

SUSTAINABLE DEVELOPMENT NINE YEARS AFTER RIO

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This paper is a personal contribution to the discussion on Sustainable Development by Simon Upton. It does not necessarily represent the views of the Round Table nor of the OECD.

Sustainable Development Nine Years After Rio: A Diffuse Agenda?¹

For about fifteen years now we have been living with the idea of sustainability. It has found its way into almost every corner of public policy. It has spawned a vast literature. And it has become a catch-all which a bewildering array of businesses, public interest groups, and political organisations have felt obliged to graft it onto their agendas. However, its success as a unifying principle of policy and conduct is also its Achilles heel. For, as the notion of sustainability has expanded to embrace almost everything, the possibility of it supporting a clear and focussed agenda has been placed at risk.

Is the idea too big and too diffuse to compel action? While the principle of sustainable development provides a useful means of insisting on the inter-connectedness of many economic, social and environmental issues, it risks creating the impression that there is some unique principle to which policy debates can appeal. We should be wary of such claims.

The Brundtland Commission defined sustainable development as progress that “meets the needs of the present without compromising the ability of future generations to meet their own needs”. It is a formula with enormous human appeal and it has stood the test of time. But the core environmental and development issues that Brundtland identified should be tackled without recourse to metaphysical leaps.

We need to be clear about the questions we are asking if sustainable development is going to be more than a mantra. While some questions lend themselves to scientific analysis or an appraisal of costs and benefits, others go to the heart of fiercely contested political ideals that defy consensus conclusions (such as equity and social cohesion). The embrace of sustainability should not provide a means for escape from real political and philosophical differences.

1. Written with the assistance of Vangelis Vitalis

Re-Focussing on the Essential Problems

As we approach next year's summit conference, 10 years after Rio and 30 years after Stockholm, it might be worth trying to re-state, in very simple terms, just what it is that we're all worried about?

Contemporary concern is focussed on the ability of the planet's *renewable* resources to sustain life in general *and* human development in particular. Specifically, there are two over-riding concerns that have always been present:

- first, that the pressure of human claims (particularly by developed countries) on some key elements of the bio-physical environment, place us at risk of crossing thresholds beyond which lie very significant environmental perturbations with high economic, social and environmental costs; and that the testing of those thresholds will be hastened if developing countries follow a similar path to that taken by developed countries before them.
- second, that development is an imperative for literally billions of people in developing countries for whom barriers to development pose not just a moral challenge to the rest of the world community but increase the risks of conflict, environmental degradation and social instability.

What is the evidence for these concerns?

Thresholds

With respect to the thresholds argument, the evidence of serious risks is reasonably compelling on several fronts.

(i) Climate Change

In the case of climate change, a number of models estimate that global warming over the next century will rise in the range of 1.4 to

5.8 degrees Celsius, depending on a combination of climatic sensitivity to rising greenhouse gases and the level of future emissions. This range is comparable to that reported earlier by the IPCC⁽¹⁾. Any significant warming will entail costs in fields as diverse as agriculture and public health. What are not fully understood are the thresholds at which catastrophic or irreversible changes could be triggered. To manage the risk, precautionary action would seem prudent. But concluding a binding treaty to take the first steps is proving extremely difficult.

(ii) Access to Water

Water is not only a necessity of life; it is also a necessity for food production and economic development. Water shortages contribute to poverty and starvation and severely constrain industrial development. Analysis undertaken for the World Commission on Water suggests that, over the coming 25 years, the areas affected by “severe water stress” on the planet will expand by more than 2 million square kilometres. The number of people living in the worst-affected regions will nearly double from 2.1 billion to 4 billion⁽²⁾. Currently, seventeen countries are estimated to be mining their water resources to extinction⁽³⁾. In some parts of the world the risk of heightened pressure on water resources leading to tensions or even regional conflicts is very real. This has significant implications for population displacement, infrastructure damage, and refugee flows.

