Chapter 3
Making Sense of Sustainable Development in a Changing World

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The report of the World Commission on the Environment and Development (WCED) (titled Our Common Future, commonly referred to as the Brundtland Report) defined sustainable development as ‘…a development that meets the needs of the present without compromising the ability of future generations to meet their own needs’ (WCED 1987, p. 43). The concept has been much debated and criticised (e.g. Redclift 1992; McNeill 2000) and numerous alternative definitions have been proposed (e.g. Pezzey 1992; Robinson 2002). No consensus has been – or is likely to be – reached on any better definition; in part because for most people the concept is normative. What is clear is that the central issue is the potential, or actual, conflict between development and the environment, and hence between the interests of present and future generations.

Since the 1990s, it has been common to distinguish between three dimensions of sustainable development - economic, social and environmental - as summarised in the ESD triangle of the World Bank (Serageldin and Steer 1994), or the definition used by OECD (2001) that sustainable development ‘embodies a concern for taking a broad view of what human welfare entails, and for balancing the goals of economic efficiency, social development and environmental protection’.
Much discussion, both theoretical and practical, has revolved around the trade-offs between the three dimensions - economic, social and environmental – of sustainable development. While ‘the economic dimension’ can include economic growth as well as industrialisation and diversification of the economy, this chapter interprets the economic dimension narrowly - to refer simply to economic growth; while the social dimension covers the issue of equity as well as other social issues such as identity and cohesion.

In particular, there has been a heated ‘economic-environmental’ debate reflecting a range of different viewpoints concerning ‘weak’ versus ‘strong’ sustainability (See Brekke 1997; Pearce and Atkinson 1995). Weak sustainability refers to the view that natural resources can – at least to some extent - be substituted by human-made resources. ‘Strong’ sustainability challenges the substitutability of different types of capital (environmental, economic, and, according to some, social capital), and requires that minimum amounts of the former should be independently maintained. The various positions are well summarised by von Braun (2012), who distinguishes four different sustainability concepts: very strong (Deep ecologists), strong (Cautious ecologists), weak (Ecological touch), and very weak (Growth optimists). Here, we will adopt an intermediate position between the extremes of ‘weak’ and ‘strong’ sustainability, interpreting environmentally sustainable to mean avoiding the risk of major ecosystem disruption.

The relation between economic growth and the environment has been described by some in terms of an environmental Kuznets curve - an inverted U-shaped relation (Grossmann and Krueger 1991; Stern et al. 1996). The hypothesis (and indeed the name) in fact derives from a similar debate long before the concept sustainable development was introduced, concerning the trade-off between economic growth and equity. It was claimed (Kuznets 1955) that as
income levels in a country increase, they first become more and then less unequal. According to this view, as the economy grows the environmental conditions initially deteriorate; but, beyond a certain point, subsequent economic growth can be used to counteract environmental degradation, so that conditions improve again. There are, however, critical arguments that this supposed relation between economic growth and the environment does not hold (Arrow et al. 1995); that the empirical evidence is weak and very sensitive to the econometric techniques that are used (Dinda 2004; Galeotti et al. 2006; Stern et al. 1996). It is certainly arguable that pollution is a very different type of environmental challenge than the use of non-renewable resources or destruction of biodiversity, and that the environmental Kuznets curve hypothesis is valid only for the former.

Another criticism of the environmental Kuznets curve is that the improvement of environmental quality in rich nations may be associated not only with a greater degree of awareness, and changing pattern of demand, as incomes increase, but also the transfer (or externalising) of costs from rich to poorer countries. On a global scale, flexibility in the allocation of resources and increasing interdependence of markets has facilitated a remarkable process of redistribution of economic activities between countries, leading in many cases to what is known as ‘ecological dumping’ (and also ‘social dumping’). The most obvious manifestation of this is the export of hazardous waste from rich to poor countries. A more subtle example is the import of logs from countries where deforestation is excessive to rich countries where forest cover is stable or increasing.

One approach to measure the environmental impact of humanity on the globe is the ecological footprint. Developed by Wackernagel and Reese (1996), this expresses the environmental pressure of production and consumption in terms of land area. Thus the footprint measures the
geographical area per person (in global hectares per capita) needed for production and consumption; the areas being aggregated at the country level. Pollution and climate gas emissions are factored into the footprint. The size of the ecological footprint tends to rise with increasing national income, eventually flattening out at higher levels. But the ecological footprints of countries in the North are well in excess of one (the point at which human activity exceeds environmental carrying capacity), indeed more than four in most cases; such levels of consumption are completely unsustainable if all countries sought to achieve them.

