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The changing face of commodities in the twenty-first century

Note prepared by the UNCTAD secretariat¹

Executive summary

By the end of the twentieth century, commodity prices were in the doldrums, mainly because of sluggish demand growth in relation to supply. They had been on a downward trend in real terms since the 1980s. However, since 2002, commodity prices have rebounded, driven largely by growing demand in newly industrializing developing countries. If the cycle of growth and industrialization in developing countries continues, the current commodity boom may mark the beginning of a changed commodity economy in the twenty-first century characterized by a long-term resurgence in the demand for, and value of, primary commodities in world trade. This holds out the possibility that low-income commodity-dependent developing countries may be able to generate sufficient gains from commodity trade to relieve financing constraints and enable them to launch their economies on a sustained growth path of rising income and poverty reduction. These prospects raise opportunities and challenges for trade and development, and the need for appropriate policy responses. UNCTAD XII provides an opportunity for the international community to agree on an international action plan on commodities designed to harness development gains from the present boom in commodity prices and to address the long-standing commodity trade and development problems.

¹ This document was submitted on the above-mentioned date as a result of processing delays.

I. Introduction

1. Trade in commodities is of vital importance to both exporting and importing countries. A large number of developing countries, particularly the poorest, depend on primary commodity exports. These exports are critical to employment and incomes, and are a major source of government revenues, accounting for a large share of their resources for financing development. On the other hand, importing countries need predictable and affordable access to supplies of raw materials in order to maintain and fuel industrial growth and satisfy consumption demands of their populations. Other concerns, particularly food security, food safety and the environmental and social sustainability of commodity production and use are also important to importing and exporting countries. Finally, the recent turmoil in commodity markets has underlined the shared interest of all countries in ensuring that commodity markets do not become a source of global macro-economic instability.

2. This background note highlights the opportunities and challenges arising from the current boom in commodity prices and the prospects for a long-term resurgence in the demand for primary commodities. It also points to the need for appropriate policy responses.

II. The commodity boom and its impact on developing countries

A. Extent of price increases

3. Since 2002, commodity prices have been on the rise following their sharp fall between 1995–1997 and 2002. The price of oil has risen approximately tenfold from a low in 1999 to a record high of \$100 per barrel at the beginning of 2008. The UNCTAD price index for non-fuel commodities has also reached its highest level in current dollars since 1960, rising 107 per cent since 2002 (see table 1). The broad-based rise in prices has been driven by the boom in metal and mineral prices, which have increased 224 per cent since 2002. In real terms, commodity prices are still below their levels of the 1970s and early 1980s. Only the real price for the minerals, ores and metals group has exceeded those levels.

Table 1. World primary commodity prices, 2001–2007
(Percentage change over previous year)

Commodity group	2002–2006*	2007
All commodities (in current dollars)**	89	18
All commodities (in special drawing rights)	66	12
Food and tropical beverages	48	24
<i>Tropical beverages</i>	51	9
<i>Food</i>	48	26
Vegetable oilseeds and oils	26	66
Agricultural raw materials	62	15
Minerals, ores and metals	220	4
Crude petroleum	158	67

Source: UNCTAD secretariat calculations, based on UNCTAD *Commodity price bulletin*, various issues; and United Nations Statistics Division, *Monthly bulletin of statistics*, various issues.

*Percentage change between 2002 and 2006.

**Excluding crude petroleum.

4. The evolution of commodity prices since 2006 reveals a mixed pattern. While some commodity prices continued to rise in 2007, there has been a slowdown, or even a decline in some prices. Expectations are that slower global economic growth, increased supplies of some commodities, substitution effects in minerals and metals and energy commodities, changing behaviour of investors in commodity markets and the strong influence of crude petroleum prices on the prices of many other commodities will likely put downward pressure on commodity prices in the medium term. However, the short-to-medium-term prospects are for commodity prices to remain firm.

B. Causes of price increases

5. The driving forces behind the current boom in commodity prices have been a combination of strong global demand, led by China, and a slow supply response, together with low inventories for a number of commodities, particularly minerals and metals and grains. Commodity prices have also been influenced by speculation, fed by high liquidity in international financial markets and relatively low interest rates, seeking higher returns in comparison to equity and debt securities. The increase in dollar-denominated commodity prices between 2002 and 2006 is also partly explained by the depreciation of the dollar against other major currencies. Finally, a major factor in the current rise in demand for some agricultural commodities, particularly maize and sugar, is the heightened demand for biofuels, which is closely linked to developments in energy prices.

6. On the supply side, the response of production to rising demand has been sluggish, particularly for energy, metals and minerals. A prolonged period of low prices, coupled with the long lead times in mining investment, led to slow capacity growth for many years and meant that supply could not catch up with the sudden increase in demand. Consequently, inventories of metals have been drawn down and are now extremely low. There are some indications that global oil consumption growth has slowed since 2006, with a decline in oil consumption in the countries of the Organization for Economic Development and Cooperation (OECD) while Chinese consumption has risen. At the same time, global oil production, especially refining capacity, has been growing slowly. Thus, on the whole, even with slower growth in the global demand for oil, market conditions remain tight, with spare capacity of the members of the Organization of the Petroleum Exporting Countries at very low levels.

7. The pattern of price developments in the agricultural sector is due to many factors. Supply constraints – production shortfalls and low world stocks of cereals in the face of strong growth in consumption for food and feed – caused by shifts in the composition of food demand in rapidly growing Asian countries towards high protein foodstuffs and brisk demand for biofuels, have triggered tightness in the grain and oilseed sectors. High feed prices have also raised costs for animal production and resulted in higher livestock and dairy prices.