(iii) The Marine Environment

A third area where thresholds loom is in the availability of fish resources and the health of coastal marine environments.

Fish play a fundamental role in the human diet. They provide for nearly a fifth of the animal protein consumed by developing countries. Declines in fisheries resources therefore have serious implications not simply for the marine environment, but for development as well.

It is estimated that almost 50% of all marine fish stocks are already fully exploited. Over 20% are either over-exploited or depleted⁽⁴⁾. Worse, perhaps, less than 2% of the global fishery resource is on the road to recovery. One of the major problems remains the level of by-catch. It has been estimated that the by-catch of less-favoured species exceeds 25 million tonnes a year *or nearly a third of the overall annual fish take*⁽⁵⁾. The potential for destabilisation of the eco-systems on which harvested species depend is obvious. It is the sort of crude frontier-style destruction that has been unacceptable in developed countries for decades but goes unseen (and largely unprotested) on the high seas.

(iv) Terrestrial Biodiversity

The value of biodiversity to the biosphere and to human development is more diffuse — and therefore less easily described — than other ecological services. Depending on the ecosystems in question, naturally diverse habitats provide a wide range of benefits. They include carbon sequestration (valuable as a buffer against climate change), and water and soil conservation. And beyond its value to science and our appreciation of nature amenity, maintaining genetic diversity is important for breeding programmes associated with food production and wider biotechnology.

A threshold in any global sense is not coherent, but locally and regionally the collapse of ecosystems and the biological diversity within them can have disastrous consequences. Many parts of our planet, for instance, face unrelenting and radical destruction of habitat. During the 1990s, an area of tropical forests four times the size of Switzerland (nearly 20 million hectares) was felled annually. Within thirty years the projection is that nearly 10% of all tropical forest species alive today will be extinct⁽⁶⁾. The impacts of felling on this scale go beyond the loss of pure genetic diversity to include the disruption of climate patterns, hydrological systems and soil erosion.

In each of the above cases, the trajectories of resource use indicate severe disruption to bio-physical systems, in many cases at the regional level and in some cases (pre-eminently climate change) at the global level. While the thresholds at which the need for adaptative changes to crisis response are not precisely known, most trends indicate accumulating rather than decreasing risk, even allowing for technological change.

The Development Gap

If trends suggest we are taking increasing risks with the sustainability of biophysical systems, it is equally clear that the prospects for human development in many parts of the world make for similarly grim reading. Currently, 1.2 billion people live on less than one US dollar a day and a further 1.6 billion on less than two⁽⁷⁾. More than one billion people therefore cannot meet even the most basic of consumption requirements and some 840 million people on the planet are severely malnourished⁽⁸⁾.

Nearly a billion adults are illiterate and more than 260 million school-aged children do not attend any form of schooling. Worse still, more than 250 million of them work as child labourers. The share in global income of the richest fifth of the world's population is a staggering 74 times that of the poorest fifth. Emphasising the link between the environment and development is the point that some 60% of the world's poorest people live in ecologically vulnerable areas. Furthermore, nearly 3 million people a year die from air pollution, and more than 5 million die of diarrhoeal diseases caused by drinking contaminated water⁽⁹⁾.

In short, if the careless use of renewable resources by affluent countries is bad for the environment, there is nothing environmentally sustainable about poverty as it is experienced by a significant percentage of the world's population.

The imperative to address the kinds of social development problems noted above is frequently cast in moral terms. There are, however, more ruthlessly utilitarian and self-interested reasons.

These problems have very real and direct implications for the developed world. It has become commonplace to describe the planet as a global village. Films, television and increasingly, the Internet, have made it possible for one-half of the world to see a glamorised version of how the other half lives.

People are understandably determined to try to gain access to this enhanced quality *and* quantity of life. It is hardly surprising that one of the implications of this development gap is inexorably rising pressure for migration to the developed world. To this pressure must be added specific (but related) causes of migration such as refuge from war, persecution, violence or human rights violations.