In summary, despite awareness of the environmental damage that is involved, the rich countries of the world have levels and patterns of consumption well in excess of what the planet can bear. The economic growth of rich countries is being fuelled by displacement of production to poorer countries, which thereby depletes their non-renewable resources and generates pollution that accompanies industrial production. The development path being followed by most, perhaps all, countries of the world is clearly unsustainable. But there are no examples of an adequate response to this challenge.

The most ambitious international effort to address global environmental issues, including climate change, was made in the wake of the report of the World Commission on the Environment (the Brundtland report) in 1987. The report’s strong message on the need for deep socio-political change in the light of climate change and other critical environmental problems gained considerable international attention. It formed a mandate for the World Conference on Environment and Development (WCED), the first of its kind, held in Rio de Janeiro in 1992. World leaders assembled to draw up conventions on crucial environmental issues including biodiversity and climate change. The Brundtland report put forward a strong argument for dramatic reductions in global carbon emissions (60 percent over a quarter
century) and argued that the greatest responsibility for reductions should be borne by the
developed countries (80 percent reductions). In the discussions leading up to the summit,
however, the ambition to meet these targets gradually declined. In place of the 80 percent
implied by the Brundtland report, the pre-negotiating position of the developed countries was
a mere 20 percent reduction over 20 years. By the time the conference actually started, this
figure had been lowered to 15 percent. As a consensus on this target began to emerge among
the majority of participants, the negotiations were stalled and eventually blocked by the USA
in a dispute over the numbers but also a dispute - which continues to the present - on whether
the countries of the South should make reduction commitments. The less developed countries,
led by India, felt they should be exempted from targets because they had extremely small
historical carbon emissions and still faced enormous development challenges.

Subsequent efforts to come to a global agreement on CO2 reductions have had progressively
lower ambitions. The Kyoto Protocol of 1995 set national reduction goals for the signing
parties (which did not include e.g. USA, Russia and China) at between 5 and 8 percent
reductions. The most recent (Rio +20) conference in 2012 gave up entirely on a global CO2
reduction goal and fell back on a vague resolution to increase the pace of diffusion of green
technologies. Over this same period of decreasing commitment, the evidence for the
relationship between carbon emissions and climate change has become still stronger. Lack of
international cooperation with regard to climate change can, perhaps, be readily explained:
this is a classic example of the free rider problem, where no one country will significantly
benefit from reducing emissions unless all the major emitting countries also do so
(exacerbated by the fact that latecomers can legitimately argue that they bear less
responsibility for historical emissions). But why is there also so little action at the national
level, to promote development that is environmentally sustainable? In the next section we
argue that the primary reason is the growth imperative that dominates thinking about progress and development at every level of society from national government to household. Despite growing evidence of impending ecological crisis related to climate change, national governments, no matter how rich the country, have not seriously challenged the economic growth imperative. We will argue that in recent years, ‘green economics’ has been promoted as the means to reconcile economic growth and reduced environmental impact, most notably at the Rio+20 Conference in 2012, but there is little reason to believe that this is a credible solution.

**Why sustainability has failed**

Why this lack of commitment to a low carbon transformation – and, more generally, to a more environmentally sustainable development? The answer to this was encapsulated in an unusually candid remark during the Rio negotiations by then President George Bush: ‘The American way of life is not up for negotiation’. He understood quite well that the use of fossil fuel energy permeates every aspect of daily life in the developed countries, from industrial production to virtually every domain of household consumption, including food, shelter, cleaning, travel and recreation. A commitment to significantly reduce carbon emissions would involve a transformation of these highly valued, and carbon intensive contributions to the American ‘way of life’; something Bush and other national leaders were not willing to commit to. This reluctance with regard to carbon reductions contrasts with a willingness to act on some other global environmental problems of the 80s, notably acid rain and ozone depletion. These problems could be resolved through regulating industries, end of pipe ‘scrubbing’ of pollutants and replacing problematic chemicals with less harmful ones. None of these changes seriously affected everyday lives of ordinary citizens. Nevertheless there
were political challenges, and it is interesting to study why industry suddenly turned around on the ozone issue (Levy and Newell 2002).

