components of this comprehensive strategy. They play a vital role in generating household income and building up assets. They also play multiple roles in producing food, provisioning the household, preparing food and feeding the family. Even the poorest women possess valuable knowledge of, and skills and talents in, the management of natural resources. It is, therefore, crucial that the opportunities arising from agricultural and economic development benefit them and strengthen their capacities to acquire and utilize nutritionally adequate foods. Women must participate as full and equal partners in the fight against hunger.

31. In the next section, five priorities for action to meet the WFS goal are identified in the light of this approach and an attempt is made to estimate the cost implications of each of these priorities. The first four priorities relate to the agricultural and rural development track of the overall strategy, while the fifth relates to measures to enhance access to food.

Priorities for action in food, agriculture and rural development

32. Table 1 sets out the incremental average annual public expenditure required for a multicomponent programme intended to lead to the achievement of the WFS goal by 2015. It should be noted that these cost estimates are far from being an exhaustive list of all the required expenditures. Rather they should be seen as a priority list. While much more is required, it is critical to mobilize at least the amounts mentioned below.

33. The spending proposals contained in this document do not preclude the possibility of countries or regions devising more ambitious rural development programmes. An example is the Comprehensive Africa Agriculture Development Programme (CAADP) described in Box 1, which aims to revitalize the struggle against poverty and hunger in the African continent through rapid agriculture-based economic development.

34. It would be misguided to conclude from Table 1 that an incremental public investment of about US\$24 billion per year will produce an annual “return” of US\$120 billion. The interventions described are aimed at halving the number of the undernourished between 1990–92 and 2015. The figure for the benefits describes what would happen if the number of the undernourished were halved, *through whatever means*, i.e. not necessarily through these particular interventions. In particular, the investment costs are predicated on the crucial assumption that the necessary enabling political, social and economic environment exists and that sufficient private investment will accompany public investment spending. It should also

Table 1
Incremental annual public investment needed to meet the WFS goal

Priority area for investment	Estimated annual cost* (US\$ billions)
1. Improve agricultural productivity in poor rural communities	2.3
2. Develop and conserve natural resources	7.4
3. Expand rural infrastructure and market access	7.8
4. Strengthen capacity for knowledge generation and dissemination	1.1
5. Ensure access to food for the most needy	5.2
Total investment costs	23.8
Estimated annual benefits of meeting WFS goal	120.0

* All costs are in 2002 prices.
Source: FAO calculations.

Box 1

Focus on the special needs of Africa

The African continent faces special challenges. The latest figures (for 1999–2001) show that about 205 million people – 27 percent of Africa’s population – are chronically hungry, compared with 171 million in 1990–92. While the proportion of the population living in hunger is dropping slightly, the absolute numbers are rising.

Most of the economic opportunities accessible with Africa’s limited financial and human capital, at both the household and the national level, will have to come from agriculture, since agriculture directly affects the lives of between 70 and 80 percent of Africa’s people. Agricultural development must be at the centre of sustainable development in Africa in order to bring down the incidence of hunger and poverty by a substantial amount. Unfortunately, agriculture is being devastated by the spread of the HIV / AIDS epidemic. In Sub-Saharan Africa, AIDS has already killed around 7 million agricultural workers since 1985 and 16 million more may die before 2020. Over 20 percent of the agricultural labour force has been lost in Botswana, Namibia, Mozambique, South Africa and Zimbabwe. Losses of this magnitude can cause the collapse of the entire social fabric of rural communities.

The resource requirements for the Anti-Hunger Programme given below are the minimum amounts required to promote hunger reduction through agricultural development in Africa. These figures therefore exclude the cost of programmes to promote direct access to food. Given the special needs of Africa, especially sub-Saharan Africa, a minimum amount of US\$4.6 billion per year will be required. It is proposed that these additional resources be allocated to sub-Saharan Africa as follows: US\$2.4 billion in concessional assistance to agricultural and rural development, and another US\$1.6 billion from public domestic sources. It is expected that an additional inflow of US\$0.6 billion per year in non-concessional loans will be available.

A more ambitious programme has been launched by Africa’s leaders, the New Partnership for Africa’s Development (NEPAD). NEPAD’s cross-cutting priorities are: peace, security, democracy and political, economic and corporate governance. These are complemented by the following sectoral priorities: infrastructure, human resources development, agriculture, environment and culture. NEPAD’s framework, which applies to all of Africa, provides a potentially important avenue to attain and even exceed the WFS goals in the entire region.

The Comprehensive Africa Agriculture Development Programme (CAADP) was launched in June 2002 under the auspices of NEPAD. The African Union Summit Declaration on Agriculture and Food Security in Africa, issued at Maputo in July 2003, resolved to implement in earnest the CAADP and to adopt fair policies for agricultural development and commit increased budgetary resources for their implementation. Governments have committed themselves to allocate a minimum of 10 percent of their budgets to agricultural and rural development and food security within five years.

In the medium term, action to promote comprehensive and balanced agricultural development will require a focus on three priority areas: increasing food supply and reducing hunger; extending the area under sustainable land management and reliable water control systems; and improving rural infrastructure and market access. Resource requirements for these three priority areas are estimated to be approximately US\$13 billion per year between 2003 and 2015.

be noted that, in addition to the benefits deriving from the reduction in the number of the undernourished from the programme, there are expected to be other benefits associated with rural development, such as overall poverty reduction. Nevertheless, it would seem reasonable to conclude from Table 1 that spending on hunger reduction is very worthwhile.

35. As for the timing of these investments, there are good reasons to give priority to direct food assistance programmes, building these up rapidly from the outset. When such programmes procure food from local sources, they provide income for local producers and, by feeding the hungry during the period before the fruits of agricultural investment become available, improve their productivity and income-earning opportunities. Clearly, local procurement is not always possible in emergencies and in cases of severe national food deficit. In these situations food aid is essential.

IMPROVE AGRICULTURAL PRODUCTIVITY AND ENHANCE LIVELIHOODS AND FOOD SECURITY IN POOR RURAL COMMUNITIES

Cost estimate: US\$2.3 billion per year

36. Improving the performance of small farms in poor rural and peri-urban communities offers one of the best and most sustainable avenues for reducing hunger by increasing the quantity and improving the quality of locally available food. It also provides a foundation for equitable economic growth. At the very least, better performance improves food availability and nutrition within the immediate farm families, thereby increasing their capacity to enjoy a full life, learn and work effectively and contribute to the general good of society. But it also increases and diversifies food supplies in local markets, creates a base for expanding and diversifying farm output into tradable products, opens employment opportunities and slows rural-urban migration.

37. Starting up such a process requires an initial injection of capital, either through loans or matching grants, to enable small farmers to build up productive assets on their farms. The average cost of investments required to kick-start a sustainable process of on-farm innovation may be estimated at about US\$500 per family. Typically, this start-up capital would finance the uptake of new technologies, such as seed of improved varieties, plants, manure or fertilizers; small-scale on-farm works and equipment (e.g. land levelling, treadle pumps); breeding stock (e.g. poultry, goats); or contributions towards community-led measures to improve food security (e.g. school gardens, paralegal services to broaden land access). To ensure sustainability, farmers who take part in such programmes would repay the initial capital into savings and loans associations or community-run revolving funds, thereby allowing reinvestment of the benefits accruing from higher production.

38. Success in on-farm development depends on the creation of a policy environment conducive to agricultural growth, supported by research and extension institutions that are responsive to locally articulated needs. In many cases success also depends on developments beyond the farm boundary, such as improvements in roads or in the supply of irrigation water. The investment needs for these improvements are addressed under other programme components.

39. Sustaining and upscaling this process requires the emergence of self-reliant community institutions that can take the lead in ensuring the food security of all their members, plough gains back into new investments and develop linkages with other communities through sharing knowledge and experience. This enables groups of communities with a common goal to place increasingly effective demand on the broadening range of services and types of infrastructure required to allow them to develop greater resilience to economic, social and natural shocks as well as to earn more and emerge from hunger and extreme poverty.

40. The scale of the programme must be massive if it is to have a meaningful impact on reducing hunger and poverty. A plausible target is to benefit 60 million households in developing

countries between now and 2015, equivalent to approximately half the number of people who are now hungry. The total cost would be about US\$2.3 billion per year over 13 years.

