

Gambling everything for more: the Earth that development built

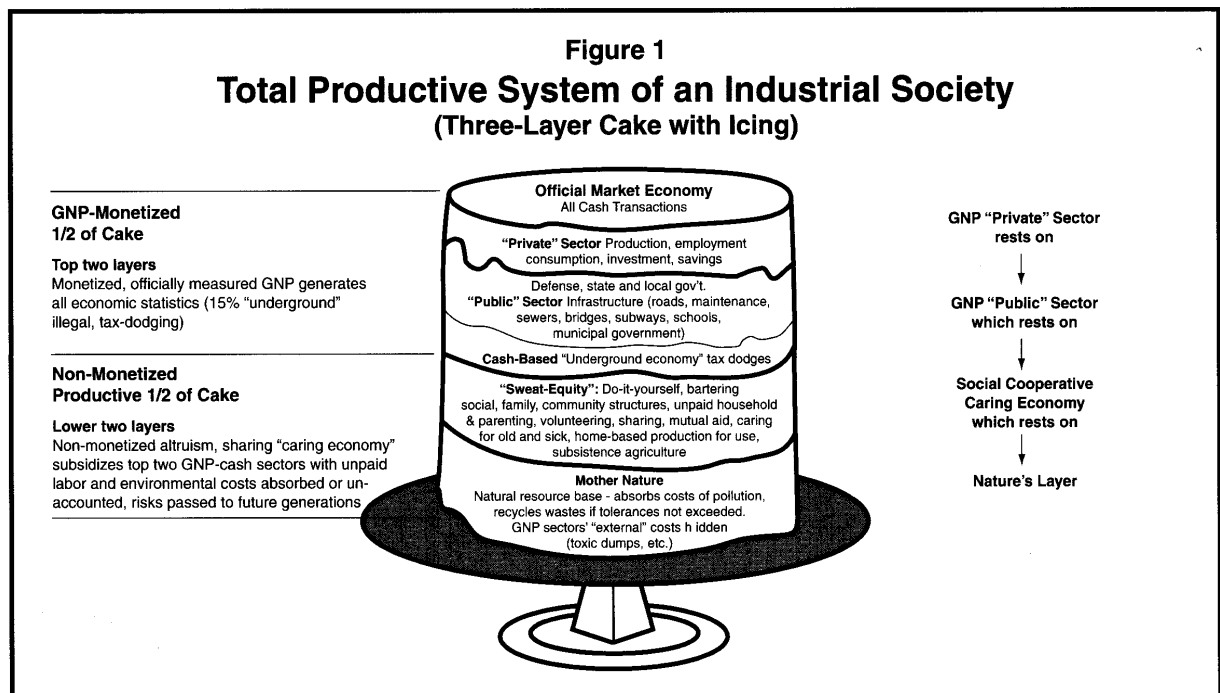
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The environment forms the basis of all global social and economic systems, and the substrate for all development activities. This paper reviews the current state of the global environment. Whilst debates about the limits to growth continue, several inter-related indicators suggest that limits do exist, and are being dangerously exceeded. While all of earth's inhabitants depend on the environment for survival, poor people often depend very directly on the natural resource base for their livelihoods. Areas of particular concern from a development perspective include climate change, water resource management, and agriculture. Marginalised groups - such as indigenous peoples and women - are often the first to experience the impacts of environmental degradation, yet lack the political influence to redress them. Failure to meet the environmental Millennium Development Goals looks inevitable, in turn putting the achievement and sustainability of the other MDGs in jeopardy. The author argues that although individuals can bring about change, the world needs active citizens to participate in decisions about the political and institutional forces that shape consumption pattern the world over, and governments can and should do more to stimulate and facilitate this participation.

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1. Introduction

The natural environment matters to poor people and the development enterprise for two fundamental reasons. First, as the basis of our economic and social systems, it matters deeply to *all* of us, rich and poor (see Figure 1, below).¹ To the extent that environmental constraints and natural resource degradation limit the scale or threaten the integrity of these systems, they undermine the possibility that economies can be expanded or sustained in ways that include the half of humanity that is still largely excluded from the wealth and well-being they generate.



Source: Hazel Henderson, *Paradigms in Progress* (San Francisco: Berrett-Koehler Publishers, 1991).

