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What are the implications of the global crisis and its aftermath for developing countries, 2010-2020?

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WHAT ARE THE IMPLICATIONS OF THE GLOBAL CRISIS AND ITS AFTERMATH FOR DEVELOPING COUNTRIES, 2010-2020?

Working Paper number 68

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WHAT ARE THE IMPLICATIONS OF THE GLOBAL CRISIS AND ITS AFTERMATH FOR DEVELOPING COUNTRIES, 2010-2020? *

Andy Sumner**, Joe Ballantyne*** and Andrew Curry***

ABSTRACT

Some major “game changers” beyond the recent economic crisis and food/fuel crisis will have an impact on the Millennium Development Goals (MDGs) to 2015 and afterwards. “Future-proofing” the MDGs is about thinking how future(s) might impact the Goals, MDG gains, costs, strategies and opportunities for faster progress on poverty reduction.

Scenarios—multiple coherent and plausible futures—are a vehicle both for acting on possible future(s) and interpreting their implications. This paper explores the implications for growth and poverty reduction in developing countries of four futures scenarios to address the following question: “What are the implications of the global financial crisis and its aftermath, regionally and globally, for developing countries, taking a 5–10 year view?”

The scenarios and modelling were developed through interviews and workshops with a range of stakeholders in the United Kingdom, India and Kenya. This paper takes a structured approach to reviewing outcomes for growth, poverty reduction and the MDGs for different developing economies, against the background of the post-crisis context. The scenarios were developed using a version of the morphological scenarios approach, field anomaly relaxation (FAR). This creates a backdrop of internally consistent futures for policy formation and decision making by identifying and analysing the most significant drivers of change in the global financial and political systems. The scenarios are closely connected to a “soft” model that identifies possible pathways, causal linkages and transmission variables between the scenarios and associated levels of economic growth and poverty reduction via key economic variables. This permits more granular interpretation of the scenario outcomes than conventional scenario-analysis techniques. This work was funded by DFID (the futures mapping) and UNDP (the annex MDG review).

Keywords: MDGs; futures; scenario planning; poverty reduction.

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1 INTRODUCTION

Development futures mapping is an emerging area of interest in development research, as well as in policy in a broader sense (for examples, see Grimm et al., 2008; Hughes et al., 2008; Lundgaard, 2009), often specifically with regard to Africa (see Table 2 and Box 1 for examples). For instance, one could take those with a dedicated development angle, such as the European Association of Development Research and Training Institutes' (EADI) European Development Cooperation 2010 and 2020 projects, the Society for International Development's Horizon Scanning Project, and the Millennium Project's Africa Foresight initiative.¹

Arguably, this stems from a sense that the economic crisis marked the end of a benign era of relative stability, strong economic growth and fairly buoyant aid budgets, and ushered in a different post-crisis world or "new normal" that may be one of multiple and interlinked crises. Suffice to note here that the conclusion of the US National Intelligence Council Report (2008: xii), based on a widespread and large academic consultation, is sobering: "trends suggest major discontinuities, shocks and surprises".

Nassim Nicholas Taleb has popularised the thesis of "Black Swans"—unexpected, unpredictable and high-impact events such as the economic crisis itself. Taleb argues that human beings underestimate the likelihood and impact of hard-to-foresee events. We should not try to predict Black Swans, however, but "invest in preparedness, not in prediction" (Taleb, 2007: 208). In short, we can seek to identify a relatively small number of variables or drivers that are likely to have a disproportionate influence on future "development" and possible global future(s).

2 THE POST-ECONOMIC CRISIS CONTEXT

The MDGs comprised an approach born of a benign era of relative stability, stronger economic growth and fairly buoyant aid budgets. We now face a very different world. Changes sparked by increased uncertainty and a growing sense of multiple insecurities can have adverse impacts on poverty levels, and evidence is already emerging that the economic crisis itself is leading to significant changes in the context for development more broadly.

- Global governance: the move from the G8 to the G20 means that large developing nations have more representation and power, but changes in the International Monetary Fund (IMF) and the World Bank will be crucial for wider changes in governance.
- New economic and social policies: it is probable that developing countries will be more inclined to explore new development models; approaches from China, the "Beijing Consensus", are more likely to be taken up than Western prescriptions; the scale of the food and financial crises has made a powerful case for better social protection systems, but building a sense of ownership in governments and civil societies remains a challenge in securing long-term budget allocations.

As Jones et al. (2009: 51) have noted: "the era in which the seven major industrial economies could meet with Russia and act collectively to solve global problems is over". The rise of the G20 and its institutionalisation at the G20 Pittsburgh Summit as the global body for economic coordination marks a fundamental shift from the era in which agreement was reached on the MDGs, wherein the countries of the Organisation for Economic Cooperation

and Development (OECD) were the main drivers and decision makers in global economic affairs. The shift from the G8 to the G20 is certainly positive for developing countries' representation, but it is less clear that the impact on development itself will be immediately beneficial. While in recent years the G8 has had Africa and the MDGs as a permanent item on its agenda, it has been harder to introduce issues relevant to the poorest countries, such as the MDGs, into the G20 discussions. Increasingly, moreover, many issues are addressed in a G2 consisting of the United States and China.

The G20 is evolving as the "steering committee" on global and systemic issues that could come to include climate, health and other matters likely to be high on the future international agenda. As noted, a shortcoming is the absence of representation of low-income countries, particularly African countries, in contrast to the strong representation of the Asia-Pacific countries (ten of the 19 countries). The G20's structures may also evolve. There are suggestions that it should move towards a constituency-based system resembling the model of the World Bank/IMF boards. Much will depend on how developing-country blocs operate politically in these new international fora, and on governance reform at the IMF and the World Bank (reform at both of these bodies has G20 deadlines for decisions in 2010 and 2011). There is consensus that the heads of the two institutions should be selected in an open and transparent process, and should not be restricted to candidates from one country or region. Contention remains on the composition of quotas and boards, as these reflect voting strength and levels of access to resources.

The economic context has also been shaken by the crisis, because of the uncertainties created by the unexpected shocks to finance and trade, as well as their knock-on effects on millions of lives, and the shaking of confidence in what were previously thought to be the certainties of economic theory and practice. The crisis was different for three reasons: its origins in the industrialised countries; the speed of global transmission; and the size of the shock. Nonetheless, not all that was expected actually happened (see Table 1).

TABLE 1

The Global Economic Crisis: What Happened? What Didn't?

What has happened in the crisis in developing countries?	What has not happened?
Slowdown in growth rates	But no overall developing-country recession
Fall in export volumes	But very variable
Fall in export unit values	But main problem is rising commodity prices
Reductions in FDI and portfolio investment	No country-specific crises as in the 1990s
Banking problems in emerging markets.	Banking systems have held up well
Falls in remittances affecting poorer countries	Too early to draw a definitive conclusion
Sovereign debt increasing	Could become a major issue
Trade credit expected to fall	Clear evidence of this problem hard to find
Aid flows expected to fall	Some have cut, but no generalised fall

On a broader policy note, the Washington Consensus has been declared dead (again) but the nature of the shift to a "Beijing Consensus" or model (meaning a greater role for state-led or state-managed global integration) and policy experimentation is still unclear. The IMF (2010a; 2010b; 2010c) most recently has questioned inflation targeting and capital controls, and has raised the prospect of new financial and bank taxes. Further, the discussion of "global economic imbalances" at the G20, and the resulting agreement that governments have a role

in directing markets in order to avoid “imbalances”, would have been an unthinkable break with the orthodoxy just a few years ago. If it opens up discussion of a wider range of policy instruments for development, it will have value. As noted above, however, it is far from certain that the change in language in G20 declarations and on the pages of the *Financial Times* will have any long-term impact on policy.

A further change is the continuing economic uncertainty caused by the crisis itself—it is not clear when or if growth rates in the poorest countries will start to pick up, and whether the poorest people will benefit in time to prevent permanent damage to livelihoods and the erosion of assets. In terms of recovery and the fiscal outlook, there are various concerns regarding the speed of the recovery, fiscal space, and impacts on public expenditure, social spending and debt service, which are highly country-specific. Global growth is clear enough, judging by the IMF’s *World Economic Outlook* estimates, and recovery is very much V-shaped in the emerging economies and in Africa. Martin Wolf at the *Financial Times* and Moisés Naim at *Foreign Policy* note the “LUV” recovery (L-shaped recovery in Europe, U-shaped in the United States, and V-shaped in big emerging economies), implying a fiscally constrained, indebted North and a dynamic set of larger emerging economies. Much depends on when the monetary and fiscal stimulus is withdrawn. In short, sustained recovery is not guaranteed. Continued policy efforts are needed to keep interest rates low, devise credible strategies for withdrawing monetary support, maintain the fiscal stimulus into 2010 with exit strategies, repair the financial sector in advanced and emerging economies, and bring about a global rebalancing of excessive surpluses and deficits in line with the G20 “mutual assessment programme” led by the IMF.

Furthermore, the averages mask significant differences, and in some countries there is a “triple whammy” of large growth decelerations, slow recovery of growth rates and little or no fiscal space, particularly in Africa (half of all countries, according to some estimates). Moreover, a number of fragile states are in the very high-risk category of high growth deceleration, low/no fiscal space and three years or more to recovery. There is evidence that this will have MDG impacts not only on growth but also on social spending, albeit varying by country.

Economic uncertainty in donor countries is also leading to a decline in public support for aid budgets. This is an immediate concern for policymakers over the next few years, and will be critical in determining the economic and social policy environment.

Looking further ahead, some major “game changers” beyond the recent economic crisis and food/fuel crisis (see annex for further discussion) will have an impact on the MDGs to 2015 and afterwards. One should also note the changing nature of aid itself, given the rise of “new” donors among the BRIC countries (Brazil, Russia, India, China) and wider afield, as well as debates on climate finance that may dwarf “traditional aid” flows. Innovative financing is already changing the nature and structure of aid, and donors are increasingly aware of debates on the post-bureaucratic age. All of this indicates a political and economic environment of increasing uncertainty over the next decade or more, or a situation of “confronting the long crisis” to echo Evans et al., (2010).

Scenarios—multiple coherent and plausible futures—are a vehicle for acting on possible future(s) and for interpreting their implications. To this end, The Futures Company and the Institute for Development Studies (IDS) collaborated on a project to develop scenarios and modelling in light of the global financial crisis, with a view to addressing the following question: “what are the implications of the global financial crisis and its aftermath, regionally and globally, for developing countries, taking a 5–10 year view? The scenarios and modelling were developed through interviews and workshops with a range of stakeholders in the United Kingdom, India and Kenya.

TABLE 2

Examples of African Futures Mapping

Country/horizon	Methodology and key drivers	Scenario narratives
East Africa/2040	<p>Scenario paper</p> <ol style="list-style-type: none"> 1. Natural and resource wealth. 2. Rural/urban disparities; migration. 3. Violence/war (or threat thereof). 4. Effects of climate change/environmental damage. 5. Political stability. 6. Crime and unemployment. 	<p><u>"I want to be a star"</u>: the region is so spellbound by the promise of resource wealth that it welcomes all suitors and cedes control of its future.</p> <p><u>"I want a visa"</u>: East Africa's executive elite, motivated by enlightened self-interest, deploys its intellectual skills and state power to deliver development. It also finds that a confidence in control can only take one so far and that it faces stark decisions.</p> <p><u>Usiniharakishe (don't rush me)</u>: the region's countries struggle to retain and reclaim control over their most local assets—land, water, trees, creativity—in an effort to determine their own futures. The land slowly heals over time and biodiversity reaches record levels.</p>
Kenya/2020	<p>30 researchers developing scenarios in a period of more than a year, in between five workshops.</p> <ol style="list-style-type: none"> 1. Violence and erosion of cultural values. 2. Unemployment. 3. Lack of government legitimacy and weak institutions. 4. Mistrust of the judiciary. 5. Decreased agricultural productivity and an uncompetitive manufacturing sector. 6. Poor infrastructure and utilities. 	<p><u>El Niño scenario</u>: total breakdown of Kenya as it is today.</p> <p><u>Maendeleo scenario</u>: initial rapid economic gains but the country is full of inequalities and instability, without political reform.</p> <p><u>Katiba scenario</u>: institutional (political) reform without substantial economic transformation.</p> <p><u>Flying geese scenario</u>: political, social and economic reform leading to inclusive democracy and growth.</p>
Rwanda/2025	<p>Conversation-based, convening with key individuals from Rwanda and other countries (scenario development).</p> <ol style="list-style-type: none"> 1. Lack of freedom of speech and erosion of civil liberties. 2. Lack of political progress (pro-forma consultations without implementing reforms). 3. Sluggish private sector because of bureaucracy. 4. Stagnating economy. 5. Involvement in regional conflicts. 	<p><u>Visionary scenario</u>: Kigali is a thriving tourist destination and capital, with direct flights to all major global cities, children are in school. Years of attracting foreign investment and streamlining bureaucratic processes have been effective.</p> <p><u>Alternative scenario</u>: Rwanda is run by "benevolent" but strong-armed government, recognised as doing a good job and rewarded for its governance style; other East African Community (EAC) leaders may emerge and take on this style of governing.</p>
Uganda/2025	<p>50 people from different professions and backgrounds; conversations and investigations in order to understand what has led to Uganda's current state. This was carried out over 18 months and sought to identify the factors that are influencing the future, as well as to map what future Ugandans are facing potentially.</p> <ol style="list-style-type: none"> 1. Intransigence of the political elite in power and their role in collapsing avenues for dialogue. 2. Deepening of poverty and social exclusion. 3. Greed and callousness of the political and business elites. 4. Legacy of violence, conflict and mistrust. 5. Fear of renewed conflict as a result of the transition failing. 6. A shared vision that Uganda can be "bigger and better". 	<p><u>Rope bridge</u>: legitimacy of government dependent on its fostering national consensus and tackling pressing problems within society.</p> <p><u>Ow'embaliga</u>: displacement, disparity and disintegration.</p> <p><u>Ovago Vile Vile</u>: national unity; reconciliation, renewal and reconstruction.</p>

Sources: Rwanda: <http://www.scenariodevelopment.com/Future_of_Rwanda/>;
Kenya: <<http://www.kenyascenarios.org/default.html>>;
Uganda: <<http://www.scenarios.ws/uganda/>>;
Horn of Africa futures: <<http://www.sidint.net/sid-first-trend-monitoring-report-greater-horn-of-east-africa/>>.

BOX 1

Over the next 20 years, what factors will drive Africa and the world's responses to the AIDS epidemic, and what kind of future will there be for the next generation?

Three scenarios for HIV/AIDS in Africa to 2025:

Tough choices: Africa takes a stand

In this scenario, African leaders take tough measures that reduce the spread of HIV in the long term, even if it means difficulties in the short term. The key message is that Africa can lay the foundation for future growth and development, and reduce the incidence of HIV by means of increased government involvement and coordination, a more coherent strategy (emphasising both prevention and the scaling-up of antiretroviral therapy), greater HIV/AIDS spending (of about US\$100 billion) and a sharper focus on children orphaned by AIDS. But there will continue to be a high number of deaths (which will begin to fall by 2015) and a doubling in the number of children orphaned by AIDS, since prevention measures will take time to work through the system.

Traps and legacies: the whirlpool

This is a story about the deepening of AIDS, poverty, and marginalisation because of a series of seven traps that prevent all but a few nations/privileged segments of the population from escaping continuing poverty and HIV prevalence. The epidemic will thus continue because: HIV is seen in isolation from its root social, economic and political contexts; resources provision is inconsistent and unpredictable over the next 20 years; African countries fail to translate the aspirations of pan-African unity into effective reality; donors do not harmonise their responses; aid is volatile and of poor quality; antiretroviral drugs are easier to access than adequate nutrition and clean water; the realities of human behaviour are denied; and the root causes of poverty are not addressed. In this scenario, by 2025 HIV prevalence is similar to that of today (at about 5 per cent of the adult population); the cumulative number of people dying from AIDS increases more than fourfold; and the number of children orphaned by the epidemic continues to rise beyond 2025.

