



**Simon Upton**, Chairman of the OECD Round Table on Sustainable Development, Member of the Advisory Board of the Holcim Foundation, France

**We must translate the idea of sustainable development, which is a very broad and often nebulous idea, into concrete applications in specific fields. Sustainable development is linked to millions of fields – energy use is but one. Sustainable construction gives us a focus relating to the built environment, a focus which is very valuable and practical.**

# Welcome to

Simon Upton commands a long and broad overview of global efforts in sustainable development. He spoke to the Holcim Forum about the role international policy plays in sustainable development and touched on practically every critical aspect of the topic. His assessment of past efforts, the problems we face, and the priorities and approaches we should adopt are seasoned with knowledge, experience, realism, and penetrating insight.

Keynote speech by Rt. Hon. Simon Upton



# contested territory

You have invited me to provide an “international policy perspective” of where we have arrived with the idea of sustainable development. I accepted the invitation because it issued me with a challenge to stand back and try to take in the big picture. It’s a very big picture. But I want to make it clear at the outset that my comments are focused on the world of policy – with which you as practitioners and business people have to cope as best you can. With a new foundation focused on a new building block of sustainability, it seems appropriate to start by extending a welcome. And here is mine: “Welcome to controversy and uncertainty; welcome to contested territory.” That might seem a strange sort of welcome. After all, hasn’t the quest for “sustainability” become absolutely mainstream? When the World Business Council for Sustainable Development reports that over half the companies listed in the German DAX-30 index view sustainable business practices as key to the long-term success of the company we are scarcely dealing at the fringes of society.<sup>1</sup> Countries, cities, businesses, trade and professional associations and a huge array of non-governmental organizations have been falling over themselves to frame their strategies and missions in terms of “sustainability.” Indeed, you have to work hard to find organizations that don’t find room for some language about sustainability in their mission statements.

## **Just what is sustainable development?**

And yet I persist in saying that this is contested territory. It’s true in two ways. In the first place, there are commentators who are ferociously sceptical of sustainable development, especially as some sort of organizing principle. If you want to gauge the tone of this opposition I strongly recommend a collection of essays entitled “Sustaining

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In 1998/1999 he chaired the seventh session of the UN Commission on Sustainable Development. In December 2001 he was appointed chairman of the OECD Round Table on Sustainable Development, a position he held through 2004.

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<sup>1</sup><http://www.wbcsd.org/>

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Architecture in the Anti-Machine Age.”<sup>2</sup> It is a cross section of just about every imaginable viewpoint held by professionals within the sectors represented in this audience. The genesis of the book appears to be an intense debate

within British architectural circles about whether architects should shoulder some sort of environmental duty of care. Alongside what have become orthodox calls for construction that is more attuned to environmental limits, there are some opposing contributions from professionals who won’t accept a bit of it. Here is a sample from Austin Williams: “Learning to live with less – the cri de coeur of sustainability – has created a paranoid and stultifying climate that slows down a process of change and puts real development on the back burner. Ultimately, with precaution its watchword, sustainability indicators lead to proscriptive regulation, or worse, self-proscription; lowering one’s sights to that deemed achievable rather than elevating our gaze to the higher goal of what is desirable.”<sup>3</sup> But it is not that sort of commentary I had in mind. Rather, it is the sheer range of positions that have been taken in the name of sustainable development. This is not a new observation. For more than a decade now, commentators have been remarking on the myriad ways in which all sorts of entities from sovereign states to NGOs have chosen to describe their understanding of “sustainable development.”

### **The Brundtland Formula is a universal starting point**

While the Brundtland Formula – “meeting the needs of the present without compromising the ability of future generations to meet their own needs” – provides an almost universal starting point, the range of tailor-made definitions is wide enough to accommodate just about

<sup>2</sup>Abley, I. and Heartfield, J. (eds.) *Sustaining Architecture in the Anti-Machine Age* (London: Wiley-Academy, 2001).