Combating climate change through a transition from high to low energy use in the rich OECD countries would demand a radical change in the politics and practices related to economic and social development. It would challenge the fundamental axioms of economic growth and free markets, both of which are deeply embedded in the political economies of the rich countries of the world and, as several of the chapters in this volume will explore, have rapidly penetrated the political economies of the emerging economies. In North America, Europe, and increasingly in emerging economies such as China, India and Brazil, the association of wellbeing with economic expansion and free markets is promoted by and for every societal level and sector, from business to household. The development paradigm was encapsulated by Max Weber (as paraphrased by Welzer 2011, p.24): ‘a model of the economy, society and the subject that … relentlessly promotes productivity increases; a fuel that keeps the machinery running; and a form of civilization that endows all of its members with a biographical model that stipulates interminable, self-transcendent growth’. This development paradigm embodies a vision of the future that is incompatible with sustainability. Aside from a few nationally commissioned studies to explore the way economic growth is measured (France), or the consequences of low growth or no growth economics (Great Britain and Germany), the axioms of current development have not been seriously challenged by national governments in the rich OECD countries. Belief in unfettered growth, free markets and increased productivity has also penetrated international development models and agencies (Klein 2007).

These axioms of development have persevered despite ample evidence that the environment continues to degrade and global social imbalances remain unaddressed. Carbon emissions
have increased by 80 percent since 1970 and 40 percent since 1990 (Jackson 2009, p.69). A fifth of the global population earns 2 percent of the global income while the richest 20 percent earns 75 percent. (Ibid.). The doctrine of unlimited growth and free markets has persevered despite powerful theoretical critiques not only from an ecological perspective, but also from neo-Marxists and other social theorists such as Karl Polanyi (2001). Ironically, as Polanyi argued in his seminal work *The Great Transformation*, the ‘free market’ has probably never existed in any society; the functioning of markets in fact depends on a state-generated legal framework and the strict public regulation of private property, national currencies, legal contracts and credit markets.

There is no greater hindrance to a sustainable transition than the deeply held view that economies cannot thrive unless they grow. If the global economy continues expanding at the current rate of 4 – 5 percent per year, it will be 80 times bigger in 2100 than it was in 1950 (Jackson 2009). It is absurd to imagine than the global ecosystem can continue to thrive, or even to survive the massive demands on resources or the wastes generated by an economy of that size. Yet to tamper with growth is to tamper with one of the imperatives of market-based economies. Historically, geographic expansion sustained growth in North America and Europe through colonialism, international trade and transnational investment. More recently, temporal expansion enabled by credit-based production and consumption has allowed economies to grow through mortgaging the future, permitting the continued exploitation of material resources in the form of land, fuels and minerals, as well as driving continued increases in pollution and carbon emissions (Welzer 2011). As Welzer writes, the growth axiom leads to the current thinking that ‘if oil is in short supply, drill deeper; if water is scarce, desalinate the sea; if fish stocks are dwindling, travel further out’(2011, p.31). In short, the politics of expansion have put persistent and accumulating pressure on the environment.
In the past decade, the contribution of the economic growth to increasing ecological degradation has been the subject of an increasing crescendo of academic critique from a wide range of authors and disciplines (see for example Jackson 2009, Pugh et al. 2000, Patel 2009). In the recent ‘State of the World’ report by the World Watch Institute, entitled *Is Sustainability Still Possible?* (WWI 2013), an impressive set of authors state decisively that a significant reduction in the environmental impacts of economic activity will not be possible within the economic growth paradigm.

The macro-economic imperatives are mirrored at the level of households and individuals. Despite strong empirical evidence that happiness does not increase with income, it appears that the expectations of the great majority of people are for ever-increasing levels of consumption (Easterlin 1974). Promoting austerity is not favoured by politicians wishing to get reelected. This is the dilemma. To quote George Monbiot (2003, n.p.):

> The only rational response to both the impending end of the Oil Age and the menace of global warming is to redesign our cities, our farming and our lives. But this cannot happen without massive political pressure, and our problem is that no one ever rioted for austerity. People take to the streets because they want to consume more, not less.

Given the nature of national politics, rekindling interest in sustainable development will be difficult – especially given the recent economic recession and the ensuing debates which are mainly concerned with ‘restarting’ economic growth and immediate issues of increasing commercial competitiveness and providing jobs. However, there is a growing academic
consensus that a paradigmatic change in the national politics of growth is an ecological imperative.

