



Multilateralism for an Age of Scarcity

Building international capacity for energy, food and climate security

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Abstract

Resource scarcity issues – above all climate change and soaring prices for energy and food – are uniquely integrated. Unfortunately, the same cannot be said for the multilateral institutions and processes charged with managing them. This paper sets out a route map towards the more integrated and effective multilateralism needed for the transitions ahead.

Part 1 of the paper begins by exploring the links between scarcity issues, and discusses why it is necessary to see them through a single lens. Part 2 then assesses how the multilateral system is placed to cope with scarcity issues, and finds that it often falls into one of two traps – fragmentation or over-centralisation. In order to move towards a more distributed approach, policymakers need to focus on the *function* of multilateralism rather than its *form*. In particular, multilateral policy should focus on the need to produce *shared global operating systems* to manage global issues over the full term of their life cycles; the *shared awareness* needed to envision and agree such systems; and the *shared platforms* needed to build coalitions to open up political space in pursuit of them.

Part 3 of the paper explores the shared operating systems that will be needed to manage global scarcity issues, and sets out five illustrations of the kinds of framework likely to be needed, including a global deal on climate change that manages the problem over the full term of its lifecycle; integration of energy and food security of supply concerns into world trade rules; agreed principles for sharing the investment and adaptation costs implied by scarcity issues; more effective treaty compliance systems; and better systems for crisis management, social protection and resilience.

Part 4 of the paper concludes by setting out a range of proposals for how the international system can proactively build shared awareness in order to start imagining and working towards such operating systems in earnest. It emphasizes that while much more shared awareness between leaders and officials is the right starting point, a much fuller engagement of constituencies outside governments and international agencies is also essential in order to tackle the highly distributed challenges of the 21st century.

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Introduction and summary

Resource scarcity issues – above all oil prices, food prices and climate change – are at the top of the world’s agenda. Food prices have risen 83 per cent in three years; oil costs are at their highest level ever, with some experts anticipating \$200 a barrel by the end of the year; and climate change impacts are accumulating much faster than anticipated.² Speaking at a UN food summit held a month before he was due to chair the 2008 G8 summit in Hokkaido, Japanese Prime Minister Yasuo Fukuda set out his assessment in stark terms: the Club of Rome’s 1972 *Limits to Growth* report “was right”.³

That assessment remains highly contentious – but there is no disputing the speech with which scarcity issues have risen up the international policy agenda, or the acuteness of the concerns they raise. As Martin Wolf, the chief economics commentator at the Financial Times, put it at the start of the year,

“...the biggest point about debates on climate change and energy supply is that they bring back the question of limits. This is why climate change and energy security are such geopolitically significant issues. For if there are limits to emissions, there may also be limits to growth. But if there are indeed limits to growth, the political underpinnings of our world fall apart. Intense distributional conflicts must then re-emerge – indeed, they are already emerging – within and among countries.”⁴

The paper’s chief foreign affairs columnist, Gideon Rachman, put the other half of the argument in a column six months later, in which he wrote that,

“It is all very awkward. China and India are getting richer. And it appears their new middle classes want all the things we want: cars, washing machines, even meat. Here in the west, we have to restrain ourselves from saying: ‘Stop. You can’t live like us. The planet can’t stand it. And our wallets can’t stand it. Have you seen the price of petrol?’

“Global equity is the awkward issue lying behind the world food crisis. In the long run, it will also prove fundamental to discussions on energy and global warming.”⁵

These two perspectives capture the essence of the current global dilemma. In one sense, globalization is working: the world’s middle class is growing at an unprecedented rate, and inequality between developed and developing countries is falling for the first time in living memory.⁶ Yet globalization as it is today cannot be sustained. Demand – for food, for energy, for ‘airspace’ for carbon emissions – is growing faster than supply.

So scarcity issues place a question mark over globalization. At worst, they could reverse it. The impact of spiraling oil prices on the cost of shipping goods could impose a brake on world trade, the main driver of global prosperity – in effect, reimposing the tariffs that negotiators have painstakingly eliminated in successive trade rounds since the second world war.⁷ The world could slide into

² BBC News, “Oil price ‘may hit \$200 a barrel’”, 7 May 2008, at <http://news.bbc.co.uk/1/hi/business/7387203.stm>; Bloomberg,

“Gazprom sees Oil at \$250 in ‘Foreseeable Future’”, 10 June 2008, at <http://www.bloomberg.com/apps/news?pid=20601085&sid=aljH0.KunHcE&refer=>

³ Yasuo Fukuda, *Address by KE Mr Yasuo Fukuda, Prime Minister of Japan, On the Occasion of the High-Level Conference on World Food Security: The Challenges of Climate Change and Bioenergy*, speech, 3 June 2008: available at <http://www.mofa.go.jp/announce/pm/fukuda/address0806.html>

⁴ Martin Wolf, “The dangers of living in a zero sum world economy”, *Financial Times*, 18 December 2007

⁵ Gideon Rachman, “We cannot go on eating like this”, *Financial Times*, 2 June 2008

⁶ UNCTAD Trade and Development Report 2007, cited in John Vandaele, “Globalisation ‘localises’ inequality”, IPS News, 11 March 2008, at <http://www.ipsnews.net/news.asp?idnews=41549>

⁷ For a fuller exposition of this argument, see Jeff Rubin and Benjamin Tal, “Will Soaring Transport Costs Reverse Globalisation?”, analysis paper, CIBC World Markets, 2008

fractured regional blocs badly placed to tackle shared challenges like climate change, or fall prey to intensifying competition between major powers for dwindling food, energy and water resources. Poor people and poor countries would be unlikely to flourish in any of these scenarios.

At best, on the other hand, scarcity issues could provide the catalyst for a global process of renewal: a globalization that is at once more stable and more inclusive. The difference between these two outlooks will depend on the capacity of the world's states, leaders and people to act collectively in pursuit of shared interests. In other words, it will depend on the effectiveness of multilateralism in delivering common objectives – even if the forms that this multilateralism takes end up looking radically different from today's international bureaucracies, intergovernmental decision-making forums and inter-state agreements.

Today, the political space for such comprehensive solutions is not yet open.

Polling data in numerous countries shows that while large majorities believe climate change to be real, they also believe that its effects will impact primarily on other people and other places.⁸ Most people also feel that their own actions are of little importance, and that while major steps are needed, it is for other actors to take them.⁹

The same story applies on food and energy issues. While the new 'global middle class' hardly welcomes price inflation, there appears so far to be little realization that individual consumption decisions have global outcomes, and can impact poor people on the other side of the world. Instead, people tend to look to governments for solutions that allow business as usual to continue.

As a result, policymakers have limited incentives to engage too deeply with the politically difficult choices that need to be made, or to be too frank about the possible longer term outlook. While the imperative of re-election makes the dilemma especially transparent for policymakers in democracies, the case of China – where maintaining current growth rates is clearly the government's primary objective – shows that governments of all kinds face the same pressures.

If the current global political calculus does not favour plain speaking and comprehensive action on scarcity trends – as appears to be the case – then there is in effect no real option but to wait until the political space does open up. Assuming that the social, economic and environmental pressures associated with scarcity issues continue to rise, then over time their impacts will create the political space needed for radical action.

However, it is highly unlikely that such a process will be comfortable, or that these pressures and impacts will increase in steady or predictable ways. On the contrary, the likelihood is that shocks and stresses imposed by scarcity issues on social, economic and natural systems will be sudden, volatile and unpredictable.

In political terms, while increasing scarcity impacts will open windows of opportunity for comprehensive action, these windows for are likely to open *suddenly* – and to remain open only *briefly*. (As the economist Milton Friedman once wrote to his fellow monetarists, when they were still voices in the wilderness: “Only a crisis - actual or perceived - produces real change. When that crisis occurs, the actions that are taken depend on the ideas that are lying around. That, I believe, is our basic function: to develop alternatives to existing policies, to keep them alive and available until the politically impossible becomes the politically inevitable.”)¹⁰

⁸ Alex Evans and David Steven, *Climate Change: the State of the Debate*, New York: Center on International Cooperation, 2007: available at http://globaldashboard.org/wp-content/uploads/2008/06/State_of_the_Debate.pdf

⁹ Phil Downing and Joe Ballantyne, *Tipping Point or Turning Point? Social Marketing & Climate Change*, Ipsos MORI, 2007, available at <http://www.ipsos-mori.com/publications/srreports/climatechange.shtml>

¹⁰ Milton Friedman, *Capitalism and Freedom*, University of Chicago Press, 2002

For as long as the political space for comprehensive action remains closed, then, the real question for policymakers is about *readiness*. When windows of opportunity open suddenly, and briefly, will the world's mechanisms for facilitating collective action – its institutions of multilateralism – be ready to move swiftly into the gap?

Summary

Parts 1 and 2 of the paper argue that while energy, food and climate security are thoroughly integrated, the same cannot be said of either the international institutions or the government bureaucracies meant to tackle them. As the UN High Level Panel on Threats, Challenges and Change observed in 2004, “finance ministries tend to work only with the international financial institutions, ministers of agriculture only with food programmes and environment ministers only with environmental agencies.”¹¹ Matters haven't improved much since.

This has the result that scarcity issues are increasingly delegated upwards: to heads of government, to international agencies like the UN and the World Bank, and to top-level gatherings like the G8. In theory, Presidents, Prime Ministers and Secretaries-General should be able to think globally, not departmentally. In practice, their track record is not encouraging. Heads of government or of international agencies have the big picture on global problems, but on their own lack the resources needed to solve them.

What the world needs is a way to tackle global problems that overcomes fragmentation in governments and the international system – but avoids the trap of creating one more over-centralized international bureaucracy. To that end, the paper argues that current global challenges demand a three-part international response – shared awareness, shared platforms and shared operating systems.¹²

- *Shared operating systems* are the ultimate goal: global frameworks to manage the tough transitions ahead over the full term of their life cycles, while still including sufficient flexibility to adapt to changing circumstances.
- To get to them, global leaders need to develop much deeper *shared awareness* of common challenges – and each others' positions on them. Today's summits are too formal and rushed to produce that. Leaders should spend more time together outside the tightly scripted confines of formal meetings – the original idea behind the G8 – and they should employ full-time rather than part-time sherpas, tasked to think through (even “war-game”) future scenarios, rather than draft communiqués.
- At the same time, far-sighted leaders need to build *shared platforms* – coalitions of governments, international institutions and non-state actors – to open up political space for tough decisions. But they must understand that they cannot completely control such coalitions, which will be shaped by a core idea more than a central HQ.