<sup>3</sup>Ibid., p. 48.

anybody – at which point I become sceptical. Is this a consensus or is this in fact intensely contested terrain over which contestants have for the time being sought to declare a verbal truce? Supporters of sustainable development, while conceding the “elusive” nature of the concept, assert some shared core principles.<sup>4</sup> Sceptics label it “fudge.”<sup>5</sup> This paper does not attempt to explore the more philosophical recesses of this debate. They lie outside my expertise. I hope instead to shed some light on the state of the inter-governmental dialogue on sustainable development which is, of course, of direct interest to those of you who deal with the policy and regulatory consequences of the political debate. I will also venture a few personal thoughts on where the debate might valuably be focused from here on. So what is my assessment of the international policy debate on sustainable development as it is conducted in official and political circles? In a nutshell, I would say it is often overblown, confused, and lacking any sense of priority. That’s largely because there is a pretence of consensus where in fact there is significant disagreement. This is in marked contrast to the less grandiose but much more focused engagement of some businesses and NGOs on specific parts of the agenda.

### **1992 UN Conference: The Rio Summit and its aftermath**

The reason for this confusion goes back to how governments coped – or failed to cope – with what they said at the 1992 UN Conference on Environment and Development. I use the Rio Summit’s full title advisedly – it was a conference about the environment *and* development. Rio was not a conference about everything. Nor was it a conference about a three-legged thing called economy, society, and environment. That was a slightly later transmutation. In many ways Rio represented an uneasy compromise between two interest groups – those (largely from developed countries) who wanted to arrest the alarming global environmental trends; and those (largely from devel-

<sup>4</sup><http://www.iisd.org/sd/principle.asp?pid=33&display=1>

<sup>5</sup>Heartfield, J. in Abley, I. and Heartfield, J. (eds.) (2001).

oping countries) who wanted not only to restate their right to develop as they choose, but sought significantly increased assistance to do so. The bridge between these interests, as you all know, was supposed to be aid flows that would set that development process in motion along a more “sustainable” path.

The environmental agenda dominated Rio, and this launched a series of global treaties building on the approach that had been successfully adopted to tackle ozone-depleting compounds. The future was to be governed by multilateral treaties. The ensuing decade was a decade of negotiations on a broad front covering the atmosphere, the oceans, and the biosphere. The most generous overall assessment would be that there has been modest progress. A sterner view would be that most negotiations have become bogged down and the ensuing sense of exhaustion has removed any appetite for new forays at the negotiating table.

On the development front, the hoped for development assistance that had been mooted as the deal clincher simply failed to materialize. Worse, the value of development assistance actually shrank in the first few years after Rio. The development that did occur – largely in Asia – owed little to sustainable development friendly development assistance and much to liberalization and direct foreign investment.

### **Twelve years after Rio: What progress have we made?**

An attempt was made to provide new impetus to the development agenda through the Millennium Development Goals<sup>6</sup>, currently being prosecuted with almost superhuman effort by Jeff Sachs. And amidst the fallout from the war on terrorism, we have seen some rich countries start to increase their development expenditure with the realization that a world with failing states is a world that can harbor all sorts of horrors. But the world remains far from achieving what it says it wants to achieve.

<sup>6</sup>The Millennium Declaration (available at <http://www.un.org/millennium/declaration/ares552e.htm>) launched the Millennium Development Goals. These can be read at <http://www.un.org/millenniumgoals/>

An honest assessment of whether in the 12 years since Rio the world economy has embarked on the sort of sustainable global development path many had hoped for would have to be: it has not. One popular explanation for this is what is claimed to be “lack of political will.” You will hear this phrase in many international forums. But this seems to me facile. Better explanations might be that leaders either didn’t know what they were signing up to or, more cynically, that they never intended to deliver. I prefer the first explanation. I think the world embraced a poorly understood concept and then allowed it to be elaborated in ways that assumed agreement where there was none. Again and again we have witnessed verbal consensus where there were real differences or, more importantly, insufficient hard information to implement concepts that were often nebulous.