Times of transition: Africa overcomes

"Times of transition" is the story of what might happen if all of today's good intentions were translated into the coherent and integrated development response necessary to tackle HIV and AIDS in Africa (through cumulative investments of nearly US\$200 billion). In this scenario, there is a doubling of aid flows to Africa, sustained for a generation, with investments in health systems, agriculture, education, electrification, water, roads, social development, and institutional and governance capabilities. "Times of transition" describes fundamental changes in the ways donors provide aid and the ways governments deal with that aid, so that it promotes sovereignty, does not undermine autonomy, is not inflationary, and does not foster dependency. The important message of this scenario is that early expenditure, with a continuous growth in prevention spending, means that the care and treatment budget can begin to decline as early as 2019, as the total number of people living with HIV and AIDS begins to fall.

Implications and learning from the three scenarios

The worst of the epidemic's impact is still to come, yet there is still a great deal that can be done to change the longer-term impacts. How the crisis confronting Africa is defined, and by whom, will make a fundamental difference to the outcome of tackling the crisis. The death toll will continue to rise, no matter what is done. Most commitments do not extend beyond the next five years, and uncertainty remains about the level of resources that will be available in the future.

3 WHAT IS SCENARIO MAPPING?

The history of scenario planning goes back to the early 1960s, with the work of Herman Kahn's Hudson Institute in the United States and the "Futuribles" movement in France. Kahn wanted to find a way of "thinking the unthinkable" about the possibility of nuclear conflict between the superpowers. In the 1970s, Shell adopted the method in a business environment, using it to explore the consequences of a rapid increase in oil prices at a time when conventional wisdom thought this improbable. Oil prices did rise, and Shell's strategic response transformed its market share and profitability, an outcome that increased awareness of scenarios in the business sector.

As a discipline, scenarios work tends to be practitioner-led and is sometimes thought to be under-theorised. Different approaches have emerged from different disciplines and geographies. These include, for example, the dominant "double-uncertainty" matrix, widely used in North America and the United Kingdom; the French "prospective" method; quantitative and qualitative cross-impact methods; and more interpretative methods such as causal layered analysis.

Bishop, Hines and Collins (2007) suggest that there are about eight "families" of scenarios methods, and within these some 30 identifiable techniques. The morphological approach is a variant of the "uncertainty"-based approach to scenario development. Bishop Hines and Collins note that while morphological scenarios techniques "are more complicated and hence less common, they do overcome the difficulty that it is devilishly hard to capture the uncertainties of the future in just two dimensions."

Whichever method is used, they share a common underlying philosophical basis: that the future cannot be predicted; that there are multiple possible futures; and that by understanding, organisations can increase their resilience to change (List, 2005). As List (2005: 3) notes, "by the end of the 20th century, scenario work had become the most widely used method for multiplistic foresight."

Scenarios are a tool for thinking about the range of different possible futures, and can be used to inform policymaking. Using scenarios to explore and rehearse uncertainties may highlight a number of issues or potential options that require further detailed investigation or analysis.

Scenarios are most commonly used as an analytical tool in a strategic context. Typically, they are used to broaden and deepen the way organisations sense their external environment, to connect this to the way they respond to stimuli, and to help define future vision and strategic priorities. They are often used to provide answers to what are termed "unstructured" or "wicked" problems—messy, adaptive problems that are not amenable to conventional approaches.²

Scenarios are typically used to rehearse different policy options available to an organisation, and to highlight their potential strengths, weaknesses and unintended consequences. Finally (and less frequently), they are used to "future proof" (or "windtunnel") a decision or potential investment that is "on the table".

Essentially, “future-proofing” the MDGs is about thinking how future(s) might impact the Goals, MDG gains, costs, strategies and opportunities for faster progress on the MDGs.

The concept of future-proofing the MDGs is not new. It has been used with reference to “climate-proofing” the MDGs by Fankhauser and Schmidt-Traub (2009: 5), who estimate that the cost of making the MDGs “climate-resilient” is about a third higher than the conventional cost of meeting the MDGs: about US\$100 billion a year for the next decade, compared with US\$72 billion a year for the MDGs alone. Extra costs arise from having to provide more development support (for example, extra bed nets against malaria), the same support at a higher cost (for example, more expensive infrastructure), and entirely new measures (for example, adaptive capacity building). Climate change can also lead to the prioritisation of certain measures compared to the baseline development plan (for example, disaster management).

Scenarios should not be considered as predictions of the future (see Table 3). In reality, the future is likely to contain variations of elements found in each of the four narratives. Hence the narratives should be considered as a way of illustrating the range of potential future outcomes of combinations of drivers, rather than as definitive statements about future developments or variations around a midpoint or base case.

TABLE 3

What Are Scenarios?

Scenarios should ...	Scenarios should not ...
Effective scenarios should provide descriptions of alternative coherent and plausible futures, informed by structured and rigorous analysis of the most significant drivers of change.	Scenarios should not be considered as predictions of the future. In reality, the future is likely to contain variations of elements found in each of the four narratives.
The narrative should present a logically coherent world, highlighting the drivers of change which combine to produce particular outcomes.	Importantly, scenarios should not present a generalised view of feared or desired outcomes. In any future world, there will be a range of “winners” and “losers”, and it is important that the scenario narratives reflect this.
The scenarios should be internally consistent.	
Crucially, effective scenarios should provide a specific, strategy-focused view of the future.	Finally, it is crucial that scenarios are not the product of outside futurists or consultants. In order for scenarios to gain traction within an organisation, it is important that people feel a sense of ownership of the narratives, and have a clear and robust understanding of the process undertaken to develop them.
Rather than describing a future world in general terms, they should provide specific and strategically relevant information on pertinent areas.	

4 OUR METHODOLOGY

4.1 GENERATING THE SCENARIOS

Our scenarios were developed using a version of a method known as field anomaly relaxation (FAR), which is based on morphological analysis.

This approach focuses on identifying and analysing the most significant drivers of change in the global financial and political system over the next 5–10 years. It allowed the project team to identify and develop four coherent and internally consistent scenarios and economic modelling based on analysis of those drivers

This approach aims to create a backdrop of internally consistent futures for policy formation and decision making. Reflecting the breadth of the project question, it allowed

a greater level of depth and veracity to be incorporated into the scenario narratives than the traditional “2x2” scenario approach, and enabled a closer link to the modelling work. Morphological analysis is a deductive process, in that the scenarios are “deduced” from an analysis of the drivers of change.³

A core assumption of the methodology is that we live in “fields” of interactions with other people and events. These fields can include *structural* factors such as political stability, social organisations or economic growth and exchange rates, as well as *individual* variables such as personal interactions and decisions. The fields are also interrelated: certain combinations of different fields present a coherent frame for understanding the future, while other combinations lack coherence (for example, a combination of high economic growth with high energy prices and high levels of political instability would be considered internally inconsistent). By examining different combinations of fields, the full morphological approach explores the range of imaginable and plausible patterns of interaction, eliminating those that do not satisfy an overall assessment of internal coherence. The remaining, internally consistent patterns are then used as stepping stones to create paths into the future.

The project involved an initial scanning phase, during which the project team developed a long list of about 60+ key drivers of change, which were identified through a combination of desk research and interviews with development experts. See Sumner and Tiwari (2009) for the full list.

“Drivers of change”, of course, is an approach familiar to many in development policy (Warrener, 2004). We define drivers of change here as forces (which can be social, technological, economic, environmental or political) that are likely to influence the outcome for the overall system or subject defined by the project question over the specified time period. They may influence it positively or negatively. In addition, a driver of change can be characterised by the way it impedes the rate of change—for example, “the low rate of investment in new technology”. The processes of scanning for drivers and then analysing them for importance and degrees of uncertainty are the platforms on which work in the scenarios field (and work in the futures field more generally) are based. Clusters of these drivers of change formed the “fields” or sectors of interaction central to the morphological approach.

A number of techniques were used to refine this long list. Initially, workshops were held with stakeholders to reduce the initial 60 drivers to a shorter list of about 30 that (after review and testing) were considered to have greater impact on the shape of the global economy and development over the next decade. This assessment was largely qualitative. Relationships between these drivers were subsequently analysed by means of an impact matrix, based on the work of Godet (2001) to identify both “contextual drivers” (high-impact, and relatively independent of the other drivers) and those drivers that were important and also uncertain (high-impact and relatively interdependent).

This analysis was cross-checked using Decision Explorer, a software tool that maps and analyses relationships within systems (Eden and Ackerman, 1998). Together, these three stages have been found to give sufficiently robust analysis of drivers and their inter-relationships in scenarios-development processes. The important and uncertain drivers were then grouped into factor themes, as outlined below, to describe the overall landscape.

The six core drivers chosen from the process above as priority drivers were:

- shifts in global wealth distribution;
- trends in multilateralism;
- changes in the intra-country polarisation of wealth/income inequality;
- changes in the nature of aid and development funding;
- rising energy prices (over the long term); and
- changes in information flows.

A range of plausible outcomes or factors associated with these uncertainties over the period covered by the scenarios were then identified, and these uncertainties were put together in plausible combinations to create the outline scenario narratives. Table 4 shows the range of futures associated with each variable.

TABLE 4

Range of Futures Associated with Each Variable

Sector	Factor	Factor	Factor	Factor
Shift in global wealth distribution	Collapse of the US\$	Rise in national protectionism	Rapid shift in global wealth from west to east	Rejuvenation of Western economies and slow of global wealth shift
Trends in multilateralism	Multilateralism	Minilateralism	Bilateralism	
Polarisation of wealth/ income inequality	Continued polarisation of wealthy/poor	Stabilisation at present levels of inequality	Political action taken to reduce inequality	
Nature of aid and development funding	Reductions in aid expenditure as aid processes lack public accountability	Vertical integration/ concentration of aid	Continued fragmentation of aid	
Rising energy prices (over the long term)	Slow / steady increase in energy price	Sharp rise in energy prices	Greater volatility in energy prices	Stagnation in energy prices
Information flows (ICT)	Continued growth in information flows	Greater state control of information flows	Decline/stagnation of penetration of information flows	

Each scenario included, at core, plausible combinations of the ranges of uncertainties outlined above (see Table 5).

There are a number of benefits to using the deductive approach. It is a structured process, with a clear flow from drivers to scenarios construction. It also provides a relatively straightforward way to connect the scenarios to their strategic and policy implications. The factor combinations, initially identified through analysis by The Futures Company and IDS, were tested at stakeholder workshops as part of the scenario-development workshop.

TABLE 5
Scenarios by Key Drivers

Sector	Roller Coaster	Western (Re)Invention	South by Southeast	The Odd Couple
Shift in global wealth distribution	Collapse of the US\$	Global wealth shift slows	Rapid shift in global wealth from West to East	Rise in national protectionism
Trends in multilateralism	Multilateralism	Western-led multilateralism	Bilateralism	Minilateralism
Polarisation of wealth/income inequality	Continued polarisation of wealthy/poor	Stabilisation at present levels of inequality	Political action taken to reduce inequality	Stabilisation at present levels of inequality
Nature of aid and development funding	Reductions in aid expenditure as aid processes lack public accountability	Asset transfer to poorer countries via carbon trading system	Continued fragmentation of aid	Vertical integration/concentration of aid
Rising energy prices (over the long term)	Slow / steady increase in energy price	Slow / steady increase in energy prices	Greater volatility in energy prices	Sharp rise in energy prices
Information flows	Continued growth in information flows	Continued growth in information flows	Decline/stagnation of penetration of information flows	Greater state control of information flows

4.2 THE MODELLING APPROACH AND ASSUMPTIONS

Any categorisation of countries is contentious (see Harris, Moore and Schmidt [2009] for a recent review of “developing”-country classifications). Our model is based on a typology of developing countries according to their relationship with the global economy. The categories were chosen to reflect any given country’s relationship with the rest of the world through the balance of payments, and thus the link between the future scenarios or contexts and the country’s key macroeconomic variables by addressing these questions: Is the country a net fuel importer or exporter? Is the country dependent on non-fuel primary commodity exports and/or aid?

These questions led us to develop country groupings based on combinations of net fuel-importing countries (Table 7) and fuel exporters, and dependency on non-fuel primary commodity exports and aid.⁴ We deal with fuel exporters as one grouping (rather than combinations of fuel exporter with aid and non-fuel commodity exporters) because under all scenarios fuel prices are rising, implying that fuel revenues will accrue to those countries (the use and distribution of those fuel revenues is then a governance question).

TABLE 6
Combinations of Aid and Non-Fuel Commodity Dependent Countries

		<u>Is the country non-fuel commodity export dependent ?</u>	
		Yes	No
Is the country aid dependent?	Yes		
	No		

The specific quantification of thresholds for these variables are as in Table 7. Of course, these are not uncontroversial.⁵

TABLE 7

Definitions Used for Net Fuel Exporters, Non-Fuel Commodity Dependency, Foreign Aid Dependency

Indicator	Our definition	Details and data
Net fuel exporter	>20% of exports US\$ value	Countries that have more than 20% of export value in fuels. There is an IMF WEO category of “fuel exporters” by the main source of export earnings. Data from UNCTAD.
Net fuel importer	Positive net fuel trade	Countries that import more fuels than they export. Data from UNCTAD.
Non-fuel primary commodity dependency	>50% of exports US\$ value in three leading commodities	Countries with more than half of all export earnings in three commodities. Data from UNCTAD.
High foreign aid dependency	>9% of GNI	Countries with ODA/GDP greater than 9%. Data from World Bank WDI.

Sources: OECD (2003), *Harmonising Practices for Effective Aid Delivery*. Paris. OECD; UNCTAD (2009), *Trade and Development Report*. Geneva, UNCTAD.

We can then outline the characteristics of different countries. See the tables in the annex for countries and data, including additional information on private capital flows—foreign direct investment (FDI) and remittances—as it is relevant to the later discussion. We did not include portfolio flows because these are significant only in South Africa and Indonesia.

We then have country groupings as follows.

Net fuel exporters; for example, Nigeria, South Africa, Sudan and Indonesia.

Net fuel importers:

- with neither primary commodity export dependency nor aid dependency: for example, Bangladesh and Nepal;
- with primary commodity dependency but without aid dependency: for example, Kenya and Jamaica;
- with both primary commodity export dependency and aid dependency: for example, Afghanistan, Ethiopia, Ghana, Malawi, Mozambique, Rwanda, Sierra Leone, Tanzania, Uganda and Zambia.

We take these country groupings and consider each future scenario. First, we ask what each scenario means at a global level for trends in: fuel prices (already explicit in each scenario); non-fuel primary commodity prices; the size and composition of aid flows; the size and composition of private capital flows (notably FDI and remittances). Key assumptions are in Tables 8, 9 and 10.

TABLE 8

Key Variables and Underlying Assumptions as to Determinants

Key variables linking scenario to countries	Key assumptions at to main determinants of trends
Fuel prices	Explicit in each scenario.
Non-fuel commodity prices	Prices are a function of prevailing trends in protectionism, which will raise prices; robust global growth, which will raise prices; and robust growth in the BRICs, which will raise prices.
Aid flows	Size of flows are a function of a climate regulation agreement, which will increase flows; multilateralism, which will increase flows; and robust growth in the BRICs, which will increase flows (in non-traditional aid).
Private capital flows	Size of private flows are a function of prevailing trends in protectionism, which will reduce flows; global growth, which will increase flows; robust growth in the BRICs, which will increase BRIC outward private capital flows; and OECD growth, which will lead to increases in OECD outward capital flows.

Finally, for each country grouping in each scenario we make assumptions for trends in medium-term economic growth prospects (based on trends in fuel prices, non-fuel commodity prices, aid flows and private capital flows), trends in labour demand (based on fuel prices, non-fuel commodity prices, aid flows and private capital flows) and trends in public budgets (based on fuel prices, non-fuel commodity prices and aid flows) (see Table 9).

