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ENABLING SMALL COMMODITY PRODUCERS AND PROCESSORS IN DEVELOPING COUNTRIES TO REACH GLOBAL MARKETS

Note by the UNCTAD secretariat[*]

Executive summary

The objective of the paper is to define the problem of exclusion from global markets and to assess policy options and models for integrating small agricultural producers in supply chains in a sustainable manner.

The agricultural situation in poor countries has been changing rapidly in recent years, with structural reform of agricultural sectors and the growth of international supply chains which concentrate power in a relatively small group of large purchasers, including supermarket chains and other large agrifood corporations. As the supply chains to which smallholder producers were previously accustomed have largely ceased to operate, integration into these new supply chains has become a critical imperative.

The paper identifies five supply chain elements that are necessary to overcome market and institutional weaknesses: infrastructure and logistics, commodity marketing information, the capacity to meet market requirements, support and ancillary services and finance. It proceeds to review models of organized supply chains that have been successful in integrating small producers into new supply chains: outgrower schemes, supermarket and off-taker-driven supply chains, supply chains facilitated by financial institutions, commodity exchanges and non-profit organizations.

[*] This document was submitted on the above-mentioned date as a result of processing delays.

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I. INTRODUCTION: RURAL POVERTY, COMMODITY PRODUCTION AND TRADE

1. The failure to tackle the links between commodity production and trade and extreme poverty has been described as the major "sin of omission" in the current approach to poverty reduction.[1] According to the International Fund for Agricultural Development (IFAD), 75 per cent of the 1.2 billion people living on less than $1 a day live and work in rural areas.[2] Moreover, about half of the world's hungry people are from smallholder farming communities, another 20 per cent are rural landless and about 10 per cent live in communities whose livelihoods depend on herding, fishing or forest resources. Smallholder producers play a major role in rural development. The FAO considers that:

> "Improving the productivity of small farmers has a ripple effect that spreads benefits throughout poor rural communities. When small farmers have more money to spend, they tend to spend it locally on labour-intensive goods and services that come from the rural non-farm sector, boosting the incomes of the rural population as a whole, including landless labourers who make up a large part of the population of the poor and hungry in many countries."[3]

2. Moreover, the agricultural situation in poor countries has been changing rapidly in recent years. With the liberalization of agricultural sectors and the withdrawal of government from many agricultural marketing functions, the supply chains to which smallholder producers were accustomed have largely ceased to operate. As a result, access to markets is much diminished – along with access to the ancillary services that parastatal marketing boards used to provide – and thus integration into new supply chains has become a critical imperative.

3. However, significant obstacles are confronted when addressing this challenge. In addition to the existing supply-side constraints and infrastructural deficiencies that hinder smallholder producers in developing countries, the growth of international supply chains which concentrate power in a relatively small group of large purchasers has made the future of smallholder commodity producers appear increasingly uncertain. Furthermore, international supermarket chains are now expanding with extraordinary rapidity in the developing world, with their share of retail food sales in both South America and East Asia "ballooning" from less than 20 per cent to more than 50 per cent between 1992 and 2002.[4] As a result, suppliers are faced with ever stricter contractual requirements and increasing costs of compliance. In this changing context, smallholder farmers may face marginalisation for several reasons, including:[5]

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[1] UNCTAD (2004), The Least Developed Countries Report 2004: Linking International Trade with Poverty Reduction (New York and Geneva), p. 234.

[2] International Fund for Agricultural Development, *Rural Poverty Report 2001: The challenge of ending rural poverty* (Rome: IFAD, 2001), available on the internet in August 2005 at www.ifad.org/poverty/index.htm, p.1

[3] Food and Agriculture Organization (2004), *The State of Agricultural Commodity Markets 2004*, p. 32.

[4] Food and Agriculture Organization (2004), *The State of Food Insecurity in the World 2004*, p. 20.

[5] As set out by Ashley, C. and S. Maxwell, "Rethinking Rural Development," in C. Ashley and S. Maxwell (eds.), *Rethinking Rural Development*, theme issue of *Development Policy Review*, Vol. 19 No. 4 (London: Overseas Development Institute, 2001), p. 407.

- small farmers are more likely to grow low-value staples for self-sufficiency;
- the skills required to manage new technologies and the necessary investments are beyond the reach of many small farmers;
- small farmers pay more for inputs and receive less for outputs than large farms.

II. SUPPLY CHAIN ELEMENTS FOR OVERCOMING MARKET AND INSTITUTIONAL WEAKNESSES

A. Infrastructure and logistics

4. The absence of adequate infrastructure is a major obstacle to smallholder producers since it increases transaction costs and introduces risks, particularly with respect to producers' ability to meet delivery commitments. Four infrastructural elements are identified as critical to smallholder production and integration into supply chains: transportation, storage, communication and irrigation.

5. Exorbitant transportation costs have a significant impact on competitiveness. For example, it is not unusual in Africa for as much as 40 per cent of national export earnings to be diverted into international transport services. This may be exacerbated for smallholder producers through the additional transportation costs and time required at the local level as a result of deficiencies in the network of rural feeder roads.

6. Lack of adequate storage facilities can also be a major source of inefficiency and. In the United Republic of Tanzania, transport costs account for 60 per cent of the total marketing cost for maize, and losses due to inadequate storage facilities are estimated to be 30-40 per cent of production.[6] Absence of communications results in segmented rural markets and poor information flow that adversely affect the performance of rural markets.

7. Given fluctuations in annual and seasonal rainfall patterns in many developing countries, more widespread use of irrigation could have an important positive effect on agricultural productivity. While large-scale, capital and management intensive schemes have often led to disappointing results, a stronger emphasis on small-scale, easy-to-manage irrigation schemes might lead to larger increases in productivity and more directly benefit smallholder farmers.

8. In view of the size of capital investments, infrastructure is a major target for financial assistance and has been identified as such in the context of discussions on the Aid for Trade initiative.

