



**ENABLING THE
GRADUATION OF LDCs:**
ENHANCING THE ROLE OF COMMODITIES
AND IMPROVING AGRICULTURAL PRODUCTIVITY



UNITED NATIONS CONFERENCE ON TRADE AND DEVELOPMENT

**Enabling the Graduation of LDCs:
Enhancing the Role of Commodities and Improving
Agricultural Productivity**



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Abstract

Graduation from the category of least developed countries (LDCs) has always been among the ultimate objectives of the previous three decennial Programmes of Action for LDCs.¹ However, the latest Programme of Action – the Istanbul Programme of Action (IPoA) adopted in May 2011 by the Fourth United Nations Conference on Least Developed Countries (LDC-IV) was the first to include an express, time-bound and concrete objective of enabling least developed countries to meet the criteria² for graduation. In particular, the IPoA set the highly ambitious target that half of the LDCs should be able to meet the graduation criteria by the end of the decade, i.e. that 24 out of the current 48 countries within the LDC group would be eligible for graduation by 2020. The challenge for LDCs and their development partners now is to create an overall enabling policy framework to effectively implement the commitments and actions contained in the Istanbul Programme of Action, including allowing half of the LDCs to meet the graduation criteria by 2020. This is by no means an easy task in itself, given the state of socioeconomic progress in LDCs and, more importantly, the record of graduation to date. Growth in LDCs remains elusive and unsustainable, characterized by excessive shocks to crises with little or no progress in poverty reduction in these countries. In nearly 40 years of existence of the category of LDCs, only three countries have managed to exit the group: Botswana (in 1994), Cape Verde (in 2007) and the Maldives (in 2011).

The present study, which is the outcome of ongoing work by the UNCTAD secretariat on LDCs, assesses the challenges, opportunities and prospects for meeting the criteria for graduation, particularly by enhancing the role of commodities and improving agricultural productivity. It contains a synthesis of several case studies on sectoral and thematic issues of strategic significance to LDCs and provides policy analysis together with recommendations for action at the national, regional and international levels. The study is, therefore, expected to advance ongoing deliberations on issues of LDCs, including graduation, by the Trade and Development Board of UNCTAD and other relevant bodies of the United Nations system.

Key Words

UNCTAD, graduation, LDCs, commodities, food security, Istanbul Programme of Action

¹ The Substantial New Programme of Action for LDCs for the 1980s, the Paris Programme of Action for the 1990s and the Brussels Programme of Action for the Decade 2001–2010.

² Graduation from the list of LDCs is based on a systematic review and assessment of socioeconomic progress of least developed countries based on three criteria: per capita income and two composite indices (Human Asset Index and Economic Vulnerability Index)

Background

As part of its ongoing work in assessing the most pressing trade and development challenges facing the least developed countries, the Division³ for Africa, LDCs and Special Programmes of UNCTAD developed and implemented a project titled “Economic Crises and Commodity-Dependent LDCs: Mapping the exposure to market volatility and building resilience to future crises”.

The International Coffee Organization (ICO) participated in the project as sponsoring International Commodity Body (ICB), while a financial contribution to project implementation came from the Common Fund for Commodities (CFC), to which the UNCTAD secretariat wishes to express its sincere gratitude and appreciation.

The project assisted in undertaking case studies in selected countries⁴ in Africa and Asia with the objectives of (a) closely examining the role of commodities and agricultural productivity in contributing to the graduation objective of the Istanbul Programme of Action (IPoA) for LDCs for the decade 2011–2020; (b) assessing the structural weakness, excessive fragility and vulnerability to shocks of the economies of LDCs; and (c) reviewing and documenting the challenges arising from volatility of the commodities markets and the recent global economic, financial and food crises on LDCs’ prospects for meeting internationally agreed goals, including those contained in the IPoA .

As part of the project and with the aim of sharing successful and less successful experiences as well as best practices among LDCs and their development partners, a Special Event⁵ on Commodity Dependence and the Impact of the Multiple Global and Economic Crises on LDCs was held during the Fourth United Nations Conference on Least Developed Countries (LDC-IV), which took place in Istanbul (Turkey) in May 2011. The project also assisted in the organization of the meeting of LDC experts and trade negotiators in Addis Ababa (Ethiopia) from 27 February to 1 March 2012. The expert meeting deliberated on key issues of strategic interest to LDCs, with an emphasis on the challenges, opportunities and prospects for graduation. The event was part of the preparatory process for the Thirteenth Session of the United Nations Conference on Trade and Development (UNCTAD XIII), which was held in Doha (Qatar) in April 2012.

The present study, which is the final product of the project, is intended to serve as background documentation for the Fifty-ninth Session of the Trade and Development Board of UNCTAD and other relevant forums, dealing with issues related to the implementation of the Istanbul Programme of Action for LDCs.

³ The project team consisted of Mussie Delelegn (Economic Affairs Officer), Jean-Claude Mporamazina (Economic Affairs Officer) and Michael Bratt (consultant). Ms Jo Butler (Deputy Director) and later, Mr. Tesfachew Taffere, Director of the Division, provided overall supervision and guidance for the implementation of the project. Secretarial and administrative support to the project were provided by Corazon Alvarez, Sylvie Guy, Paulette Lacroix and Regina Ogunyinka

⁴ Countries covered by the project include Benin, Burundi, Mali, Tanzania and Zambia from Africa and Cambodia, Lao PDR and Nepal from the Asian region. The case studies can be accessed and downloaded at the UNCTAD website: www.unctad.org.

⁵ The outcome of the Special Event in the form of policy conclusions and recommendations, which fed into the outcome document of LDC-IV, is available at www.unctad.org.

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Abbreviations

ADS	Agriculture Development Strategy (Lao PDR)
ASDP	Agriculture Sector Development Programme (United Republic of Tanzania)
BPoA	Brussels Programme of Action
CAADP	Comprehensive Africa Agriculture Development Programme
COMESA	Common Market for Eastern and Southern Africa
CPIA	Country Policy and Institutional Assessment
DES	Dietary energy supply
EAC	East African Community
ECOWAS	Economic Community of West African States
EIF	Enhanced Integrated Framework for Trade-related Technical Assistance for LDCs
EITI	Extractive Industries Transparency Initiative
EU	European Union
EVI	Economic Vulnerability Index
FAO	Food and Agriculture Organization (of the United Nations)
FCFA	Franc de la Communauté Française d’Afrique (CFA franc)
FDI	Foreign direct investment
FEWS NET	Famine Early Warning Systems Network
FRA	Food Reserve Agency (Zambia)
GDP	Gross domestic product
GIEWS	Global Information and Early Warning System
GHI	Global Hunger Index
GNI	Gross national income
HAI	Human Asset Index
HLTF	High-Level Task Force on the Global Food Security Crisis
IFAD	International Fund for Agricultural Development
IITA	International Institute of Tropical Agriculture
ILO	International Labour Organization
IMF	International Monetary Fund
IPoA	Istanbul Programme of Action
LDC	Least developed country
LDC-IV	Fourth United Nations Conference on the Least Developed Countries
LIFDC	Low-income food-deficit country
MDG	Millennium Development Goal
NAFRI	National Agriculture and Forestry Research Institute (Lao PDR)
ONASA	Office National d’Appui à la Sécurité Alimentaire (Benin)
PDS	Public Distribution System (India)
SOE	State-owned enterprise
SONAPRA	Société Nationale de Promotion Agricole (Benin)
SRI	System of rice intensification
TIC	Tanzania Investment Centre
UN	United Nations
UNCTAD	United Nations Conference on Trade and Development
UNICEF	United Nations Children’s Fund
WFP	World Food Programme
WTO	World Trade Organization

Introduction

The Fourth United Nations Conference on Least Developed Countries (LDC-IV) took place in Istanbul (Turkey) in May 2011 and adopted the Istanbul Programme of Action (IPoA) for LDCs for the Decade 2011–2020. The Conference was a continuation of the previous three decades’ efforts of the United Nations aimed at building global consensus on the pressing development challenges and priorities of the least developed countries (LDCs) as well as mobilizing national actions and international support measures to address the challenges. As with the previous conferences, LDC-IV adopted a new programme of action with an overarching objective “to overcome structural challenges faced by the least developed countries in order to eradicate poverty, achieve internationally agreed development goals and enable graduation from the least developed countries category” (paragraph 27). Simply put, LDC-IV provided yet another opportunity for LDCs and their development partners for an increased and renewed global partnership to substantially improve socioeconomic progress in LDCs and to ensure their progressive and beneficial integration into the global economy. Its success, however, will be judged not only by whether the noble objectives and goals set out in the IPoA are attained but also by the extent to which such national and international efforts lead, on a sustainable basis, to an improvement in the overall well-being and aspirations of their population and subsequent generations.

From past experience, the success of several specific initiatives and the various programmes of action in favour of LDCs remains mixed at best and falls short of expectations at worse. Consequently, extreme poverty in these countries remains widespread and generalized, affecting a large proportion of their population; economic growth continues to be uneven, fragile and vulnerable to shocks; their trade share of world trade is marginal or negligible with their exports heavily dependent on one or two primary products, as a result of which their marginalization in the global economy continues unabated. LDCs remain in a dismal condition despite their improved growth performance, especially during the 2002–2008 period, when they registered, as a group, a GDP growth rate of 7.1 per cent, which is above the growth rate of 7 per cent agreed in the previous Programme of Action. Even with a fragile global recovery, in 2010, the growth rate in LDCs as a whole went up to 5.7 per cent from 4.6 per cent in 2009. As UNCTAD has been consistently arguing for some time, the challenge for LDCs has always been that their growth trajectory has not been complemented by productive capacity-building, structural change/transformation, value addition and employment creation. As a result, they lag behind other developing countries, especially in meeting MDGs.

The question is how can as many LDCs as possible graduate from the LDC category, given the immense socioeconomic challenges facing them, especially in the face of excessive fragility and vulnerability to shocks of their growth performance? In response to the above-cited question and as part of its ongoing work on LDCs, UNCTAD developed a project entitled “Economic Crises and Commodity-dependent LDCs: Mapping the exposure to market volatility and building resilience to future crises”.

The present publication, which is the outcome of the project, argues that the boom-bust cycle of the 2000s showed in stark terms that natural resources play a crucial role in LDCs’ economic growth, poverty reduction and food security. After all, commodities accounted for four-fifths of LDCs’ goods exports during 2007–2009, with the share of commodities exceeding 50 per cent in 38 countries. On the one hand, the boom period was primarily driven by surging demand for commodities, particularly minerals and fuels. On the other hand, the triple-F crises (fuel, food and financial) exacerbated the vulnerability of LDCs and recalled the group’s overreliance on the export of a few primary commodities and on the vagaries of commodity prices. In this regard, the publication articulates the dangers of excessive dependence of LDCs’ exports on a few commodities where some five product groups dominate the export earnings of these countries during the 1995–2010 period.

The publication consists of four broad chapters. The first chapter sets an analytical construct (framework) for meeting the graduation objective, with a succinct analysis of the challenges, opportunities and prospects vis-à-vis the established criteria for graduation. The second chapter provides evidence-based analysis on the impact of the recent multiple global crises on commodity-dependent LDCs, including at household level, together with policy responses. Chapter three examines the food security situation in LDCs in the light of the precipitous decline in agricultural productivity and the immense shock which people in LDCs experienced as a result of the recent global surge in food prices. Finally, chapter four provides policy conclusions and recommendations on how LDCs can realize the potential of their commodities sector to become a lever for the development and structural transformation of their economies.

The findings and policy conclusions contained in the present publication are consistent and converge fully with UNCTAD's earlier work on LDCs and proposal for a New International Development Architecture (NIDA)⁶ for LDCs. NIDA considers commodities as an integral part of a forward-looking agenda to shape international economic relations and partnership in support of the development efforts of LDCs. To reverse the decline in socioeconomic conditions in LDCs and put them on the path of sustained economic growth and development as well as to expedite their exit from the category of LDCs, a paradigm shift in development policies and strategies is needed. Such a shift should consist of at least four pillars: (i) building productive capacities, including science, technology, innovation and knowledge systems, with a focus on economic diversification, value addition and job creation; (ii) scaling up international support mechanisms in favour of LDCs; (iii) effectively addressing climate change challenges, low agricultural productivity and persistent food insecurity; and (iv) improving the quality of domestic policies and their implementation in these countries. The four pillars, which imply the need for a radical shift in development partnerships and fundamental changes in the design and execution of domestic policies, are considered as key for LDCs to make a significant leap forward and to meet the graduation criteria by 2020. The shift should include an expanded partnership that goes beyond aid and market access; the enhancement of LDCs' trading opportunities; stronger support for domestic resource mobilization; the ability of LDCs to attract and make use of private capital inflows, the building of technological capabilities, innovation and know-how; and the importance of LDCs for designing their own graduation plan or strategy.

⁶ For more details, see *The Least Developed Countries 2010 Report: Towards a New International Development Architecture for LDCs*.

Chapter 1: Graduation of LDCs in the 2010s: Setting the bar high

“(…)

The overarching goal of the Istanbul Programme of Action for LDCs for the decade 2011–2020 is to overcome the structural challenges faced by the least developed countries in order to eradicate poverty, achieve internationally agreed development goals and enable graduation from the least developed country category.

Guided by the overarching goal, national policies of least developed countries and international support measures during the decade will focus on the following specific objectives with the aim of enabling half the number of least developed countries to meet the criteria for graduation by 2020:

(…)”⁷

At the Fourth United Nations Conference on the Least Developed Countries (LDC-IV), Member States adopted a Programme of Action that, for the first time, included an express, time-bound and concrete objective of enabling least developed countries (LDCs) to meet the criteria for graduation. In particular, the Istanbul Programme of Action (IPoA) set the highly ambitious target that half of the LDCs should be able to meet the graduation criteria by the end of the decade, i.e. that 24 out of the current 48 countries with LDC status would be eligible for graduation by 2020.

At the Thirteenth United Nations Conference on Trade and Development (UNCTAD XIII), held in Doha (Qatar) from 21–26 April, member States called on UNCTAD to “Continue to monitor progress of LDCs towards graduation thresholds with a view to identifying challenges ahead for action at national and international levels in coordination with the Office of the High Representative for the Least Developed Countries, Landlocked Developing Countries and Small Island Developing States”. They also requested UNCTAD to “assist LDCs to face the challenges of graduation from the LDC category, including strategies for facilitating smooth transition, a clear understanding of the post-graduation environment, better focus of efforts on promoting their development, and creating suitable and robust economic and legal frameworks and institutional capacity in the field of trade and investment”.⁸

The immensity of the challenge of enabling half of the current 48 LDCs to meet the graduation criteria by 2020 is clear enough when one considers that only three LDCs have graduated to date: Botswana in 1994, Cape Verde in 2007 and the Maldives in 2011. Furthermore, even taking into account the fact that Samoa is slated to graduate in 2014⁹ and that Equatorial Guinea, Kiribati, Tuvalu and Vanuatu have been found eligible for graduation at least once before, it means that 19 LDCs should achieve in less than a decade what 8 LDCs have managed in over 15 years.

The challenge is none the easier in view of the continued sluggish world economy and, in particular, the economic woes afflicting developed countries. Based on projections by the International Monetary Fund (IMF), UNCTAD (2011a) forecasts that the annual average real gross domestic product (GDP) growth rate of LDCs as a group during 2009–2016 will be 5.8 per cent. This would be below both the 7.1 per cent achieved during 2001–2008 and the IPoA economic growth target of at least seven per cent per annum during the present decade.

⁷ Paras 27–28 of the Programme of Action for the Least Developed Countries for the Decade 2011–2020.

⁸ Paragraph 41 “o” and 41 “p” of the Doha Mandate

⁹ The initial date of December 2010 was postponed due to the devastating effects of the Pacific Ocean tsunami in 2009.

The lower expectations of LDCs reaching the seven per cent per annum target are also reflected at more disaggregate levels. At the regional level, UNCTAD has forecast that the aggregate GDP of the group comprising African LDCs and Haiti will expand by 5.8 per cent on an annual basis during 2009–2016. Asian LDCs are predicted to post annual average growth of 5.9 per cent between 2009 and 2016, whereas island LDCs are forecast to grow by 5.0 per cent during the same period.¹⁰ At the country level, the economies of 10 LDCs are forecast to expand by an average of seven per cent or more on an annual basis between 2009 and 2016, compared with 14 LDCs that grew at this rate during the preceding eight-year period.

Thus, from the perspective of the seven per cent growth target, the prospect of a large number of LDCs being able to meet the graduation criteria seem bleak indeed. It does not appear much better from the viewpoint of the official LDC graduation criteria (see Box 1 for a summary of the criteria).

The criterion that is closely related to the seven per cent growth target is the gross national income (GNI) per capita criterion. At the 2009 triennial review of the list of LDCs, the Committee for Development Policy of the United Nations Economic and Social Council set the graduation threshold for this criterion at \$1,086. Assuming that the threshold does not change, UNCTAD (2011a) analyses LDCs' prospects for meeting the GNI per capita criterion by 2020. It finds that 11 LDCs have already fulfilled the criterion, of which six are island LDCs, four are African LDCs and one is an Asian LDC.¹¹ Another seven LDCs would meet the criterion by 2020 if the annual average growth rate forecast for 2009–2016 were to apply to the present decade (the group being composed of four African LDCs, two Asian LDCs and one island LDC). However, 28¹² LDCs would not be able to reach the threshold by 2020 in this scenario, of which 22 are African LDCs, four are Asian LDCs, one is an island LDC and one is a Caribbean LDC. The median number of years needed for this group to fulfil the criterion is estimated at 28.5 years, with a minimum of 10.2 years and a maximum of 112.1 years.¹³

Another criterion concerns human assets. The graduation threshold for this Human Asset Index (HAI) criterion was set at the value of 66 in the 2009 triennial review of the list of LDCs. Excluding the recently graduated Maldives, six LDCs were at or in excess of this value in the review (five island LDCs and one Asian LDC). The median value was 42.6, which was higher than the median value of 40.2 in the 2006 triennial review (albeit the graduation threshold at that review was set at 64). This suggests that there has been a slight improvement in the HAI of LDCs in the recent past, but that a large number of them are far from meeting the HAI criterion.

A third criterion relates to economic vulnerability. The graduation threshold for this Economic Vulnerability Index (EVI) criterion was set at the value of 38 in the 2009 triennial review. Eight LDCs met this criterion, of which five are African LDCs and three are Asian LDCs. This was twice as many as in the preceding review, when two African LDCs and two Asian LDCs reached the graduation threshold. The median value in the 2009 review was 52.0, which was marginally higher than the median of 51.4 found in the 2006 review. Hence, LDCs' economic vulnerability actually diminished ever so slightly between the two reviews.

¹⁰ Unless otherwise specified, the quasi-regional classification of LDCs in this paper follows that of UNCTADstat, where island LDCs are comprised of Comoros, São Tomé and Príncipe, and Timor-Leste in addition to the five Pacific Island LDCs.

¹¹ The 11 countries are Angola, Bhutan, Djibouti, Equatorial Guinea, Kiribati, Samoa, São Tomé and Príncipe, Sudan, Timor-Leste, Tuvalu and Vanuatu.

¹² There are no IMF forecasts for two of the countries – Afghanistan and Somalia. Hence, no projection of their fulfilment of the GNI per capita criterion could be made.

¹³ This excludes Yemen, which is forecast to register a negative average annual growth rate during 2009–2016.

Box 1. Graduation and its three criteria

The two common denominators among LDCs, since the creation of the category in 1971, have been low per capita incomes and structural weaknesses. For this reason, three distinct aspects of development have been assessed since the establishment of the LDC category: income, human resources and economic structure. These three basic criteria continue to provide the foundation for determining whether a country is least developed, but the number of indicators has gradually expanded as a result of a greater understanding of the conditions of LDCs and the challenges they face as well as better data availability. Thus, the three indicators used in the first review had grown to 13 indicators by 2011. More specifically, the most recent assessment of whether a country should be included among the LDCs or if a country is eligible to graduate from the LDC status was based on the following criteria and indicators (the ratios in parentheses refer to the weights given to the various indicators within each criterion):

- GNI per capita.
- Human Asset Index (HAI):
 - Percentage of population undernourished. (1/4)
 - Under-five mortality rate. (1/4)
 - Gross secondary enrolment ratio. (1/4)
 - Adult literacy rate. (1/4)
- Economic Vulnerability Index (EVI):
 - Population. (1/8)
 - Remoteness. (1/8)
 - Merchandise export concentration. (1/16)
 - Share of agriculture, forestry and fisheries in GDP. (1/16)
 - Share of population in low elevated coastal zones. (1/8)
 - Victims of natural disasters. (1/8)
 - Instability of agriculture production. (1/8)
 - Instability of exports of goods and services. (1/4)

LDCs can become eligible for graduation in one of two ways: by meeting two of the three basic criteria or by achieving a GNI per capita that is at least double the graduation threshold levels (there is also the third, voluntary, option whereby an LDC unilaterally decides to withdraw from the group). Under normal conditions, an LDC cannot graduate from the group before it has been eligible for graduation at two consecutive triennial reviews. The reviews, as well as the establishment of the criteria (and their subcomponents) for the identification of LDCs, are carried out by the Committee for Development Policy – a subsidiary body of the United Nations Economic and Social Council. The most recent review took place in March 2012.

It might be instructive to look at the progress of LDCs against some of the indicators of the Millennium Development Goals (MDGs), since a few of them are similar, if not identical, to some of the indicators used to determine LDC status. In fact, the four HAI indicators correspond, to a greater or lesser extent, to the MDG indicators included in the following targets: halving the proportion of people who suffer from hunger (Target 1.C); ensuring primary schooling (Target 2.A); and reducing the under-five mortality rate (Target 4.A). UNCTAD (2010) reports progress on several MDG indicators, with the development concerning the following three being particularly relevant:

- Proportion of undernourished population: 21 LDCs are on track to meet this indicator (12 African LDCs, five island LDCs and four Asian LDCs), four are making medium

progress, four are making low progress, and 14 are experiencing reversal/stagnation (11 African LDCs, two island LDCs and one Asian LDC).¹⁴

- Net enrolment ratio in primary education: 20 LDCs are on track to meet this indicator (13 African LDCs, five island LDCs and two Asian LDCs), 11 are making medium progress (eight African LDCs and three Asian LDCs), five are making low progress and five are experiencing reversal/stagnation.¹⁵
- Under-five mortality rate: 14 LDCs are on track to meet this indicator (five African LDCs, five Asian LDCs, three island LDCs and Haiti), 13 are making medium progress (12 African LDCs and one island LDC), 14 are making low progress (10 African LDCs, two Asian LDCs and two island LDCs), and seven are experiencing reversal/stagnation.¹⁶

As a side note, it might be worth pointing out that, in terms of export concentration, there does not seem to be any particular group that is progressing faster or slower than others. For instance, oil and mineral exporters do not, at least at first sight, appear to be more or less likely to meet these indicators than LDCs specialized in other types of export.

In sum, the outlook for LDCs' economic growth for the next five years amid a challenging global economic climate and the recent performance of LDCs against the HAI and EVI criteria do not provide much grounds for optimism for enabling LDCs to meet the criteria for graduation by 2020. That said, when UNCTAD (2000) looked into the crystal ball to estimate when LDCs would reach \$900 per capita based on growth rates of 1990–1998, it found that four¹⁷ LDCs out of 40 would manage to do so by 2015. In the event, seven of those 40 LDCs had reached that target by 2010. Some encouragement can therefore be had from the performance of LDCs during the 2000s.

1.1. The boom-bust decade of the Brussels Programme of Action

The overarching goal of the precursor of the IPoA – the Brussels Programme of Action (BPoA) – was “to make substantial progress toward halving the proportion of people living in extreme poverty and suffering from hunger by 2015 and promote the sustainable development of the LDCs” (para 6). To this end, it set the specific GDP growth target of at least seven per cent per annum and the objective of raising the ratio of investment-to-GDP to 25 per cent. The BPoA also made it explicitly clear that it was based on international development targets, including those of the Millennium Declaration.

Ten years later, the IPoA gave a mixed assessment of the progress made during the BPoA. Among the positive points, it found that “[e]conomic and social development was better during the implementation of the Brussels Programme of Action than during the previous decade, despite large differences among individual least developed countries” (para 15). The IPoA also stated that the LDCs had “made some progress towards reaching the Millennium Development Goals” and towards good governance (paras 16-17)

On the negative side, however, the IPoA asserted that, notwithstanding the positive role of the BPoA in furthering the development of LDCs, “the specific goals and actions of the Brussels Programme of Action have not been fully achieved” (para 18). The specified failures included “a limited impact on employment creation and poverty reduction” despite the better

¹⁴ The 21 LDCs on track are Angola, Bangladesh, Benin, Burkina Faso, Cambodia, Chad, Djibouti, Ethiopia, Kiribati, Lao PDR, Malawi, Mali, Mauritania, Mozambique, Myanmar, Niger, Samoa, São Tomé and Príncipe, Solomon Islands, Sudan and Vanuatu.

¹⁵ The 20 LDCs on track are Benin, Bhutan, Burundi, Comoros, Ethiopia, Kiribati, Liberia, Madagascar, Malawi, Mali, Mozambique, Nepal, Rwanda, Samoa, São Tomé and Príncipe, Togo, Uganda, United Rep. of Tanzania, Vanuatu and Zambia.

¹⁶ The 14 LDCs on track are Bangladesh, Bhutan, Eritrea, Ethiopia, Haiti, Kiribati, Lao PDR, Malawi, Mozambique, Nepal, Niger, Samoa, Timor-Leste and Yemen.

¹⁷ Excluding the already graduated Cape Verde and Maldives.

economic performance of some LDCs; very limited structural transformation in many LDCs; and persistent “vulnerability to external shocks” (para 18).