DEVELOP AND CONSERVE NATURAL RESOURCES

Cost estimate: US\$7.4 billion per year

41. Land, water and plant and animal genetic resources enable agriculture, fisheries and forestry to contribute to food production and rural development. Combining them with appropriate technologies, financial capital, labour, infrastructure and institutions enhances their productivity. This combination of resources and human ingenuity has enabled global food production to outpace growing demand, despite the declining availability of per capita land and water resources and the tendency towards depletion of genetic resources. If food demand is to be met in the future, increased outputs will have to come mainly from intensified and more efficient use of these limited means of production. At the same time, action must be taken to arrest the destruction and degradation of the natural resource base. Achieving these apparently conflicting tasks requires investments to manage the resource base, improve technical production efficiency (yields) and develop practices that foster sustainable and intensified food production. International agreements, such as the International Treaty on Plant Genetic Resources for Food and Agriculture adopted at the 2001 FAO Conference, can provide agreed frameworks for the conservation and sustainable utilization of key agricultural resources, and the fair and equitable sharing of the benefits. An estimated annual incremental public sector investment of US\$7.4 billion is required in natural resources (i.e. land and water, plant and animal genetic resources, fisheries and forestry) to meet the WFS target in 2015. This figure is broken down as follows:

- US\$2.5 billion per year is needed for the extension and improvement of irrigation systems beyond the farm boundary (e.g. dams, canals) and the implementation of programmes that foster farmers' adoption of soil and water conservation practices.
- US\$500 million per year is needed to conserve and use plant genetic resources. The rapid ratification and entry into force of the International Treaty on Plant Genetic Resources for Food and Agriculture will allow funds for the implementation of priority activities, plans and programmes, in line with the Leipzig Global Plan of Action, to be mobilized through its Funding Strategy. This will help cover the incremental cost of funding international activities and will contribute to national activities necessary to conserve, evaluate, make available and enhance the use of plant genetic resources, providing the basis for yield increases through crop breeding and better on-farm management of genetic resources.
- The conservation of farm animal genetic resources, together with genetic improvement schemes for increased animal productivity through higher reproductive rates and better

production per animal, would require investments of an additional US\$385 million per year.

- Ensuring the sustainable use of the world's fisheries, while increasing production, will require investments of an additional US\$2 billion per year in fisheries monitoring and protection, in the creation of alternative livelihood sources for fishermen and in aquaculture. As most wild fish stocks are fully exploited, about 70 percent of these investments will be used to conserve aquatic ecosystems and manage associated capture fisheries. Additional fish demand will be met mainly from aquaculture, in which relatively modest public investment will trigger large private investment commitments.
- Incremental public sector investment needed to use forests in a sustainable manner to meet the WFS goal is estimated conservatively at US\$2 billion per year. This would be used to protect forests from unauthorized or unplanned conversion, manage wild food sources in forests, develop alternative livelihood opportunities for food-insecure forest-dependent populations, and minimize and offset the negative consequences of converting forest to agricultural land.

EXPAND RURAL INFRASTRUCTURE (INCLUDING CAPACITY FOR FOOD SAFETY, PLANT AND ANIMAL HEALTH) AND BROADEN MARKET ACCESS

Cost estimate: US\$7.8 billion per year

42. Throughout the 1990s, many developing countries invested substantially in infrastructure. While such investments have done much to improve living standards and increase productivity, the rural areas of most developing countries still face inadequate levels of services and often a deteriorating stock of rural infrastructure. This infrastructural handicap has resulted in, *inter alia*, reduced competitiveness of the agriculture of developing countries in domestic and international markets, and it has increased the costs of supplying growing urban markets from national farm production. Reversing the decline in the share of developing countries in world agricultural exports, which is an essential ingredient in improving rural incomes, will require increased efforts by many developing countries to alleviate their domestic supply-side constraints. There is a danger that, unless infrastructure-related constraints are addressed, developing countries will miss the opportunities arising from multilateral negotiations on agriculture, which aim to achieve substantial improvements in market access through reductions in export subsidies and trade-distorting domestic support. The highest priority must go to the upgrading and development of rural roads and to ensuring their maintenance, and to basic infrastructure to stimulate private sector investment in food marketing, storage and processing.

43. The assurance of food safety and quality is an important factor in food security, as contaminated food is a major cause of illness and mortality. It is also important for broadening

access to export markets. All developing countries are faced with an urgent need to invest in creating a stronger institutional capacity to ensure higher standards of food safety and quality and compliance with international standards throughout the food chain. In an increasingly globalized market, it is also essential to take measures to prevent the spread of livestock and crop pests and diseases beyond national boundaries, since this can have devastating effects on food security and safety in both developing and developed countries. This requires substantial investments in monitoring and surveillance systems and in building the capacity of institutions responsible for plant and animal health.

44. Post-production operations account for more than 55 percent of the economic value of the agricultural sector in developing countries and up to 80 percent in developed countries. However, relatively little public sector and developmental support is targeted at this sector in developing countries. Action is urgently needed to develop food handling, processing, distribution and marketing enterprises by promoting the emergence of small-scale farmers' input supply, processing and marketing cooperatives and associations. It is also important to encourage entrepreneurship and to develop the requisite infrastructure and standards.

45. Investments in rural infrastructure to enhance market access will not only complement and underpin the projected increased levels of agricultural production, but will also provide wider and more general socio-economic benefits.

46. The additional public investments required to meet the WFS target amount to an annual US\$7.8 billion at 2002 prices. This amount includes new construction of rural roads (US\$5.2 billion) and of market infrastructure (US\$850 million) as well as the maintenance and rehabilitation of both (US\$1.3 billion and US\$31 million, respectively). Another US\$200 million would cover the cost of capacity building, support for policy assistance, institution strengthening and measures to improve plant and animal health. An additional US\$150 million is required for measures to strengthen food safety. While it is assumed that the bulk of spending on rural roads will be financed by the public sector, only a small part of market and food safety infrastructure needs will be funded by public resources.

STRENGTHEN CAPACITY FOR KNOWLEDGE GENERATION AND DISSEMINATION (RESEARCH, EXTENSION, EDUCATION AND COMMUNICATION)

Cost estimate: US\$1.1 billion per year

47. As already noted, success in promoting rapid improvements in livelihoods and food security through on-farm investments depends on small-scale farmers having good access to relevant knowledge. This requires the provision of effective knowledge-generation and dissemination systems, aiming to strengthen links among farmers, agricultural educators, researchers, extension workers and communicators. Agricultural research and technology development are likely to be dominated by the private sector, especially suppliers of inputs and

companies purchasing farm products. There remain, however, many areas of basic research and, especially, extension where those who have not paid for the research cannot be prevented from enjoying its benefits. Private companies would be unwilling to conduct research in these areas, yet they may be vital for agricultural development and the sustainable management of natural resources. These include, in the case of research, most forms of pro-poor technology development and most approaches to farm development that do not depend on the increased use of purchased inputs – such as integrated pest management, measures to raise the organic matter content of soils or to improve fertilizer use efficiency (e.g. through biological nitrogen fixation), or to conserve genetic resources. Because the likely users of this research are poor and widely dispersed and because it can easily be copied, it does not pay private companies to do it. The responsibility for conducting research in these areas must, therefore, rest with the public sector.

48. The experience of the Consultative Group on International Agricultural Research (CGIAR), which runs an international network of research centres, has been very positive, and there is every reason to reverse the decline in funding from which the CGIAR system has been suffering. Incremental funding of US\$350 million per year would greatly strengthen the effectiveness of the system, enabling it to continue to play a vital role in supporting the process of technology development in developing countries.

49. National agricultural research and extension systems, many of which have deteriorated in their effectiveness, also need to increase their capacity to respond to the technology needs of small-scale farmers, in particular, taking account of the acute labour shortage resulting from the HIV/AIDS epidemic in many African rural communities. Upgrading national research systems requires additional investments in building staff capacities and in improving facilities and equipment, estimated to cost about US\$350 million annually.

50. Improving the effectiveness of agricultural extension usually involves supporting the decentralization of services and making them more responsive to farmers' needs. It requires creating conditions for the emergence of multiple-service providers, including not only public sector services, but also services provided by NGOs and the private sector. It also requires the incorporation of sustainability themes such as environment and population into ongoing extension programmes, and a broader role beyond passive technology transfer to cover areas like HIV/AIDS, food security and rural poverty. The main investments will be in introducing institutional reforms and associated activities, such as training of extension staff and, particularly, farmers, who can assume much of the responsibility for facilitating group learning processes in the medium term. Investments are also needed in the preparation of extension and training materials and in means of transport. Total incremental public funding needs are estimated to be US\$290 million per year.

51. Rural people are especially threatened by the "digital divide" because of the lack of communication infrastructure in rural areas. To prevent a widening of the gap in access to

knowledge and information between urban and rural populations, public funding will be required to match private investments in bringing better radio, television and information technology connectivity into rural areas. An estimated US\$100 million per year would be required for this.