B. Commodity information: bridging the rural knowledge gap

9. Small farmers in developing countries often suffer from lack of information on market conditions at different locations or different points in the marketing chain. Farmers are frequently not aware of price differentials. Nor do they usually have access to timely and accurate information on quantity traded and quality requirements. Such information deficits can lead to economically inefficient and socially unfair outcomes. For example, prices received by farmers for the sale of their goods are in some cases significantly less than the

[6] UNCTAD (2001),"Potential and constraints of the agricultural commodities in the United Republic of Tanzania", UNCTAD/Common Fund for Commodities Workshop, Geneva, 22-23 March.

price they could have achieved if they had transported them themselves to more distant and lucrative markets, even after taking into account the cost of transport.

10. In a negotiating context characterized by imperfect and asymmetric information, market knowledge implies market power, and asymmetry in accessing market information becomes a key factor behind inequitable income distribution.

> "In a market economy with imperfect and asymmetric information and incomplete markets – which is to say, every market economy – the reason that Adam Smith's invisible hand is invisible is that it does not exist. Economies are not efficient on their own. This recognition inevitably leads to the conclusion that there is a potentially significant role for government."
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> Joseph E. Stiglitz, *Foreign Affairs*, November/December 2005.

11. Against this background, the establishment of market information services (MIS) represents a viable policy option to increase transparency and redress information asymmetries in commodity markets. MIS has been defined as "A service, usually operated by the public sector, which involves the collection on a regular basis of information on prices and, in some cases, quantities of widely traded agricultural products from rural assembly markets, wholesale and retail markets, as appropriate, and dissemination of this information on a timely and regular basis through various media to farmers, traders, government officials, policymakers and others, including consumers."[7]

12. MIS can be operated by the public sector, with emphasis typically on market information for farmers, although market information produced by MIS may also be beneficial to consumers and traders and to policymakers. In other circumstances, privately-developed and managed MIS, whether driven by a commercial organization or a producer co-operative, may be advantageous in providing the users with greater control over, or say in, its structure and content.

> **UNCTAD's contribution to market transparency and economic intelligence**
>
> UNCTAD is responsible for pioneering work connecting market analysis with tools to gather and disseminate strategic information and empower stakeholders along commodity chains. It emerged as a key agency providing commodity information, market intelligence and knowledge management. UNCTAD's programme, largely financed by contributions from the Governments of France and Italy, is based on five building blocks:
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> The ***Infocomm*** portal provides up-to-date information on major commodities. Infocomm is targeted mainly towards the international community (www.unctad.org/infocomm).
>
> ***Infoshare*** is a tool which allows interested partners to collect information (e.g. prices, intermediate costs such as inputs, local transportation, storage and inspection, national quality standards, list of exporters, interest rates, and many others), to create "intelligent information" (build statistical analysis, identify market failure, monitor market trends) and to disseminate the information to interested parties. Infoshare is targeted mainly at national or regional actors.
>
> ***Statistical publications and databases*** providing an overview of the development of commodity trade and production.

[7] Shepherd, Schalke, *The Indonesian Horticultural Marketing Information Service*, SM Occasional Paper No. 8, FAO, Rome, 1995.

The ***World Commodity Survey*** is a recurrent publication providing unique and practical information on markets, structures and innovations for more than 80 commodities.

Innovative e-products and tool kits provide in-depth analysis of specific commodity sectors.

13. Another development is the opportunity to set up communal services drawing on synergies and complementarities among private and public subjects, and among stakeholders along the supply chain. Sharing common information in a joint platform enables producers to earn insights from other stakeholders downstream in the supply chain. Communal platforms may connect farmer organizations directly with importers or even processing companies and retailers, and direct exchange among them may help to identify local varieties/qualities with the potential to serve profitable market niches. In the long run, various spillover effects can be derived, such as the promotion of geographical indications to identify the origin and quality of products.

14. It is also necessary to acknowledge the social and political ramifications of MIS. There is the risk that a MIS could engender new dynamics of inclusion and exclusion, especially where commercial farmers co-exist alongside subsistence farmers selling occasional surpluses. The latter may not be reached by the service and become further marginalized.

15. Capacity-building for MIS is in itself is not sufficient to improve market transparency and increase the bargaining power of farmers. The economic intelligence function that was formerly carried out by marketing boards or government agencies has also disappeared with the withdrawal of these agencies. Farmers must therefore have the capacity to analyse the information provided in order to generate their own marketing decisions. This need can be met either through educating farmers or alternatively through the direct provision of analysed information in a ready-to-use form. In this regard, economic intelligence must become a new capacity that commodity stakeholders have to build, be they public agencies, farmers' associations or local entrepreneurs.

C. Meeting market requirements

16. The application of sanitary and phytosanitary standards (SPS), as well as other safety standards, is an important dimension in the development and expansion of world trade in high-value added perishable products such as horticultural and fish products. It is especially important if such standards enable the effective management of risks associated with the spread of plant and animal pests and disease, and the incidence of microbial pathogens or contaminants in food. In recent years, many such standards have been tightened or extended into new areas, in the wake of a spate of food scares in developed countries and increased scientific knowledge and public concerns about the environment. The private sector has also reacted to consumer concerns and official requirements by developing its own sets of standards. While some efforts have been made to harmonize these standards at an industrial, national, regional or international level, the overall trend is toward a proliferation of standards and an increasingly complex trading and regulatory environment.

UNCTAD's contribution to enabling producers meet market entry requirements

UNCTAD's SPS project is designed to enable smallholder farmers to supply international markets. The project has involved a series of case studies covering selected commodity supply chains in three selected African LDCs (UNCTAD (2005) "Costs of agrifood safety and SPS compliance in the United Republic of Tanzania, Mozambique and Guinea Tropical Fruits", UNCTAD/DITC/COM/ 2005/2). The commodity chains are those related to banana, citrus, grapefruit, pineapple and potato. They were chosen because the products involved have posed SPS challenges for the selected countries.

Countries were selected to capture varied market orientations, and a range of experiences. The three selected countries – Guinea, Mozambique and Tanzania – expressed serious interest in export markets, but export potential has been constrained since most smallholder farmer production techniques in these countries do not comply with international SPS requirements.

For that reason, a collaborative framework was developed and implemented in Guinea to improve small farmer access to export markets through attainment of group EUREPGAP certification.