The broad conclusions reached in the IPoA’s review of the implementation and progress of the BPoA are consistent with those highlighted in other analyses of how LDCs fared during the 2000s, and the reader is referred to these studies for a fuller account of this performance.¹⁸ For the present purposes, it is nonetheless useful to summarize some of the key developments of LDCs during the past decade.

The target of achieving an annual average real GDP growth rate of seven per cent was discussed above with respect to current trends and the outlook for the future. As for the decade of the BPoA, the group of LDCs grew by 7.0 per cent per annum on average and thus managed to reach the objective that had been defined in the outset. African LDCs and Haiti as well as Asian LDCs both enjoyed strong growth at 7.0 per cent and 6.9 per cent, respectively, whereas island LDCs achieved slower growth at 5.7 per cent.

As is always the case, aggregation masks heterogeneity and the majority of LDCs (32 countries) did not, as a matter of fact, achieve the seven per cent growth target. The median average annual GDP growth rate stood at 5.1 per cent, with the lowest being a contraction of 0.3 per cent and the highest being a rapid 15.2 per cent.

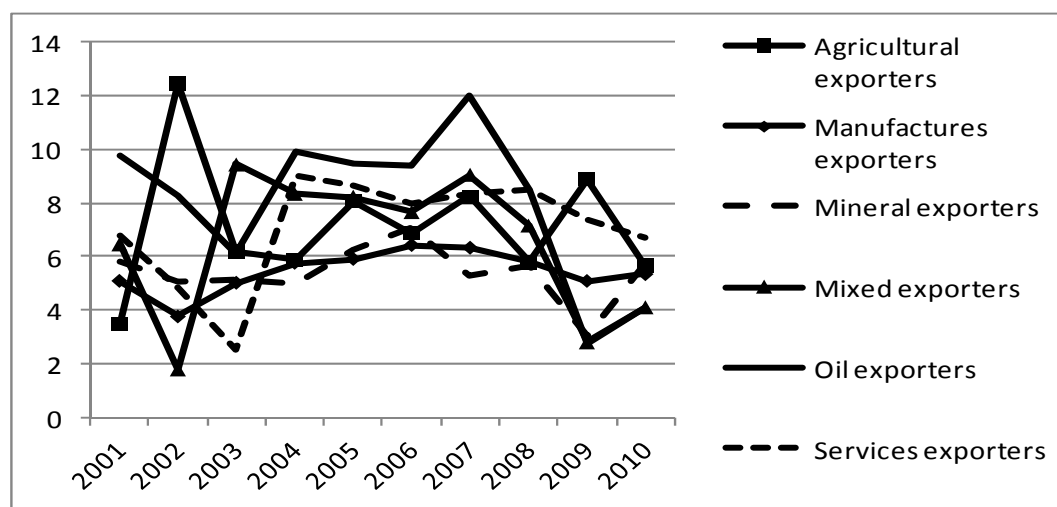
Looking at LDCs’ performances on the basis of export specialization can be informative, as it emphasizes the extent to which the growth was driven by commodity-exporting countries, in particular oil-exporting LDCs. Figure 1 shows the trends of different groups of LDCs classified according to their main exports.¹⁹ Oil-exporting LDCs clearly enjoyed particularly robust growth and constituted the fastest-growing group of countries for six of the ten years. During 2001–2010, they saw their economies expand at an average of 8.4 per cent per annum. Perhaps surprisingly, the group of LDCs specialized in mineral exports achieved the slowest growth over the whole period, at an annual average of 5.5 per cent. Exporters of manufactures experienced slightly faster growth at 5.7 per cent per year, whereas the economies of services exporters, agricultural exporters and mixed exporters all expanded by more than seven per cent per annum on average.

The trends depicted in Figure 1 also serve to illustrate the familiar boom-bust cycle of the 2000s, whereby many LDCs experienced an economic boom from 2002 until the outbreak of the global financial crisis and a subsequent slowdown in economic growth. During the boom years of 2002–2008, LDC economies expanded at an annual average of 7.5 per cent, whereas their growth stood at 4.6 per cent and 5.1 per cent, respectively, in 2009 and 2010. As expected, oil- and mineral-exporting LDCs were the two groups hardest hit by the global financial crisis. Still, LDCs fared relatively well in its aftermath when compared with the rest of the world, as world output contracted by 2.0 per cent in 2009 and expanded by 3.9 per cent in 2010. In fact, LDCs as a group grew faster than both developed and other developing countries in 2009.

¹⁸ See, for instance, Chapter 1 in UNCTAD (2010a) and Chapter 1 in UNCTAD (2011a).

¹⁹ The classification is taken from UNCTAD (2010a), which has grouped the LDCs “according to which category accounts for at least 45 per cent of the total exports of merchandise goods and services in 2003–2005” (p. xv).

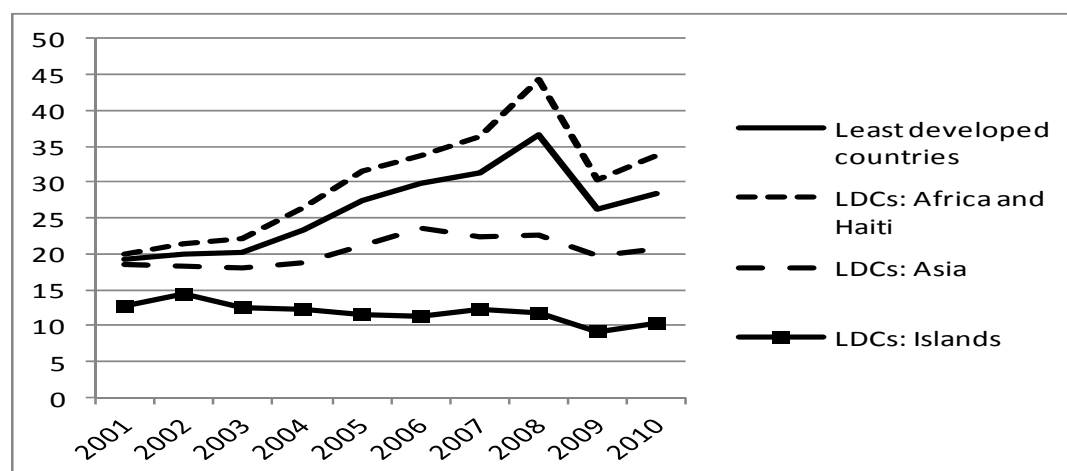
Figure 1. Annual average real GDP growth of LDCs by export specialization, 2001–2010
(per cent)



Source: UNCTADstat.

The boom-bust cycle is evident in a number of other indicators than GDP growth rates. Perhaps the starkest visual depiction of the ups and downs of the previous decade can be observed from the evolution of exports (Figure 2). Even taking GDP into account, the figure shows a clear contrast between the boom years in the run-up to the global financial crisis and the subsequent plunge in exports, especially with respect to the African LDCs and Haiti group.

Figure 2. The share of merchandise exports to GDP in LDCs by quasi-regional group, 2001–2010
(per cent)

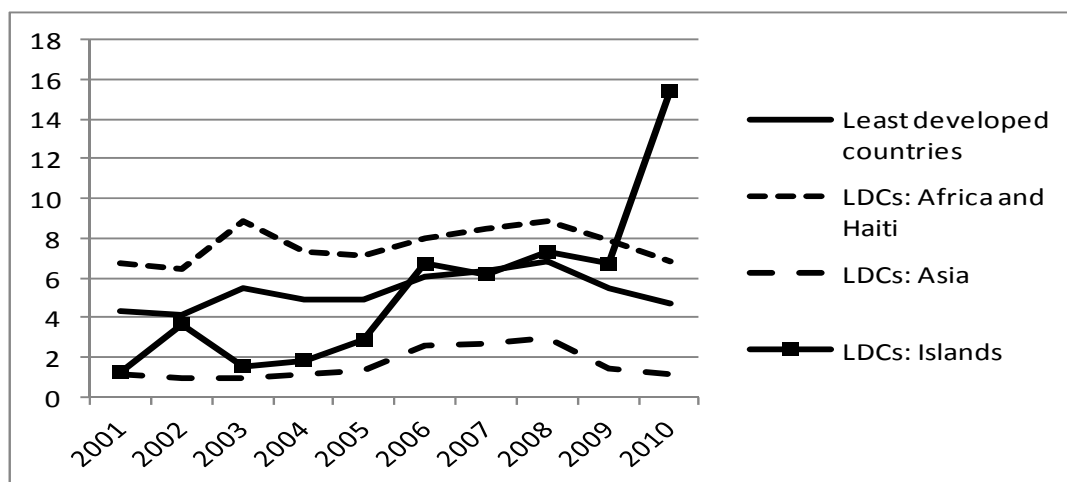


Source: UNCTADstat.

Foreign direct investment (FDI) flows to LDCs similarly followed a boom-bust pattern in the 2000s, with the FDI-to-GDP ratio gradually rising to 6.8 per cent in 2008 before falling to 4.7 per cent in 2010, which was only slightly higher than at the start of the decade (Figure 3). Interestingly, although the group comprising African LDCs and Haiti and the group of

Asian LDCs both displayed clear trends of rise and fall in investment flows, island LDCs were only moderately affected by the shock of the global financial crisis in 2009 and saw their share of FDI flows to GDP surge to 15.4 per cent in 2010.

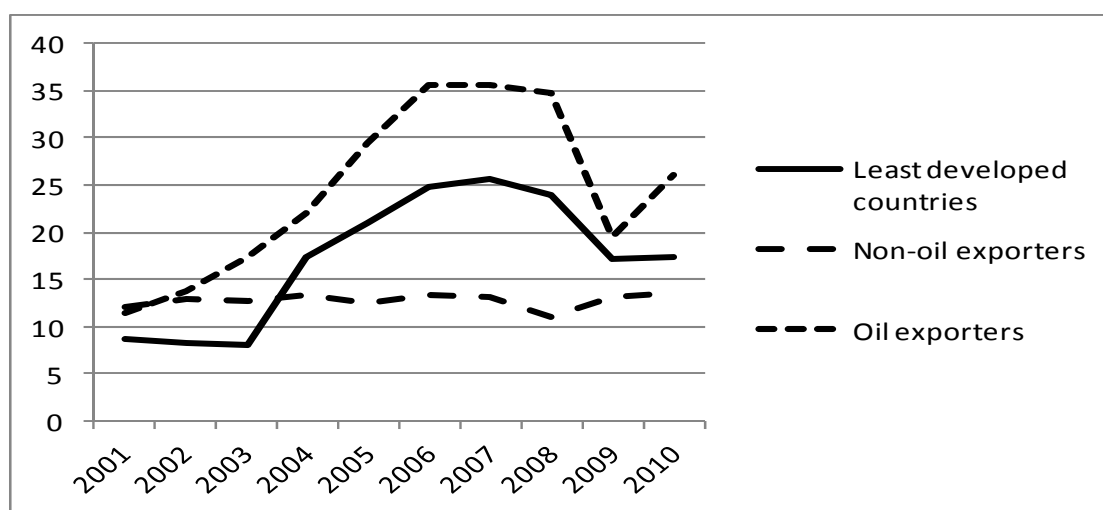
Figure 3. The share of FDI flows to GDP in LDCs by quasi-regional group, 2001–2010 (per cent)



Source: UNCTADstat.

The importance of natural resources, in particular oil, in driving the performance of LDCs is evident in Figure 4, which shows gross domestic savings in LDCs in 2001–2010. Clearly, the aggregate picture for LDCs as a group mimicked to a great extent the reversed U-curve displayed by oil-exporting LDCs. The evolution of gross domestic savings in non-oil-exporting LDCs, by contrast, was fairly flat during the decade.

Figure 4. The share of gross domestic savings in GDP in LDCs, 2001–2010 (per cent)



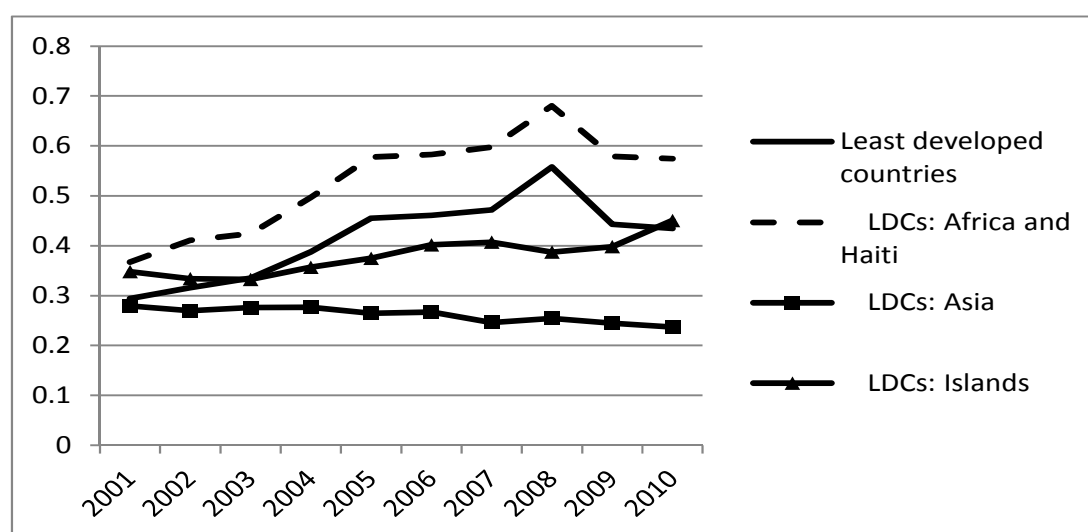
Source: World Development Indicators, World Bank.

The continued low level of gross domestic savings in most LDCs, as depicted in Figure 4, is one indication that the strong growth enjoyed by LDCs as a group was not accompanied by any significant productive capacity-building. In fact, UNCTAD reaches the conclusion that

the “productive structure of the LDCs has remained static, even during the high economic growth of the 2000s”.²⁰

The weak development of productive capacities went hand in hand with the lack of structural transformation in LDCs during the decade of the BPoA. The share of industry in total value added in LDCs as a group did rise from 25.1 per cent in 2001 to 30.9 per cent in 2009, overtaking the share of agriculture in the process (in 2004). However, this trend was to a large extent driven by the minerals and fuels sectors, with the share of manufactures virtually flat throughout the decade. Given this development, it is not surprising that employment creation in the 2000s lagged behind GDP growth, since the hard commodity sectors are capital-intensive rather than labour-intensive.

Figure 5. Export concentration index in LDCs, 2001–2010
(0 = minimum concentration, 1 = maximum concentration)



Source: UNCTADstat.

Another negative development during the previous decade was that LDCs became increasingly reliant on a limited number of exports. There was an overall rise in the export concentration of LDCs, as the value for the group as a whole climbed from 0.29 in 2001 to 0.43 in 2010.²¹ As indicated in Figure 5, this trend was driven by African LDCs. The export concentration of island LDCs also rose during the decade, while that of Asian LDCs declined. A country-level analysis reveals that the evolution of export concentration among the LDCs was evenly split, as half of them experienced decreasing concentration and the other half experienced increasing concentration.

1.2. The role of commodities in LDCs’ development

A common thread running through the experiences of LDCs during the previous decade is commodities. The ups and downs seen by the LDCs as a group were inextricably linked to their natural resources and the various impacts that the triple-F crises (fuel, food and financial) had on these. The importance of addressing the issue of commodities in order to enhance the prospects of enabling LDCs to meet the criteria for graduation cannot, therefore, be stressed enough, especially in view of the fact that the commodity dependence of LDCs may have actually increased in the 2000s.

²⁰ See UNCTAD (2011a) P. 36.

²¹ The values of the export concentration index lie between 0 and 1, with a higher value signifying greater concentration.

Moreover, current global trends, such as an increasingly greater role of the South and what some perceive as an era of higher commodity prices,²² would mean that many LDCs are presented with an opportunity to build on their natural resource riches to boost productive capacities and promote structural transformation. At the same time, these possible trends imply that LDCs are faced with a threat of becoming increasingly commodity-dependent and vulnerable to external shocks. LDCs thus find themselves at a juncture, where the extent to which lessons from the boom-bust decade of the BPOA are drawn and translated into actions will determine how well the countries are able to “[a]chieve sustained, equitable and inclusive economic growth”.²³

The next two chapters investigate the role of commodities in LDCs in order to shed light on the opportunities and threats associated with natural resources. Chapter 2 focuses on the evolution and nature of the commodity dependence of LDCs as well as on the impact that the global crises of the past decade have had on LDCs, especially in the context of commodities. Chapter 3 turns the spotlight on one particular aspect of commodities: food security. In particular, it focuses on the issue of food security in LDCs in view of recent food crises. Both chapters draw on available literature as well as on case studies that have been commissioned by UNCTAD. The case studies focused on how six LDCs were affected by the recent global crises, particularly from a commodity perspective.²⁴ A final chapter concludes the study by highlighting the role of commodities in leveraging development and structural transformation in LDCs.

²² See, for instance, Dobbs et al. (2011).

²³ United Nations, 2011a, para. 28(a)

²⁴ Benin, Burundi, Cambodia, Nepal, Tanzania and Zambia.

Chapter 2: The global crises and the commodity dependence of LDCs

2.1. Introduction

The boom-bust cycle of the 2000s showed in stark terms that natural resources play a crucial role in LDCs' economic growth, poverty reduction and food security. On the one hand, the boom period was primarily driven by surging demand for commodities, particularly minerals and fuels. On the other hand, the triple-F crises (fuel, food and financial) exacerbated the vulnerability of LDCs and recalled the group's overreliance on the export of a few primary commodities and on the vagaries of commodity prices. No wonder, then, that the significant role of commodities is reflected in UNCTAD's proposal for a New International Development Architecture, which highlights commodities as one of five key pillars in a forward-looking agenda to shape international economic relations.²⁵

2.2. The commodity dependence of LDCs

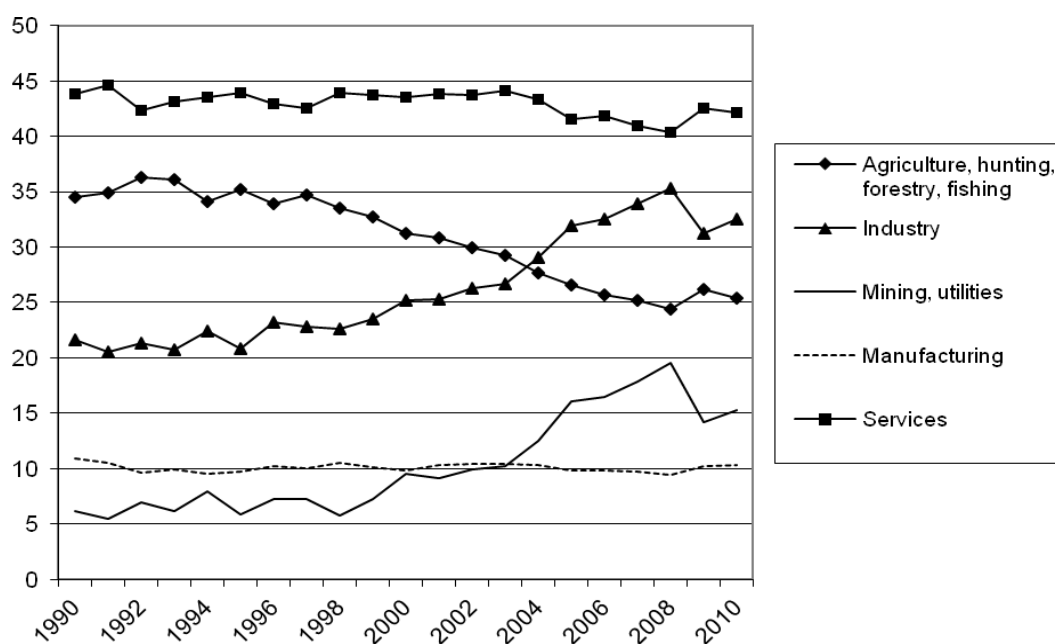
It would be an understatement to say that the economic performance of LDCs as a group relies heavily on commodities. After all, commodities accounted for four-fifths of LDCs' goods exports during 2007–2009, with the share of commodities exceeding 50 per cent in 38 countries. What is more, there are indications that LDCs have become even more dependent on commodities over the past decade. This section takes a closer look at this dependence and how it has evolved in recent years.

Extractive industries have become increasingly important in terms of value added...

Figure 6 shows the sectoral contributions to total value added in all LDCs during the period 1990–2010. It depicts the share of agriculture, industry and services as a percentage of GDP as well as that of two industrial subsectors – the manufacturing sector and the mining and utilities sector. Four things are worth highlighting with respect to these sectors' shares and trends. First, services have been the largest sector throughout the period, with a share that has remained fairly stable at a little below 45 per cent. Second, agriculture has experienced a general decline since the late 1990s, whereas the opposite was true for industry: in fact, the value added of industry overtook that of agriculture in 2004. Third, the main driver behind the growth of industry has been minerals and fuels, reflected by the fact that the figure for the mining and utilities sector displays a virtually identical trend as the industrial sector as a whole. Fourth, the share of manufacturing has been relatively constant during the past decade, hovering around 10 per cent of GDP.

²⁵ UNCTAD, 2010a.

Figure 6. Value added in LDCs by kind of economic activity, 1990–2010
(percentage of GDP)

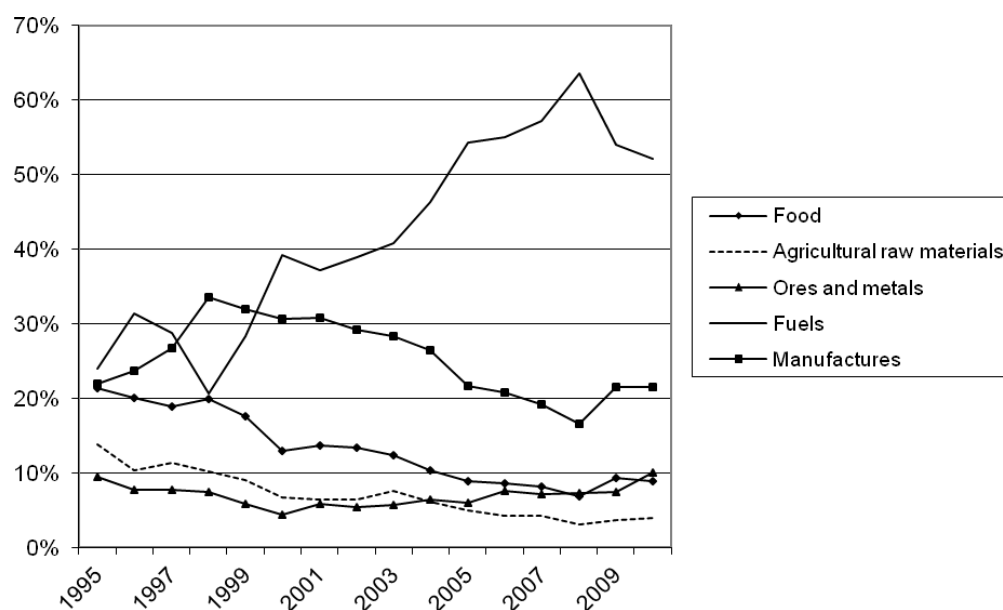


Source: UNCTADstat.

... in terms of exports...

LDCs' dependence on commodities is even more visible when one looks at the composition of their exports. This can be clearly seen in Figure 7, which shows the evolution of five product groups in 1995–2010 with respect to their share of total exports. The rocket-like surge of fuels in LDCs' export basket in the decade leading up to the financial crisis is nothing short of remarkable, with fuels exports accounting for almost two-thirds of all LDC exports in 2008. Meanwhile, the share of both food and manufacturing exports fell for the most part of the period, although manufactures accounted for some 20 per cent, which is as much at the end of the period as it was at the beginning of the period. Interestingly, the share of ores and metals – a sector that benefited from rising prices during the boom period – did not expand dramatically during the 2000s and, like manufactures, was on a par in 2010 with what it had been fifteen years earlier.

Figure 7. Merchandise exports from LDCs, by sector, 1995–2010
(percentage of total exports)



Source: UNCTADstat.

The importance of commodities for LDCs' exports is not only confined to a few countries. For instance, UNCTAD classifies 27 of the current 48 LDCs as commodity exporters: 11 agricultural exporters, 10 mineral exporters and six oil exporters.²⁶ Moreover, the three largest exports in 19 of these 27 countries were commodity products that accounted for more than 50 per cent of merchandise exports in 2009.

... and in terms of investment inflows.

Sectoral data on FDI in LDCs is limited in terms of both availability and quality. There is, nevertheless, good reason to suspect that the overall picture of FDI is similar to that of value added and exports, i.e. that extractive industries account for the lion's share of total FDI flows to LDCs.

