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### **The role of South–South and triangular cooperation for sustainable agriculture development and food security in developing countries**

Note by the UNCTAD secretariat

#### *Executive summary*

With South–South economic cooperation on the rise, there are many opportunities for developing countries to benefit from the experiences of their more successful counterparts in the developing world through enhanced trade and investment links and knowledge transfer. Since 2005, rising international demand for food products, the diversion of some food crops to biofuel production, and excessive speculation in commodity markets have led to sharp increases in the prices of some key food products, ultimately triggering the 2008 global food crisis. The immediate negative impact of the crisis was felt most in low-income, food-deficit and import-dependent countries, especially those in Africa, whose food import bills grew on average by nearly 60 per cent between 2007 and 2008. Fortunately, prices have come down from their peak in mid-2008, although they are still above their pre-crisis levels. Therefore, food insecurity remains a pressing concern for many poor economies, and must be given a more prominent position on the international development agenda, as UNCTAD has consistently stressed. This background note explores how South–South cooperation, including with the support of development partners (triangular cooperation), could raise agricultural output, particularly in low-income and food-deficit economies, facilitate the transition to sustainable agricultural production, and help tackle the scourge of global poverty.

Since the onset of the global food crisis, agriculture has moved to the forefront of the development agenda. Most of the commentary concerns the failure of agriculture in many developing countries to serve as an engine of development and poverty reduction. But the experiences of developing countries are not all failures. As this background note shows, there are success stories involving the contribution of agriculture to sustainable economic growth, poverty reduction and food security. Their successes offer important lessons to the countries that have suffered most from the crisis, and also demonstrate the tremendous potential that can be played by South–South cooperation. This UNCTAD expert meeting will address how South–South and triangular cooperation can help poor economies reverse the decline in agricultural productivity and increase investment in agriculture, rural infrastructure and agricultural research and development.

## I. Introduction

1. In recent years, rising international demand for agricultural products, the diversion of some food crops to biofuel production, and excessive speculation in commodity markets have led to sharp increases in the prices of some key food products, ultimately triggering the 2008 global food crisis. Between January 2005 and June 2008 alone, prices of maize – a basic food crop in many poor communities in Africa and Latin America – almost tripled, wheat prices increased by 127 per cent, and rice prices soared by 170 per cent. Much of that increase took place between March 2007 and March 2008, with sharp spikes in the weeks before prices peaked.

2. Although the crisis was viewed as global, the immediate negative impact was felt most in low-income, food-deficit and import-dependent countries, especially those in Africa, whose food import bills grew on average by nearly 60 per cent between 2007 and 2008. Since food items account for 50 to 80 per cent of the consumer spending of the low-income groups within the population, the sharp price increases had an immediate impact on poverty trends, and in some countries triggered political unrest.<sup>1</sup>

3. With the decline and stabilization of food prices in the second half of 2008, social and political tensions have eased. In many countries, however, prices have remained above their pre-crisis levels, and for those countries, the crisis is far from over. At the end of 2008, the Food and Agriculture Organization of the United Nations (FAO) estimated that 33 countries still faced crisis conditions, in some cases worse than a few months earlier (FAO, 2008). The United Nations has estimated that more than 120 million people may have fallen below the \$1-per-day poverty line since 2006 owing to food price increases, with the most vulnerable populations located in South Asia and sub-Saharan Africa. Indeed, gains in the eradication of hunger since the early 1990s, when the proportion of hungry people decreased from 20 per cent in 1990–1992 to 16 per cent in 2004–2006, were reversed in 2008, largely due to higher food prices. Currently, nearly a billion people in the world are undernourished. This figure is expected to rise if bold measures are not taken to reverse the decline in agricultural investment and productivity in many developing countries, particularly in food production.

4. The global food crisis of 2008 has, in recent months, been overshadowed by the global financial and economic crisis. However, food insecurity remains a pressing concern for many poor economies, and must be given a more prominent position on the international development agenda, as UNCTAD has consistently stressed. UNCTAD has also warned that in the search for a solution, while it is important to tackle the most urgent humanitarian aspects of the crisis, attention must not be diverted from long-term failures of agricultural and development policies at both the national and international level.

5. Indeed, the crisis represents a wake-up call for countries that have neglected food production, relied on imports, and systematically reduced investment in the agricultural sector. For these countries, the crisis has vividly demonstrated the need for policies that create the right incentives for investment in agriculture and establish an appropriate mix between food and export crops.

6. During the crisis, the spotlight was understandably concentrated on those countries that were the hardest hit – the net food importers. However, the extent of global hunger points to a problem of agricultural sustainability which reaches beyond the bottom billion and encompasses a wide array of policy issues.

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<sup>1</sup> The spike in food prices triggered riots in over 20 countries and was the main reason for the fall of at least one government.

7. The agricultural sector in a number of developing countries has been resilient in the face of both short- and long-term shocks. Indeed, the shift to more productive agricultural practices in these countries accounted for the steady reduction in levels of global hunger prior to the recent crisis. Their successes offer important lessons to the countries that have suffered most from the crisis, and also demonstrate the tremendous potential that can be played by South–South cooperation. This background note explores how increased economic cooperation among developing countries, including with the support of development partners (triangular cooperation), could raise agricultural output, particularly among smallholder farmers, facilitate the transition to sustainable agricultural practices, and help tackle the scourge of global poverty.