C. Impact on developing countries

8. Rising commodity prices have contributed to significant improvements in the external accounts of many developing countries dependent on primary commodities with large terms of trade gains for oil- and mineral-exporting countries. Table 2 presents an estimate of the impact of changes in the terms of trade of developing countries, by export structure.

1. Oil- and mineral-exporting developing countries

9. Between 2004 and 2006 income gains from changes in the terms of trade were high for oil- and mineral-exporting countries, exceeding 7 and 5 per cent, respectively

of gross domestic product, while, on average, exporters of other commodities showed losses. However, in some cases, the windfall gains have been partly offset by increased profit remittances by transnational corporations involved in the exploitation of natural resources. This has been the case particularly for oil- and mineral-exporting countries in Africa and Latin America where foreign companies account for a large proportion of their export-oriented production, especially in mining, and where the taxation system is favourable to private firms in the extractive industries. As shown in table 2, high income payments to non-residents drained most of the terms-of-trade-related income gains for mineral exporters between 2004 and 2006.

Table 2. Impact of changes in terms of trade and net income payments on national disposable income in selected developing country groups, average for 2004
(Percentage of gross domestic product)

	Effects from changes in terms of trade	Effects from changes in net income payments	Net impact
Oil exporters	7.3	-0.2	7.0
Exporters of minerals and mining products	5.7	-4.6	1.2
Other commodity exporters	-0.2	-0.1	-0.3

Source: UNCTAD secretariat calculations, based on United Nations Statistics Division, United Nations common database; International Monetary Fund, Balance of payments statistics database; Economic Commission for Latin America and the Caribbean, Balance of payments statistics database; national sources; and UNCTAD estimates of unit value and volume of exports and imports.

2. Other commodity-exporting developing countries

10. The record is mixed for exporters of agricultural products. While countries exporting vegetable oilseeds and oils, cereals, dairy products and some meat products have seen their terms of trade improve over the past few years, some of those exporting tropical agricultural products have seen the prices of their exports outpaced by those of their imports, for example, fuels and food, and thus are experiencing significant deterioration of their terms of trade. Tables 3 and 4 provide some indications of the impact on the cost of petroleum imports for selected low-income countries and on the food import bills of the low-income net food-importing countries.

11. The current hike in world prices of nearly all major food and feed commodities is having a ripple effect through the food value/supply chain, contributing to food price inflation and hence to greater food insecurity, especially in poor countries. In recent months, food riots have broken out in several countries and a number of governments around the world have implemented a series of measures to limit the increase of domestic food prices and prevent consumption from falling.

Table 3. Oil import costs as a proportion of total imports selected sub-Saharan African countries
(percentage)

	1996–2000	2001–2005
Benin	9	24
Burundi	10	15
Central African Republic	8	16
Kenya	14	18
Madagascar	10	12
Rwanda	9	18
Togo	8	12
United Republic of Tanzania	9	14

Source: UNCTAD calculations.

12. The agricultural price boom has also been accompanied by much higher price volatility – large price fluctuations over a short period – than in the past, especially in the cereals and oilseed sectors, increasing the degree of uncertainty of returns in agricultural markets. Finally, high and low price events are typical occurrences in agricultural markets; thus it can be expected that the current period of high prices will eventually end, even if the long-term trend is upwards. In this context, an issue is how to cope with the inevitable bust phases to come in the price cycle.

13. The extent to which commodity exporting developing countries will continue to benefit from high commodity prices will depend on how global demand for, and supply of, the different commodities evolve. In any case, the long-term benefits for producing developing countries will depend on their ability to use their higher commodity export earnings for diversification of production and industrialization. By reducing their dependence on commodities, this will also make their export earnings less vulnerable to fluctuations in commodity prices (see recommendations, part V).

Table 4. Cereal import bill of low-income food deficit countries by region and type
(billions of dollars)

	2002–2003	2007–2008
Africa	6.5	14.6
Asia	7.0	15.4
Latin America and Caribbean	0.3	0.7
Low-income food-deficit countries	14.0	31.2
Wheat	7.8	19.1
Coarse grains	3.3	5.2
Rice	3.0	7.0

Source: Food and Agriculture Organization of the United Nations, *Crop prospects and food situation* (December 2007).

* Includes food deficit countries with per capita income below the level used by the World Bank to determine eligibility for assistance from the International Development Association (i.e. \$1,575 in 2004).

III. The realities of the global commodity economy at the beginning of the twenty-first century and the outlook for commodity trade

14. The current commodity boom that has improved the situation of primary commodities in world trade has revived the potential role of commodity trade in contributing to sustained economic growth and poverty reduction in the globalized

economy. However, key realities of the commodity economy remain at the beginning of the twenty-first century, including high price volatility in the sector, declining long-term trends in commodity prices and incomes in real terms, limited development gains from the production and trade of primary commodities for many developing countries – especially low-income countries – and continued difficulties in diversification. These realities are discussed in this section.

A. Continuing commodity dependence

15. Despite a marked shift over the past 30 years in the composition of the exports of developing countries taken as a group – from primary commodities to manufactures, which now account for around 70 per cent of their exports – many developing countries are still highly dependent on commodity exports. As indicated in table 5, currently, 92 developing countries depend on primary commodities for at least 50 per cent of their export earnings. If oil is excluded, non-oil commodities account for over 50 percent of average annual exports for 47 countries.

Table 5. Primary commodity dependence of developing countries
(2003–2005 annual averages)

Commodity group	Number of developing countries that derive at least 50 per cent of export earnings from commodities	Number of developing countries that derive between 20 per cent and 49.9 per cent of export earnings from commodities
All commodities	92	38
Non-fuel commodities	47	41
Fuel	25	18
Ores and metals	7	13
Agricultural raw materials	3	6
All foods	29	39

Source: UNCTAD calculation based on data from the United Nations Commodity Trade Statistics Database (COMTRADE).