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Second, poor people generally depend on the natural resource base more, and more directly, than the rest of society. Poor people are affected first and worst by the loss of environmental resources, and so are more likely to fall deeper into poverty when these are degraded. Since the limited assets that poor communities have available to finance their development and lift themselves out of poverty are more likely to be environmental goods and services, this also means that environmental degradation undercuts their potential to escape poverty – even assuming it is not sufficiently severe to undermine the integrity of the wider economy.

These simple fundamentals create a useful lens for analysing poverty-environment linkages and are central to an understanding of why '...development policies aimed at reducing poverty that ignore the impact of our current behaviour on the natural environment may well be doomed to failure.'² They also help understand the implications of the current state of the environment, described briefly in Section 2. Key debates surrounding questions of environmental quality are laid out in Section 3. Section 4 reviews trends and dynamics central to change in poverty-environment conditions.

¹ In addition, the environment matters to many people, including poor people, who value its 'intrinsic' and other non-use values. That is, ecosystems, species and other resources matter in their own right, independent of their functional value to human systems. The emphasis on economic values in this paper, due to limited space, does not deny these additional values. Recognition of cultural, spiritual and intrinsic values of the environment only strengthens the arguments presented.

² Millennium Ecosystem Assessment (2005), 'Living Beyond Our Means: Natural Assets and Human Well-being,' Statement from the Board, p. 19.

2. State of the environment

Dominant and influential global discourses may differ in their analysis of how serious environmental problems are or who is to blame for them – oblivious rich consumers or fast-growing populations of ‘poverty-stricken masses. But they all agree problems exist.’³ Global scientific assessments are unanimous in their message: the atmosphere, forests, wetlands and other freshwater resources, coral reefs, marine environments, and the life they all support are being destroyed at rates that seriously threaten the well-being of present and future generations (see Table 1, below). Despite all the rhetoric about sustainable development over the past two decades, it remains most elusive in the area of environmental conservation.

Table 1: Selected global environmental assessments

2006	<i>State of the World, 2006, Special Focus: China and India</i> , Worldwatch Institute	‘The rise of China and India illustrates more clearly than any development in recent memory that the western, resource-intensive economic model is simply not capable of meeting the growing needs of more than 8 billion people in the twenty-first century.’
2005	<i>Ecosystems and Human Well-being: Synthesis</i> , Millennium Ecosystem Assessment	‘At the heart of this assessment is a stark warning. Human activity is putting such a strain on the natural functions of Earth that the ability of the planet’s ecosystems to sustain future generations can no longer be taken for granted.’
	<i>Environment and Human Well-being: A Practical Strategy</i> , UN Millennium Project, Task Force on Environmental Sustainability	‘60% of Earth’s ecosystem services – freshwater provision, soil nutrient renewal and productivity, and biodiversity – are being rapidly degraded or used unsustainably. Climate change may be the single greatest driver of environmental change. Tens of millions of people will be displaced as a result in coming decades.’
	<i>World Resources 2005: The Wealth of the Poor</i> , WRI, UNDP, UNEP and World Bank	‘Poor people must necessarily depend on natural resources to escape poverty, but they lack access, control and power over these resources to realise their economic potential due to an array of governance failures.’
2004	<i>Living Planet Report</i> , WWF	Populations of terrestrial, freshwater and marine species have declined by 40% since 1970; the intensity of renewable natural resource use in 2001 was 2.5 times larger than 1961.
	<i>Limits to Growth: The 30-year Update</i> , Donella Meadows, Jorgen Randers and Dennis Meadows.	‘...We are much more pessimistic about the global future than we were in 1972. It is a sad fact that humanity has largely squandered the past 30 years in futile debates and well-intentioned, but half-hearted, responses to the global ecological challenge. We do not have another 30 years to dither. Much will have to change if the on-going overshoot is not to be followed by collapse during the twenty-first century.’
2003	<i>World Development Report 2003: Sustainable development in a dynamic world</i> , The World Bank	‘Past patterns of growth worldwide have generated costs that are not sustainable... ensuring sustainable development requires attention not just to economic growth but also to environmental and social issues. Unless the transformation of society and the management of the environment are addressed integrally along with economic growth, growth itself will be jeopardized over the longer term.’

³ For a useful review of poverty-environment, discourses see: Adger, W. Neil et al. (2001), ‘Advancing a Political Ecology of Global Environmental Discourses,’ *Development and Change*, Vol. 32, 681-715.