## **II. Agricultural development in successful developing countries: the lessons**

8. Of the developing world's 5.5 billion people, more than 3 billion live in rural areas, with half in smallholder (agricultural) households. The food crisis that emerged in 2008 has demonstrated their vulnerability to adverse long-term trends and unexpected shocks. Historically, most successful cases of sustained economic growth and rising living standards began with progress in agriculture. In more recent years, the experiences of China, India and Viet Nam, for example, also show how agricultural growth can lay the basis for growth in industry and the rest of the economy. Cross-country analyses further suggest that growth originating in the agricultural sector is often much more effective in reducing poverty and insecurity than growth in non-agricultural sectors. In the case of China, for example, it has been found that growth originating in agriculture was over three times more successful in reducing poverty than growth in non-agricultural sectors; and the figure has been found to be even higher for South Asia. In Latin America, the impact has not been quite as large, but it has still been found to be a major factor in the decline in overall poverty across the region.

9. Of course, the fact that some developing countries have succeeded in strengthening their agricultural sector does not necessarily mean that the lessons from these countries can be drawn in a mechanical way or applied automatically in other developing countries. There are no quick fixes or standardized solutions. Each country faces a unique situation that depends on a host of factors, including its size, resource endowment, starting position, level of development and history – as well as the external environment, which can sometimes be a constraining factor. Therefore, the search for lessons from successful developing countries is guided by the desire not to replicate the experience elsewhere, but to identify the common principles that have helped guide policymakers and other actors involved in those successes.

10. The elements commonly associated with successful agricultural development in developing countries include:

(a) A proper balance between public and private sector involvement. For example, in most cases, governments have played a key role in guiding the development of the sector, and local markets have been developed that offer relatively stable output prices providing reasonable returns on investment. Strong policy interventions have provided support for sustainable cultivation patterns and to strengthen domestic food distribution systems. Most governments in successful countries have intervened to stabilize output prices, guarantee local procurement and subsidize inputs and credit;

(b) A strong emphasis on investment in building productive capacities, particularly for smallholders, both to ensure a more reliable supply of food to growing urban populations, and to strengthen the investment–export nexus with an eye to

employment creation outside the rural areas (box 1). An effective set of investment incentives is needed to provide farmers with a predictable financial surplus and to encourage them to invest so as to raise productivity and diversify output;

(c) An integrated approach to agricultural development, involving land reform and technological support, as well as investment support in rural infrastructure – such as feeder roads, energy, storage systems and small-scale irrigation. Strong local research and extension services to support high-yielding agricultural technologies. Research and development has often borrowed from, and been supported by, international research centres, such as the development and diffusion of high-yield varieties of wheat and rice during the “Green Revolution”. Many success cases have been built on irrigation systems rather than on rain-fed systems, and have been heavily concentrated in Asia. India is a significant exception, with its “second” Green Revolution in the 1980s taking place in rain-fed areas;

(d) Fairer trading relations, whereby market obstacles and asymmetries facing small-scale producers are corrected through collective support mechanisms such as subsidized credits, export consortia, collective marketing services etc.

#### **Box 1. The investment challenge in agriculture**

Massive underinvestment in agriculture has been particularly significant in those rural economies where smallholder farms predominate. In order to guarantee greater food security and allow agriculture to make a more positive contribution to the wider development process, government spending in agriculture will need to double or triple in many developing countries, particularly in African countries where investment in agriculture has been declining.

The United Nations, through the Secretary-General’s High-Level Task Force on the Global Food Security Crisis, has proposed a Common Framework of Action (CFA) as a comprehensive strategy for tackling the crisis. The CFA estimates that an additional \$25 billion to \$40 billion will have to be invested every year, financed through domestic resource mobilization and official development assistance (ODA), for food and nutrition security, social protection, agricultural development, and a better functioning of food markets.

Also according to CFA estimates, approximately one third of the resources would be needed for immediate food assistance and short-term budgetary and balance-of-payments support, and the rest for investments in rural infrastructure, education, clean water and agricultural research. The largest sums need to be invested in South Asia, followed by Latin America, although on a per capita basis, Africa will require the greatest investment push.

11. In all these respects, South–South cooperation can play a central role in spurring the transition to more productive and sustainable farming practices.

### III. The problems of sustainable agricultural development in developing countries

#### A. Constraints on productivity growth

12. High levels of poverty have often been associated with the predominance of agricultural employment. Moreover, the shrinking of the agricultural sector as per capita income rises – in terms of its employment share and contribution to total output – is an established fact of economic development. How best to manage that contraction in a way that supports rising output in other sectors of the economy and without jeopardizing food security has, however, been a long-standing and contentious part of the development policy debate.