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### **We have no shortage of theory**

Two related tendencies were at work – one, the desire (particularly strong in academic circles) to create a meta-theory or paradigm out of the huge array of concerns that found their way into the Rio process. To provide a flavor of the sort of thing I have in mind, here’s a statement from the IISD website I mentioned, attributed to Dr. William E. Rees: “Sustainable development is positive socioeconomic change that does not undermine the ecological or social systems upon which communities and society are dependent. Its successful implementation requires integrated policy, planning and social learning processes; its political viability depends on the full support of people it affects through their governments, their social institutions and private activity.”<sup>7</sup> To the practitioner of government, this is a recipe for everything that floats serenely above the world of fiercely contested values and

<sup>7</sup><http://www.iisd.org/sd/principle.asp?pid=42&display=1>

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woefully incomplete information. Or take this example from the “Principles for a Sustainable Society” developed by IUCN, UNEP and WWF. The first principle asserts that we should “...share

fairly the benefits and costs of resource use and environmental conservation among different communities and interest groups, among people who are poor and those who are affluent, and between our generation and those who will come after us.” Another states that “a national programme for achieving sustainability should involve all interests, and seek to identify and prevent problems before they arise.”<sup>8</sup>

### **We must translate theory into practical terms**

My purpose here is not to take issue with the values of those who have promoted these formulations but to draw attention to the problems they create for policymakers. The question of what constitutes “fair shares” in modern societies is one of the most contested and value-laden debates we can imagine, even if focused solely on the redistributive impact of taxation and welfare systems. Scaling this debate up to cover everything and extending it temporally across generations would greatly multiply the complexity, and – far from “identifying and preventing problems before they arise” – would likely end in the exhaustion of those consulted and the dilution of any conclusions. That has not stopped some brave attempts to try to put into operation this maximalist version of sustainable development. The European Commission, for instance, has elaborated a broad “three pillar” approach to sustainable development. Its formula speaks of “economic growth [that] supports social progress and respects the environment, social policy [that] underpins economic performance, and environmental policy [that] is cost-effective.”<sup>9</sup>

<sup>8</sup><http://www.iisd.org/sd/principle.asp?pid=57&display=1>

<sup>9</sup>European Commission, (2001) Communication from the Commission: A Sustainable Europe for a Better World: A European Union Strategy for Sustainable Development, European Commission, Brussels, 15 May (COM (2001) 264 final).

### **Trade-offs: the problem is where to draw the line of compromise**

This approach can take us only so far. It cannot determine limits to the trade-offs that may be attempted between these so-called three pillars of sustainable development. Now, it may be possible to specify some biophysical limits with respect to environmental policy, but many policy trade-offs confront ethical rather than scientific questions. As such they are routinely the subject of lively political debate and do not lend themselves to resolution by analysis.

But analysis – and clear boundaries – is what decision-makers seem to want, as my experience at the OECD attests. In 2001 the OECD published a major report entitled “Sustainable Development – Critical Issues.”<sup>10</sup> 487 pages long, it represents one of the most exhaustive analytical studies of the sustainable development terrain. As you would expect from such an organization, it is a sober, careful piece. After describing economic, environmental and developmental trajectories at the global level, the report returned to the basic conundrum confronted at Rio in these terms: “With inappropriate incentives towards the use of natural capital, economic activities can lead to pressures that risk reaching critical thresholds in the regeneration capacity of resources and of inducing irreversible effects. At the same time, disparities in economic conditions and unmet social needs in many parts of the world may make it more difficult to establish strong coalitions of countries who can respond to these challenges. Countries characterized by pressing social problems are likely to pay less attention to environmental problems and to be less willing to accept the structural adjustment associated with shifts towards more environmentally sound patterns of production and consumption. While a description of individual challenges does not determine the sustainability of current development paths, the linkages between these challenges and their policy responses demonstrate the need for their integrated consideration.”<sup>11</sup>

<sup>10</sup>OECD (Paris: 2001), *Sustainable Development – Critical Issues*.

<sup>11</sup>*Ibid.*, p. 27.

### **Sustainability indicators: We need tools to measure progress**

The response of ministers was to seek tools to measure progress. They wanted concrete things they could monitor, not a paradigm. The aim was to introduce into the OECD's regular reviews of member economies a selection of indicators that could shed light on essential elements of any shift towards a path of sustainable development. The effort failed. Countries could not agree even on a minimal list. The initiative was reduced to nominating a set of mainly economic and environmental performance measures by which countries could choose to be assessed. After several iterations, the process was discontinued. While valuable insights may have been gained from the exercise, its failure should not surprise us. Very simply, the scope of sustainable development with its all-embracing versions have presented it as beyond either the analytical or institutional capacities we have at hand.