52. Strengthening capacity in education in relation to the Anti-Hunger Programme requires an emphasis on the basic educational needs of rural people, covering all technical disciplines related to sustainable agricultural and rural development. Unfortunately, reasonably well grounded cost estimates for this element are currently unavailable and will be provided at the earliest possible opportunity.

53. Particular attention needs to be paid to education about food and nutrition, as the attainment of the food security and nutrition goals of the WFS depends on the ability of people to make an array of informed choices about food, including its production, processing and storage, and particularly its purchasing, preparation and consumption. Improving family care and feeding practices and developing lifelong good eating practices are essential for improving and maintaining good health and nutrition and represent very cost-effective interventions. Well-targeted food and nutrition communication and education campaigns can have a profound effect on public opinion about issues concerning poverty, hunger and malnutrition, and they can be a powerful tool for generating the popular and political will necessary to alleviate hunger. Such education should stress the importance of a diversified, nutritionally balanced diet for reducing micronutrient malnutrition. Because indigenous foods are often key elements of such a diet, the importance of preserving these foods should also be stressed. The cost of supporting basic food and nutrition information, communication and education is estimated to be US\$15 million a year, including the expansion of the “Feeding Minds, Fighting Hunger” initiative – led by FAO and the United States World Food Day Committee.

54. To improve the chances of success, a strategy for agricultural and rural development should follow an approach in which research, extension, education and communication components are integrated. Coordination between national-level and community-level interventions is crucial.

ENSURE ACCESS TO FOOD FOR THE MOST NEEDY THROUGH SAFETY NETS AND OTHER DIRECT ASSISTANCE

Cost estimate: US\$5.2 billion per year

55. The need to ensure direct access to food by the poor arises not only from humanitarian considerations and from the right to food, but also from the fact that it is a productive investment that can contribute greatly to fighting poverty. The need for such assistance does not disappear with economic development, but changes its focus towards temporary assistance during crises.

56. All governments committed to achieving the WFS goal need to put programmes in place to ensure that, where the goal is not being met, their citizens have access to adequate food through traditional extended family and community coping arrangements, market mechanisms and the process of economic growth. Options include:

- *Targeted direct feeding programmes.* These include school meals; feeding of expectant and nursing mothers as well as children under five through primary health centres; soup kitchens; and special canteens. Such schemes contribute to human resource development by encouraging children to attend school and improving the health and nutritional status of mothers and infants. They minimize nutrition-related illnesses and mortality among children, raise life expectancy and contribute to a fall in birth rates. Recent WHO estimates show that approximately 30 percent of children under five (approximately 200 million children) are more vulnerable to sickness and more likely to die early because of undernourishment.
- *Food-for-work programmes.* In many developing countries, a significant number of rural people are subsistence or below-subsistence farmers, producing only enough food to feed their families for part of the year. Food-for-work programmes provide support to such households while developing useful infrastructure such as small-scale irrigation, rural roads, buildings for rural health centres and schools.
- *Income-transfer programmes.* These can be in cash or in kind, including food stamps, subsidized rations and other targeted measures for poor households, and are also good means of increasing food-purchasing power and improving dietary intake.

57. Programmes aimed at ensuring adequate access to food by 214 million of the most nutritionally deprived people in the world would cost an annual amount of US\$5.2 billion. Of this, about US\$1.2 billion is needed for a school feeding programme targeting the most needy schoolchildren. The estimate assumes that a nutritionally adequate “basket” of foods is provided. As a result of better feeding, it is expected that school attendance will increase. However, since universal primary education is already included in the Millennium Development Goals, the additional cost of educating these children is not taken into account here.

58. The first victims of large-scale emergencies, whether caused by humans or natural, are the poor and chronically hungry because they generally lack savings and stocks of food. Early intervention, as and when emergencies occur, helps to avoid further destitution and suffering of poor households. Current programmes, however, often fail to reach several million people affected by emergencies. They also tend to suffer from delays (which limit their effectiveness in reducing suffering and mortality) because of the current system of raising funds through international appeals *after the event* (in spite of the fact that it is often possible to predict with a fair degree of certainty whether and even when an emergency will occur). Additional international funding (or food supplies) is needed to extend the reach of emergency feeding

programmes and to build up reserve funds (such as the World Food Programme's Immediate Response Account) aimed at speeding up response time.

59. An essential part of such interventions, beyond meeting immediate food needs, is to ensure the timely availability of seeds, tools and other inputs for small-scale farmers so that they can resume food production rapidly. The costs, including administrative costs, of input packages for restoring subsistence production are estimated to be an average of US\$50 per family. To address the needs of about 10 million rural families, not currently benefiting from emergency assistance, would cost US\$500 million annually. The costs of emergency assistance interventions have not been counted as part of the total cost of programmes aimed at chronic hunger.

A policy framework for the Anti-Hunger Programme²

60. It cannot be emphasized strongly enough that the investments proposed under the Anti-Hunger Programme will only have the intended impact on hunger and poverty if appropriate policies are in place. Such policies will ensure the maximum impact of public resource mobilization on hunger and poverty reduction as well as sustainable use of the resource base. In particular, an enabling policy environment is a prerequisite for the success of the Anti-Hunger Programme as it is required for attracting flows of private investment to complement public investment flows and enables the poor and hungry to realize their full development potential. The following section presents the emerging consensus among the international development community on key policies related to the twin-track approach. It must be stressed that the formulation of policy plans and frameworks at the country level is indispensable for country ownership of those policies and as a basis for donor support.

61. The emerging consensus supports a reliance on markets and market signals and macroeconomic discipline and stability as necessary conditions for economic growth. It is also widely accepted that: i) a reliance on markets and macroeconomic stability is not a sufficient condition for economic growth; and ii) economic growth by itself may not lead to substantial and strong reductions in poverty and hunger, though such reductions will not be brought about without swift economic growth either. For sustainable pro-poor growth, policies and institutions are needed to improve human capital and expand human potential, broaden access to productive resources, promote the generation and adaptation of knowledge and technology to the benefit of the poor and enhance their access to markets. The quality and transparency of governance and public administration, a participatory approach to policy design and implementation at all levels, and commitment to gender equality are essential elements of a pro-poor policy framework. Appropriate social safety nets for especially vulnerable segments of the population should be devised and integrated in the policy framework.

62. This section begins by outlining elements of an appropriate international and domestic policy environment and subsequently focuses on key principles that should guide actions on the five priority areas for investment under the Anti-Hunger Programme.

MAKING THE INTERNATIONAL TRADE ENVIRONMENT CONDUCIVE TO POVERTY AND HUNGER REDUCTION

63. For developing countries to derive the full benefits of increased integration into the global economy, action is required at both the international and national levels. Institutions of global governance can create a better environment for developing country agriculture by promoting

peace and stability, providing global public goods, such as reduction of monetary and financial volatility, promoting a rules-based multilateral trading system and implementing international environmental agreements that promote sustainable development.

64. Freer trade in agriculture can make a powerful contribution to rural development and hunger reduction. But the benefits from freer trade do not come automatically. Many developing countries need companion policies and programmes that help increase agricultural productivity and product quality and the functioning of market institutions in order to raise competitiveness in domestic and international markets. The measures proposed in the Anti-Hunger Programme can contribute substantially to this end.

65. The Agreement on Agriculture of the Uruguay Round of multilateral trade negotiations held out the promise of a rules-based, transparent, trading system for agricultural commodities and was generally welcomed by developing countries. However, the practical application of the Agreement has raised concerns among developing countries that it is imbalanced in its effects. These countries contend that its rules hinder them in pursuing food security and supporting their own agriculture while doing too little to constrain developed countries from subsidizing and protecting theirs.

66. The focus of the Agreement is on restraining support for domestic agriculture, rather than the promotion of food security as such. Yet, it does have an impact on food security. For example, lower tariffs on imported food, while providing lower incomes for net sellers of food (such as landowners), also lead to lower food prices for net buyers of food (such as the rural landless or the urban poor) and may thus promote food security.

67. The Agreement does not rule out support for domestic agriculture, but rather seeks to restrain trade-distorting support such as tariffs and certain kinds of subsidy. This is permitted up to 10 percent of the value of agricultural production in most cases for developing countries. However, developing countries generally lack the resources to take full advantage of this provision and cannot raise tariffs on food without serious consequences for their poor. By contrast, the developed countries have more flexibility in practice as they possess the resources to provide subsidies and can also raise tariffs on food without serious consequences.