13. The challenge arises in part from the multiplicity of actors and functions in the agricultural sector. Farmers range from small-scale subsistence units to large-scale and highly capital-intensive producers who are often oriented to the export market. The sector is, moreover, a possible source of inputs for other potentially more dynamic sectors, usually located in the emerging urban economy, while at the same time it is expected to guarantee food security for the bulk of the population that continues to live and work in the countryside. Approaches to managing these conflicting demands have, in part, diverged on the question of whether to treat agriculture as a leading or a lagging sector in the growth process. As shown by the experience of successful developing countries, however, the answer to that question hinges on the possibility of raising productivity across the full range of farming units, including by increasing the use of machinery and technological know-how, improving land and water management, and introducing sustainable farming practices.

14. Rising productivity should bring lower prices, help farmers make a reasonable living even from smallholdings, increase the supply of labour for emerging dynamic sectors, and generally improve living standards in the urban areas and increase domestic savings. At the same time, a more productive agricultural sector should open up new export opportunities, help establish a more strategic integration into global markets and provide more predictable sources of foreign exchange.

15. What the least developed countries (LDCs) have experienced over the past three decades is, however, just the opposite. Estimates show, for example, that cereal yields in the LDCs are at about half the level of those in other developing countries, and that yields for some other basic food crops – such as oil-bearing crops and vegetables – are less than half of those in other developing countries.<sup>2</sup> Even where yields have increased for some export crops, land yields have remained low and population growth has consistently outstripped the growth of agricultural output, with malnutrition a permanent threat.

16. The principal reasons for the persistent decline in productivity are lack of investment in rural development and lack of access to the right kind of technology and know-how needed to bolster crop yields. In 2008, the Economic and Social Commission for Asia and the Pacific estimated that raising the average productivity of the Asia-Pacific region to that of Thailand could take 218 million people out of poverty. Agricultural research and development, education of the rural population, and rural infrastructure, particularly electricity and roads, are the key determinants of labour productivity, and investments in these areas would have a major impact on bolstering food security.

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<sup>2</sup> UNCTAD. *The Least Developed Countries Report 2006*. See also Chapter III of the *Least Developed Countries Report 2009*, entitled “Agriculture: The Heart of the LDC Development Problem”.

17. The “green revolution”, based on research in high-yielding plant varieties, has been held up as a model in this regard. As noted above, such varieties did help to raise output and productivity in some countries, particularly in Asia, during the 1970s. However, many poor economies were left out of this experience, and even among the successes, a growing body of subsequent research has revealed some serious weaknesses, notably the impact on small-scale producers and the environment. A reassessment of the green revolution is now under way, with a direct bearing on the issue of using South–South cooperation to transfer policy lessons and know-how on farming practices and technologies across countries and regions in the developing world.

18. Such a reassessment should pay particular attention to new and emerging issues, such as the role of organic production practices in sustainable agricultural development; the potential of innovative systems of agriculture production that add value to the supply chain, for example biofuels and bioenergy from non-food crops; and the impacts of climate change and related adaptation challenges. It also needs to include the active participation of a wide range of stakeholders and adopt a much more integrated perspective that links agricultural development to the finance, trade and energy sectors.

## **B. Policy mistakes**

19. The idea that large public investments and support services are the key to raising productivity growth has long been opposed by those who maintain that farmers have been kept poor precisely because such government actions have distorted the workings of a free market in agriculture. Since the debt crisis of the early 1980s, development policy on agriculture has shifted towards a much greater reliance on price signals as the means to improve efficient resource use and increase production. Indeed, the trend of underinvestment in agriculture, and food production in particular, and the shift in the incentive structure towards cash crop production appears to have accelerated during this period, as part of the structural adjustment programmes implemented by many countries in order to obtain loans from the International Monetary Fund and the World Bank.<sup>3</sup>

20. The policies recommended to help with the adjustment programmes and as conditions for receiving new loans included exchange rate corrections, the withdrawal of governments from agricultural markets, the dismantling of marketing boards, the elimination of food subsidies, and deregulation of markets for agricultural inputs and outputs. Moreover, a corresponding drop in aid flows to the agricultural sector followed on the expectation that farmers’ investment decisions would be best financed by directly accessing credit in private markets. To the contrary, however, the reduction of both public investment and aid flows discouraged private investment in agriculture, particularly in rural infrastructure, which is essential for rapid and sustainable agricultural development. Following this policy shift, many farmers have suffered not only from lower growth and more unstable output prices but also from rising input prices for food crops and the elimination of fertilizer subsidies.

21. Previous UNCTAD reports have drawn attention to the risks involved in rapid liberalization and deregulation without the investments and institutional support needed to raise productivity performance and provide alternative sources of employment for the rural population. In fact, during the 1990s, agricultural output dropped sharply in both middle- and low-income developing countries, falling in many cases to below the population growth rate. That trend has continued in the LDCs, particularly in sub-Saharan Africa, eventually setting the stage for the recent food crisis (box 2).

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<sup>3</sup> Mittal A (2008). Food price crisis: rethinking food security policies. G-24 discussion paper no. 56.