### **Growing worldwide awareness of sustainable development**

So where are we? There is certainly no shortage of statistics that can be fashioned into depressing forecasts of trouble ahead. Has then the last decade been a waste of time? To my mind the answer is unequivocally "no." That sustainable development has almost become a household word suggests that the issue resonates with some widely held concerns about the way we live and our impact at a global level. There are real issues of environmental degradation and poverty that haunt people even if they hold radically different ideological views about how the future should unfold. Real issues affecting real people in the real world do not evaporate because of faulty theories.

Nobody today seriously suggests we can just ignore the environmental or social consequences of economic activity. In fact, nobody ever has. What's different is a growing awareness of the global scale of impacts from which people previously considered themselves to be

completely separated – if they were aware of them at all. It's one thing to be aware of an unfolding disaster on the other side of the world; it's another to be able to view the consequences in real time and feel some sense of responsibility or connectedness with it while at the same time having no means of making sense of the sheer complexity of that interconnectedness.

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Viewed through ideological spectacles, it would be tempting to conclude that we are stranded between facing the unpredictable consequences of unconstrained human agency and suffering the unintended consequences of poorly informed regulators. I think there is something in that stark choice. But that would be to surrender the issue to politicians and policymakers. The fact is, they are normally followers and rarely leaders. We have all underestimated the time it takes to absorb complex information – and the last decade or so has seen a prodigious amount of new information on the way our biosphere works and the way in which social and cultural institutions adapt to change. There has been a huge amount of experimentation, sifting of good ideas and poor ones. There has also been a huge increase in our understanding of the way our activities interact with the planet's biosphere. The debate about sustainability is increasingly anchored in hard facts – and where they are missing, there is a willingness to find them.

### **The green GDP: A new environmental and economic indicator**

I mentioned the OECD's attempt to develop indicators. It is one of dozens.<sup>12</sup> In the process, we are making progress closing some of the

<sup>12</sup>For a recent compilation of official sustainability indicators see OECD (2003) Overview of Sustainable Development Indicators Used by National and International Agencies STD/DOC(2002)2. See also a background paper prepared for the Ninth Session of the Commission on Sustainable Development, Report on the Aggregation of Indicators of Sustainable Development, UNDESA (2000).

gaps that need to be closed to describe where we're going at the global level. Let me tell you about one piece of work that you won't read about in the Sunday newspapers. It's a manual – which makes it sound very boring. It involves trying to give some precision to the interrelationship between the economic and the physical worlds, and it was developed jointly by the European Commission, the IMF, the OECD, the UN and the World Bank.<sup>13</sup> It is forgettably called the SEEA – I won't even decipher the acronym for you. It shows how standard economic accounts, which produce such aggregates as GDP, could be extended to include the contribution of the environment to the economy and the impact of the economy on the environment. It represents the state of the art in progress towards “green accounting” and draws much on last decade's explosion of thinking that I have described.

The goal of the SEEA is not simply to produce figures for a “green GDP” but to quantify on an industry-by-industry and commodity-by-commodity basis the inputs required from the environment and the waste returned to it. By looking at particular natural resources such as minerals, fish, and timber, it is possible to see whether use by the economy is sustainable, and if not, how far below sustainability it falls.

As far as use of the environment goes, it is possible to show various measures of the degradation caused by burdening natural “sinks” beyond their absorptive capacity. The accounts exist in physical and monetary terms. Monetary valuation is rightly controversial since many ecological “services” aren't traded and there is no agreement on how to place a value on degradation. To my mind such efforts are likely to produce spurious results – but that is not an essential part of the exercise. With an agreed upon accounting framework, countries are now in a position to chart the relationship between economic and

<sup>13</sup>United Nations, European Commission, International Monetary Fund, Organisation for Economic Co-operation and Development & World Bank. Handbook of National Accounting: Integrated Environmental Economic Accounting 2003. (New York: United Nations, 2003). See <http://unstats.un.org/unsd/envAccounting/seea.htm>

environmental stocks so we can at least get an idea of the size and trajectory of the claims that recorded economic activity is making on the biosphere.