TABLE 9

Key Variables and Underlying Assumptions as to Determinants

Key variables linking scenario to countries	Key assumptions at to main determinants of trends
Medium-term economic growth prospects	Rising fuel prices dampen growth prospects for fuel importers and raise growth prospects for fuel exporters; rising commodity prices raise growth prospects in commodity dependent countries; rising aid raises growth prospects in aid dependent countries; and private capital flows raise growth prospects in all countries.
Labour demand	Good growth prospects raise labour demand significantly if in non-fuel and non-commodities in particular.
Public budget surplus/deficit	Good growth prospects lead to good public budget prospects.

Of course, many of these assumptions may not hold in reality for all sorts of reasons, and many are determined by the quality of governance and social and economic policy (take, for example, whether oil revenues lead to healthy budgets).

We then aggregate these trends to consider three key poverty indicators, taking three key MDGs: the dollar-a-day indicator, primary enrolment and child mortality. Although the timeline is 5–10 years, and thus to 2015 and beyond, we chose the MDGs to make the modelling concrete and also because household income poverty, child education and child mortality are likely to remain crucial dimensions of poverty reduction after 2015. Income poverty is linked to growth, labour demand and trends in food prices (assuming a significant link between food and fuel prices). Education and health poverty are linked to growth and public budgets (see Table 10).

TABLE 10


Modelling Assumptions



Outcome	Assumed key determinants					
	Extent of multilateralism	Trends in economic protectionism	Strength of global growth	Strength of OECD country growth	Strength of BRIC country growth	Climate "deal"
Level 1						
Non-fuel commodity prices		x	x	x	x	
Volume of aid	x			x	x	x
Volume of private capital		x	x	x	x	
Level 2	Growth	Fuel prices	Commodity prices	Aid	Private capital flows	
Strength of growth	n/a	x	x	x	x	
Strength of labour demand	x		x		x	
State of public finances	x	x	x	x	x	
Level 3	Growth	Labour demand	Public budget	Food prices (oil prices)		
Dollar-a-day poverty	x	x		x		
Education MDGs	x		x			
Health MDGs	x		x	x		

We now outline each scenario in detail and MDG-related impacts for different types of countries. Box 2 introduces the four scenarios by identifying key drivers of each.

BOX 2

Future Scenarios Developed and Key Drivers

<p><i>South by Southeast: Key Drivers</i></p> <ul style="list-style-type: none"> • <i>Minilateralism.</i> • <i>Rapid shift in wealth from West to East.</i> • <i>Sharp rise in energy prices.</i> • <i>LICs excluded from emissions until thresholds reached.</i> 	
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<p><i>Western (Re)Invention: Key Drivers</i></p> <ul style="list-style-type: none"> • <i>Development of Western multilateralism.</i> • <i>Rejuvenation of Western economies and maintenance of their share of GDP.</i> • <i>Steady increases in energy price.</i> • <i>Framework for emission reductions and asset transfer from rich to poor countries via carbon credits.</i> 	
<p><i>The Odd Couple: Key Drivers</i></p> <ul style="list-style-type: none"> • <i>Development of “minilateralism” and protectionism on trade flows.</i> • <i>Steady increase in energy prices.</i> • <i>A common regulatory framework for emission reductions.</i> • <i>Continued internal polarisation of wealthy/poor</i> 	
<p><i>Roller Coaster: Key Drivers</i></p> <ul style="list-style-type: none"> • <i>Collapse of the dollar.</i> • <i>Bilateralism.</i> • <i>Increased volatility in energy prices.</i> • <i>Piecemeal/regionalised environmental regulation mechanisms.</i> 	

5 SCENARIO 1: SOUTH BY SOUTHEAST

5.1 OUTLINE NARRATIVE

5.1.1 Stagnating West, Resurgent East

The recession of 2008–2010 proves a significant event in driving the financial rebalancing away from Western powers towards the East. Hampered by billions of dollars of bad loans, a failure to reform the banking system significantly and huge pension deficits, Western economies

continue to stagnate. Even after the “official” end of the recession, growth remains slow, and significant stimulus expenditure ultimately fails to revitalise industrial sectors in developed countries. The West appears to be slipping into a Japan-style “lost decade” of low interest rates and low levels of return.

In contrast, many developing countries handle the fallout of the financial crisis with greater success. Cash-rich China increases its domestic investments, leveraging its significant foreign exchange reserves to buy foreign assets, provide direct financial assistance and make long-term deals with resource-rich countries (many in Africa) that lack liquidity. This move proves adroit given the sharp increase in the price of oil and energy prices, driven largely by increasing demand from emerging economies and also by the failure of energy technologies to deliver predicted efficiency gains.

Moreover, the burgeoning middle classes in China, India and South America prove able to maintain domestic levels of demand, promoting continued rapid economic growth in these areas. Their growing influence is not just economic but also cultural. The Indian Premier League in cricket, Bollywood films, tai chi and Chinese food all challenge the hegemony of Hollywood, burgers and the English Premier League in football.

5.1.2 Minilateralism

Though there are calls for a “New Bretton Woods” to regulate the global economy better, policymakers fail to agree on a set of globally transparent and effective rules to apply to a world of differing capitalisms and levels of financial and institutional development.

The result is that the idea of a single “international community” consisting of nation states is no longer a reality. Rather, a series of *de facto* trading blocs emerges. China has liberalised its economy by opening up to controlled forms of investment from “trusted partner states” such as Singapore, Malaysia and South Korea, and has signed a host of financial and trade agreements with much of the rest of Asia, Middle Eastern oil producers and Russia. These agreements, typically legitimated on the grounds of protecting these nations from “destabilising Western speculation”, emphasise many features of what commentators call the “Chinese model” of development, with tighter capital controls and greater state intervention across the economic cycle.

Meanwhile, in developed markets, ongoing economic stagnation leads to a resurgence of nationalism and growing calls for economic protectionism: “Buy Local” campaigns (many endorsed by local politicians) grow in popularity in Europe and the United States. Politicians and pundits watch the relative economic decline of Europe and the US, the “hollowing out” of the industrial base and the growth of China’s economic sphere of influence with a growing sense of alarm. One response is much closer ties between the trading blocs of the European Union (EU) and the North American Free Trade Agreement (NAFTA).

Low-income countries (LICs) lacking significant natural resources often find themselves left out of major trading blocs in this scenario. The African Union encourages the development of a regional trading bloc across the continent but this effort is only partially successful, because many resource-rich African countries tend to focus their diplomatic energies and calls for FDI on one or other of the regional trading blocs.

Power is more dispersed in this scenario. Though the United States remains the single most powerful actor, its relative strength is in decline and US leverage is more constrained.

Without any significant central coordination, regulation tends to be led at a regional level and varies significantly between economic jurisdictions. Capital and goods flows between the blocs are impeded, and financial-service firms must often compete as regional entities with separate balance sheets. There is little coordination between the different trading blocs, and the Bretton Woods institutions (World Bank, IMF) are increasingly marginalised.

5.1.3 A Piecemeal Approach to Climate Change

Globally, there is no overarching “deal” to reduce carbon emissions significantly. Instead, the approach to emission reductions is piecemeal and measures are often taken at a regional level. There is little coordination in terms of emission cuts between the major trading blocs, and pledged reductions are typically non-binding. LICs are generally excluded from any requirement to reduce CO₂ emissions until an emission threshold is reached.

5.1.4 Restrictive Communications

Communications and connectivity are more controlled and monitored by governments than they were in the first decade of this century, a trend that has been increasingly stealthy as data-surveillance techniques have become more sophisticated. One result is further to reduce political activism and the influence of non-governmental organisations (NGOs) in both the South and the North.

TABLE 11

South by Southeast: Focus and Flow Questions

What are the major patterns of production in this world?	Production in this world is much more regional in nature. Global flows of goods are reduced both by the establishment of global trading blocs with limited flows of goods and capital between them, and by sharp increases in energy prices, which in turn increase the cost of shipping.
What are the major patterns of consumption in this world?	Overall consumption falls in this world: there is less international movement of goods, and thus what is consumed tends to be more regional in nature.
How do people connect to one another in this world?	Connections intensify within economic blocs in this world, but tend to decrease outside of it. English declines as the global lingua franca, particularly in countries closely tied to China, and hence websites are typically read in local languages. There is considerably more state monitoring of electronic communications: the Internet proves not to be the democratising force that many had hoped for in the 1990s.
What are the institutional structures which support this world?	The Bretton Woods institutions, such as the World Bank and IMF, have significantly less influence in this scenario, and tend to be much more regional in nature.
Which groups are marginalised in this world?	Countries outside the major trading blocs are often marginalised in this world. While some LICs attract significant investment, typically in their resource sectors, many others exist outside the major trading blocs, with negative economic impacts. Western economic powers stagnate economically (and to a degree socially) in this world.
Which groups are heard?	Energy producers, leading countries in regional trading blocs, regional governance bodies.
Who gains from this world?	Gainers in this world include resource-rich countries and developing countries that emerge relatively unscathed from the recession.
Trends in non-oil commodity prices	Overall direction of the trend: <u>increasing</u> . Non-fuel commodity prices rise because of significant demand from China and India, and greater protectionism may also increase prices.
Trends in size and volume of aid flows	Overall direction of the trend: declining. Aid flows are falling overall because of the declining influence of the West, but offset somewhat as aid flows shift composition to non-traditional donors.

Trends in size and form of private capital flows	Overall direction of the trend: <u>mixed</u> Private capital flows are stagnating overall but there is a shift in composition as non-OECD capital flows increase at the same time as a decline/stagnation in OECD capital flows. Regional investment patterns become more pronounced—that is, Chinese FDI in ASEAN; South Africa in SADC; Russian in the Stan republics. Remittances from the European Union (EU) stagnate or fall but remittances from middle-income countries to LICs increase. Regional migration expands in “growth centres” such as Beijing and migration fluctuates with growth in those centres.
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5.2 IMPLICATIONS FOR POVERTY AND GROWTH

In the South by Southeast scenario, **fuel prices are rising steadily. Non-fuel commodity prices rise** because of significant demand from China and India, while greater protectionism may also increase prices. **Aid flows are falling** overall because of the declining influence of the West, but this is offset somewhat as the composition of aid flows shifts to non-traditional donors. **Private capital flows are stagnating overall** but there is a shift in composition as non-OECD capital flows increase while OECD capital flows decline/stagnate. Regional investment patterns become more pronounced—Chinese FDI in the Association of Southeast Asian Nations (ASEAN), South African in the Southern African Development Community (SADC), and Russian in the “Stan” republics. Remittances from the EU stagnate or fall, but remittances from middle-income countries to LICs increase. And regional migration expands in “growth centres” such as Beijing, fluctuating with growth in those centres.

TABLE 12

South by Southeast: Variables and Trends

Variable	Direction of variable	Trend details
Fuel prices	↑	Rising steadily.
Non-fuel commodity prices	↑	Higher prices because of robust BRIC growth.
Size of aid flows	↓	Falling because of declining influence of West. Shift to non-traditional donors.
Size of private capital flows	↓	Overall, stagnating. Fall in OECD private capital flows offset somewhat by rise in non-OECD private capital flows.

What does the South by Southeast scenario mean for different types of countries?

Table 14 provides an overview.

- For *fuel exporters* this is again a **potentially positive** scenario as rising fuel prices spur growth and public spending. Labour demand might benefit in a limited way from fuel-led growth and/or from robust demand from the BRIC countries, but be constrained by a lack of private capital. As a result, income poverty, education and health indicators have the potential to improve steadily.
- For *fuel importers*, things are more mixed. For *fuel importers with neither primary commodity export dependency nor aid dependency*, the outlook is **potentially positive** because robust growth in the BRIC countries fuels growth and labour demand. Again, as a result, income poverty, education and health indicators have the potential to improve steadily.

- For *fuel importers with commodity dependence but without aid dependency*, this is a **potentially positive** scenario because higher non-fuel commodity prices would support growth and healthier public budgets, and thus underpin income poverty reduction and improved education and health indicators.
- For *fuel importers with commodity dependence and aid dependency*, this scenario is potentially **more negative**. Although rising commodity prices would support growth and public spending, the impact of drastically declining aid budgets could have greatly influenced income poverty, education and health.

TABLE 13

South by Southeast: Medium-Term Prospects for Each Country Grouping

	Significant fuel exporter	Net fuel importer with neither aid or non-fuel commodity export dependency	Net fuel importer and commodity dependent	Fuel importer and commodity and aid dependent
	FUEL EXPS	FUEL IMP	FUEL IMP + COM	FUEL IMP + AID + COM
	Nigeria, South Africa, Sudan, Indonesia, Vietnam, and Yemen.	Bangladesh, India, Nepal, Pakistan, and China.	Kenya and Jamaica.	Ethiopia, Ghana, Malawi, Mozambique, Rwanda, Sierra Leone, Tanzania, Uganda, Zambia, Afghanistan, and Guyana.
Macroeconomic prospects				
Strong economic growth	GREEN	GREEN	GREEN	ORANGE
Strong labour demand	ORANGE	GREEN	GREEN	ORANGE/RED
Healthy public budgets	GREEN	GREEN	GREEN	ORANGE/RED
Poverty reduction prospects				
Reduction in the dollar-a-day poverty headcount ratio	GREEN	GREEN	GREEN	ORANGE
Improvement in primary school enrolment/completion ratios	GREEN	GREEN	GREEN	ORANGE/RED
Improvement in child and infant mortality rates	GREEN	GREEN	GREEN	ORANGE/RED

Code: GREEN = positive prospects; ORANGE = mixed prospects; RED = negative prospects.

6 SCENARIO 2: WESTERN (RE)INVENTION

6.1 OUTLINE NARRATIVE

6.1.1 US and EU Reinvention

Policies introduced to prevent the worst excesses of the recession prove successful in developed markets and many return to robust levels of economic growth by 2013, their economies proving resilient, flexible and adaptive. Financial institutions taken into public ownership during the depth of the financial crisis are quickly returned to the private sector with their capital ratios strengthened and their investment banking and securities operations

broadly intact. The US dollar and the euro have fallen against a basket of international currencies, increasing the competitiveness of exports, and US bond yields remain low and stable. Equity, oil and commodity prices have risen, creating challenges for exporters such as China, while stock, bond and currency prices in emerging markets have increased by even greater proportions.

The push for renewable energy in the EU and the United States slowly lowers their demand for fossil fuels, reducing trade surpluses with Russia and with Middle Eastern countries. Moreover, the greater focus on developing a more sustainable national infrastructure provides a further economic stimulus in developed economies, shifting from the consumption-led growth of the 1990s to investment-led growth.

The EU, meanwhile, reasserts the Lisbon goal of becoming a dynamic and competitive knowledge-based economy by 2020. The United States, emboldened by the success of its stimulus spending and re-assertive financial sector, appears ready to continue its leading role in developing and managing global financial architecture.

6.1.2 Challenges in Developing Countries

One significant outcome is that, while emerging economies continue to grow, the differences in the levels of growth are smaller than in previous decades. Infrastructure bottlenecks, resource shortages (including water shortages), as well as limits on the productive capacity of the land and an increase in the rate of desertification, all prove a drag on the pace of development, as does a global carbon trading system that penalises energy-inefficient production. The steady increase in the price of oil finally reduces the comparative advantage of export-oriented economies as the cost of shipping goods increases with the cost of oil, and there is a parallel decline in levels of FDI in emerging markets.

In China, there is social unrest following the succession of the fifth-generation Chinese leaders in 2012. While the immediate causes are clear (a slowing economy and alarm over the effects of environmental damage), the protesters are increasingly middle class, concerned to hold Chinese officials and politicians to account for how they spend tax revenues and for their political choices.

6.1.3 A New Variant of Multilateralism

The speed of contagion of the 2008–2009 global financial crisis concentrates the minds of many policymakers with regard to the interconnected nature of many global challenges. One of the most significant impacts of this is a reassessment of many assumptions about multilateralism. While the view among many experts had been that a multipolar world would lead to more representative international institutions, in reality the G20 proves too complex a structure for significant breakthroughs, as amply illustrated by the grindingly slow progress of the Copenhagen talks. Instead, many policymakers (and particularly those from the developed world) argue that, given the scale of the global financial and environmental challenges, effectiveness and efficiency are more important than pure representativeness, and negotiations tend to involve “The Quartet” of the EU, the United States, Japan and China.