Part 3 of the paper then sets out five kinds of shared operating system that might be needed to manage scarcity issues:

¹¹ UN High Level Panel on Threats, Challenges and Change, *A more secure world: our shared responsibility – Report of the Secretary-General's High-level Panel on Threats, Challenges and Change*, UN, 2004: available at <http://www.un.org/secureworld/>

¹² The framework was developed jointly by the author and David Steven, and is set out in their paper *Shooting the Rapids: multilateralism and global risks*, Global Dashboard, 2008 (available at <http://tinyurl.com/3jft8q>).

1. **A comprehensive global climate framework** – that engages all of the world’s countries in binding commitments, in order to manage the problem over the full term of its life-cycle.
2. **Better management of security of supply concerns** in both food and energy, including through the world’s rules-based trading system, to increase predictability, lower volatility and contain the risk of strategic resource competition.
3. **Agreed principles for sharing the costs of scarcity issues**, including regarding the role of developing countries in delivering global solutions and (in particular) clarifying the role of Official Development Assistance on scarcity issues.
4. **Enforcement and compliance systems that deliver**, to provide more effective multilateral agreements and promote trust between states (and in particular between developed and developing countries).
5. **Better global systems for crisis management, social protection and resilience** in order to manage the impacts of the turbulent process of transition that scarcity issues imply, and in particular to protect poor people and fragile states.

These five areas are not intended to represent a definitive list of global operating systems for scarcity, although more comprehensive action on all five of these points is certainly needed; indeed, part of this paper’s purpose is to catalyse discussion about what other kinds of operating system are needed, and what they might look like.

Part 4 of the paper concludes by asking how multilateralism can be reformed to become more effective at asking these kinds of far-reaching questions.

Today, the lack of political space referred to earlier means that governments – acting alone or in concert – struggle to move beyond incremental ‘initiatives’ that are more effective at generating media coverage than real progress. In order to be ready to move towards more comprehensive frameworks when windows of opportunity opens, the international system needs to become much more effective in building shared awareness – not only between leaders, but also between officials in diverse agencies and publics in diverse countries.

With this in mind, the paper makes five recommendations on how governments and international agencies can actively build shared awareness – once again, not a definitive list, but instead a set of examples designed to illustrate the underlying argument and (with luck) trigger debate. These are:

1. **Build shared awareness at the leaders’ level** – through heads of government and international agencies spending more time together, but less of it in highly formal, choreographed interactions.
2. **Move from part time sherpas to virtual secretariats** in processes to prepare summit agendas, with the underlying objective of creating more ‘bandwidth’ for developing shared ideas and joint options to go to the leaders’ level.
3. **Work towards a culture of interoperability** – not just at leaders’ level, but *throughout* governments and international agencies, both within and across them, through a culture of secondments and joint exercises such as scenario building.
4. **Produce a World Resources Outlook**. There are already World Outlook reports on energy, food and (through the IPCC) climate change – but not report that connects the dots between them. Commissioning one would force relevant agencies to work together, and potentially open political space and drive policy development.

- 5. Move towards a more open source approach to policymaking.** Governments tend to do their thinking and policy development in private, as though it were something shameful. Bringing it into the open would at once improve prospects for buy-in from non-state actors – who increasingly have the power to block global deals (think of the EU Constitution and the Lisbon treaty) – and improve the quality of the thinking by bringing more processing capacity to bear on global problems.

I: A Perfect Storm

Oil prices are currently close to \$140 a barrel.¹³ Goldman Sachs has argued that prices could reach \$200 before the end of 2008, while Gazprom has suggested that they could climb as high as \$250 a barrel within 18 months.¹⁴

The central reason for oil prices' recent rise has been growth in global demand, especially in emerging economies like China and India. On present course, according to the International Energy Agency, world energy needs will be 50 per cent higher in 2030 than today – with China and India alone accounting for 45 per cent of the increase.¹⁵

But even as demand has exploded, supply has struggled to keep pace, stubbornly remaining at around 85 million barrels a day.¹⁶ Part of the reason is simply that developing new supplies takes many years. But new oil supplies are also hard to get at – either geographically, or because of the expenditure of money or energy needed to access resources like oil shales or tar sands. People, equipment and engineering skills are all in acutely short supply.¹⁷

Some analysts go further and argue that the world is close to the 'peak' of global oil production – when the rate of world oil production reaches its zenith and begins its decline. Such claims are impossible to verify – such a peak would only be clear a long way in retrospect – futures prices for oil suggest that perceptions of an imminent peak are becoming widespread in commodities markets.¹⁸

However, it is by unnecessary to be a peak oil believer to worry about the future outlook on oil security. The International Energy Agency estimates that investment of some \$22,000 billion – a little under half of 2006 gross world product – is needed in supply infrastructure to meet projected demand; so far, there is so far no sign of investment on this scale being forthcoming.

Food prices are have increased by 83 per cent worldwide over the last three years, especially on the key crops of corn, rice, soybeans and wheat – where from March 2006 to March 2008, prices increased by between 95 per cent and 152 per cent.¹⁹

These price rises have been due above all to income growth in emerging economies, where the changing diet patterns of a growing middle class have led to sharply increased demand for grain. Other factors include use of crops for biofuels, the relative inelasticity of food supply, and historically low stock levels. More recently, feedback loops have arisen from some countries suspending exports at the same time as others have sought to increase their imports.

Over the long term, as with oil, there are concerns about whether supply increases will be able to keep pace with demand – which the World Bank projects will rise by 50 per cent by 2030, the same increase as for oil.²⁰ Yield growth driven by the 20th century 'green revolution' is running out of

¹³ Carola Hoyos and Javier Blas, "Oil futures approach \$140 as fears grow of shortages by 2012", *Financial Times*, 21 May 2008

¹⁴ BBC News Online, "Oil price 'may hit \$200 a barrel'", 7 May 2008, at <http://tinyurl.com/5bw7aj>; Terry Macalister, "Oil to hit \$250 a barrel, says Gazprom chief", *The Guardian*, 11 June 2008, at <http://tinyurl.com/6epsoj>

¹⁵ International Energy Agency, *World Energy Outlook 2007*

¹⁶ Source: International Energy Agency, cited in *World Oil*, Vol 229 No. 6, May 2008: available at <http://tinyurl.com/4u8w7b>

¹⁷ See for example Daniel Yergin, "Oil has reached a turning point", *Financial Times*, 28 May 2008, at <http://tinyurl.com/3vkdrrm>

¹⁸ Carola Hoyos and Javier Blas, "Shortage fears push oil near \$140", *Financial Times*, 20 May 2008

¹⁹ Alex Evans, *Rising Food Prices: drivers and implications for development*, briefing paper, Chatham House, 2008; HM Treasury, *Global commodities: a long term vision for stable, secure and sustainable global markets*, June 2008

²⁰ See Jenny Wiggins and Javier Blas, "Bread and butter issues: rising prices may herald the first global food shortage since the 1970s", *Financial Times*, 23 October 2007.

steam, in part as public investment in new seed varieties has fallen. The future outlook is also difficult, as fertilizers increase in price as energy costs increase, as water for irrigation becomes scarcer, as biofuels increase as a long-run source of demand for crops, and as the need to expand the acreage of land under cultivation for food becomes constrained by other demands – including not only growing crops as feedstock, biofuels, fibre (such as paper and timber), but also the needs of carbon sequestration, forest conservation and biodiversity, and land for the world's growing cities – as well as land degradation.

Climate change, finally, looms in the background as a long term threat multiplier not only on food and energy, but on a host of other issue besides.

While the Intergovernmental Panel on Climate Change notes that moderate temperature increases (of one to three degrees C) can drive larger crop yields, it also stresses that this is before other changes are taken into account – such as changes in precipitation, more extreme weather events and (especially) reduced water availability. Overall, the IPCC is clear that the net effect of climate change on global food security will be negative: between 40 and 170 million more people will be undernourished as a result of climate change, according to the Panel's Fourth Assessment Report.

At the same time, agriculture itself is also a major driver of climate change. Deforestation and changes in land use account for 10 per cent of all greenhouse gas emissions; agricultural by-products (especially methane production from livestock and rice cultivation) account for another 12.5 per cent, bringing the total for agriculture and land use to almost a quarter of the world's greenhouse gas emissions before transport is even taken into account.

On energy, meanwhile, climate change poses an immense challenge. The development of modern society has taken place largely on the back of cheap and readily available energy supplies – largely in the form of fossil fuels, which can helpfully be separated out into the two broad use categories of (a) fuels for electricity generation and (b) fuels for transport.

In both of these categories, the global challenge is essentially to move from carbon dependence to a close to zero carbon model by the middle of the century. According to the last IPCC report, limiting average temperature rise to between 2.0 and 2.4 degrees Celsius will involve stabilizing greenhouse gas levels in the air at somewhere between 445 and 490 parts per million of carbon dioxide equivalent – entailing a need for global emissions to peak by 2015 at the latest, and then decline to between 50 and 85 per cent below 2000 levels by 2050. Once the rate of sink failure – the recent observed slowdown in the capacity of the earth's oceans and forests to absorb carbon dioxide – is factored in, the level of emissions reductions needed is even more dramatic.