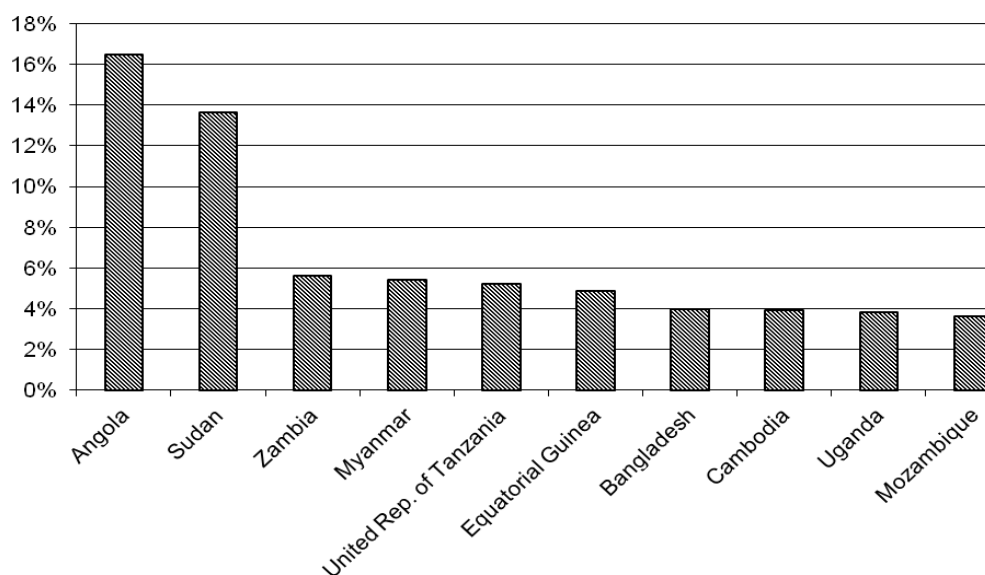
The geographic distribution of FDI provides an indication of the importance of hard commodities in terms of investment. Accordingly, Figure 8 shows the ten largest recipients of FDI stock in 2010, which accounted for more than two-thirds of FDI inward stock in LDCs. Five of these ten LDCs are classified as either oil or mineral exporters by UNCTAD; FDI inward stock in them represented some 44 per cent of the LDC total.²⁷ Moreover, even a country like the United Republic of Tanzania, which is categorized as a services exporter and has started to diversify away from mining, experienced a surge of FDI inflow into the mining sector in 2006–2008.²⁸ The large share of FDI flowing to commodity-exporting LDCs and to the minerals and fuels sector in several other LDCs strongly implies that extractive industries play an important role in attracting FDI to LDCs.

²⁶ The remaining LDCs are classified as follows: 10 services exporters, six manufactures exporters and five mixed exporters. UNCTAD, 2010a, p. XV.

²⁷ Angola, Equatorial Guinea and Sudan are oil exporters, while Mozambique and Zambia are mineral exporters.

²⁸ UNCTAD 2010a and 2011f, P. 19.

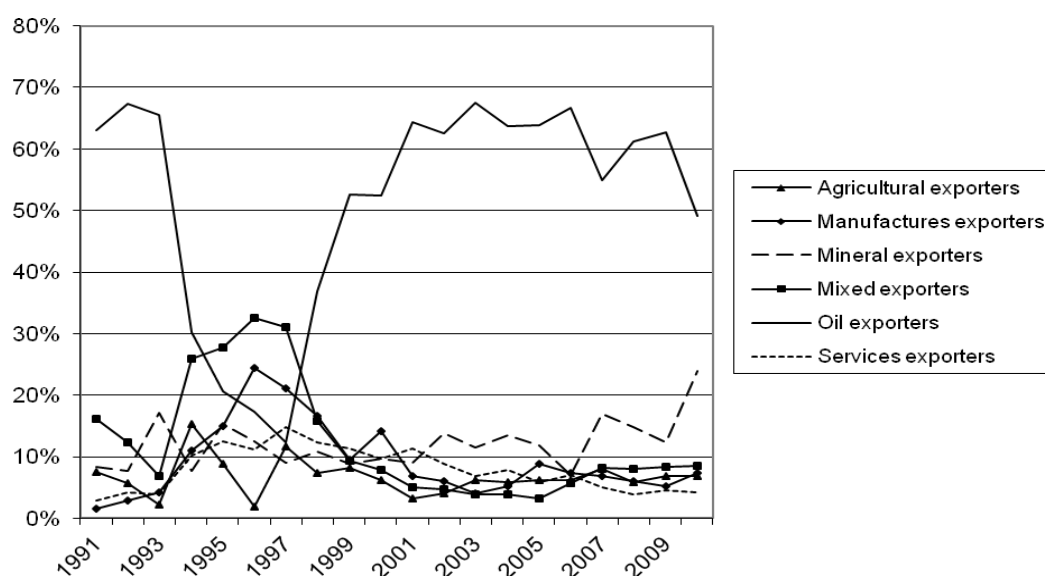
Figure 8. Ten largest LDC recipients of FDI stock in 2010
(percentage of total FDI stock in LDCs)



Source: UNCTADstat.

What is more, there are indications that FDI flows to LDCs have become increasingly concentrated in extractive industries (Figure 9). Apart from a period around the mid-1990s, oil exporting countries have received the largest share of FDI inflows to LDCs during the past two decades. The years that were the exception – namely 1994 to 1997 – resulted from the combination of a drop in the absolute level of FDI flows to oil exporters (including disinvestments in Yemen) and an increase in the flows to other types of exporters (such as Myanmar before the Asian financial crisis).

Figure 9. FDI flows to LDCs, by type of exporter, 1991–2010
(percentage of total FDI inflows)



Source: UNCTADstat.

The above discussion is consistent with the main findings presented in UNCTAD (2011f), which observed that “FDI inflows are concentrated in resource-rich LDCs, while other countries tend to attract minimum inflows”.²⁹ The study also found that this concentration of FDI had intensified during the past decade. It further noted that even though FDI in extractive industries only account for a small share of the number of projects in LDCs, it represents a large share in terms of value due to the highly capital-intensive nature of these projects.

However, the overall picture masks the diversity of LDCs’ commodity dependence.

Although LDCs as a whole exhibit a strong dependence on commodities, it is important to stress the heterogeneity within the grouping. The above-mentioned UNCTAD classification based on export specialization reflects this, whereby LDCs are categorized according to their concentration in one of six areas: agriculture, manufacture, mineral, mixed, oil and services.

Broadly speaking, African LDCs are more commodity-dependent than Asian LDCs. This is also borne out in Tables 1 and 2, which show the evolution of sectoral value added and export composition, respectively, in two groups of countries: African LDCs and Haiti, on the one hand, and Asian LDCs, on the other.

Table 1. Value added by kind of economic activity in African LDCs and Haiti and in Asian LDCs, 1990-2010 (percentage of GDP)

	1990	1995	2000	2005	2010
	Africa and Haiti				
Agriculture, hunting, forestry, fishing	34	36	32	28	26
Industry	23	21	25	34	35
Mining, utilities	8	8	12	21	21
Manufacturing	11	8	8	8	7
Services	43	43	43	38	39
	Asia				
Agriculture, hunting, forestry, fishing	36	34	30	25	24
Industry	19	21	25	29	29
Mining, utilities	3	3	6	8	7
Manufacturing	12	12	13	14	15
Services	45	45	44	47	47

Source: UNCTADstat.

Both tables point to a higher dependency on minerals and fuels in Africa than in Asia. In particular, Table 1 shows that the shares of the three broad categories of agriculture, industry and services are fairly similar in the two country groups. However, the shares differ with respect to the two industrial subsectors of (i) mining and utilities and (ii) manufactures. Although the share of mining and utilities more than doubled in both groups over the past two decades, they accounted for almost one-fifth of total value added in the Africa/Haiti group in 2009 compared with seven per cent in the Asia group. The share of manufactures, in contrast, expanded slightly in the Asia group during the same period to reach 14 per cent in 2009, whereas it fell from 11 per cent to 7 per cent in the Africa/Haiti group.

The contrast between the two groups is thrown into even greater relief when one looks at exports, as seen in Table 2. The group of African LDCs and Haiti saw the share of fuels in their exporting basket surge from one-quarter in 1995 to just under two-thirds in 2010. The role of agricultural and manufactures exports, however, dropped for the group during the

²⁹ *Ibid.*

same period. Fuels exports from the group of Asian LDCs, which also accounted for about one-quarter of total exports in 1995, remained fairly constant over the 15-year period. The share of manufactures exports, meanwhile, expanded from 48 per cent in 1995 to 57 per cent in 2010.

A similar story is told by FDI flows, as implied by the earlier discussion on geographic distribution in the context of Figure 8. UNCTAD (2011c) reports that most foreign investments in Asian LDCs have been in services such as telecommunications and electricity. The bulk of FDI inflows to African LDCs, however, have gone to extractive industries.

Table 2. Merchandise exports from African LDCs and Haiti and from Asian LDCs, by sector, 1995–2010 (percentage of total exports)

	1995	2000	2005	2010
	Africa and Haiti			
Food	26	17	9	9
Agricultural raw materials	12	8	5	3
Ores and metals	14	7	8	13
Fuels	25	48	65	64
Manufactures	9	11	8	7
	Asia			
Food	12	7	9	9
Agricultural raw materials	16	5	5	6
Ores and metals	1	1	1	3
Fuels	23	27	28	24
Manufactures	48	58	55	57

Source: UNCTADstat.

The majority of the population in LDCs continue to work in the fields.

The capital-intensive nature of extractive industries is not conducive to job creation. As the boom period was based on hard commodities, it did not have a significant impact on employment in LDCs. That said, the countries do remain heavily dependent on commodities in terms of employment, with some two-thirds of the population working in agriculture. Hence, this dependence is rooted in soft rather than hard commodities.

The International Labour Organization (2011) provides data on the shares of the labour force working in the three broad sectors of agriculture, industry and services. It shows that people working in agriculture in LDCs represented 64 per cent of total employment in 2008, down from 69 per cent in 2000. The shares had decreased in both African and Asian LDCs, with a larger proportion of the population in African LDCs being engaged in agriculture (68 per cent in 2008 compared with 59 per cent in Asian LDCs). Employment in the other two sectors expanded during the period in both African and Asian LDCs, particularly in the latter. In 2008, 10 per cent of the LDC population worked in industry and 26 per cent worked in services.

Great concerns regarding food security.

LDCs remain highly food-insecure, notwithstanding the large proportion of the population employed in agriculture and the fact that the sector's GDP share remains

significantly higher than the sector's share in the world's gross output³⁰ (despite the declining share of total value added discussed above). Just consider that the Food and Agriculture Organization of the United Nations (FAO) in March 2012 listed 25 LDCs as requiring external assistance for food, out of a total 34 countries.³¹ Or that LDCs constituted 42 of the 66 countries that have been classified as low-income food-deficit countries (LIFDCs) by the FAO in 2012.

Moreover, the vulnerability of LDCs has increased in the past decade as a result of a growing dependence on food imports. A combination of factors, including a general neglect of agricultural development and rising food prices, resulted in the food import bill almost tripling from \$9 billion in 2000 to \$24 billion in 2008.³²

The commodity dependence of LDCs at a glance.

To sum up, LDCs continue to be highly dependent on natural resources, in some ways even more so than a decade ago. The scope of this reliance is wide-ranging in that it concerns soft as well as hard commodities, both exports and imports, and LDCs from different regions and in different environments. Table 3 encapsulates some of the various aspects of LDCs' commodity dependence through six indicators.

Table 3. Selected indicators on the commodity dependence of LDCs

	Export specialisation			Low-income food-deficit countries (2012)	Countries requiring external assistance for food (March 2012)	Population employed in agriculture (2010) %
	Agricultural exporters	Mineral exporters	Oil (fuel) exporters			
Afghanistan	X			X	X	59
Angola			X			69
Bangladesh				X		44
Benin	X			X		44
Bhutan				X		97
Burkina Faso	X			X	X	93
Burundi		X		X	X	80
Cambodia				X		66
Central African Republic		X		X	X	60
Chad			X	X	X	69
Comoros				X		79
Dem. Rep. of the Congo		X		X	X	57
Djibouti				X	X	71
Equatorial Guinea			X			64
Eritrea				X	X	69
Ethiopia				X	X	79
Gambia				X	X	78
Guinea		X		X	X	79
Guinea-Bissau	X			X		72

³⁰ The share of agriculture, hunting, forestry and fishing in LDCs' GDP in 2009 stood at 26 per cent compared with four per cent for the world as a whole and nine per cent in other developing countries' GDP.

³¹ FAO, 2012a, which provides the following definition: "Countries requiring external assistance for food are expected to lack the resources to deal with reported critical problems of food insecurity."

³² UNCTAD, 2010a, p. 16.

	Export specialisation			Low-income food-deficit countries (2012)	Countries requiring external assistance for food (March 2012)	Population employed in agriculture (2010) %
	Agricultural exporters	Mineral exporters	Oil (fuel) exporters			
Haiti				X	X	51
Kiribati	X			X		N/A
Lao PDR				X		77
Lesotho				X	X	37
Liberia	X			X	X	56
Madagascar				X	X	71
Malawi	X			X	X	79
Mali		X		X	X	68
Mauritania		X		X	X	50
Mozambique		X		X	X	77
Myanmar						73*
Nepal				X		88
Niger		X		X	X	87
Rwanda				X		83
Samoa						29
São Tomé and Príncipe				X		54
Senegal				X	X	71
Sierra Leone		X		X	X	60
Solomon Islands	X			X		N/A
Somalia	X			X	X	67
Sudan			X	X	X	51
Timor-Leste			X	X		80
Togo				X		47
Tuvalu	X					N/A
Uganda	X			X		76
United Rep. of Tanzania				X		77
Vanuatu						31
Yemen			X	X	X	36
Zambia		X		X		66
TOTAL	11	10	6	42	25	

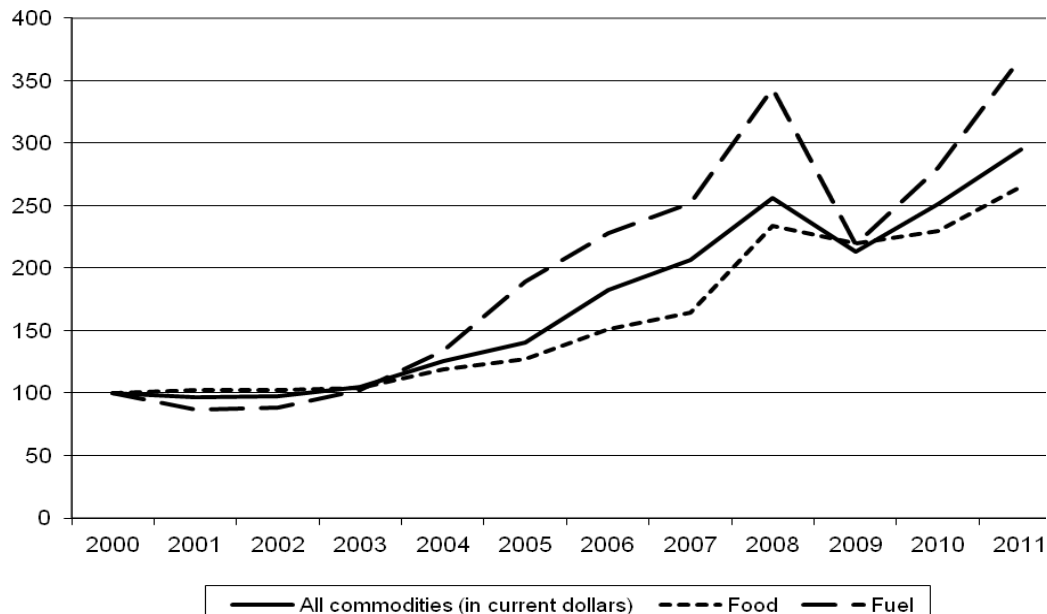
Source: FAO (2012a), FAO (2012b), UNCTAD (2010a) and UNCTADstat.

2.3. The ups and downs of commodity prices

Commodity price volatility and food security are at the top of the international agenda, as reflected by the fact that France made them key priorities of its G20 presidency in 2011. This is hardly surprising, considering the extent to which energy and food prices have fluctuated in recent years and the negative impact such movements have had on people's access to food.

The general story of commodity prices in the past decade is well-known and is depicted in Figure 10. An upward trend in prices began a few years into the new millennium, peaking in mid-2008. Subsequently, as the effects of the financial and economic crisis spread around the globe, commodity prices tumbled dramatically, even though overall levels in 2009 remained higher than in 2005 (in current US dollars). Prices then started to climb again from the second quarter of 2009 onwards. By early 2011, commodity prices had reached the high levels last seen three years previously, but eased somewhat during the remainder of the year.

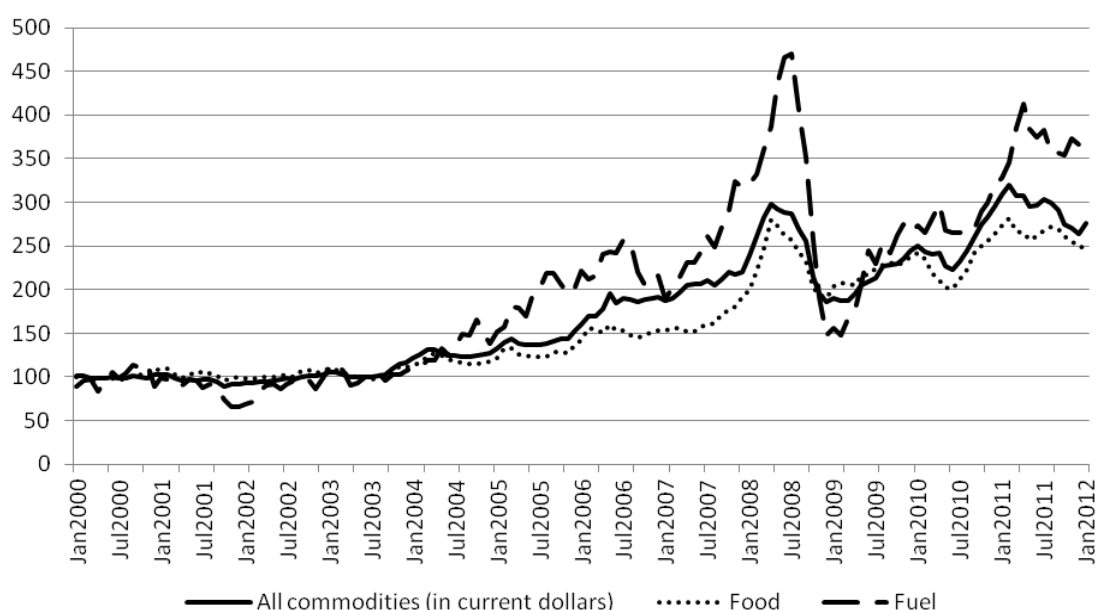
Figure 10. Evolution of annual commodity price indices, 2000–2011
(2000=100)



Source: UNCTADstat.

The plunge in commodity prices in late 2008 and early 2009 was the most dramatic drop in a decade. Just how dramatic is made clear in Figure 11, which also drives home two other points. First, it was by no means the only time that prices experienced swings. Second, the figure suggests that price fluctuations increased as the decade wore on. In other words, in tandem with a general increase in commodity prices in the 2000s, there appears to have been an overall rise in price volatility.

Figure 11. Evolution of monthly commodity price indices, Jan 2000–Jan 2012
(2000=100)



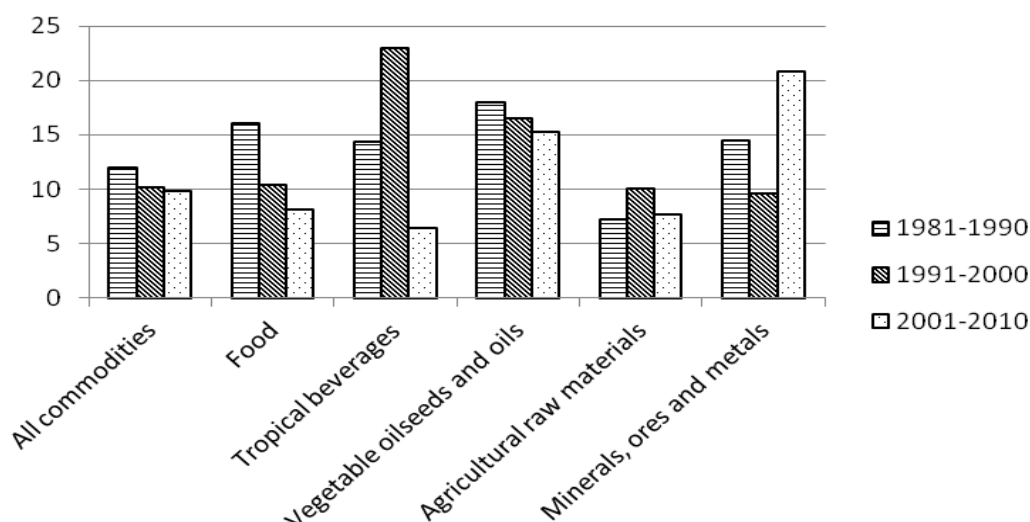
Source: UNCTADstat.

It is important, however, to qualify the statement that there was “an overall rise in price volatility” with two caveats. First, the generality of the statement obscures the varied evolution of different commodities. Figure 11 hints at these differences by showing, in addition to the average price trend for all commodities, the development of food and fuel prices. More analytically, a study on food price volatility found that the price variability of most foodstuffs, including soya bean oil and groundnut oil, increased during 2007–2009 compared with before but that there also were several instances to the contrary (e.g. the price volatility of bananas dropped over the same period).³³

Figure 12 further illustrates the differences among product categories by looking at how price instability indices have changed over the past three decades. Although the perception was that commodity prices fluctuated more in the 2000s than in the 1990s, the figure shows that in reality, the fluctuation was large only in the case of food; tropical beverages and minerals, ores and metals. Overall, price volatility increased for three of the five commodity groups (food, vegetable oilseeds and oils, and minerals, ores and metals), while the opposite trend was seen for tropical beverages and agricultural raw materials.

³³ Gilbert and Morgan, 2010. For another (preliminary) study analysing the evolution of commodity price volatility, see Mayer and Gareis, 2010.

Figure 12. Price instability indices for various commodity groups in 1981–1990, 1991–2000 and 2001–2010



Source: UNCTADstat.

Note: The greater the variability, the higher the index. Instability is measured as the percentage deviation of the variables concerned from their exponential trend levels for a given period.

The price instability indices depicted in Figure 12 also relate to the second caveat: the importance of bearing in mind what periods are being compared. Thus, whereas the price volatility for all commodities on average was almost the same in 2001–2010 and in the preceding decade, it was lower than in the 1980s. In fact, the only commodity group that exhibited higher variability in the latter period was minerals, ores and metals. Similarly, UNCTAD (2008b) shows that commodity price volatility was generally higher in the 2002–2007 period than in the 1996–2001 period. Comparing even longer periods, Gilbert and Morgan (2010) find that variability in agricultural prices was generally lower in the 1990–2009 period than in the previous two-decade period, with bananas and rice being the two main exceptions.

2.4. Commodity dependence and the global crises

2.4.1. Country-level impacts

The broader implication of the commodity price trends on the economies of LDCs in the 2000s was the boom-bust cycle that was briefly outlined in chapter 1 and has been explored in UNCTAD (2010a) among others. The boom period refers primarily to 2002–2007, a period which saw real GDP in LDCs as a group grow in excess of seven per cent annually, mainly as a result of rising commodity prices. Of the 15 LDCs displaying this average performance, four were oil exporters and three were mineral exporters.³⁴ In terms of GDP per capita, the varied growth rates of the LDCs can be summed up as follows:

- Seven countries had an average real GDP per capita per annum in excess of seven per cent (four of which are oil exporters);
- Thirteen countries registered real GDP per capita growth rates between three and seven per cent on average (three of which are mineral exporters);

³⁴ Angola, Chad, Equatorial Guinea, Mauritania, Mozambique, Sierra Leone and Sudan (UNCTAD, 2010a, p. 5).

- Seventeen countries had an average real GDP per capita per annum between zero and three per cent (of which one LDC is an oil exporter and five are mineral exporters);
- Eleven countries registered negative real GDP per capita growth rates (of which one is an oil exporter and two are mineral exporters).

The boom period came to an end with the outbreak of the global financial and economic crisis, which resulted in real GDP growth in LDCs slowing to below five per cent in 2009. Fifteen LDCs experienced negative growth in real GDP per capita, while only two countries (Afghanistan and Ethiopia) grew in excess of six per cent in per capita terms that year.

Just as analysis has shown that world trade fell much more than world gross output in the wake of the global financial and economic crisis,³⁵ so the trade of LDCs dropped significantly more than the group's GDP. In fact, LDCs did not see a decline in real GDP in 2009, but did experience a plunge in trade flows. Analysis has pointed out that the plummeting trade flows were first and foremost a result of changes in the values of trade goods rather than in their volumes.³⁶

As in the case of GDP, it was minerals and fuels exports from LDCs that rode the highest wave during the boom period but that bore the brunt of the following bust. LDC food exports weathered the crisis the best, even expanding slightly in nominal terms in 2009, and the UNCTAD case studies suggest that non-traditional agricultural exports in particular proved resilient during the global financial and economic crisis. Exports of manufactures – particularly important for Asian LDCs – fell by five per cent in 2009.

One consequence of the global crises and the volatile commodity prices at the country level was the negative impact on the ability of many LDCs to maintain steady income and spending. Among others, this reduced governments' capacity to keep current account balances stable, finance domestic and external debt, and provide social spending aimed at poverty reduction. An illustration of the extent to which this capacity was compromised in Zambia is provided in Box 2.

Box 2. Lost government revenue in Zambia

“The crisis affected the tax revenue and increases in mining tax that had been anticipated were not realized. It was estimated that lost mining production and reduced exports, mining royalties paid, as well as lost income due to primary and secondary effects on employment, led Zambia to lose up to 22 per cent of its government revenue between 2009 and 2010. In response to the sharp falls in income, actual expenditures were sharply reduced from the 2008 level, with a serious deviation from budgeted targets. The Government had to revise spending priorities for some social and development projects in the face of this.” (See the case study of the United Republic of Tanzania and Zambia, pp. 29–30)

Again, it is important to draw attention to the contrasting fortunes of LDCs. The fuel and food crises contributed to a worsening of the current account deficits of net oil-importing and food-importing LDCs, but the drop in commodity prices that followed in the wake of the global financial and economic crisis led to an improvement in their current account balances. Conversely, net oil exporters were hard hit by the plunge in commodity prices: the current

³⁵ See, e.g., Baldwin, 2009.