One of the most significant impacts of this new multilateralism is a global agreement on a common framework for regulating carbon emissions, including some asset transfer from wealthy to poor countries by means of a carbon-credits system. Centred in London and New York, the trading system effectively provides a subsidy to LICs with small carbon emissions.

6.1.4 Green Technologies

Both the EU and the United States pour significant funds into the development of green technologies, with generous subsidies for research and innovation, while the steadily increasing oil price pushes the drive for energy independence up the agenda.

Green technologies lead many commentators to refer to the new world order as “the hourglass world”: LICs at the bottom benefit from asset transfer through carbon credits and the growth of new “green” manufacturing and energy generation, while developed countries at the top maintain their global share of GDP and their significant influence over global institutions. It is the developing and middle-income countries that are squeezed.

6.1.5 Storing up Future Problems?

Fundamental reform of the banking system remain elusive, leading some commentators to warn of the dangers of a second and more damaging financial crisis in the years to come. Concentration in banking is even greater than before the crisis, and attempts at a more coordinated response to risk prove unsuccessful.

Moreover, a new generation of leaders in middle-income countries increasingly came to question the failure to undertake fundamental reform of the global financial architecture, as well as their continuing relative lack of influence over major decisions. Brazilian Premier Heloísa Helena, an outspoken critic of the new arrangements, comments that the new system represents “the new face of colonialism”.

In LICs, such concerns are heard less often. Carbon trading has been a boon and there has been significant asset transfer through carbon credits, contributing to higher levels of economic growth and improved living conditions for many—though the poor do not always benefit from these transfers. Many LICs have high hopes for development strategies that involve “clean” manufacture and energy generation, “leapfrogging” countries with older and less efficient industrial bases. Finally, one of the most striking developments has been reverse technology transfer, from South to North, of more versatile and low-impact technologies—from passive building design to water treatment.

TABLE 14

Western Reinvention: Focus and Flow Questions

What are the major patterns of production in this world?	Patterns of manufacturing are shifting in this world. While the story for much of the 1990s and 2000s had been about the huge growth of manufacturing in China, the combination of a higher oil price and carbon trading reduces the comparative advantage of countries reliant on exports of low-value goods. Instead, some production is moved back to developed economies, while LICs are able to profit from the higher market in carbon through “leapfrog” development.
What are the major patterns of consumption in this world?	One of the major trends in consumption in this world is the increasing move towards more locally produced goods. The cost of transportation, driven both by a rising oil price and the cost of carbon, means that there is less comparative advantage in producing goods on one side of the world and transporting them to the other, and more production is based closer to consumers. This development provides a relative boost for economies (particularly Western economies) with large numbers of wealthy consumers, though the net effect is an absolute loss of welfare.
How do people connect to one another in this world?	The global ICT boom continues, albeit with a greater focus on the energy efficiency of servers and less waste in materials. The continuing spread of mobile technology in Africa has transformed information systems (and financial systems), and has improved the visibility of the poor areas in the North.

What are the institutional structures which support this world?	Institutional structures in this world are remarkably unchanged. The World Bank and IMF retain significant Western influence, while less influence is assigned to middle-income countries. Institutions that were able to act as conduits of carbon trading, especially the IMF, gain particularly in influence, while the development of an International Carbon Trading Exchange in London is also important.
Which groups are marginalised in this world?	Middle-income and developing countries are particularly marginalised in this world, as Western nations continue to dominate most global institutions. In the longer term, this marginalisation leads to significant resentment among rulers and populations, and thus the institutional structures in this scenario may not be stable in the longer term.
Which groups are heard?	Many “traditional” voices continue to be heard in this scenario: the World Bank, IMF and WTO all retain influence. Outcomes for LICs are also relatively positive, as they benefit from the asset transfer afforded by the global carbon trading system and from investment in new “green” technologies.
Who gains from this world?	LICs are one group that gains in this world. Asset transfer via carbon credits, plus significant investment in green technologies, provide a boost to economic growth, while the cost of carbon emissions reduces the comparative advantage of other primary manufacturers (such as China). Developed nations also gain, as they manage to maintain their share of GDP and their dominance of many international institutions.
Trends in non-oil commodity prices	Overall direction of the trend: <u>increasing</u> . The return of strong economic growth in the West (about 3–4%) drives an increase in non-oil commodity prices. One result of this is greater FDI into LICs with natural resources.
Trends in size and volume of aid flows	Overall direction of the trend: <u>declining</u> . Traditional aid flows, especially from Western powers, decline (albeit relatively slowly) as asset transfer through carbon trading comes to be viewed as an appropriate substitute. Note: a strong feature of this scenario is that trade and aid flows are increasingly difficult to disaggregate. While traditional flows are in decline, there is a combination of resource transfer to poorer countries via carbon trading and continued FDI (driven primarily by high-priced commodities).
Trends in size and form of private capital flows	Overall direction of the trend: <u>increasing</u> . Private capital flows to LICs grow in this world, as a result of high commodity prices and of asset transfer via carbon trading. In addition, some LICs are able to capitalise on the demand for low-carbon technologies, and to “leapfrog” countries with legacy dirty infrastructure (such as through significant investment in solar).

6.2 IMPLICATIONS FOR POVERTY AND GROWTH

Western Reinvention is a scenario in which trade and aid flows are increasingly difficult to disaggregate. While traditional flows are in decline, there is a combination of resource-transfer to poorer countries through carbon trading and continued FDI (driven mainly by high-priced commodities). Carbon credits tend to displace other flows of aid. As a result, there is an increase in influence for organisations that become involved in brokering those flows or buying/selling credits (such as a new “International Centre for Carbon Trading”, the EU, the African Union), and a decline in influence for organisations that are less involved (such as the IMF and bilateral donors).

In this scenario, **fuel prices are rising steadily. Non-fuel commodity prices rise**, driven by the return of strong economic growth in the West (about 3–4 per cent). **Aid flows rise dramatically** and their composition changes. Traditional aid flows are dwarfed as carbon/climate aid and trading come to be viewed as appropriate substitutes. And **private capital flows increase** as a result of high commodity prices and of asset transfer through carbon trading. In addition, some LICs are able to capitalise on the demand for low-carbon

technologies and to “leapfrog” countries with legacy dirty infrastructure (for example, by means of significant investment in solar energy). One result of this is greater FDI into LICs with natural resources.

TABLE 15

Western Reinvention: Variables and Trends

Variable	Direction of variable	Trend details
Fuel prices	↑	Rising steadily
Non-fuel commodity prices	↑	Higher prices because of robust global growth
Size of aid flows	↑	Rising significantly because of western recovery and climate change asset transfers
Size of private capital flows	↑	Rising because of western recovery

What does the Western Reinvention scenario mean for different types of countries? Table 16 provides a colour-coded quick reference. The table is a sea of green. This scenario is reminiscent of the period between the late 1990s and the 2008 global crisis. The only cloud on the horizon is the speed of fuel price rises.

For *fuel exporters* this is a potentially **positive scenario** because steadily rising fuel prices support growth and fund healthy public budgets. Labour demand is buoyant because of global growth and private capital flows. Hence income poverty, education and health indicators are all likely to improve.

For *fuel importers* things are **generally positive**, with a caveat related to the speed of fuel price rises.

For *fuel importers with neither primary commodity export dependency nor aid dependency*, this is largely a potentially **positive scenario** because growth is led by global recovery and private capital flows. Public budgets are healthy as a result, and thus income poverty, education and health all improve.

For *fuel importers with commodity dependence but without aid dependency*, this is also largely a potentially **positive scenario** because non-fuel commodity prices are rising, thereby supporting growth. Labour demand is buoyant because of global growth. Hence public budgets are healthy and income poverty, education and health all improve gradually.

For *fuel importers with commodity dependence and aid dependency*, again this is largely a potentially **benign scenario**, with the same caveat on fuel-price trends.

This group of countries benefit hugely from climate aid and trade, as well as from rising non-fuel commodity prices. Consequently growth is strong, as is labour demand, and public budgets are healthy. As a result there is real progress on income poverty, education and health indicators.

TABLE 16

Western Reinvention: Medium-Term Prospects for Each Country Grouping

	Significant fuel exporter	Net fuel importer with neither aid or non-fuel commodity export dependency	Net fuel importer and commodity dependent	Fuel importer and commodity and aid dependent
	FUEL EXPS	FUEL IMP	FUEL + COM	FUEL IMP + AID + COM
	Nigeria, South Africa, Sudan, Indonesia, Vietnam, and Yemen.	Bangladesh, India, Nepal, Pakistan, and China.	Kenya and Jamaica.	Ethiopia, Ghana, Malawi, Mozambique, Rwanda, Sierra Leone, Tanzania, Uganda, Zambia, Afghanistan, and Guyana.
Macroeconomic prospects				
Strong economic growth	GREEN	GREEN	GREEN	GREEN
Strong labour demand	GREEN	GREEN	GREEN	GREEN
Healthy public budgets	GREEN	GREEN	GREEN	GREEN
Poverty reduction prospects				
Reduction in the dollar-a-day poverty headcount ratio	GREEN	GREEN	GREEN	GREEN
Improvement in primary school enrolment/completion ratios	GREEN	GREEN	GREEN	GREEN
Improvement in child and infant mortality rates	GREEN	GREEN	GREEN	GREEN

Code: GREEN = positive prospects; ORANGE = mixed prospects; RED = negative prospects.

7 SCENARIO 3: THE ODD COUPLE

7.1 OUTLINE NARRATIVE

7.1.1 The Rise of “Chimerica”

In this scenario the fragile economic relationship between the United States and China, in which China’s trade and capital surpluses support America’s continuing debts, remains the house of cards on which the global economy is built. But the United States is vulnerable in the wake of the global financial crisis, and thus China takes the opportunity to turn its economic leverage into greater political and diplomatic influence.

Chinese corporations and diplomats are much more active on the world stage, not least in a continuing search to satisfy China’s increasing energy and food needs. These moves are not uncontroversial, especially because resource deals are often reached with autocratic or violent states. But international (and American) reaction to these moves is more muted than it has been in the past: US politicians realise the extent to which China has continued to underpin the dollar, while Chinese policymakers recognise the importance of maintaining the dollar’s value and hence their reserves.

The big gain for China is its increasing power and influence over international organisations, gained with American support. The 2016 agreement on a new constitution for the IMF, which provides emerging economies with significantly more power to influence the direction of the Fund (along with the non-too-subtle symbolism of building a new headquarters in Hong Kong), is simply the most visible of a growing number of reforms to the international system geared to rebalancing representativeness towards emerging economies. At the same time, Chinese investment in US corporations continues to grow; the acquisition of one of the big three US carmakers in 2015 is seen as a decisive moment.

The reaction to these shifts in developed economies is muted. Staggering under the weight of significant banking losses and refusing to accept that their aggressive reflationary policies and focus on industry-led manufacturing could once again prove counterproductive, their recovery from the recession is slower than many had hoped. Many find it difficult to argue that they continue to deserve additional voting rights. By the end of the decade, even the most hubristic and nationalist of American commentators has to admit that America's period as the sole superpower seems to be over, the country's freedom of movement being increasingly restrained by the closeness of its ties with China.

Closeness with China, however, increases the distance between the United States and Europe, with ever widening trans-Atlantic splits on a broad range of issues including trade policy, intellectual property rights, defence and human rights.

Driven by steadily rising energy costs and slower demand, the level of global trade flows fails to reach the heights of 2005/6, consistently remaining at about 15–20 per cent below their peak. Under pressure from domestic voters, many politicians in developed countries are tempted to re-introduce old trade barriers, often under the rubric of environmental legislation.

7.1.2 A Framework for Tackling Emissions

In 2010 an agreement is reached on a common regulatory framework for significantly cutting carbon emissions by 2050, the result of huge diplomatic efforts by players from a wide range of countries. Though the deal is seen as a triumph by those who were party to the tough negotiations preceding it, campaigners and activists are quick to point out a number of weaknesses. Foremost among these is that neither the United States nor China fully subscribe to the common agreement on emissions reductions. Rather, both choose to implement carbon cuts *outside* of the internationally agreed framework.

One unexpected outcome of this agreement's partial nature is that NGOs, especially in Europe and Latin America, are energised by the extent of the agreement reached in the months after Copenhagen, and by the fact that the United States and China go their own way. American and Chinese corporations find themselves boycotted elsewhere in the world because of their sustainability policies or their poor labour conditions.

For LICs, the picture is mixed. The relative recovery of global prosperity means that levels of international donations to LICs recover. China's increasing role in the IMF leads to a new-found pragmatism about approaches to structural change in countries that find themselves in difficulties, while the World Trade Organisation (WTO) tends to concentrate on the more blatant cases of trade dumping. The World Bank finds itself caught between competing models of development, and is all but paralysed as a result. At the same time, because of the

extent of the agreement on climate change, NGOs are effective in aligning funds from European governments and private foundations with sustainability projects that have good outcomes for development.

7.1.3 Storing up Future Trouble

By 2020, many commentators are predicting future instability. The US-China partnership has held for a decade, but questions are increasingly being asked about the extent to which Chinese creditors are willing (or indeed able) to continue to buy American debt and, in effect, support the dollar. In China, many say that the country's prominence in important global organisations has been earned by its economic performance, and some argue that China needs more concessions from the United States in return for continuing to underwrite the US economy. More assertive members of the Politburo are reported to be saying—in a coded way, of course—that there is only a limited future in being America's bagman, or (depending on the translator) its butler.

TABLE 17

The Odd Couple: Focus and Flow Questions

What are the major patterns of production in this world?	More green technologies produced. More trade within regions than across regions.
What are the major patterns of consumption in this world?	More efficient consumption of all goods and services, with penalties for breaching stipulated standards.
How do people connect to one another in this world?	Using online conferencing facilities mainly, which are a standard feature of any large or small organisation.
What are the institutional structures which support this world?	National governments, regional specialist trade and economic committees, US congressional political system, continuing presence of the International Monetary Fund and climate change management institutions put in place after Copenhagen.
Which groups are marginalised in this world?	World Bank.
Which groups are heard?	China, United States, NGOs.
Who gains from this world?	Regional governance institutions, national governments/states, regional and national NGOs.
Trends in non-oil commodity prices	Overall direction of the trend: <u>declining</u> . Food, other non-oil commodities fall in price because of reduced volumes of trade.
Trends in size and volume of aid flows	Overall direction of the trend: <u>decline of traditional aid</u> . Aid is tied to trade deals, foreign policy, and technological assistance to go green. Volume of aid is down for LICs without natural resources or carbon quotas to sell.
Trends in size and form of private capital flows	Overall direction of the trend: <u>declining</u> . With overall trade volumes down, capital flows will also be lower. But greater regionalism also boosts regional investment, which maintains the level of private capital flows <i>within</i> regions.

7.2 IMPLICATIONS FOR POVERTY AND GROWTH

In the “Odd Couple” scenario, **fuel prices rise steadily** and **non-fuel commodity prices** stagnate because of the stagnation of growth and trade volume, as well as sluggish recovery (commodity price declines perhaps being slowed by protectionism). **Aid flows fall and their composition changes** because of a lack of multilateralism. Traditional aid in particular declines, but non-traditional aid increases. There are changes in the way aid is measured

and defined: it is more typically tied to trade and investment. But if climate-change aid is a result of a climate agreement, this could dwarf other flows and thus reverse the overall trend on aid. **Private capital flows are static/declining and their composition is changing** (as a result of protectionism). If trade volumes fall, capital flows will probably fall too, though not necessarily. Increased regional investment could be more significant.

TABLE 18

Odd Couple: Variables and Trends

Variable	Direction of variable	Trend details
Fuel prices	↑	Steadily rising.
Non-fuel commodity prices	↓	Stagnation because of growth and trade volume stagnation, as well as sluggish recovery (with commodity price declines perhaps slowed by protectionism).
Size of aid flows	↓	Declining because of lack of multilateralism.
Size of private capital flows	↓	Falling as a result of protectionism.

What does the “Odd Couple” scenario mean for different types of countries?

Table 19 summarises the implications of the scenario for the different country-groupings across macroeconomic and poverty-reduction indicators, using the colour coding explained above.