**Box 2. The African microcosm**

Sub-Saharan Africa has suffered the most from the present food crisis, because of poor social and physical infrastructure that will hamper its ability to assimilate the new technologies triggered by an eventual green revolution. Research by UNCTAD has pointed to a persistent failure, across much of the region, to develop a viable rural economy in line with broader development impulses and needs. Moreover, the adjustment programmes developed in the 1980s in response to a deepening debt crisis, which have often been presented as necessary for correcting the biases against the rural sector, have been singularly unsuccessful in stimulating the sector's recovery.

In 2003, African Governments committed themselves to raising their share of spending on agriculture to 10 per cent by 2008 in support of the Comprehensive Africa Agriculture Development Programme (the Maputo Declaration goal). Instead, however, such spending has dropped dramatically in recent decades, and the target is far from being met.

22. Relying exclusively on the private sector for agricultural credit and marketing, especially in economies where the sector is still weak, has turned out to be uneven and unpredictable. Thus, once market forces had eliminated the implicit subsidies to remote and small farmers, many farmers were left worse off. Maintaining and extending rural roads, irrigation systems, and other related public services (e.g. agricultural extension and technological research and diffusion), which in many countries had been developed earlier by marketing boards, declined after the reforms. Financial liberalization and tight monetary policies generally resulted in dwindling levels of rural credit, along with persistent underfunding of support services.

23. These policy failures have weakened the agricultural sector in many developing countries, making it harder for the agricultural sector to cope with market shocks and avoid a major-scale crisis. Indeed, many face a vicious cycle of weak investment, slow or even declining productivity growth, low incomes, small markets, and tight foreign exchange constraints.

**C. An unsupportive international system**

24. There is general acceptance that the system of protection for agriculture in advanced countries has been detrimental to agricultural development in many developing countries. High tariffs, tariff escalation and subsidies have all led to a highly distorted international division of labour in agricultural products and fisheries. Moreover, the trading system has become vulnerable to the increasingly volatile workings of the international financial system – exemplified by the rollercoaster price movements for agricultural goods in 2008 – reversing the original intentions of the post-war multilateral architects and adversely affecting developing-country prospects.

25. The removal of these distortionary practices is part of the ongoing multilateral trade negotiations launched in Doha. However, the likely impact on food security of any multilateral agreement to further liberalize agricultural trade is uncertain in the short and medium term, given the fact that the likely upward impact on world market prices would have a negative impact on net food importers, and the fact that the small scale of production in many developing countries limits their prospects of competing in global markets. In both respects, very significant increases in aid, compensatory finance and development support will be needed to ensure that there are widespread gains.

26. In fact, donors have neglected agriculture in recent decades. The share of total ODA for agriculture declined from 13 per cent in the early 1980s to under 3 per cent in 2005 and 2006. In addition, ODA allocated to other productive activities and economic infrastructure, which can have positive externalities for agriculture, also suffered from a significant drop in international support during the same period.

## **IV. South–South cooperation in sustainable agriculture development**

### **A. The rationale for South–South cooperation in agriculture**

27. As highlighted at UNCTAD’s February 2009 expert meeting on South–South cooperation, economic cooperation in the areas of finance, trade, investment and technology among developing countries can offer a very important avenue for addressing existing biases and gaps in the international economic system, including by further enhancing the effectiveness of traditional North–South cooperation. This is certainly true for sustainable agricultural development.

28. South–South cooperation is seen as desirable both because of the perceived mutual understanding that provides a strong push for more inclusive partnerships among participating countries, and also because their closer socio-economic conditions can facilitate the sharing of experiences. But there are also inherent challenges in South–South cooperation, including a lack of adequate funding and institutional capacity, different regional conditions, and vulnerability to economic and political shocks. Indeed, a perennial risk with South–South cooperation is the lack of continuity in the resulting partnerships. This is where triangular cooperation could play a critical role, by providing the funds, expertise and experience needed to strengthen South–South cooperation.

29. This is particularly true in agriculture, where South–South cooperation offers real opportunities for the transfer of policy experiences and technologies necessary for boosting agricultural productivity in developing countries, and also opens new investment and market opportunities on a more level playing field than currently exists for many agricultural producers. Indeed, there is a real chance that such cooperation could be expanded into a truly sustainable green revolution, particularly in Africa. In this respect, an important rationale for South–South cooperation is the similarity of soil, climatic and ecological conditions among some groups of developing countries. Where countries have successfully developed agricultural technologies specifically for small-scale farmers, and have designed and implemented the right policies to help raise investments in the rural sector, mechanisms need to be devised to share these experiences with other developing countries. At the same time, South–South cooperation in agriculture can help promote a diversity of experiences that could well be the single most important ingredient for achieving sustainable agriculture, particularly in small farmer settings. South–South cooperation can, moreover, help counter the dominant market influence of Northern business practices and technologies that have tended to perpetuate unequal trade relations in exporting sectors.

### **B. Emerging trends in South–South cooperation**

30. A number of developing countries are emerging as active partners on technical and economic cooperation for development in developing regions, especially in Africa. The list of these countries is long, but it includes China, India, Brazil, Malaysia, Turkey, Cuba, Indonesia, Egypt, South Africa and a number of countries in the Middle East.