³⁶ See, e.g., UNCTAD, 2010a, and WTO, 2011.

account surplus of \$2.6 billion that they had enjoyed in 2008 was turned into an enormous \$14.8 billion current account deficit in 2009.

Volatile prices can, in normal times, make it more difficult for stakeholders to plan for investments and production, which increases costs both at the macro and micro level, e.g. through perceptions of higher country risk or access to and cost of finance.³⁷ It is hardly surprising, then, that the global financial and economic crisis led to a drying-up of FDI in LDCs, with FDI inflows to LDCs dropping by 12 per cent in 2009 and by an additional 14 per cent in 2010.³⁸ Asian LDCs were particularly affected, as FDI inflows plunged by almost one half. The decline seen in Zambia described in Box 3 provides a concrete example of the repercussions of the crisis on attracting FDI.

Box 3. How the global financial and economic crisis affected investment in Zambia

Zambia

“The global financial and economic crisis set in motion investment and operational reviews in the mining sector in an attempt to reduce costs of production and stay in business. Some reactions were to increase production in response to declining export receipts on account of falling prices, decrease production, reduce capital expenditure to minimum sustainable levels, increase focus on core activities with a view to reducing reliance on contractors, and reduce non-core labour (Kryticous, 2009). The reduced export earnings for the mining sector also translated into lower investments through suspension of new projects which were dependent on retentions, as in the case of the uranium project owned by Albidon Mines. Further, some mining companies such as First Quantum and Makambo Copper Mine, which were carrying out exploration works, discontinued all new exploration activities. Konkola Copper Mines, the largest copper mine in Zambia, ordered a 40 per cent reduction in all supplier contracts. All these responses regarding investments generated a second level of repercussions through multiplier effects.” (See the case study of the United Republic of Tanzania and Zambia, pp. 37)

2.4.2. Impact on households

The negative impacts of the global crises on GDP, trade and investment in LDCs translated into significant adverse effects on their populations. For instance, it has been estimated that the global financial and economic crisis would lead to an additional 7.3 million poor people in African and Asian LDCs (6.1 million in the former and 1.2 million in the latter).³⁹

Of course, a range of difficulties emerge when one tries to get a broad view of the impact of the crises on people’s well-being in LDCs. For a start, there is the perennial problem of data availability. There are also methodological issues with respect to estimation.⁴⁰ In addition, in order to estimate the ultimate net effect of the crises on the people living in LDCs, one needs to take into account a multitude of factors that act and counteract, including employment, remittances, exchange rate movements, investment, and external assistance.⁴¹ Finally, it is ever so important to bear in mind the heterogeneity among and within the LDCs. For instance, whereas people reliant on mining exports suffered from the

³⁷ UNCTAD, 2008b.

³⁸ UNCTAD, 2011f, p. 5.

³⁹ Karshenas, 2009, p. 21.

⁴⁰ See, for instance, Karshenas, 2010, for a discussion on poverty estimates.

⁴¹ Karshenas, 2009, p. 20.

falling mineral prices in the wake of the global financial and economic crisis, those highly dependent on imported food and fuels enjoyed a respite as a result of the falling prices.

Box 4. The impact of the financial crisis on poverty in Benin

“The simulations performed in the study by the Ministry of Development on the impact of the financial crisis from a macroeconomic perspective forecast a drop in end consumption by households of 3.3 per cent in 2009 and 5.8 per cent in 2010. This decline has a negative impact on the incidence of income poverty: 34.4 per cent of citizens were poor in 2009 as compared with 33.3 per cent in 2007. Moreover, the crisis affected urban and rural inhabitants differently. In the context of commodities, the incidence of poverty was more pronounced in urban areas, whereas the crisis was considerably deeper in rural areas.” (See the case study of Benin, pp. 39)

Table 1: Impact of the crisis on poverty indices in 2009 for Benin

		P0			P1			P2	
Location	2007(*)	2009	Impact on P0 (**)	2007	2009	Impact on P1	2007	2009	Impact sur P2
Urban	28,311	29,498	1,1872	0,0846	0,0877	0,0032	0,0388	0,0401	0,0012
Rural	36,084	37,207	1,1224	0,1008	0,1041	0,0033	0,0410	0,0424	0,0014
Total	33,255	34,401	1,1460	0,0949	0,0981	0,0032	0,0402	0,0416	0,0014

Source: MDPEAP study

P0 : incidence on income poverty; P1: depth of poverty; P2: severity of poverty

(*): Based on the assumption that the situation in 2008 remains the same as in 2007.

(**): Impact is shown in percentage points.

(...)

“However, even though the crisis hit the income of consumers from urban centres and merchants, it was relatively beneficial for agricultural producers, who turned to food crops. The latter boosted their income by ramping up production to take advantage of soaring food prices.” (p. 40 of the case study)

Two of the most direct effects of the global crises at the level of the household concerned (i) employment and incomes and (ii) food consumption. Although the fallout of the crises on employment in LDCs was limited due to the high proportion of self-employed and unpaid family workers,⁴² the indications are that the global financial and economic crisis led to rising unemployment levels, informalization and more working poor.⁴³ The negative impact was keenly felt in export sectors, but construction and non-tradable sectors were also adversely affected. For instance, it has been estimated that 63,000 jobs were lost in Cambodia’s garment sector in the wake of the global financial and economic crisis and that employment in the country’s construction sector shrank by 30 per cent. As another example,

⁴² International Labour Office, 2011, p. 11.

⁴³ UNCTAD, 2010a, pp. 39-40.

the loss of more than 100,000 mining-related jobs in the Democratic Republic of the Congo have been attributed to declining activity in that sector.⁴⁴

Box 5. Job losses in Benin and Zambia

Benin

“In general, the crisis did not fundamentally affect employment, especially since it did not hit production sectors that hard. However, the number of cotton producers shrank by 15 to 20 per cent. Added to this was the impact on employees of ginning factories, which were operating at only 50 per cent of their capacity or less, causing them to cut their permanent and temporary staff in half. The services sector was affected, in particular the tertiary sector, through a slight drop in sales for products for re-export. In general, jobs were maintained overall, with a considerable share in the informal sector before the crisis.” (Case study of Benin, pp. 38–39)

Zambia

“The comprehensive study by Matenga (2010) showed that job losses in Zambia’s mining sector started to be felt in November 2008 and only eased sometime in May 2009. A total of 7,324 workers who were directly employed by mining companies (11.6 per cent of total labour force in mining sector) lost their jobs. In addition, 11,915 workers employed by mine contractor companies, accounting for 18.8 per cent of the total labour force in the mining sector, lost their jobs, giving a total loss of 19,239 workers or 30.4 per cent of the total labour force in the mining industry between June 2008 and June 2009 (excluding jobs gained). These losses are attributed to the impact of the global economic crisis. The most direct impact of the crisis on people is the loss of employment and sources of income. In view of the job losses in Zambia, a United Nations Children’s Fund (UNICEF) rapid assessment showed that women were working longer hours and that children were increasingly cared for by their siblings. These are some of the impacts that are not always identified in studies analysing the impact of crises. By the third quarter of 2009, however, some recovery was being recorded and with it some jobs were rescued.” (Zambian case study, pp. 27)

As for food consumption, the impact of volatile food prices on LDCs was borne out in particularly disturbing fashion during the food crisis in 2007–08, which raised global undernourishment by an estimated 6.8 per cent and pushed at least 100 million people into poverty.⁴⁵ The crisis has also been attributed as one of the chief causes of food riots taking place in eight LDCs between 2007 and the first half of 2008.⁴⁶ More recently, it was estimated that 44 million people in low- and middle-income countries fell into poverty as a result of the food price hikes between mid-2010 and early 2011.⁴⁷

It seems logical that the urban population was more acutely affected by the food crisis than people in rural areas, whose food consumption is partly based on their own production. This is also demonstrated in the case study on Benin (see Box 4). That said, a majority of the rural population in LDCs appears to consist of net food buyers. Estimates from FAO, for instance, suggest that 72.0 per cent of rural households in Bangladesh were net buyers of

⁴⁴ Both examples taken from *ibid.*

⁴⁵ Tiwari and Zaman, 2010.

⁴⁶ UNCTAD, 2008a, p. 83.

⁴⁷ World Bank, 2011a.

staple foods in 2000.⁴⁸ Moreover, even for net food sellers, the inflationary pressures arising from higher fuel, food and fertilizer prices posed a heavy burden.

Box 6. The impact of the global crises on food security in Cambodia

Household surveys undertaken in Cambodia shed light on the impact of the recent global crises at the micro level. For instance, it was found that the share of households that did not have sufficient money for food and other essential expenses increased from 62 per cent to 69 per cent between June 2007 and June 2008.

The pattern of consumption evolved differently during the peak of the food crisis compared with during the peak of the global financial crisis, reflecting the rise and subsequent fall of commodity prices. At the height of the food crisis, in the six months leading up to June 2008, 92 per cent of households said that their expenditure on food had increased and 48 per cent reported that their expenditure on non-food items had risen. During the period March–July 2009, however, the share of households that said that their expenditure on food increased stood at 27 per cent (31 per cent reported no change and 42 per cent mentioned a decrease), while 15 per cent found that their non-food spending had risen during the same period (41 per cent reported no change and 44 per cent said this expenditure had declined).

2.5. Coping with commodity dependence

The global crises have exacerbated the vulnerability of LDCs and recalled the risks associated with relying on a few primary commodities. The previous section looked at how the global crises affected LDCs, especially in the context of commodities. What, then, are the particular challenges that policymakers face and what are the possible solutions?

At a basic level, countries can tackle the challenges related to commodity dependence by improving their management of the natural resources and/or by diversifying their production and exports. Thus, in approaching the dual question of challenges and solutions, this section is divided into two main parts. The first part looks at the commodities sectors themselves in order to evaluate ways in which the use of these resources can be boosted. The second part focuses on export diversification and strategies to reduce commodity dependence by expanding the scope of an economy's activities.

2.5.1. Enhancing the opportunities of commodities

Price volatility is one of the main challenges associated with commodities. Two other problems that are often linked to the presence of natural resources are “Dutch disease” and rent-seeking behaviour. “Dutch disease” refers to the risk that commodity wealth will raise the country's real exchange rate, reducing the competitiveness of other export sectors and shifting resources to the commodity sector. As a result, the economy's labour-intensive sectors, notably manufacturing, suffer and its commodity dependence increases. As for the problem of rent-seeking for personal and/or corporate gain, it can lead to a system of political patronage and corruption.

These challenges notwithstanding, commodities do not merely present a threat to a resource-rich economy's development, but also offer opportunities. Obviously, a rise in

⁴⁸ FAO, 2008, p. 22. The figures for all households and all poor households were 76.8 per cent and 84.2 per cent, respectively, while they were 95.9 per cent and 95.5 per cent, respectively, for urban households and poor urban households.

commodity prices improves the economic condition of an exporting country and, as discussed above, higher commodity prices were instrumental for the growth of many LDCs in the years leading up to the global financial and economic crisis. The first country to graduate from LDC status, diamond-rich Botswana (in 1994), provides a successful example of how an economy can benefit from its natural resource endowments. Moreover, Botswana is still showing the way through recent vertical diversification by cutting diamonds locally instead of exporting the gems in their raw form, as most other exporters of diamonds still do. Namibia has also adopted this best practice.

In other words, natural resources present both opportunities and threats in terms of the economic development of commodity-rich LDCs. This begs the question of how to minimize the latter and maximize the former.⁴⁹

2.5.1.1. Management of resources

The development of a commodity-dependent LDC is inevitably linked to how well the country manages its natural resource endowment. On the one hand, successful management of resources can improve the chances that the yields from the extractive industries will percolate into the rest of the economy and help lay the foundation for long-term development. It can also build up State coffers for potential rainy days. On the other hand, mismanagement can result in enclave-led growth, patronage and capital flight.

Two key terms that are often stressed in the context of management of natural resource rents are fiscal transparency and macroeconomic management. A well-known tool available to promote increased transparency is the Extractive Industries Transparency Initiative (EITI), in which a coalition of governments, companies and civil society aim to improve governance in resource-rich countries on a voluntary basis.⁵⁰ Another interesting innovative approach to enhance transparency and accountability is the recent launch of the Kenya Open Data Initiative, which gives the public free online access to key government data on the 2009 census, national and regional expenditure, and main public services, among others.⁵¹

Box 7. Natural resource management reforms in Mozambique

Golub et al. (2011) highlight Mozambique as a country that has been successful in undertaking some reforms concerning the oil and mining sectors as well as reporting and management of public expenditure, although there is scope for further reforms. Among its measures to increase transparency, Mozambique has applied for membership of the EITI. The country's comparatively high Country Policy and Institutional Assessment (CPIA) rating of 4.5 in economic management in 2009 might be seen as a reflection of the progress made.⁵² Although the impact of these reforms on Mozambique's resilience to external shocks needs to be explored, it is worth noting that the country's GDP growth in 2009 reached 6.3 per cent.

Initiatives to promote fiscal transparency and macroeconomic management notwithstanding, what is arguably missing in several LDCs above all else is a set of clearly articulated policies as to how they can capitalize on their natural resource endowments. As

⁴⁹ Value addition is, of course, one viable strategy to capitalize on the opportunities of commodities. This particular aspect is discussed in the next section.

⁵⁰ <http://eiti.org>.

⁵¹ <https://opendata.go.ke>.

⁵² World Bank, 2011b. The CPIA is a World Bank tool to rate countries against a set of criteria. The economic management rating is the average of the scores obtained in macroeconomic management, fiscal policy and debt policy.

such, the case studies are perhaps telling in that there is not much mention of commodity policies and strategies. A welcome step to address such lacunae is the detailed investment plans that African signatories to the Comprehensive Africa Agriculture Development Programme (CAADP) draw up.

The role of increasing demand for commodities from large emerging countries in pushing up commodity prices in the 2000s points to one key feature of the previous decade: the growth of South–South cooperation. China’s engagement with Africa has received considerable attention in recent years, but the expanding South–South cooperation also concerns other LDCs as well as other emerging partners. This evolving partnership has the potential to make a significant contribution to LDCs’ economic development, as exemplified by China’s and India’s trade and investment linkages with Asian LDCs and China’s economic ties with Angola (it had become Angola’s largest importer by 2008). An example of this potential is China’s willingness to help with vertical diversification by accepting to build oil refineries for Niger and Chad – a request that was denied Nigeria for many years. All the same, it is important to be aware of some of the risks with the deepening economic relations, such as the possibility of reinforcing commodity dependence.⁵³

Encouragingly, growing demand for commodities can also be seen at the intraregional level: half of the produce of Zambian vegetable exporters is sold to the South African retail chain Woolworths,⁵⁴ and the Common Market for Eastern and Southern Africa (COMESA) and the East African Community (EAC) are becoming increasingly important export destinations for Uganda.⁵⁵

Finally, the key point of sustainable management of resources also needs to be raised. This concerns both hard and soft commodities, such as environmental consequences of mineral extraction and the overexploitation of fish. Not placing enough emphasis on sustainable management has negative consequences on the future benefits from the natural resources themselves as well as on the potential gains of other growth sectors, including tourism.

2.5.1.2. Commodity price volatility and food security

Commodity price volatility can have significant detrimental effects on LDCs’ economic development and poverty reduction, as outlined earlier. There are, moreover, close interlinkages between commodity price volatility and food security. Measures to mitigate the adverse effects of the variability of food prices include the stockpiling of physical commodities, using commodity risk management tools, compensatory financing schemes, commodity exchanges⁵⁶ and social safety nets.

In the long-term, the paramount importance of investing in agriculture to improve food security cannot be stressed enough. Indeed, the case study on Cambodia finds it to be the key lesson coming out of the global crises:

“With Cambodia’s experience with the food and economic shocks, the grand lesson was to revive agriculture, the sector having been neglected as the country aggressively pushed for a structural transformation towards export-oriented manufacturing. That agriculture was able to serve as a buffer to the GFC [global financial crisis] emphasized the fact that the growth contribution to the sector is yet to be optimized.” (pp. 26–27)

The fact that per capita food production in LDCs has been contracting since the 1970s to the extent that it was one-fifth lower in 2003–2005 compared with 1970–1972 is an

⁵³ UNCTAD, 2010c.

⁵⁴ UNCTAD, 2010b, p. 36.

⁵⁵ UNCTAD, 2008c, p. 44.

⁵⁶ Commodity exchanges have been established or mooted in Bangladesh, Cambodia, Ethiopia, Nepal, Tanzania, Uganda and Zambia.

indication of the extent to which agriculture has been neglected. Accordingly, there is considerable scope for agriculture-related reforms in several LDCs, including in terms of government support and access to and cost of finance. For instance, governments in only 7 out of 26 African LDCs allocated more than 10 per cent of their budgets to agriculture on average over the years 2003–2009 (10 per cent being the target contained in the Maputo Declaration on Agriculture and Food Security in Africa).⁵⁷ As another example, UNCTAD research from 2008 shows that only 14 per cent of the loans provided by banks in African LDCs go to agriculture (despite agriculture accounting for about one-third of total value added and, on average, 86 per cent of employment in these countries).⁵⁸

Additional issues that offer good prospects for increased food security, including traditional foods and agroecology, are discussed in detail in the next chapter.

**Box 8. Responding to the global crises:
Government interventions in Benin, Cambodia and
United Republic of Tanzania, as drawn from the respective country case studies**

Benin

Benin relied on three policy instruments in its response to the crises. The first instrument was fiscal, and included the suspension of import duties on certain agricultural products. The second one concerned the development of productive capacities through investments into the agricultural sector and credit subsidies to improve access to finance. The third instrument related to identifying ways for production to be sold. This included the Government purchasing 20,000 tonnes of cereals from producers; half was exported to Niger, while the other half was utilized as a buffer stock to regulate domestic food prices.

Cambodia

The Government in Cambodia resorted to an impressive number of policy measures in the face of the global crises. Among the measures were cash transfers, salary increases, rice subsidies, exemption of import duties on agricultural inputs, expansion of food distribution programmes and short-term vocational training programmes for laid-off workers. The Government also launched a stimulus package that reduced bank reserve requirements and boosted investments in transportation, irrigation and agriculture.

Two specific examples of the Government's bid to stabilize prices were the export ban on rice in March 2008 and its purchase of 300 tonnes of rice. The export ban resulted in domestic rice prices falling by some 10 per cent. It was lifted in May 2008 – Cambodia being the first exporter to do so. As for the purchased rice, it was subsequently sold on urban markets at subsidized prices (up to 30 per cent below the prevailing market price). The Government complemented this subsidy, which was limited in scale, by offering low-cost credit to private rice mills in order to enable them to purchase and sell larger stocks.

United Republic of Tanzania

“The Government invested in a fiscal stimulus package to ensure the economy continued to be active against the pressures for reduced economic activity. It even borrowed to support a number of projects that had been started before the onset of the crisis. The huge demand for infrastructure development implied increased requirements in the face of revenues that were falling. Infrastructure remains a major requirement in United Republic of Tanzania that will help internal integration and boost production and trade. The Government

⁵⁷ Regional Strategic Analysis and Knowledge Support System (ReSAKSS), 2010.

⁵⁸ UNCTAD, 2010b, p. 67.

had a plan to develop infrastructure financed by raising \$500 million on the international financial markets, which was scuttled by the global financial and economic crisis. The threat arose from the potential interest rates or failure to attract adequate support. To continue with its plans for infrastructure development, the authorities provided Tsh [Tanzanian Shilling] 205 billion in the budget that would be raised through a long-term local bond issue (Lunogelo, H. B., Mbilinyi and Hangi, M (2009).” (p. 37)

2.5.2. *Boosting export diversification*

Diversifying an economy’s activities beyond traditional exports translates, by definition, into reduced commodity dependence and vulnerability to external shocks. However, by no means do the benefits from diversification end there. First of all, sectoral diversification has been found to be closely associated with economic development (see Box 8 on how this might be the case in Burundi).⁵⁹ Second, although commodity-dependent LDCs can – and do – enjoy growth, the link between this growth and employment creation is quite loose. Manufacturing, services and agro-industry, on the other hand, offer better prospects to generate both.⁶⁰

Box 9. The benefits of diversification in Burundi

As articulated in the case study of Burundi, coffee is by far the most important product for the country’s economy, accounting for an average of 70 per cent of exports and 11 per cent of GDP during the period 1995–2009. Notwithstanding this prominent position and the opportunities the sector offers by making it more competitive, it is essential to realize the potential benefits that can be had from diversifying the economy. In fact, the case study on Burundi draws attention to an analysis that found that increasing coffee production by 10 per cent would raise the country’s GDP by 0.3 per cent, while increasing production outside the coffee sector by 10 per cent would boost GDP by 3.5 per cent.

Diversification comes in a number of forms. For one thing, it is possible to diversify vertically, i.e. to seek to exploit value addition opportunities by expanding production into upstream and downstream activities along the value chain (i.e. value addition into input sectors and resource-processing industries). For another, an economy can diversify horizontally by developing other sectors – commodity-related or not. Horticulture and tourism are two sectors that offer good prospects for many LDCs, with considerable backward and forward linkages, as highlighted in previous UNCTAD studies.⁶¹ A third type of diversification is to modify and/or upgrade existing products, e.g. by moving from low-end to high-end goods, developing other varieties of the products or targeting niche markets.

At this point, it is worth noting that even if the focus here is on value addition and sectoral diversification, one type of diversification that has been prominent in recent years is geographical. In particular, the destinations of LDC exports have become increasingly varied, with a greater share of exports heading to other developing countries. Related to this is the finding by Brenton and Newfarmer (2007) that a significant share of export growth in low-income countries (not only LDCs) between 1995 and 2004 was due to existing products being exported to new markets, although the expansion of existing products in existing markets accounted for the largest contribution to export growth by far.

⁵⁹ See, e.g., Imbs and Wacziarg, 2003, and Carrère et al., 2007.

⁶⁰ UNCTAD, 2010d, p. 22.

⁶¹ UNCTAD, 2008c, and UNCTAD, 2010b.

The rest of this section investigates some of the key elements of export diversification, viz. the national framework, productive capacities and the international environment.

Box 10. Diversification and economic development: Insights from Vietnam

Albeit it is not an LDC, Golub et al. (2011) highlight Viet Nam as a case study with valuable lessons for LDCs, particularly those located in Asia.

One significant feature of Viet Nam's policies has been the adoption of a gradualist approach towards liberalization since 1986, which has included price liberalization on agricultural crops and the easing of restrictions on foreign firms. In addition, the Government has made significant investments in infrastructure (9–10 per cent of GDP over the past decade) and training in addition to pursuing prudent macroeconomic policies. These factors have helped attract foreign direct investment, which has furthered an expansion from garments to footwear and electronics. Moreover, as a result of a bilateral trade agreement with the US that was signed in 2000 (establishing normal trade relations between the two trading partners), exports from Vietnam to the US increased more than tenfold between 2001 and 2007. One of the notable challenges of Vietnam's gradualist approach is the continuing dominance of inefficient State-owned enterprises (SOEs) in crucial services that are generally closed to FDI, such as telecommunications, transportation and finance.

The national framework

It is trivial to remark that an economy's activities do not take place in a vacuum. Nevertheless, the significance of an enabling national framework for the expansion of an economy cannot be understated and, despite some progress, there is still considerable scope for LDCs to improve the environment in which firms operate. The link between economic performance and the business climate is also underlined by Golub et al. (2011), who find a positive correlation for non-oil LDCs between the Country Policy and Institution Assessment (CPIA) and, respectively, growth of per capita income and growth in export values.

Governance

Weak governance is discussed in some of the case studies as well as in Golub et al. (2011), with the latter highlighting it as an issue that concerns LDCs in all regions. Although progress can be seen in several areas, corruption still emerges as an impediment to the expansion of the economies' activities. In addition, it is of essence that improvements in governance are not merely understood as upgrading legislation but that reforms and rules are followed up by strong implementation and enforcement, with no exceptions. Institutions capable of implementing policies and enforcing laws and legislations are key in improving the state of governance in LDCs.

Although improving governance is not a problem that can be resolved immediately, steps can be taken to cushion the negative impact of inadequate governance in the interim. In Cambodia, for instance, a strong trade association and a large role for foreign firms in the garment sector have been conducive to overcoming constraints in the national environment by facilitating dialogue and strengthening public–private partnership.⁶² Export processing zones or special economic zones are other policy options. Nevertheless, it is crucial that such measures are not pursued in place of more fundamental reforms that aim to improve governance in the long term.

⁶² Golub et al., 2011, p. 39.

Macroeconomic management

Greater macroeconomic stability has been one of the success stories of many LDCs during the past decade, with government deficits and inflation rates being brought under control. The resilience of some countries in the wake of the global crises attest to the advancements made. At the same time, the crises exposed weaknesses in the macroeconomic management of some LDCs, including the reliance on income from commodities. One of the areas where there is scope for LDCs to take steps to strengthen macroeconomic management is in the mobilization of domestic resources, including tax reforms. Mozambique's initial reforms of the tax code for the mining and oil sectors might serve as one example in this regard. This will not only contribute to increased domestic resources mobilization but will also add to continued improvement in governance and transparency in government interventions.

The case studies on United Republic of Tanzania and Zambia also highlight the importance aid can have for LDCs facing external shocks, arguing that aid, coupled with domestic resources, proved vital to support the countries in the wake of the crisis.

Business regulations

The role of private sector development and FDI in export diversification and economic growth is a recurring feature in the case studies. However, in order to ensure a conducive business environment to boost the private sector and attract investment, it is key that firms can operate without having to deal with overly burdensome laws and procedures. To this end, several case studies undertaken in LDCs, inter alia in the context of the present project, highlight the importance of facilitating business regulations, including ease of investment and trade facilitation.