68. The investments proposed under the Anti-Hunger Programme do not entail trade-distorting support to agriculture. Investments in rural infrastructure, research or feeding programmes for the hungry simply lower production costs in general or equip a country's population to participate productively in work and trade and are not, for all practical purposes, contrary to WTO provisions on domestic support. Indeed, input and investment subsidies given to low-income resource-poor farmers in developing countries are specifically exempted from discipline.

69. It is important for developing countries to note that the better developed their infrastructure, institutions, and research and development capacity, the greater their gains from trade. To take

the example of infrastructure, transport and insurance costs account for more than 25 percent of the total value of exports for a third of all African countries. Investments in Priority Area 3 proposed in this paper should improve transport and marketing infrastructure in developing countries while also promoting food safety, thus improving overall competitiveness.

70. However, it is natural to ask whether the domestic production increases generated through this investment programme and the associated policy reforms are sustainable in the face of competition from agricultural producers and exporters in other, particularly developed, countries that benefit from subsidies and protection. These support measures have two negative impacts on farmers in developing countries. First, they make import competition itself difficult. Second, they cut into exports. Thus it becomes difficult for farmers in developing countries to earn a living in agriculture.

71. It is argued here that the proposed investments will strengthen the ability of developing country farmers to compete with their developed country counterparts. At the same time, a reduction in trade-distorting support to agriculture should promote the expansion of agriculture in developing countries, although there would, of course, be short-run adjustment costs that need to be taken into account. This agenda is currently being pursued through multilateral negotiations under the Doha Round. The following are some of the important issues in the negotiations that are of concern for the developing countries:

- *Agricultural tariffs – peaks and escalation.* The tariff structures of many Organisation for Economic Co-operation and Development (OECD) countries are characterized by tariff peaks and escalation. Many agricultural (and other) products where developing countries have a comparative advantage face peak tariffs in OECD countries that are much higher than average tariffs. Moreover, tariffs escalate, i.e. they are higher for more processed products – sometimes twice as high for products in the final stage of manufacture as for products in the initial stages. This militates against the development of value-added activities in developing countries.

It should be noted that the tariff structures of developing countries are also characterized by peaks and escalation. Because these hurt imports from other developing countries, attention should be given to lowering them.

- *Non-tariff barriers – dumping allegations, standards and rules of origin.* Not only have anti-dumping allegations reported to the WTO grown exponentially in the 1990s, but the vast majority are against developing country imports. A disturbing recent trend is that some developing countries have also begun to make heavy use of this mechanism, often against other developing countries.

While the need for food safety standards is widely accepted, the level of stringency is often a matter of scientific debate. To take one example, the World Bank estimates that

the application of *Codex Alimentarius* standards on Aflatoxin contamination by developed countries, as opposed to several autonomous standards currently applied, would result in a 50 percent increase in exports of cereals and nuts from 31 countries, of which 20 are developing, to markets in Europe, Japan, Australia and Canada, without any serious impact on public health. Developing countries are often not equipped to deal with product standards and labelling requirements and require major investments in order to do so. Investments under Priority Area 3 of the Anti-Hunger Programme directly tackle this problem.

Many developing countries benefit from preferential market access. However, the stringent rules of origin applied here have considerably reduced the effectiveness of such schemes, and major improvements are required.

- *Support to agriculture.* Out of the total transfers to agriculture in the OECD countries of about US\$318 billion in 2002, US\$235 billion were direct support to agricultural producers.³ Many developing countries are significant exporters of the products thus supported (e.g. sugar, rice, fruits and vegetables) and are affected directly in terms of lost exports. Moreover, these and others who produce for home markets are affected through depressed prices and dumping. Tariff peaks also tend to occur on goods that already benefit from price and other supports, thus making it very difficult for developing country farmers to compete. It should be pointed out, however, that not all the measures under which such support is granted are trade distorting.

72. The current provisions on subsidies and protection need to be judged against the recognition of development needs. Within the context of international trade negotiations, developing countries should also take steps to reduce their own barriers to imports from other countries, especially developing countries. This kind of support not only hurts consumers (particularly where food products are concerned), but also reduces a country's export competitiveness and should therefore be used after careful consideration.

73. The launching of the Doha Round of multilateral trade negotiations in 2001 had raised hopes that the development and food security concerns of developing countries would be taken into account. Unfortunately, at the time of writing, the future of the Doha Round is uncertain in light of the failure of the Cancun Ministerial Conference.

74. In their efforts to build competitiveness in international as well as domestic markets and improve the livelihoods of the poor and hungry, developing countries – in particular the poorest – will require external assistance. In this context, the pledges by major donors during the International Conference on Financing for Development to increase official development assistance (ODA) are encouraging. It is particularly urgent to reverse the sharp decline in ODA to agricultural and rural development.

MAKING THE DOMESTIC POLICY ENVIRONMENT CONDUCTIVE TO POVERTY AND HUNGER REDUCTION

75. The importance of sound macroeconomic policies in promoting agricultural and rural development and poverty reduction cannot be overstated. Although there seems to be a movement away from the dogmatic adherence to rigid macroeconomic targets that characterized the 1980s and most of 1990s, it is nevertheless widely accepted that unless governments are committed to long-term macroeconomic stability, reforms in agriculture are unlikely to be effective. Stable and predictable macroeconomic policies encourage savings and investment, discourage capital flight and focus private sector efforts on promoting efficiency instead of anticipating and reacting to macroeconomic shocks.

76. Although many developing countries have moved towards macroeconomic stability, budget allocations for agricultural and rural development remain painfully low. Substantial increases in budget allocations are particularly critical where hunger and poverty are prevalent and where the performance of agriculture, as the backbone of the economy, is well below potential.

77. Policy formulation and implementation should be based on a process that encourages participation by the poor and involves civil society organizations and the private sector so as to broaden ownership of goals and strengthen consensus on action. This will also facilitate the mobilization of private capital towards the objectives of sustainable alleviation of hunger and poverty. Administrative and fiscal decentralization makes it more likely that the poor will have a say in the decisions that affect them. Another critical area for public action lies in enhancing the functioning of markets through appropriate laws and regulations that ensure fair competition, safeguard market access by the poor and enforce adherence to sanitary, phytosanitary and environmental standards.

78. Since agriculture is subject to a high degree of risk, it is also necessary to promote and improve instruments that address the need for risk management, especially that of the most vulnerable. This includes measures to ensure that markets for financial services allow rural populations to save, lend and borrow more efficiently.

79. Finally, policies geared towards the rural economy must take account of the growing evidence that agriculture alone is not enough to sustain livelihoods for poor rural families – hence the importance of non-farm rural activities, particularly in view of the fact that they offer the poor an escape route from poverty and constitute an integral part of their risk management and coping strategies. Policies and institutions are needed to develop rural infrastructure, build entrepreneurial capacity and ensure competitive and fair markets for small-scale rural enterprises.

POLICIES FOR PRIORITY AREAS OF THE ANTI-HUNGER PROGRAMME

80. The following sections raise key policy issues that are more directly associated with the five proposed priority areas for investment.

81. *Improve agricultural productivity in poor rural communities.* The key policy issue in this priority area is strengthening the ability of rural communities, especially those that are poor and vulnerable, to organize themselves and play an active role in matters that affect their livelihoods. This should lead to the improved availability and adoption of technologies that are appropriate for the needs of the rural poor.

82. Associations of smallholders and rural community organizations, in coalition with civil society organizations, can play an important role in redressing some of the most serious handicaps faced by their members and non-members. These include insufficient access to natural, financial and human capital, lack of access to appropriate technologies and income-earning opportunities, high transaction costs and insufficient access to markets, lack of access to information, communications services and other public goods such as health and sanitation services.

83. Collective and coordinated action assures greater responsiveness of the political process to the specific needs of communities and their members, prevents abuse of pricing power for agricultural products and inputs by large buyers and sellers, allows producers to capture the considerable economies of scale existing in the procurement of inputs and marketing of outputs and facilitates the exchange of information and access to credit. The role of such partnerships and coalitions is particularly important in the face of government withdrawal from the provision of marketing services and credit.

84. *Develop and conserve natural resources.* With few exceptions, the scope of bringing additional natural resources into agricultural production (notably land and water resources) is limited. The only viable option is sustainable intensification, i.e. increasing the productivity of land, water and genetic resources in ways that do not compromise unacceptably the quality and future productive capacity of those resources. The policy environment must ensure that intensification is indeed sustainable and beneficial to the populations involved.

85. The development of baseline information on renewable natural resources is necessary for monitoring changes over time. Practical decision-support tools for local farmers need to be developed as an important component in capacity building for a participatory approach to developing and conserving natural resources.