16. The situation of commodity-dependent countries varies according to the commodities on which they are dependent. Petroleum-exporting countries face an atypical demand and supply situation. The demand for oil is highly inelastic given the essential role of energy in the functioning of modern society and productive processes, and the low degree of technical and economic substitutability of other sources of energy supply in the short term. At the same time, economically exploitable supplies are available only in a limited number of countries. The situation of mineral exporters is somewhat similar to that of oil on the supply side: supply is determined principally by the existence of a mineral deposit. However, demand for minerals follows closely the business cycle and industrial demand growth in the industrialized and industrializing countries.

17. Exporters of agricultural commodities fall into two categories: low-income producing countries dependent on the export of one or a few agricultural commodities, such as the traditional tropical products produced by small-scale farmers; and dynamic, more diversified, middle-income agricultural-exporting countries. The latter group includes a few developing countries such as Argentina, Thailand, Malaysia, Viet Nam and Brazil, whose export of certain bulk commodities, for example, cereals and oilseeds, are highly competitive. In fact, these more agriculturally diversified developing countries have actually become less commodity-dependent over the past decade.

B. The low-income commodity dependency trap

18. In contrast, the low-income agricultural producing developing countries are mostly specialized in export of commodities – traditional tropical products – for which demand in traditional developed country markets has been sluggish in recent years. As a result, their share of world commodity trade has been stagnant or falling, along with their capacity to diversify into higher value commodities or manufacturing. Although specialized in agricultural exports, these countries are typically net importers of food. The largest single concentration of commodity-dependent countries in this category is in Africa.

19. With reliance on one – or a few – export commodities, the low-income commodity-producing developing countries are highly vulnerable to trade shocks, and face an unpredictable existence at both the micro and macro levels. They are confronted with a common set of challenges when participating in international markets. These include structural over-supply for many of their traditional export commodities, and therefore declining prices; erosion of trade preferences as a result of multilateral and regional trade liberalization, which contribute to difficulties in retaining international market shares; a proliferation of standards in their traditional markets in OECD countries; and increasing concentration and reduced competition in global supply chains for products based on these primary commodities, which make value addition and greater participation in value chains more difficult. Some of these problems are related to the workings of the international trading system (see next section).

C. Structural and systemic factors affecting the development and poverty reduction impact of commodity production and trade

20. Both internal and external factors have an impact on the extent to which commodity sectors can serve as an engine of growth in developing countries. Internal constraints include institutional, policy, infrastructural and human capital deficits, and structural problems. For example, in the oil and mining sectors, backward and forward linkages between the sectors and the rest of the economy are frequently undeveloped. The lack of appropriate strategies for investing oil and mining revenues has also limited the impact of these sectors on development. In agricultural sectors, supply-side constraints, in particular inadequate trade-related infrastructure, human capital and technological innovation, reduce opportunities for vertical diversification and value addition.

21. Trade barriers in the international trading system – market access and entry conditions, lack of regulation of anti-competitive practices in international supply/value chains and inability to comply with ever-changing trade standards – also limit opportunities for commodity-based development. For example, tariff peaks and tariff escalation affect mainly agricultural products. Moreover, large domestic support to agriculture and export subsidies in OECD countries have led not only to declines and greater instability in the prices of some agricultural commodities on world markets, for example, cotton, but also to a crowding out of developing countries in export markets. Finally, the subjecting of developing countries to most of the rules that hold for developed countries in the multilateral trading system reduces the policy flexibility of commodity-dependent developing countries to promote commodity-based development through targeted policy incentives.

D. Long-term prospects for commodity trade: new regions of industrial growth and increased demand for commodities

22. An emerging reality of the early twenty-first century is that developing countries are becoming leading consumers of commodities. Table 6 shows, for example, that between 1995–1997 and 2003–2005 developing countries increased their share of world primary commodity imports in total and in every major commodity group. The largest increase in developing country world import shares occurred in ores and metals. Asia, particularly China, mainly accounts for the rise in these import shares. After slowing somewhat in 2001–2002 from an annual average growth rate of 12.4 per cent for the decade 1991–2000, China resumed its double-digit growth in 2003. India is also approaching double-digit growth. Sustained strong growth in these continent-size developing economies will continue to impart a strong demand for commodities, especially because they are in a phase of development in which the intensity of use of energy, metals and raw materials is on the rise. Equally, rising standards of living will increase demand for food imports, particularly because of the shift to a diet higher in proteins and rapidly rising consumption of items that have traditionally been considered as luxuries, such as coffee and cocoa. Although developed countries still account for at least 60 per cent of world commodity imports, in all major commodity groups, industrializing developing countries are projected to continue to grow at a faster pace than developed countries and consequently will continue to underpin demand growth in raw material markets.

Table 6. Shares in world imports, 1995–1997 and 2003–2005
(Percentage of world imports of each category; annual averages)

Regions	All commodities		Fuels		Ores and metals		Agricultural raw materials		Forestry		All foods		Fish	
	1995–1997	2003–2005	1995–1997	2003–2005	1995–1997	2003–2005	1995–1997	2003–2005	1995–1997	2003–2005	1995–1997	2003–2005	1995–1997	2003–2005
Developed countries	69	67	68	67	69	60	68	62	77	70	70	69	84	80
Developing countries	28	30	28	30	28	37	31	36	22	29	27	29	15	18
of which:														
Asia	20	23	21	24	24	32	24	29	17	25	17	17	12	14
of which:														
China	2	6	2	4	3	13	5	13	2	12	2	3	1	3
India	1	2	2	3	1	2	1	2	1	2	0	1	0	0
Transitional economies	4	3	4	3	2	3	1	2	1	1	4	4	1	2
Memo item: World imports (billion dollars)	1 236	2 189	437	1 087	182	302	141	160	168	78	476	639	53	71

Source: UNCTAD calculations based on COMTRADE data.