31. China, for example, is fast becoming a major investor in Africa and also an important supplier of manufactured goods and importer of raw materials and agricultural products. This has created opportunities for African farmers. In 2000, China moved to consolidate this cooperation by establishing the Forum on China–Africa Cooperation (FOCAC), which meets every three years. As part of this initiative, China has significantly boosted its development cooperation budget in recent years, with a strong emphasis on the development of agriculture. For decades, the country has supported agriculture development in Africa, and these efforts are expected to be strengthened at the fourth Ministerial Conference of the Forum on China–Africa Cooperation (FOCAC) in November 2009, where agriculture and food security will be a key theme.<sup>4</sup> China is already supporting the establishment of 14 centres for agricultural research in a number of African countries. Over 100 agricultural scientists are working in the field with African technicians in order to improve the food security of the continent and generate export surpluses where possible (box 3).

### **Box 3. Cooperation between China and Africa in agriculture**

Agriculture has been a priority for China–Africa economic and technical cooperation, involving over 40 countries and over 200 cooperation projects. China has sent 10,000 agro-technicians to Africa to train local farmers and provide technical support. There has been a strong focus on land management, breeding technologies, food security, agricultural machinery, and the processing of agricultural and sideline products. China has, in recent years, intensified its cooperation in agricultural technology, organizing training courses on practical agricultural technologies, carrying out experimental and demonstrative agricultural technology projects, and speeding up the formulation of the China–Africa Agricultural Cooperation Programme. The Beijing summit Forum on China–Africa Cooperation in 2006 gave new momentum to these activities.

The Action Plan 2007–2009 for China–Africa Cooperation on Agricultural Matters included the strengthening of the exchanges, and cooperation in farming, animal husbandry, irrigation, fisheries, agricultural machinery, the processing of agricultural produce, sanitary and phytosanitary measures, food safety and epidemic control, and actively explores new forms and ways of agricultural cooperation. The plan included sending 100 senior experts on agricultural technologies to Africa, and setting up 10 demonstration centres of agricultural technology on the African continent. In addition, measures were identified to stimulate Chinese businesses to increase investment in agriculture in Africa, focusing on infrastructure development, the production of agricultural machinery, and the processing of agricultural produce in Africa.

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<sup>4</sup> The FOCAC was first created in 2000 in Beijing. At the third FOCAC (Beijing, 2006), China announced it would double its aid to Africa by 2009.

China is also active in triangular cooperation projects, particularly in Africa, with FAO making available \$30 million for its trust fund to support developing countries in improving their agricultural productivity as an instrument for achieving the Millennium Development Goals. China has also partnered with the Brazilian Earth Resources Satellite (CBERS) programme for distribution of images, aimed at increasing the access of African Governments and organizations to satellite images that strengthen their capacity to monitor natural disasters, drought, desertification, deforestation, threats to agricultural production, and threats to public health.

A China–Africa Development Fund was created in 2007. Its total reserves are expected to reach \$5 billion, which will be made available for infrastructure projects, including in the agricultural sector. China is also an important partner in Africa’s agricultural trade. In 2006, it pledged to further open up its market to Africa, increasing from 190 to over 440 the number of export items from the African LDCs that are eligible for zero-tariff treatment. Cooperation in customs, taxation, inspection and quarantine to facilitate health has been strengthened too.

*Source:* Forum on China–Africa Cooperation. Beijing Action Plan 2007–2009.

32. India, too, through the Africa–India Forum Summit launched in April 2008, aims to reinforce cooperation, especially with the transfer of agricultural technologies that meet the real needs of small-scale farmers in Africa. The summit is paving the way for more solid cooperation between Africa and India, which is another lead actor in tropical technology, not only in high-tech packages but especially in low technology, which is just as important for meeting farmers’ needs (box 3). India is also an active player in the “Interregional initiatives for Africa” – a joint initiative of India, Brazil and South Africa (IBSA) – which established the IBSA Facility Fund for Alleviation of Poverty and Hunger in Africa in 2003. South Africa itself, a leader on the continent in agricultural technology, is a key player in the transfer of technologies to fellow African countries.

**Box 4. India–Africa Forum Summit 2008: Framework for cooperation in agriculture**

The cooperation will focus on the following areas:

- (a) Capacity-building and sharing of experience in policy analysis and planning relating to the agriculture sector;
- (b) Cooperation in water resource management and irrigation practices, agro-infrastructure development, transfer of applied agricultural technology and skills transfer;
- (c) Cooperation to combat agro-based diseases;
- (d) Capacity-building/training to increase the capacity of small landholder African food producers to comply with the required quality and safety standards, including extension activities and agricultural credit policies;

(e) Sharing experiences and information on appropriate storage and processing technologies and jointly promoting the uptake of African- and Indian-developed technologies for diversification and value addition in relation to food and agricultural products;

(f) Sharing of expertise and information between commodity boards of Africa and India, with a view to learning from each other's experiences in farm mechanization, post-harvest technology, organic farming, policy and regulatory frameworks and the setting up of cross-border commodity exchange boards;

(g) Enhancing market opportunities for African value-added agricultural products;

(h) Cooperation in livestock management, breeding technologies, meat processing, dairy industry development, fisheries and aquaculture, including the exchange and transfer of applied technology;

(i) Establishing linkages between agriculture and industrial development in order to support and nurture agro-processing industries; and

(j) Enhancing cooperation between agricultural training centres and relevant research institutes.