2002	<i>Global Environmental Outlook (GEO3), UN Environment Programme (UNEP)</i>	‘...a growing world population... is exacerbating the demand on resources and services, and increasing the generation of wastes to meet many of these demands. Overall, policy measures have not been adequate to counteract the pressures imposed by increasing poverty and uncontrolled consumption. [There is] indisputable evidence of continuing and widespread environmental degradation.’
2001	<i>Climate Change 2001: Third Assessment Report, Intergovernmental Panel on Climate Change</i>	‘Projected global warming in 2001 (+1.4 – 5.8°C) is <i>significantly</i> higher than the 1992 (1.0 – 3.5°C by 2080) estimate. Rising surface and lower atmosphere temperatures and melting of glaciers, snow cover and permafrost are attributable to greenhouse gas emissions from human activities.’
1998	<i>Human Development Report 1998: Consumption for Human Development, UN Development Programme (UNDP)</i>	‘Today’s consumption is undermining the natural resource base. It is exacerbating inequalities. And the dynamics of the consumption-poverty-inequality-environment nexus are accelerating. If the trends continue without change... today’s problems of consumption and human development will worsen.’

Building on the layer-cake image in Figure 1 (above), the fundamental problem is that the top two layers (market economy) are growing at the expense of the bottom layer (natural resource base). As an indicator of the state of the bottom layer, the Living Planet Index reports a decline of approximately 40% in populations of terrestrial, freshwater and marine species worldwide since 1970.⁴ The current rate of species extinction is up to one thousand times that of the fossil record, and experts forecast this rate could increase tenfold within the next fifty years.⁵

In simple terms, the dynamics of the problem can be understood in terms of two flows between these layers: resource extraction and waste production. Each of us, and the economies we are part of, consume resources from the natural resource base in the air we breathe, the food we eat, the structures we live in, the transport we use, and all the other products and activities that support our subsistence and leisure. At the same time, economic production and consumption processes based on these inputs of raw materials generate pollution and wastes, which must ultimately be absorbed or processed by the natural resource base. Together, the full complement of provisioning and processing services that nature provides is known as ‘ecosystem services’. As these services are diminished, the viability of our economies is undermined.

It is tempting to think that we can escape this tight dependence on the natural resource base with modern technologies. It is true that technology continues to make dreams realities – we can now produce biodegradable plastics from plants – but our lives and economies will continue to depend wholly on the natural environment for the foreseeable future. The Millennium Ecosystem Assessment is unambiguous on this point: ‘these are dangerous illusions that ignore the vast benefits of nature to the lives of the 6 billion people on the planet. We may have distanced ourselves from nature, but we rely completely on the services it delivers.’

The volume of resources that is cycled through the economy is known as the material ‘throughput’. Because the natural resource base has physical limits, the human economy that depends on it also has limits in terms of throughput. Ultimately, our economies cannot exceed the planetary limits of ecosystem services or stocks of non-renewable resources. The scale and reach of human impacts on the natural environment is sometimes hard to appreciate, but the figures are shocking. Nearly a quarter of the Earth’s entire land area has already been converted from natural forests, savannas and grassland

⁴ Jonathan Loh and Mathis Wackernagel (2004), ‘Living Planet Report,’ WWF, UNEP-WCMC and Global Footprint Network (this needs to be up-dated by publication with the next report, out in 2006).

⁵ Millennium Ecosystem Assessment (2005), ‘Living Beyond Our Means: Natural Assets and Human Well-being,’ Statement from the Board.

to cropland. Three to six times more freshwater is now held and controlled by humans in artificial reservoirs than by all the rivers of the world. 'In many sea areas, the total weight of fish available to be captured is less than a tenth of that available before the onset of industrial fishing.'⁶

Poor people are directly affected by many of these impacts. Deforestation, desertification, urban pollution, biodiversity loss, and indoor air pollution – the list is long. But three issues in particular stand out as areas where the impacts and potential for change are especially significant to the challenge of overcoming poverty: sustainable agriculture, water resources management and global climate change.

3. Key debates

There is nothing new about the overall global trend of declining environmental resources, or the idea that this can undermine economic growth. What is new is the emerging consensus that finite limits associated with stocks of natural resources and the environment's absorptive capacity are cause for concern, and the evidence that we may be getting too close to these limits for comfort or prudence.