23. Given the pattern of this demand growth which is centred mainly on fuels, metal and agricultural raw materials, exporting developing countries of these commodities are likely to benefit from strong demand and relatively high world prices for such commodities. Exporting developing countries are likely to benefit further from the fact that the developing countries have a rising share in each others' commodity trade (see table 7).

Table 7. Commodity trade, including fuels, among developing countries, by regions
(1995–1997 and 2003–2005 averages)

Region	Exports to developing countries (percentage of total commodity exports)		Imports to developing countries (percentage of total commodity imports)	
	1995–1997	2003–2005	1995–1997	2003–2005
	Africa	23	30	41
America	31	33	51	53
Asia	37	48	59	64
All developing countries	33	41	56	61

Source: UNCTAD calculations based on COMTRADE data.

24. While the growing trade in primary commodities among developing countries is unlikely to be sufficient to permanently reverse the long-term decline in real commodity prices, a sustained increase in the demand for commodities by these countries from each other will continue to provide additional opportunities for increased commodity exports by developing countries, including capture of value added in the new supply chains being developed directly from producing developing countries to new consuming markets in Asia. Thus, in the medium- to long term, low-income commodity-dependent developing countries may be able to generate sufficient gains from commodity trade to help launch their economies on a sustained growth path of rising per capita income and progress in poverty reduction.

IV. Emerging commodity policy issues

25. Despite the favourable outlook for commodities, several emerging issues have a bearing on the extent to which stronger demand and higher prices for commodities will translate into sustainable growth and development, and poverty reduction.

A. Distribution of rent from extractive industries

26. The government's share in the rent from export-oriented activities in the mining, oil and gas sectors is a potentially important source of revenue for financing development. Government revenue accrues from transfers of State-owned exporting companies or as a share of export income through royalties and income taxes paid by private operators. Careful management of the rent from extractive industries is of special importance because these rents are generated from the exploitation of non-renewable resources, which will eventually be exhausted.

27. Some general trends and orders of magnitude based on rough estimates of the distribution of rents in the oil and mining sectors can be identified. In some major oil-exporting countries where most government income is generated directly through State-owned exporting companies or joint ventures transfers to the public budget

exceed 60 per cent of total fuel export earnings.² In contrast, in several sub-Saharan African countries, such transfers account for a much smaller share of oil export earnings. The counterpart of the relatively low share of the public sector in total oil earnings in sub-Saharan Africa is the higher share obtained by foreign investors. The lower fiscal income in these countries is explained partly by high start-up costs and high initial depreciation allowances that reduce the taxable income, but also by fiscal incentives accorded to the foreign-owned companies.

28. The rise in the prices of oil, minerals and metals in recent years has rekindled the debate on the distribution and use of windfall rents in the extractive industries. Fiscal incentives accorded to foreign investors have come under criticism, especially in a number of Latin American countries. The incentives, which were mainly introduced during a period of persistently low mineral prices, are seen by many as unnecessarily generous at the present, much higher prices. In response, some countries have recently revised their fiscal and ownership regulations in the oil and mining sectors.³

B. Competition in commodity supply/value chains

29. The numbers and transaction value of mergers and acquisitions in many industries across the world, especially in commodity industries such as oil and gas, food and beverages, and metals and minerals, have risen sharply in recent years. For instance, in the mining sector, the number and value of mergers and acquisitions rose dramatically in 2005 and 2006 – compared with those recorded over the past decade – amounting to a transaction value of around \$60 billion by the third quarter of 2006.⁴

30. Commodity trading companies, processors and retailers – for example, large supermarket networks – in major consuming markets control commodity supply chains, a situation being reinforced by the ongoing concentration on the side of commodity buyers and the parallel fragmentation on the side of the producers.⁵ This makes most producers in commodity-dependent developing countries price-takers. Increased concentration in commodity markets is a major reason for the widening spread between what consumers pay and what producers receive for their produce.⁶

31. One challenge is how to deal with mega-mergers in commodity sectors and competition issues in global supply/value chains. There is an urgent need to strengthen competition policy in commodity industries where the principal actors are increasingly a small number of large enterprises which dominate the trading and processing activities in those commodities around the globe.

C. Commodities, environmental sustainability and climate change

32. There are two key aspects to the emerging interface between commodities, environmental sustainability and climate change. One is that the increasing global demand for energy, industrial raw materials and foodstuffs associated with growing world population, industrialization and urbanization may put strains on the environment in terms of resource requirements and pollutants. The other relates to the impact of commodity production and use on climate change.

² See UNCTAD (2005), *Trade and Development Report 2005*, chapter 3.

³ See UNCTAD (2007), *World Investment Report 2007*, chapter 6.

⁴ UNCTAD, Cross-border Mergers and Acquisitions Database, available from www.unctad.org/fdistatistics.

⁵ In the context of structural adjustment programmes, marketing boards were dismantled in a large number of commodity-dependent developing countries.

⁶ The increased profits of both trading and processing companies over the period of the price collapse of tropical products such as coffee and cocoa suggests that market concentration has benefited these companies.