*Source:* African Union, 2008.

33. In Latin America, Brazil has been actively involved in South–South cooperation for agricultural development, both within the region and with other developing regions, particularly Africa. Brazil's projects in Africa were initially focused on the Portuguese-speaking countries of Angola, Mozambique, Guinea-Bissau and Cape Verde. However, the establishment of Embrapa in Ghana points to a new phase in its South–South cooperation (box 5). More recently, other African countries, including Ghana, Benin, the Democratic Republic of the Congo, Guinea, Kenya and Ethiopia, have signed technical cooperation agreements and begun implementing joint projects.

**Box 5. South–South cooperation in public research:  
the Embrapa example**

Embrapa is a Brazilian agricultural research and training institution established in 1973, which has been a driving force for agricultural development at the national, regional and international levels. Embrapa has over 40 research centres distributed across the different agro-ecological systems of the country, and 5 abroad (one in the United States, two in Europe, and one each in the Bolivarian Republic of Venezuela and in Africa). Each Brazilian centre focuses on a number of commodities or a specific technological research field, thus avoiding duplication of work. The research fields of Embrapa are diverse (from agricultural production techniques and rural development, the environment and biodiversity, extension, and the training of agricultural technicians and farmers, to bioenergy, biotechnology, agrifood and socio-economics).

In the late 1990s, Embrapa established subsidiary institutions abroad. The first office (called Labex) was established in the United States in 1998. The second is located in Montpellier, France, as part of the Agropolis project, a reference centre for tropical agriculture research in Europe alongside Wageningen in the Netherlands, with whom Embrapa also recently established a partnership. Embrapa is the only developing-country research centre on tropical agriculture to be physically present on European Union territory. A third office was inaugurated in Accra, Ghana, in 2006, breaking new ground in the international cooperation of Brazilian agriculture with the developing world. A fourth office was created in the Bolivarian Republic of Venezuela in 2008. An office for Asia is under consideration, as is one for Central America.

Embrapa Africa is part of a broad strategy by the Brazilian Government to enhance South–South and triangular cooperation in the agricultural sector. The partnership aims not only to transfer and field test the tropical technology know-how acquired by Brazil in the past four decades, but also to learn from successful experiences in other developing countries, enhancing the global partnership for agriculture and rural development. Projects in Africa were initially focused mainly on the Portuguese-speaking countries (Angola, Mozambique, Guinea-Bissau and Cape Verde). Subsequently, a number of other African countries, including Ghana, Benin, the Democratic Republic of the Congo, Guinea, Kenya and Ethiopia, have signed technical cooperation agreements. Brazil is working towards a broad partnership that includes all members of the African Union in technological transfer and agricultural capacity-building projects.

34. The Arab countries and Arab funds are another good example of South–South cooperation, particularly in the field of irrigation and water management, where they have accumulated knowledge and expertise. These countries are taking the lead in considerably increasing their support for Africa’s agricultural development. An example is the South–South cooperation agreement between Egypt and the United Republic of Tanzania, building on Egypt’s long-standing expertise in irrigated agriculture. Most of the land under cultivation in the United Republic of Tanzania is rain-fed, leaving farmers at the mercy of weather patterns and conditions. Egyptian experts and technicians have been working with local farmers on irrigation, plant nutrition and soil fertility, marketing, cooperatives, rural credit and finance, seed production, agricultural engineering, and animal and crop production.

## V. The modality of triangular cooperation

35. Triangular cooperation exists when South–South cooperation is supported through partnerships with Northern donors who provide financial and/or technical assistance (box 6). It is regarded as the “third generation” of cooperation, and for many, it represents a promising field with great and still largely untapped potential. FAO’s Special Programme for Food Security (SPFS) and the Japan International Cooperation Agency’s programme on research are examples of triangular cooperation.

**Box 6. Triangular cooperation: beyond financing**

Triangular cooperation has been seen by many conventional donors as a creative funding mechanism in the face of the increasing scarcity of resource flows. However, traditional donors have made few financial commitments to this scheme, and it is not clear what amounts have already disbursed. Many donors consider their participation not only in financial terms, but also as a way of contributing their expertise and support to capacity development in recipient countries. Beyond financing, triangulation schemes can provide two very important contributions to South–South cooperation.

For DAC members, triangular cooperation poses several challenges, such as creating mechanisms to establish both rules for and inputs from each participating country, and also joint planning processes, without generating high administrative and institutional costs. In addition, triangulation will increase pressure on the South to respond to the Paris- and Accra-based aid effectiveness principles, since it involves committing resources from DAC members. On the other hand, and following the Accra mandate, the joint planning, implementation and evaluation activities promoted by donors can serve to strengthen the institutional capacities of the providers of South–South cooperation.

*Source:* Sanín Betancourt MC and Schulz NS (2009).

36. The SPFS facilitates the transfer of techniques that are successfully employed in one country to other countries. The main aim is to take the best elements of “what works” and craft them into a custom-made plan for the host country. Over 100 countries are now involved in the SPFS system, and over half of them have started implementing their own customized national plans (box 7).