To date, the project has organized pilot farms that will be ready for EUREPGAP certification by the end of 2006; formed a viable exporting cooperative; trained producers and inspectors on EUREPGAP protocols; strengthened the capacity of laboratories; and provided capacity building activities in SPS awareness and other retailer's agrifood safety standards, pest risk assessment, and post-harvest handling techniques.

17. At the same time, agrifood markets in developing countries are undergoing profound changes fuelled by economic development, increases in per capita incomes, changing technology and urbanization. Higher incomes and increasing numbers of women in the labour force mean greater demand for high-value commodities, processed products, and pre-prepared foods. Commodities are becoming differentiated products because customers are increasingly willing to pay for product attributes that include convenience, taste, variety and high quality. Urbanization increases the scope for economies of scale in food marketing and distribution, while reductions in transaction costs due to improvement in transport and telecommunications increase the size of the market for distributors and retailers. The result is an impressive increase in the volume of food marketing handled by large distribution networks such as supermarkets, but also substantial organizational and institutional changes throughout the food marketing chain.[8] Such changes include the setting of private grades and standards for food quality and safety.[9] Subcontracting for products of specified quality is likely to proliferate as a form of integration between retail food chains and producers.

18. Furthermore, the structural changes in the agrifood system have raised the costs of compliance with SPS and retailer's agrifood safety standards which can inhibit smallholder farmer entry into competitive markets. It is a challenge for them to meet market entry requirements and to deal with distribution systems characterized by a large number of rules and regulations for each buyer.

19. The principal challenge confronting governments and the international development community is to ensure that smallholder farmers and rural poor can meet the growing entry requirements of international markets. There are a number of ways in which market entry by smallholder farmers can be addressed. These include developing producers' associations and

[8] See Dolan (2001), "Horticulture Commodity Chains: The impact of the UK Market on the African fresh vegetable industry", *Working Paper* No. 96, Institute for Development Studies.

[9] See Berdegué (2002), "The rapid rise of supermarkets in Latin America: Challenges and opportunities for development", *Development Policy Review* 20 (4):317-34.

linkages with global supply chains to facilitate exports of commodities produced by smallholder farmers. In addition to technical assistance targeting small farmers, it is also important that the interests and capabilities of these farmers inform the standard-setting process, both in the bodies establishing standards under the SPS Agreement and those dealing with unofficial standards.

D. Provision and coordination of support services

20. Small-scale producers require access to a number of support services, such as provision of seeds, fertilizer and other inputs, advice and extension services, logistics services and quality control. Many of these services were in the past provided by state or parastatal institutions, including marketing boards. The dismantling of such institutions was carried out in the expectation that the private sector would fill the resulting gap and do it more efficiently. However, in most cases the private sector has proved unable to do so for a variety of reasons, including that national markets are often too small or insufficiently organized for private sector service providers to realize economies of scale.

21. Buyers may be suppliers of support services, as is often the case in contract farming, where the buyer provides seeds and other inputs. Contract farming tends to promote productivity increases and reduce farmers' exposure to risk, and has been successful in many countries, particularly for labour intensive export crops, such as vegetables. However, it is not necessarily the best alternative for all crops or for all farmers. Another way of facilitating the effective distribution of support services is to exploit economies of scale through local specialization. Under the "one village, one product" scheme, which originated in Japan and appears to have been successfully applied in Malawi, a village specializes in growing one crop for sale, thereby making possible savings in purchasing inputs and accessing services such as irrigation expertise.

22. Nevertheless, governments are in many cases the most effective providers of support services, not least because they are in a position to establish national networks for service delivery. Allocating the necessary resources – which may come from a more concerted effort to provide financing for rural development – for the re-establishment of networks for delivery of extension services and necessary inputs is therefore a matter of high priority. These networks can also serve as transmission mechanisms for improved technologies.

E. Financing small farmers

23. Access to finance is a major concern for farmers – especially small farmers – in developing countries. Without finance, producers face difficulties to meet market demand, remain competitive, and increase their share in the final value of their products. However, financiers have typically found it risky and costly to provide financing to rural areas using standard methods of lending based on the borrower's credit risk.

24. Supply chain financing[10] represents a mechanism for the provision of financing to farmers which brings lower risk and enhanced profitability to the financier. With the emerging trend in several developing countries of farmers, processors and traders integrating into global supply chains, lenders can provide members of the supply chain (farmers, processors, service providers), including infrastructure providers, with credit on the basis of

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[10] Microcredit schemes may be integrated into supply chain finance. However, such schemes are usually too limited in the size and duration of loans to meet agricultural financing needs.

their place in the supply chain. Relationships between actors in the commodity chain would facilitate financial flows either directly (from one supply chain actor to another or indirectly (by making the potential client more attractive to financiers).[11]

25. Supply chain financing allows financiers to group credit demand, secure transactions and ensure reimbursement through off-takers in the chain, rather than through a multitude of small farmers. These off-takers may include processors, traders or end-users, and/or may be structured around the supply of agricultural inputs and equipment. The incentives for farmers to reimburse financiers through their supply arrangements are strong, and the risks that the financier runs are basically limited to crop risks, i.e. the risk that the farmer neither produces enough nor produces the required quality, risks which can be mitigated by the banks' use of new risk management tools.