86. With regard to water, the key policy issue is the growing competition between water requirements for agriculture and other water uses (domestic, industrial and ecosystem). As agriculture is by far the largest water user, the efficient use of water for agriculture should be the starting-point for expanding water availability for other uses. A challenge for countries is

to find the appropriate balance between improved rainfed agriculture and intensive irrigation so as to improve agricultural potential while promoting food security and poverty reduction. Policies affecting agricultural water use must provide incentives for efficiency gains and ensure that water scarcity is appropriately signalled to water users. Transparent, stable and transferable rights to water use for individual users or groups of users are powerful instruments for promoting efficiency and distribution equity.

87. Concerning land for agricultural use, the most important policy issues concern access and tenure (individual or community ownership, rental or longer-term user rights), improved land management practices and investments in soil fertility with a long-time horizon. Ensuring access to land will significantly contribute to its sustainable use. In this context, strengthening women's rights to own and inherit land is particularly important. Policies should recognize the complexity of existing land tenure systems and of formal and informal arrangements regarding land use rights. They should take into account the impact of increased mortality of the productive generation in rural areas as a result of HIV/AIDS and its potential impact on land use patterns and inheritance arrangements.

88. Ensuring present and future access to sufficient diversity of genetic resources for food and agriculture requires policy action at both the international and national levels. Regarding the conservation and sustainable use of plant genetic resources, the policy framework is set out in the International Treaty on Plant Genetic Resources for Food and Agriculture and the Leipzig Global Plan of Action. However, the measures contained in the treaty need to be integrated into national agricultural and rural development programmes. An appropriate regulatory framework for variety release and seed distribution that facilitates synergies between the public, private and informal seed systems needs to be established. For animal genetic resources, international and national regulatory frameworks still need to be developed to guide actions at the national level.

89. For fisheries, the critical policy issue is to limit access to natural fish stocks where the capture, particularly marine, has reached or surpassed sustainable limits. Respecting limits on access to fish stocks requires that governments and fishing communities share authority and responsibility for making decisions about the use of fisheries resources. During the 1990s, several global agreements were reached on how to manage marine capture fisheries in a manner that would ensure conservation and long-term sustainable use of marine ecosystems. Among these are the Code of Conduct for Responsible Fisheries, adopted by the FAO Conference in 1995, and the 1995 United Nations Fish Stocks Agreement, which came into force at the end of 2001.

90. In forestry, policies and institutions are needed to ensure full accounting of the value of the resource and benefits that accrue to the various members of society. These need to be incorporated into decision-making on utilization and conservation. Policies should encourage and promote the participation of key stakeholders in forest planning and management. In many cases there is a need for greater transparency and accountability in policies affecting

forest access and management. Institutional strengthening and coordination at the national and international levels is needed to ensure the inclusion of non-market values associated with forests, such as biodiversity, carbon sequestration and watershed protection. It is also important for policies affecting the management of forest resources to give recognition to the food security buffer role they play for the poorest members of society.

91. *Expand rural infrastructure and broaden market access.* A critical policy problem in the provision of infrastructure is addressing the relative neglect of poor rural communities. While involvement of the private sector in infrastructure construction and servicing may increase efficiency and respond better to overall needs, it may also mean that poor farming regions continue to be underserved. The public sector should maintain an active role in infrastructure provision that benefits the poor, for example the provision of secondary or rural roads. The policy approach should encourage decentralization and community participation in infrastructure investment planning, implementation, maintenance and financing to ensure demand-driven, sustainable service delivery and consider various forms of public-private partnerships.

92. Enhancing market access implies that coordinated policy, legislative and regulatory frameworks consistent with international obligations for food safety and plant and animal health are in place. Policies must be enacted and enforced, especially in countries where food contamination and plant and livestock diseases are endemic. Private-public partnership ventures, from supply through certification facilities and services, and flexible approaches to the progressive compliance with standards are effective means in strengthening access to trade.

93. *Strengthen capacity for knowledge generation and dissemination.* Policy action should aim at ensuring that the poor share the benefits of technological progress (agricultural, information, energy and communications). This is particularly so for areas with poor agro-ecological potential, which are usually sidestepped by private commercial research. Public funding is required for the development and/or adaptation of technological options for those areas.

94. Policies should promote technological options that address the twin goals of agricultural productivity and environmental sustainability. In the short term, research policy should focus on identifying and removing constraints to the adoption of practices that promote an optimal use of existing technologies, including organic agriculture, conservation agriculture and integrated pest management. New technologies are needed for areas with shortages of land, water or labour, or with particular problems of soil or climate. The promotion of labour-saving technologies is needed to respond to labour shortages of female-headed and HIV/AIDS-affected households, where a shortage of labour constitutes the principal constraint to diversified and sustainable cultivation. The emerging consensus is for a participatory approach to technology design and generation. Farmers' organizations, women's associations and groups and other civil society organizations can promote the necessary partnerships between farmers and scientists so that technological options are demand-driven and relevant. National policies

should facilitate the establishment of functional linkages among research, extension education and communications.

95. *Ensure access to food by the most needy through safety nets and other direct assistance programmes.* Policies conducive to the achievement of this priority area should, *inter alia*, be derived from a human rights-based approach. A key policy prerequisite is the existence of information that identifies accurately who the hungry are and where they are located. FAO and the World Food Programme (WFP) can assist governments in effective targeting, through the Food Insecurity and Vulnerability Information and Mapping Systems (FIVIMS) and the Vulnerability and Mapping (VAM) system.

96. Programmes to provide direct assistance to the hungry can only succeed when national governments establish effective capacity for the delivery of such assistance. This requires a supportive national policy environment for the development of social safety nets, which can be provided in cooperation with civil society organizations. Social safety net policies specifically targeted at hunger reduction should give recognition to the special vulnerability that women and children have to malnutrition at critical times in their lives and should support the creation and implementation of programmes such as mother-child feeding, related health and nutrition education and school feeding.

97. A national commitment and relevant policies towards gender equality and women's rights is essential to enhancing access to food. At the household level, an improved status of women has been shown to be the most important single variable in reducing malnutrition.

98. Finally, a policy commitment by government and non-state actors is essential for international humanitarian assistance to ensure access to food in times of conflict and crisis.

URBAN HUNGER

99. The majority of the poor and hungry in the developing world live in rural areas and will continue to do so till 2015 and possibly beyond. As the primary focus of the Anti-Hunger Programme is on actions to be taken in the years up to 2015, an emphasis on rural hunger is warranted. However, a discussion of the problem of urban hunger is necessary in view of the rapid growth in urban populations: the UN Population Division estimates that urban populations will equal and then exceed rural populations from 2020 onwards. Of the increase of 2.2 billion in the world's population projected between 2000 and 2030, 2 billion will take place in the cities of the developing world. Survey data on poverty and child undernutrition show that in many countries the absolute number of poor and undernourished individuals living in urban areas has increased, as has the urban share of overall poverty and undernourishment.

100. The urban poor depend disproportionately on the informal sector for their employment and income and rely principally on market purchases for their food supplies. In a few cases,

urban agriculture can be a source of livelihoods and household food supplies, especially in formerly rural areas incorporated into cities.

101. The reliance of urban households on pre-prepared and street foods results in diets that are usually richer in sugars and fats than those of rural households, thus contributing to a higher incidence of obesity and non-communicable diseases in urban areas, especially as urban lifestyles are often associated with lower levels of physical activity. At the same time, a more crowded, unhealthy environment (air pollution, insufficient sanitation facilities, low drinking-water quality), may lead to higher levels of communicable diseases despite the fact that medical facilities tend to be better in towns.

102. *Policy responses to urban food insecurity.* Devising policies and programmes targeted at urban food security is made easier by the fact that these policies a) have to reach a much more spatially concentrated population, b) can rely on a network of public services (education, health) that is usually more developed and far-reaching than the rural one, and c) can rely on more effective civil society and NGO networks that can bridge the gap between public and private sector actions. At the same time, the large number of activities in which the poor are involved limits the scope of focused sector-specific policies to improve their livelihoods. In general, policies regarding urban food security fall into two broad categories: i) those that enhance and protect the livelihoods of the poor and ii) those that work directly to improve food and nutrition security.

- i) *Policies to enhance and protect urban livelihoods.* Providing opportunities to the urban hungry to improve the basis of their livelihoods implies supporting the productive activities in which they are involved, especially those that are intensive in unskilled labour (public works, construction, petty trades and services). Enhancing the functioning of urban markets through improved infrastructure and strengthening of market institutions will reduce transactions costs and facilitate participation by the urban poor in markets.

Improving governance and stamping out corruption is particularly important in view of the dependence of the urban poor on the informal sector. Interviews with the poor conducted by the World Bank identified corruption and harassment by the police as two of their main complaints.