At the same time, the tensions generated by the deterioration of ecological services (particularly those provided by forests and aquatic ecosystems) may act as a further catalyst for population displacement, along with the rising incidence of cross-border disease contagion, regional instability and civil strife. It is also well known that poverty coupled with the collapse of effective governance acts as a catalyst for international crime, including narco-trafficking, money laundering and terrorism. All of these are issues that impinge on the developed world's daily lives and should provide a justification, if not to help others, then as a form of self-help.

Do We Need to Know More?

It is tempting to conclude that further descriptions of our distance from a sustainable development path will add little value; and that the urgency with which solutions are required is self-evident.

It is certainly true that the challenge of sustainability has spawned an industry of experts seeking to measure varying dimensions of sustainability at the national level. But in an increasingly interdependent world, there is a need to assemble measures that can relate national data to the global and regional systems on which resource use impacts and also shed light on priorities. Without some agreed measure of what it is we are seeking to

achieve, setting priorities and assembling scarce resources to deal with them is all but impossible.

Such measures were called for at Rio in 1992. But, nearly ten years on, there is still no agreement on how to measure the trends at the global level. The problem is only partly a dearth of reliable information – there is far more available than there has ever been. It is also political. Governments cannot agree on which set of indicators to use, in part because of an anxiety about where their country might emerge in any ranking system and in part because of ongoing doubts about the reliability of any sure measures which would have huge public explanatory power.

This problem is not new. The adoption of GNP back in the 1950s as the primary measure of economic wellbeing was the subject of similar controversy. Many countries resisted its implementation and denounced the measure as naïve, simplistic and unable to measure accurately overall economic growth. Nearly fifty years later, taking macroeconomic decisions without reference to GNP and the framework it provides for analysis (not least for comparing the economic performance of countries) would be unthinkable.

With respect to sustainable development, the human development part of the equation is, in some respects, better catered for. The UN's Human Development Index (HDI) is recognised as a fundamental measure of progress in terms of a country's commitment to and level of human development. It is methodologically transparent and easy to understand. And as a tool to both galvanise action and measure progress it is as flawed and as invaluable as GNP is to economic discussion.

A similar determination to measure the sustainability of resource use with reference to the bio-physical limits discussed above is required. Two particularly promising measures could help fill this gap. The first is the World Bank's concept of Genuine Savings. In simple terms, it adjusts gross savings by deducting the value of depleted resources and pollution damage, and of carbon dioxide emissions. It also considers education spending as an increase in saving, since this spending may be considered an investment in

human capital (rather as consumption is treated in traditional national accounts). The overall figure is expressed as a percentage of GDP.

The appeal of such an indicator is that it uses established concepts and standard monetary values that are familiar to decision-makers. Its principal weakness stems from the fact that it relies on valuing environmental assets that aren't actually traded — such as the atmosphere's ability to absorb CO₂, or biodiversity. Similarly, the measure fails to provide sufficiently broad coverage of renewable resources and does not address in a persuasive way the absence of data on the monetary value of water, fisheries resources and pollution.

One indicator that may address some of the shortcomings of the genuine savings measure is the *ecological footprint*. This is based on the notion of carrying capacity and is a way of expressing the impact of human activity on the biosphere as a single number. The result is a per capita 'footprint' that can then be multiplied by national populations to provide a country's footprint on the planet.

The major advantage of the footprint approach is that it gives a clear and unambiguous message about sustainability in an easily digested form. The World Wildlife Fund, which uses the footprint, suggests that humanity's overall ecological footprint has overshoot by over 30% the area of the globe that can remain biologically productive on a sustainable basis.

The concept has not, to date, been used in official policy making. Beyond the striking message which the footprint conveys, the indicator does have its limitations. The manner in which energy use is calculated is controversial. Additionally, the measure excludes many environmental impacts (pollution, non-biological resources, environmental risks), which makes it difficult to assess conclusively whether the measure is too conservative or, conversely, overly optimistic.