26. There are a number of financing models that are available:

- On-lending/trader's credit: large traders or processors give advances to farmers or to smaller traders which in turn give advances to farmers, who are supposed to sell to them.
- Leasing of agricultural equipment.
- Contract farming and similar interlinked schemes provide farmers with an integrated package of advice, inputs, credit, marketing services, agricultural equipment, quality control and information. The credit may come from the input provider or offtaker, or from a bank associated with the contract farming scheme, with the bank assuming the risk of default. If the funds come from the input provider or the offtaker, they normally refinance through their bank credit lines.
- Warehouse receipt finance where banks take collateral over goods as these move through the supply chain, rather than just at one point or as the goods move from one stage to the next. For example, the bank can start financing the goods once they enter an up-country warehouse and continue financing as the goods are transported and processed, and then enter an export warehouse, are exported and transferred to a vessel, transported to the importing country and then again stored. In doing so, banks normally work through specialized collateral managers and agents who take responsibility for controlling commodity stocks and flows.[12]

III. A REVIEW OF SUPPLY CHAIN MODELS AND SUCCESS STORIES IN INTEGRATING SMALL PRODUCERS

A. Outgrower schemes

27. According to UNCTAD 2002,[13] an outgrower scheme is one of a number of models of productive organization in agriculture that fall under the broader category of 'contract farming'. The paper's definition of an outgrower scheme brings together four elements: a central facility surrounded by growers who produce on their own land under contract; the provision of inputs and technical assistance to growers; guarantees to purchase the growers'

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[11] See Rural and Agricultural Finance Initiative (RAFI) Notes, *Value Chain Finance*, Issue 2.
[12] See Report of Expert Meeting on Financing Commodity-based Trade and Development: Innovative Financing Mechanisms, Geneva, 16-17 November 2004, prepared by the UNCTAD secretariat.
[13] *Farmers and farmers' associations in developing countries and their use of modern financial instruments*, UNCTAD/ITCD/COM/35, 2002, pp. 10-11

crop subject to meeting predefined standards; and growers typically receiving a pre-agreed percentage of the final sales price of their product, thus leaving them still fully exposed to price risk. Outgrower schemes are commonly organized around the factory of a processor, though they may also be constituted by other off-takers (including traders, exporters or end users), as well as input suppliers, governments or government agencies and non-governmental organizations.

> "Increases in agricultural production and productivity…[and] … synergies that develop between sugarcane outgrowers (individual farmers), the outgrowers' association and the processing factory (the buyer of farmers' produce) are the keys to the success of the development effort and thus the possibilities of reducing poverty".
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> *Øygard, Borchgrevink, Lazaro and Temo (2002).*

28. A further dimension that often runs in parallel with an outgrower scheme is the development of outgrower cooperatives or associations, sometimes spurred by the processor, sometimes by a rural development agency or an NGO, and sometimes on the initiative of the outgrower community itself. An example is the Mtibwa Outgrowers Association (MOA)[14] with reference to small-scale sugarcane production in Tanzania. MOA's aims are "advocacy in cane production and business, fair play in price regulations, contractual agreement, payment and sustainable development of cane production, credits, input supply, extension services and training". More recently, it has begun to facilitate acquisition of grants and loans from donor organizations. MOA has also established the Mtibwa Outgrowers Transport Association[15] and a Savings and Credit Cooperative Society, known as MOA SACCOS. Furthermore, it has played a high-profile lobbying role which culminated successfully with the passing of the Sugar Industry Act in 2001. Among other things, the Act seeks to "promote the development of smallholder sugarcane growers"; "to create and promote a competitive environment conducive to fair play among stakeholders in the sugar industry"; and "to monitor the execution of contracts and marketing arrangements between sugarcane outgrowers and sugar manufacturers or other bodies related to the sugar sector and reconcile the parties, when disputes arise."[16] These moves can be understood as solutions taken by the outgrower association to overcome obstacles to the effective integration of small producers into supply chains – including in transportation and logistics, in finance, and in the legal and regulatory framework.

29. Significant variations exist in the structures and objectives of different outgrower schemes in different locations. A report on outgrower schemes in forestry across twelve countries in Latin America, Africa and the Asia-Pacific region[17] identifies diversity across outgrower schemes in four dimensions: the length of partnerships between grower and processor; the share and nature of the risks and benefits pertaining to the grower; the extent to which growers act individually or as a collective; and the extent to which inputs or technical support are provided by processor to grower. Accordingly, there is significant variation in the

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[14] See Ragnar Øygard, Axel Borchgrevink, Evelyne Lazaro and Anna Temo (2002), "Poverty-reducing Effects of Agricultural Development in Tanzania", *Noragric Report No. 10*, December.

[15] As reported in the annual report of the United States - African Development Foundation 2004 (dated February 2005).

[16] Part II, Clause 4, Sections (c), (d), and (m), Sugar Industry Act of 2001, Tanzania, available at: http://www.agriculture.go.tz/Regulations/The%20Sugar%20Industry%20Act,%202001.pdf.

[17] FAO (2001), "Forestry Outgrower Schemes: A Global View", report based on the work of D. Race and H. Desmond, Forest Plantation Thematic Papers, FAO *Forestry Department Working Paper FP/11*, March.

manner with which an outgrower scheme can facilitate small producers to integrate into regional, national or global supply chains.

30. The impact on small producers made by outgrower schemes, and contract farming more generally, has featured prominently in the debate about the form that agricultural development should take in the developing world. The obvious appeal is the link between the small producers participating in the outgrower scheme and the guaranteed buyer. There is also the potential for further benefits, including the supply of inputs, equipment, know-how, finance, information and/or other services to upgrade small producer performance and productivity.

31. Yet a risk with outgrower schemes arises from the nature of the business relationship formed between the processor and the outgrowers in which the latter depend on the former as the monopsony purchaser of their product. Firstly, the outgrowers face market risk posed by a reduction in demand from the buyer. Secondly, there is the risk that the processor will abuse its market position to the detriment of the outgrowers. For example, the MOA case study reveals that outgrowers sometimes experienced late payments and denial of harvesting services from the sugar estate. Thirdly, as Key and Runsten (1999) point out,[18] with the investment of fixed resources and new cropping patterns to meet the buyer's requirements, exit from the scheme becomes constrained further reducing the producer's bargaining power. Furthermore, attention must be paid to the impact of outgrowers schemes upon small producers not included in the scheme: Are local markets being disrupted? Is the access to inputs, finance, logistics and extension services being affected?

32. Several mitigating actions can be taken to combat these risks. Establishing an association representing outgrowers is perhaps the most important major step, especially if it not only represents outgrower interests in negotiations with the processor, but also provides other critical enabling services such as savings and credit facilities. Additionally, an outgrower association that acts collectively on behalf of small producers can reduce the high transaction costs that may put off processors or other off-takers from engaging in such schemes. Another step is to foster diversification among outgrowers and their families, especially the development of non-farm sources of income to reduce dependence on the single buyer. Governments can ensure that a legal framework is in place which enshrines the rights and obligations of all parties to outgrower agreements, backed by regulatory powers to ensure compliance.