For *fuel exporters* such as Nigeria, South Africa, Sudan, Indonesia, Vietnam and Yemen, this is a world of **good prospects**: good growth prospects because of fuel-price rises; labour-demand prospects are weak because growth is fuel-led with stagnating commodity prices, aid, and private capital inflows. Assuming the fuel revenue is used productively, public budgets should be healthy (one might question that food prices may rise because of fuel-price rises, which will have an impact on poverty through households that are net food consumers: the urban poor and the rural poor who have little or no land). These impacts may be mitigated by creating fiscal space for public expenditures, which could also maintain education and health budgets and secure some progress on the education and health MDGs. The key policy issue is whether the fuel revenues are channelled into social spending.

For *fuel importers*, things are more mixed.

For *fuel importers with neither primary commodity export dependency nor aid dependency*, such as Bangladesh, India, Nepal, Pakistan and China, this scenario is potentially **not too bad** because, although the fuel-price rise slows growth, there may be better prospects for non-commodity exports (manufactures and services) from these countries, as well as other sources of finance. Thus growth, labour demand and public budgets may not be impacted as much as in other groupings. Because of this, moreover, income, education and health poverty may not come under such significant pressure. This, however, depends on the impact of food-price rises on consumption poverty and health.

TABLE 19

Summary of Odd Couple and Medium-Term Prospects for Each Country Grouping

	Significant fuel exporter	Net fuel importer with neither aid or non-fuel commodity export dependency	Net fuel importer and commodity dependent	Fuel importer and commodity and aid dependent
	FUEL EXPS	FUEL IMP	FUEL + COM	FUEL IMP + AID + COM
	Nigeria, South Africa, Sudan, Indonesia, Vietnam, and Yemen	Bangladesh, India, Nepal, Pakistan, and China.	Kenya and Jamaica	Ethiopia, Ghana, Malawi, Mozambique, Rwanda, Sierra Leone, Tanzania, Uganda, Zambia, Afghanistan, and Guyana.
Macroeconomic prospects				
Strong economic growth	GREEN	ORANGE	RED	RED
Strong labour demand	GREEN/ORANGE	ORANGE	RED	RED
Healthy public budgets	GREEN/ORANGE	ORANGE	RED	RED
Poverty reduction prospects				
Reduction in the dollar-a-day poverty headcount ratio	GREEN/ORANGE	ORANGE	RED	RED
Improvement in primary school enrolment/completion ratios	GREEN/ORANGE	ORANGE	RED	RED
Improvement in child and infant mortality rates	GREEN/ORANGE	ORANGE	RED	RED

Code: GREEN = positive prospects; ORANGE = mixed prospects; RED = negative prospects.

For fuel importers with commodity dependence and without aid dependency, such as Kenya and Jamaica, there is potentially a “**double whammy**” in fuel and commodity prices, and thus growth, labour demand and public budgets are all likely to stagnate while food prices rise. These countries may become aid-dependent as a result. Income poverty is hit by lower growth, and education and health are under pressure because of the loss of fiscal space.

Finally, for fuel importers with commodity dependence and aid dependency, such as Ethiopia, Ghana, Malawi, Mozambique, Rwanda, Sierra Leone, Tanzania, Uganda, Zambia, Afghanistan and Guyana, there is potentially a “**triple whammy**” of fuel prices rising, commodity prices stagnating, and declining aid. Income poverty may be severely impacted by lower growth, and education and health may come under pressure because of the loss of fiscal space.

8 SCENARIO IV: ROLLER COASTER

8.1 OUTLINE NARRATIVE

8.1.1 A Financially Unstable World

In the Roller Coaster scenario, the world moves away from the dollar as a reserve currency. After a period of financial instability, the euro replaces the dollar and the economic and political stability that this creates rumbles on, becoming the overwhelming feature of the scenario.

The **headlines** for LICs are poor: none of the actors is looking out for the interests of LICs, and the overall level of aid declines. With the decline of multilateral organisations and of regional groups, there are no political processes into which countries can be “co-opted” to support a development agenda.

The **catalyst** is a rise in the level of hostility towards the United States among younger Muslims in the Gulf. Faced with greater militancy (and sympathy), Yemen decides to start migrating oil contracts to euro-pricing as the opportunity arises. Iran begins to follow suit. The US sabre-rattling that follows makes the decision far more visible than it would otherwise have been. Attempts by governments to shore up the dollar’s decline are washed away by the wall of speculative money that bets against the dollar, and the currency plummets. Suddenly the United States, long used to the domestic financial benefits of being the world’s reserve currency, is living on empty.

Shifts in reserve currencies are turbulent affairs. They are protracted and disruptive. One early price of instability is a quick contraction of the influence of multilateral institutions, as countries turn to traditional allies and trading partners to help them through the crisis. Bilateral and other local regional arrangements rapidly replace larger-scale regional and multilateral arrangements in the face of economic contraction.

8.1.2 Decline in the Dollar, Rise in the Euro

The most immediate casualty is the United States, which suffers heavy exchange-rate decline despite the best efforts of economic allies, especially in Asia, to support it. Many countries that were surprised by the switch from the dollar still have substantial dollar holdings and have a strategic interest in ensuring that the currency stabilises. American exports are more competitive than ever as a result of the currency decline. And in a world where large countries are now net food importers, America’s grainbelt is a strategic asset. Nonetheless, the shock to the United States is psychological as well as economic; its politics turns in on itself.

Despite longstanding calls for a new reserve currency based on a basket of global currencies, the speed of the transition leaves no opportunity for this. The euro is the only currency with a large enough economic base to take the weight. One of the advantages of the euro’s new-found seigniorage is that it can reflate the struggling EU economies. Frankfurt, as a result, has become an increasingly important financial services centre and has been bolstered by the decision to move the European Bank of Reconstruction and Development to the city, and into the Eurozone, from London. It is surely only a matter of time before the United Kingdom decides it should join.

One medium-term non-economic consequence is the US withdrawal, for budget reasons, from many of its former military bases, and a general reduction in the capability of the North Atlantic Treaty Organisation (NATO). In a world of increasing tensions, skirmishes tend to flare up more quickly and persist for longer. There is recurrent border fighting in the Himalayas between India and China, partly caused by disputes over the mountains’ increasingly important water resources.

8.1.3 International Institutions Lose Influence

International institutions traditionally regarded as sympathetic to the United States have become less influential. The World Bank, marginal at the start of the crisis, is more marginal

afterwards. The WTO and associated bodies have found their judgements on trade disputes ignored and unenforceable. The IMF gained some credibility by issuing special drawing rights to ease the global economy during the transition from the dollar, but is regarded with suspicion. Russia, for example, now a global creditor because of the size of its energy reserves, has not forgiven the Fund for the disastrous policy conditions it attached to the loans of the 1990s, while the Middle Eastern states have long been suspicious of its close links to Washington's policymakers. Its proposed move in 2022 (Singapore and Abu Dhabi are candidates) is seen by some as a last throw of the dice to make the institution more credible. In the Arab world, the question of how an Islamic Monetary Fund might be designed is active.

Good international relationships are not helped by the unreliability of electronic communications. In a volatile economic world, volumes of spam and electronic fraud and theft have soared, to the point that it is unsafe to use the Internet without encryption. Simpler applications for this are emerging, but the days of sending a quick email or logging on, unsecured, to a social networking site seem distant. One of the Asian "Stan" republics, widely regarded as a centre for electronic crime, finds its electronic links to the rest of the world severed, probably by the Russians, in a move that is simultaneously decried and applauded.

In a world where the significant economic players have a strong interest in oil production, environmental issues are less prominent and harder to articulate, since global institutions are fragmented and ever more lacking in influence. The main factor behind the reduction of carbon emissions is simply the lower levels of economic activity.

At the same time, however, the instability of oil prices in uneven markets has its own cost, since it makes it difficult for businesses and national finance departments to plan. Renewables start to acquire a "security premium" against oil, which increases investment in their development. As economic instability continues, governments find themselves squeezed between their poor financial position and increasingly vociferous populist domestic pressure to take action to improve economic performance. Some have already ignored the advice of their economists and have simply started to print money. Where there is spare capacity, the inflationary risks are not great. And even if there is inflation, the winners outnumber the losers.

For the LICs, aid flows generally decline, although there are some increases in aid tied to political and diplomatic objectives. Outcomes for LICs without natural resources are poor.

TABLE 20

Roller Coaster: Focus and Flow Questions

What are the major patterns of production in this world?	Production becomes more local (and there is less of it) as the global economy becomes more fragmented and energy prices become more volatile.
What are the major patterns of consumption in this world?	Consumption falls in general. There is less international trade, so consumption tends to be of more regional goods, or of goods produced by traditional trading partners (e.g., Britain buys bananas from the "old Empire").
How do people connect to one another in this world?	Use of electronic connections declines because of increasing crime and identity theft in the electronic sphere. Providers that can offer secure connections and gateways prosper (e.g., mobile operators) but the cost of such provision is higher than internet-based systems, so communications become more expensive as a share of income—also leading to reductions.

→

What are the institutional structures which support this world?	Institutions generally are in retreat. There are few credible global organisations. Instead, this world seems like a return to a form of mercantilism in which governments promote their own commercial interests, backed with judicious application of military power as necessary. The EU benefits because the euro has become the reserve currency and because it manages to maintain its large internal market.
Which groups are marginalised in this world?	The United States; environmental activists; internationalists.
Which groups are heard?	Energy producers; Muslims; the EU.
Who gains in this world?	Gainers include: the Eurozone countries; economic elites in resource-rich countries. Islamic social movements become more influential; pirates (and mercenaries) become more widespread.
Trends in non-oil commodity prices	Overall direction of the trend: <u>declining</u> . This is a scenario of decline and instability, with obvious consequences for economic performance and trading relationships (both contract). Hence the impact on industrial commodities will be that prices fall (declining demand); the impact on commodities that represent stores of value (gold, diamonds) are likely to rise, especially gold; instability over the reserve currency likely to migrate towards the euro no matter how well organised Europe's bankers are. Lower trade will probably exacerbate food shortages where they have started (food reserves are likely to represent political and diplomatic leverage) and hence prices will probably be higher.
Trends in size and volume of aid flows	Overall direction of the trend: <u>declining</u> . Increasing bilateralism, probable recession and increased global mistrust are likely to mean that multilateral aid flows fall. There may be an increase in bilateral flows, especially where these are linked to diplomatic, strategic or political objectives. It is also likely that there will still be multi-millionaires in this world, although they may be more anxious than at present. Hence we expect aid flows from private foundations, but these will also fall. There may be an increase in regional aid (e.g., resource winners helping neighbours).
Trends in size and form of private capital flows	Overall direction of the trend: <u>mixed</u> . This is complex, but it seems unlikely there will be an early rebalancing of global capital reserves, and energy exporters will be the big winners. Hence their reserves will be looking for a home, almost certainly in Europe (the only location apart from the United States with the scale and robustness). China's investments will depend on how well it has played the dollar decline and the extent to which it uses resources to improve internal infrastructure and demand. The euro question: will it use new-found reserve status to spend without responsibility?

8.2 IMPLICATIONS FOR POVERTY AND GROWTH

The “Roller Coaster” is a scenario of decline and instability, with clear consequences for economic performance and trading relationships. Fuel prices are **volatile and rising**. **Non-fuel commodity prices are falling** because of declining demand and recession. However, the impact on commodities, which represent stores of value (gold, diamonds) usually rise in these periods. Prices for food and water increase as less trade exacerbates food shortages. **Aid flows decline** because of recession, and global mistrust increases. There may be an increase in some bilateral flows, especially where they are linked to diplomatic, strategic or political objectives. Aid flows from foundations also fall. Regional aid may become more important. **Private capital flows decline overall**, particularly from OECD countries, because of recession, which might be partially offset by non-OECD flows as China's investments take advantage of non-fuel commodity price trends.

TABLE 21

Roller Coaster: Variables and Trends

Variable	Direction of variable	Trend details
Fuel prices	↑	Volatile and rising significantly.
Non-fuel commodity prices	↓	Lower prices because of global recession.
Size of aid flows	↓	Fall because of global recession impacts on aid budgets in traditional and non-traditional donors.
Size of private capital flows	↓	Fall because of global recession and volatility prevents investments.

What does the Roller Coaster scenario mean for different types of countries? Table 22 provides a colour-coded quick reference. For *fuel exporters*, this is potentially a world of **good prospects** because of rising (albeit volatile) fuel prices. Growth will be spurred by the fuel-price rise (though price volatility may lead to stop-start growth). Labour-demand prospects are more mixed if growth is fuel-led and the prolonged global recession leads to depressed export markets for manufacturing and services. The outlook for public budgets is good, but again it could be a volatile picture if fuel prices rise erratically. The prospects for income-poverty reduction are mixed if growth is fuel price-led, but health and education budgets could be expanded as a result of oil revenues.

For *fuel importers* things are **much less positive**.

For *fuel importers with neither primary commodity export dependency nor aid dependency*, the high fuel prices will dampen growth, which is unlikely to be offset by other export markets because of a global recession. Hence labour demand will be weak and public budgets under pressure, probably leading to potentially **adverse impacts** on income poverty, education and health indicators.

For *fuel importers with commodity dependence but without aid dependency*, things are potentially **worse** because of the stagnation of non-fuel commodity prices as a result of the recession, in addition to the fuel-price rise. Both will dampen growth and labour demand, as well as depress fiscal space, potentially leading to adverse impacts on income poverty, education and health indicators.

For *fuel importers with commodity dependence and aid dependency*, this scenario is potentially even worse than for the grouping above. The triple shock of fuel price rises, declining non-fuel commodity prices and falling aid budgets overall (even with rises in non-traditional aid) make this scenario **particularly bleak** for this group of countries.

TABLE 22

Roller Coaster: Medium-Term Prospects for Each Country Grouping

	Significant fuel exporter	Net fuel importer with neither aid or non-fuel commodity export dependency	Net fuel importer and commodity dependent	Fuel importer and commodity and aid dependent
	FUEL EXPS	FUEL IMP	FUEL + COM	FUEL IMP + AID + COM
	Nigeria, South Africa, Sudan, Indonesia, Vietnam, and Yemen.	Bangladesh, India, Nepal, Pakistan, and China.	Kenya and Jamaica	Ethiopia, Ghana, Malawi, Mozambique, Rwanda, Sierra Leone, Tanzania, Uganda, Zambia, Afghanistan, and Guyana.
Macroeconomic prospects				
Strong economic growth	GREEN/ORANGE	RED	RED	RED
Strong labour demand	GREEN/ORANGE	RED	RED	RED
Healthy public budgets	GREEN/ORANGE	RED	RED	RED
Poverty reduction prospects				
Reduction in the dollar-a-day poverty headcount ratio	GREEN/ORANGE	RED	RED	RED
Improvement in primary school enrolment/completion ratios	GREEN/ORANGE	RED	RED	RED
Improvement in child and infant mortality rates	GREEN/ORANGE	RED	RED	RED

Code: GREEN = positive prospects; ORANGE = mixed prospects; RED = negative prospects.

9 CONCLUSIONS

One of the striking implications from the country typologies is the extent to which developing countries mainly fall into one of two types. On the one hand, there is a small group of net fuel exporters; on the other, there is a much larger group of fuel importers that are also primary-commodity export-dependent and aid-dependent. (Kenya and Jamaica sit between these, as commodity-dependent but not aid-dependent.)

Because one of the strong outcomes from the initial drivers scan was that energy prices were likely to rise over the decade (the uncertainty was more related to the patterns associated with this increase), these two groups have strongly divergent futures and the scenarios are strongly patterned.

The point of scenario work, however, is not just to understand and interpret the world and its future uncertainties. It is designed to create the space in which it is possible to adapt and respond. Thus each group has very different implications for policymakers and aid organisations.

9.1 NET FUEL EXPORTERS

At a macro level, future outcomes for the oil-producing countries are positive in all scenarios except Roller Coaster, where they could be unstable. Fuel-exporting countries generally

produce good outcomes at the level of the MDGs in the model, although there are risks in the distribution of benefits, and governance becomes even more important for these countries.