To date, no one has implemented such an accounting framework in its entirety. But the tools are there if decision-makers really want to get serious about their own national performance. Some countries have developed accounts for some significant resources like minerals, forestry, and water.<sup>14</sup>

### **Monitoring must be on a global scale**

What SEEA can't do is account for the use of the environment – either to provide inputs or absorb outputs – at the global level. It is focused strictly at the national level. Gathering data at the level of countries tells us nothing about the extent to which lifestyles in one country affect the global environment. A country can, for instance, look very good in terms of CO<sub>2</sub> emissions. But if it is simply importing goods that another country had to emit large amounts of CO<sub>2</sub> to produce, the picture changes. Developing measurements of cross-border activity would enable us to paint that picture – something which is overwhelmingly logical in an increasingly globalized economy. The Round Table I chair recently commissioned some work on this subject and it is very promising.<sup>15</sup>

But the even trickier calculation which no one can provide at this time is some long-term causation between waste generated now and the capacity of the environment to go on providing services in the future. This, from an environmental sustainability point of view, is the really critical issue. What feedback from a significantly altered biosphere would – at some future time – impose significant costs to human well-being and possibly irreversible effects which our descendants might

<sup>14</sup>Remarkably, congressional opposition to the concept has prevented the US Bureau of Economic Analysis from developing any such accounts.

<sup>15</sup>OECD Round Table on Sustainable Development (Paris, 2003), *Sustaining Whose Development? Analysing the International Effect of National Policies*, Harrison, A., Upton, S. and Vitalis, V. The paper was presented at the 12th meeting of the Round Table and can be found at this address: <http://www.oecd.org/document/>

## What feedback from a significantly altered biosphere would – at some future time – impose significant costs to human wellbeing and possibly irreversible effects which our descendants might bitterly regret?

bitterly regret? This is the worry that gnaws away in the back of many minds including some of those who remain confident that ecological crisis will be the mother of technological adaptation.

### **The future: Critical factors are ignorance, time, trade-offs, and treaties**

This brings me to where I think future attention should be focused. To my mind the public policy agenda should be recast in a more modest, pared-down version compatible with the sort of human and institutional limitations that politicians and citizens with limited resources – and, frankly, limited attention spans – can realistically be asked to embrace.

In the first place, policymakers should avoid versions of sustainability represented as ethically imperious theories of everything. This is contested terrain where what we don't know is almost certainly more significant than what we do know. Paradigms that seek to incorporate everything take on a quasi-religious status that simply will not command widespread engagement or support debate and disagreement, the essential raw materials for problem-solving.

Secondly, the policymakers should return to the original Rio compromise – avoiding irreversible environmental degradation that would be to our cost in the long run while allowing a way out of poverty in the developing countries of the world. (The “modesty” of that agenda is, by the way, strictly relative!) We need to deal with four factors: ignorance, time, a reluctance to make difficult trade-offs, and a system of international treaties that is not equal to some of the challenges globalization poses. Let me deal briefly with each in turn.

## **Ignorance: We must improve our understanding**

Ignorance is in some ways the easiest problem to describe. We know the extent of the changes we have made to the concentration of atmospheric gases responsible for trapping incoming solar radiation and the likely impact on tropospheric temperatures<sup>16</sup>; we know that human activity is now controlling or interfering with 25 to 40% of the planet's photosynthetic output<sup>17</sup>; we know that we have doubled the global terrestrial fixation of nitrogen from the atmosphere and tripled the rate at which phosphorus is lost from soils and carried into water-courses (and is ultimately finding its way into the oceans).<sup>18</sup>

These are significant interferences in the bio-geochemical cycles that have over time created the sort of biosphere we are familiar with. What we don't know is the likely consequence of this scale of interference or (as seems inevitable) the consequences of even larger interferences. The sheer complexity of these cycles – and the paucity of available data in some respects – means that we cannot say with any confidence what sort of feedbacks might cause sudden, unexpected changes in the sort of world we expect to be living in. These feedbacks might not necessarily all be negative. We just don't know. Remaining resolutely focused on improving our scientific understanding is essential. The biosphere is – and always has been – in a state of constant change. Human pressures are adding to those changes. We need to understand better the changing, dynamic nature of the biosphere and, given its complexity, be cautious about rash verdicts either of impending doom or Pollyanna-like complacency. As Professor Vaclav Smil reminds us: “What we need is not more clever arguing, and what we cannot get, given the inherent complexities of biospheric transformations and major uncertainties concerning their outcomes, is a confident, albeit probabilistic, appraisal of our prospects.”<sup>19</sup> Take loss of biodiversity as an illustration of flying blind. While there is

<sup>16</sup>Smil, V. *The Earth's Biosphere* (Cambridge: MIT Press, 2002), p. 236.