In any case, current emissions are projected to overshoot these levels by a long distance. The last World Energy Outlook report's reference scenario projected that emissions of carbon dioxide would jump by 57 per cent between 2005 and 2030.²¹ The Stern Review, meanwhile, estimated that a level of 550 ppm level of carbon dioxide equivalent could be reached as early as 2035, with at least a 77 per cent chance (perhaps as high as 99 per cent) of global average temperatures rising by more than two degrees C.²²

²¹ International Energy Agency, *World Energy Outlook 2007*, IEA, 2007: available at <http://www.worldenergyoutlook.org/>

²² Sir Nicholas Stern et. Al., *The Stern Review of the Economics of Climate Change*: available at <http://tinyurl.com/bnz37>

Joining the dots

These, then, are perhaps the three most important issues of resource security that will shape international relations over the century ahead. This is not to say that they are the only ones. Water scarcity, in particular, is likely to be a major problem in the years ahead: 500 million people already live in countries chronically short of water, and the figure is likely to rise to 4 billion by 2050; and as noted earlier, competition for land is already emerging as an issue in a number of parts of the world.²³

However, while land and water scarcity are likely to have global impacts in the future, management of these resources will as a rule take place primarily at the national or regional level – hence while many of the arguments in this paper still apply to them, the paper limits its principal focus to the triumvirate of climate, energy and food.

But this still leaves the question: why think of these three issues as an integrated whole beneath the collective heading of ‘scarcity issues’ – as opposed to regarding them simply as separate issues that happen to share a few attributes?

In the first instance, simply because of the extent to which they amplify and reinforce one another. Figure 1 below sets out a sample of some of the links between different scarcity issues, but it is those along the three sides of the energy / food / climate triangle that are most important:

- A stable **climate** is essential for global **food** security, while current food production systems are also a major emitter of greenhouse gases – through both energy use and direct emissions from livestock, cultivation practices, deforestation and so on.
- **Food** security depends on **energy** security because of its current reliance on energy inputs throughout the food value chain, while the emergence of biofuels (and the arbitrage relationship between food and fuel that they create) further increases the link between energy and food prices.
- Finally, **climate** change and **energy** security are fundamentally intertwined because of the obvious point that emissions from burning fossil fuels are the principal cause of rising greenhouse gas concentrations in the air.

²³ Robin Clarke and Jannet King, *The Atlas of Water* (London: Earthscan Books, 2004), page 20

Figure 1: selected linkages and feedback loops between scarcity issues

Cause... ...effect	Climate	Energy	Land use	Water	Food
Climate		Fossil fuel emissions drive climate change Some air pollution dampens climate change by reducing radiative forcing Energy security concerns may lead to more coal	Deforestation leads to methane emissions as trees decompose	Water a highly energy intensive industry (energy = 40% of water cost in developing countries) Groundwater depletion leads to higher energy use for extracting / desalinizing water	CO2 emissions from agriculture energy use (cultivation, processing, refrigeration, distribution) Methane emissions from livestock, rice cultivation
Energy	Climate change demands retreat from fossil fuels, investment in new energy systems Extreme weather can impact oil production (e.g. hurricanes in Gulf of Mexico)			Water a highly energy intensive industry (energy = 40% of water cost in developing countries) Groundwater depletion leads to higher energy use for extracting / desalinizing water	Agriculture a major consumer of energy, both directly (cultivation, harvest, processing, refrigeration, distribution) and indirectly (fertilizer, other inputs)
Land use	Desertification will increase with climate change	Biofuel cultivation leads to increase in demand for cultivable land Deforestation for firewood		Changes in water management (dams, irrigation etc.) can affect land downstream	Increased demand for agriculture land competes with alternative land uses Deforestation for agriculture
Water	Climate-driven changes in precipitation; increased droughts Changes in water availability e.g. through glacial melting	Higher energy costs can lead to higher water costs because of energy used in extracting / pumping / processing it	Changes in land use can affect water management (e.g. wetlands can create resilience to flooding)		Increased water use for irrigation can affect water resources (e.g. shrinking of Aral Sea)
Food	Short term yield variance due to rising temperatures Reduced yields through extreme weather events Reduced yields through changes in precipitation and water availability	Higher energy prices lead to higher food prices as input costs increase (energy, fertilizer) Biofuels create arbitrage relationship between food and fuel, pulling food costs upwards in line with energy	Land and soil degradation reduces acreage available for expanding cultivation	Lower water availability has negative effect on crop yields, can make some crops unsuitable for area	

Common drivers, common implications

As well as being related to each other through cause and effect, scarcity issues also share many of the same drivers and implications.

Demand for energy and food – and for ‘atmospheric space’ for greenhouse gas emissions – is rising, as is demand for land and water. As already noted, the principal driver in each case is the growing size and affluence of a ‘global middle class’ that spans both developed and emerging economies. While the new global middle class enjoys high living standards across the board, especially important for scarcity issues are its *energy use* (larger homes, increased mobility, energy used to manufacture and move consumer goods) and its *diet*, which is more resource-intensive because of its higher levels of meat, dairy products and processed food. Population growth is also significant, although global population growth has slowed in recent decades and will – if present trends continue – stabilize later this century.

Second, there is increasing awareness of limitations to **supply** growth of the same goods. However, there are important distinctions. Food is a renewable resource while fossil fuels are not; a stable climate is a global public good (i.e. if it exists, everyone automatically enjoys it, and no one can be excluded from its benefits), while the same does not apply to energy and food. Nonetheless, the similarities outweigh the differences, especially the high cost of investment in growing the global supply of energy, food and capacity to absorb greenhouse gases (through carbon capture and sequestration, afforestation etc.)

Third, the confluence of rising demand and limited supply growth implies the risk of **inflation**. Energy and food prices are already the two principal drivers of global price inflation, which is rising all over the world (and into double digits in many developing countries).²⁴ The same trend can be expected to apply to carbon prices in any future policy framework that aims to stabilize the climate through internalizing the cost of climate change into price mechanisms.

Another implication of a tight overall supply picture on energy, food and (in the future) carbon is the probability of price **volatility**. In part, this is simply due to the fact that with relatively low stock levels, ‘buffers’ against price volatility have been removed; the relatively inelasticity of both supply and demand on both food and energy also contributes to the problem. On top of these factors, policy interventions by governments – such as the recent reductions or suspensions of food exports by a range of countries – can further compound the problem.

In the background, there is the emergence of long term concerns over **security of supply**. There has been considerable discussion in recent years of China’s policy of seeking to forge long term bilateral purchase agreements for energy resources with a range of countries in Africa and elsewhere, while US troop deployments in the Persian Gulf have also contributed to other countries’ security of supply assessments.

More recently, China, Saudi Arabia and other countries have sought to ensure the security of their food supply through similar long term purchase agreements (or indeed through outright purchases of land in third countries); other countries (such as the Philippines) are aiming for self-sufficiency in strategic staple foods.²⁵ Similar concerns about ensuring adequate ‘space’ for economic and development needs are discernible in countries’ acute concerns about national competitiveness in discussions about the allocation of a global carbon budget in future climate change policy.

²⁴ The Economist, “An old enemy rears its head”, 22 May 2008, available at <http://tinyurl.com/5ej3ro>

²⁵ Jamil Anderlini, “Beijing looks at foreign fields in plan to guarantee food supplies”, *Financial Times*, 9 May 2008; Paolo Romero, “Arroyo: RP to become self-sufficient in rice supply by 2013”, *Philippine Star*, 11 June 2008, available at <http://tinyurl.com/5kqo4d>

Next, the effects of all of the scarcity issues discussed here will tend to have disproportionate impacts on **poor people and poor countries**. Poor people spend a much higher proportion of household income on energy and food than more affluent consumers: in the case of food, between 50 and 80 per cent.²⁶ The World Bank states that 30 countries have already experienced riots as a result of food or energy prices; as the process of rural to urban migration continues apace in developing countries, these trends may become more acute as consumer discontent becomes more concentrated and visible.²⁷

Food and energy inflation also pose significant challenges for the balance of payments position of import-dependent developing countries. According to a survey of thirteen sub-Saharan African countries conducted last year by the International Energy Agency, for example, the increased cost of oil in these countries represented 3 per cent of their GDP, more than the sum of debt relief and aid received over the past three years by the countries.²⁸

Finally, it is important to note how **distributed** scarcity issues are – in that they involve the beliefs, behaviours and decisions not just of a few thousand leaders and policymakers, but of *hundreds of millions* of actors, including companies, organisations and individual people. Consequently, any policy response to these issues raises questions of **influence** – where governments often struggle, as efforts on other influence-related challenges such as HIV prevention or counter-radicalisation demonstrate. On scarcity issues, effective influencing will often depend on credible assurances that individual action will be matched by others (“I will if you will”).

To sum up, then, the core challenges posed by scarcity issues are essentially as follows:

- Invest in growing the **supply** of key resources (food, energy, atmospheric space) as far as possible, subject to sustainable limits;
- Seek to bring global **demand** levels within these sustainable levels;
- Manage global **competition** for key strategic resources to avoid the risk of resource competition turning into conflict;
- To safeguard the position of **poor people**, who are more vulnerable to the effects of scarcity issues, and have less voice in policy debates about them;
- Mitigate, as far as possible, the negative **impacts** of a turbulent process of global **transition** through investment in resilience.

So how is multilateralism positioned to cope?

²⁶ Simon Maxwell, “Will rising food prices derail development efforts?”, ODI blog, 29 February 2008, at <http://blogs.odi.org.uk/blogs/main/archive/2008/02/29/5520.aspx>.

²⁷ The Economist, “Taking the strain”, 8 May 2008

²⁸ Ed Crooks and William Wallis, “Africa aid wiped out by rising cost of oil”, *Financial Times*, 28 December 2007

2: Reforming Multilateralism

Unfortunately, while international collective action is a pre-requisite for managing scarcity issues to a successful conclusion, today's multilateral system is badly configured for the job. The reasons why can be simmered down to three: the problem of fragmentation; the opposite problem of over-centralisation; and the limits to action by states.