It should be remembered, however, that the scenarios here are primarily *economic* in nature; while fuel exports will create additional income, questions remain about how that additional income is distributed. Much work has been done on the dangers and upheavals faced by countries (in Africa and further afield) that suddenly discover hitherto unidentified natural resources.

Hence the need here is for governance and institutional frameworks that are sufficiently robust to ensure that the revenues are distributed effectively. One can imagine that NGOs will continue to be active in this regard, although their leverage may be limited. Only in one of the four scenarios can they mobilise governments or corporations that are likely to be concerned about governance, and even then the demand for oil and the enthusiasm for profits may overwhelm the better instincts of managers or shareholders. In this case, an additional focus on institutional capacity building from the international development community will also become increasingly important.

9.2 NET FUEL IMPORTERS

In sharp contrast, outcomes for net fuel importers are much more negative. Outcomes are particularly poor for countries such as Ethiopia, Sierra Leone, Malawi and Mozambique, which are net fuel importers and are also dependent on both primary commodity exports and aid.

For these countries, concentration on the delivery of essential aid to the poorest will continue to be important, as will institutional capacity building. Over the longer term, a key challenge for many of these countries will be the development (not surprisingly) of a more diversified economy, away from reliance on primary commodity exports.

More broadly, the fuel importers have a chance to escape from their oil dependency through a form of African “green deal”. Reading the scenarios, there is a “leapfrogging” opportunity in which these countries can develop skills and technologies to build their own energy infrastructure, just at the point where the output/cost ratio of solar photovoltaic starts to become competitive. Given the paucity of their own resources, this will require external investment from aid partners—investment that is not focused solely on poverty reduction, but more broadly on promoting shovel-ready projects that bring affordable and environmentally sustainable energy to African communities.

Outcomes for countries that are net fuel importers, and that have neither commodity export dependency nor aid dependency (a group that includes both India and China) are more benign. This is partly because robust growth in the BRIC countries spurs export growth and labour demand, and because of the better prospects for non-commodity exports such as finished goods and services.

For these countries, the challenge is related more to promoting continued economic diversification and development in order to foster continued growth. In particular, countries in this category continue to have relatively high levels of energy intensity (that is, they consume a lot of energy per unit of GDP produced), which is a significant challenge as we move into an environment where the cost of energy is rising.

ANNEX

FUTURE-PROOFING THE MDGS: WHAT ARE THE CRITICAL UNCERTAINTIES FOR 2010–2015 AND BEYOND?

Andy Sumner*, Tom Mitchell* and Thom Tanner*

1 THE IMPACT OF THE ECONOMIC CRISIS ON THE MDGS

As global economic recovery begins, the short- and medium-term impacts of the crisis on the MDGs are beginning to become clearer. There were large falls in exports, FDI and remittances, but these declines were very variable and not all the expected impacts materialised.

TABLE A1

Macroeconomic Impacts of the Crisis

Emerging and developing economies	2007	2008	2009	2010
GDP, constant prices (annual % change)	8.323	6.139	2.385	6.346
Investment as % GDP	29.216	29.733	29.044	30.215
Gross national savings as % GDP	33.49	33.589	31.04	32.509
Export volume of goods and services (annual % change)	9.737	4.023	-8.163	8.304
Current account balance % GDP	4.24	3.742	1.799	2.078
Private financial flows, net (US\$ bn)	689.345	179.193	180.156	209.794
Official flows, net (US\$ bn)	-98.437	-116.92	80.209	-2.256
Change in reserves (US\$ bn)	-1,226.03	-666.561	-538.768	-632.36
External debt, total debt service, interest (US\$ bn)	165.289	164.405	141.847	134.636
Sub-Saharan Africa				
GDP, constant prices (annual % change)	6.932	5.541	2.112	4.716
Investment as % GDP	21.489	22.015	21.716	22.605
Gross national savings as % GDP	22.648	23.311	20.288	21.572
Export volume of goods and services (annual % change)	7.301	0.264	-7.022	7.004
Current account balance % GDP	1.235	0.918	-2.05	-1.681
Private financial flows, net (US\$ bn)	26.343	24.822	18.166	40.551
Official flows, net (US\$ bn)	-3.776	-3.33	6.199	7.918
Change in reserves (US\$ bn)	-29.195	-17.099	8.193	-12.793
External debt, total debt service, interest (US\$ bn)	7.65	8.201	8.669	9.11

Source: IMF WEO database (April 2010) at:

<<http://www.imf.org/external/pubs/ft/weo/2009/02/weodata/index.aspx>>.

* Institute of Development Studies.

Growth slowed but there were few outright recessions. The impacts were highly nuanced by country. Recovery is clear enough globally and regionally in Asia and Africa, but the regional average masks major differences across regions.

Given that macroeconomic impacts and recovery have been highly variable, we can expect poverty estimates to be similarly so. Precise estimates of MDG poverty impacts to date have been wide-ranging and have largely focused on growth elasticity estimations or research from previous crises (given the time-lags in real data collection). There is much data at the country level, and in May–June 2010 the UN Global Impact and Vulnerability Alert System (GIVAS) will start reporting new data based on numerous UN agencies' contributions.

The most recent global estimates (March 2010), based on the latest growth data, revise earlier estimates and are relevant for MDG 1, given that an additional 50 million people were estimated to be living on less than US\$1.25/day in 2009 (or 57 million on less than US\$2/day) and an extra 15 million in 2010 (19 million on less than US\$2/day). This creates a cumulative impact of 64 million on less than US\$1.25 (or 76 million on less than US\$2/day) (Ravallion and Chen, 2010).

In terms of MDG 1 (nutrition), MDGs 2 and 3 (education) and MDGs 4, 5, 6 (health), there are several conclusions from previous crises (see Table A2): infant and under-five mortality are significantly worse during economic downturns; completion rates in primary education, especially for girls, also deteriorate rapidly during economic downturns; and female enrolment in primary and secondary education drops during contraction (Conceição et al., 2009; Conceição Namsuk Kim and Mendoza, 2009).

TABLE A2

Human Development and Gender Outcomes during Crises in Sub-Saharan Africa
(Sample Averages during Growth Deceleration versus Otherwise)

Indicator	During deceleration	Otherwise	Significance
Life expectancy female (years)	52.26	55.02	**
Life expectancy male years	48.87	51.86	**
Life expectancy total years	50.52	53.40	**
Infant mortality rate	106.62	85.61	**
Under 5 mortality rate	161.3	139.40	*
Primary completion females	33.83	50.37	**
Primary completion males	48.44	56.55	*
Primary completion total	40.95	53.55	**
Ratio female: male in primary enrolment	77.86	87.27	**
**Ratio female: male in secondary enrolment	63.57	79.88	**
Ratio female: male in tertiary enrolment	32.52	62.31	**

Source: Conceição et al. (2009); Conceição and Namsuk Kim (2009).

Notes: ** difference significant at 1 per cent level; * difference significant at 5 per cent level; under-five mortality average rises to 172 when three countries in conflict are included.

Impacts on infant mortality (MDG 4) have also been estimated on the basis of growth declarations. The results range from 30,000–50,000 more infant deaths per year in Africa (Friedman and Schady, 2009) to 200,000–400,000 more infant deaths globally (Friedman and Schady, 2009; World Bank, February 2009; World Bank, August 2009). A gendered aspect was also noted in the estimation of an additional 1.5 male infant deaths per 1,000 live births

and 7.4 female infant deaths per 1,000 live births per 1 per cent growth deceleration (Baird et al., 2009; World Bank, February 2009).

Indeed, much research on previous crises suggests that they have highly gendered impacts: women are more likely to lose employment than men because women dominate export sectors for garments, electronics and agricultural exports (Buvinic, 2009). Furthermore, girls are more likely to drop out of school in both low- and middle-income countries (Skoufias and Parker, 2006; Schady, 2004) and, as noted above, the infant mortality rates for girls exceed those for boys during a downturn (Baird et al., 2007). Given that the key focus of many MDGs is child poverty, a particular concern is that the poverty impacts of the crisis have long-term effects on children (and future generations) via lesser height, delayed school enrolment and reduced grade completion (Alderman et al., 2006; Yamano et al., 2005). There is also cross-country evidence of impacts of severe psychological distress and mental health (for example, Das, 2008), and of elevated levels of community and intra-household conflict during and after a crisis (for example, Friedman and Thomas, 2007; World Bank, 2008). Cross-country, rapid-appraisal qualitative research during the crisis (for example, Hossain et al., 2009; World Bank, 2009) has also uncovered such non-material impacts.

As regards recovery and the fiscal outlook, there are various MDG concerns related to the speed of the recovery, fiscal space and effects on public expenditure in general, social spending in particular, and debt service, which differ considerably across countries. Global growth is clear enough, judging by the estimates of the IMF *World Economic Outlook* (February 2010), and recovery is very much V-shaped in developing countries (see Table A1). However, there was a distinct slowdown in the pace of global recovery towards the end of 2009 (judging by global trade data, for example) and much depends on when the monetary and fiscal stimulus is withdrawn. In short, sustained recovery is not guaranteed.

There is further evidence that the crisis might have longer-lasting MDG impacts into 2010–2015 via social spending, albeit differently across countries (see Tables A5 and A6).

TABLE A3

Public Expenditure Indicators/Projections, 2007-2010, Selected Sub-Saharan African Countries
(fragile states bolded: green = positive; red = negative)

	Public expenditure (in % of GDP)				Government revenues (in % of GDP)			
	2007	2008	2009	2010	2007	2008	2009	2010
Ethiopia	17.07	14.48	13.27	15.48	14.11	11.94	11.23	13.43
Ghana	37.34	41.03	36.56	37.39	28.85	27.47	29.86	29.15
Kenya	22.05	23.09	24.35	26.61	19.78	20.49	20.54	21.43
Malawi	27.11	30.09	31.25	28.81	28.23	27.49	26.17	24.94
Mozambique	23.39	24.43	25.61	29.63	19.87	21.87	23.33	24.58
Nigeria	24.11	25.04	28.42	25.46	30.35	24.14	32.01	18.13
Sudan	21.26	20.08	22.56	15.75	17.66	15.92	21.16	12.61
Uganda	21.36	21.08	22.93	26.97	17.62	21.07	18.37	21.92
Zambia	15.24	15.60	14.70	15.78	15.30	14.67	13.00	13.64
Zambia	19.82	20.38	20.57	20.56	36.84	19.32	19.30	18.45

Source: IMF WEO Database.

TABLE A4

Trends in Debt Service in Selected African Countries

(US\$ m. Red = significant rise; green = static or fall; fragile states bolded)

	2007	2008	2009	2010
Ethiopia	0.14	0.07	0.09	0.31
Ghana	0.18	0.33	0.58	0.45
Kenya	0.39	0.39	0.38	0.48
Malawi	0.02	0.01	0.02	0.02
Mozambique	1.31	0.68	0.82	0.83
Nigeria	1.27	0.60	0.63	0.54
Sudan	0.17	0.33	0.49	0.67
Uganda	0.08	0.08	0.07	0.10
Zambia	0.07	0.10	0.11	0.13

Source: IMF WEO Database.

TABLE A5

Estimated Impacts on Total Education Spending, 2008 and 2009, Selected Countries

(red = significant decline; green = significant rise; fragile states bolded)

	% of GDP		% of total budget	
	2008	2009	2008	2009
Burkina Faso	2.3	4.2	9.4	11.8
Benin	5	4.6	18.8	17.9
Ghana	9	5.9	21.8	17.4
Kenya	5	5	17.2	17.4
Mozambique	6.3	7.1	18.5	19.3
Rwanda	3.9	4.4	16.6	16.4
Sierra Leone	1.2	1.4	8	11.3
Tanzania	5.6	5.6	19.7	18.3
Uganda	2.9	3	15.3	15.3
Zambia	4.1	4.4	15.4	17.2

Source: Martin and Kyrili (2009).

TABLE A6

Estimates of Impacts on Total Health Spending, 2008 and 2009, Selected Countries

(red = significant decline; green = significant rise; fragile states bolded)

	% GDP (09-08)	% Budget (09-08)
Kenya	-0.1	-0.2
Rwanda	+0.4	+0.4
Tanzania	-0.5	-2.7
Uganda	+0.06	-0.2

Source: Martin and Kyrili (2009).

Fragile states in particular have been badly hit by the crisis as a result of slowing growth and the fiscal squeeze stemming from the economic downturn. Falls in per capita GDP growth were projected in 27 fragile states in 2009 and, on the basis of 2009 data estimates, government revenues were also expected to fall as a percentage of GDP in 21 of 32 fragile states (OECD, 2010). At the same time, aid is under pressure as a result of the crisis. Irish and Italian aid has already been cut and the OECD (2010) estimates only half of the Gleneagles promise of 2005 to raise aid levels by US\$50 billion by 2010 will be met. Although official development assistance (ODA) will reach a record high in 2010, several G7 countries are not meeting their Gleneagles commitments, much less the European Commission's 0.51 per cent aid commitments.

2 THE FOOD AND FUEL CRISIS

In 2007–2008 there were some drastic increases in food and fuel prices. Although food and fuel prices in general have fallen in 2009–2010, they remain higher than before 2007.

The 2010–2015 outlook is for higher food prices. The OECD/FAO estimates are 10–20 per cent higher food prices over the next 10 years (compared to 2010), with fuel prices (vegetable oil) 30 per cent higher. This is because of expected higher oil prices. Climate change is also likely to play a role in food-price rises because of changes in the weather and drops in yields in South Asia and Southern Africa. There could be another global price spike if oil prices rose suddenly again or if droughts, floods or conflict led to higher food prices. In late 2009 there were such concerns in the Horn of Africa and South Asia.

Jaspars and Wiggins (2009) argue that the price spike was due to increased demand from China and India; a slowdown in the growth of cereal production since the 1980s and a series of harvest failures from 2005 onwards; the rising price of oil, which increased fertiliser costs and thus stimulated biofuel production; and various countries' restrictions on grain exports. Food prices fell in late 2007 and 2008 because of increased production in the OECD countries and a drastic fall in oil prices. Although wheat and maize fell to pre-crisis levels, rice remains 80 per cent higher. It is important to track food prices, not least because domestic prices of staples in many countries are higher than changes in the global grain price as a result of local factors such as conflict, supply disruptions and weather.

This has implications not only for the nutrition-related MDGs; across the MDGs, nutrition matters. It matters not only in its own right and as regards the nutrition- and health-related MDGs, but it also plays a large role in education and other MDGs. Even before the food crisis, one in three infants in South Asia and Sub-Saharan Africa were chronically malnourished. In South Asia, the number of children under five who are low weight-for-age or low height-for-age is steadily declining (though still rising in several countries), but in Sub-Saharan Africa the number is steadily increasing even at the regional level. Child malnutrition is responsible for half of all child deaths, and infant and maternal malnutrition are leading causes of disease. Indeed, the *Lancet* series on Child Survival (2003) and on Maternal and Child under-nutrition (2008) identified the main cause of death among children younger than five years from preventable causes (diarrhoea, pneumonia, measles, malaria, HIV/AIDS), identifying the underlying causes of under-nutrition (Jones et al., 2009). At a national level, the higher costs of imported food can drain foreign exchange, lead to inflation and reduce economic growth.

Food accounts for 50–90 per cent of poor families' budgets, so changes in food prices matter. When food prices rise, poor families adjust the quantity and quality of the food they consume (as well as healthcare and schooling). The nutritional impacts on young children and pregnant women can be severe. The priority period is while the child is in the womb and up to 18 months of age. Malnutrition losses incurred during this period cannot be retrieved by interventions after the first 18 months of life; they are losses that the child will carry throughout life. Of the female babies that survive, those that remain malnourished in adolescence are more likely to give birth to malnourished children.

Although one might think that higher food prices will help poor farmers, a surprising number of rural households are net buyers of staple foods (about 60 per cent in Bangladesh, Kenya and Mozambique, for example). In many countries, only a minority of farmers have land and capital to sell surplus food, and many African countries have gone from being net food

exporters in the 1970s to being net importers in recent years. The food-price increases have been well documented and assessed in research. The food riots in more than 20 countries were a highly visible consequence. There was a severe price spike in 2008, but food prices had been rising since 2000 (see Table A7).