Rwanda can serve as an example to other LDCs on how to ease the cost of doing business. The country has been praised as a top reformer in recent years, moving from being ranked 150th in 2008 to 58th in 2011 out of 183 countries in the World Bank's Doing Business index. Part of this success is due to the Government making an improved business climate a priority, including by establishing a Doing Business Task Force, but what has set Rwanda apart from many other LDCs is the Government's political will and strong enforcement of reforms.

Productive capacities

Whereas the previous sub-section looked at the national environment in which an economy's activities take place, this subsection turns to the actual means of production: LDCs' productive capacities. This broad concept can be seen as consisting of three key components: productive resources, entrepreneurial capabilities and production linkages.⁶³ However, the focus here is on the two elements of productive capacities that are primarily emphasised in the case studies, viz. hard and soft infrastructure.

⁶³ UNCTAD, 2006.

Box 11. The impact of the global financial and economic crisis on productive capacities in Benin and Burundi

Benin

“The impacts of the crisis on commodity production capacities are mixed owing to the predominance of the informal economy in the primary sector (99 per cent of sectoral GDP), where mechanisms to adjust to market shocks have had a remarkable offsetting effect, along with government measures in support of certain products. These can be viewed as positive if we consider the investments attracted to boost production capacity and enhance protection against the harmful effects of the crisis on food security and poverty above all. Yet they have also had a considerable negative effect as a result of skyrocketing input prices.

The concerns created by the crisis have made it possible, at the micro level, to boost investment in food-producing sectors in general and in particular in corn, rice, and roots and tubers (cassava, yams). Food producers were driven by the Government’s appeal to boost food production as preparation for a possible famine. Irrigated areas are being prepared within the framework of the Emergency Food Security Support Programme. Some 6,000 ha of low-lying areas have been reclaimed to boost rice production, and decorticators have been installed.” (pp. 30–31)

Burundi

“Burundi’s production capacity has been hit by world financial and economic crises. The volatility of agricultural commodity prices, through its two components, variability and uncertainty, has been accompanied by high interest rates, leading to a drop in investment, loss of jobs, mainly for unskilled workers, and a worsening of income poverty. It goes without saying that this succession of harmful consequences affects the country’s production capacity. According to information taken from the online databases FAOSTAT and UNCTADSTAT, accessed respectively in September and October 2010 and published by UNCTAD (2010), Burundi’s production capacity deteriorated in 2008. We illustrate this using indicators for agricultural production, food production and economic growth.” (p. 14)

Hard infrastructure

The inadequacy of hard infrastructure, such as transportation systems, telecommunications, and energy supply, is frequently underlined as a major bottleneck for export diversification and economic growth in LDCs. This point has also been recognized by the LDCs themselves and several countries, e.g. Ethiopia and the Gambia, have been making strides to address the investment gaps, with the expansion of mobile phone networks perhaps constituting the most successful example. Still, physical infrastructure remains woefully deficient in LDCs.

The LDCs that primarily benefited from the boom period of the last decade – commodity-rich countries, in particular – had an opportunity to address these inadequacies. However, the global financial and economic crisis has put several plans on hold.

The need to restructure inefficient SOEs operating in infrastructure sectors is crucial, since an inadequate provision of telecommunications, power and the like drag down the performance of the rest of the economy. The positive impact of reforms in infrastructure is perhaps most apparent in mobile telephony. For instance, a study on post-conflict countries in Africa finds that liberalizing the telecommunications industry in Sierra Leone substantially improved access to information and communications technology products, with the formation

of five mobile operators contributing to the network covering 80 per cent of the country's land and mobile cellular subscriptions per 100 people increasing from 2.4 in 2003 to 18.1 in 2008.⁶⁴

Soft infrastructure

The notion of soft infrastructure covers several issues, ranging from governance and business regulations to adequate skilled labour and lack of access to and high cost of credit. However, as the two former issues were discussed above, this subsection focuses on the skilled labour and credit availability.

Skills shortages constitute a constraint throughout the LDC grouping. Moreover, the global crises have most likely aggravated the problem. For instance, incidents have been reported in Cambodia where poor households have resorted to withdrawing children from schools as a coping strategy to deal with rising food prices (although this was the least common action among eleven broad strategies).

An example from the leather industry in Ethiopia shows how concerted and targeted efforts that include skills development can boost an industry.⁶⁵ In the face of stiff competition of imports, notably from emerging economies in the early 2000s, the Government launched consulting, training and marketing programmes to raise the quality of locally produced shoes in addition to working with firms to set export and productivity targets. The measures have contributed to a revival of the sector and although shoe exports remain small, they have grown since the programmes started.

The problem concerning credit is, above all, to obtain credit from banks in the first place, with small and medium-sized enterprises and agricultural producers being particularly affected. However, even when credit is provided, there is often the problem of borrowers facing prohibitively high interest rates. For instance, in the case of horticulture, UNCTAD (2010c) notes that the average interest rate in Africa stands at 12 per cent or more. However, the same report also draws attention to Ethiopia, where the Government has been subsidizing loans at 6.5 per cent to horticultural producers and exporters. As shown in Box 12 below, Nepal also faces enormous technical and institutional challenges in meeting food safety requirements, especially in its attempt to export honey to the EU and Republic of Korea.

Box 12. Nepal and the challenges to expand and upgrade honey exports⁶⁶

In order to be eligible to export honey to any EU member country as well as Norway (a key destination of Nepali honey exports until 2002), Nepal will have to be listed in the EU as an authorized country for import, under EU Directives 92/118/EEC of 17 December 1992 (GoN 2010a and AEC 2006). To this end, Nepal has to submit national residue plans, guaranteeing the monitoring of the groups of residues and substances identified by the EU. Lack of a national residue control plan is also hurting exports to the Republic of Korea. While the Government of Nepal has been supporting the honey sector by providing a 25 per cent cost subsidy on beehives and a 50 per cent cost subsidy on other tools, equipment and services, failure to put in place an internationally acceptable national residue control plan even a decade after the imposition of the ban has proved to be a critical barrier to honey exports to overseas markets.

In the absence of internationally recognized domestic testing and certification facilities, honey processors have to send samples to overseas countries for testing, which is

⁶⁴ Ndlovu, 2011a and World Development Indicators, World Bank.

⁶⁵ Golub et al., 2011.

⁶⁶ Synthesis from the case study of Nepal by Paras Kharel (www.unctad.org)

costly (AEC 2006). NTIS 2010 accords priority to addressing this problem by strengthening (laboratory) testing capacity in the area of maximum residue levels (MRLs) and microbiology, and reviewing Pesticides Act 1991 and Pesticides Rules 1994 “to ensure that crop protection comply with changing and most stringent MRL requirements of trading partners”—by 2012 (GoN 2010a). As of April 2012, the Central Food Laboratory at the Department of Food Technology and Quality Control was in the final stage of obtaining accreditation on 24 parameters from India’s National Accreditation Board for Testing and Calibration Laboratories. However, the process of obtaining accreditation for MRL-related testing has yet to begin as the lab’s capacity in this area remains to be upgraded.* The pace of putting in place the necessary institutional and legal arrangements and infrastructure to effectively address SPS-related barriers to exports, as envisioned by the Nepal Trade Integration Strategy (NTIS) 2010, needs to be seriously sped up.

* Based on conversation with Ms Jiwan Prabha Lama, Director General, Department of Food Technology and Quality Control, GoN.

*International environment*⁶⁷

Just as a country’s production cannot be isolated from the national context, it is equally important to analyse the national economy in relation to the international setting. The global crises – rooted as they were in non-LDCs – demonstrated this to devastating effect by way of their impact on LDCs.

The trade policy of trading partners can both hamper and assist export diversification of LDCs. From a positive perspective, duty-free, quota-free preferences by developed countries can act as incentives to expand the scope of LDCs’ economic activities. However, from a negative perspective, non-tariff measures by developed countries, notably agricultural subsidies and the standards and technical regulations facing agricultural exporters, can reduce the competitiveness of LDCs and make it more difficult for LDC exporters to pursue diversification opportunities.

Regional economic relations present opportunities for LDCs to diversify their exports, as exemplified by intraregional trade and investment flows affecting Asian LDCs. Beyond export diversification, regional cooperation can also assist in addressing common challenges, such as common regional infrastructure (rail networks, roads, hydroelectric dams etc.) or regional initiatives to deal with the issue of food security (e.g. the initiatives found within the Economic Community of West African States (ECOWAS)⁶⁸ or in the CAADP).

⁶⁷ See UNCTAD, 2010a for a detailed analysis of the linkages between LDCs’ development and the international economic architecture as well as for proposals for a New International Development Architecture.

⁶⁸ Soulé, B.G. and Yérima, B., 2011.

Box 13. What governments did not do: A couple of notable absences

Monitoring and evaluation

Conspicuously absent from the case studies is the issue of monitoring and evaluation of government responses to the crises. This might simply be explained by that more time needs to pass before valuable assessments of government policies can be carried out. Or, of course, that the results of such monitoring and evaluation were not publicly available or highlighted in the case studies. Nevertheless, the overall impression from the case studies is that governments could have done more to assess their policy responses. Indeed, the report covering United Republic of Tanzania and Zambia explicitly states that there were no monitoring mechanisms in those countries (p. 40).

Reforms

It is not clear how, if at all, governments in the case study countries saw the global crises as opportunities to institute reforms in various areas. As a matter of fact, the impression coming out of the experiences of United Republic of Tanzania and Zambia is quite the opposite, at least with respect to tax reforms: “Governments did not seize the opportunity to change tax policies during the crisis. However, if anything, there is a serious need to reform taxes. The revelations or lessons from the crisis should spur the governments into reforming their tax policies.” (pp. 40–41)

Chapter 3: Enhancing food security through agricultural development⁶⁹

3.1. Introduction

“Historically, the world rice market has been an unstable and unreliable source of supply.” These are the opening words of a paper published by a senior United Nations researcher in early 2008. He went on to write that since the mid-1980s, “the world rice market has become much more reliable”,⁷⁰ but it may fairly be asked if he would use those words now. There is ample evidence that volatility has actually increased in agricultural commodity prices over recent decades, and three years after that statement many people have commented on the instability of the world’s cereal markets in general.

As discussed in chapter 2, the sharp increases and subsequent fluctuations since late 2007 in the prices of basic cereals quoted on world markets have been the most severe for the poorest people and the poorest net food-importing countries. This has not only brought hardship at the individual level through malnutrition and worsening livelihoods, but has had wide-ranging effects at the national level as well. The food riots in eight LDCs during the food crisis of 2007–08 are one manifestation of the political instability attributed to higher food prices.⁷¹

This chapter examines the situation of food security in LDCs in the light of the huge shock which people have experienced as a result of the recent global financial, economic, fuel and food crises. It focuses on six countries – Benin, Burundi, United Republic of Tanzania and Zambia in Africa, and Cambodia and Lao PDR in Asia – reviewing what policies have been used to address the situation, how successful they have been and what other options may be available. The chapter adopts a holistic approach to the underlying issues by taking into account various perspectives, including economic, environmental, agronomic and nutritional considerations.

The chapter is structured as follows. The first section offers a review of the concept of food security. The following two sections discuss the food crisis and its impact on LDCs more generally and, subsequently, on the six countries in particular. The fourth section analyses the underlying issues and looks at several options to alleviate food security concerns.

3.2. What is food security?

First of all it is important to define food security, since the term is used to mean different things in different contexts.⁷² The factors involved in food security are many and varied, and there are almost as many ways to understand the term as there are food security analysts. The general understanding of the phrase owes much to the pioneering work on famine of the Nobel Prize-winning economist Amartya Sen, who established that there is frequently plenty of food available in times of famine but that a section of society does not have access to it. This is reflected in the definition of food security which was agreed at the FAO’s World Food Summit in 1996:

‘Food security exists when all people, at all times, have physical and economic access to sufficient, safe and nutritious food that meets their dietary needs and food preferences for an active and healthy life.’

⁶⁹ This chapter is an abridged, edited and updated version of Lines (2011).

⁷⁰ Dawe, 2008, p. 41.

⁷¹ As another example – albeit not related to an LDC – the recent uprising in Tunisia began with a vegetable trader’s suicide in a neglected agricultural region of the country.

⁷² This section of the chapter draws on work done by Thomas Lines in 2009 on behalf of the Intergovernmental Authority on Development. See Lines (2009), and other documents of late 2009 listed at www.tomlines.org.uk/page2.htm.

Food security policy is taken here to have three main elements, in this order of importance:

1. The regular production or assured supply of sufficient nutritious food at places and prices that are accessible to everybody and meet their preferences.
2. Assurance that all citizens have the means to acquire or grow the food they require for a nutritious diet, and sufficient economic robustness to withstand shocks of all sorts, whether they be naturally caused (e.g. a low or lost harvest due to pests, drought or floods), economic (e.g. increases in food prices), personal (e.g. sudden expenditure needs that can arise from illness or bereavement), political (e.g. the interruption of supplies because of conflict) or from any other cause. This is a broad understanding of the concept of “social protection”, as applied to food security.
3. Arrangements in place to foresee possible interruptions to food supply and ensure that everybody is adequately fed in the event of such an emergency (this is disaster risk management).

Food security can be achieved in various ways, according to the circumstances. For example, among the richer countries the United Kingdom has not produced all of the food it needs for a very long time. Except during the Second World War, however, the UK has never had a food security problem, because it could always afford to import enough food to meet its needs. But few if any LDCs could be called food-secure with such low rates of self-sufficiency, because they are not assured of sufficient export revenue or the ability to borrow enough money to pay for these imports. Similar considerations apply at the level of poor individuals and households.

Therefore, food security is, as much as anything, an issue of poverty. At the national level, as well as the individual one, Sen’s point about access to food is critically important. People, and countries, need to have sufficient purchasing power to meet their food needs. Important questions for food security therefore are always, whose access to food is insecure, and even: who is poor? Secondly, general security also matters – both from the point of view of the State, since both civil and foreign conflicts can interrupt food supplies, and the individual, whose food security is often affected by other forms of insecurity, such as civil unrest, natural disasters or personal misfortune.

Although food security is a simple idea in principle, numerous influences can upset it in practice. In LDCs, these may include the following:

- The risky nature of food production and distribution. The climates of many LDCs are arid or semi-arid, and even where this is not the case, weather and rain patterns can be unreliable. Soil qualities and biota vary, for example leaving many lowland areas suitable for pasture but not for agriculture, or vice versa.
- Pervasive poverty. All LDCs have a large proportion of economically or socially vulnerable people, who face difficulty in growing or earning enough to feed their households. This makes them vulnerable to any destabilization of food supplies, whatever its origin.
- Limited systems of communication. Weak infrastructure can inhibit both domestic and cross-border trade in agricultural products and food.
- The adverse consequences of climate change. Climate change appears to be responsible for greater variability of rainfall, more frequent droughts and a lowering of water tables in many tropical regions in recent years.
- Rapid population growth. On average, populations in LDCs grow faster than elsewhere in the world,⁷³ which puts pressure on both the resources available in rural areas and the food supplies reaching urban areas.

⁷³ 2.2 per cent per annum in LDCs in recent years, which is roughly twice the world average and the average in other developing countries (UNCTADstat).

- Conflicts. It takes a long time for society to recover from major conflicts, and in some of these places they are still feeling the after-effects today.

Food security policy in the long term must ensure there is enough food available and that there is universal access to it, so as to end any need for emergency measures. These measures are only designed to meet immediate needs, not to be a semi-permanent part of any country's food supply. The need to meet people's food preferences must also not be overlooked, although there is a question about how far it should reasonably be taken. The main policies required for food security lie in these areas:

- Agriculture;
- Agricultural trade – including imports, where the balance of payments is strong enough to allow them;
- Social protection (welfare) and distribution of income;
- The management of disasters and risks of disaster; and
- Mechanisms to address both chronic and transitory food insecurity when it arises.

This chapter mainly considers the first two items in the list above, since success in them is essential to ensure food security in the long term.

3.3. The food price crisis in commodity-dependent LDCs

Trade in primary commodities is known to pose one of the biggest problems for development, because many underdeveloped countries have few sources of foreign exchange other than the export of either agricultural or mineral commodities. But the prices of those commodities are notoriously volatile, while selling them for export also deprives the country of their use for its own purposes and of resources such as land from which they were produced. More recently, however, it can be said that the commodities problem has actually become more pronounced because, unlike in the past, most poor countries now also import a large share of their food supplies. So the commodity problem now affects both sides of most LDCs' external trade as well as the realization of any government's most basic task: that of ensuring its people are fed. In this respect, the United Nations now designates 70 countries as low-income food-deficit countries (LIFDCs). These include all six of the countries studied for this paper and, in total, 42 LDCs: 29 African LDCs, 7 Asian LDCs, five island LDCs and Haiti.⁷⁴

The volatility of most commodity prices is not arbitrary but follows cycles, related to the wider business cycle and fluctuations in supply and demand for each commodity in turn. Since the middle of the last decade, commodity prices have experienced their biggest cyclical upturn since the 1970s. Led initially by certain industrial and mineral commodities such as oil, iron ore and copper, in late 2007 the prices of wheat, maize and rice also started to move sharply upwards, creating a big "spike" in their prices on world markets between about October 2007 and June 2008. The exact dates vary according to the cereal, wheat prices having reached the top of their spike in February 2008, not very long after rice prices began a sharp climb.

Much has been written and said about the reasons for these price increases, and there is no general consensus. However, among the suggested causes it is useful to distinguish between factors which immediately prompted the price increases and more long-term factors which lay in the background. The most obvious among the former were short-term changes in supply and demand. Thus, the world faced a shortage of wheat supply due to harvest shortfalls caused by bad weather, in particular a severe drought in Australia, a major exporter. In some cases, there were also sudden additions to demand, in particular the purchase of

⁷⁴ The countries are listed in FAO, 2012b. It should be noted that Cambodia has recently been a net exporter of cereals in successive years, so it may already be inaccurate to consider it as a food-deficit country.

maize (corn) in the United States for the production of biofuels, which was receiving a new subsidy initiated by President George W. Bush. Immediate problems of supply and demand were, however, harder to identify on the rice market.

The extent of the influence on prices of financial investors and speculators is disputed, but there is little doubt that in 2007–08 it was important in the wheat and maize markets, for both of which the Chicago Board of Trade’s futures exchange sets reference prices for the rest of the world. This followed recent growth in the “non-commercial” use of commodity markets, including that by financial funds which invest in commodities on the basis of price indices that need not reflect fundamentals and can result in herd behaviour.⁷⁵ In the case of rice, any such influence was more indirect and it is less widely accepted as an explanation, because the futures markets play only a minor role in the rice trade. However, a role was played by export restrictions on the rice market, especially India’s near-complete ban from October 2007.

A specific example of how the gyrations in the global markets in 2008 affected a fairly stable domestic market is found in this account from Zambia, where maize is the main staple food: “[The] May 2008 food balance sheet showed a small surplus over national consumption requirements... Because of nervousness in the markets related to high world food prices, private millers and traders [later] started the 2008 season by aggressively buying maize at prices higher than the [Food Reserve Agency] floor price.”⁷⁶

In addition to the short-term factors, there were various long-term factors in the background that facilitated the sudden tightening of the markets. The prices of cereals and other primary commodities had been relatively low for many years, leading to a degree of complacency among policymakers and a neglect of agriculture. This, combined with an emphasis on production for export since the era of structural adjustment, led many developing countries to rely more and more on imports of staple foods, leaving them exposed when the prices of those imports rose suddenly. Low prices had also reduced the pressure for increased agricultural yields, which had stagnated since the early 1990s, contributing to a decline in world stocks on some of the cereal markets.

The immediate impact on LDCs that resulted from an overall neglect of agricultural development, greater dependence on food imports and the sharp food price increases was a rise in the food import bill of the LDC group: from more than \$9 billion in 2002 to \$24 billion in 2008 (although this dropped somewhat in 2009).⁷⁷ Since the large majority of LDCs are net food importers, this meant that the food crisis put additional pressure on their balance of payments. Rising food prices also exacerbated levels of poverty and household food security, which is not surprising in view of the fact that poor households can spend up to 80 per cent of their incomes on food. It is likely that urban households were more affected by the price rises. That said, the majority of rural households in LDCs, despite being able to draw on their own production for part of their consumption, in fact consist of net food buyers who were similarly impacted by the food crisis.

However, even net food sellers were unable to take advantage of higher prices because their major production inputs went up in price by even more. Indeed, over the whole period since the last commodity price boom in the 1970s, cereal prices actually increased less rapidly than those of manufactured goods, but those of the industrial inputs to agriculture increased by more than the manufactures prices. Changes in the average “real” prices of various commodities between the three-year periods of 1978–80 and July 2005 to June 2008 are shown in Table 4. It may be noted that the real prices of cotton and coffee, important export products for many LDCs, fell the most over this period, although they have been rising fast since 2010.

⁷⁵ For an in-depth report on the impact of financialized commodity markets on commodity prices, see UNCTAD, 2011h.

⁷⁶ Tembo et al., 2009, p. 29 (Table A1).

⁷⁷ UNCTAD, 2010a.

Table 4. Percentage changes in real commodity prices since the late 1970s*

Commodity	Percentage real price change
Crude oil	+ 59
Phosphate rock	+ 46
Wheat	- 19
Maize	- 25
Rice	- 45
Cotton	- 57
Coffee	- 63

* Changes in average real prices between 1978–80 and July 2005 to June 2008, in per cent, deflated by the average unit values of manufactured goods. Prices are deflated between the two three-year periods by a factor of 0.5638.

Source: Lines (2011), based on data from UNCTAD, the World Bank, the IMF and International Rice Research Institute.⁷⁸

The problem of increases in input prices appears at both the national level and that of the individual farm or smallholding. Thus, the national situation in United Republic of Tanzania has been reported as follows:

“Conforti and Sarris (2008) ... trace the effects of commodity price increases through the economy and the households. They find that the commodity price changes facing a country like Tanzania can amount to a six per cent of GDP negative shock to the economy. The reason for this is that while the agricultural price rises may imply a positive shock, the large petroleum crises imply an even larger negative price shock, as Tanzania relies very much on petroleum imports.”⁷⁹

In addressing the challenges of food security, it is therefore justified to explore options for reducing farmers’ reliance on mineral and chemical inputs and, at the economic level, reducing LDCs’ dependence on the global agricultural markets that have sent price shockwaves around the world. Solutions along these lines might have the added benefit of increasing the resilience of food production to changes in the climate and alleviating environmental concerns, e.g. through reduced use of minerals and chemicals that might harm soil quality and water availability over the long run. But before examining these policy options in detail, it is instructive to have a detailed look at the experiences of the six countries with respect to food security.

3.4. Food security and agricultural development in six LDCs

Three features distinguish the countries that have fallen behind the rest of the world during the era of globalization. They are: remoteness from world markets (sometimes because they are landlocked); dependence on commodity exports; and a combination of rural poverty with substantial imports of food.⁸⁰ A large share of agriculture in national income and employment could also be added. The six countries under review share most of these characteristics, although due to their situation in South-East Asia, Cambodia and Lao PDR are less remote economically than the African countries. However, it should be noted that unlike many other LDCs, in 2008 none of them except Benin was seriously dependent on food imports, yet they were all affected to a greater or lesser extent by the global price crisis.

78 A more detailed table, showing the price changes of 22 commodities, may be found at www.tomlines.org.uk/CommodityPriceChanges1970sJune2008.pdf.

79 FAO, 2009, p. 41, citing P. Conforti and A. Sarris. (2008) “Policy Response to a Commodity Price Boom under Structural Constraints: The case of Tanzania”, presented at an FAO meeting in Rome.

80 Lines, 2008, pp. 16-23.

The six countries are assessed in the annual Global Hunger Index (GHI)⁸¹ as having food security statuses that vary between “serious” and “extremely alarming”. As seen in Table 5, these assessments have diverged over the last 20 years: while in 1990 they were almost within 10 points of each other (from Benin on a score of 21.5 to Cambodia on 31.7), by 2011 the difference between the best and the worst was over 20 points (from Benin on 14.7 to Burundi on 37.9). Three countries (Benin, Cambodia and Lao PDR) markedly improved their scores over those 20 years, two (United Republic of Tanzania and Zambia) improved a little, but Burundi’s score seriously deteriorated.

Table 5. Countries’ status on the Global Hunger Index in 1990 and 2011

GHI status, 2011	Country	GHI score, 1990	GHI score, 2011	Comparison
“Serious”	Benin	21.5	14.7	Better
	Cambodia	31.7	19.9	Better
“Alarming”	Lao PDR	29.0	20.2	Better
	United Rep. of Tanzania	23.1	20.5	Better
	Zambia	24.7	24.0	Similar
“Extremely alarming”	Burundi	31.4	37.9	Worse

Source: von Grebmer et al. (2011).

Note: A country’s status is based on the following GHI scores:

“Serious”: 10.0-19.9; “Alarming”: 20.0-29.9; “Extremely alarming”: ≥ 30.0

An increase in the GHI indicates a worsening of a country’s hunger situation, while a decrease in the GHI indicates an improvement in a country’s hunger situation.

In general, Table 6 suggests a relationship between food security performance and general economic performance, as measured by the growth (or decline) in GDP per capita over almost the same period of years. However, there is an exception in the case of Benin, where the improvement in the GHI appears somewhat greater in relation to economic growth than in the other countries.