33. Climate change relates to commodities and development in two ways: through the impact of climate change on commodity producers, especially resource-poor and vulnerable ones, arising, for example, from unstable weather conditions – more storms and floods in some places and growing aridity in others – or reduced resilience of coastal ecosystems; and the consequences for them of climate change mitigating measures. There is a growing consensus that emissions of greenhouse gases such as carbon dioxide and methane – most of which are linked to the use of fossil fuels – are a principal factor in climate change. Related issues concern the importance of preserving tropical rainforests.

34. Climate change issues are being addressed through various policies for carbon-reduction such as regulatory measures (e.g. standards on energy efficiency or regulation and standards on renewables); fiscal measures (e.g. carbon taxes or subsidies for energy efficiency and fuel switching); and market-based and incentive measures (e.g. Kyoto flexibility and government procurement). These measures should take into account their likely impact on developing countries and provide for capacity-building, technology transfer and adoption of new energy technologies, including biofuel production.⁷

D. Energy security and the oil price boom in perspective

35. Access to affordable energy is indispensable for sustaining economic growth and improving the quality of life. While the impact of the current oil price increases on net oil-importing countries has generally been much smaller than in the two previous episodes of oil price hikes (i.e. 1973–1974 and 1979–1983), it has been larger for developing countries. Part of the reason is a substantial reduction of oil dependency in developed countries over the past 30 years, reflected in a reduced share of oil in total energy consumption and a reduced reliance on industrial production compared to services. In contrast, reliance on oil imports has increased in the developing world, largely as a result of industrialization and urbanization. Whereas in 1972 the oil import bill in developing countries (excluding the Organization of the Petroleum Exporting Countries) represented 0.8 per cent of their gross domestic product, in 2004–2005 it exceeded 3.5 per cent, roughly twice the ratio in the main OECD countries. In Asia the ratio of oil imports to gross domestic product remains the highest, followed by sub-Saharan African countries, excluding Nigeria and South Africa, despite a much lower level of industrialization. As noted in part II, some low-income oil-importing developing countries have been particularly hard hit (see table 3).

36. In sum, oil prices have had, and continue to have, an impact on the import expenditure of a significant number of developing countries. However, in many cases the negative impact on the trade balance has been partly or fully compensated for, either by a parallel increase in the price of other exported primary commodities or by expanding volumes of manufactured exports. Nevertheless, oil dependency remains high in many developing countries, where 1.6 billion people still lack access to electricity. The prospect of sustained high oil prices will adversely affect economic growth and poverty reduction for countries not experiencing higher prices for their exports.

E. Biofuels and the implications for food security

37. The strong demand for biofuels has been a response not only to high crude petroleum prices but also to growing concern about climate change. The commodities most affected by this increase in demand have been sugar and maize, which are used

⁷ For further discussion see UNCTAD (2007), *The interface between trade and climate change policies and the role of UNCTAD* (TD(XII)/BP/2).

for ethanol production, and vegetable oils for biodiesel. In addition to being environmentally friendly in terms of carbon emissions, the production of biofuels may be economically beneficial to developing countries, as it may help reduce their oil import bills, offer improved energy security through diversification of energy sources and provide opportunities to diversify agricultural output.

38. In general, developing countries have a competitive advantage in biofuel production. For instance, producing ethanol from sugar cane in Brazil is more efficient in economic and environmental terms than producing it from maize in the United States.⁸ However, developed countries are promoting local production and limiting access to their markets by means of support policies in the form of subsidies for their producers and high import tariff protection.

39. The competing uses of land for the production of food, animal feedstock and biofuels have contributed to food security concerns. For instance, increasing the land under maize production in the United States for ethanol production has displaced land for soybeans, the prices of which have been rising sharply since mid-2006. This in turn has led to higher prices for animal feedstock and meat. The higher food prices can have dramatic consequences for net food-importing developing countries (see table 4 above). There are also concerns that the effects on deforestation, water scarcity and biodiversity as a result of bringing increased land under cultivation may offset the environmental benefits of biofuel production. A possible solution may come from obtaining biofuels from tropical plants, such as the jatropha tree, which can grow on degraded land and would therefore not compete with other uses yet have a positive environmental impact, or from using improved technology.

V. Policy responses

40. International policy action on commodities has to address two sets of challenges: on the one hand, the perennial problems of international commodity markets and trade and their impact on the efforts of commodity dependent developing countries to develop and to meet the Millennium Development Goals, especially the reduction of poverty; and on the other hand, the challenge of harnessing development gains from the current commodity boom.

A. Commodity policy: an historical perspective

41. Long-standing commodity trade and development problems are related to the boom and bust cycles in commodity markets, especially for agricultural commodities. The need to stabilize commodity prices and to assure returns that are considered remunerative to producers is a concern of developing and developed countries alike. Historically, two distinctive trends have emerged, one with respect to producers in the developed countries, and the other with regard to those in the South.

42. Whereas OECD countries have been providing income stabilization support and protection of livelihood for their farming populations – which represent on average 3 to 4 per cent of their workforce – equivalent to some \$1 billion a day,⁹ developing countries, because of fiscal constraints, have not been able to do so. Instead they have looked to the international community for solutions to their commodity dependence and associated problems. This is especially the case of Africa where agriculture

⁸ For further discussion see UNCTAD (2007), *Biofuel production technologies: status, prospects and implications for trade and development* (UNCTAD/DITC/TED/2007/10).