TABLE A7

Price Rises in Key Caloric Food Items, 2008–2009

Country	Food item	Caloric contribution	Price increase 2008-9	Price increase Jan-Oct 2009
Mozambique	Cassava	33%	61%	
Dem. Rep. Congo	Cassava	55%	60%	
Sudan	Sorghum	26%	38%	
Kenya	Maize	36%	21%	16%
Chad	Sorghum	18%	18%	
Burkina Faso	Sorghum	27%	15%	
Tanzania	Maize	27%	14%	23%

Source: World Bank, Feb 2010, Food Price Watch.

There are numerous estimates of the nutritional impacts of food-price increases, such as Tiwari and Zaman (2010), who concluded that their preferred estimate relates to a 35 per cent price-increase scenario (average food-price change 2007–2008) and a partial pass-through of prices (the price shock faced by domestic consumers is 80 per cent of the price shock in the international markets). This implies 64 million more undernourished people. A 50 per cent increase implies 146 million more undernourished people (see Table A8). Tiwari and Zaman have also estimated country impacts on the basis of actual increases in the prices of food staples (see Table A9).

TABLE A8

Food Price Scenarios in 2008 and Impact on Global and Regional Undernourishment (millions)

	Baseline (FAO, 2007)	35% increase food prices 2007-8 and “partial pass through”	50% increase food prices 2007-8 and “full pass through”
Sub-Saharan Africa	236	246.4	253.4
Asia and Pacific	583	628.6	695.5
Latin America and Caribbean	51	57.0	63.2
Middle East and North Africa	37	42.5	48.5
Total	923	986.5	1069.4

Source: Tiwari and Zaman (2010, forthcoming).

TABLE A9

Food Price Scenarios in 2009 and Impact on Undernourishment in Selected Countries

	Increase in price domestic staple 2009	Change in undernourishment incidence (millions)
Mozambique	61%	763,291
Kenya	21%	453,897
Burkina Faso	15%	149,592
Tanzania	14%	444,599

Tiwari and Zaman (2010, forthcoming).

There have been several global meetings to discuss policy responses to the food crisis, and in April 2008 the United Nations established the High Level Task Force on the global food security crisis, which led to the Comprehensive Framework for Action. In June 2009, representatives of 180 countries met in Rome. The emerging consensus is a “twin-track approach”, which Sanogo (2010) notes is based on:

- 1) Measures to meet the immediate food needs of the vulnerable, via:
 - emergency food assistance;
 - safety nets;
 - the provision of agricultural inputs and services;
 - adjustments in trade and tax policy; and
 - steps to manage the macroeconomic implications of price rises.

- 2) Measures to build long-term resilience, via:
 - increased food production, especially by small farmers;
 - managing food stocks more effectively;
 - adopting less ambitious targets for biofuels production; and
 - systematic social protection.

Social protection systems—the real insurance for future crises—are essential. The good news is that the crisis and the post-crisis context have created greater policy space for those advocating social protection systems. Social protection programmes such as cash transfers have attracted international attention because of the strong evidence that they have positive benefits for the educational, health and nutritional MDG outcomes of millions of poor children, especially girls, by targeting cash payments at the caregiver (usually the mother) and providing greater incentives for girls' schooling.

Social protection is a set of actions and policies that partly reflect existing social policy, but that add some new components (such as cash transfers) and are specifically directed at helping households to manage risk and to reduce the incidence and impact of shocks. Bapu Vaitla et al. (2008) and Davies and McGregor (2009) go further to develop a notion of transformative social protection and “graduation” out of poverty (see Table A10).

TABLE A10

Types of Social Protection (SP) Instruments and Role during Current Crisis

	Type of SP	SP instruments	Role in Crisis
Short term	Protective (social assistance)	Social transfers Disability benefit Pension schemes Social services	Immediate protection and relief from poverty and deprivation
	Preventive (insurance and diversification mechanisms)	Social transfers Social insurance (pensions, health insurance, unemployment benefit) Livelihood diversification Savings clubs; funeral societies	Prevents damage to coping strategies
	Promotive (economic opportunities)	Social transfers Access to credit Asset transfers/protection school feeding Starter packs Access to common property resources Public works programmes	Promotes resilience through livelihood diversification and improves security
Long-term	Transformative (addressing underlying social vulnerabilities)	Promotion of minority rights Anti-discrimination campaigns Social funds	Transforms social relations To reduce exclusion

Source: Davies and McGregor (2009).

What is new about social protection is treating exposure to various risks by means of a systems approach. Social protection thus allows poor/vulnerable families to take more risks and invest; helps poor/vulnerable families to develop human capital; and allows families to avoid negative coping mechanisms.

For LICs, and indeed for all countries, periodic crises are likely to be the “new normal”. These crises will be compound: climatic, economic, fragile states and so on. Key to these crises is uncertainty over who will be hit and when. We thus need to think of social protection as a system, not as components. Addressing each crisis as it comes is ineffective and inefficient, and the crisis may have passed by the time there is a response. A systems approach does not mean one single, universal programme; it means viewing the collectivity of programmes as a system.

Social protection has developed extensively in LICs during the last ten years. In Africa, the largest programmes are in Ethiopia and South Africa but pilot schemes, some large, are emerging in Kenya, Zambia and Ghana.

Moreover, there is a lot more evidence now about what sorts of programmes are most effective and how to target and improve the livelihoods of different groups. There is also strong evidence linking a range of social protection interventions to the nutrition, education and health MDGs in a wide range of countries (see review of Sumner, 2010). It is still the case, however, that few of these schemes are long-term or at scale. This is due to various factors, in particular that the schemes have large administrative start-up costs, that capacity to implement them is limited, and that the domestic demand from governments evident in Latin America is less visible elsewhere. One proposal to overcome these impediments is a “resilience compact/contract”. Donors might pay the upfront start-up costs on condition that governments agree budget lines to fund annual spending; civil society organisations could monitor and evaluate effectiveness in reaching the poor and the poorest, and prepare an annual “MDG resilience report”. Although some countries will face fiscal constraints over the next few years, various mechanisms of “new aid” are evolving.

3 MDGs AND CLIMATE CHANGE

Climate change presents a range of MDG challenges (see Tables A11 and A12).

TABLE A11

Selected Examples of Current and Projected Climate-Change Impacts on Industry, Settlement and Society, and Their Interaction with Other Processes

Climate driven phenomena	Evidence for current impact/vulnerability	Other processes/stresses	Projected future impact/vulnerability	Zones, groups affected
a. Changes in extremes				
Tropical cyclones, storm surge	Flood and wind casualties and damage; economic losses; transport, tourism; infrastructure (e.g. energy, transport); insurance	Land use/population density in flood-prone areas; flood defences; institutional capacities.	Increased vulnerability in storm-prone coastal areas; possible effects on settlements, health, tourism, economic and transportation systems.	Coastal areas, settlements and activities; regions and populations with limited capacities and resources; fixed infrastructure; insurance sector.

→

Extreme rainfall, riverine floods	Erosion/landslides; land flooding; settlements; transportation systems; infrastructure	Similar to coastal storms plus drainage infrastructure.	Similar to coastal storms plus drainage infrastructure.	Similar to coastal storms.
Heat- or cold-waves	Effects on human health; social stability; requirements for energy, water and other services (e.g. water or food storage); infrastructure (e.g. energy transportation)	Building design and internal temperature control; social contexts; institutional capacities.	Increased vulnerabilities in some regions and populations; health effects; changes in energy requirements.	Mid-latitude areas: elderly, very young and/or very poor.
Drought	Water availability; livelihoods, energy generation, migration, transportation in water bodies	Water systems; competing water uses; energy demand; water demand constraints.	Water-resource challenges in affected areas; shifts in locations of population and economic activities; add. investments in water supply.	Semi-arid and arid regions; poor areas and populations; areas with human-induced water scarcity.
b. Changes in means				
Temperature	Energy demands and costs; urban air quality; thawing of permafrost soils; tourism and recreation; retail consumption; livelihoods; loss of meltwater	Demographic and economic changes; land-use changes; technological innovations; air pollution; institutional capacities.	Shifts in energy demand; worsening of air quality; impacts on settlements and livelihoods depending on meltwater; threats to settlements/infrastructure from thawing permafrost soils in some regions.	Very diverse, but greater vulnerabilities in places and populations with more limited capacities and resources for adaptation.
Precipitation	Agricultural livelihoods; saline intrusion; water infrastructures; tourism; energy supplies	Competition from other regions/sectors; water resource allocation.	Depending on the region, vulnerabilities in some areas to effects of precipitation increases (e.g. flooding but could be positive) and in some areas to decreases.	Poor regions and populations.
Sea-level rise	Coastal land uses; flood risk, waterlogging; water infrastructure	Trends in coastal development, settlements and land uses.	Long-term increases in vulnerabilities of low-lying coastal areas.	Same as above.

Source: IPCC (2007).

TABLE A12

MDGs 1–7 and Climate Change-Relevant Poverty Impacts

Millennium Development Goals	Climate change relevant poverty impacts
Goal 1: Eradicate extreme poverty and hunger	Climate change is likely to impact on poor people's livelihoods and food security by: <ol style="list-style-type: none"> 1. Reducing poor people's livelihood assets 2. Altering path and rate of economic growth 3. Undermining food security
Goal 2: Achieve universal primary education	<ol style="list-style-type: none"> 4. Destruction of schools/other assets by extreme events 5. Loss of livelihoods – reduced school attendance 6. Disaster-related migration of families
Goal 3: Promote gender equality and empower women	Reduced agricultural productivity/disasters can: Burden women's health; Limit women's time to participate in decision-making/income generation activities; Reduce livelihood assets for women
Goal 4: Reduce child mortality Goal 5: Improve maternal health Goal 6: Combat HIV/AIDS, malaria and other diseases	Climate change-induced extreme weather events are likely to result in higher prevalence of vector- and water-borne diseases, declining food security and decreased availability of potable water
Goal 7: Ensure environmental sustainability	Climate change will directly impact on natural resources, ecosystems and the earth's natural cycles. This is predicted to reduce the quality and quantity of natural resources and ecosystems.

Source: Urban and Sumner (2009).

Stern (2009a: 75) suggests thinking of “development in a more hostile climate”. Fankhauser and Schmidt-Traub (2010) estimate the cost of “climate-resilient” MDGs to be about a third higher than the conventional cost of meeting the MDGs—about US\$100 billion a year for the next decade, compared to US\$72 billion a year for the MDGs alone. Extra costs arise from having to provide more development support (for example, extra bed nets against malaria), the same support at a higher cost (for example, more expensive infrastructure), as well as new measures altogether (for example, adaptive capacity building). Climate change can also lead to the prioritisation of certain measures compared to the baseline development plan (for example, disaster management). In one of the better-known estimates of adaptation costs (UNDP, 2007), about half of the costs arise from social protection programmes that mitigate the adverse social impacts of climate shocks.

Poor countries and poor people living in them tend to be more seriously affected, but have reduced assets and capacities with which to cope with and adapt to impacts (Kates, 2000; Stern, 2007; Mitchell and Tanner, 2009). For example, some of the most widely cited trends for Africa include: a drop in agricultural yields by as much as 50 per cent by 2020; an additional 70–250 million Africans at risk of increased water stress from climate change; an extra 40–60 million Africans exposed to malaria; and rising sea levels that may severely affect mangrove forests as well as coastal fisheries, and lead to increased severe flooding (Boko et al., 2007; Fankhauser and Schmidt-Traub, 2009; Stern, 2007).

Such scenarios have prompted a flurry of activities to integrate adaptation into development and poverty reduction programmes, often linking to communities of practice in disaster-risk reduction, sustainable livelihood approaches and vulnerability assessment (Yamin et al., 2005). The injustice of impacts are felt hardest by those who have done least to contribute to the problem, framing adaptation as an equity and rights issue (Mitchell and Tanner, 2009).

As regards the MDGs, although some of the impacts of climate change may not occur until after 2015, there is a need to “climate-proof” the MDGs so that MDG gains are not wiped out and the medium-term pathway is consistent with adaptation. Climate change may impact MDG-related concerns in numerous ways, such as through greater volatility in agricultural production as a result of a greater variability in the weather, including more frequent and intense droughts. This will mean changes in wage rates and income, as well as seasonality in income and consumption. “Hunger seasons” (see Bapu Vaitla et al., 2008) may become more pronounced and some relatively well-populated areas that already have semi-arid climates (such as Southern Africa, Northeast Brazil and northern Mexico) are likely to become drier. Water scarcity in such cases will be exacerbated.

Another climate impact on the MDGs is via more frequent and more severe disasters such as storms and tsunamis: the poor often live on marginal land with limited resilience to extreme weather. Homes and other assets such as livestock and possessions may be lost, and in the aftermath of major events there are high risks of water-borne and insect-borne diseases. Changed climates, in turn, are likely to affect ecosystems, with shifts in the range and distribution of flora and fauna. In some cases, this may mean that insects as disease vectors spread to previously unaffected areas, as may happen with an advance of malaria into higher altitudes.

The likely impact of the above is significant migration, particularly urban migration (see below). This will have significant implications for the MDG-related concerns, as will natural-resource conflicts and changing livelihoods.

There is a growing acknowledgment that a process of “adaptation” is central to sustaining and accelerating MDG progress or “climate-proofing” the MDGs. Although initially secondary to mitigation, adaptation is now a central strand of national and international climate policy (UNFCCC, 2007). What does pro-poor or pro-MDG adaptation look like? Mitchell and Tanner (2009) argue that there is a need to consider pro-poor adaptation by types of poverty (chronic and transient) in order to build suitable adaptive processes and adaptation options for the poor to pursue different pathways out of poverty (see Table A13).

TABLE A13

Types of Pro-Poor Adaptation

Type of adaptation	Chronic poor		Transient poor	
	Always poor	Usually poor	Cyclical poor	Occasionally poor
Autonomous adaptation	Conflict, crime, sex work Selling of last assets	Intra-community transfers/charity Sending children to work	Seasonal migration Working multiple jobs, longer hours	Diversify livelihoods Investment in social capital/ assets
Market-based adaptation		Promote micro-finance, micro-insurance Cattle insurance	Weather-indexed insurance Promote microfinance, micro-insurance	Promote micro-finance, micro-insurance Selling assets
Policy-driven adaptation	Assisted migration Cash transfers	Community restocking schemes Subsidised seed banks	Ecosystem rehabilitation Improved climate information (seasonal forecasting)	Social insurance programmes (health, crop, employment) Irrigation schemes/ urban service provision

Source: Mitchell and Tanner (2009).

Pro-poor adaptation seeks to assess how climate change may affect routes in and out of chronic poverty. It also seeks to expose opportunities presented by climate change for those in chronic poverty. This could include changes to ecosystems that make them more productive and offer a greater range of environmental assets. Despite food security concerns, transitions to labour-intensive biofuel crops may provide new employment options. Opportunities are most likely to emerge through adaptation interventions and institutional strengthening that target the poorest groups, funded by rising flows of adaptation finance.

Indeed, Davies et al. (2008) have linked social protection directly to pro-poor climate adaptation in “adaptive social protection”. This entails addressing climate change vulnerabilities by social protection mechanisms that improve the ability of agriculture to increase productivity in a changing climate and that support diversification of livelihoods away from climate-sensitive livelihood activities, particularly in areas prone to severe droughts or floods. For the latter, adaptive social protection for farmers could mean moving to off-farm activities, for which social protection measures could include promoting off-farm rural enterprise and industry, investment in urban services, assisted migration and improved remittance schemes.

Adaptive social protection is not just a matter of moving people out of agriculture. In the agricultural sector itself, social protection measures that could build resilience to climate change and benefit from integrating climate-change adaptation include: weather-indexed

insurance, asset restocking (including direct livestock provision) and cash transfers. Programmes introducing duck rearing in flood-prone areas or camel rearing in drought-prone areas can help build climate resilience into livelihood asset building. Breed selection is also a crucial component of such initiatives. In Bangladesh, for instance, the introduction of a selection of duck species that are more capable of living with less water, are better suited to higher temperatures and consume readily available non-aquatic vegetation aims to build climate resilience.