Table 6. Annual average growth (or decline) in GDP per capita, 1992–2010

Country	Growth rate in GDP per capita, 1992–2010
Cambodia	6.2
Lao PDR	5.2
United Rep. of Tanzania	3.0
Benin	1.3
Zambia	1.0
Burundi	- 1.0

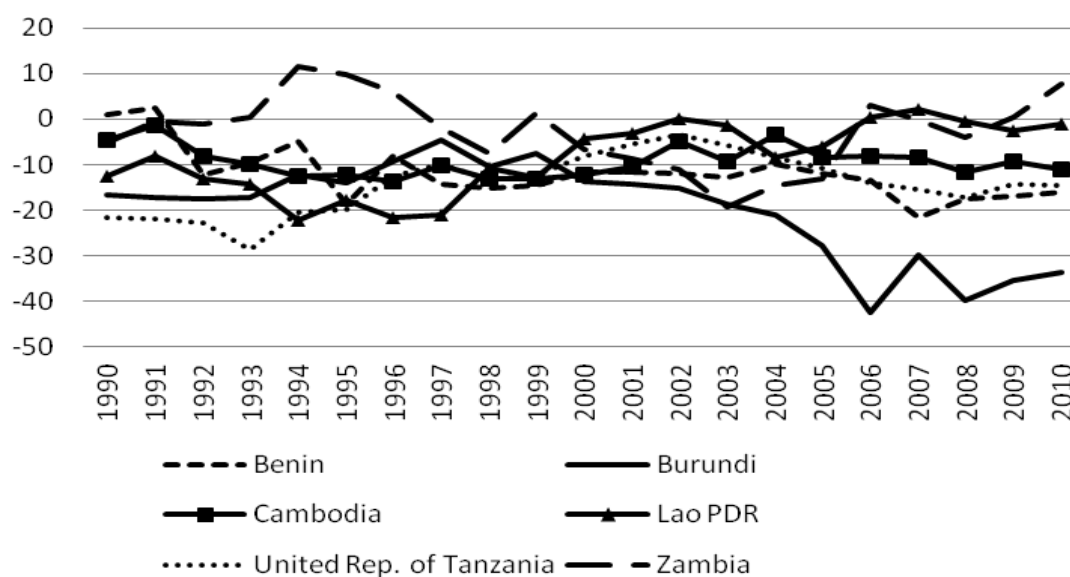
Source: UNCTADstat.

On the other hand, in this very small sample of countries there is no apparent relationship between food security trends, as measured by the GHI, and in the evolution of trade balances and current accounts (as a share of GDP), as seen in Figures 13 and 14. To be sure, the indicators for Burundi deteriorated significantly, especially after the mid–2000s. The trends of the other five countries do not, however,

81 The GHI is calculated by the International Food Policy Research Institute (IFPRI) and “is designed to comprehensively measure and track hunger globally and by country and region” (von Grebmer et al., 2011, p. 7).

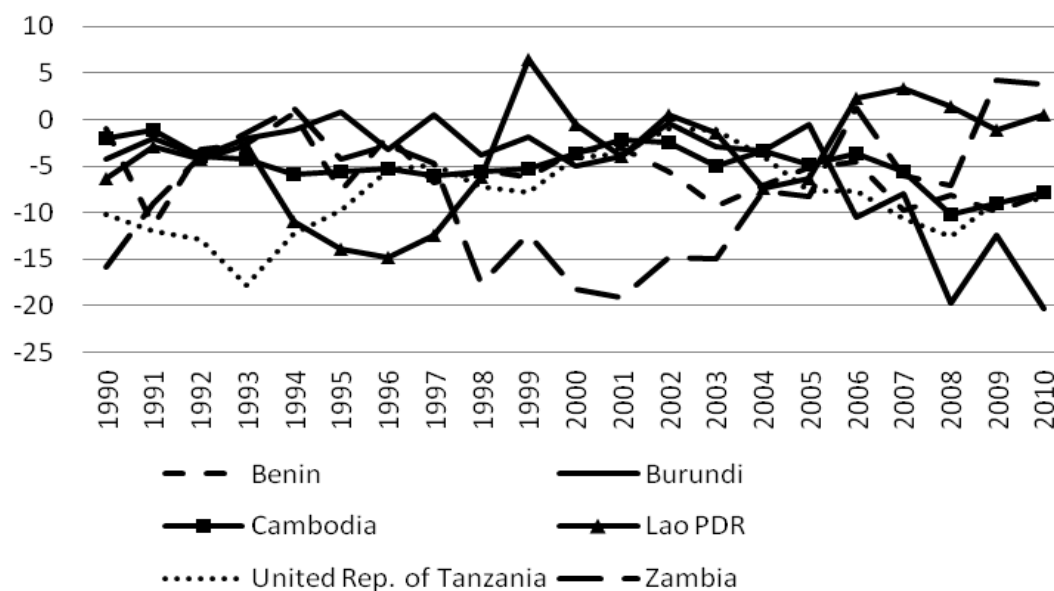
suggest strong linkages between trade and current account balances, on the one hand, and food security, on the other.

Figure 13. Performance of trade balances, 1990–2010 (percentage of GDP)



Source: UNCTADstat.

Figure 14. Performance of current accounts, 1990–2010 (percentage of GDP)



Source: UNCTADstat.

The data in Table 7 suggest that Cambodia and United Republic of Tanzania should be in the best position to weather the shock of increased staple food prices, and Burundi and Zambia in the worst position.

Table 7. Exposure to harm from external shocks in the case study countries

		Macroeconomic vulnerability	
		<i>Medium</i>	<i>High</i>
Human development status	<i>Medium</i>	Cambodia United Rep. of Tanzania	Lao PDR
	<i>Low</i>	Benin	Burundi Zambia

Source: Marone et al. (2009), based on U.N. and IMF data

Maize, rice and wheat are not the only staple foods consumed in LDCs. In Burundi, for instance, they are only the third, fourth and fifth most favoured foods. Hence, it is important to study the position of other important foodstuffs, most of which do not enter international trade very much and are therefore protected from the sorts of price shock that affected the three main traded cereals. However, as sources of food security many of them have other weaknesses, for example lower production yields.

Table 8 shows how varied the diets are in the six countries. There is no dominant crop in Burundi, which reflects the population's preference for other foods than the main internationally traded cereals, the geographical variety of the country and the sourcing of its food supplies. No staple food dominates in Benin either, but Tanzanians and Zambians predominantly favour maize. Cassava is an important back-up crop in all the African countries except United Republic of Tanzania, but better-off city dwellers often prefer rice or wheat. As for the two Asian countries, the people of Cambodia and Lao PDR rely heavily on rice for their dietary energy supplies (DES).

Table 8. Main staple foods in the case study countries

	Crop	Percentage of dietary energy supply (DES)	Comments
Benin	Maize	21	
	Cassava	16	
	Rice	11	Mostly imported, for urban consumption
	Sorghum	6	
Burundi	Beans	16	
	Cassava	16	
	Maize	13	
	Rice	3	90 per cent self-sufficient
	Wheat	2	Urban consumption
United Rep. of Tanzania	Maize	34	
	Rice	9	Mostly imported
	Beans	3	
Zambia	Maize	52	

	Crop	Percentage of dietary energy supply (DES)	Comments
	Cassava	13	
	Wheat	7	Mainly urban consumption, 74 per cent self-sufficient
	Rice	1	
Cambodia	Rice	66	A net exporter of rice and maize in recent years
Lao PDR	Rice	64	

Source: FAO GIEWS, www.fao.org/giews/pricetool

3.4.1. Case study 1: Benin

Benin has pursued successful food security policies over many years despite a weak export base and limited progress in economic development, as conventionally understood. The impact of the 2008 crisis on Benin's people was also more limited than in many countries. According to the International Fund for Agricultural Development (IFAD), the country still has a high level of hunger but made rapid progress in combating food insecurity in the 1990s and 2000s (see Table 2 above).⁸² The most recent Vulnerability Assessment by the World Food Programme (WFP), conducted in November–December 2008, concluded that 972,000 people, or 12 per cent of households, were experiencing food insecurity, while a further 1.05 million (13 per cent of households) faced a risk of food insecurity.⁸³ By economic category, poverty and food insecurity were most prevalent among subsistence farming households – the largest population group in Benin.⁸⁴

After the 2008 crisis, retail prices for maize, the country's leading staple food, fell from their mid-2008 highs but remained substantially above previous levels until the middle of 2009, when in some parts of the country they fell right back to the levels of 2006 and early 2007. However, they remained higher in Cotonou, the largest city.⁸⁵ Among the other main food crops, prices of cassava increased sharply in most places in late 2008, but no higher than during a previous cassava price surge in 2005.⁸⁶ The value of food imports increased to FCFA 271 billion in 2008, three times their level in 2000.⁸⁷

According to the case study which Soulé and Yérima did for UNCTAD, several factors contributed to the relatively benign impact of the crisis in Benin. Chief among these is the limited market penetration of agriculture, which is dominated by family smallholdings that use mixed farming systems and extensive herding of small livestock. These practices reduce risks, whether those arising from climate shocks or malfunctioning global markets, and in particular they minimize the effects of a crisis linked to international price volatility. Soulé and Yérima describe the informal sector as the “motor” of Benin's economy. A simulation conducted by the Benin Government indicated that during the crisis, poverty was aggravated more in urban than rural areas. This is because agricultural activity was less affected by the crisis, partly because of measures adopted by the Government, while urban households that depended on manufacturing, trade and other services were the biggest victims of price increases. Most agricultural producers could rely on subsistence production and in many cases increased their incomes by quickly raising production to take advantage of the higher prices.⁸⁸

⁸² IFAD, 2010, Table 1, p. 51.

⁸³ WFP, 2009, p. 115.

⁸⁴ *Ibid.*, p. 117.

⁸⁵ FAO/GIEWS National Basic Food Prices Tool, www.fao.org/giews/pricetool/ (March 2011).

⁸⁶ *Ibid.*

⁸⁷ Soulé and Yérima, 2011, p. 38.

⁸⁸ *Ibid.*, pp. 17, 39, 40 and 44.

At the time of the price crisis in 2007–08, the Government introduced a number of immediate measures. It sold \$83 million worth of cereal reserves but purchased over 20,000 tons of grain from farmers, half of which was bought by Office national d'appui à la sécurité alimentaire (ONASA), the National Food Security Support Office, as buffer stocks to stabilize domestic prices, and half by the National Agricultural Promotion Company (SONAPRA) under contract with WFP, for export to Niger. The Government reduced import duties on rice, sugar and milk, and imposed an unofficial export ban on cereals. Fertilizer subsidies, previously reserved for cotton farmers, were extended to food producers. The Government also approved FCFA 8.2 billion worth of food subsidies, while food and non-food vouchers for targeted beneficiaries were planned with WFP and French aid. However, prices were then liberalized on most subsidized products from July 2008. These measures aimed at increasing the productivity and competitiveness of certain food commodities, in particular rice and maize. By 2010, the incidence of poverty had fallen by 2.1 per cent. This was largely to the sharp increase in food production, as rural people took advantage of the large purchases by ONASA and SONAPRA at the higher prices.⁸⁹

However, the distributive impact of these measures among Benin's farmers has been called into question. According to one recent report, "In Benin, in order 'to ensure production', the majority of beneficiary farmers were big producers who grow more than two hectares (60 per cent)." This was said to be an example of a wider situation where, "Despite international commitments in favour of small farmers, many reports indicate that programmes supporting food production have generally targeted farmers seen as better off and more productive."⁹⁰

In June 2008, the Government adopted an ambitious Strategic Plan for Agricultural Sector Revival (PSRSA), which proposes conventional industrialized agriculture for a rapid increase in crop output, with diversification based on four main food security crops: maize, rice, cassava and yams. The cassava value chain has a strong potential as an economic multiplier, since its production, processing and retailing create the greatest number of jobs. Meanwhile, the yam is considered the leading crop for food security and agricultural incomes. In fact, it has become the largest contributor to the farm economy, providing 21 per cent of agricultural GDP.⁹¹ Benin has also seen rapid growth of rice imports, catering to urban tastes. Domestic rice production has also grown fast, but Soulé and Yérïma consider that the rice sector was underexploited due to the absence of any promotion policy for it until 2008.⁹²

Finally, it should be mentioned that, in addition to the global crises, Benin faced a major crisis of its own between July and November 2010, when heavy floods destroyed over 68,000 hectares of cropland for maize, sorghum, cassava, millet and yams, and killed 141,000 animals. They affected an estimated 680,000 people, many of them in the poorest departments, such as Alibori, Borgou, Ouémé and Zou. Food security is weakest in the Atacora region in the North-West, next to the frontiers with Burkino Faso and Togo. But besides Atacora, the poorest people are concentrated in the other Northern departments (Alibori, Borgou and Ouémé) and in Zou in the Centre-South.⁹³ The FAO's Global Information and Early Warning System (GIEWS) pointed out that the "[m]aize price in October 2010 in Cotonou ... was 44 per cent higher than in October 2009 and 77 per cent higher than the pre-food prices crisis level of three years ago. This has led to a serious deterioration of the food situation in parts of the country."⁹⁴

⁸⁹ Inter-agency Assessment Mission, 2008; HLTF, 2009, pp. 56-59; Soulé and Yérïma, 2011, pp. 40, 41 and 45.

⁹⁰ Mousseau, 2010, p. 25 and pp. 24–25 respectively, citing World Bank project proposals of October and November 2008.

⁹¹ Soulé and Yérïma, 2011, pp. 26 and 28–29.

⁹² Gajigo and Denning, 2010, Table 9.1, p. 166; Soulé and Yérïma, 2011, p. 27.

⁹³ WFP, 2009, p. 115.

⁹⁴ GIEWS, 2011a.

3.4.2. Case study 2: Burundi

Burundi has the misfortune to display nearly all the features identified as being behind economic weakness, and especially rural poverty, in LDCs: the country is small; it occupies a remote, landlocked position; depends on commodity exports; and suffers from severe rural poverty. Burundi is more densely populated than most of Africa, and 90 per cent of the population depends on subsistence agriculture.⁹⁵ In an agrarian country with a mainly rural population, this indicates that the land is productive, allowing two crops per year in much of the country. But it also means that food supplies have to be larger to meet needs, which they have failed to do in recent times. The country is reported to be between 300,000 and 400,000 tons short of food each year.⁹⁶ The United Nations Development Programme has described Burundi's human development as "dire". In particular, the malnutrition rate increased from 48 per cent of the population in 1990–92 to 66 per cent in 2002–04.⁹⁷

Although quite small, Burundi is geographically varied, a factor which affects food production and consumption. There is a broad range of staple foods, none of which accounts for more than 16 per cent of DES – the case for both beans and cassava, the leading staples. Maize is the most widely grown cereal, with average crops of 120,000 tons in 2005–09.⁹⁸ Imports of food are less than in many countries, but the leading formal food import is maize. Cassava and beans are also imported, mostly informally, from neighbouring countries – mainly from United Republic of Tanzania and the Democratic Republic of the Congo, but also from Rwanda or from Uganda via Rwanda. Bujumbura, the capital, and the rest of north-western Burundi are less integrated than other regions in domestic food markets, and depend on imports from DR Congo.

According to WFP, Kirundo Province in the north-east, next to the Rwandan border, is the poorest with 82 per cent of the population living on less than \$1 per day.⁹⁹ There was recently a wave of emigration from there to Rwanda arising from food shortages. The early 2011 bean crop was reduced because of poor rains in late 2010, which led to reduced sowings and affected food security. The volume of the main bean crop, which is harvested in December–January, fell by half in Kirundo province, which experienced the worst shortage of rain. In December 2010, bean prices there were 38 per cent higher than a year before.¹⁰⁰

Burundi's food crisis is a chronic problem, which – at least in price terms – was actually rather less severe in 2008 than it was just before and just after that. In line with the cropping seasons, food prices are generally highest at the turn of the year, and so it proved even in 2008. However, several crop prices had already increased sharply in 2006–07, and among the five crops monitored by the Global Information and Early Warning System in Bujumbura, only wheat prices rose at a faster rate during 2008, more than doubling from 350 Burundi francs per kg in late 2007 to a peak of 750 francs in October–November 2008. On the other hand, prices increased again in 2009, and in late 2010 those for the most important staple foods were all higher than they had been at their 2008 peaks: by 16 per cent in the case of beans, 23 per cent for cassava flour and 10 per cent for maize.¹⁰¹

Nevertheless, special attention was focused on the adequacy of food supplies in 2008 and 2009 in Burundi, as it was elsewhere. The Government responded by suspending import duties on certain food and oil products and reducing sales taxes on 13 basic foods, with the

⁹⁵ HLTF, 2009b, p. 64.

⁹⁶ Marone et al., 2009, p. 12, citing the World Food Programme.

⁹⁷ *Ibid.*

⁹⁸ *Ibid.*

⁹⁹ WFP, 2010, p. 3. Until the middle of the 1970s, Kirundo was the richest province in Burundi and a major producer of beans and sorghum. However, over the last 35 years or so, droughts have gradually turned Kirundo and vicinity into the poorest areas of Burundi and southern Rwanda.

¹⁰⁰ FEWS NET, 2011.

¹⁰¹ FAO/GIEWS National Basic Food Prices Tool, www.fao.org/giews/pricetool/ (Accessed in March 2011).

aid of a \$10 million grant from a World Bank trust fund. Also with the help of donors, it spent the equivalent of an extra three per cent of GDP on assisting the most vulnerable social groups with programmes such as school feeding.

In July 2008, the Government adopted a new National Agricultural Strategy, aiming to triple the budget for agriculture in the spirit of the African Union's Maputo Declaration. At present, barely three per cent of the budget is earmarked for agriculture even though it accounts for 35 per cent of GDP.¹⁰² The main aim is to rehabilitate and modernize the sector in order to eventually transform agriculture from subsistence to a market basis.¹⁰³ Market mechanisms barely exist in rural Burundi at present. Actions in this field include the opening of seed centres in 15 provinces and assistance to irrigation, especially in the rice-growing area of Imbo province, north of Bujumbura. Rehabilitation of the tea and coffee export sectors is another priority. In February 2009, a National Food Security Programme was also approved.¹⁰⁴

In March 2010, a strategy document for the livestock sector was approved at a national workshop. Burundi's agroclimatic conditions are suitable for extensive pasturing, but this has reached its limits due to the narrow parcelling-up of land and the ensuing competition between agriculture and pastoralism. The space remaining for pasture is less and less adequate and agriculture no longer produces a sufficient surplus to provide the initial livestock, as in the past.¹⁰⁵

Ndimubandi (2011) recommends that the Government set up food reserves or emergency food banks for the benefit of the most deprived parts of the population. Yet he recognizes that this alone will be insufficient without a good understanding of how to manage the stocks and the distribution of food parcels. A further recommendation is for regional organizations of which Burundi is a member, such as COMESA and the EAC, to finance a fund to reduce food price fluctuations in strategic products.¹⁰⁶

In accordance with the depth of the problems that Burundi faces, it has received considerable attention from aid donors since 2008. The biggest single programme is worth \$50 million from the World Bank, for the restoration of agricultural productive capacity and sustainable management of land resources. Meanwhile, IFAD has committed \$122 million, including cofinancing, to a series of projects aimed at assisting smallholder food production and value chains.

3.4.3. Case study 3: United Republic of Tanzania

United Republic of Tanzania has a large and diverse land area, much of it fertile. Alongside Zambia, it has enjoyed the greatest political stability when compared with the other case study countries ever since Tanganyika and Zanzibar combined to form the United Republic in 1964. Although not uniformly successful, the policies pursued under President Julius Nyerere in the early years were aimed largely at meeting the needs of the rural majority. All of this should provide a promising basis for food security in the future. However, the country's approach to food security appears somewhat contradictory and is hard to define precisely.

According to GIEWS data, the prices of maize, beans and rice in Dar es Salaam peaked in early 2010 then fell sharply due to with the bumper main-rains harvests achieved in that year. The highest maize price, equivalent to \$415 per ton, was in January 2010. This was 24 per cent above the previous peak of \$335 per ton in February 2008, which was itself 122 per cent above the price one year earlier. However, by August 2010 the maize price had subsided

¹⁰² Ndimubandi, 2011, pp. 39-40.

¹⁰³ *Ibid.*, p. 8.

¹⁰⁴ *Ibid.*

¹⁰⁵ *Ibid.*, pp. 9 and 21.

¹⁰⁶ *Ibid.*, pp. 38 and 40.

to \$195 per ton, its lowest for nearly three years. Similar patterns were seen on the markets for beans and rice in Dar es Salaam.¹⁰⁷

By early 2011, the situation had changed and the Famine Early Warning Systems Network reported that, “[A]bout 1.25 million people are considered to be food-insecure until March 2011, with about one-third categorized as highly food-insecure.” They were mostly in the Dodoma, Arusha, Kilimanjaro, Shinyanga and Tanga regions in the centre and north-east of the country.¹⁰⁸ This was due to the late appearance of the late–2010 short rains, which also led to serious food problems in bordering regions of Burundi.

The Government’s main measures to deal with the 2008 crisis were to ban maize exports, remove duties on cereal imports and introduce fertilizer vouchers for farmers. The main element of social protection was to release stocks from the National Food Grain Reserve.

The guiding policy document at the time was the Agricultural Sector Development Strategy, which was approved in 2001 and spelt out later in the Agricultural Sector Development Programme (ASDP) of 2006. Its goals were summed up by the High-Level Task Force on the Global Food Security Crisis (HLTF) as “to increase private sector investment and to give farmers better access to and use of agricultural knowledge, technologies, marketing systems and infrastructure”.¹⁰⁹ It aimed to move from subsistence to commercial agriculture, and to decentralize responsibility to local government authorities.

United Republic of Tanzania has become one of the leading centres of work on alternative crops and farming methods, including agroforestry. It hosts the Africa Regional Centre of the World Vegetable Centre, in Arusha. Part of the Centre’s approach is to learn from farmers, in the search to develop indigenous sources of micronutrients.

Tanzanian government policy has to some extent pursued and encouraged many of the agroforestry practices, for example with the approval of a National Agroforestry Strategy in 2004. In Annex 2.2 of the ASDP, for instance, agroforestry is specified as requiring “basic and strategic research in those fields considered of key national interest”. However, it makes no reference to agroforestry practice or to any specific goals in this field. As such, it does not seem to be an integral part of this national policy, although United Republic of Tanzania is one of the countries with greatest experience of agroforestry.

Since 2009, the Government has pursued a new general programme called Kilimo Kwanza (“Agriculture First”). The first paragraph of the Kilimo Kwanza Resolution calls it “Tanzania’s Green Revolution to transform its agriculture into a modern and commercial sector”.¹¹⁰ Under the fourth of ten “actionable pillars”, its Implementation Framework provides a list of “strategic food commodities” to be promoted “for the country’s self-sufficiency”.¹¹¹ The programme emphasizes food reserves and a price stabilization mechanism. Pillar no. 7, with the title ‘Industrialization for agricultural transformation’, calls for the increased production of fertilisers and agrochemicals.¹¹² However, the Framework says nothing about green manures or other aspects of agroecology.

Following up on Kilimo Kwanza’s aim of creating a “modern and commercial” agricultural sector, an announcement was made at the World Economic Forum 2011 of a 20-year, \$3.4 billion “Southern Corridor” programme, to work closely in alliance in that region of United Republic of Tanzania with Syngenta, the agribusiness multinational company, and

¹⁰⁷ FAO/GIEWS National Basic Food Prices Tool, www.fao.org/giews/pricetool/ (Accessed in March 2011).

¹⁰⁸ GIEWS, 2011d.

¹⁰⁹ HLTF, 2009b, p. 164.

¹¹⁰ United Republic of Tanzania, 2009b.

¹¹¹ United Republic of Tanzania, 2009a, para 4.1. The commodities are maize, cassava, rice, legumes, fish, meat and dairy products, wheat, bananas, potatoes, sorghum and millet.

¹¹² Tanzania National Business Council, 2009.

16 other major corporations. It will be started with \$2 million of project finance from the United States Agency for International Development. The idea is to develop a “hub-and-outgrower” system, the hubs being large commercial farms along the Corridor and the outgrowers being smallholder farmers.

United Republic of Tanzania also has an active policy to promote foreign investment in rural land:

“[T]he Tanzania Investment Centre [TIC]... is mandated, among other things, with identifying available land and providing it to investors, as well as with helping investors obtain all necessary permits... The TIC has set up a ‘land bank’— it has identified some 2.5 million hectares of land as suitable for investment projects. Land is vested with the TIC and then allocated to the investor on the basis of a derivative title. After the end of the investment project, the land reverts back to the TIC.”¹¹³

These are worrying signs of a disconnect between national statements of principle and actual policy actions. The Government would do well to encourage and assist all of the more people-based and ecologically sound approaches to agriculture.

Meanwhile, United Republic of Tanzania’s programmes are heavily dependent on donor funding, including \$676 million of loans for agriculture and social protection. Even if most of this is on concessional terms and most of the work is successful, it may fairly be asked how a country of United Republic of Tanzania’s economic status will manage to repay such a large sum.

3.4.4. Case study 4: Zambia

Zambia is interesting as much for the consequences of certain policies that were undertaken before 2008 as for anything since then. In a period of great economic hardship for the country, and after a radical reform of agricultural policies, rural poverty in Zambia actually fell in the 1990s. Since 2008, there has also been a rapid increase in food production, but this came after some of the policies abandoned earlier had been restored.