It is easy to discredit such tools. But in the absence of a framework of indicators, national and international debates over

priorities and trade-offs end up being based on fragmented data, anecdote, or worse. Indicators do not eliminate disagreement on policies. But they are a better guide than mere prejudice.

Is that all we need?

Almost certainly not. Changes in governance, economic management and technological interconnectedness have been profound in recent years. Advocates of sustainability need to be careful that they are proposing solutions that are deliverable in the world as it has evolved. There is always a temptation to cling to verbally negotiated solutions long after the chances of their practical implementation has become remote. That's not surprising: reaching agreement is often an arduous business.

But it must always be open to carry out a reality check on the basic political assumptions that underwrite the world we live in. Here are three propositions, rarely stated, but glaringly obvious if actions rather than words are allowed to speak for themselves:

1. No developed country politician is going to secure a mandate to reduce consumption radically and effect big short-run cuts in living standards in an effort to head off long-run environmental harm. (The recent reaction to rising energy prices on both sides of the Atlantic is testament to that.)
2. No developing country is going to limit its freedom to develop as developed countries have before them. Developed-world living standards are built on the conversion (for which read, destruction) of natural resources into intellectual and human resources. This 'substitution of natural capital with human capital' (as economists characterise it) is a trade-off that every country regards as its own sovereign choice.
3. It is extremely unlikely that the 1970s target set of raising levels of Overseas Development Assistance by rich countries to 0.7% of GNP will be met by more than the handful of north-west European countries that have already achieved it⁽¹⁰⁾. Buying a

different development path with taxpayers' funds looks a forlorn hope.

So what does this mean for the sorts of pressures that talk of sustainability is supposed to mitigate? Again, rather than looking at the professed intentions of governments, it may be salutary to reflect on the implications of the three preceding realities. If they are correct – no radical change in first-world consumption, an ongoing conversion of natural resources to raise living standards today and no prospect of significant additional resources to change the pattern of third-world development – then a visitor from Mars would be left with two fairly glaring conclusions:

First, that decision-makers must be relying on some extraordinary technological breakthrough that will render all the unsustainable trajectories redundant; that radically different relationships are possible between resource use and current developed world living standards.

And second, that something other than developed-world aid transfers will be available to change the game for developing countries so that their development path will follow a radically different pattern of resource use.

These are assumptions that are never spelt out probably because they are believed to be either too heroic, or too contentious – or both. But in the absence of evidence to the contrary, it is hard to see what else political leaders are banking on to solve many of the environmental and developmental issues that confront them.

How likely is it that solutions will come out of the undergrowth to make such unspoken assumptions more plausible? The answer is more likely than you might think, but it won't come about through benign neglect. And it won't come about by making altruistic gestures wrapped in visionary words.

Pricing for Scarcity

Start with good old-fashioned scarcity and hard-nosed risk management. If vital natural systems that deliver life-sustaining conditions are at risk, then their growing scarcity has to be communicated to the people who use them. Standard economic theory would suggest that prices actually paid by users are the best way of getting the message through. Fully privatised markets certainly get messages through — some of which (like ability to pay) may not be very palatable. So all sorts of things can be done to blunt the distributional consequences of putting a price on things like air or water. Governments can assert ownership and ration access in all sorts of price-distorting ways. That's a political judgement.

But what won't work is the pretence that there isn't some basic limit to the amount of water we can pollute, the amount of CO₂ we can put into the atmosphere and so on. Or, worse still, that we can worry about these issues but go on subsidising activities that take us in the *opposite* direction — like keeping coal mines, shipyards and farms going when the market would have closed them down long ago.