<sup>17</sup>*Ibid.*, p. 240.

<sup>18</sup>*Ibid.*, p. 251.

<sup>19</sup>*Ibid.*, p. 251.

huge debate over the number of species and the natural or “background” rate of species extinction,<sup>20</sup> there seems little doubt that we have increased that rate by as much as an order of magnitude. In the process we are getting rid of species we haven’t described and whose importance for ecosystem functioning and/or potential human value are unknown. The implicit choice that is being made is between the conservation of potential “knowledge” embodied in living things versus the creation of new “knowledge” through the ongoing substitution of natural for human capital. What we don’t know is whether we are losing something of much greater long-term value than what we are gaining.

Ignorance of the human world is no less concerning although potentially more tractable. Certainly, if we are talking about what we need to do to meet basic developmental goals, we don’t need large amounts of additional information to know where the priority issues reside.

### **Change takes time**

What about time? It’s something all of us are short of, and much attention has been lavished on trying to forecast the timescales within which actions must be taken to avert this or that crisis. There are two problems here. One is that our forecasting abilities are woefully inadequate for the complex human responses we are trying to guess. Even something as apparently quantifiable as the dynamics of population growth remains shrouded in conjecture. The distinguished demographer Joel Cohen has remarked that “the demographic future has none of the inevitability that population projections convey ...[because] ... no one knows what people will choose to want.”<sup>21</sup> If we can’t predict choices about fertility, it should come as no surprise that attempts to forecast future energy demand (a key determinant of the time we may or may not have to head off serious climatic risks)

<sup>20</sup>For a summary discussion, see Cohen, J. (1995), p. 337.

<sup>21</sup>Cohen, Joel E. *How Many People Can the Earth Support?* (New York: Norton, 1995), p. 152.

are almost doomed from the outset. A recent survey of forecasting attempts over the last hundred years described the whole enterprise as “a manifest record of failure.”<sup>22</sup>

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Yet we need to have some working hypotheses about what it is we are trying to sustain over what time-frame and then to be in a position to monitor what actually happens, because, as has been observed, sustainability can only be assessed after the fact.<sup>23</sup> Hence the importance of constantly monitoring trends over time and being prepared to adapt to those trends. This is what the universal adoption of the economic and environmental accounting I spoke of earlier would help us to do.

But there is a second sense in which time is not on our side, and that is the time it takes for institutions and attitudes to change. Look at the time it takes to try to stabilize dysfunctional states. Look at the time it takes to mobilize even functional societies to confront a challenge such as AIDS. I don't intend to dwell on this point but it does seem to me the single biggest challenge to those who argue for urgent change with little more than exhortations for information and education. I am unaware of any evidence to suggest that even democratic societies (presumably with the most information and open to new ideas) are capable of sustaining radical policy changes without the stimulus of a crisis. Is this so surprising? At the level of individual agents, we know how difficult it is to persuade people to modify their behavior even when lifestyle risks they run are well described and the risks of harm strongly predictable.

I don't expect you to draw comfort from this assessment, but I can see little to be gained by promoting policies that simply ignore the

<sup>22</sup>Smil, V. *Energy at the Crossroads* (Cambridge: MIT Press, 2003), p. 121.

<sup>23</sup>Costanza, R. and Patten, B. C. *Defining and Predicting Sustainability*, *Ecological Economics* 15 (1995), pp. 193–196.

time it takes for people to change their behavior in the face of risks that, in terms of human timescales, are relatively long-term.

### **Constant change demands significant and continuing trade-offs**

Next there is the question of trade-offs – both in a physical sense and in a policy sense. One of the unfortunate trends in much writing about sustainability has been a flirtation with the notion that there is some lost equilibrium that must be recaptured. It is certainly valid to point to the greatly increased rate of change that human activity is causing to the biosphere thereby possibly placing us at risk of feedbacks that occur on time scales in which our civilization cannot adapt. But it is misleading to suggest that there is some way we can live that eliminates the need for constant adaptation.

Indeed there are intriguing possibilities that natural climate change has actually been a driver for a succession of turning points in civilization that have in turn been rendered fragile by successive changes. Our civilization is inextricably caught up in a dynamic process that has always required change.