Maize has long been Zambia’s main staple food, recently accounting for 52 per cent of DES, and its cultivation has frequently been encouraged by governments for that reason. However, in May 2008 Zambia’s food balance sheet showed a small surplus over national consumption requirements, which might have led one to expect stable or even falling prices.¹¹⁴ But the global maize price increases of the time disrupted Zambia’s market and ended up forcing its domestic prices up, when they would probably have remained much more stable had it not been for events on the global market. The consequences were severe. In a comparative study with four other countries in 2009, it was reported that “rural Zambian women explained that inadequate food meant they were not strong enough for fieldwork.”¹¹⁵

As a national average, maize prices peaked between March and May 2008, depending on the type of maize. This was before the spike in world prices ended. Cassava, wheat and local rice prices rose to new peaks in 2010 but maize did not, and all prices fell towards the end of that year in the wake of a bumper maize crop. They remained between 12 per cent higher (for white maize) and 83 per cent higher (for rice) than they had been at the beginning of 2008. Agriculture is more productive in the wetter cassava belt of the north; even maize yields are higher there than in the south, which specialises in maize. Cassava is consumed more by the poor and wheat by better-off city dwellers.

¹¹³ The TIC operates under a leasing law which was drafted by the World Bank’s more commercial arm, the International Finance Corporation (Daniel and Mittal [2010], pp. 19 and 45).

¹¹⁴ Tembo et al., 2009, p. 29 (Table A1).

¹¹⁵ Institute of Development Studies, 2009, p. 50. The other countries were Bangladesh, Indonesia, Jamaica and Kenya.

A detailed study of Zambian households, conducted between 2006 and 2009, revealed some complexity in the impact of the food price changes. The conclusions were not far from what common sense might predict, but they argue against any simplistic view of the impact on hunger and poverty. Whereas price rises in both food and non-food items had a major negative welfare impact on urban households, primarily due to their high net consumption of food, rural households engaged in agriculture, especially medium- and large-scale farming households, experienced an overall positive impact as the benefits from higher food prices outweighed the adverse effects of non-food price increases.¹¹⁶

During a severe economic crisis after a sharp real decline in copper prices and falling metal production in the 1980s, policies for food and agriculture were radically changed in the early 1990s under structural adjustment. In particular the loss-making National Agricultural Marketing Board, which had a monopoly on grain marketing, was disbanded in 1990. For several years, there was some confusion over policy as there was no clear vision of what to replace the previous system with. In due course, the Food Reserve Agency was founded in 1996, effectively restoring some of the functions of the National Agricultural Marketing Board.

Yet despite the country's general crisis, rural poverty actually fell in this period, from 92 per cent in 1993 to 83 per cent in the late 1990s and to 74 per cent in 2003.¹¹⁷ This reduction has mainly been attributed to the growth of non-maize crops, including cassava, sweet potatoes, and groundnuts and, possibly, domestically consumed horticultural products.¹¹⁸ This switch in cropping patterns was facilitated by the launch in the early 1990s of new varieties of cassava, groundnuts and sweet potatoes, developed under public funding in the 1980s, before the cutbacks. Ever since 1961, there has been a steady growth in cassava production, while over the same period maize output has been volatile and erratic.

Part of the increase in rural incomes also came from the export-led growth in cotton and tobacco. By 2003–04, one-fifth of small farmers were growing cotton, which was based on an outgrower scheme rather than large commercial farms or foreign direct investment.

As for maize, it is interesting to note that maize input subsidies – including fertilizer subsidies – were removed during this period, with maize losing ground to cassava and other traditional crops. The Government put the emphasis back on maize only recently and in 2010 there was a record maize crop – attributed partly to fertilizer but also to high prices guaranteed by the Food Reserve Agency. According to FAO/GIEWS, maize production in 2009 rose to 1.9 million tons, some 35 per cent above the 2005–09 average, and it was estimated to increase another 48 per cent in 2010 to 2.8 million tons, or twice the 2005–09 average. The national surplus of maize enabled the Food Reserve Agency (FRA) to purchase nearly 900,000 tons of maize in 2010, some of which was meant for sale later in the year in order to counter the shortages and higher prices of food in the “hungry” season. By November 2010, maize prices were 19 per cent lower than a year earlier. Informal maize exports to DR Congo also expanded.¹¹⁹

3.4.5. Case study 5: Cambodia

Cambodia has made great strides in improving food security since its domestic conflicts ended in the late 1990s. Poverty and hunger are expected to remain for some time yet, but the country is considered to be generally food-secure. Over the last decade, there has been a massive increase in agricultural production. Table 9 tracks five major crops.

¹¹⁶ McCulloch and Grover, 2010, p. 31.

¹¹⁷ Jayne et al., 2007, pp. x, and 16.

¹¹⁸ *Ibid.*, p. 8 and Table 1, p. 11 as well as Govereh et al., 2007, p. 8.

¹¹⁹ GIEWS, 2011e.

Table 9. Growth in crop production in Cambodia since 2000

	2000–03 average (thousand tons)	2009 (thousand tons)	Increase (per cent), 2000–03 to 2009
Paddy rice	4,165	7,586	82
Maize	202	924	359
Cassava	186	3,497	1,784
Vegetables	171	323	89
Sugarcane	179	350	96

Source: Runsinarith (2011), Table 8, p. 12.

Nevertheless, half of Cambodia’s estimated two million farmers were adversely affected by the 2008 rice price crisis¹²⁰ and the country still has to make up a lot of ground before it and its rural population can catch up with its more prosperous neighbours.

Geographically, Cambodia is divided from north to south by the River Mekong and its delta. Agriculture is mostly rainfed, as in Africa, accounting for 90 per cent of the rice area, compared with 77 per cent in Thailand and only 40 per cent in Viet Nam.¹²¹ The Mekong is a valuable resource, but it is complicated by Cambodia having to share it with other countries which have dams either in place or planned upstream.

Despite the rapid growth of maize and cassava production, there remains heavy dependence on rice as a staple food, accounting for 66 per cent of DES. The rice market is reported to be closely integrated, both from province to province and via informal trade with Thailand and Viet Nam, including exports to both countries.¹²² Most of the exports are of paddy rice, which is milled in the two importing countries, some of it then being re-exported back to Cambodia. According to Pandey and Bhandari, this indicates that production costs in Cambodia are relatively low. Most of Cambodia’s more limited formal exports are of high-quality organic rice, sold at premium prices to neighbouring South-East Asian and European markets.¹²³ However, the country’s ambitious current rice strategy will probably require exports to some of the most food-insecure countries; in 2005, sub-Saharan Africa imported 31 per cent of the world’s traded rice.¹²⁴ And in 2009, Cambodia promised to export 120,000 tons to Senegal.¹²⁵

In Phnom Penh, the capital, nominal prices of “Somali” (high-quality milled) rice increased by 90 per cent in May 2008 from a year earlier, but elsewhere in the country price rises were lower, at around 25 to 40 per cent from November 2007 to May 2008.¹²⁶ Prices peaked around time then fell, before returning to new, albeit lower, highs at the turn of 2009–10. By the end of 2010, in various parts of the country they had fallen to roughly where they had been in January 2007.¹²⁷ As in other countries, the potential benefits to farmers from higher cereal prices were substantially reduced, if not lost entirely, because of concurrent sharp increases in fertilizer prices.¹²⁸

Box 7 in Chapter 2 describes the large number of policy responses by the Cambodian Government to the global crises, including food distribution programmes, investment incentives and an export ban on rice. Cambodia’s social protection system was supplemented

¹²⁰ UN, 2008, p. 3.

¹²¹ Pandey and Bhandari, 2010, p. 235 (Table 12.3).

¹²² *Ibid.*, pp. 244.

¹²³ *Ibid.*, pp. 239–40 and 243.

¹²⁴ Gajigo and Denning, 2010, p. 185.

¹²⁵ *Ibid.*, p. 181.

¹²⁶ Pandey and Bhandari, 2010, p. 244.

¹²⁷ FAO/GIEWS National Basic Food Prices Tool, www.fao.org/giews/pricetool/ (March 2011).

¹²⁸ Pandey and Bhandari, 2010, pp. 245.

in 2008 by programmes for school feeding, supplementary food and nutrition for mothers and children, and food for work.¹²⁹ However, this response was described by the HLTF's visiting team as "less robust" than that for agriculture. Meanwhile, the Cambodia case study calls for "an overhaul in the Government's social safety net system, though there admittedly is not much to restructure given the limited interventions in place. The imperative is to create a comprehensive and sustainable social safety net system with schemes that can be quickly mobilized in the event of a crisis."¹³⁰

However, Cambodia has one of the most coherent sets of policies for food security and agriculture, including the ambition of soon becoming a regular net exporter of rice. The operation of its national working group was presented as a model for others by the United Nations High-Level Task Force.¹³¹ The Government calls its overall policy for development a "Rectangular Strategy", because it comprises four policy fields. The first of these is concerned with agriculture; it is straightforwardly referred to as "Enhancement of the Agricultural Sector" and contains four subcomponents: (i) improving agriculture productivity and diversification; (ii) land reform and mine clearance; (iii) fisheries reform; and (iv) forestry reform.¹³²

The broad aim is to move from extensive to intensive agricultural development through an integrated approach, leading to higher rice yields and exports. There is an emphasis on irrigation, and aid to be given to export sectors, including plantations and aquaculture. One feature is the System of Rice Intensification (SRI), under which the Government has invested in better seeds and irrigation systems to boost rice exports: "In Cambodia, more than 80,000 families now use SRI practices, which are reported as leading to a doubling of rice yields, substantial reductions in the use of fertilizers and agrochemicals, and increases in farm profits of 300 per cent."¹³³

Not only rice is supported. The World Bank's Country Assistance Strategy, extended in May 2008, supports increased production of not only rice but also vegetables, meat and fish. Work is also ongoing in ecological approaches to agriculture and forest conservation.

A concern is that, as in some African countries, the Government's open policy towards investment has led to social conflicts over foreign access to land. Cambodia's partners in this have been diverse, with interest reported from Kuwait, Qatar, Republic of Korea and the Philippines¹³⁴ as well as the UK firm Tate & Lyle, which invested in sugarcane there in order to diversify from its previous concentration on African, Caribbean and Pacific partners of the EU.

3.4.6. Case study 6: Lao People's Democratic Republic

Lao PDR was recently described as "in the midst of a fundamental transformation" based on the rapid development of mines, plantations and hydroelectric dams.¹³⁵ Over the last five years, the annual growth rate has averaged eight per cent¹³⁶ and in recent years the trade position has improved substantially. However, Lao PDR is landlocked and mountainous with low population density, and this resource-intensive development puts great pressure on agricultural land, since only about four per cent of the area is arable and permanent crops cover no more than 0.35 per cent of it.¹³⁷

¹²⁹ HLTF, 2009b, p. 70.

¹³⁰ Runsinarith, 2011, p. 26.

¹³¹ HLTF, 2009c, p. 20 (Box 5).

¹³² Royal Government of Cambodia, 2008, p. 11.

¹³³ IFAD, 2010, p. 160 (Box 16).

¹³⁴ Minder, 2008.

¹³⁵ Fullbrook, 2009, p. 16.

¹³⁶ FAO/WFP, 2011, p. 5.

¹³⁷ *Ibid.*, p. 6.

While Lao PDR is well on the way to recovery from the conflicts of previous decades, they did leave the countryside “littered” with unexploded bombs from the 1960s and 1970s. According to the FAO and WFP,

“Lao PDR is the most heavily bombed country in the world per capita (Indochina war). [Unexploded ordnance] contamination still affects 15 of the provinces and is still an issue for populations living in affected areas, as it prevents them from expanding their cultivation area.”¹³⁸

However, Lao PDR’s food security status is much improved. Rice provides 64 per cent of DES¹³⁹ and about 90 per cent of the arable area is devoted to rice,¹⁴⁰ most of it rainfed. In 2008, the impacts of the food and financial crisis were not severe, but because of persistent, acute malnutrition and rapid utilization of natural resources there was “no room for complacency”, according to HLTF.¹⁴¹ No doubt partly in consequence of the scattered population, FAO and WFP wrote:

“Vulnerability and food insecurity continue to be characterized by highly localized small scale shocks, which may have severe impacts at the community and district level. As a result of incomplete recovery following Typhoon Ketsana in late 2009 and the 2010 drought and floods, food insecurity is still concentrated in the central and southern regions of the country.”¹⁴² Acute malnutrition has also arisen among the poorest groups in the ethnic areas, especially in the north, near the Vietnamese border.¹⁴³

At their peak in September 2008 the national average prices of ordinary rice were 69 per cent higher than in December 2006 – a substantial increase, but less than in many countries. The reason given for the lesser impact of the crisis is that Lao PDR is relatively isolated from world food markets because it does not import the main sticky rice staple.¹⁴⁴

However, there was a further price surge during the course of 2010, pushing the August 2010 price up a further four per cent from its September 2008 level.¹⁴⁵ By the end of the year, the Government had helped to bring prices down again by using rice reserves to balance supply and demand, and temporarily banning rice exports.¹⁴⁶ In early 2011, GIEWS reported that prices had stabilized in most of the country, but at a much higher level than before. “For example, the price of glutinous rice quality no. 2 in Vientiane capital market recently was at LAK 7, 000/kg, some 40 per cent above the level in May 2010.”¹⁴⁷

As we have seen, the Government used its rice reserves to reduce prices. In late June and July 2010, it is reported to have sold more than 100,000 tons of rice from its stocks in Vientiane, the capital. The Government approved LAK 50 billion (about \$6.2 million) for the rice stockpile and in 2011 it announced a further LAK 50 billion for it, in order to keep prices stable at times of the year when they would normally peak.¹⁴⁸

Besides rice, in Lao PDR there is “high consumption of wild foods such as vegetables, shoots, fruits, insects, wildlife, wild fish, and other aquatic animals”. The WFP’s Vulnerability Analysis showed that “many households eat non-rice staples on a daily basis: four per cent eat maize, five per cent cassava and another six per cent eat other roots and

¹³⁸ *Ibid.*, p. 27.

¹³⁹ FAO/GIEWS National Basic Food Prices Tool, www.fao.org/giews/pricetool/ (March 2011).

¹⁴⁰ HLTF, 2009a, p. 6.

¹⁴¹ *Ibid.*, p. 1.

¹⁴² FAO/WFP, 2011, p. 4.

¹⁴³ HLTF, 2009a, p. 4 (Box 1).

¹⁴⁴ HLTF, 2009a, p. 2.

¹⁴⁵ FAO/GIEWS National Basic Food Prices Tool, www.fao.org/giews/pricetool/ (March 2011).

¹⁴⁶ World Bank, 2011c, p. 77.

¹⁴⁷ GIEWS, 2011c, p. 1.

¹⁴⁸ Pongkhao, 2011.

tubers.”¹⁴⁹ This tradition provides considerable potential for better nutrition and food security, but it is recognized that the situation has deteriorated.¹⁵⁰ Moreover, because most farmers use their land for rice production, it is likely that rice yields might have to increase further before there can be an increase in the consumption of roots and tubers.¹⁵¹

HLTF was impressed by the Government’s response to the crisis of 2008, in particular the “seriousness” with which it sought to implement the National Nutrition Plan adopted in December 2008, and the REACH pilot programme which was introduced to tackle child hunger and undernutrition.¹⁵² There was also a new five-year food security strategy. HLTF described the level of chronic malnutrition as “alarmingly high”, but the nutrition policy established a framework to improve nutrition by 2020, most importantly by committing the Government and investors “to abide by the findings of environmental and social impact assessments, and to follow the law, particularly in the hydropower, mining and plantation sectors, to prevent adverse impacts on nutrition.”

However, some other commentators have been less confident about the Government’s commitment. One argued that, although poor nutrition was placed at the top of the Government’s agenda, “The policy will struggle unless food production and the integrity of the environment receive greater recognition for their value in contributing to national security.”¹⁵³

According to HLTF, the “Government hopes to make food security and nutrition gains as a result of the expansion of industrial agriculture, especially plantations for rubber and pulp which have in some cases created good wages.”¹⁵⁴ In September 2010, a new Agriculture Development Strategy (ADS) for Sustainable Development, Food and Income Security was adopted, covering the years 2011–2020. It aims at a transition from subsistence to commercial smallholder farming. A five-year Agriculture Master Plan is also under preparation with an Agriculture Investment Plan, as part of the 2011–15 National Socio-Economic Development Plan. All of this allows the possibility of foreign concessions for rice farming, which in the Government’s view “will enable Lao farmers to learn about new technology in rice cultivation, processing and marketing.”¹⁵⁵ In important related areas of policy, Lao PDR is heavily dependent on donors. But agricultural extension is donor-funded, as are provisions for social protection – which are rather fragmented, perhaps in consequence of this fact.

One concern about the ADS is the extent to which it takes into account the environment. However, in Lao PDR there is a lively movement for conservation agriculture and agroforestry. The National Agriculture and Forestry Research Institute (NAFRI) is one of several organizations operating in this area.¹⁵⁶ It argues that converting forest into monocultural land for maize can produce 15 years of tillage, but at the cost of reducing organic matter in the soil from more than 7.9 per cent to less than 2.8 per cent. NAFRI recommends that conservation agriculture be included in school and university curricula.

3.5. Underlying issues and policy options: Agriculture and food security

The inadequacies of the world’s dominant farming system were laid bare in the 2008 price crisis. Dependence on unstable global markets, excessive and growing similarity of the world’s staple foods, demographic pressure and vulnerability to shocks appearing from those

¹⁴⁹ WFP, 2007, p. 74.

¹⁵⁰ FAO/WFP, 2011, pp. 12-13.

¹⁵¹ HLTF, 2009a, pp. 6–7.

¹⁵² HLTF, 2009b, Box 6, p. 21.

¹⁵³ Fullbrook, 2009, p. 80.

¹⁵⁴ HLTF, 2009a, p. 3.

¹⁵⁵ Phouthonesy, 2010.

¹⁵⁶ For more information, visit www.cansea.org.la, a portal hosted by the Conservation Agriculture Network for Southeast Asia (CANSEA).

markets are all features of this problem. Continuing down this path only risks a further increase in the external vulnerability of many countries. It is time to think seriously about a new approach to agriculture and food security, which would reduce those vulnerabilities, restore the ecological balance in agriculture, reduce damage done to the atmosphere and help to improve farmers' livelihoods as well as increasing LDCs' food security. There are issues here that concern food supplies themselves and the inputs applied by farmers to their crops. Farmers in many places are unable to profit from higher crop prices because of the cost of inputs, which are also a drain on a country's balance of payments.

The industrial form of agriculture comes at a high environmental cost. Over a long period, it causes damage to soil structures as a result of monocropping and the application of chemicals, as has been found in some of the Asian countries which went furthest with the Green Revolution of the 1970s and 1980s. These risks are highest where the soils are poorest, as in much of Africa. It is therefore important that LDCs seek to strike a sustainable balance between modern practices and traditional approaches.

The food price shocks, and the failure in many places of farmers to benefit from higher prices, are elements of a wider agricultural crisis. Agriculture has become so unremunerative that anecdotal evidence suggests that young people in countries at all levels of development are going into other lines of work rather than following their parents on to the family farm. The economic marginalization of agriculture is also reflected in its low weight in terms of GDP, despite the majority of the population being rural. In Zambia, for example, the agriculture sector employs some 85 per cent of the labour force but accounts for just 17 per cent of GDP.¹⁵⁷ This huge disparity in many countries between the social importance of agriculture and its economic importance can lead to unfortunate biases in policy, which might partly explain the coexistence of rapid economic development with continuing rural poverty in countries like China and India.

The neglect of agriculture has a direct bearing on the immediate measures that were used, with widespread donor support, to cope with the price shocks in 2008. Most of these measures were short-term in nature. Some of them were well-merited, but their effectiveness for the future can only be judged in relation to any later crisis of a similar sort (including the further run-up in world cereal prices since July 2010). According to a recent study,

“The most-used policy response in agriculture was the provision of agricultural inputs. The provisional estimate for Africa's short-term needs, made by the Comprehensive Africa Agriculture Development Programme (CAADP) in May 2008, was [US]\$1.29 billion, including \$112 million for seeds and \$749 million – nearly 60 per cent of the total – for fertilizers. Through the IFSP [sic] [Initiative on Soaring Food Prices], FAO distributed agricultural inputs to some 370,000 smallholders in more than 80 countries. Out of 40 countries assisted under its Global Food Crisis Response Program, the World Bank assisted 20 with the provision of agricultural inputs.”¹⁵⁸

In Benin, inputs represented 90 to 100 per cent of such funding. Yet despite claims to the contrary, it would appear that the free provision or subsidization of fertilisers and other inputs to farmers is not the most effective way to promote food security in the long term. The reduction in rural poverty in Zambia during the 1990s, in the face of a very adverse economic climate, suggests that it is better for governments to spend on integrated rural development, including infrastructure, outreach and R&D, than on inputs. In Africa, one of the biggest requirements is for roads, to facilitate the development of both domestic and cross-border trade in food and other products.

We should also warn against big swings in policy, such as the premature ending of even temporary subsidies, or sudden changes in a policy without regard to the possible impact

¹⁵⁷ Marone et al., 2009, p. 41.

¹⁵⁸ Mousseau, 2010, p. 23, citing report of CAADP regional workshop, www.nepad-caadp.net/pdf/Pretoria%20Workshop%20over%2006.pdf.

on the next crop season. The uncertainty in this regard caused serious problems with Zambia's maize supply in 2010. And UNICEF considered 26 developing countries to have reduced or ended food subsidies prematurely in 2009 and 2010. In the light of more recent events, it is interesting to note that they included Egypt, Libya and Tunisia.¹⁵⁹

3.5.1. A review of policy options to enhance food security

It has been argued that the greater food insecurity seen in LDCs as a result of the food crisis was symptomatic of a deep-seated lack of agricultural development. It follows that LDCs must put in place long-term strategies – in addition to having recourse to short-term measures – in order to reduce their vulnerability to external shocks, whether they are financial, political, environmental or other. The subsequent sections examine several of these options, taking into account their social and environmental dimensions as well as their economic aspects.

Traditional foods

The combination of the climate crisis with the food price crisis should give in particular give pause for thought about the ways in which agriculture is pursued. The high frequency of floods and droughts and the greater irregularity and uncertainty of rainfall are all signs of the effects of climate change. Measures to address price and production issues should not, therefore, risk aggravating the climate crisis. Climate change requires two things in this area of policy: (i) to build resilience to the stresses it causes into production systems and the crops themselves; and (ii) to reduce the emissions of greenhouse gases from agriculture, which is a major source of such emissions. Any action which can serve both purposes together is especially valuable.

As it so happens, many indigenous crops are more resilient to stresses such as reduced or irregular rainfall than are the main internationally traded cereals, wheat, rice and – especially – maize (despite the many other virtues which make that crop so important in much of Africa).¹⁶⁰ However, yields for traditional crops tend to be lower, at least under present conditions – if only because less research has been put into increasing those yields.

Furthermore, the emphasis on a small number of internationally known crops has not only caused environmental damage but in many places impoverished people's diets. Millet, for instance, contains more proteins, minerals and vitamins than wheat or rice and is more resilient, requiring less water to grow. Still, this crop has been neglected in Africa. The case for putting more focus on overlooked traditional food cultures has also been made by, among others, the International Assessment of Agricultural Knowledge, Science and Technology for Development:

“In the past, many traditional foods were gathered from forests and woodlands, which provided rural households with food and nutritional security. With the loss of habitat through deforestation, population growth, increased urbanization and poverty and an emphasis on staple food cultivation, this wild resource has diminished. In addition, improved access to other food crops and purchased foods...has contributed to the trend towards diet simplification, reduced fresh food supply, and disappearance of nutrient rich indigenous food. This simplification has had negative impacts on food diversity and security, nutritional balance, and health. Indigenous fruits and vegetables have been given low priority by policymakers, although they are still an important component of diets, especially in Africa.”¹⁶¹

¹⁵⁹ Ortiz, Chai and Cummins, 2011, p. 26 (Table 3).

¹⁶⁰ See McCann (2001) for the long history of maize's adoption as a major staple crop in Africa.

¹⁶¹ International Assessment of Agricultural Knowledge, Science and Technology for Development, 2009, p. 155.

But not only in Africa: the HLTF's Country Visit report on Lao PDR reported that "Household surveys show that collecting more food from the forest was the most frequent coping strategy" in 2008.¹⁶²

So a return to a greater variety of sources of food, including traditional crops, could improve nutrition. In recent years, much research has been done in this area, but still more is required. Between 1996 and 2008, the U.S. National Research Council published three volumes called "Lost Crops of Africa", providing information on 10 cultivated grains, several wild grains, 18 vegetables, 10 cultivated fruits and 14 wild fruits.¹⁶³ Research into all of them has been neglected, while their culture has not been widely recommended by agronomists and extension agents. Yet their virtues for nutrition, food security, rural development and sustainable landcare are numerous. Cowpeas, for example, are recommended for their high protein content, leaves and stalks that make nutritious animal fodder and roots that provide nitrogen to depleted soils. They also give food during the annual "lean period" at the end of the rainy season.¹⁶⁴

In light of the above, it is perhaps not surprising that the International Institute of Tropical Agriculture has made these recommendations to Africa for avoiding the economic risk that another food crisis would provide:

"In sub-Saharan Africa, governments should promote the utilization of non-tradable crops such as cassava, sorghum, millet, yam, cocoyam, banana and plantain, cowpea and bambara nut as substitutes to corn [maize] and rice, which are prone to global price fluctuations. These could be supplemented by small livestock such as goats and sheep to supply the required nutrients to families in poor communities."¹⁶⁵

Agroecology

Agroecological methods provide alternatives to applying minerals and chemicals for soil nutrition and crop protection, offering both economic and environmental benefits. We have already mentioned the cost to farmers of rising prices for fertilizer, even while cereal prices were also going up. For instance, in Cambodia the cost of fertilizer almost tripled between January and November 2008, leading to a "substantial increase" in the price ratio between nitrogen inputs to the soil and paddy rice outputs. Averaged year by year, that ratio increased from 4.1:1 in 2004 to 5.8:1 in 2008.¹⁶⁶

The United Nations Special Rapporteur has summed up the benefits of agroecological production as follows:

¹⁶² HLTF, 2009a, p. 2.