Too much fragmentation

Over the last five years, a succession of international commissions and high level task forces has reviewed the capacity of the UN and the multilateral system to deal with the emerging global issues of the 21st century. Two reports – the High Level Panel on Threats, Challenges and Change (2004) and the High Level Panel on System-Wide Coherence (2006) – were especially important. While they focused primarily on conflict issues and development assistance respectively, both referred to the importance of energy, environment and resource scarcity issues as well. The first of the two was blunt about the poor configuration of the international system for dealing with scarcity issues, noting that:

“Rarely are environmental concerns factored into security, development or humanitarian strategies. Nor is there coherence in environmental protection efforts at the global level. Most attempts to create governance structures to tackle the problems of global environmental degradation have not effectively addressed climate change, deforestation and desertification. Regional and global multilateral treaties on the environment are undermined by inadequate implementation and enforcement by the Member States.”

The second High Level Panel took up the theme, arguing that “fragmented institutional structures do not offer an operational framework to address global issues, including water and energy”, and added that “the inadequacy of the current system is the result of having outgrown its original design”.

This theme of fragmentation into ‘stove-pipes’ or ‘silos’ was very much at the heart of the concerns of both High Level Panels, not just on scarcity issues but across *all* global issues. One of the most significant sections of the first High Level Panel is worth quoting at length to illustrate the point:

“The fragmented sectoral approaches of international institutions mirror the fragmented sectoral approaches of Governments: for example, finance ministries tend to work only with the international financial institutions, development ministers only with development programmes, ministers of agriculture only with food programmes and environment ministers only with environmental agencies....

“Existing global economic and social governance structures are woefully inadequate for the challenges ahead. To tackle the challenges of sustainable development countries must negotiate across different sectors and issues, including foreign aid, technology, trade, financial stability and development policy. Such packages are difficult to negotiate and require high-level attention and leadership from those countries that have the largest economic impacts. At the moment, there is no high-level forum which provides leaders from large industrial and developing economies a regular opportunity for frank dialogue, deliberation and problem-solving.”

Yet despite these explicit recognitions of the problem, neither report made clear exactly what needed to be *done* in order to overcome fragmentation and so manage scarcity trends effectively.

Admittedly, the second High Level Panel did put forward at least two specific recommendations: that the UN Secretary-General commission an “independent assessment of international environmental governance”, and that “an upgraded UN Environment Programme should have real authority as the “environmental policy pillar of the UN system”. But neither of these proposals has been taken forward since the publication of the Panel’s report – and even if they had been, there would still be the problem that scarcity issues fit awkwardly into the “environment” box.

True, climate change is often seen as an ‘environmental’ issue – although it is so cross-cutting that it could just as easily be seen as an economic, security or developmental issue. But even then, food and energy security fit much less neatly into the ‘environmental’ frame.

As a result, the upgraded environmental institutions proposed by the second High Level Panel would still cover only a fraction of the range of scarcity issues – when (as argued earlier) the real need is for an integrated perspective across all of the issues. An approach to reform that takes “environment” as its starting point hence risks reinforcing fragmentation rather than overcoming it – and would in any case fail to address the further problems of fragmentation that apply to food and energy.

While the UN’s Food and Agriculture Organisation theoretically leads on food, in practice this responsibility is shared with two other agencies (also based in Rome): the World Food Programme, responsible for emergency food aid, and the International Fund for Agricultural Development, designated as the UN system’s financing mechanism for agricultural aid.

Relations between the three agencies are variable, and co-ordination minimal. Part of the problem is that while WFP is part of the ‘core’ UN system, the same is not true of FAO and IFAD – which, as ‘specialised agencies’, have intergovernmental governing bodies that are entirely separate from the General Assembly, leaving them largely exempt from co-ordination by the UN Secretary-General. Moreover, while WFP and IFAD are generally seen as effective agencies in their areas, the same cannot be said of FAO, which suffers from pronounced organisational weaknesses including excessive bureaucracy and weak leadership.

On energy, meanwhile, there is no multilateral agency with a mandate to look at all aspects of the issue. The International Energy Agency is supposed to represent major consumer countries, but its 27 members are all OECD countries – hence leaving out key emerging economies including China and India. Although the Organisation of the Petroleum Exporting Countries (OPEC) is generally thought of as the major body representing producer states, in fact well over half of the world’s oil is produced by non-OPEC countries.²⁹ Yet the most fundamental incoherence on energy is the obvious one: that with consumer and producer states represented by two different institutions in two different cities, it is wholly unclear where any discussions about a comprehensive approach encompassing both producer *and* consumer interests would take place.

Finally, there is a further set of international institutions that are crucially important to scarcity issues, but which are effectively outside the UN system. Of these, the most important are probably the three main international financial institutions: the World Bank, International Monetary Fund and World Trade Organisation. While the first two are technically specialized agencies of the UN system (like FAO), all three are in practice wholly independent of it.

All in all, then, while the UN’s two recent High Level Panels on multilateral reform were right to point towards the need for a more integrated approach – both to scarcity issues and to a wider set of global risk issues – neither report really made clear how this should be achieved in practice. As

²⁹ Source: US Energy Information Administration (<http://www.eia.doe.gov/emeu/cabs/nonopec.html>)

scarcity issues becomes steadily more acute in their impacts and their political salience, so this ‘unfinished business’ in multilateral reform becomes more pressing.

Too much centralisation

If fragmentation is already widely recognized as a problem in both governments and the international system, the solution most often turned to is the opposite: centralisation.

At the national level, many heads of government have sought to improve the coherence of policy, political strategy and communications by centralizing decision-making into Prime Ministers’ Offices, Chancelleries, Cabinet Offices and National Security Councils. Internationally, the same dynamic is replicated through the increasing delegation of difficult problems to head of state level summits – most notably the G8 / G8+5, but also a range of regional forums (such as the European Council or APEC) and issue-specific summits at heads’ level (such as the UN Secretary-General’s High Level Event on Climate Change in September 2007, or the FAO food summit held in Rome in June 2008).

The advantage of centralizing decision-making in this way is that heads have the big picture, and are – in theory, at least – better able to see the linkages, interdependencies and trade-offs between multiple issues. The drawback, though, is that heads have heavily constrained resources. Their own time is at a premium, and their (relatively small) staffs are often directed towards firefighting immediate term crises rather than looking to longer term agendas.

The track record of the G8 in the decade since it expanded to include Russia at the Denver summit demonstrates the problem. While the G8 has occasionally agreed important new policy frameworks during the last decade – notably the Global Fund to Fight AIDS, TB and Malaria (Genoa, 2001), the Proliferation Security Initiative (Evian, 2003) and developing world debt relief (Gleneagles, 2005) – its outcomes have tended towards ‘initiatives’ more notable for short term media coverage than long term progress on difficult issues. In particular, G8 heads have tended not to agree deals that would entail significant domestic implementation commitments.³⁰

Debate continues on the possibility of enlarging the G8 to become a G13, a G18 or an ‘L20’ (the same countries as belong to the G20 Finance Ministers’ group, but at the leaders’ level – hence ‘L’), and there are certainly important questions about the legitimacy and effectiveness of a de facto global leaders’ forum that does not include emerging economies such as China and India as full members. However, the track record of the G8 suggests that it is necessary to ask whether this model of decision-making forum would be able to deliver comprehensive deals on scarcity issues *whichever* countries are around the table.

As discussed earlier, political will is part of the picture. But another important issue is the adequacy of mechanisms used to prepare the agenda for such summit meetings – specifically, the network of ‘sherpas’ nominated by heads to represent them in preparatory discussions. While sherpas are supposed to add more capacity to the negotiation process through their series of meetings in advance of summits, in practice they will often themselves be almost as busy as the leaders they represent: typically, sherpas will be the Permanent Secretary of the Ministry of Foreign Affairs or another position of equivalent seniority.

³⁰ For a fuller discussion of the G8 and proposals for a new global leaders’ forum, see Alex Evans, *A New Global Leaders’ Forum? Comparing and evaluating recent proposals*, New York: Center on International Cooperation, 2007 (available at <http://www.cic.nyu.edu/internationalsecurity/docs/newgloballeadersforum.pdf>)

So while head of state level gatherings may be better placed to see the big picture and agree deals that cut across sectoral lines, it is not clear that they have the capacity to handle the highly technical complexities involved in scarcity issues. Centralisation is not the same thing as coherence.

The limits of state action

A further problem with centralized approaches is that they overlook the extent to which non-state actors have become major foreign policy players in their own right. This is not so much a question of the power of single issue NGOs (who, whilst effective at putting issues onto the multilateral agenda in the first place are arguably less effective at influencing negotiations once underway) or of multinational companies (whose influence on most multilateral processes, with the possible exception of trade, is often over-stated), as a more general observation about the distributed nature of scarcity issues and other global risks.

What happens internationally on climate, energy and food is the result of the decisions, beliefs and behaviours of hundreds of millions of people and organisations, rather than a few hundred diplomats involved in a multilateral negotiation. On climate, while it is governments that must negotiate the successor agreement to Kyoto, the effect that such an agreement is intended to secure is a change in companies' investment decisions and individuals' consumption patterns. Similarly, while it is the supply side of food and energy that is currently the main focus of governments' attention, it is on the demand side that the principal drivers of current high prices are to be found. In the long term, solutions will also require action on the demand side of the equation.³¹

Because of this, governments and international agencies have to think about questions of influence: to attempt to tackle scarcity issues or other distributed global risks is also (by extension) to engage in public diplomacy. However, influence is undermined by the perception of unaccountability or of a remote international bureaucracy seen to think that 'it knows best'.

If non-state actors arrive at such conclusions about intergovernmental action, then they can wield their own influence to try to halt it. One obvious recent example of this is the rejection of Europe's Lisbon Treaty by Irish voters in a referendum (which followed earlier rejection of Europe's draft constitution by French and Dutch voters in 2005). As well as demonstrating how publics can sink ratification processes, these examples also arguably show public concerns to maintain national sovereignty, coupled with a scepticism of international bureaucracies, even in Europe – generally seen as the continent most open to ceding sovereignty upwards.

There are real risks that something similar could happen on climate change – the scarcity issue closest to an international deal – if publics perceive that policymakers are moving beyond the political space available for a global deal.