The debate about 'the limits to growth' began with the 1972 text of the same name, which argued that, in the absence of profound socio-economic and cultural change, human activity would exceed ecological capacity within the following 100 years, resulting in a catastrophic collapse in population and human welfare. Many contemporary economists continue to dismiss the seriousness of this proposition, arguing that productivity and output growth can be sustained for the foreseeable future as market prices shift incentives for new technological development and switching from scarce resources to cheaper substitutes.

This may be true, but it remains to be seen whether such shifts can in fact occur without themselves generating greater environmental costs. In the case of several key commodities – food grains, freshwater and oil – it is most likely that we won't have to wait too long for the results. The period between 1999 and 2005 saw the most serious deterioration in world grain stocks since 1960.⁷ In contrast to just a decade ago, BP, Shell, Chevron and even Exxon-Mobil are now talking openly about scarcity. While it took 125 years to burn the first half of the estimated global supply of two trillion barrels of oil, Chevron estimates it will take just 30 years to use up the remaining trillion. 'Current water consumption is only able to continue by shifting the problem to distant communities and natural systems – or to future generations.'⁸

Currently, the only feasible substitutes for oil and gas as transport fuels are biofuels, derived from crops. As demand for food grains and biofuels increase simultaneously, can the productivity of limited agricultural land keep pace? In both China and India, water scarcity is already cited as the limiting factor on grain production.⁹ Given burgeoning demand for water in urban and industrial sectors, can enough water be diverted to agriculture to support both food and energy farming? These are the tests facing the limits to growth debate in the coming decade.

Unfortunately, it is still difficult to know where, exactly, the environmental limits to human economic activity lie. More than a decade ago, Oxfam's last Poverty Report discussed the 'ecological footprint' concept, now widely used as an indicator of resource use relative to the Earth's biological capacity. Analyses of humanity's ecological footprint suggest that, globally, we have been exceeding this capacity since 1986. In 2001, this overshoot meant that 1.2 planets were required to meet humanity's resource demands. How can we use more than the Earth's available resources? The answer is that over-exploitation of resources today can diminish the viability of ecosystem services in the future. This

⁶ MEA (2005), *op. cit.*

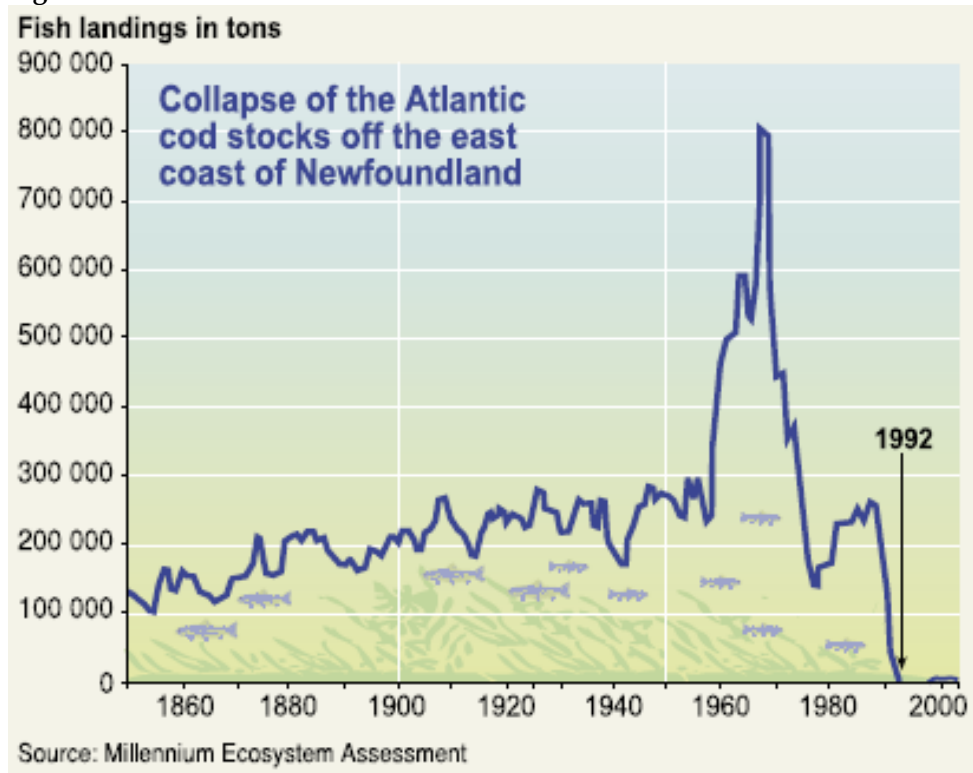
⁷ USDA, Production, Supply and Distribution database, www.fas.usda.gov/psd, cited in WorldWatch (2006).