B. Supermarket / off-taker driven supply chains

33. Supermarkets have now assumed a pivotal role in the agricultural sector. However, products do not only flow from small producers in developing regions to supermarkets situated in OECD countries, but also to those in developing regions, including both national, 'indigenous' supermarket chains and local subsidiaries of multinational retailers. For example, research conducted in a study by Reardon and Berdegué (2002)[19] suggests that: "… supermarkets in Latin America buy 2.5 times more fruits and vegetables from local producers than all the exports of produce from Latin America to the rest of the world."

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[18] Nigel Key and David Runsten (1999), "Contract Farming, Smallholders and Rural Development in Latin America: The Organization of Agroprocessing Firms and the Scale of Outgrower Production", *World Development*, Vol. 27, No. 2, pp. 381-401 (1999).

[19] Thomas Reardon and Julio Berdegué (2002), "The rapid rise of supermarkets in Latin America: Challenges and opportunities for development", *Development Policy Review*, Vol. 20, No. 4.

34. As supermarkets grow, Reardon 2004[20] observes how operational expansion tends to stimulate six structural shifts in the *modus operandi* of supermarket procurement: centralized procurement systems replacing per-store procurement; cross-border sourcing replacing a focus that is local or national; use of specialized wholesalers able to ensure product quality, safety and consistency, replacing involvement in traditional wholesale markets; use of global logistics firms to manage multinational operations; development of preferred supplier schemes replacing spot market activity; and adoption of private quality standards. Taken as a whole, these changes have made a significant impact on agricultural supply chains – on cropping patterns, on production technologies and methodologies employed, on investment and financing requirements for producers, and on the nature of the relationship between producer and off-taker.

35. It has been argued that supermarkets' participation in agricultural supply chains has been to the disadvantage of smaller producers. Several studies claim that that supermarket intervention has led to a shift towards larger producers, especially agribusiness this has been, driven by the perception that they have the capacity to better meet supermarkets' quantity and quality requirements.[21] Where supermarkets do contract directly with small producers in developing countries, the same type of critiques are aired with regard to outgrower schemes and contract farming – namely over-dependence, abuse of position, and difficulty of exit. A third category of criticism relates to the proliferation and imposition of standards on the small producer.

36. On the other hand, other studies reveal methods by which supermarkets are structuring their procurement to enable the advantageous participation of small producers in supermarket-driven supply chains. Two examples are briefly explored.

37. The first example highlights a structure in which small producers in Madagascar are connected via an exporter to European supermarket chains. Minten *et al.* (2005)[22] conducted a study of 10,000 small-scale farmers in the highlands of Madagascar that produce vegetables – mainly French beans – for seven supermarket chains in France, Belgium and the Netherlands. Each farmer agrees a standardized micro-contract with a Madagascan exporter which details input, quality and timing requirements, and specifies price. Assistance is provided by the exporters' extensive network of extension personnel, including guidance on production management and provision of prefinanced inputs (seeds, fertilizer and pesticides) that must be later paid back in kind. Ongoing monitoring to ensure fulfilment of the supermarkets' quality requirements is provided by the exporter, as well as private auditors hired by the supermarket to ensure that standards are met. The authors' empirical survey of the impact on farmer welfare found that "small farmers that participate in these contracts have higher welfare, more income stability and shorter lean periods. We also find significant

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[20] Thomas Reardon (2004), " The rapid rise of supermarkets in developing regions: implications for agricultural development", paper presented at the international conference 'Supermarkets and Agricultural Development in China: Opportunities and Challenges', Shanghai, May, available at:
http://cati.csufresno.edu/Cab/rese/ShanghaiConf/Tom%20Reardon/Tom%20Reardon-paper.doc

[21] See, for example, John Humphrey, Neil McCulloch and Masako Ota (2004), "The impact of European market changes on employment in the Kenyan horticulture sector", *Journal of International Development*, Vol. 16 No. 1, and Peter Gibbon (2003), "Value-chain governance, public regulation and entry barriers in the global fresh fruit and vegetable chain into the EU", *Development Policy Review*, Vol. 21.

[22] Bart Minten, Lalaina Randrianarison and Johan Swinnen (2005), " Supermarkets, international trade and farmers in developing countries: Evidence from Madagascar", *SAGA Working Paper* (Strategies and Analysis for Growth and Access, a project of Cornell and Clark Atlanta Universities, funded by USAID), September.

effects on improved technology adoption, better resource management and spillovers on the productivity of the staple crop rice."

The *Caras do Brazil* project "(integrates) small-scale producers in a modern way, to supply well differentiated and high quality products… (with a) leader in the supermarket sector using its coordinating role to train producers and create a kind of hybrid of 'own-brand' and 'protected denomination of origin'."[23]

38. A second example is *Caras do Brazil* ('Faces of Brazil'), which is a scheme run by the Pão de Açúcar Group, the country's second largest supermarket chain.[24] The scheme is designed to incorporate into the supermarket's supply chain small producers whose activities promote environmental sustainability, cultural diversity and social inclusion, particularly among marginalized communities. Products include not only foodstuffs, but also beauty products and handicrafts. A two-phase process of incorporation ensures that only producers that meet the programme's objectives and adhere to a set of defined ethical practices are included and that producers are assisted to meet appropriate product quality, price and packaging standards. No specific quantity requirements are imposed, thereby enabling small producers to be included in the scheme. Further, reflecting the particular circumstances of the participants, small producers in the *Caras do Brazil* scheme are paid within 10 days, as opposed to a 30-day average for other suppliers.