⁹ For example, see OECD (2007), *Agricultural policies in OECD countries: monitoring and evaluation 2007*, table 2.1.

employs around 70 per cent of the workforce, a great majority of whom live on less than a dollar a day.¹⁰

1. International stabilization efforts

43. The search for solutions to commodity problems at the international level was first given serious consideration in the post-World War II period in the negotiations leading to the 1948 agreement on the Havana Charter, which was not ratified by member States. The continued downward trend in the terms of trade for commodity-exporting countries, combined with instability in commodity prices and revenues, led to the commodity issue being placed high on the agenda of UNCTAD's first conference in 1964. After that, attempts to develop a viable international commodity policy were carried out within the framework of UNCTAD, leading to the adoption in 1976 of the Integrated Programme for Commodities at UNCTAD IV in Nairobi.¹¹ The idea was to negotiate commodity agreements that would, through their own resources and those borrowed from a common financing facility to be established for this purpose, be able to finance buffer stocks in order to reduce price fluctuations, and stabilize prices at levels remunerative to producers. However, despite intensive negotiations spanning several years, the only new commodity agreement that was negotiated within the context of the Integrated Programme for Commodities in UNCTAD was the International Natural Rubber Agreement. The Agreement establishing the Common Fund for Commodities, which was adopted in 1981, entered into force only in 1989, with its first window designed to finance buffer stocks suspended.

44. With the advent of a global recession in the 1980s, some existing commodity agreements, such as that for sugar, were discontinued under the pressure of depressed prices, while economic clauses in agreements such as those for coffee and cocoa were removed. With the ascendancy of market-oriented strategies in the 1980s, intervention in markets was no longer deemed acceptable. Instead, the free play of market forces via price liberalization and deregulation was cited as promising the most efficient allocation of resources and welfare gains for developing countries suffering balance of payments difficulties and the debt overhang in the 1980s.

2. Compensatory financing mechanisms

45. Compensatory financing facilities, first introduced in the International Monetary Fund, have also been used in efforts to buffer at the macro and micro levels commodity-exporting developing countries and producers against the worst effects of commodity price and income volatility. The best-known are the Contingency and Compensatory Financing Facility of the International Monetary Fund (1988), preceded by the Compensatory Financing Facility, which commenced in 1963; and the various arrangements concluded between the European Union and the African, Caribbean and Pacific countries under successive Lomé Conventions and the Cotonou Agreement, that is, the stabilization of export earnings, the system for mineral products and the instrument for financing short-term fluctuations in export earnings. Although these instruments have had significant resources, they have suffered from problems associated with their design and operation, affecting eligibility and the number of countries having access, the proportion of export shortfall compensated and the speed of disbursement which have limited their intended countercyclical effects.

¹⁰ See World Bank (2007), *World development report 2008: agriculture for development*.

¹¹ The Programme covered broadly five areas: commodity price stabilization (with a focus on ten core commodities: cocoa, coffee, copper, cotton, jute, rubber, sisal, sugar, tea and tin); market access (to supplies and markets for importing and exporting countries, respectively); processing in developing countries; marketing and distribution systems; and improving the competitiveness of natural vis-à-vis synthetics.

3. Domestic stabilization schemes

46. Domestic price stabilization measures to address commodity problems have also been tried in many developing countries. Crop marketing boards and *caisses de stabilisation*, which in many cases had existed since colonial times, mediated between world markets and producers in many commodity-exporting countries. They offered support (administered) prices and also provided ancillary services such as extension and rural infrastructure including, in some cases, health and educational facilities, input provision, product distribution and credit.

47. The record of these boards was mixed, and in the late 1970s and early 1980s some were beset with problems, such as corruption. Nonetheless, crop marketing boards did play a vital role in the development of the agricultural export sector in several countries, and these institutions were dismantled in many countries within the context of structural adjustment programmes, thereby exposing commodity producers to the vagaries of world commodity markets. The post-adjustment experiences have also been mixed, but, on the whole, real producer prices have reflected the declining pattern of world commodity market prices. Farmers have also suffered negative consequences because production and marketing costs have risen, fertilizer prices and transport costs have soared and net incomes have declined. Consequently, small producers have been less able to protect themselves from falling commodity prices.

4. Commodity price risk management

48. Against the background of the limited progress made by both domestic and international price stabilization schemes to address the commodity problems of developing countries, attention has focused since the 1990s on the use of market-based mechanisms for managing commodity price risks. The relevant derivatives contracts are usually traded on international commodity exchanges in major financial centres such as London and New York. Technically, these mechanisms permit producers, or governments of producing countries, to limit the risks arising from unanticipated price movements by passing them on to investors (speculators) on these exchanges.

49. However, the use of these market-based instruments is not widespread in developing countries because of the lack of sophistication, size and cost in using these markets. Accordingly, interest is now focusing on the establishment of commodity exchanges in developing countries that can offer hedging opportunities adapted to the needs of domestic producers and traders. However, not all developing countries, especially the low-income commodity-dependent countries, have the necessary critical mass of professional traders/exporters and large commodity producers, required to operate an exchange with viable and effective hedging possibilities. In any case, while futures markets may help to address problems related to price variability, they cannot address the issue of long-term declines in commodity prices and negative terms of trade trends for commodity-dependent countries.

B. The way forward

50. The way forward requires actions to harness development gains from the boom in commodity prices and to address the long-standing commodity trade and development problems. They consist of aspects relating to global governance, coherence and solidarity.¹²

¹² See also the outcome of the pre-UNCTAD XII event on commodities, *The global initiative on commodities report*, Brasília, 7–11 May 2007.

1. Actions to address long-standing commodity trade and development issues

51. Policy actions are needed: to remove factors contributing to market failures and thereby facilitate commodity market adjustments; to mitigate the impact of highly volatile and declining incomes, especially from agricultural commodities, on low-income commodity-dependent countries and poor farmers; to facilitate value addition and greater participation in commodity value chains by commodity-producing countries; and to facilitate access to resources for financing commodity development.