Reducing obstacles to setting up and expanding small businesses in a legal manner is especially helpful. Transforming informal rights to assets into formal rights, perhaps by finding ways to give title to land held informally, holds out the promise of unlocking large amounts of capital that already exist but cannot be put to productive use, for example, as collateral for raising loans for productive purposes. This policy can also be a source of revenue to city governments if they charge small fees for issuing ownership certificates.

Effective social safety-net programmes, such as food and health care subsidies, cash transfers and unemployment assistance, can be vital in protecting the livelihoods of the urban poor given their heavy reliance on the informal economy. It is therefore important to ensure that these benefits are not confined to participants in the formal economy.

Urban and peri-urban agriculture is estimated to involve 800 million urban residents worldwide, and accounts for about 15 percent of all the food consumed in urban areas. Vegetable cultivation can make an important contribution to urban livelihoods as vegetables can be grown on small plots of land using wastewater and their sale can finance purchases of other food by the poor. Vegetables are also a valuable source of vitamins and micronutrients. Similarly, peri-urban agriculture is a significant source of meat, milk and eggs. Any expansion of urban agriculture will be faced with increasing competition for land for urban dwellings, infrastructure and other urban amenities. Policies for urban agriculture will also have to reconcile its potential benefits with the environmental and health costs it implies.

- ii) *Direct support for urban food and nutrition security.* Policies and programmes to reduce urban food insecurity should take into consideration its nature and major causes. An important aspect is the quality and healthiness of diets. Urban households, and poor urban households in particular, rely heavily on street and pre-prepared foods, often spending up to a third of their income on them. This is partly because the poor have limited access to cooking fuel and partly because buying pre-prepared food saves time, which has a high opportunity cost in urban areas. The high fat and sugar content of such foods may promote obesity and facilitate the spread of non-communicable diseases.

Policy should address the causes of unhealthy diets rather than try to discourage them directly (through regulation or taxation). For example, to the extent that the urban poor rely on street foods because of shortages of cooking fuel, policies to improve access to cooking fuel by the poor would be more efficient. Similarly, to the extent that street foods are prepared and served under less hygienic conditions than home-prepared foods, policy should focus on improving the safety and quality of purchased foods. This can be achieved through education and training in hygienic food-handling, by raising public awareness and through food fortification and supplementation programmes. To the extent that pre-prepared foods are unhealthy, it is necessary to promote dialogue with the food industries, stressing the importance of less saturated fat, more fruits and vegetables, and effective food labelling. Incentives for the marketing and production of healthier products are also necessary. In working with advertising, media and entertainment partners, there is a need to stress the importance of clear and unambiguous messages to children and young people.

Improved access to safe drinking water is critical for lowering the incidence of water-borne diseases. In many developing countries, the poorer parts of cities receive piped water for a very limited time during the course of a day, forcing the poor to buy water from private sellers or do without. A common reason is inappropriate pricing of water, which leaves municipalities starved of resources. One possible solution to the problem of poor access to water is to have two-tier pricing, with low or even no charges for a reasonable minimum quantity of water and then sharply rising prices for quantities above that level. Improved access to water needs to be combined with practical ways to improve hygiene (e.g. washing hands before handling food, which has been shown to be surprisingly effective). Vaccination and immunization programmes for children are a vital part of public health and are essential for improving food utilization. Unfortunately, they are often neglected in developing country cities.

Finally, measures are needed to reduce the burden of expenses related to transport and communications borne by the poor. Of these the most significant is the cost of transport. Many of the urban poor live on the outskirts of towns and travel long distances to work and to shop. The importance of providing well-functioning public transport to the poor and promoting local retail market facilities in areas where they live cannot be overstated. Neither can the importance of providing cheap telecommunications services as these tend to reduce the need to use public transport.

103. *Conclusion.* Urban food insecurity is a fast-growing problem in the developing world. Policies aimed at addressing this problem have to take into account the precarious nature of urban livelihoods on the one hand and, on the other hand, the drain on the purses of the poor caused by transport and communication costs, the burden of communicable and non-communicable diseases, and their reliance on pre-prepared foods. A lack of properly devised policies is likely to impose heavy costs in terms of the loss of economically productive life years, continued reduction in economic growth and national productivity, and increases in the health burden and its consequent costs. There are also important interactions between rural and urban food insecurity. A more effective fight against hunger and poverty in rural areas is likely to reduce the pressure for rural–urban migration and thus the prevalence of urban hunger.

Financing the programme

104. The combined extra public cost of all investment requirements indicated in this programme will be approximately US\$24 billion at 2002 prices. Of this, about US\$5 billion will be for addressing the hunger problem through direct transfers to the undernourished. Another US\$19 billion will be required for addressing the problem of undernourishment and rural poverty through agricultural growth and productivity enhancement in rural areas. The possible sources of funding for this latter part are examined below.

105. For the year 1999, total ODA (i.e. bilateral and multilateral grants and concessional official flows) to developing and transition countries for agricultural and rural development amounted to about US\$8.1 billion,⁴ while non-concessional official flows amounted to about US\$3 billion. In real terms there was a decline of about 31 percent between 1990 and 1999 in concessional

Figure 2
ODA commitments to agriculture from 1988 to 1999



Note: The narrow definition of agriculture includes crop and livestock production, land and water, agricultural inputs and services, fisheries and forestry. The broad definition includes all elements in the narrow definition as well as research, training and extension, manufacturing of agricultural inputs, environmental protection, agro-industries, rural development and infrastructure, and regional and river development.

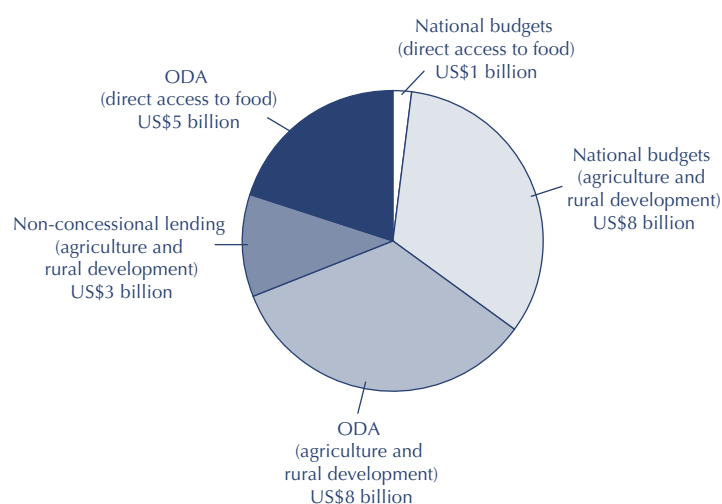
The graph shows the evolution of concessional external assistance to agriculture from 1988 to 1999 in 1995 prices. The figures represent commitments made by donors, showing a drastic decline in ODA during the period. The decline is more pronounced for the narrowly defined agriculture sector. The declines in concessional flows for the broadly defined agriculture sector have been contained mainly due to the increased weight of environmental protection, research, extension and training, and rural development and infrastructure in total concessional flows to agriculture.

assistance to agriculture broadly defined and 48 percent to agriculture narrowly defined (see Figure 2). Unfortunately, this declining trend was not counteracted by increased lending to agriculture by the international financing institutions (IFIs).⁵ The share of agriculture in total lending – concessional and non-concessional – by IFIs declined by more than half over this period, from about 20 percent of total lending in 1990 to about 9 percent in 1999. The total volume of lending to agriculture declined by 40 percent in real terms.

106. The problem of declining official resource flows to agricultural and rural development is compounded by the fact that the regional distribution of these flows does not reflect the distribution of hunger in the world. Under the Anti-Hunger Programme proposed here, a reorientation of the additional resource flows is suggested in favour of regions that have a high incidence of undernourishment.

107. The relative contributions of ODA, non-concessional assistance and national expenditure to the total costs of this programme are outlined in Figure 3, with a more detailed breakdown in Table 2. Total resources required for the agricultural and rural development component of the programme amount to US\$18.6 billion. Of this, it is anticipated that approximately US\$2.5 billion will be financed through non-concessional assistance flows. This is considered to be essential for supporting and stimulating private sector lending for these purposes. The remaining US\$16 billion will be financed by a combination of concessional external flows (ODA) and domestic resource flows. It is expected that most of the direct access to the food component will be financed from ODA.

Figure 3
Possible sources of financing



Note: All figures are in 1999 US\$.

This figure shows one possible option for sharing the costs of the investments proposed here.

- About 13 percent of total expenditure on agricultural and rural development comes from non-concessional lending. The balance is shared roughly equally by national budgets and ODA.
- About 90 percent of the expenditure on enhancing direct access to food comes from ODA, the balance from national budgets.