⁸ MEA, 2005, *op. cit.*

⁹ WorldWatch, 2006.

is why it is so difficult to know where the thresholds lie. And also, why it's so dangerous to push the boundaries.

Figure 2:



When thresholds are crossed, environmental change can become catastrophic and even irreversible. As an example, cod stocks off the Grand Banks of Canada show few signs of recovering more than a decade after their sudden collapse and the closure of the fishery in 1992 (see Figure 2, above). Scientists now believe that a 2-degree rise in average global surface temperatures would represent a threshold for 'dangerous climate change', a level beyond which catastrophic changes to geophysical and biological systems is likely.¹⁰ Recent evidence of climate impacts in the Arctic and elsewhere around the world suggests that, already, climate change is occurring much faster than expected. For this reason especially, a precautionary approach to environmental limits is warranted.

Most experts would agree that economic growth could cause significant environmental damage through resource extraction and needs to be better managed to reduce such impacts. Increasingly, many experts, including economists, believe there is justifiable cause for concern over resource scarcity, especially when the full spectrum of environmental services (including absorptive capacity, natural hazard regulation and waste treatment functions) is taken into account.¹¹ Some economists believe that the scale of economic growth in some countries (the US) has already surpassed ecologically sustainable levels, leading to 'uneconomic growth'.¹² One of the most active areas of debate about these issues over the last decade relates to the question of whether and how environmental impacts relate to economic growth.

The now famous 'environmental Kuznets curve' (EKC) claims to demonstrate that environmental degradation increases with national income – up to a critical turning point, after which countries

¹⁰ UEA/Norwich meeting 2005

¹¹ Dennis Pirages and Ken Cousins, *From Resource Scarcity to Ecological Security: Exploring New Limits to Growth*, MIT Press, September 2005.

¹² Herman Daly, 'Economics in a Full World,' *Scientific American*, Vol. 293, Issue 3, September 2005, pp. 100-107.

become rich enough to demand and pay for conservation measures. The implication is often that continued economic growth is the ultimate solution to environmental degradation, since countries will ultimately gain the resources to pay for resource conservation and pollution abatement.

Although this argument is still prevalent after more than a decade of debate, there are more than enough serious concerns to reject this implication outright.¹³ The relationship posited by the EKC can only be empirically established for some forms of pollution (mostly air pollution). For species extinctions that accompany economic growth, it is impossible to recover previous levels of biodiversity for the obvious reason that a species, once extinct, is gone forever. In the case of carbon dioxide, the principal greenhouse gas responsible for climate change, studies have found that emissions do not peak at some level of income (rather they keep on rising).¹⁴

Most importantly from a poverty perspective are two additional problems with the EKC. First, ecological footprint analyses confirm that environment degradation in one (poor) country can be directly linked to economic growth and associated demand in another (rich) country that has apparently turned on the downward slope of the curve for that particular pollutant. Second, most EKC data reflect the national rather than local or household scale and conclude that environmental concern correlates with wealth. Since poor people are often pushed to ecologically marginal areas, wealthier segments of society may not be particularly concerned with the pollution that affects them there. In any case, right at the outset of this debate the World Bank found that, 'The existence of an environmental Kuznets curve, and this point cannot be emphasised enough, does not imply that countries will naturally grow their way out of environmental problems.'¹⁵

Related to the EKC debate are claims about the 'de-materialisation' of advanced economies, or 'decoupling' of economic growth from resource throughput. In recent years, graphs have appeared to suggest that the energy per unit of GDP (growth) in rich world economies is falling (after several decades of close tracking). In particular, the US Government has presented such graphs as evidence of its progress towards greenhouse gas reduction goals at international climate change negotiations. There are several reasons - ranging from changes in energy sources to increased levels of imports as a share of consumption - why these claims cannot be treated as robust evidence that growing economies are not actually reducing their rates of energy consumption, let alone their wider consumption of natural resources.¹⁶ Looking more specifically at raw materials, a recent review of metal stocks found that, 'Data on the stock of copper used in the U.S. over the past century cast doubt on the idea that demand for metals eventually decreases as incomes rise.'¹⁷