As noted earlier, polling data suggests that while majorities in a wide range of countries see climate change as real and urgent, there is so far less willingness to consider fundamental changes in lifestyle. If such concerns became fused with a narrative of unaccountable international bureaucracies seeking to constrain individual freedoms – a narrative that climate skeptics could be expected to promote – there would be a clear risk of pushback from non-state constituencies. David Steven has argued that progress towards a global deal is hence comparable to a game with the opposite dynamic to chess: as the endgame moves closer, more pieces flood the board as constituencies mobilize to protect their interests.

³¹ For a fuller discussion of this area, see Alex Evans and David Steven, *Towards a theory of influence for twenty-first century foreign policy: the new public diplomacy in a globalized world* (available at <http://tinyurl.com/6k2ydo>)

As a result, it is essential for the success of multilateral management of scarcity issues that such collective action is built on genuine buy-in from diverse publics, together with real commitment to the principle of subsidiarity – so that it is clear that only policy that *must* be made at the supranational level, is.

Towards a distributed approach

In order to manage scarcity issues more effectively, then, multilateralism faces a twofold challenge. First, it must overcome the problem of fragmentation between sectoral ‘silos’ that constantly bedevils the need for an approach that connects the dots between issues and recognizes the linkages and trade-offs involved. At the same time, secondly, multilateral collective action must avoid the trap of over-centralisation, aiming instead for a more decentralized approach – both because public acceptability is at a premium where scarcity issues are concerned, and simply because centralized approaches lack the capacity to deal with such complex issues comprehensively.

With these requirements in mind, what might a more effective approach look like? In essence, by starting from an analysis of function rather than form.³²

Previous reform initiatives have arguably concentrated too much on the organisational paraphernalia of multilateralism: the summits, bureaucracies, treaties and communiqués. The rate of return on political capital expended on these areas is low, as the 2005 UN reform process demonstrated. Instead, policymakers should start from the question of what outcomes the multilateral system needs to deliver. Specifically, multilateralism should help to provide three shared public goods that – shared operating systems, shared awareness and shared platforms.

Shared operating systems

Shared operating systems, first, are the ultimate objectives in managing scarcity issues and other global risks. In our paper, we argued that multilateralism is often at its best when it goes unnoticed: when, in other words, it presides over a stable system that ticks quietly along, providing a public good with minimal fuss.

For example, no airplane flies without shared global standards for air traffic control, safety and security checks; yet passengers never need to stop to think about these systems. Another example is the international banking protocols that make it possible to send remittances around the world. The fact that both systems are organised by the private sector is besides not the issue: the important point is that the *function* is delivered, regardless of the *form* the operating system takes.

In the context of managing scarcity trends, then, shared operating systems would take the form of comprehensive global policy frameworks that manage the full duration of the transition to a sustainable situation (‘full term’ as opposed to merely ‘long term’). For example, a full term climate framework would be designed not only to set out emissions targets for the next five or ten years, but to manage the problem all the way to achievement of the UN Climate Convention’s ultimate goal of stabilizing greenhouse gas concentrations in the air at a safe level. At the same time, full term frameworks also need to be flexible enough to be adapted over time to take account of changing circumstances: for example, a globally agreed upper limit on CO₂ levels in the air would need to be revisable to take account of new science findings as they become available.

³² The arguments set out in this section are explored more fully in Alex Evans and David Steven, *Shooting the Rapids: multilateralism and global risks*, Global Dashboard, 2008 (available at <http://tinyurl.com/3jft8q>), which is where the concepts of shared awareness, shared operating systems and shared platforms were first set out as a set.

In reality, of course, it is not possible to jump directly to shared operating systems; if it were, there would be no problem. This is where shared awareness and shared platforms enter the picture.

Shared awareness

Building shared awareness – a common understanding of an issue that can lead to a common vision or solution – is the first step in the process of identifying and working towards shared operating systems.

One of the best examples of this process in action is the Intergovernmental Panel on Climate Change. In its 20 years of existence, the IPCC has institutionalised the connection between climate scientists and the international community. It has also functioned as an anchor for conversation and debate on the issue, and been responsible for helping bring together governments, businesses and civil society. Without its influence, there would have been little prospect for a concerted and comprehensive attempt at climate stabilisation.

By contrast, many intergovernmental summits (especially at the leaders' level) are notable for their failure to produce real shared awareness of common challenges and countries' positions on them. Summits are usually too formal and rushed to produce such an outcome – a critique that was central to Giscard d'Estaing's original vision for the G8 when it first met at Rambouillet in 1975, but has arguably been lost since. The problem of limited capacity in the sherpa networks tasked with preparing summit agendas further reinforces the problem.

But to return to the themes of the section on centralisation above, shared awareness also needs to extend further than just intergovernmental negotiations. While numerous multilateral talking shops demonstrate clearly that there is no point in undertaking 'stakeholder dialogue' for the sake of it, shared awareness must nevertheless be broad enough to include as many relevant players as possible – including outside governments and international agencies – and deep enough to bring in all relevant expertise (which, again, may well be in the non-state sector).

Ultimately, then, shared awareness is “a systematic attempt to ensure that all actors are working from an agreed evidence base; that they share an analysis of what changes are needed; and that they are using a common language”.³³ Although building this capital is a process that takes time, it is a step that cannot be skipped over: to do so risks policy that is either poorly designed or that has little chance of securing political agreement – from publics as well as policymakers.

Shared platforms

Finally, leaders need to build *shared platforms* – coalitions of governments, international institutions and non-state actors – to open up political space for shared operating systems. Shared platforms are the intermediate step in the troika: the process is moving from awareness to action, but not yet as far as the stable endpoint of shared operating systems.

As good example of shared platforms in action is the global international development campaign organised in advance of the 2005 G8 and World Summit (variously called Make Poverty History, the One Campaign and the Global Call to Action on Poverty). The coalition was effectively a partnership between civil society and governments that wanted to push for change, and trigger more aid, fairer trade and increased debt relief. Whilst the campaign was not intended to be a comprehensive solution on international development – an operating system – it aimed to work towards one by building political support and then channeling it towards specific ends. Shared

³³ Ibid.

platforms, then, are about the development of advantageous political conditions in which it is possible to start moving towards the endpoint of shared operating systems.

Governments can rarely, if ever, hope to control such coalitions; but there is nonetheless much that they can achieve by working inside them and with them. As with shared awareness, the important point for governments and international agencies to recognize is that they are just one among a diverse array of participants in international conversations about managing global risks. While such a recognition may not come easily for leaders used to top-down approaches, the fact remains that governments no longer have a monopoly over foreign policy – and that multilateralism is still catching up with that fact.

The centrality of narrative

Finally, it is worth noting one last point: the central importance of *narrative* to shared awareness, platforms and operating systems.

As the history of public perceptions of climate change shows, the way that people perceive global issues is by no means driven only – or indeed primarily – by facts, evidence and rational argument. In reality, narratives, images, values and personal relationships (“what ‘people like me’ think”) are all at least as important.³⁴

At present, an increasing number of political leaders is becoming increasingly explicit about the scale of the global challenge ahead. At the same time, however, few of them have yet made clear to audiences either at home or abroad what meeting that challenge will mean for individuals. As a result of the lack of parity between the ‘problem’ storyline and its ‘solutions’ counterpart, audiences often assume that either the scale of the problem is being exaggerated, or that it is already too late for solutions. As the climate change expert Simon Retallack puts it, “Stressing the large scale of global warming and then telling people they can solve it through small actions like changing a light bulb evokes a disconnect that undermines credibility and encourages people to think that action is meaningless.”³⁵

There is a pressing need for greater honesty about the essential unsustainability of many individuals’ current consumption levels – as well as emphasis of the key point that consumption levels need not be equated with standards of living. But at the same time, it is also essential that leaders paint a clear picture of where the world may hope to arrive if it rises to the challenge posed by scarcity issues.

Narratives about Malthusian overshoot-and-collapse scenarios, of increasing instability and conflict, of ‘not enough to go around’ are not only demoralizing: they also risk becoming self-fulfilling prophecies if they then lead to irrational, knee-jerk policy decisions made on the basis of fear.

By contrast, there are clear advantages to promoting narratives that make clear that while the world is indeed entering a period of turbulence, the process should be understood as a *transition to a new stable state* in which all can flourish. The advice of the Book of Proverbs – that “where there is no vision, the people perish” – should be taken seriously by leaders as they consider the new scarcity agenda.³⁶

³⁴ See Alex Evans and David Steven, *Climate Change: the State of the Debate*, New York: Center on International Cooperation, 2007: available at http://globaldashboard.org/wp-content/uploads/2008/06/State_of_the_Debate.pdf

³⁵ Simon Retallack, *Ankelohe and beyond: communicating climate change*. Available at http://www.opendemocracy.net/globalization-climate_change_debate/ankelohe_3550.jsp

³⁶ Book of Proverbs 29:18

3: Shared operating systems for scarcity issues

The previous section set out the theoretical outline of a more effective multilateral approach to managing scarcity issues. What might it look like in practice?

Start by asking what kinds of new or renewed shared global operating system might be needed. Which policy frameworks *have* to sit at the global level – rather than regional, national or lower – and where are there gaps in the multilateral system’s capacities?

Inevitably, the list of five policy areas that follows is neither comprehensive nor precise. Many of the categories overlap; and as the previous part of the paper has already set out, shared awareness must be built up first before any definitive list can be produced. But with these caveats stated, the following list sets out a selection of example areas where agreement on shared global operating systems may be needed.

1. A full term climate framework

The single most important operating system priority among scarcity issues is to agree a comprehensive full term framework for managing climate change. In part, this is because of the seriousness of the impacts across multiple sectors (food production, water availability, risks to health, extreme weather effects, conflict risk, potential for refugee flows, the risk of abrupt and irreversible ‘positive feedback’ effects). The urgency of agreeing a full term plan is further increased by the rapidity with which concentrations are rising, and by growing evidence that the earth’s natural carbon sinks, such as oceans and forests, are breaking down and absorbing progressively less CO₂.

As noted earlier, Article 2 of the 1992 UN Climate Convention is explicit that the goal of climate policy is to stabilize greenhouse gases “at a level that would prevent dangerous anthropogenic interference with the climate system”. States have yet to quantify this level; it is difficult to see how any full term framework can be agreed until they do so.