39. In conclusion, supermarkets' increasing dominance over agricultural supply chains is now almost universally recognized, both in OECD countries and also across the developing world. Given this situation, the question is not whether small producers should participate in supermarket supply chains, but rather how they can do so in a manner that improves their livelihoods. What the examples detailed above hold in common is the realisation of mutual benefits for both parties: whilst the supermarket receives the right products at the right time at the right price and at the right quality, small producers not only have a ready purchaser for their produce but are actively assisted to upgrade production volume, techniques and/or standards. Clearly, safeguards must be in place to protect vulnerable producers in the face of unequal power relationships, but the opportunities for agricultural development should also be recognized.

C. Supply chains facilitated by trade and development financial institutions

40. Financiers may act as catalysts for the integration of players in the value chain because they understand that this helps farmers make more money, whilst mitigating their own risks in lending to the sector. A supply chain approach is one of the safest ways for banks to provide finance. Credits are based on the performance of the borrower in the chain, rather than on the borrower's risk profile. Commodity supply chain credit schemes promote risk sharing and joint accountability, thereby reducing lending risks.

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[23] As discussed in Walter Belik (2004), "Designing rural and agricultural development programs in the new era of Supermarkets: a Brazilian and Latin American perspective", paper presented at the international conference on "Supermarkets and Agricultural Development in China: Opportunities and Challenges", Shanghai, May 2004, available at: **http://cati.csufresno.edu/Cab/rese/ShanghaiConf/Walter%20BELIK/Walter%20Belik-paper.doc;** also see www.carsdobrasil.com.br .

[24] Belik, ibid.

41. Banks are diversifying their financing schemes to move beyond pure lending activities through partnering with members of the commodity supply chain. They are identifying relationships along the supply chain, mitigating constraints, exploiting opportunities for supply chain finance, and exploring how banks can participate in these relationships.

42. In creating supply chains, banks first identify a buyer and the farmers who can provide the crop, as well as seed companies who can supply farmers and then buy back the crops. Banks can even enter into sourcing and servicing agreements with such companies for providing loans. The companies producing farm inputs have the advantage of knowing the farmers. They are therefore familiar with the borrowers' profile, and can act as direct selling agents for banks. The agri-input companies provide the farmer with technical advice on best-suited cropping patterns and services, such as soil testing, land preparation and providing inputs required for the produce. In this context, the risks for the financiers are much lower and agricultural lending can become a profitable activity.

UNCTAD's contribution to commodity and supply chain finance

UNCTAD has been at the forefront of efforts to mainstream and promote innovative financing techniques and mechanisms that open up new horizons for the financing of commodity sector participants. UNCTAD activities targeted to both public and private sectors include:

- Building perspectives on broad trends in financing and pinpointing the implications for development of commodity sectors and the institutions that serve them.
- Advising on the structuring of financing mechanisms for specific commodities.
- Engaging in institution- and capacity-building to implement new commodity financing schemes.
- Organizing large awareness-raising and networking workshops and high-level conferences on financial techniques.
- Arranging tailored training programmes for banks and other financiers.

43. In India for instance, a new generation of banks, such as ICICI Bank, HDFC Bank and IDBI have devised supply chain solutions to agricultural finance which in turn have opened up new avenues of business for reaching out to farmers. While some banks have made direct investments in commodity exchanges, others have partnered with self-help groups and other agencies. Banks are also tying up with companies to provide other services to farmers, such as financing input supply and providing advisory services.

44. In a bid to make rural lending less risky, ICICI Bank has adopted strategies that focus on bringing together the supply chain players and farmers to ensure better prices for agricultural produce. Their financing approach entails building up relations with farmers, examining such details as soil quality, types of fertilisers and crops, providing sector linkages, and bringing together various parties on a common platform. ICICI is providing integrated supply chain solutions for the produce, cleaning, packaging, cold storage and exports of fruits such as grapes in Nasik and Sangli and apples in Himachal Pradesh. This has improved product quality, reduced cost and ensured economies of scale at the rural level. ICICI has also developed a low-cost ATM, with electronic loan cards pre-loaded with authorized loan amounts made available to farmers.

45. Lack of finance in the agricultural sector is a major hindrance for sustainable rural development and global integration. Among the key challenges to the provision of

agricultural and rural finance are high transaction costs, low yields, recovery concerns and thin spreads. The involvement of banks in enhancing existing commodity trade activities and facilitating new services can expand access to sustainable agricultural finance and increase the competitiveness of small producers, as well as a range of agricultural and agribusiness enterprises.

D. Commodity exchange-facilitated supply chains

46. The core function of a commodity exchange is to provide a market in which multiple buyers and sellers trade commodity-linked contracts on the basis of rules and procedures laid down by the exchange. In practice, the presence of an exchange stimulates a wide range of impacts whose effect is to bring discipline to the agricultural sector and facilitate the integration of supply chains.

47. Primarily, commodity exchanges offering spot trade act as a conduit for linking participants in the physical markets – whether producers, processors or off-takers – with trading partners. By concentrating trade in one place, the exchange reduces transaction costs as buyers and sellers benefit from savings in time and resources that would otherwise have been incurred in the search for a suitable counterparty. This has been one of the major imperatives driving recent efforts to establish a pan-African commodity exchange. A pan-African exchange would provide producers located in Africa's fragmented markets with an expanded market for their products and, by acting as a single procurement forum for international commodity purchasers, could become a gateway for the efficient supply of African commodities to world markets.

UNCTAD's contribution on commodity exchanges

Over the past 15 years, the UNCTAD secretariat has built up a solid record of providing support for the establishment and development of commodity exchanges and associated institutions (such as collateral managers and regulatory agencies) in developing countries and countries with economies in transition.

UNCTAD has provided direct technical assistance and advice both for creating new exchanges, and for improving the performance of existing ones (including assistance in designing new contracts), with involvement in initiatives in the Dominican Republic, Ghana, Kazakhstan, India, Indonesia, Malaysia, Nigeria, Russia, Sri Lanka, Turkey and Ukraine, as well as advising on and supporting the creation of the proposed Pan-African Commodities and Derivatives Exchange, a regional exchange for Africa.