Civilization as it has evolved since the last ice age has been based on the transformation of natural capital (to use the language of accounting I have already spoken of). We have chosen to transform natural capital into physical and intellectual resources which we have found more desirable (and in many cases necessary to secure our survival in the face of an environment in which total harmony has eluded us). That is going to continue. Amidst all the various scenarios of which I am aware, none posits a world in which we achieve some equilibrium that leaves the remaining unaltered elements of the biosphere in their present state. Even the most optimistic scenarios envisage a widening human “footprint.” Take for example the most radical “sustainability

first” scenario sketched in UNEP’s GEO-3 report published in 2002.<sup>24</sup>

This scenario (one of four) is described as one in which “a more visionary state of affairs prevails, where radical shifts in the way people interact with one another and with the world around them stimulate and support sustainable policy measures and accountable corporate behavior.”

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In comparing the outcomes of the four scenarios the authors rightly point out that many of the benefits of their “sustainability first” scenario would accrue beyond the period for which they modeled results (to 2030). Nevertheless, their results show large, ongoing substitutions of natural capital. Atmospheric concentrations of CO<sub>2</sub> would still rise from 380 to 450 ppm; biodiversity is still threatened across 56% of the land area. The numbers here are less important than the trends. Very simply, a future world even involving “radical” changes in human interactions will involve massive ongoing change. That means facing a future with, at the least, very significant continuing trade-offs. And since a prudent acquaintance with human nature suggests not using a “visionary” or “radical” state of affairs as the baseline, the trade-offs are likely to be even more significant. Last year’s World Energy Outlook forecast USD 16 trillion of new investment in energy services, the overwhelming bulk of which is in the fossil fuel sector.<sup>25</sup>

Clearly there is no single sort of “sustainability” or balance of trade-offs we might aim for. It all depends on the choices everyone from governments to individual consumers makes. Different substitutions of resources will degrade or enhance different stocks in different ways, almost certainly unpredictably. If you look at the consumption trends

<sup>24</sup>UNEP (2002) Global Environment Outlook 3, p. 344.

<sup>25</sup>OECD/IEA (Paris, 2003), World Energy Investment Outlook, p. 42.

of rich societies – and even more so those of rapidly developing societies – it is tempting to conclude that we’ve taken a collective bet that high and rising levels of resource use brings with it the technological capability to deal with any unforeseen problem. What if we are wrong?

On the other hand, radically constraining resource use by means of stringent government controls places a different sort of bet: that radical change of political and social expectations in many countries is sustainable and that we have the institutional capabilities to deal with unforeseen human problems! My own view of the trade-offs is irrelevant. All I want to emphasize is that there is no unique pathway to some ideal state. All we have are messy trade-offs, none of them costless.

### **International treaties and initiatives substitute for global governance**

Finally there is the issue of sorting out the jungle of treaties and international initiatives that currently take the place of any coherent global governance. I have already referred to the post-Rio flurry of treaty-writing that has lost momentum. A similar disillusionment has followed from the experience of the Commission on Sustainable Development. There simply is not enough human negotiating capacity in rich countries to embark on the range of issues policy advisers find themselves grappling with. Imagine how overwhelming it must be for poorer countries.

But there is also a degree of disconnect between the idea of global environmental treaties and the way in which global trade rules have been constructed. This is a fiendishly complex and controversial field. But in simple terms, the laudable objective of fighting egregious subsidies and trade barriers that stand in the way of development oppor-

tunities for poor countries runs up against the equally laudable desire of citizens to minimize the environmental impact of their consumption not just locally, but globally. Little is gained if consumers in rich countries raise their own environmental standards but impose an increasingly destructive consumption “footprint” far away where the damage can only be seen by global monitoring satellites.

**Clearly there is no single sort of “sustainability” or balance of trade-offs we might aim for. It all depends on the choices everyone from governments to individual consumers makes.**

Developing countries are rightly concerned about green protectionism. And consumers in the developed world are equally right to be concerned about the environmental and social scars that may lie behind an apparently harmless product on the supermarket shelves. Getting coherent ground rules for a genuinely global economy that is environmentally sustainable remains a key priority.