However, the political problem with attempting to begin discussions on this central issue revolves around the issue of developing country targets. Any formal ‘stabilisation target’ will entail the definition of a global ‘emissions budget’ that shrinks year-on-year to ensure that overall greenhouse gas levels in the air remain below that ceiling. This will in turn mean that all emitters – including developing countries – will need to take on quantified, binding emissions targets.

So far, few countries have showed willingness to initiate serious discussion about the equity principles that would underpin a global allocation of emissions permits (which, assuming that they were tradable, would also be a valuable asset). At present, countries’ emission levels are broadly proportionate to the size of their economies. However, many developing countries have made clear that they will only be willing to take on quantified emissions targets if allocated in proportion to population, rather than wealth.

The most widely discussed way of reaching a compromise between these two positions is through a gradual process of convergence to equal per capita emission rights, that takes place over a negotiated timescale (such as 30 years); proponents of this approach include Angela Merkel, Nicolas Sarkozy, Manmohan Singh and a range of senior international opinion formers including Sir Nicholas Stern, Jeffrey Sachs and Kemal Dervis.

However, whatever allocation method is selected, the essential point from a risk management point of view is simply that a global carbon budget is defined and allocated between the world’s countries; until this is done, the problem of climate change is not being comprehensively managed.

2. Security of supply and the world trade system

As noted earlier, many countries are already showing acute security of supply concerns on both oil and food. Competition for energy resources is already visible in Africa, the Middle East and the South China Sea, to give just three examples, with major importing countries showing concerned that rivals are seeking to 'lock up' supplies: while the US accuses China of trying to 'lock up' African oil supplies through the use of long term bilateral contracts with producers, for instance, China worries about the strategic implications of a long term US troop presence in the Persian Gulf.³⁷

On food, meanwhile, countries including China and a range of Gulf countries are using similar strategies, either through long term purchase options, or through leasing land (or buying it outright) in third countries. Other food importers, such as the Philippines, are attempting to become self-sufficient in key food commodities. The concerns leading to such actions have been amplified dramatically by recent export reductions or suspensions by key producer countries including Argentina, Kazakhstan, Vietnam and India: many countries' trust in liquid global markets has been seriously damaged.³⁸

In the background, there is the fact that although the world has a rules-based trade system – with the WTO, and its binding dispute resolution mechanism, at its heart – this system was built for very different conditions to the ones that obtain today. In essence, the WTO is designed to mediate disputes between states over market access, dumping and so on: the kinds of disputes that arise in a buyer's market. However, as food and energy costs have soared and security of supply concerns have proliferated, the world has moved into a seller's market on these goods. Yet despite the acute concerns over export restrictions, long term contracts and so on, the WTO has been sidelined as it is simply not relevant to these issues as currently configured.

If security of supply concerns continue to grow in the future, it will become increasingly important to develop global agreement on global trade principles that can manage such concerns safely and minimize the risk of damaging resource competition.

In the case of energy, it is pointless to try to address concerns on oil security of supply without fully taking climate change objectives into account at the same time. As oil prices have risen inexorably in recent weeks, they have exposed the chronic lack of join-up across the two policy areas: so for example the UK's Prime Minister Gordon Brown flew to Saudi Arabia to call for increased oil production in order to lower prices less than a week before making a series of major policy announcements to highlight his government's commitment to a low carbon economy.³⁹ A far more integrated approach is needed.

A comprehensive global climate change framework of the kind proposed a moment ago could help to address oil security of supply concerns too, by providing long term predictability on future demand. Whatever happens on investment in new oil supplies and whenever the peak in world oil production materializes, climate change means that policymakers and publics in oil importing countries must reconcile themselves to progressively higher prices at petrol pumps. At the same time, if these prices exhibit wildly volatile swings and long term unpredictability, the process of

³⁷ David Sanger, "China's oil needs are high on US agenda", *New York Times*, 19 April 2006; Raphael Minder and Demetri Sevastopulo, "Scramble for Asian resources raises fears", *Financial Times*, 1 June 2008

³⁸ Jamil Anderlini, "Beijing looks at foreign fields in plan to guarantee food supplies", *Financial Times*, 9 May 2008; Paolo Romero, "Arroyo: RP to become self-sufficient in rice supply by 2013", *Philippine Star*, 11 June 2008, available at <http://tinyurl.com/5kqo4d>; Alex Evans, *Rising Food Prices: drivers and implications for development*, Chatham House, 2008

³⁹ See for example Andrew Rawnsley, "Don't rely on the boys with the black stuff, Mr Brown", *The Observer*, 22 June 2008: available at <http://tinyurl.com/6zek9p>

transition will be more painful than it needs to be – and oil producers may also lack the incentives needed to invest in energy infrastructure.

However, while a global deal on climate change could replace volatility and exposure to sudden price shocks with transparency and a degree of predictability, these benefits will *only* be realized if that global deal is (a) sufficiently long term, and (b) global in scope – with quantified, binding targets for all countries. The long time horizon matters simply because capital stock lifetimes in the energy sector are so long-run (frequently upwards of thirty years). A climate deal that only provides predictability for, say, a decade ahead is therefore not much use in helping investors to plan. Similarly, a sub-global deal that leaves major energy users out of the framework will also include scope for great uncertainty in energy use (as well, obviously, as emissions).

With food, however, a comprehensive global climate deal would not have the same capacity to act as the principal instrument for managing security of supply concerns (even if stabilizing the climate is nonetheless essential to global food security). Among the elements that would need to be considered in developing a global operating system for food security of supply are:

- **Exporters’ responsibilities.** What responsibilities do major exporters owe to countries that depend on them for imports – for example on maintaining levels of imports as far as possible, or providing notice of intention to reduce export levels?
- **Importers’ responsibilities.** Some oil-producing countries have expressed concerns about uncertainty over the shape of future climate mitigation policies in consumer countries, and how these will affect demand (and hence prices) for oil. Do consumers owe a duty to producer countries to try as far as possible to provide greater clarity on future demand management policies?
- **Managing strategic resource competition.** If supplies of oil and food continue to tighten and competition between import-dependent countries intensifies, then should major powers dependent on imports of key resources consider whether to seek a global agreement on ‘fair shares’ to available resources in order to reduce the risk of friction?
- **Protecting developing countries’ interests.** Some import-dependent developing countries are already struggling to meet the cost of food and fuel imports and face significant balance of payments difficulties. While the IMF’s Exogenous Shocks Facility is intended to help countries facing price shocks, it also assumes that such shocks will be temporary blips – which may not be the case with food and fuel.

A common thread across all four of these potential elements is that none of them offers a total solution to security of supply concerns. Each aims for no more than a ‘least bad’ approach that tries to minimize risks through improving transparency and predictability, and hence allow countries to take domestic policy decisions on an informed basis while trying as far as possible to reduce volatility and the risk of unanticipated shocks.

3. Sharing the costs of scarcity issues

As the first part of this paper has already touched on, the global transition implied by the emergence of scarcity issues is likely to be acutely expensive. Among the various estimates of the investment price tags attached to different scarcity issues by international agencies and experts are the following:

- **Climate change.** The International Energy Agency has estimated the cost of halving global emissions by 2050 at \$45,000 billion, or 1.1 per cent of global economic output (a level

comparable with the Stern Review's estimate that stabilizing CO₂ levels at 500-550 parts per million by 2050 would cost around 1 per cent of GDP). This would equal \$23.600 billion by 2030 on a *pro rata* basis.⁴⁰

- **Meeting energy demand.** The IEA estimated in the last World Energy Outlook that the cost of meeting a projected 50 per cent increase in energy demand by 2030 would entail investment needs of \$22,000 billion in supply infrastructure.⁴¹
- **Investing in agricultural productivity.** The UN Food and Agriculture Organisation has estimated that \$30 billion a year is needed invest in productivity gains in low income food deficit countries.⁴² UN Secretary-General Ban Ki-moon put the same figure at \$15-20 billion.⁴³ The total estimated costs between now and 2030 would therefore be between \$330-440 billion (UNSG) and \$660 billion (FAO).
- **Climate change adaptation.** The UN Development Programme has estimated that an additional financial commitment of \$86 billion per year, or 0.2 per cent of OECD GDP, is needed by 2015 to finance climate adaptation needs in developing countries.⁴⁴ This would total \$1,892 billion by 2030 if the full amount were committed annually from now on.

In reality, of course, these figures mean little. For one thing, there are huge uncertainties involved. For another, the figures above are not really comparable: the first two are global totals, while the latter two apply only to developing countries, for example. And since, scarcity issues are closely interconnected in the real world, money spent on tackling one scarcity issue may well generate wins on others: so money earmarked for climate adaptation may well generate benefits in the context of agriculture as well, for instance.

Nevertheless, even if these figures give no more than a rough estimate accurate only to within an order of magnitude, they do illustrate one central fact (other than the desirability of a full integrated cost assessment): that the transition ahead is unlikely to be cheap. So far, the world has not really started to engage in earnest with *any* of these investment requirements. This may continue to be the case for as long as there is no agreement on how to share out these costs.

Perhaps the most important question at global level on this front is that of who should pay for developing countries' needs – above all technology transfer in the climate change context, and the costs of adaptation and resilience to the impacts of all three scarcity issues – and whether these financial flows should be additional to Official Development Assistance (ODA).