48. Reinforcing this market creation effect is a market access effect. In many parts of the developing world, a new breed of commodity exchanges are proactively expanding market access – both to the exchange markets but also crucially to the exchange's pricing information. This will benefit producers otherwise disconnected from the market and vulnerable to receiving sub-optimal prices and conditions from better-informed intermediaries. An example is India, where the installation of price tickers in remote local markets means that "spreads between spot prices of commodities in local agricultural markets and commodity exchanges will soon shrink."[25] Such models are designed to bring marginalized commodity producers into the market and are made possible by advances in communications technology.

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[25] "Price tickers to come up in all *mandis* (local agricultural markets) soon", *Financial Express, India*, 27 August 2005.

49. A third impact that exchanges can make is to drive the adoption of quality standards. This is important in view of increasingly stringent crop quality and food safety requirements. By defining standards for the acceptance of products to be delivered to the exchange, and then instituting a rigorous grading procedure upon receipt of the physical good, the exchange forces producers to meet the requirements of the end users of the traded commodities.

50. A fourth impact of exchanges is to facilitate the provision of critical auxiliary services, such as warehousing and commodity finance. When an exchange drives the creation of a warehouse network to improve the efficiency of its delivery and collateral management processes, it enhances the transportation, storage and reserve management infrastructure for the traded commodities. An excellent example can be found in the Philippines where the National Food Authority has developed an electronic network combining exchange and warehousing functionalities.

51. Similarly, exchanges in Colombia and Venezuela have pioneered solutions that use exchange functions to provide commodity producers with access to relatively cheap sources of finance through trade in producer repurchase agreements, also known as 'repos'. This demonstrates how exchanges can integrate critical auxiliary services into supply chains.

52. In conclusion, a commodity exchange can act as ‘island of excellence’ in an otherwise disordered marketplace, extending high levels of performance and integrity along the supply chain and imposing discipline on the physical market. Exchanges can catalyse the integration of small producers into supply chains through extending access to markets, imposing quality requirements as a precondition to trade, disseminating price information, efficiently managing collateral and providing a mechanism for the management of price risk.

E. Non-profit organization-facilitated supply chains

NGO-led capacity-building initiatives: The CARE REAP Model

53. Since 2000, CARE International in Kenya has initiated a partnership model known as the Rural Enterprise Agribusiness Promotion (REAP) Programme. REAP is a commercially viable and socially responsible model aimed at increasing incomes of the smallholder farmers in a sustainable manner by addressing the challenges they face, such as access to credit, availability of agricultural inputs and technical expertise, and quality control. The programme has been tested in Kenya, Mozambique, Zambia, Zimbabwe and Ghana.

54. In Kenya the programme is aimed at helping small farmers (i.e. those with less than 1.5 acres of land) facing constraints related to small size, inadequate technical and managerial skills, and compounded by new stringent market standards. The programme targeted clusters of smallholder farmers concentrated along eight rivers to achieve the following objectives: (i) organize farmers into groups; (ii) provide linkages with the market; (iii) provide linkages with the input and credit suppliers; (iv) provide extension services; (v) form a core management unit to coordinate this bundle of business development services.

55. The programme has evolved into a partnership with the private sector. CARE has partnered with Vegpro, one of the largest horticultural companies in the country, to develop and implement the Vegcare marketing company under the Kenya Horticultural Marketing Alliance project. The project comprises a commercial component and a business support component. The commercial component entails the formation and development of an independent horticultural marketing company, offering marketing and business development services to smallholder farmers. The business support services component includes “start-up”

support services to the joint business venture. Activities include technical support on community mobilization and horticultural marketing, setting up EUREPGAP-compliant smallholder production systems and setting up “pro-poor” input credit services.

56. Through this model, it has been possible in the first year to form a joint venture to provide marketing services with the private sector, establish commercial production and marketing systems, put in place quality management systems for smallholders that are compliant with EUREPGAP standards, link 450 farmers to formal markets, raising their farm incomes from $300 to between $400-$1000, develop a business plan to guide the company into long-term commercial viability and export 30 MTS of produce per week to the competitive EC market.

Fairtrade Labelling Organizations (FLO)

FLO is an association of 20 European fair trade initiatives created in 1997 to coordinate their efforts. In 2002, FLO divided its activities between FLO international which aims to develop and review standards and assist producers, and FLO-Cert GmbH, which carries out the inspection activities. In 2005, FLO supervised 20 national initiatives in 21 countries, 508 organizations of producers in 58 countries in Africa, Asia and Latin America, more than 500 traders and 1483 licensees. Standards normally contain two parts: one generic and one containing specific information related to the mentioned product. This second part may, for example, contain the fair trade minimum price for the product.

Fair trade and transparency labelling

> *"Fair trade is a trading partnership, based on dialogue, transparency and respect, that seeks greater equity in international trade. It contributes to sustainable development by offering better trading conditions to, and securing the rights of, marginalized producers and workers – especially in the South"* (FINE consensus, 2001).

57. Historically, fair trade had remained relatively negligible and marginal until the combined effects of certification development and the launch of fair trade products on the shelves of supermarkets allowed a larger audience to access fair trade products. In 2005, about 80 percent of these products were sold in supermarkets. With the severe drop of commodity prices occurring at the end of the 1990s, notably in regard to coffee, a large number of growers have been prodded to turn their production to fair trade in order to disconnect their revenues from international price movements and historical market instability.

58. To be entitled to use the fair trade label, stakeholders must comply with a set of strict requirements. For instance, growers must commit themselves to apply decent working conditions, to avoid the use of child or forced labour, and to implement minimum health, safety and environmental standards. Trading partners must pay a *fair trade minimum price*[26] that enable farmers to cover not only their sustainable production costs, but also guarantee their living (producers and workers taken together) as well as a *"fair trade premium"* (also known as *development premium)* to be invested in infrastructure or in the upgrading of social and/or environmental conditions. Farmers often have access to pre-financing from their buyers.

[26] When the market price is higher than the fair trade minimum price, the first is applied to the farmers.

59. Since 2001, fair trade retail sales have recorded growth rates of between 20 per cent and 40 per cent per year, bananas and coffee in the lead. Members of the European Parliament decided on 6 July 2006 to urge the European Commission to issue a recommendation on fair trade.[27] This document considers the application of a reduced VAT on fair trade products, as well as the cancellation of custom duties related to fair trade products imported from developing countries.