### **Working to meet basic needs is a sure investment**

The scale of the issues I have outlined does not demand a grand theory from policymakers. Rather, as I have argued, it demands modesty. Sustainable development is a useful idea if we are prepared to focus on the basics – the issues which, at any given time, promise the greatest improvements regarding the most pressing needs – and accept that change will not be driven from the top down but be triggered by a widespread understanding of the key priorities. This Forum’s focus on “basic needs” is to my mind the right one. It is as applicable to environmental pressures as it is to human needs. In the world of policy those needs are better understood on the social and developmental front than on the environmental front. The Millennium Development Goals command an increasingly broad consensus. There will be no human security or environmental integrity in a world in which there is widespread illiteracy,

chronic sickness or short life-expectancy owing to dysfunctional governance, degraded water quality, and the absence of even basic sanitation services. The problems are solvable but will require trade-offs including fiscal ones that run into many billions of euros.<sup>26</sup>

Estimates of the sums involved can easily be assailed given the frailties of the available data. But the direction of the cost-benefit equation is unambiguous. By staying with these basic needs we know the gains are potentially enormous. The fiscal trade-offs needed within rich societies are pretty clear.

### **The environment has basic needs too**

On the environmental side the numbers may be less certain. It is one thing to spell out goals for percentages of well-defined human populations and estimate the financial resources that would need to be marshaled. It is another to seek to preserve particular levels or elements of biodiversity when fewer than two million species have been described and estimates of the total number out there range from five million to 30 million or more.<sup>27</sup> This brings us back to the issue of making trade-offs in the face of uncertainty. Basic needs, environmentally, are not about fine-tuning some equilibrium but about trying to reach agreement on key vulnerabilities and some provisional prudential limits to avoid significant harm.

Two key issues requiring better definition and then active cooperation are, firstly, what components of the earth's biodiversity are needed for ecosystems to function in a way that will provide the "environmental services" on which the continuation of life relies; and secondly, what level of greenhouse gas accumulation in the atmosphere are we prepared to nominate as being potentially dangerous.

<sup>26</sup>Sachs Report estimated that we could by 2010 be saving around 8 million lives a year by focusing principally on AIDS, tuberculosis and malaria and investing in some key research and public health priorities. The price tag? An increase in investment by rich and poor countries alike. In the case of development assistance programs, it would mean rich countries increasing their health-related expenditures from \$6 billion per year to \$22 billion per year by 2007, rising to \$31 billion a year by 2015 – a sizeable sum but still only around 0.1% of the GNP of donor countries. There is one set of trade-offs. The Macroeconomics & Health Commission estimated that the economic benefit from such an investment would be "\$186 billion per year and plausibly several times that." WHO, (Geneva, 2001), p. 12. A similar order-of-magnitude feel for what the costs and benefits of tackling basic sanitation would be suggests that expenditure of around \$11 billion per annum in the world's developing regions would yield annual benefits of over \$60 billion in terms of avoided sickness, deaths and loss of productivity.

<sup>27</sup>Smil, V. (2002), p. 87.

Any answer to these questions will involve trade-offs which will depend ultimately on the resilience and flexibility of human institutions. Deciding not to address them will not remove the need for trade-offs. It might simply mean we have fewer choices and less time to adapt than would otherwise be available. Foundations like the Holcim Foundation can help by generating ever more cost-effective ways of making scarce developing-economy resources go further while at the same time reducing the environmental footprint of the built environment. While I have sketched some of the issues we need to know more about, you as practical people don't need to wait for precise answers before acting. As leading companies know, eco-efficient solutions are good for business and good for the environment.

**The evolution that is required in the policy world today is a return to basic human needs and basic environmental vulnerabilities.**

### **We need not a visionary theory, but a return to basics**

The Holcim Foundation sees sustainable construction as an evolutionary concept. Sustainable development is also evolutionary. The evolution that is required in the policy world today is a return to basic human needs and basic environmental vulnerabilities. This approach will not produce a visionary paradigm. Indeed, by relinquishing a theory of everything, we will bring into the open some of the deeply contested values that have been submerged beneath the rhetoric of sustainable development. But if policymakers can focus on what we don't know, on the human time-frames in which we can realistically confront significant changes, and be honest about the trade-offs that are at stake, they will start to catch up to where I believe many people including businesses already are.

Simon Upton