(a) *Facilitating commodity market adjustment*

52. Possible actions to address causes of protracted periods of commodity market imbalance and high price volatility include:

- (a) reduction or elimination of factors that lead to structural imbalances in markets and prevent the adjustment of supply to demand, such as trade-distorting domestic support and export subsidies;
- (b) support for national efforts to invest in the production of new supplies as warranted by the market situation or to adjust supply to international market conditions;
- (c) support for the better functioning of markets at the national and regional levels, including the strengthening of markets, marketing systems and services.

(b) *Dealing with income effects of commodity price instability and declining terms of trade*

53. Possible actions to mitigate the impact on producers or consumers, particularly in least developed countries, of lower or higher and more volatile commodity prices and adverse terms of trade trends include the following:

- (a) strengthening compensatory financing schemes, for example, by improving eligibility criteria; extending their coverage to include essential imports such as fuel and food; and more timely disbursement of funds;
- (b) establishing viable safety nets at the national level for small producers.

(c) *Increasing development gains for developing countries from trade in commodities*

54. Possible actions at the international level in this regard consist of two aspects: policy or rule-making actions and financial actions (see (d) below).

- (a) Enhancing market access for commodity-based products
 - (i) Reduction or elimination of tariffs and tariff escalation affecting commodity-based products;
 - (ii) Reduction or elimination of non-tariff barriers, including regulatory protectionism and control of private barriers to entry.
- (b) Encouraging value addition and greater participation in supply/value chain by, for example:
 - (i) Providing policy flexibilities under international trade rules for low-income commodity-dependent countries to provide incentives, including domestic support, temporary exemption from tariff reduction and export aids, for investments in the context of national programmes to diversify commodity production and add value through processing of commodity-based products for export;
 - (ii) Addressing anti-competitive practices within commodity supply/value chains, in particular, by providing support for:
 - a. Voluntary codes of conduct for enterprises;
 - b. National and regional mechanisms to address anti-competitive practices;

- c. Formation of producer associations at the national level;
 - d. Enforcement of international rules on restrictive business practices.
- (c) Removal of infrastructural bottlenecks and tariff and non-tariff barriers to the development of new supply/value chains to dynamic markets in the South and within developing regions.
- (d) *Resources for financing commodity development*
55. Low-income commodity-dependent developing countries need increased support and investments aimed at strengthening the competitiveness of their productive sectors, by, for example:
- (a) Upgrading traditional commodity sectors
(By raising competitiveness and productivity – through reduction in production and transaction costs, improvements in quality and compliance with standards – producers would be able to live with lower prices, and/or to obtain higher prices through quality premiums and specialty market shares.)
 - (b) Diversifying around traditional commodities
(Vertical diversification would allow producing countries to add more value before export and thus retain more income in the local economy.)
 - (c) Diversifying into non-traditional commodities
(Diversifying horizontally into non-traditional commodities or into non-commodity activities and local livelihood products – as a safety net for small and resource-poor commodity producers – can help to reduce or eliminate the economic vulnerability due to dependence on a few primary commodity exports.)
56. Possible actions could include the following:
- (a) Increased official development assistance and aid for trade targeted to help meet adjustment costs of trade reforms and preference erosion, to strengthen productive capacities in commodity sectors and exploit new demand opportunities in dynamic developing markets, to support greater participation in international supply/value chains and diversification efforts through improved capacity to meet standards and other market requirements such as sustainable production and processing systems, and to help build trade-related infrastructure that would relieve supply-side constraints.
 - (b) Facilitated access to investment finance could include mechanisms whereby regional and multilateral financial institutions, sovereign wealth funds and private financial institutions provide incentives to invest in export commodity sectors of low-income developing countries, especially those for which the price outlook is favourable.

2. Actions to harness development gains from the current commodity boom

57. Actions are needed to support the effective utilization by commodity-dependent developing countries of the opportunities offered by higher commodity prices to initiate a process of sustained economic growth and poverty reduction, and to mitigate the detrimental impact of higher energy and food prices on the growth and development prospects of net-energy and -food-importing developing countries.

3. Managing the oil boom

58. From a development perspective, challenges include governments successfully negotiating more beneficial and transparent contracts with oil companies, ensuring that taxes are not evaded and corruption is reduced, managing the macroeconomic challenges created by the boom, managing strategically the use of windfall oil

revenues to diversify the economy and ensure sustainable growth, and dealing with the adverse impact of higher energy costs on the development prospects of oil-importing developing countries.

59. Policy recommendations are provided below.

- (a) at the national level, taking into account the eventual depletion of oil reserves, a three-pronged strategy for successfully managing oil revenues should be considered.
 - (i) A macroeconomic framework aimed at ensuring high rates of prudently invested savings, for example, through a national oil fund, and an effective counter-cyclical policy to stem real exchange rate appreciation and to insulate government expenditure from the volatility of oil price cycles;
 - (ii) A business plan for investing the surplus revenue to enhance productivity and added value, build social and economic infrastructure and human resources, and develop the non-oil productive sectors;
 - (iii) A political and social contract for managing oil revenues, based on democratic participation and transparent economic governance, for example by adhering to the Extractive Industries Transparency Initiative. Oil revenues should be distributed equitably across regions within countries to avoid exacerbating civil strife and conflicts.
- (b) At the international and regional levels, developing countries should be supported to develop their potential for producing biofuel economically to help reduce oil import bills, raise rural incomes and diversify agricultural production. It may also offer improved energy security through diversification of energy sources. As a temporary measure, non-debt-creating compensatory financing facilities should be provided to these countries.