Table 2
Possible sources of finance for the programme

Priority action area	Total incremental needs per year (US\$ billions)	Increase in official development assistance (US\$ billions)	Increase in non-concessional assistance (US\$ billions)	Increase by recipient countries (US\$ billions)
Improve agricultural productivity in poor rural communities	2.3	1.0	0.3	1.0
Develop and conserve natural resources	7.4	3.2	1.0	3.2
Expand rural infrastructure and market access	7.8	3.3	1.2	3.3
Strengthen capacity for knowledge generation and dissemination	1.1	0.6	0.0	0.5
Total agricultural and rural development	18.6	8.1*	2.5	8.0
Ensure access to food for the most needy	5.2	4.7	0.0	0.5
Total	23.8	12.8	2.5	8.5

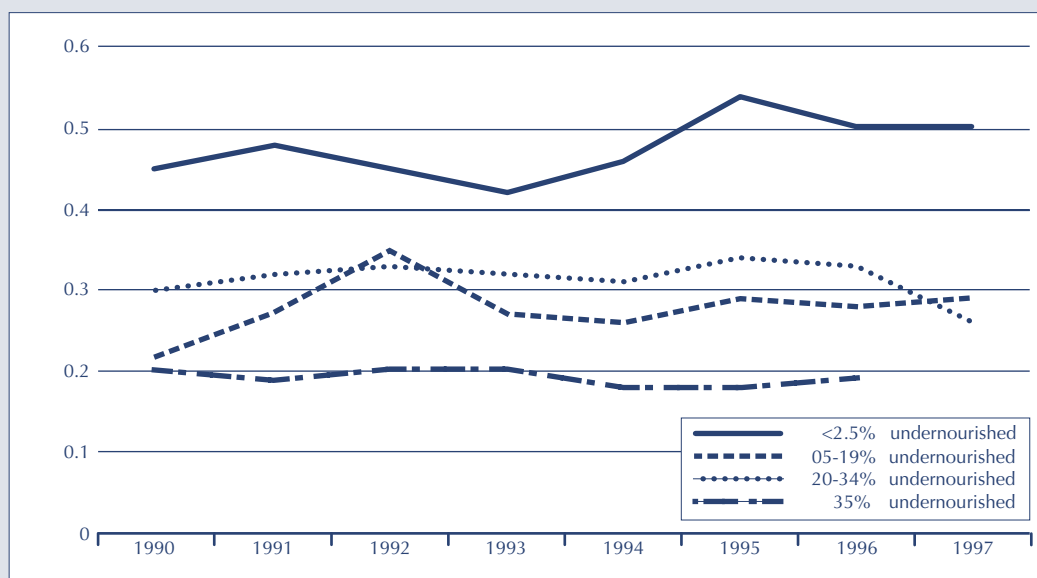
* Of which, concessional loans = US\$2.8 billion, multilateral grants = US\$2 billion and bilateral grants = US\$3.3 billion.
Source: FAO calculations.

108. The breakdown will vary among investment items and countries. Historically, the breakdown for agricultural and rural development has been roughly 65:35 between domestic and external funding. In view of the competing demands on developing country budgets to meet other Millennium Development Goals, and in view of efforts articulated during the Monterrey conference to raise development assistance, it would appear reasonable to assume a 50:50 breakdown between ODA and domestic resource mobilization *on average* for the additional resources required under the Anti-Hunger Programme. This leaves open the possibility that countries with a high prevalence of hunger would contribute a lower share from domestic sources. Applying this general principle would result, on average, in higher ODA shares for regions with a high prevalence of hunger, such as sub-Saharan Africa (for which a 60:40 ratio is suggested between ODA and domestic resources) and in lower shares of ODA for regions with a low prevalence of hunger, such as the transition countries (25:75).

109. The proposed average cost-sharing of 50:50 will result in a doubling of ODA (concessional flows) to agricultural and rural development, from roughly US\$8 billion in 1999 to US\$16 billion per year. Cast in terms of its share in total agricultural GDP of the developing countries, a doubling of ODA will bring this share closer to (but still slightly less than) the same share in 1988. So, even a doubling of ODA to agricultural and rural development will barely recover the ground lost by the continuous decline since the peak year of 1988. There appears

Figure 4

The share of agriculture in public spending relative to its share in GDP: countries grouped by prevalence of undernourishment



The vertical axis shows the ratio of the share of agriculture in government expenditure to the share of agriculture in GDP. The higher this ratio, the greater the weight of agriculture in government spending relative to its weight in the economy. Countries have been grouped according to the prevalence of hunger. Category 1 includes countries for which the share of undernourished to total population is less than 2.5 percent, etc. Owing to lack of data, countries where the undernourished constitute between 2.5 and 5 percent of the population have been omitted. The figure shows that in countries which have been most successful in reducing hunger, the weight of agriculture is better reflected in national spending than in the least successful countries, although in the latter group of countries agriculture constitutes the backbone of the economy. Relative neglect of agriculture in favour of a drive towards industrialization has prevented many countries from realizing their growth and hunger reduction potential.

to be a growing consensus in favour of such a doubling, as shown, for example, by the final declaration of the 2003 UN Economic and Social Council High-Level Segment. The declaration stresses the need for an integrated approach to rural development and then "... recalls the pledges made at Monterrey to substantially increase ODA, and today calls for immediate measures to at least double, from the current levels, the allocation of ODA to agriculture and rural development ...".

110. The implication for the national budgets of the developing countries will be an average increase of about 20 percent of the total expenditures for agriculture, compared with the recent past. Figure 4 provides some evidence on the impact of such spending. It shows that countries that allocated relatively more public resources to agriculture had a lower prevalence of hunger.

111. Various options are conceivable for mobilizing the additional external resources required for the financing of the Anti-Hunger Programme. New and innovative forms should also be considered. Two possibilities are discussed below.

Box 2
Reconciling trade and aid

While developed countries continue to provide high subsidies to their farmers, ODA for agricultural and rural development in developing countries has declined unabatedly. In real terms, it fell by as much as 31 percent over the 1990s, and has reached a level as low as US\$6 per agricultural worker. The lack of resources for agricultural and rural development hinders the efforts of developing countries to increase the productivity and competitiveness of their agriculture and agro-industry. Nowhere is this more evident than in rural infrastructure – particularly the lack of rural roads, research and extension and irrigation facilities – but ports, energy and telecommunications systems are also inadequate.

Developing countries often lack the material and human resources to implement the policies and institutional reforms needed to comply with and take advantage of trading opportunities arising from the WTO Agreement on Agriculture (AoA). Substantive investment is also needed for the necessary capacity building to implement the Agreements on Sanitary and Phytosanitary Measures (SPS), Technical Barriers to Trade (TBT) and Trade-Related Intellectual Property Rights (TRIPS). The capital needed may come close to a year's development budget for many of the least developed countries.

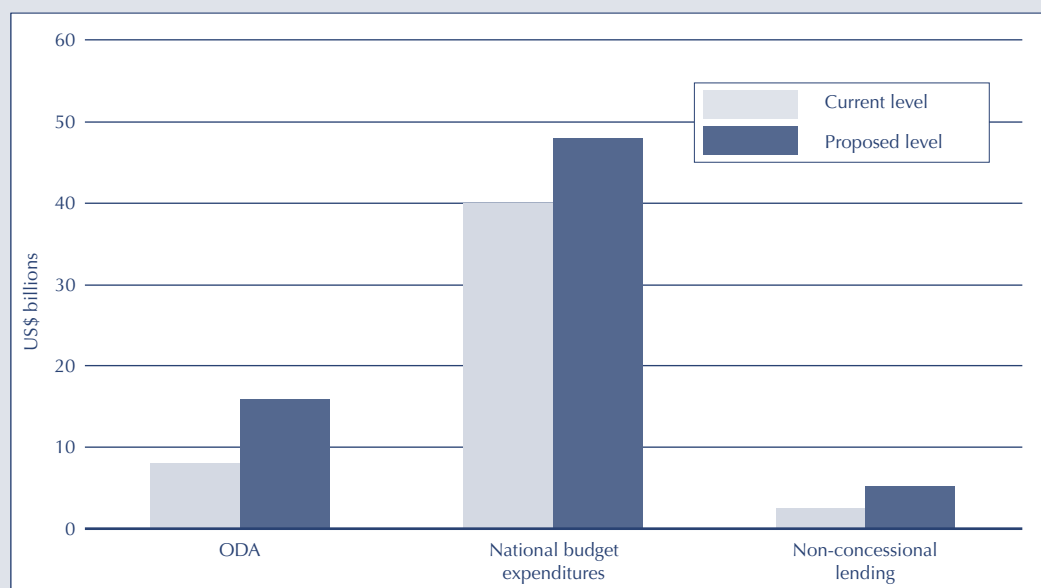
While aid should not substitute the removal of barriers to trade, it will remain essential for hunger and poverty alleviation in many of the poorer countries. An increased flow of ODA to the priority areas under the Anti-Hunger Programme would, in particular, result in enhanced competitiveness of the agriculture and rural sectors of developing countries, in markets at home and abroad. Thus, it would support the principle of "aid for enhancing trade", thereby enabling developing countries to share in the benefits of freer trade.