To illustrate the point, it is useful to compare the figures shown above with current global total ODA spend. If one adds the lowest estimate for agriculture (\$330 billion) to the climate adaptation estimate (\$1,892 billion), the total comes to \$2,222 billion between now and 2030, or around \$101 billion a year. This is almost exactly the same as the world spent on ODA in 2007, which according to the OECD was \$103.7 billion – and this is before *any* account is taken of the cost of reducing emissions in developing countries (including China and India).⁴⁵

⁴⁰ International Energy Agency, *Energy Technology Perspectives 2008*, IEA, 2008: available at <http://www.iea.org/Textbase/techno/etp/index.asp>

⁴¹ International Energy Agency, *World Energy Outlook 2007*, IEA, 2007: available at <http://www.worldenergyoutlook.org/>

⁴² FAO press release, "The world only needs 30 billion dollars a year to eradicate the scourge of hunger", 3 June 2008: available at <http://www.fao.org/newsroom/en/news/2008/1000853/index.html>. The figure excludes investment in countries like Russia and Ukraine, where significant productivity gains are in reach, but only with large investment

⁴³ Elisabeth Rosenthal and Andrew Martin, "Leaders speak of their own issues at a conference addressing food shortages", *New York Times*, 5 June 2008

⁴⁴ UNDP, *Human Development Report 2007-2008: "Fighting Climate Change: Human Solidarity in a Divided World"*, UN, 2008: available at <http://hdr.undp.org/en/>. The figure hence excludes the costs of adaptation in developed countries.

⁴⁵ OECD DAC, "Debt relief is down: Other ODA rises slightly", 4 April 2008: available at <http://tinyurl.com/3orrbx>

While the numbers are uncertain, the underlying choice is stark. Developed countries could reallocate *all* current ODA spending – on health, education, fighting HIV, promoting good governance, providing clean water and so on – to scarcity issues, and still not meet the full cost. They could determine that all spending on scarcity issues should be additional to ODA – as developing countries would like – and see their spending on overseas aid double at a stroke. Or they could elect to do nothing – and leave developing countries facing the burden of global challenges that they have done least to create.

4. Enforcement and compliance systems that deliver

At present, most international agreements lack effective compliance mechanisms that can impose penalties when Parties fail to meet or deliver their international obligations. Of the two main exceptions, the first is the World Trade Organisation, which can impose binding sanctions on member countries – a measure described by former WTO Director-General Supachai Panitchpakdi as “the most active international adjudicative mechanism in the world today”.⁴⁶ The second is the UN Security Council, which under Chapter Seven of the UN Charter can mandate the use of armed force to “maintain or restore international peace and security”.

Unfortunately, neither of these bodies can enforce compliance with obligations such as multilateral environmental agreements or finance for development commitments. As a result, compliance tends to be variable.

Despite the regular endorsement by most OECD countries (but not the US) of the principle of giving 0.7 per cent of gross national income to development assistance, most OECD members fall short of this figure: the OECD’s Development Assistance Committee states bluntly that “most donors are not on track to meet their stated commitments”.⁴⁷ At present, the only countries to exceed the 0.7 per cent target are Denmark, Luxembourg, the Netherlands, Norway and Sweden.

Compliance with multilateral environmental agreements is similarly patchy. While MEAs are rarely short of rhetorical flourish in their aspirations, delivery usually falls short. For instance, while Europe is often perceived as being at the forefront of leadership on global climate policy, the most recent data available (2004) shows that of the 15 EU countries with quantified targets under Kyoto, only four – France, Sweden, Germany and the UK – were on course to meet their obligation, and the EU as a whole was also well off target.⁴⁸ In particular, commitments agreed under MEAs on assistance to developing countries – through technology transfer or capacity building, for example – often go unmet.

These regular failures to meet agreed international commitments are corrosive to future agreements, especially on scarcity issues. Future agreements on scarcity issues will rely in part on developing country participation. However, prospects for agreement are corroded if the perception is allowed to flourish that countries can fail to deliver without serious consequences.

These observations have sometimes been used as arguments in favour of a new World Environmental Organisation. However, as discussed earlier, the ‘environment’ frame is not obviously the best lens through which to look at scarcity issues, given that climate change would clearly be included while energy and food might not be; moreover, the fact still remains of the poor rates of return on attempts to ‘redraw the international organogram’.

⁴⁶ Supachai Panitchpakdi, “The WTO at ten: Building on ten Years of Achievements”, in Giorgio Sacerdoti, Alan Yanovich, Jan Bohanes: *The WTO at Ten: The Contribution of the Dispute Settlement System*. Cambridge University Press, 2006.

⁴⁷ OECD DAC, “Debt relief is down: Other ODA rises slightly”, 4 April 2008: available at <http://tinyurl.com/3orrbx>

⁴⁸ European Commission report, COM(2004) 818 final, “Catching Up With The Community’s Kyoto Target”: available at <http://tinyurl.com/3ouzju>

A better approach might be to seek to find ways of using existing international architecture – perhaps especially the WTO – to enforce compliance. If trade is the engine of globalization and scarcity issues are among the principle challenges to globalisation’s future, then it makes sense to try to integrate the two.

5. Crisis management, social protection and resilience

The increasing importance of scarcity issues also means that a reassessment is needed of the international system’s capacity to respond to a wide range of crises. Extreme weather events, crop failures, spikes in the price of energy or food and competition for access to scarce land or water can all lead to humanitarian emergencies, or multiply risks factors for violent conflict.

Inevitably, resilience will primarily be a bottom-up proposition: an attribute that rests mainly with communities themselves as opposed to the international and domestic agencies that respond in emergency situations. This recognition is clearly set out in the Hyogo Framework, a package of multilateral policy measures designed to improve disaster risk reduction, but implementation of it depends on political buy-in at all levels of governance from global to local – and hence much higher profile than the agenda enjoys today.

However, some dimensions of the resilience agenda do unavoidably belong at supranational level, especially in the context of responding to scarcity impacts in the most fragile states or in countries with least capacity to respond.

Part of the challenge will simply be to scale up the number of vulnerable people that the international system is able to assist at any one time. A rough rule of thumb sometimes used at the UN is that the world’s humanitarian system can assist up to around 100 million people at any one time (at present, for example, 73 million people depend on the World Food Programme for assistance). However, as the impacts of scarcity trends increase, the humanitarian system will need to be ready for the possibility of greatly increased numbers of vulnerable people. The same may well apply to the UN’s peacekeeping system as well.

The prospect of more operations that are larger in scope also accentuates existing debates over the need for a humanitarian system that is better co-ordinated. Whilst recent reforms have made some advances in the use of pooled funding arrangements and in the co-ordination role played by the UN Office for the Co-ordination of Humanitarian Assistance at global level and by UN Humanitarian Co-ordinators on the ground, much remains to be done.

Finally and perhaps most importantly, work is urgently needed on how social protection systems – safety nets that can help poor and vulnerable people with the costs of rising food and fuel prices – can be rolled out rapidly. As noted earlier, numerous countries have already experienced riots related to food and fuel inflation, leading to concerns for state stability as well as humanitarian impacts. Many governments are responding to these political tensions by maintaining or increasing subsidies, but these have a range of drawbacks including being a drain on government revenue, potential inflationary impacts and the poor targeting of the assistance.

In response, many aid donors have argued that developing countries should instead use social protection systems, which target assistance (such as cash, vouchers or food) at the poorest and most vulnerable consumers. However, one the main obstacles to such systems is that (particularly in the case of vouchers and food), they require sophisticated distribution systems and institutional infrastructure to administer them – in contrast to subsidies. As many governments lack this capacity, aid donors and humanitarian relief agencies may need to develop a rapid reaction capability that

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allows them to roll such systems out rapidly when prices spike, early warning risk systems are triggered or in the wake of shocks such as extreme weather events.

4. Shared awareness for scarcity issues

As already noted, the list of shared operating systems set out in the last section is no more than a selection of examples designed to illustrate the kinds of global mechanisms that might be needed to manage the transitions ahead. So far, the political space for serious discussion of such mechanisms is by and large not yet available, and relatively little thought has gone into imagining the comprehensive, full-term (as opposed to short-term and incremental) solutions needed.

A process of sustained investment in shared awareness – at leaders’ level, between governments and international agencies, and more widely – is therefore needed as the essential first step towards a multilateralism that can handle scarcity issues. The following section sets out a short set of specific proposals for steps that could be taken now to start building up more multilateral capacity for developing shared awareness on scarcity issues.

In each case, the objective is the same: to imagine the shared operating systems and shared platforms needed, by breaking out of sectoral ‘silos’ that hamper integrated responses, while at the same time avoiding the trap of over-centralisation that leads to reduced legitimacy and a tendency towards short-termism. Each recommendation also shares the underlying intention of increasing the capacity or ‘bandwidth’ of strategic conversations at every level.

(While shared platforms will be a crucial part of multilateral reform, they are not imagined in detail here since the form they take will depend not only on building up shared awareness first, but also on the visions for specific shared operating systems that emerge from that shared awareness when it reaches critical mass.)

I. Shared awareness at leaders’ level

As noted earlier, head of state level summit meetings today are poorly configured for delivering comprehensive results on scarcity issues. But they are also badly designed for delivering shared awareness among leaders. As well as being brief, summit meetings also tend to be highly structured, and heavily geared towards delivering the ‘outcome’ (a communiqué, an initiative) rather than real shared awareness which might act as the foundation for consensus over the kinds of operating system needed.

However, as the American author William Lind observes, “good decisions are far more often a product of informal conversations than of any formal meeting, briefing or process”. He continues with the wry observance that,

“History offers a useful illustration. In 1814, the Congress of Vienna, which faced the task of putting Europe back together after the catastrophic French Revolution and almost a quarter-century of subsequent wars, did what aristocrats usually do. It danced, it dined, it stayed up late playing cards for high stakes, it carried on affairs, usually not affairs of state. Through all its aristocratic amusements, it conversed. In the process, it put together a peace that gave Europe almost a century of security, with few wars and those limited.

“In contrast, the conference of Versailles in 1919 was all business. Its dreary, interminable meetings ... reflected the bottomless, plodding earnestness of the bourgeois and the Roundhead. Its product, the Treaty of Versailles, was so flawed that it spawned another great European war in just twenty years. As Kaiser Wilhelm II said from exile in Holland, the war to end war yielded a peace to end peace.”⁴⁹

⁴⁹ William Lind, “Conversations”, available at http://www.d-n-i.net/lind/lind_3_14_07.htm

In the context of the G8 and other heads' level meetings, then, one step forward might be to return Giscard d'Estaing's original vision for the forum when it first met in 1975 (then as a G6; Canada joined the following year at the behest of the US): a process designed to maximize informal interaction and minimized intergovernmental formalities. In practice, then, leaders could elect to dispense with the communiqué, and instead just decide to *spend more time conversing with each other* with no particular agenda or discussion points.