37. Japan partners with Brazil to transfer agricultural technology to other developing countries, including in Africa. The NERICA project (New Rice for Africa) resulted from the cooperation between several African countries and research centres, backed by donors (e.g. Japan, FAO and the African Development Bank). It led to the creation of new drought-resistant and high-yield rice for Africa, and is an illustration of the potential of triangular cooperation for future consideration. Other important partners in South–South cooperation for agricultural development in Africa are the United States and the United Nations System. Interregional initiatives to finance agriculture development projects, such as the IBSA fund referred to earlier, have proved extremely effective in strengthening South–South cooperation.

**Box 7. FAO support for South–South cooperation**

FAO organizes special South–South cooperation (SSC) agreements so that technicians and experts from emerging developing countries can work directly with farmers in host countries, sharing their knowledge and skills. As of mid-2007, 39 agreements had been signed, the most recent of which involved Gabon and China (January 2007). Over 1,400 experts and technicians had worked in the field on SPFS, NPFS and RPFS projects. FAO is committed to making SSC a key component of its SPFS activities. In 2006, FAO entered into a strategic alliance with the Government of China to deploy an additional 3,000 SSC experts and technicians to national and regional food security programmes. An agreement with China was signed in May 2006.

In mid-2007, similar arrangements were at an advanced stage of discussion with the Government of India. Providing this level of expertise will strengthen the role and impact of SSC support to NPFS and RPFS, in terms of an increased number of experts and technicians and greater technical coverage, and is expected to lead to rapid improvements to the livelihood of small-scale rural producers.

38. South–South and triangular cooperation in agriculture results in a win-win situation. The interaction between countries with similar agro-ecological systems, amplified by the support of an even greater number of actors, creates a unique potential for improving coordination and sharing experiences, avoiding the replication of techniques that did not produce results in other countries and benefiting all parties in the process. It is potentially a win-win game for all the stakeholders involved, including the farmers, the rural community and the economies of both the recipient and the donor countries. This is true for the latter not only because of the direct benefits resulting from the project, but also because of the learning experiences arising from these new types of cooperation, which in turn create opportunities to reshape the future of aid, making it more effective and ensuring a better return on the efforts involved.

## **VI. Opportunities for South–South trade and investment in agriculture**

### **A. The search for dynamic products**

39. In the past decade, the demand for food in a large number of developing countries has increased at a faster rate than in previous periods, due to population increase, a dynamic rise in disposable income, or both. Reflecting this strong demand, trade in agricultural products, especially food, was one of the most dynamic growth sectors in South–South trade. This was particularly true of Africa. But the growth in food exports has been especially dynamic in trade with neighbouring countries, and in most cases, the products that are traded in this context are quite different from the traditional set of cash crops exported to developed countries. They include meat/fishery/dairy products and vegetables, which suggests there has been some improvement in trade facilities (e.g. refrigerating containers, warehouses and transport networks).

40. Regional and subregional integration agreements have helped foster and sustain such trade, which could be further enhanced through promoting regional market development by reducing/removing tariffs and non-tariff barriers. In this context, it is particularly important to have harmonization or mutual recognition of standards, transparent regulations and procedures in agriculture and agricultural trade, and readily accessible market information. It is equally important to develop regional infrastructure in logistics, including roads, rail, flights and shipping, as well as institutional arrangements (i.e. testing laboratories, research and academic training institutions, certification bodies and accreditation institutions).

41. The main question here is: What policy measures can enable developing countries, particularly poor economies, to make the best of opportunities for stable and sustainable growth in agricultural trade? The following are three areas in which such measures could be formulated:

#### **Market access and entry conditions:**

(a) How different are the market access and entry conditions (tariffs and non-tariff barriers) among different segments of agricultural products, e.g. staple crops;

vegetables/fruits and meat/fishery/dairy; fats and oils; and cash crops (tea, coffee, cocoa)? How can regional trade agreements improve on these conditions?

(b) More processed agricultural products are traded in South–South trade than in South–North trade. What are the major factors behind this? How can developing countries take advantage and strengthen their productive capacity in food processing and marketing?

(c) Can South–South trade in food help developing countries boost their collective capacity to improve product quality (safety) standards, e.g. through mutual recognition of standards and regulation, and through the exchange of knowledge and expertise between trading partners?

#### **Trade finance and trade facilitation:**

(a) Do adequate facilities exist for trade finance in food and agriculture exports? Policies and institutions for South–South trade financing are still in their formative stages. What can be done to improve the situation? What services-related measures can be taken to improve agricultural production and trade in regional and subregional contexts?

(b) What are the areas in trade logistics in greatest need of support, bearing in mind that these areas may be quite different depending on the type of agricultural products?

(c) How can such needs be translated into public as well as private investment, including through triangular cooperation?