Governments have to stop pretending that they can exhort people to make changes when the prices people pay tell them otherwise. Give a clear price signal about future price trajectories — and the first of the heroic assumptions comes plausibly within our grasp. If it is believed that technological ingenuity will find a way around the scarcity of atmospheric space or cropland or water, then it's irresponsible to delay giving innovators and investors that signal. That's what creating a market in scarce environmental assets is all about. How those assets are distributed and owned is a secondary — albeit mightily contentious — issue. But avoiding contention by pretending there is no scarcity is the road to ruin.

But does ruin lie at the end of this road? That's a question both about the trade-offs we're prepared to make, and the absolute limits that apply to some environmental assets. These are

questions sceptics in developed countries and leaders in developing countries are bound to ask.

How much bio-diversity can be safely traded away for higher material living standards? How much conversion of forests into pasture or arable land can we sustain? And what are the limits? The problem is raised in its most difficult, inter-generational form by climate change. How much warming are we prepared to tolerate – and what are the limits beyond which human-induced temperature increases might generate much more radical climate change?

These are questions of risk management. And science can only take us so far. The IPCC's decade-long efforts to pool knowledge on climate change have come in for their share of criticism. But it's hard to know how else, in good faith, one could make an assessment of a genuinely global phenomenon. We can – and should – ask for the constant up-dating and challenging of research results, but at a certain point it becomes a matter of taking prudential action. And that means identifying a final concentration target and then getting down to the messy business of trying to chart a course that takes account of the distributional consequences of acting at different speeds and in different sequences.

Unless a start is made – unless some provisional agreement that atmospheric space for human greenhouse gases is limited – even the first steps won't be taken. The good news is that everything we know about markets is that once a level of confidence is established, investors normally don't sit on their hands. They can take account of the long term as well as anyone can. That's why it may not be merely heroic to count on radical technological changes that can de-couple the trajectory of living standards that people aspire to from the resources consumed in providing it. But without political action to create the necessary framework, sensible people won't lift a finger.

Trade as well as Aid

So much for owning up to scarcity and making it the mother of invention. But what of the development gap? Even if we had the technologies and the management practices, how could we insert them into the growth trajectory of developing countries in time to alter the course of history? After all, many of the big infrastructural investments that come on the coat tails of development have long lead times and have a life of decades. Production and consumption patterns laid down now could be fixed for more than a generation.

In short, how do we intervene swiftly and effectively for the better? The traditional response – development assistance for capacity-building and technology transfer – simply isn't going to deliver on the scale or at a speed that is acceptable to countries who see no reason why they should defer their chances for improvement at the behest of those who've only become concerned once they've made themselves comfortable.

The only transmission mechanism in sight is private investment. Many of the most important decisions that will affect the fate of the world's forest, oceans, freshwater and climate – and determine the development prospects of billions of people - are already being taken by companies. The institutions they encounter will determine whether or not they invest and, if they do, how well they will do it.

Businesses are more or less influenced by governments depending on where they operate. In some countries, clear and transparent regulatory systems ensure that resources are used efficiently and environmental harm is limited. In others, an unsavoury nexus of corporate pressure and political and institutional corruption almost guarantee that resources are wasted, environmental corners are cut and the social consequences of large projects are disregarded. So the extent to which official development assistance can shore up strong institutions and the education systems of developing countries can be very important.

But development is not solely a matter of external capital — whether public or private. It is also a matter of access to markets. Despite the Uruguay Round — which heralded unprecedented liberalisation of international markets — access to the high-value markets of the developed world remain something to which developing countries aspire. While the imports of raw materials and low value-added items from developing countries generally face a zero or very low tariff in developed markets, intermediate and processed products face successively higher tariffs.

Agricultural subsidies in developed countries have long inflicted damage on developing countries. In the five years since the Uruguay Round Agreement on Agriculture came into force, subsidies for agriculture in developed economies have *risen*⁽¹¹⁾. And this, despite a commitment to reduce such support. The export of these subsidised products undermines the returns available to developing country exporters.