60. Fair trade represents an interesting and growing alternative niche for developing countries to diversify their exports. However, it would be a mistake to consider it as a panacea. In fact, fair trade, like other alternatives to traditional trade, suffers from the lack of clear, concerted and generally recognized international legislation and a proliferation of rules, which often vary according to trading partners, certifying institutions, companies and supermarket chains. Even if basic criteria remain similar, the satisfaction of requirements imposed by one partner does not mean that the product will meet the requirements of others. This heterogeneity has created an important information asymmetry on the producers' side, but also for consumers who can face difficulties understanding the subtleties among all the certification schemes.

UNCTAD's contribution to the development of the fair trade movement

As the fair trade movement originated, UNCTAD has served as a forum for developing countries to express their views on new ways to reduce discrepancies caused by traditional international trade patterns.

UNCTAD has also a fundamental role to play in the future as supported by main stakeholders in the Fair Trade Declaration issued prior to the UNCTAD XI, which states that "UNCTAD, as an UN agency, should also reinforce its role in this matter". Internal steps have been taken such as the creation of the sustainable coffee partnership. These initiatives should be strengthened and further developed in the future.

61. Finally, despite the high growth rates recorded over the past few years, the size of these new market segments remains relatively minor. According to Nicole Chettero, spokeswoman for the US certifier TransFair *"Only a third of all the fair trade certified coffee grown is bought by fair trade dealers with the rest sold on the open market at lower prices"*. That means that even if a producer in developing countries has turned his production to meet fair trade criteria, he can't be sure that his production will be sold at a fair trade price.

IV. CONCLUSIONS AND ISSUES TO BE ADDRESSED BY EXPERTS

A. General issues

62. The structure of agricultural sectors and supply chains has changed markedly over the previous two decades. However, what remains unchanged is that small commodity producers in many developing countries remain amongst the most impoverished elements of society. Poverty is a complex phenomenon to understand and its linkages with commodity production are deep-rooted and multifaceted. As the commodity sector has evolved and relations between participants – producers, processors, traders, purchasers, distributors and end-users – have been reconfigured, the impact of emerging supply chains on growth and

[27] For further information, consult the European parliament website: http://www.europarl.europa.eu/

poverty has become increasingly complex. It is nevertheless clear that the exclusion of small producers from supply chains excludes them from opportunities to diversify, as well as from opportunities to improve their security and levels of income. Accordingly, one of the foremost objectives of the international community with respect to the connection between poverty on one hand, and commodities production and trade on the other, has to be to ensure that small producers can reach markets. Actions to this end range from creating a level playing field in international agricultural trade to provision of extension services at the local level. The Aid for Trade initiative should assign particular importance to improving competitiveness of small-scale commodity producers and enabling them to participate in supply chains.

Questions to experts:

- How can the poverty of small producers be defined, conceptualized and measured in the developing world?
- What linkages and causalities exist between the activity of commodity production and the condition of poverty?
- What have been the most significant structural trends that have affected global commodity supply chains? What has been their impact on small producers?
- Where are the opportunities and where are the threats in the changing commodity markets for small producers? How should opportunities be embraced and encouraged? How should threats be resisted or mitigated?

B. Elements and obstacles to supply chain integration

63. In the context of structural change in commodity markets, small producers are under pressure to adapt their activities to an environment which has been completely transformed. For many, such an adaptation has faced severe obstacles. For others, the adaptation has not even commenced. Market information, finance, logistics, assistance to meet market requirements and other support services are among those that small producers require to overcome institutional deficiencies in their operating, environment. With the realisation that direct unilateral state involvement in the sector has at best, yielded limited success, new modalities of public-private action are required to equip the small producer with the talents, techniques, resources and attitudes to participate in the new order in global commodity markets. Support from the international community in the form of technical and financial assistance will be necessary to help build the capacity of small producers.

Questions to experts:

- What does integration into supply chains mean for small producers, and how can it provide an effective development path?
- Which supporting elements provide the greatest leverage for integrating small producers? How should the provision of such elements be extended, and by whom?
- How can public donors and the private sector help to improve dissemination of market information to small commodity producers?
- How can the capacity of banks to extend supply chain-based credit be improved?
- What changes are needed in public and private sector standard-setting processes that affect international trade to ensure that the capabilities of small developing country producers are adequately taken into account?

- What are the most significant obstacles obstructing small producers in the developing world from building sustainable livelihoods? How can they be reduced or removed?
- What forms of policy advice and technical assistance can be provided by the international community to support developing countries' capacity – and institution-building requirements?

C. Solutions and enablers

64. Since the substantial withdrawal of governments from commodity sectors, a range of actors with diverse interests in the commodity sector have stepped in to organize supply chains. New models have evolved in which private, and in some cases non-profit, organizations, facilitate small producer participation in supply chains. Such models have often provided small producers with access to new markets and support services. Yet in some contexts, new patterns of vulnerability and dependence have also emerged which pose novel dangers to small producer livelihoods. For policymakers, an immediate priority should be to develop policy frameworks that support the effective and advantageous integration of small producers into supply chains whilst incorporating protective mechanisms to mitigate the dangers. Given the leading role played by multinational corporations and other private interests in these organized supply chains, policy development will require extensive coordination and cooperation between the public and private sectors.

Questions to experts:

- Which models of organized supply chains have proven most effective in enabling small producers to build sustainable livelihoods and thereby alleviate poverty? Which have proven ineffective or counterproductive?
- What should be the role of government in facilitating the integration of small producers into supply chains? How should they work with other sectoral stakeholders, domestic and international, including small producers, the private sector and the NGO community?
- How can public/private partnerships in importing and exporting countries be used to facilitate market entry for small developing country producers?
- How can the international community support the creation of markets, including, in particular, through the establishment of commodity exchanges?
- What should be the balance in focus between the facilitation of supply chains that cater for domestic, regional and international trade?
- What aspects of the regional and international environment need to be aligned with developing country efforts to integrate producers into supply chains?
- How can the international community assist developing countries in building supportive enabling frameworks for supply chain integration?

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