The general unwillingness of leaders to promote sustainable development – in practice – is related to an unwillingness to explore alternatives to growth, which is in turn related to the short time horizon that typifies the political world. Long term benefits which impose short term costs are not easy to ‘sell’ to the electorate. Rather than leading, politicians seem if anything to be lagging behind public opinion. In some countries, there have been voices for change – from the urban middle classes, for example, or civil society more generally – manifested in new ‘Green’ parties. But these have generally had only limited influence.

In recent years, ‘green economics’ has come to replace sustainable development as the means to reconcile the twin objectives of economic growth and reduced environmental impact (Wilhite and Hansen in press). Indeed, this was the main message of the Rio+20 Conference in 2012, which many regard as a retrograde step in relation to Rio+12:

We affirm that there are different approaches, visions, models and tools available to each country, in accordance with its national circumstances and priorities, to achieve sustainable development in its three dimensions which is our overarching goal. In this regard, we consider green economy in the context of sustainable development and poverty eradication as one of the important tools available for achieving sustainable development and that it could provide options for policymaking but should not be a rigid set of rules. We emphasize that it should contribute to eradicating poverty as well as sustained economic growth, enhancing social inclusion, improving human welfare and creating opportunities for employment and decent work for all, while maintaining the healthy functioning of the Earth’s ecosystems (UNCSD 2012, para. 56).
Green economics emphasizes the resolution of environmental problems through increased technical and economic efficiency, while retaining the aims of a growing and (geographically) expanding economy. For an increasing number of rich countries in North America and Europe, including Scandinavia, the argument is that economic efficiency, delivered through free markets, will offset the negative environmental effects of economic growth and deliver sustainability. These precepts of green economics are closely associated with those of ‘ecological modernisation’, a theory and policy framework for environmental sustainability based on the pillars of green technologies and free markets (Spaargaren and Mol 1992; Huber 2008). Ecological modernization under-estimates, or even neglects, the challenges of reducing environmental damage in a growth economy (see Gibbs 2006 and Baker 2007). In fact, by some proponents growth is portrayed as not merely compatible with the environment but actually capable of enhancing it, the argument being that growth will provide the capital necessary to address environmental problems (Hajer 1995). An early critic, David Pepper (1998, p. 5) referred to ecological modernization as ‘market environmentalism’, characterized by weak regulatory approaches and dependent on voluntarism from the corporate sector. Robertson (2004) and others have shown how ecological modernisation has been seamlessly incorporated into corporate rhetoric and into global development institutions without significant changes in practice.

Recent contributions from ecological modernisation theorists (Mol and Spaargaren 2009) have postulated that the greening of government and businesses will extend to social practices in communities and homes. We agree with the arguments of Hudson (2009) and Davies and Mullin (2011), who write that it is doubtful that ecological modernization, with its emphasis
on transformation through resource-efficient technologies and markets, has the capacity to either theorize or encourage changes in social or collective practices.

Many emerging economies are buying into the economic and technical efficiency arguments of green economics and ecological modernisation (see Knutsen and Ou, chapter five and Scott et al, chapter 15 in this volume). There have in fact been significant increases in efficiency in OECD countries (use of material resources per unit of GDP). The global energy intensity is now 33 percent of what it was in 1970. Energy intensity in both the US and the UK is 40 percent lower that it was in 1980 (Jackson 2009, p.69). But there are no examples of countries that have reduced either their energy use or their ecological footprints over the same period. From a climate change perspective, footprints are increasing. Global carbon emissions have increased by 80 percent since 1970 and 40 percent since 1990 (Jackson 2009).

These empirical findings on the limitations of increased efficiency should be a wakeup call for the promoters of green economics. Increased production efficiency will continue to do what it is intended to do in a free-market economy: free up capital for investments in further expansion. For industries, cutting the cost of inputs, seeking cheaper sources of raw materials and labour and acquiring energy-efficient technologies are all strategies used to increase profits and to expand the scale of production. For consumers, the consumption of energy efficient products frees up money for more consumption of the same service (such as transport, space heat or hot water) or the consumption of other products that also use energy, thus negating the energy savings of the original purchase (Winther and Wilhite in press; Foster et al. 2010; Brannlund et al. 2007; Frondel et al. 2012; Sorrell et al. 2009). It is difficult to imagine how these ‘rebound effects’ will be eliminated in a growth-oriented economy. Eric Ringmar (2005, p.3), in his book entitled *Surviving Capitalism: How We Learned to Live with*
the Market and Remained Almost Human writes that ‘Societies are being reorganized in the image of the market. Efficiency, rationality and productivity are to characterize ever more of what we do, and what cannot be justified in such terms should disappear.’ In a recent series of books and articles, Tim Jackson (2012, p.1) argues that one step in a sustainable ‘reorganization’ of the economy would be to reduce our obsession with efficiency and productivity. He writes that:

We’ve become so conditioned by the language of efficiency. Output is everything. Time is money. The drive for increased labour productivity occupies reams of academic literature and haunts the waking hours of CEOs and Treasury Ministers across the world. But there are places too where chasing labour productivity doesn’t stack up at all. What sense does it make to ask our teachers to teach ever bigger classes? Our doctors to treat more and more patients per hour? Our nurses to rush from bed to bed and no longer able to feel empathy and offer comfort. Compassion fatigue is a rising scourge in the caring professions, hounded by meaningless productivity targets[…]. In short, achieving a green economy may be less to do with ‘sustained growth’ and technological utopianism and more to do with building an economy of care, craft and culture.

The green economy concept is relying on the same drivers of transformation as those which have brought the world to the brink of environmental catastrophe. It proposes a green ‘twist’ on growth, efficiency and free markets. A rethinking of these three axioms of conventional development constitutes an enormous challenge in societies in North America and Europe where several generations have lived with deeply embedded ideas about the association of productivity and efficiency with the good life and social achievement. This association has contributed to what Robbins (2004) refers to as the ‘culture of capitalism’ in the USA, a trend
that can also be observed in other countries (Wilhite and Hansen in press). In e.g. India, productivity, efficiency and time management have not historically been essential aspects of culture, but global interconnectedness and transnational capitalism are contributing to changes. Wilhite (2008) writes about how social valuation of frugality, product longevity, and reuse are dissolving in India the wake of its ‘opening’ to the global economy in the early 1990s. One of the dominating themes in product advertising in India is how this or that product will save time, improve time management and bring social affirmation.

Welzer (2011, p. 38) is one of many scholars who are skeptical about the ability of national governments to bring about the sea change necessary for the sustainable transition. He writes:

> The goal is to devise an exit strategy from growth, not to preserve a cultural practice that undermines our own survival conditions. Such strategies are not the types that can be developed in the usual ill-fated coalitions of ‘experts’ and policymakers. To invent a post-growth society is a project for civil society; its realization cannot be delegated.

We can draw inspiration from growing community-based efforts to promote sustainability. Many of these are joining global networks of communities such as the ‘Transition Movement’ (originally called Transition Towns). In 2009, there were 134 communities officially registered as members of the Transition Movement (Scott-Cato and Hillier 2010). In order to be eligible to join the movement, a community must commit to adherence with certain principles involving both participatory planning and an aim to be less environmentally intrusive. Implicit to the movement is an alternative political economic framing that is ‘non-capitalist’ (Hopkins 2013), yet incorporates a positive vision rather than one of denial or
simplicity. These transition communities are islands of sustainable practice and represent new forms for a micro-politics of sustainability that is rapidly increasing in scale.

Another source of change from below can be attributed to the growing interest in collaboration, in part stimulated by internet based networks that specialize in non-market exchanges such as exchanges of used goods, sharing of housing, car sharing and other creative forms of exchange (Levine 2009; Botsman and Rogers 2011; Attali and Wilhite 2001). In a recent book entitled Together: the Rituals, Pleasures and Politics of Cooperation, Sennett contends that these forms for cooperation are natural to social interaction but have been repressed by what he calls ‘modernity’s brutal simplifiers’. He goes on to write that ‘cooperation is embedded in our genes, but cannot remain stuck in routine behaviour; it needs to be developed and deepened’ (Sennett 2012, p.280). Grass roots efforts directed at visioning, planning and developing new sustainable practices deserve attention and support by national governments. In concluding this section, the words of Welzer (2011, p.33) are appropriate:

We have, today, reached the end of a template for life and business that, for 200 years, has been extremely successful - one that worked quite magnificently under the old conditions. Those conditions – namely the availability of an entire planet for a small part of humanity and its economic model – however, no longer exist

Something has to give if a viable ecology is to be put first and the economy designed and dimensioned to sustain it. A range of different visions exist, yet there is a discouraging scarcity of national and transnational political alternatives. There is a dire need to come up with more pragmatic alternatives to current practices.
Will the emerging economies change the picture?