2. From part time sherpas to virtual secretariats

However, while there may be merit in leaders spending more time in unstructured interaction, this approach is clearly not enough in itself. Leaders' time will always be the political commodity in shortest supply, and so summit meetings will still require mechanisms to prepare for them before they happen and then follow up on them afterwards.

This brings us to the issue of the sherpa system designed to deliver these functions, touched on earlier. As the paper has already discussed, sherpas' capacity to develop high levels of shared awareness among themselves – and hence shared visions of the kinds of global operating system needed for scarcity issues – are heavily constrained by the fact that sherpas themselves have extremely busy schedules. A brief survey of some of the 'day jobs' of current G8 sherpas proves the point: for Japan and Canada, the sherpa is the Deputy Minister for Foreign Affairs; for Germany, the Under-Secretary of State in the Finance Ministry.

The obvious option for creating more preparatory and follow-up capacity for heads' level gatherings would be to create permanent secretariats with permanent staff (such as the UN Secretariat, but on a smaller scale). In practice, however, there would be two obvious problems with such an approach. First, it would fall into the trap of creating a new international bureaucracy (probably creating an array of new turf wars on the way). Second, and more fundamentally, any proposal for a separate secretariat would be unlikely to win favour from member countries, at least if UN member states' reluctance to provide the UN secretariat with new staff posts is any guide.

However, a potential way through would be for countries to set up a *virtual* secretariat, staffed by full time sherpas. These sherpas could split their time between their home capital and time working together. While such an approach would not magically eliminate national differences, it would create much more 'bandwidth' around sherpa discussions than the current system of just a handful of sherpa meetings to prepare for a G8 or other summit.

A variation on the same theme could be developed if governments took up a suggestion made by the World Economic Forum in its 2007 Global Risk Network Report, which proposed that countries should have Country Risk Officers – a position analogous to that of a Chief Risk Officer in the corporate world.⁵⁰ According to WEF, the position would function as “a focal point for managing a portfolio of risk across disparate interests, setting national prioritization of risk and allowing governments to engage in the forward action needed to begin managing global risks rather than coping with them”.

If a critical mass of governments – and potentially international agencies as well – created such positions, this would also create the capacity for a global network to integrate data, expertise and risk management strategies. Once again, the opportunity here is to create additional 'bandwidth' for developing shared awareness and visions for common operating systems.

⁵⁰ See World Economic Forum, *Global Risks 2007: a Global Risk Network Report*, WEF, 2007: available at http://www.weforum.org/pdf/CSI/Global_Risks_2007.pdf. The author was a participant in a number of the workshops leading up to the report's publication.

3. Work towards a culture of interoperability

However, even a virtual secretariat would only be able to go so far in producing shared awareness and overcoming the problem of fragmentation between national governments and international agencies: more shared awareness is needed at working level as well as in and around summit meetings. As Al Gore's former National Security Adviser Leon Fuerth puts it,

“...not only new systems, but also a new bureaucratic culture are required. As we have learned from experience with military reform, networked command and control are essential, but so too is the culture of jointness—the capacity, based on constant practice, of being able to plan and operate seamlessly across jurisdictional lines. The absence of a jointness culture was one of the main causes for the failure of the U.S. intelligence community to head off September 11. It is now exposed as a fundamental cause of the Department of Homeland Security's debacle over Hurricane Katrina.”⁵¹

In part, the challenge of producing what Fuerth calls a “culture of jointness” depends on more intelligent structuring of career paths in governments and international agencies. At present, it is entirely possible for national or international civil servants to spend their entire careers in one agency, or in one city, or working on one specialized issue area – a fact that is entirely antithetical to real interoperability and shared awareness.

Instead, secondments ‘elsewhere’ should be a central, recurrent feature of all staff careers in both governments and international agencies. Experts on one scarcity issue – climate change, say – should be required to spend time working on other scarcity issues. Officials from one department need to spend time in other sectoral departments – or other governments. Staffers in international agencies should do stints working in national governments, and vice versa.

A related point is that there is no substitute for officials from different sectors and agencies spending time working together collaboratively. Talking about joined-up working is not the same as doing it (in the knowledge that the results will be submitted to more senior staff). Fuerth gives the example of structured thinking about possible future scenarios as one kind of useful collaborative working; another might be for officials from different backgrounds to be immersed in simulated situations (‘war games’) in which they can evaluate their own performance after real time exercises.

4. A World Resources Outlook

While there is a World Food Outlook, a World Energy Outlook and (through the IPCC) what is in effect a World Climate Outlook, there is no single outlook report that pulls together a strategic synthesis across all of these issues and explores the linkages between them thoroughly. This matters for three reasons.

The first is simply that an integrated report would provide policymakers with a valuable integrated analysis that they currently lack – and forecast data that fails to take an integrated approach risks presenting a misleading picture. A good current example is provided by a recent report on the world food outlook to 2017, prepared jointly by the OECD and FAO, which forecast that while food prices would remain on average higher than before their current spike, they would also shortly resume their long term decline.⁵²

⁵¹ Leon Fuerth, “Strategic Myopia: the case for forward engagement”, *The National Interest* 83, Spring 2006

⁵² OECD-FAO Agricultural Outlook 2008-2017, OECD & FAO, 2008: available at <http://tinyurl.com/4ymg89>

However, a closer look at the report's assumptions shows that energy and climate change have been factored in poorly or not at all. Faced with uncertainty over the effects of climate change impacts, the report appeared to take *no* quantitative account of the effect of climate change on world agricultural yields – a position hard to square with the more sanguine perspective of the IPCC. On oil, meanwhile, the reports assumes that “prices ... slowly increase over the outlook period from USD \$90 per barrel in 2008 to USD \$104 per barrel by 2017”.⁵³ However, at the time of writing, even the *current* estimate is 50 per cent lower than actual oil prices; futures markets suggest that markets take a more hawkish view of the long term price outlook too. In other words, because the report fails to take the full range of scarcity issues properly into account, it risks conveying a more optimistic impression than might be warranted by a more comprehensive approach.

The second reason that formal international reports of this kind matter is because they have the potential to drive policy action. The role of the IPCC in catalyzing movement on climate change is a case in point.

But it is the third reason that is arguably the most important: since there is no one international agency that covers the full range of scarcity issues, producing such a report would necessarily have to be a collaborative endeavour. Once again, the process of producing such a report would *compel agencies to talk to each other and work together* – in the process developing a wealth of shared awareness about issue linkages, agency perspectives and so on.

The current example of the UN High Level Task Force on the Global Food Security Crisis shows what can be achieved: thanks to high level buy-in from the UN Secretary-General, IMF Managing Director and World Bank President, staffs from both international financial institutions and from a range of UN agencies are working together very effectively to produce not only an integrated policy analysis, but also much improved complementarity in delivery as well.

The same three international agency heads, together with the Executive Director of the International Energy Agency should therefore consider commissioning a World Resources Outlook report that would present an integrated assessment of climate change, energy, food and related issues such as land and water, and which would be prepared jointly by UN agencies (including the IPCC) the World Bank, the IMF and the IEA. There could be no more effective signal of the international system's determination to take an integrated approach across these uniquely linked issues.

5. Towards a more open source approach to policymaking

Finally, there is the fact that shared awareness needs also to break out beyond governments and international agencies – to include diverse publics, companies, NGOs and individual citizens who (owing to the highly distribute nature of scarcity issues and other global risks) have effectively become foreign policy players in their own right – in at least two ways.

First, as noted earlier, non-state actors have the capacity to block global deals if they feel their interests to be threatened or not to have been taken into account: the failure of the EU Constitution and the stalling of the Doha trade round are telling signals of the problems that can arise during negotiation or ratification.

But just as importantly, non-state actors matter because it is with them that the real long-term solutions to scarcity issues can be found. While the role of governments in setting global frameworks is indispensable, these policy frameworks are ultimately needed to manage the competitiveness and equity concerns of the world's citizens, companies and civil society groups – and

⁵³ *Ibid*, p. 15

by doing so, persuade those non-state actors to change their consumption patterns, investment strategies, behaviour, decisions and values towards more equitable and sustainable models.

Ultimately, then, progress towards global deals will depend on *coalitions* – the ‘shared platforms’ of governments, international agencies, companies, citizens, NGOs and the influential voices referred to earlier in the paper.

Governments can deliver a deal only if they have a clear mandate from their domestic constituencies – *and* if they understand the pressures that other governments face at home too, and the capacity to engage these constituencies informally.

Civil society groups have a crucial advocacy role, articulating big picture solutions and amplifying the voices of those who are marginalized in global policy debates – but are currently often hampered by ‘single issue’ focuses on environment, development or other policy areas, that obstruct them in the same way as governments are held back by fragmented ‘silos’.

Businesses have the capacity to obstruct progress on scarcity issues, but will also be central to delivering solutions. For this to happen, however, the needs of companies – in particular their need for greater long-term predictability and transparency in order to reduce investment risk – need to be given greater weight in policy debates.

Finally, many other voices – especially in the media – also occupy crucially influential roles, not only in establishing key reference points in debates, but (more fundamentally) in helping to shape the narratives that others use to frame their thinking about scarcity issues – and whether they see the process ahead as the transition to a fairer and more sustainable globalization, or the slide into a Malthusian story of overshoot and collapse.

Without a strategic approach that draws these diverse constituencies together to build deeper shared awareness about scarcity issues, there is no prospect of developing the shared platforms and operating systems needed. Promoting that shared awareness – an inherently bottom-up process that is inescapably more to do with conversation than with co-ordination – hence needs to become core business for tomorrow’s multilateralism.⁵⁴

⁵⁴ A typology of different approaches to such public diplomacy work is set out in Alex Evans and David Steven, *Towards a theory of influence for twenty-first century foreign policy: the new public diplomacy in a globalized world*: available at <http://tinyurl.com/6k2ydo>