¹⁶³ National Research Council (1996, 2006 and 2008). The cultivated grains are: African rice, finger millet, fonio (or acha), pearl millet (various types), sorghum (various types), teff, Guinea millet, emmer, Ethiopian barley, Ethiopian oats and kodo millet. The vegetables are: amaranth, bambara beans, baobab, celosia, cowpeas, dika, African eggplant, egusi, enset, lablab, locust beans, long beans, marama, moringa, native potatoes, okra, shea and yambeans. The fruits are: balanites, baobab, butterfruit, carissa, horned melons, kei apples, marula, melons, tamarinds, watermelons, aizen (or mukheit), chocolate berries, custard apples, ebony, gingerbread plums, gumvines, icacina, imbe, medlars, monkey oranges, star apples, sugarplums, sweet detars and tree grapes.

¹⁶⁴ International Institute of Tropical Agriculture, 2010 and *Afrol News*, 2010.

¹⁶⁵ International Institute of Tropical Agriculture, "Surviving the Storm: How agricultural research could help Africa weather another food crisis", 13 December 2010, www.iita.org/news-asset/-/asset_publisher/9MZf/content/surviving-the-storm-how-agricultural-research-could-help-africa-weather-another-food-crisis?redirect=%2Fnews. (Accessed in February 2011).

¹⁶⁶ Pandey and Bhandari, 2010, p. 242 (including Table 12.8).

“[T]he diversity of species and of farm activities that agroecological approaches allow are ways to mitigate risks from extreme weather events, as well as from the invasion of new pests, weeds and diseases, that will result from global warming. The agroecological practice of cultivar mixtures bets on genetic diversity in the fields in order to improve crop resistance to diseases. In Yunnan Province in China, after disease-susceptible rice varieties were planted in mixtures with resistant varieties, yields improved by 89 per cent and rice blast disease was 94 per cent less severe than when the varieties were grown in monoculture, leading farmers to abandon the use of fungicidal sprays.

“Agroecology also puts agriculture on the path of sustainability by delinking food production from the reliance on fossil energy (oil and gas). It contributes to mitigating climate change, both by increasing carbon sinks in soil organic matter and above-ground biomass, and by avoiding carbon dioxide or other greenhouse gas emissions from farms by reducing direct and indirect energy use.”¹⁶⁷

A related area that combines research at the genetic, species and ecosystem levels (rather than working on genetic improvements alone¹⁶⁸) is agroforestry: using trees in conjunction with agriculture to improve both output and sustainability. As 2011 is the International Year of Forests, it seems an appropriate time to promote this. An interesting example is the placing of *Faidherbia acacias* (or “fertilisr trees”) among crops. It has, for instance, been reported that, “In Malawi, maize yields are typically 2–3 times higher when the crop is grown under a canopy of *Faidherbia*.”¹⁶⁹

Until recently, however, all these possibilities have been overlooked by tropical agricultural research. Indeed, they are still ignored in much of the international debate on agriculture and food security. That said, productive international research establishments exist in the field of traditional crops, such as the World Agroforestry Centre in Nairobi, Kenya; the International Institute of Tropical Agriculture in Ibadan, Nigeria; and the World Vegetable Center’s Regional Center for Africa¹⁷⁰ in Arusha, United Republic of Tanzania. The latter has introduced new varieties of soya, yardlong beans, eggplants (aubergines), tomatoes, Chinese cabbages and water convolvulus in Cambodia, Lao PDR and Vietnam. It has offices in all four of the African case study countries and works there on value chains and the consumption of indigenous vegetables, as well as improved varieties.

Besides making poor use of the locally available resources, most conventional research fails to mobilize farming communities’ existing agricultural knowledge. When farmers are consulted on methods of soil nutrition and pest control, rather than told what scientists think they ought to know, the results can be striking. After research in Zambia and Malawi into the substances in wild plants that can control insects and other pests, it was reported: “We found that most farmers were very knowledgeable about the pesticidal properties of a large number of plants..., although they use relatively few on a regular basis.”¹⁷¹ In view of indications that the use of traditional varieties and methods are on the decline,¹⁷² there is great urgency to reverse this process and ensure that tropical agricultural research focuses more on native agricultural knowledge and practices.

Farmer field schools

¹⁶⁷ De Schutter, 2011, p. 13.

¹⁶⁸ Pimbert, 2010, p. 2.

¹⁶⁹ World Agroforestry Centre, 2010, p. 8.

¹⁷⁰ Previously known as the Asian Vegetable Research and Development Center, or AVRDC.

¹⁷¹ World Agroforestry Centre, 2010, p. 31.

¹⁷² Pimbert, 2010, p. 2.

Some fieldworkers have turned extension into something more like a seminar than a lecture or demonstration, encouraging advisors and farmers to learn from each other, or farmers simply to teach each other. Here as well, the results can be powerful. The system, known as farmer field schools (FFSs), was invented in Indonesia but, as with agroforestry, United Republic of Tanzania is also at the forefront of such efforts. This is what IFAD reported:

“FFSs were found to be especially beneficial to women, those with low literacy levels and farmers with medium land size. Impacts on farmers with small land area were weak, probably because such farmers are resource-poor and have limited capacity to invest in FFS technologies. Overall, participation increased income by 61 per cent in the three countries [Kenya, United Republic of Tanzania and Uganda], with differences at the country level. The most significant change was seen in Kenya for crops (80 per cent increase) and in the United Republic of Tanzania for agricultural income (over 100 per cent increase). FFSs proved to be able to adapt to new information, markets and policies. The experience also influenced rural development approaches in the region – Uganda and the United Republic of Tanzania are making strong moves towards institutionalizing FFSs as the main public extension approach.”¹⁷³

Coming back to the immediate responses to the 2008 price crisis, one author has suggested that money at the time was better spent on the development of traditional crops than the subsidization of inputs:

“Agricultural experts in Ethiopia argue that the weakness of the seed sector ... should have encouraged part of the spending on seeds... FAO followed this different approach in certain countries, such as Niger, where it worked at developing seed multiplication of improved varieties of local crops such as millet and sorghum. Following this approach elsewhere would have resulted in a stronger and more sustainable impact than just fertilizers....in several instances input programmes diverted development money that was earmarked for rural development and construction of infrastructure.”¹⁷⁴

In summary, a concerted attempt to encourage farmers to build on their own knowledge and promote traditional foodstuffs and agroecological ways of farming can lead countries on to a virtuous circle of:

- Reduced vulnerability to imported market shocks;
- Higher yields achieved in a way that works with nature rather than against it;
- Increased resilience to environmental threats, especially climate change, without creating further dependence on imported technology;
- Enabling farmers to benefit fully from higher prices because fewer inputs have to be bought, and therefore their production costs are lower and they can invest more in making further agricultural advances;
- Greater diversification of farming households' incomes and nutritional variety;
- A reduction in the foreign exchange costs of agriculture, through lesser use of imported inputs; and
- Maintaining local control over seed supplies.

Restrictions on trade

The bans and other restrictions imposed on grain exports in 2007–08 by certain governments have been widely criticized on two main grounds. First, they can exacerbate

¹⁷³ IFAD, 2010, p. 176 (Box 22).

¹⁷⁴ Mousseau, 2010, p. 26, citing F. Mousseau (2009).

food security problems in the countries that import the grain, for example in Kenya after United Republic of Tanzania's maize export ban. From the importer's perspective, this highlights the importance for a country of getting the right balance between its domestic food needs and a large (and notably successful) agricultural export sector. However, it also points to the value of regional trade as a substitute for the breadth of supply available in very large countries such as India and China. Second, by reducing the extent of a price surge, an export ban risks dampening the possible supply response in its wake. This argument has frequently been made and although it might be valid in the long term, export bans might ease domestic prices in the short term. The strongest argument against export restrictions, therefore, lies in their possible effect on potential importing countries.

Many developing countries have found their food security damaged by the reduction of barriers to food imports from global markets, which was frequently imposed under structural adjustment. Even where the imported foods were not subsidized in the producing countries, this could cause damage if domestic food producers were not given the time or the means to adjust to such new sources of competition. That is particularly important in countries where a large share of the population relies on agriculture for its livelihood.

Restrictions on trade can be defended on the grounds that each government is responsible for making sure that its own people get fed. However, this does not mean that it should refuse to cooperate with its neighbours. Nor is it a call for self-sufficiency in food supplies: while the latter may be feasible in countries as big as China and India, smaller countries (including perhaps every country in Africa) do not enjoy sufficient economies of scale and can best substitute for them by pursuing regional trade. Even informal cross-border trade in food products can be very useful in smoothing out gluts and shortages between one country and another.

Steps to boost regional integration have proliferated in the past couple of decades – the creation of the East African Common Market in July 2010 (with Burundi and United Republic of Tanzania as two of its five members) being a recent example. To the extent that these initiatives increase regional trade, they can therefore result in greater food security. Regional agricultural policies have also been considered, where the African Union's CAADP can be seen as a first step towards a regional initiative on a continental scale.

Food stocks and food reserves

A central element of many successful food security policies has been the use of national food reserves. By buying stocks when prices are low and releasing them when there is a scarcity or prices are high for another reason, food reserves help the stabilization of prices as well as food security – and can be run at a profit, if managed properly. Of Zambia it has been written, “When FRA [Food Reserve Agency] sales are confined to periods of relatively high prices as they generally are with some notable exceptions, these results suggest that they have a stabilizing effect on market prices.”¹⁷⁵

Food reserves do not have to be national. Under the EU's Common Agricultural Programme (CAP) before it was reformed, so-called “intervention stocks” were run by each Member State but under rules that were agreed by all States jointly. Whatever actual form the food reserve should take – and the CAP was designed to meet West European needs in the 1960s, not LDCs' needs 50 years later – a similar combination of national or local stocks with joint regional decision-making can be advisable. However, they should be fully under the control of the country or countries for which they are meant. There have recently been proposals to create a global food stock, but that would remove from national governments the control that they themselves need over food security. Donor agencies can by all means be

¹⁷⁵ Chapoto and Jayne, 2009, p. 21.

invited to advise on the establishment and running of food reserves, but they should not own them or control them.

Food aid

A comparable danger arises from the practice of external food aid. The international Food Aid Convention was established in 1967 and is due shortly for renewal, its latest version dating back to 1999. However, there is no consensus about the form it should now take among the eight, mostly developed countries or regional groups which are signatories to it.¹⁷⁶ An original purpose of the Convention was to enable some of those countries to offload agricultural surpluses, and it is still used in that way by some powerful members. But it has long been recognized that the delivery of actual food to those in need, while often necessary in an emergency, can be harmful in the long term because it undermines the capacity of a country, region or household to produce enough food to meet its needs. An example of recipients' attitudes to it is found here: "Overseas Development Institute research conducted in 2008 in Ethiopia pointed out that food aid was the least preferred intervention for pastoralists, who, instead of handouts, called for measures to limit the volatility of food prices."¹⁷⁷

Many important donors, including the EU and its Member States, therefore no longer supply food-in-kind for humanitarian needs but rather money to purchase food, preferably on local or regional markets. The World Food Programme, the principal agency distributing food aid, is also moving in this direction. However, the very presence of food aid can lead the needy into long-term dependence on it. For example, WFP has been active in the Karamoja region of Northeastern Uganda since 1964, but the region's problems of conflict and malnutrition remain unsolved.

Most of the countries which have achieved food security did so by their own means rather than relying on an external agency. A classic example is India, which periodically suffered famines until the 1960s. It overcame them through a combination of agricultural policy – pursuing the Green Revolution to increase domestic supplies of staple foods – and the Public Distribution System (PDS), which was briefly referred to above. LDCs would be well advised to emulate these policies rather than accede to an expansion of externally administered systems.

Social protection

Much the same caution should apply to social protection programmes, with questions of dependency and control again coming to the fore. India's PDS is such a programme since it provides food for those who need it. It has come under criticism recently, but at least it is an Indian system which Indian policy debates can determine. In other countries, food aid programmes have expanded from simple food distribution to more intrusive schemes such as school feeding programmes. A good case can be made for these, since they ensure that schoolchildren get at least one nutritious meal per day and provide a strong incentive for poor parents to send their children to school. However, any country's schools are part of the national system and should be fully subject to domestic authorities. External agencies may be helpful in assisting with school meals, but actually running the programmes risks overstepping the mark between assistance and interference.

¹⁷⁶ Argentina, Australia, Canada, the European Union (EU), Japan, Norway, Switzerland and the United States.

¹⁷⁷ Mousseau, 2010, p. 20.

Chapter 4: Policy recommendations

One can be forgiven for having a strong sense of scepticism concerning the ability of a large number of LDCs to meet the graduation criteria by 2020. The outlook for GDP growth for the next five years is not encouraging. Many LDCs, notwithstanding some progress made, are unlikely to achieve the MDGs on time. The decade of the BPoA, despite the boom period and the growth rates achieved, neither brought about any significant strides towards developing productive capacities nor promoted much structural transformation of LDCs.

Providing further fuel for such scepticism are the continuing challenges facing LDCs with respect to commodities. After all, the notion of a natural resource curse has repeatedly been highlighted by observers as a key hindrance to the development of LDCs, associated as the concept is with a heavy reliance on a few products, “Dutch disease”, poor governance and exposure to price volatility, among others.

On the face of it, however, there is nothing predetermined about the nature of LDCs’ commodity dependence. An abundance of natural resources could, for instance, imply a blessing rather than a curse for a country’s development. The success story of Botswana and the country’s management of its diamond deposits is a case in point, especially since it was the first LDC to graduate (in 1994). This suggests that realizing the potential of commodities to benefit LDC economies is, at least to a certain extent, a matter of policy. In view of how intertwined the development of LDCs are with the commodity sector, it would be reasonable to expect that greater success in dealing with natural resources could go a long way towards enabling LDCs to meet the criteria for graduation – even in the eyes of a sceptic.

How, then, can LDCs realize the potential of commodities for leveraging development and structural transformation? The case studies discussed in the present report, the outcome of UNCTAD’s Special Event on Commodity Dependence and the Impact of the Multiple Global Economic Crises on LDCs in Istanbul on 8 May 2011, the outcome of UNCTAD’s expert meeting on Challenges and Opportunities for LDCs: Graduation and Structural Transformation in Addis Ababa on 28 February – 1 March 2012 and the Special High-level Event on Implementation of the Istanbul Plan of Action for LDCs: Graduation and Structural Transformation in Doha on 24 April 2012 draw attention to the following policy recommendations:

Actions by LDCs:

- **Define long-term visions that link the commodity sector to national development strategies.** By ensuring that the role of commodities is incorporated into national development strategies, LDCs increase the likelihood of maximizing the potential of the sector in order to avoid a repeat of the jobless growth without structural transformation experienced during the previous decade. What is needed is a more holistic approach that incorporates a development perspective and factors in the role and functions of commodities in economic growth and poverty reduction.
- **Promote good governance and prudent policies that improve natural resource management.** Instituting policies that enhance fiscal transparency and accountability, such as adopting EITI or embedding fiscal rules in national legislation, are key elements in improving the management of natural resources in times of commodity price booms as well as commodity price drops. The experience of open government initiatives, such as that of Kenya’s Open Government Data Portal, should be drawn on.¹⁷⁸ LDCs are also encouraged to join the Open Government

¹⁷⁸ See <http://www.mckinnovate.com> for several case studies.

Partnership, a multilateral initiative launched in 2011 to promote transparency, effectiveness and accountability.¹⁷⁹

- **Boost investment in agriculture and ensure that it is well targeted.** LDCs should increase their support to the agricultural sector with a view to boosting productivity growth and enhancing food security. African LDCs should strive to reach, at a minimum, the target of earmarking 10 per cent of their budgets for agriculture, as per the Maputo Declaration and the IPoA (para 60.2:h). Equally important, LDCs should take steps to target investment judiciously, e.g. through boosting research and development on indigenous crops and by applying a gender perspective.¹⁸⁰ Efforts should include improving production and marketing systems, diffusing technology and disseminating information as well as assisting in establishing acceptable practices in agriculture to meet international standards. Business and other social linkages with agribusiness, hotel chains and other catering service providers are also effective ways of increasing both farm production and productivity.
- **Integrate policies that address climate change into commodity-based strategies.** There are strong linkages between climate change and commodities. For instance, agriculture's direct contribution to global greenhouse gas emissions has been estimated at 13 per cent, while its direct and indirect contribution amounts to some 33 per cent.¹⁸¹ Thus, it is essential to pursue commodity policies which factor in climate change, e.g. via greater support to ecological agriculture.
- **Strengthen domestic resource mobilization.** LDCs' domestic development agenda for the coming decade should include efforts to strengthen domestic institutions in order to mobilize private savings and improve the tax collection system. Such endeavours are crucial for augmenting government revenues and rationalizing government spending in order to eliminate areas of over-expenditure and ensure efficient use of resources.
- **Make concerted efforts to build productive capacities along its three dimensions.** The vital importance of developing productive resources, entrepreneurial capabilities and production linkages in LDCs to advance their development has been stressed repeatedly by UNCTAD. In recognition of the contribution of the private sector to economic growth and poverty reduction, governments should encourage private sector development through enhancing private sector capabilities as well as improving governance and business regulations. In addition to tackling corruption and easing ways to conduct business, it is instrumental that LDCs support the development of entrepreneurial capabilities. LDC governments must take measures across the board to strengthen infrastructure – from enhancing road and ICT networks to ensuring greater access to credit and reduced cost of trade finance. In doing so, they need to attract investments into new projects as well as into the upgrading and maintenance of existing infrastructure.
- **Boost regional integration.** Regional integration among LDCs remains low, implying there is ample scope for strengthening regional economic ties. There is good reason to do so, since some evidence suggests that intraregional trade are more conducive to further economic diversification than interregional trade.

¹⁷⁹ <http://www.opengovpartnership.org>.

¹⁸⁰ FAO (2011b) finds that offering women the same access to productive resources as men could increase agricultural production in developing countries by 2.5–4.0 per cent.

¹⁸¹ UNCTAD, 2010g.

- **Strengthen and formulate strategies for South–South relations.** The intensification of LDCs’ ties with Southern partners was one of the main features of the previous decade. The greater geographical diversification this entails and the complementary role it plays for traditional partnerships have benefited LDCs by reducing their exposure to external shocks and by supporting the development of productive capacities.

Actions by development partners:

- **Increase the quantity and improve the quality of official development assistance (ODA) to LDCs.** ODA remains critical for supporting the efforts of LDCs in their development process, as the majority of LDCs depend on such resources to finance their development needs. A paradigm shift in development aid is needed so that ODA is linked to national priorities of recipient countries through direct budgetary support and by establishing monitoring mechanisms for donors’ performances at the national level. Moreover, there should be a rebalancing of priorities between the social and productive capacity sectors, with increased emphasis on the latter. Along with these qualitative changes in development aid, it is important for LDCs’ development partners to address urgently the quantity of ODA by meeting agreed aid targets. Furthermore, aid conditionalities must not restrict policy choices in recipient countries, and it is desirable that future development assistance to LDCs be provided in the form of grants rather than loans and as direct budgetary support. It is equally important to find a lasting solution to the debt burden of LDCs.
- **Pursue trade policies that are conducive to the development of LDCs.** Developed countries and developing countries that are in a position to do so should immediately and fully implement the commitments to grant duty-free, quota-free access for all products of all LDCs and to remove market entry barriers, including non-tariff measures and other trade barriers. Efforts by trading and development partners should also include secured simplified, harmonized, and flexible rules of origin. Finally, Aid for Trade should be scaled up, where full and effective implementation of the Enhanced Integrated Framework for Trade-related Technical Assistance for LDCs (EIF) is important for alleviating constraints impeding supply capacities, including weak trade-related infrastructure.
- **Put in place a new international development architecture for the LDCs.** The new architecture should go beyond the confines of aid and market access and include transfer of technology and know-how as well as building technological capabilities and innovation in these countries. It should also provide an impetus for the full implementation of paragraph 52 of the IPoA on supporting the development of science, technology and innovation in LDCs, including the Turkish initiative to establish an “International Science, Technology and Innovation Center” dedicated to technology transfer to LDCs.
- **Facilitate the flow of remittances to LDCs.** The flow of remittances to LDCs from nationals living and working abroad has become an important source of development finance in LDCs, supplementing domestic resource mobilization and external financial flows, including ODA. There is, therefore, a need for greater and more coordinated efforts by the international community to promote channels, mechanisms and international policies to reduce the transaction costs that hamper the use of remittances as a source of development financing in relevant countries. Efforts should also include developing a legal and institutional framework to protect migrant

workers, particularly in times of socioeconomic problems in migrant-receiving countries and during periods of political upheaval.

- **Greater support for agricultural development in LDCs.** Development partners of LDCs can assist in efforts to invest in agricultural research, innovation and technological upgrading with special focus on small farmholds. For instance, ODA's share of agriculture in total development aid flows slumped from 14.8 per cent in 1987–89 to 5.5 per cent in 2007–2010. Efforts should include better management of key natural resources, particularly land, biodiversity and water. Further efforts are necessary to mitigate the impact of commodity price volatility on LDCs' economies, including food security, via the setting-up of physical emergency food reserves and the establishment of a virtual reserve mechanism.
- **Promote increased transparency in the commodity industry.** Greater disclosure concerning the production and trading of natural resources is not only important on the part of LDCs, but is also desirable on the part of development partners – developed and developing countries alike. Recent steps by some development partners to toughen the reporting requirements for natural resource companies are a welcome trend,¹⁸² as is the ongoing discussion to expand the scope of EITI to include deals between oil companies and traders.¹⁸³
- **Make concerted efforts to address commodity price volatility.** In view of the negative effects of LDCs' growing exposure to volatile commodity markets, attention needs to be paid to continued support for commodity sectors of LDCs, enabling their greater participation in global value chains on an equitable basis as a way to promote sustainable market-driven growth. UNCTAD (2011h) provides a number of specific recommendations, including increased transparency and tighter regulation of financial players.
- **Assist a smooth transition for graduating LDCs.** A few LDCs are nearing the graduation threshold, which is a step in the right direction. However, post-graduation uncertainty regarding international support measures and eventual or premature loss of such support measures in the areas of ODA, market access, special and differential treatment with regard to WTO obligations, and falls in ODA levels remain among their major concerns. Concrete ways and means should be put in place for the effective and smooth transition of graduating countries.
- **Bolster international support measures for LDCs to tackle concerns related to climate change.** These should include adequate and appropriate technical and financial assistance for adapting to and mitigating climate change impacts, establishing early warning systems, transferring eco-friendly (green) technologies to LDCs and making available scientifically credible and adequate information on the state of climate change and weather patterns.

¹⁸² See, for instance, Sections 1502–1504 of the US's Dodd-Frank Act and Barker and Chazan, 2012, on current negotiations in the EU.

¹⁸³ Blas, 2012.

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Annex

**Table 1. Basic indicators of the five case study countries and LDCs
(per cent unless otherwise specified)**

	Benin	Burundi	Cambodia	United Rep. of Tanzania	Zambia	LDCs
Annual average real GDP growth rate (2000-2010)	3.8	3.5	8.7	7.0	5.6	7.2
Annual average real GDP growth rate per capita (2000-2010)	0.7	0.6	7.3	4.1	3.0	4.8
Labour force (millions in 2010)	3.7 mn	4.4 mn	8.1 mn	22.8 mn	5.7 mn	376.5 mn
of which: in agriculture	43.3	85.6	61.8	76.1	57.6	64.6
Annual average export growth rate (2000-2010)	15.5	7.9	15.0	18.2	25.9	19.4
Annual average import growth rate (2000-2010)	16.2	15.8	15.3	19.9	20.8	16.9
Share of primary commodities in total exports (average 2000-2010)	88.5	70.8	6.9	64.8	86.1	74.2
Share of FDI inflows over GDP (average 2000-2010)	2.0	0.4	5.9	3.3	6.7	5.0

Source: UNCTADstat.

Note: Estimated data for Benin's import growth rate and Cambodia's export and import growth rate as well as for the share of primary commodities over GDP in Benin, Burundi and Cambodia.

Table 2. GDP growth, export growth and trade balance in the five case study countries and LDCs before, during and after the crises, 2007-2010

		2007	2008	2009	2010
GDP growth rate (per cent)	Benin	4.6	5.0	2.7	2.6
	Burundi	6.4	4.3	3.3	3.9
	Cambodia	10.2	6.7	0.1	6.0
	United Rep. of Tanzania	7.1	7.4	6.0	6.8
	Zambia	6.3	6.0	6.1	7.1
	LDCs	9.2	7.6	4.9	5.6
Merchandise export growth rate (per cent)	Benin	42.3	22.5	- 4.5	13.4
	Burundi	6.9	-13.3	14.7	62.0
	Cambodia	10.7	15.2	- 8.6	27.9*
	United Rep. of Tanzania	15.5	37.0	- 1.9	35.8
	Zambia	22.5	10.4	- 15.4	67.0
	LDCs	24.3	38.4	- 28.1	26.0
Trade balance (current \$US, millions)	Benin	- 1,189	- 1,169	- 1,115	- 1,061
	Burundi	- 405	- 524	- 467	- 497
	Cambodia	- 718	- 1,191	- 968	- 1,244
	United Rep. of Tanzania	90	- 19	- 147	- 66
	Zambia	- 2,656	- 3,691	- 3,168	- 3,409
	LDCs	- 31	- 569	55	1,251

Source: UNCTADstat.

Note: Estimated data for Benin's export growth and trade balance in 2008-2009 as well as for Cambodia's export growth and trade balance in 2009.