112. Liberalization of agricultural trade implies substantial savings to developed countries from reduced support to their agricultural sectors. Some of the resources saved could be channelled in the form of development assistance to promote agricultural and rural development in developing countries. Box 2 provides a review of some of these issues.

113. Figure 5 shows how the proposed incremental public investments in agricultural and rural development compare with recent flows of national budgetary allocations, concessional international assistance and non-concessional lending to agricultural and rural development. It is underlined that the proposal on cost sharing put forward in the Anti-Hunger Programme is one of many conceivable options for dividing the costs between various financing sources.

Figure 5

Current and proposed expenditure levels for agricultural and rural development by financing source



ODA for agricultural and rural development: The current level, US\$8 billion in 1999, is for agricultural and rural development, broadly conceived.

National budgets: Since only a limited number of countries report data on government expenditures on agriculture, the corresponding figure for all developing countries had to be estimated. Thus, the average share of agricultural expenditures of the reporting countries was multiplied by the 1998 data on "General Government Final Consumption Expenditures" for all developing countries in current US dollars. The data sources were World Bank. *World Development Indicators 2001*; and IMF Government Financial Statistics.

Non-concessional lending: The source for the figure on current non-concessional lending is derived by FAO using data from OECD/DAC and the international financing institutions.

Box 3

Assumptions underlying calculations of benefits and costs

It is emphasized that the investment cost estimates presented in the Anti-Hunger Programme are initial estimates of orders of magnitude that will be subject to review and eventual revision as part of, inter alia, the Millennium Development Project, which is a core element of the UN-led Millennium Development Goals Strategy. The estimates are for all developing countries. Readers are reminded that these are estimates of *incremental public investments* required for attaining the World Food Summit target of halving hunger by 2015. It is emphasized once again that the investments proposed here will only have the desired impact on hunger and poverty if complementary flows of private capital are forthcoming. This is most unlikely in the absence of a supportive policy framework.

While these investments are intended to promote agricultural and rural development, they are expected to have an impact on both rural as well as urban hunger and poverty. In particular, the cost estimates for Priority Area 5 below make no distinction between the rural and urban hungry.

CALCULATING THE BENEFITS OF HUNGER REDUCTION

The benefits are calculated as the value of additional “healthy life years” resulting from improved food intakes. The difference between the average food intake that is foreseen under a “business as usual” scenario (see Note 1), and the intake needed to attain the World Food Summit target is used to calculate the additional healthy life years that would be obtained if the target were achieved. This is done by deriving econometrically a relationship between healthy life expectancy and a number of variables representing food availability, access and utilization. Every additional healthy life year is valued at the 2002 equivalent of the projected per capita income of the developing countries in 2015 of US\$563, the figure used in WHO’s report on macroeconomics and health. Data sources: World Bank. World Development Indicators 2001; FAOSTAT data 2002; and WHO data (healthy life expectancy by country).

CALCULATING THE COSTS OF PRIORITY INTERVENTIONS

Priority area 1. Improve agricultural productivity and enhance livelihoods and food security in poor rural communities

The investment cost estimates in this priority area are derived from the assumption that small, poor farm households can improve their productivity with a one-time injection of start-up capital. The target group consists of extremely poor, low-productivity households that cannot realize their productivity potential because of a lack of savings and credit. It is envisaged that 4.6 million such households would receive assistance initially. This would be repeated annually for a fresh group of households for the next 13 years, accumulating to a total of 60 million households by 2015. The average cost of US\$500 per household has been derived from an analysis of costs incurred under FAO’s Special Programme for Food Security (see www.fao.org/spfs for further details).

Priority area 2. Develop and conserve natural resources

The investment estimates for land and water resources are derived from the assumption that meeting the WFS target will require limited expansion of both irrigated and rainfed areas as well as an increase in the productivity of existing land and water resources. The expansion needed would be in addition to that forecast under the baseline scenario of FAO’s perspective study World agriculture: towards 2015/2030 (see Note 1) . The underlying assumption is that the additional average caloric intake in each

country required to halve the number of hungry by 2015 is met through a combination of domestic production and imports. Additional calories from domestic production and imports are based on the self-sufficiency ratio projected for 2015 under the baseline scenario. Estimates of total cost were derived by multiplying physical quantities by FAO's expert judgement of unit costs.

Investments are required for achieving sustainability in the exploitation of fisheries and forestry resources through a range of measures, including technical innovation, institutional reform and rehabilitation. The costs of these investments are derived from a similar procedure to the one described in the previous paragraph.

With regard to plant genetic resources, the costs of these investments are in line with the Leipzig Global Plan of Action on plant genetic resources and represent FAO's expert judgement of the cost. The estimates for the animal genetic resources component is based on FAO's expert judgement and cover the costs of conservation and improvement of the animal genetic resource base.

Priority area 3. Expand rural infrastructure and market access

The investment estimates for roads were derived from minimum requirements for road densities that would be consistent with achieving the WFS target. Minimum targets for 2015 (5 km/1 000 persons and 25 percent of all roads to be paved) were compared with population/road densities for 2000 to obtain an estimate, by region, of new road requirements by 2015. Rehabilitation and maintenance costs were calculated as percentages of the incremental road works value. Investment needs for market infrastructure were calculated on the basis of projected incremental supply required to achieve the WFS target, the procedure for which is explained in the notes for priority area 2. An additional component is the cost of measures to build capacity in meeting sanitary and phytosanitary standards.

Priority area 4. Strengthen capacity for knowledge generation and dissemination

Based on FAO's expert judgement of relative needs and returns to research, communications and education, it was felt that the bulk of the investments in this priority area should go to agricultural research in view of the well-documented high returns to applied research for developing countries. It is envisaged that these resources would be shared equally between the National Agricultural Research Systems (NARS) of developing countries and the Consultative Group on International Agricultural Research (CGIAR). The remainder of the funds would go communications and education, as explained in the text.

Priority area 5. Ensure access to food for the most needy

The estimate was derived by calculating the cost of providing an adequate diet only to those parts of the population whose dietary energy intake is so low (lower than or equal to 1.2 times the basal metabolic rate) as to make them unable to work. The assumption is made that such individuals can be identified at a relatively low cost so that perfect targeting is possible. The cost of the basket of foods is estimated at about US\$28 per person per annum. An additional US\$10 is added for transaction costs related to the targeting of the individuals in need. The assumption is made that the total number of hungry people is falling by 22 million per year, so the number of people who need to be fed falls proportionately and so does the cost of providing direct access to food. The number of people being fed is projected to decline gradually from 214 million at the start to 110 million in 2015. For the school feeding programme, it is assumed that the average cost is US\$1 per week and that the programme runs for 36 weeks per year. The cost of other programmes could not be estimated owing to a lack of data. Furthermore, there are no baseline estimates of the ongoing costs of existing programmes.

NOTES

- ¹ The term “business as usual” refers to the best estimates available to FAO of the likely evolution in food availability, agricultural output, population, incomes and a host of other variables related to nutrition under the baseline scenario of FAO’s perspective study *World agriculture: towards 2015/2030*. This assumes, *inter alia*, that no extra effort is made to meet the World Food Summit (1996) target.
- ² This section has benefited greatly from contributions by the World Food Programme (WFP) and the International Food Policy Research Institute (IFPRI). It also reflects a common policy framework for the twin-track strategy for poverty and hunger reduction as first presented by FAO, IFAD and WFP at the Monterrey International Conference on Financing for Development in March 2002. The final responsibility for its content rests with the FAO secretariat.
- ³ The figures for total transfers to agriculture and direct support to agricultural producers in 2002 are provisional.
- ⁴ Sources: OECD/DAC creditor reporting system; FAO calculations. A broad definition of agricultural and rural development is used. Data from 1999 were used, as the 2000 data for UNDP and OPEC transfers are not available.
- ⁵ The World Bank, African Development Bank, Asian Development Bank, Inter-American Development Bank and the International Fund for Agricultural Development.