4. Managing the mineral boom

60. From a development perspective, challenges include obtaining a more equitable sharing of revenues between foreign investors and host countries, particularly the windfalls of a boom period; building human resource capacity, through training, for example; supporting economic diversification in mining areas; setting up strong procedures and institutions to improve resource management and integrating artisanal, or small-scale miners into the formal economy.

61. Policy recommendations are provided below:

- (a) At the national level:
 - (i) Take steps to ensure that national benefits increase when prices rise (e.g. through progressive taxation or production sharing agreements);
 - (ii) Support the establishment of better linkages – upstream, downstream and in ancillary services (e.g. local procurement) – between the mining sector and other sectors of the economy;
 - (iii) Target resources deliberately to poverty reduction (e.g. through health, education, social safety nets) and to employment creation (e.g. through incentives and promotion of entrepreneurship, and access to credit).
- (b) At the international level:
 - (i) Provide support to capacity-building and transparency efforts of producing countries for the prevention of anti-competitive behaviour;
 - (ii) Consider mechanisms to ensure that the ongoing concentration of firms in the mining sector does not stifle competition in the sector.

5. Managing the agricultural commodity boom

62. From a development perspective, challenges include ensuring that maximum earnings reach producers, using the investment by producers and governments of windfall revenues to target raising productivity and increasing value addition in addition to the diversification of agricultural sectors in order to reduce vulnerability to price fluctuations, addressing threats to food security arising both from rising food prices and from competition for land and other inputs between food and export crops (including biofuels), and strengthening mechanisms at the national level (e.g. stabilization funds, commodity boards, safety net programmes) to deal with the eventual downside of the price cycle.

63. Policy recommendations are provided below:

- (a) At the national level
 - (i) Turn general declarations of support for agriculture into detailed sectoral and commodity-specific strategies with adequate budgets;
 - (ii) Encourage farmers to adjust their portfolio of export commodities to take advantage of commodities with favourable price outlooks;
 - (iii) Governments with substantial revenues from extractive industries should consider providing support that is compatible with the World Trade Organization to the agricultural sector and producers of tradable crops, including investing boom revenues in infrastructure and services to support farmers – rural roads, electricity, irrigation, extension, technology and research;
 - (iv) Promote national economic diversification by investing windfall revenues in agro-processing activities, increasing value addition and use of by-products;
 - (v) Put in place financial tools adapted to the needs and capabilities of smallholders so that they can raise the capital needed to improve productivity;
 - (vi) Consider establishing stabilization funds as a safety net for commodity producers;
 - (vii) Strengthen agricultural research institutes to facilitate the adoption, adaptation and creation of improved technologies;
 - (viii) Rethink and restructure marketing boards so that they can retain their useful regulatory role and provide effective support services to farmers;
 - (ix) Develop effective systems to improve farmers' access to reliable, accurate and timely market information.
- (b) Support should be given at the international and regional levels for:
 - (i) Value addition and greater participation in supply/value chains through improved market access and entry conditions, including fair competition in these chains;
 - (ii) Capacity-building for compliance with trade standards;
 - (iii) Capacity-building to take advantage of opportunities in dynamic markets of developing countries and within regions;
 - (iv) Joint ventures between countries for value-adding activities, especially within regional groupings;
 - (v) Measures to address the adverse food security impact of higher food prices;
 - (vi) National and regional agricultural research institutes for technology adaptation and development.

C. UNCTAD's contribution to a re-launched agenda on commodities

64. Re-launching the commodity agenda requires not only endorsing the above-mentioned actions, but also committing to a programme of work that expands and refines previous commitments. UNCTAD's contribution should be built on the three pillars of its work: research and analysis, dialogue and policy consensus-building, and technical cooperation.

65. For example, policy-oriented research and analysis in a re-launched agenda on commodities could include studies on ways to facilitate commodity market adjustments, particularly for commodities prone to structural over- or undersupply; identification of best practices for greater participation in commodity value chains, including ways and means of overcoming challenges to increase value addition in specific commodity sectors; best practices in the generation, management and utilization of government revenues from the extractive industries; best practices in energy diversification strategies including the optimal mix of energy sources (e.g. geothermal, solar or biofuels); and best practices regarding the roles of government and public institutions in promoting commodity sector development, for example, productive capacity upgrading, export marketing, managing risks, access to finance, research and development, and extension services; analysis of the policy flexibility required by commodity-dependent countries in the context of rules and disciplines of the World Trade Organization to pursue an active diversification programme; the adjustment needs of commodity-dependent developing countries arising from trade policy reform processes, including the impact of preference erosion and fiscal revenue losses; and non-tariff barriers, including public and private standards affecting commodity exports in raw and processed forms.

66. International dialogue and consensus-building on policy actions required for dealing with commodity problems and issues could focus on ways to integrate commodity policies into national, regional and international development and poverty reduction strategies; on trade-related policies and processes for resolving commodity problems; and on investment and financial policies with respect to official development assistance, aid for trade, compensatory financing schemes and other means of facilitating financial resources for commodity-based development.

67. Priorities in technical cooperation activities could be given to assisting commodity-dependent developing countries in mainstreaming commodity policies into their national and regional development strategies; implementing reforms; moving up value chains; and diversifying commodity sectors; complying with public and private international trade standards; taking advantage of export opportunities arising from new patterns of global demand for commodities; putting in place institutions and procedures to ensure transparency, good governance, fair contracts and fair taxation in extractive industries, and sound management of revenues from depletable natural resources, including investment in infrastructure and human capital development; economically and environmentally sound energy diversification strategy choices, including the use of biofuels, while taking into account domestic food consumption needs; local capacity-building in the management, trade and financing of projects in the extractive industries of developing countries; and the development and implementation of alternative marketing schemes and support systems for small commodity producers, including economically viable safety net programmes.