In brief, the outlook for sustainable development now looks worse than ever. Some countries already have an ecological footprint well in excess of one, and others are rapidly following the same (unsustainable) path. It is surely ironic, and unfortunate, that when – at the beginning of this millennium - there began to be some serious debate in the North about the need to moderate economic growth, the financial crisis which hit so dramatically had the effect not only of silencing such ‘dangerous’ thoughts, but also of promoting the idea that rapid economic growth in the South, notably China and India, was essential for the continued wellbeing of people in the North.

Do the emerging economies constitute only a greater challenge to sustainable development, or can there also be opportunities here? In order to address this question we will, in the following pages, consider whether they might – optimistically - play a positive role at global, national or regional levels, with regard to protecting the environment, reducing poverty, and managing the perhaps impossible task of combining the two.

Emerging economies, or at least the largest of them, are important actors in international negotiations concerning the environment. Traditionally, they have been associated with the G77 group of countries whose standard position, to oversimplify somewhat, has been that concern for the environment is primarily a matter for the rich countries: it is they that have been pushing the issue, they that have largely been the cause of the problems faced on a global scale, and they that are best placed – by virtue of their financial resources and technology – to address the challenges. An optimistic scenario is that the leading emerging economies will instead move ‘to the other side’, i.e. acknowledge that they in fact have considerable affinity with the rich countries, and should share some of the global burden –
albeit not to the same extent. A few specific cases exemplify the current situation. As noted above, in Rio in 1992, India led the G77 countries (together with USA) in stalling the negotiations concerning the proposed CO2 reduction goal of up to 20 percent over the succeeding 20 years. At the Conference of the Parties (COP) of UNFCCC in Copenhagen in 2009, China was widely blamed for stopping a potential agreement being reached. Subsequently, however, it has emerged that this may be something of a misunderstanding; China has in fact made some efforts to correct the view that they are so firmly opposed to an international agreement. The country has in very recent years shown an increased willingness to participate, and even share a leading role, in global environmental initiatives. Brazil, one might argue, has played a rather positive role on the international scene, having hosted two of the three UNCEDs - in 1992 and 2012.

In terms of global impact, issues of trade and investment are just as important as international conventions and conferences. How have emerging economies acted in this regard? China, especially, is becoming a very major actor: both hugely increasing its imports of raw materials from poor countries (see Knutsen and Ou, chapter five in this volume) and investing in these countries in mining and agriculture. Apart from the sheer volume of resources, how socially and environmentally responsible are the means of extraction? In many cases the answer is ‘not very’. For example, there is little support outside the European Union for their attempts to fight illegal logging through FLEGT (Forest Law Enforcement Governance) enacted in 2003. Can one envisage an optimistic scenario? Turning to the national level, there are perhaps more grounds for optimism, with signs of growing awareness about the environment, especially among the younger generation. In India, there has been for many years an active environmental movement. There are quite powerful grassroots activists (e.g. growing out of the Chipko movement), and some battles - such as those regarding the Sardar Sarovar dam on
the Narmada river - which have gained international attention. China has initiated ambitious
domestic renewable energy and energy efficiency programmes. Along with countries such as
India and Brazil, China is, to cite the Human Development Report (UNDP 2013, p.50)
‘developing and sharing new climate-friendly technologies’. It is the fourth largest producer
of wind energy and the world’s largest producer of wind turbines and solar panels - which are
produced more cheaply than in the North, thus attractive to a wider market.

At the regional level it is relevant to ask: can these countries play a positive role - either
supporting their neighbours, or showing leadership? The case of deforestation in the Amazon
provides a good example of a mixed case. On the one hand, Brazil has drastically reduced
deforestation through a range of different policy measures, and shown the way to
neighbouring countries such as Peru, Ecuador and Bolivia; and has offered technical advice
and assistance in the use of satellite imagery – a crucial instrument for effective monitoring
and control. On the other hand, there is evidence of so-called ‘leakage’, i.e. neighbouring
countries are, apparently in collaboration with private sector Brazilian actors, cutting down
forest in areas adjacent to the Brazilian border. In the case of both India and China, relations
with their neighbours are generally less favourable than Brazil, and there is little sign of their
playing any leadership role with regard to the environment.