The statistics are barely conscionable. Last year, the EU spent over US\$ 2 billion on subsidising EU sugar farmers alone to produce a product which can be produced more efficiently and cheaply in the developing world. Similarly, in the United States, each oilseed farmer received on average nearly US\$ 12,000 per year in support⁽¹²⁾. Compare that to the average wages in most developing countries. Overall, tariffs and subsidies in the developed world cause annual welfare losses of almost US\$ 20 billion for developing countries⁽¹³⁾. This is equal to some 40% of annual ODA provided by OECD countries to the developing world⁽¹⁴⁾.

Developing countries are right to be suspicious therefore of the conditionality that rich countries talk of imposing in return for lowering trade barriers. After all, the industrialised societies got where they are by being considerably less respectful of the physical and human environment than they are today.

A Grand Compromise?

Does it follow that there is no halfway house? In the context of a new trade Round, if the offer of access for agricultural products and textiles, for instance, was breathtakingly big (in the way that delivery on the promise of additional ODA and other forms of technical assistance has not been), might developing countries not be encouraged to take up their new opportunities in a more sustainable way? The answer depends on whether the developed world will put its money where its mouth is when it comes to the cost of meeting new standards.

Developing countries already find it hard enough to meet existing sanitary and phyto-sanitary standards stipulated by the WTO's SPS and TBT Agreements. Technical assistance from developed countries to developing ones to honour these agreements has fallen well short of what is needed. Any new ones will have to be accompanied by a much less miserly approach.

Is there then a Grand Compromise in which developed countries open their markets *and* provide more generous technical assistance to developing countries to enable them to make sustainable development a part of the trade liberalisation agenda? That depends on what the deal is worth.

Movement on tariffs and subsidies alone is unlikely to be enough. A deal will have to be worked out that includes progress on these issues *and* on meaningful technology transfer and technical assistance to assist developing countries in meeting SPS/TBT requirements and new eco-labelling measures. Some more time to get there would also help.

Such a deal might just make the second heroic claim possible – that there *is* a readily available means to speedy development for developing countries: investment and trade secured by institutions that work. Countries with more open trade and investment regimes generally enjoy higher and faster rates of economic growth. The next round of trade negotiations therefore represents the best

single opportunity to bring together the economic, development and environmental pillars of sustainable development.

So What's New?

Nothing in particular. And the OECD is only the latest inter-governmental organisation to analyse the issues at the core of sustainable development and talk about unsustainable trends and cupboards full of policy interventions that could change them. So why does so little happen?

Is it that, deep down, Ministers and their advisers don't really believe there are problems of the sort outlined in this article, but that they're stuck with what they said at Rio and can't easily bail out?

Or is it that countries acknowledge the difficulties but find themselves stuck in a Prisoner's Dilemma in which, lacking the international co-ordination mechanisms, they can only move at the pace of the slowest and most compromised participants?

Or is it all much more innocent — that we simply lack reliable measures of sustainability and a precise definition of the thresholds we dare not cross?

It is probably all of these and more. There are genuine sceptics in this world. There are co-ordination problems. And there is certainly a bewildering array of data that doesn't provide as clear a picture of the bio-physical limits we face as is desirable.

But one thing is clear. Assuming that current trends are not, in a hard bio-physical sense, sustainable, progress at the current rate will never enable us to turn the corner – and will certainly never see the development prospects of literally billions of people significantly improved within their lifetimes.

It is time to ask some hard questions about whether countries are pulling the right levers – and in the right sequence. Ponderous,

grid-locked international forums cannot sustain themselves forever. The gap between words and deeds remains stark. OECD finance and environment ministers will assemble shortly to ponder the state of the sustainable development debate. They will have no shortage of analysis available to them.

They must now decide whether to treat it as a Holy Grail that is so complex no-one can grasp it... or to settle on a few concrete problems that can head off human and environmental pressures that are well described but unlikely to evolve tidily according to a timetable or with predictable consequences. If these problems do get out of control, we can be sure that it will be all hands to the pump. But fighting fires is no substitute for investing in prudent, well-researched insurance.

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