TABLE A14

Linking Social Protection and Adaptation to Climate Change

Approach to social protection	Benefits for adaptation
Provision	Prevention of those most vulnerable to climate risks who have low levels of adaptive capacity.
Prevention	Prevents damaging coping strategies as a result of risks to weather-dependent livelihoods.
Promotion	Promotes resilience through livelihood diversification and security in order to withstand climate-related shocks. Promotes opportunities arising from climate change.
Transformation	Transforms social relations to help address underlying social and political vulnerability.

Source: Davies et al. (2008).

This brings to light a broader note: climate change and the MDGs need to be seen as the same policy arena across all development policy, and need to be addressed in an integrated manner. In much of the discourse the two are still treated as separate, and adaptation is often seen as an “bolt on” to business as usual, although this is increasingly challenged (Fankhauser and Schmidt-Traub, 2009; Agrawala and Fankhauser, 2008; Fankhauser, 2010; UNFCCC, 2007; and World Bank, 2009b on adaptation costs; and World Bank, 2009a on adaptation finance; Mitchell and Tanner, 2009). This separation of climate change and the MDGs is visible in the negotiations leading up to the Fifteenth Conference of the Parties (COP15) to the United Nations Framework Convention on Climate Change (UNFCCC) in Copenhagen, which largely treated financing for climate-change adaptation as distinct from development finance and as falling under the purview of Ministers of the Environment (Schmidt-Traub, 2009). The main practical instruments to advance adaptation planning in least developed countries under the UNFCCC—the National Adaptation Plans of Action (NAPAs)—are generally developed in parallel to national development strategies, poverty reduction strategies and associated medium-term expenditure frameworks (MTEFs) that form the basis for providing and programming international development assistance (Agrawala and Fankhauser, 2008). The integration of climate change and the MDGs is essential at an operational level because if adaptation policy is not integrated into countries’ expenditure and macroeconomic frameworks, it is difficult for finance ministries and central banks to manage the increased inflow of foreign currencies.

While it is clear that climate-change adaptation and mitigation need to cut across all poverty reduction efforts, low-carbon development (LCD) debates to date have been mainly about high- and middle-income countries. There are good reasons why even the poorest countries with low emissions might be interested in pursuing LCD (Urban, 2010; Urban and Sumner, 2009). General discussions about the limits of decoupling growth from emissions are fraught (for details see Barrett et al., 2008; Ockwell, 2008), but many case studies argue that

low-carbon growth is possible—for example, in China (IEA, 2002), India (World Bank, 2008), South Africa (Government of South Africa, 2008) and Mexico (Project Catalyst, 2008).

LICs have contributed least to climate change. For them, LCD is not about cutting emissions, but about the benefits and opportunities LCD can bring. For example, fossil fuel resources such as oil are costly and can lead to a “carbon lock-in”, with infrastructure and investments bound to a carbon-intensive economy for decades. Relying on those resources, therefore, can mean greater costs in the long run. Moreover, the emission-trading scheme under the UNFCCC has introduced a price for carbon. Having a high price attached to carbon could mean a competitive disadvantage for LICs in relation to global markets.

The types of appropriate policy measures will differ for different country income groups, as well as by resource availability. Countries with high fossil fuel resources usually tend mainly to promote so-called “cleaner” fossil energy that emits fewer greenhouse gas emissions than conventional coal and oil (such as natural gas or fossil fuel power plants with carbon capture and storage). Countries with low fossil fuel resources usually tend mainly to promote renewable energy. Forest resource availability can also be important: countries with large forest resources tend to aim to achieve LCD through climate-friendly forest and land-use management.

There are several UNFCCC mechanisms for LCD (see Table A15).

TABLE A15

Low-Carbon Development (LCD) Mechanisms

Mechanisms	What is it?
Clean Development Mechanism (CDM)	Developed countries implement projects leading to emission reductions in developing countries. Developing countries gain access to climate-friendly technology, developed countries gain emission reduction credits to offset their emissions.
Emission Trading (EM)	Mechanism that sets a cap on greenhouse gas emissions and introduces a trading system. Once emission allowances are exceeded, emission credits must be bought from those that have emitted less. Emission trading is currently in place for developed countries only, but might be extended to a global level in the future.
Joint Implementation (JI)	Developed countries can invest in emission reduction projects in other developed countries as an alternative to reducing emissions domestically. JI is currently in place for developed countries only.
Reducing Emissions from Deforestation and Forest Degradation (REDD) and Land Use, Land Use Change and Forestry (LULUCF)	Currently under discussion in relation to a future climate change agreement. Developing countries could be paid for climate-friendly forest and land use management; developed countries could gain emission reduction credits to offset their emission obligations.
Nationally Appropriate Mitigation Actions (NAMAS)	The purpose of Nationally Appropriate Mitigation Actions is to outline national mitigation options that are in line with domestic policies and are developed in “the context of sustainable development, supported and enabled by technology, financing and capacity building, in a measurable, reportable and verifiable manner” (IEA/OECD 2009).

Source: Urban and Sumner (2009).

Currently, only the Clean Development Mechanism is accessible for developing countries. The first commitment period of the Kyoto Protocol will end in 2012 and a new climate-change agreement will be needed for the post-2012 era. Mechanisms for LCD will be a crucial issue for a new climate agreement. Further, LCD needs to be pursued in a pro-poor or pro-MDG manner. Key policies for pro-poor LCD can be drawn by linking pro-poor growth debates (see

discussion in McKay and Sumner, 2008; Sumner and Tiwari, 2009) with LCD debates (Barrett et al., 2008; NIES, 2006; Ockwell, 2008; Urban, 2010). Examples include green redistributive policies, whereby government revenues made by “green” industries are distributed to pro-poor sectors such as health and education; support for specific sectors that are crucial for the poor, such as agriculture and forestry; social protection for adaptation and combining the synergies between mitigation and adaptation, such as social protection measures to reduce vulnerability to climate change; community participation opportunities such as rural electrification with renewable energy; “green” job creation via development of the finance sector and increased investments in small-scale infrastructure and pro-poor forest and land-use policies: reducing emissions from deforestation and degradation (REDD) and land use, land-use change and forestry (LULUCF) are two possible mechanisms whereby payments from developed countries are directed to developing countries for climate-friendly forest and land-use management, and thus could benefit the poor by ensuring that smaller farmers and foresters can engage in the carbon market.

4 THE MDGs AND DEMOGRAPHY/URBANISATION

In 2007, for the first time in history, half of the world’s population lived in urban areas. Urbanisation is one of the most important demographic shifts worldwide of the past and coming century. The size, form, structure and function of urban areas, as well as their future growth trajectories, will be critical elements in pursuing the MDGs in the period 2010–2015. This is particularly true for developing nations, where urban growth rates are highest (see Tables A16 and A17), and where cities absorb an average of 5 million new residents every month and are responsible for 95 percent of the world’s population growth (UN Habitat, 2008: xi).

Demographic issues relate to population growth, fertility, ageing, labour-force changes, dependency ratios and the demographic transition over the medium term. Over the short term and in the period 2010–2015, urbanisation is arguably the most fundamental demographic issue. Between 2010 and 2015 there will be an additional 0.38 billion people in less developed countries (0.74 billion by 2020), of which 0.33 billion will be new urban dwellers (or 0.67 billion new urban dwellers by 2020).

TABLE A16

Population Indicators, 2005–2020

	2005	2010	2015	2020	New population 2010–2015	New population 2010–2020
Population (billions), medium variant						
World	6.51	6.91	7.30	7.67	0.39	0.76
Less developed	5.30	5.67	6.05	6.41	0.38	0.74
Least developed	0.76	0.85	0.95	1.06	0.14	0.21
Africa	0.92	1.03	1.15	1.28	0.12	0.25
Asia	3.94	4.17	4.39	4.60	0.22	0.43
Latin America and the Caribbean	0.56	0.59	0.62	0.65	0.03	0.06
Population growth rate (%)						
	2000-2005	2005-2010	2010-2015	2015-2020		
World	1.26	1.18	1.11	1.00	-	-
Less developed	1.47	1.37	1.28	1.15	-	-
Least developed	2.36	2.30	2.22	2.08	-	-
Africa	2.34	2.29	2.20	2.03	-	-
Asia	1.25	1.14	1.05	0.92	-	-
Latin America and the Caribbean	1.31	1.12	0.99	0.86	-	-

→

Dependency ratio (%)						
	2005	2010	2015	2020		
World	55	53	52	52	-	-
Less developed	57	54	52	52	-	-
Least developed	80	76	72	69	-	-
Africa	80	78	75	72	-	-
Asia	53	49	48	48	-	-
Latin America/ Caribbean	56	53	50	48	-	-

Source: World Population Prospects, 2008 revision at <<http://esa.un.org/unpp/>>.

TABLE A17

Urban Population, 2005 and 2030

	2005	2010	2015	2020	New population 2010-2015	New population 2010-2020
Urban population (billion)						
World	3.16	3.49	3.84	4.21	0.35	0.72
Less developed	2.26	2.57	2.90	3.24	0.33	0.67
Least developed	0.21	0.25	0.31	0.38	0.06	0.13
Africa	0.35	0.41	0.48	0.57	0.07	0.16
Asia	1.57	1.77	1.99	2.21	0.22	0.44
Latin America and the Caribbean	0.43	0.47	0.51	0.54	0.04	0.07
Percentage urban (%)						
World	48.6	50.6	52.7	54.9	-	-
Less developed	42.7	45.3	47.9	50.5	-	-
Least developed	27.0	29.4	32.1	35.0	-	-
Africa	37.9	39.9	42.2	44.6	-	-
Asia	39.7	42.5	45.3	48.1	-	-
Latin America and the Caribbean	77.5	79.4	80.9	82.3	-	-

Source: World Urbanization Prospects, 2007 revision at <<http://esa.un.org/unup/>>.

Available data suggest that in a large number of the world's poorest countries, the proportion of urban poor is increasing faster than the overall rate of urban population growth (Cohen, 2006: 64). This is compounded by the fact that urban poverty is often underestimated, because official statistics often underreport it. Note that while much of the current debate on cities focuses on the formidable problems of the world's largest urban agglomerations, most urban dwellers continue to live in far smaller urban settlements.

High rates of overall population growth and significant rural-urban migration have contributed to this rapid urbanisation and to the related, unplanned expansion of low-income settlements on the outskirts of many large cities or slums, without a concomitant expansion of public services and facilities. Currently, one of every three people living in the cities of the developing world lives in a slum (UN-Habitat, 2008: 90). In the developing countries, 0.8 billion people (in 2005) or a third of urban residents are slum dwellers (defined as those urban dwellers who lack improved water, improved sanitation or durable housing, or who live in households with more than three people per room). Prevalence is highest in sub-Saharan Africa, where 62 per cent of urban residents are slum dwellers (UN-Habitat, 2008: 90).

Despite the challenges urbanisation presents to the MDGs, and the importance of MDG 7d to improving the lives of at least 100 million slum dwellers by 2020, urbanisation has not received the attention it requires. The speed and scale of the growth of the world's largest cities and metropolitan areas could place enormous pressure on the immediate and

surrounding environment, posing significant challenges for sustainable development and undermining progress towards MDG 7b on the reduction of biodiversity loss (UNFPA, 2009: 19). The improper planning of urban sprawl adds to environmental degradation, and to farm and forest loss. This is the case of several Latin American cities, where sizeable damage has been caused to environmentally sensitive areas. These include Panama City and its Canal Zone, Caracas in Venezuela and its adjacent coastline, San José in Costa Rica and its mountainous area, and Brazil's São Paulo and its water basins (UN-Habitat, 2010).

Cities in many developing countries will also continue to discharge ever increasing amounts of waste into the air or into bodies of freshwater, threatening water quality and aquatic ecosystems. Congestion in many large cities poses the severe problem of increased air pollution. While motor vehicles are the main cause of pollution in cities, increased demand for energy to run air conditioning systems and electrical appliances will increasingly contribute to pollution in many cities. Currently, cities generate close to 80 per cent of global carbon dioxide emissions (Galea and Vlahov, 2005: 346).

Demographic and health-survey data collected between 1990 and 2007 show that serious malnutrition is widespread in the urban slums of Africa, Asia, Latin America and the Caribbean, and children in the poorest income brackets are malnourished at twice the rate of their counterparts in the richest ones (UN-Habitat, 2010). If the issue is not properly addressed, the growth of cities and thus of urban slums could jeopardise progress towards reducing hunger and malnutrition, and to meeting MDG 1. Because poorer neighbourhoods can have dramatically lower levels of basic services (associated with insufficient access to clean drinking water, inadequate sewerage facilities and insufficient solid waste disposal), the growth of urban centres will also greatly increase the chance that communicable and non-communicable diseases will spread.

As mentioned earlier, although the unchecked and unplanned increase in cities could greatly undermine countries' progress towards the MDGs, a better-managed urbanisation could also play an important role in MDG progress and acceleration: cities create jobs, attract businesses, and bring together the resources to generate new ideas, innovations and the increasingly productive use of technology.

Recent research shows a positive link between economic development and urbanisation in most countries in Africa and Asia (Leon, 2007; Brockerhoff, 2000; UN-Habitat, 2010; Arimah, 2010), and people in urban areas generally have greater potential access to jobs and services than their rural counterparts. In other words, despite the real urban threats to health, on balance cities in the developing world have advantages that are not available to many rural dwellers. For governments it is easier and cheaper per head to provide services (however limited) to people living in cities than to the rural poor who are often dispersed over vast geographic areas. Furthermore, the growth of urban populations over the past few decades has had a multiplier effect on the impact of immunisation and oral rehydration therapy, by increasing the proportion of children who are readily accessible because they live in towns and cities. Cities are also generally associated with a high level of contraceptive use (Brockerhoff, 2000: 4).

Improved transportation could expand the range of housing and livelihood options for the urban poor, provide work, and stimulate the private sector. In the past, investments in infrastructure and basic services for the poorest have drastically reduced urban poverty levels (UN-Habitat, 2010).

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NOTES

1. See respectively <www.edc2020.eu, www.sidint.net/themes-programmes/horizon-scanning-and-trend-monitoring-report>, <<http://www.foresightfordevelopment.org>>, <www.sampnode.org.za>, USNIC, <www.foresight.gov.uk>, <www.dni.gov/nic/NIC_2020_project.html> and <www.ifs.du.edu>.
2. For more detail on “wicked problems”, see J. Chapman, C. Edwards and S. Hampson (2009), ‘Connecting the Dots’, Demos website, <http://www.demos.co.uk/files/Connecting_the_dots_-_web-2.pdf?1259947418>.
3. For a more detailed overview of one version of morphological based scenarios, see G. Coyle (2000), ‘Field Anomaly Relaxation (FAR)’, United Nations University Millennium Project.
4. The word “dependency” is perhaps problematic but it is used extensively in defining commodity and aid relationships by UNCTAD, and the OECD-DAC.
5. Take for example, the well-known OECD (2003: 111) volume, *Harmonising Practices for Effective Aid Delivery*, which defines high aid dependency as aid (net ODA) greater than 9 per cent of GNI and low aid dependency as under 3 per cent. The middle group, apparently, is inconclusive in terms of results. UNCTAD (2008: 26) notes on the (mean) average ODA as a per cent of GNI in all least developed countries as 7.9 per cent of GNI. Maxwell (2006:1) identifies “the 20 per cent club” and the “0.2 per cent club”. In the former “aid accounts for around 20 per cent of GDP... [which is] indicative rather than statistically precise ... 20 per cent is the average aid/GNP figure for sub-Saharan Africa and 0.2 per cent is the aid/GNP ratio for India” [in 2003, according to UNDP 2005]. The best indicator of aid dependency would be ODA/Final Absorption, (Absorption = Household consumption + Investment spending + government consumption), which shows the share of total spending on final goods and services effectively “financed” by ODA.



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