Turning to the social dimension, some emerging economies are already moving ‘across the
global divide’, becoming donors rather than recipients of foreign aid. In fact, several of them
have been donors on a small scale for many years, but the volume of assistance has now
increased dramatically. In 2009–2010, China’s lending to the poorest states exceeded that
lent by the World Bank; and it is estimated that Brazil provides foreign aid in the range of
$400 million to $1.2 billion a year, mainly to Africa and Latin America; China provides $4
billion to $25 billion a year, mainly to Africa and Asia; and India provides $680 million to $2.2 billion a year - largely to its neighbours, Afghanistan, Bhutan, and Nepal, but increasingly to Africa (Asian Development Bank Institute, 2013).

At the national level, the pattern varies somewhat. China has, as is well known, reduced poverty dramatically in recent decades. But inequality has also increased substantially. There is increasing domestic discontent, constituting a potential political threat – also with a geographical (poor western areas) and ethnic dimension. It is probable that the government will be forced to act, but whether in the form of increased repression or more favourable policies is uncertain. Brazil, by contrast, appears to be moving in a positive direction. Having had historically one of the most unequal income distributions in the world, the government has, under the leadership of Lula, president and former trade union activist, and his successor Dilma Rousseff, initiated a number of reforms to redress the situation. Most notable is the Bolsa Familia, the so-called ‘conditional cash transfer’ system whereby payments are made to the poorest families provided they satisfy certain conditions such as having their children vaccinated and sending them to school. This is currently the largest conditional cash transfer programme in the world, surpassing Mexico’s ‘Oportunidades’ scheme.

India falls somewhere between the two. The distribution of income has historically been more equal than in Brazil, but rapid economic growth in recent years has had the effect – as in China – of reducing aggregate poverty but increasing inequality. India has been at least moderately successful in balancing democracy and globalisation, not least because of the interventionist role of the state that actively ‘reverses the worst effects of primitive accumulation’ (Chatterjee 2008) through welfare measures of various sorts.
We have argued above that green growth is a dubious concept for fostering sustainability in the rich countries. Can we expect it to be any more relevant for these emerging economies? Perhaps they will benefit from the fact that they are not the first countries to become economically advanced: not being burdened with outmoded infrastructure, ‘leapfrogging’ technologies, etc. The evidence thus far is mixed, and as we have argued, ‘green growth’ can never be a panacea; at best a way of reducing rather than reversing the link between economic growth and environmental stress.

**Conclusion**

The only long-term and effective response to the challenge of sustainable development will have to come not only from the production side but from sustainable consumption: significant changes in the resource intensity of consumption which radically alter the extent to which we - the rich - impact on the environment, both at home and abroad. We cannot expect emerging economies to take the lead here. We can at most hope that if we in rich countries are able and willing to show the way, then emerging economies such as Brazil, India and China will agree to be partners. But from where will political change come? Urban middle classes? Indigenous social movements? There is evidence of an emerging change at the community level in many parts of the world, but to judge from recent history, significant changes are not going to emerge in national politics or from national politicians meeting in international fora.

The record shows that innumerable international conferences have achieved very little in response to the challenge of sustainable development – despite evidence of increased urgency as the scientific evidence of climate change becomes overwhelming. The rich countries have not been willing to face up to the overwhelming difficulties of achieving low carbon societies within a development paradigm dominated by economic growth, free markets and the
mistaken view that increased efficiency can do all of the work in reducing carbon emissions in a growth economy. While there are positive changes happening at the level of local community, a lack of serious effort to achieve sustainability at the national level has hindered the negotiation of an international agreement on carbon reduction. The USA has never shown a willingness to provide leadership, and other rich countries have not filled the vacuum. Can we hope that positive change will come from the emerging economies, or from people demanding a new direction: social movements in Brazil, or the middle classes in India? Or from an autocratic state like China - whether in response to popular criticism or the increasingly real economic costs of environmental damage? And what about other emerging economies, that are each too small to make a difference on a world scale: Argentina, Vietnam, Ethiopia? These might follow some (positive?) developments in Brazil, India and China, or perhaps even establish new approaches that others can adopt. The chapters that follow will examine a wide range of countries – from Asia, Africa and Latin America – to examine their recent experience, and what this may tell us for prospects for the future.
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25