## **B. The role of regional production networks**

42. Despite the dominance of large transnational corporations (TNCs) from the North at all stages of the agrifood system of key products, the recent emergence of large food corporations from such developing countries as China, Brazil and India has given policymakers from these countries a greater say in shaping their food production, including moving into higher value- added goods and processing activities. Some of these firms have become international in their own right, providing other developing countries with more choices and some room to bargain more effectively in this sector over issues of price, standard-setting, technology transfer and so forth. However, the food price rises of 2007 and 2008 have sharpened criticism of the dominant role of global firms and led to major policy shifts. Investments by large TNCs, including from emerging economies, in vast agricultural projects in Asia, Africa and Latin America aimed at exports to the domestic market at home, point to the adoption of an alternative strategy for ensuring food security that may eventually challenge the hegemony of the global firms. Such a strategy, however, is not without its risks; the hostile reactions in Africa to similar investments serve as a warning.

43. These larger producers may also be well placed to develop strong regional networks. Regional value chains have the potential of expanding markets by providing incentives for private investors to make long-term investments in agro-processing and agribusiness. They also provide a context for governments to jointly address institutional and other constraints to regional investment and trade in commodities. Regionally integrated value chains could also be important for expanding markets, both for inputs and outputs, including for smallholder farmers who are often at a disadvantage in terms of accessing these markets. Such integration could create the scope to exploit economies of scale and improve access to new technologies and complementary services.

44. Regional value chains could also provide incentives for product and process upgrading. With expanding markets, there will be a need for improved or differentiated commodities with higher value. With established and reliable vertical arrangements

between agricultural producers and retailers along the value chain, there would be greater reliance on forward purchasing contracts and less on spot market transactions. This would lead to greater price stability for both suppliers and consumers. Regional procurement arrangements offer a number of cost-saving opportunities to firms, including reduced coordination costs, less inventory management, and savings in logistical and other transaction costs.

45. Although the exercise of market power in supply chains could threaten the economic survival of smallholder producers, supply chains have the potential of involving more smallholder farmers in downstream activities such as processing and marketing. In addition, competition in the chain could result in better returns for smallholder farmers and could also lead to higher-quality outputs. Process upgrading could lead to competitive pricing of commodities as well, since technological improvements reduce the costs of transforming and delivering products.

46. Enabling smallholders to participate, however, is likely to require coordination at the regional level in order to improve the quality and safety of products, harmonize standards and ensure an adequate flow of information to potential value-chain participants.

47. The Comprehensive African Agriculture Development Programme (CAADP) framework is particularly pertinent here, in that it was established (in 2003) under the New Partnership for Africa's Development (NEPAD) framework and is being implemented through the African Union while utilizing regional structures in the regional economic communities to facilitate the creation of a common African food market in strategic commodities. The CAADP could eventually facilitate the emergence of transnational agribusinesses along horizontal and vertical value chains of the various strategic commodities.

## **VII. The way forward**

48. Since the global food crisis in 2008, the issue of agriculture has moved to the forefront of the development agenda and is much in the headlines because of the rush by large TNCs and sovereign wealth funds to acquire land in developing countries for food production. Most of the commentary concerns the failure of agriculture in many low-income countries to serve as an engine of development and poverty reduction. But the experiences of developing countries are not all failures. As shown above, there are also many success stories involving the contribution of agriculture to sustainable economic growth, poverty reduction and food security.

49. One of the lessons of the recent global food crisis is that no country, however small and open, can afford to neglect domestic food production, and that all countries must ensure at least some domestic supplies if they are to avoid getting caught in a vortex of price volatility that can dramatically affect national food security. The international community is beginning to address these issues. The United Nations has established the Secretary-General's High-Level Task Force on the Global Food Security Crisis comprising 22 United Nations bodies, with the aims of coordinating support for in-country action to improve food and nutrition security; mobilizing investment to support urgently needed actions and longer-term national and regional plans for food and nutrition security; galvanizing the strategic engagement of multiple stakeholders in concerted and sustained efforts to improve food security through partnering at local, national, regional and global levels; and tracking the efforts of the international community as it makes commitments for food and nutrition security, and examining progress towards the realization of the CFA outcomes.

50. A high-level meeting entitled Food Security for All, hosted by the Spanish Government in January 2009, gave its backing to the document entitled "The Madrid

Process: Towards an Inclusive Global Partnership on Agriculture and Food Security”, which outlined a multi-stakeholder effort to strengthen agriculture in the fight against hunger at the local and global levels.

51. The International Assessment of Agricultural Knowledge, Science and Technology for Development (2008), also with strong intergovernmental backing, concluded that the needs and potential of small-scale farms in diverse ecosystems required urgent attention from the international community, particularly in light of ongoing changes to the climate. This does not, however, exclude an important role for trade in agricultural products, particularly where this is linked to scale economies, fast-paced capital formation and strong linkages to the non-rural local economy.

52. With increasing South–South economic cooperation, there are many opportunities for other developing countries to benefit from the experiences of their more successful counterparts through enhanced trade and investment links and knowledge transfer. The expert meeting provides a timely opportunity to address how South–South and triangular cooperation can help developing countries, particularly low-income and food-deficit economies, to develop sustainable agricultural production, which could in turn enable them to attain food security. Participants may address how South–South and triangular cooperation can help poor economies reverse the decline in agricultural investment, investment in rural infrastructure, and agricultural research and development.

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