Although the state of the natural environment is cause for concern about future well being in rich-world economies, it is a direct challenge to poor people and poor countries now, every day. Poor people in local communities across the world don't need global experts to know their environments are changing. Farmers in Southern Africa demonstrate acute awareness of climate changes that affect their livelihoods.¹⁸ Local fishermen the world over know there are fewer fish. And to communities alongside the Yellow River in China or the Nile in Africa, it is painfully obvious when these rivers run

¹³ For a comprehensive debunking of the concept, see Dieneke Ferguson et al. (1996), 'Dangerous Curves: Does the Environment Improve with Economic Growth?' A WWF International Discussion Paper prepared by the New Economics Foundation; Leslie Gray and William Moseley, 'A geographical perspective on poverty-environment relations,' *The Geographical Journal*, Vol. 171, No. 1, March 2005, pp. 12-14.

¹⁴ Jeffrey Frankel, 'Climate and Trade: Links between the Kyoto Protocol and WTO,' *Environment*, Vol. 47, No. 7, September 2005.

¹⁵ World Bank (1994), 'The Environmental Kuznets Curve,' Environment Department, Dissemination Notes #9, cited in Ferguson et al. (1996), Op. Cit.

¹⁶ Ted Trainer, 'The 'de-materialisation' myth,' *Technology and Society*, 23, 2001, pp. 505-514; Jesús Ramos-Martín and Miquel Ortega-Cerdà, 'Non-linear relationship between energy intensity and economic growth,' paper submitted to ESEE Conference Frontiers, Tenerife, Spain, 12-15 February 2003.

¹⁷ R.B. Gordon, M. Bertram and T.E. Graedel, 'Metal Stocks and Sustainability,' *Proceedings of the National Academy of Science*, Vol. 103, No. 5, January 2006, pp. 1209-1214.

¹⁸ ADAPTIVE/Oxfam, 'Climate matters: living with climate variability and uncertainty in southern Africa - Case studies for Oxfam, http://www.oxfam.org.uk/what_we_do/issues/climate_change/story_climatematters.htm

dry. In response to such local conditions and priorities, nearly one third of Oxfam's projects and programmes explicitly include reference to environmental factors as part of context analysis and/or strategy.¹⁹

Most poor people today still live in rural areas and pursue agricultural and/or natural resource-based livelihoods that are highly dependent on the environment. Even in urban areas, poor people remain dependent upon or exposed to the environment to a much higher degree than wealthier populations, meaning that their health depends upon the quality of air and water. Because poor communities generally live in the most marginal environments – near floodplains, on hillsides, in and around industrial zones and garbage dumps – and benefit least if at all from formal planning and protection measures, they are most vulnerable to the impacts of pollution and environmental change.²⁰

Because of their particular social and economic roles, women are often at higher risk and more vulnerable than men to the impacts of environmental degradation. Worldwide, women comprise the largest share of the agricultural workforce. As a result, they may be more exposed to agro-chemical pollution and more burdened when declining soil quality or water availability reduce yields available for household consumption. Since women often have reduced claims to household or community wealth-assets, they are more likely to depend on open-access resources such as forests and wetlands for subsistence and income generation. When environmental hazards result in shocks and or stresses to the livelihoods and/or health of impoverished communities, the burden of maintenance, care and recovery falls heaviest on women.

Likewise, other excluded groups that comprise the poorest of the poor are also disproportionately affected by environmental degradation. Indigenous communities in the northern tip of Greenland, far above the Arctic Circle, have recorded mercury levels in their bloodstreams as much as 12 times those considered unsafe by US Government guidelines. They absorb this toxic metal through a traditional diet heavy in fish and marine mammals that are now contaminated by pollution from industrialised countries.²¹ The indigenous peoples of the Sierra Nevada of Santa Marta in South America don't use electricity or modern transport and yet they are on the front line of the impacts of global climate change (*see* Box 1).

Box 1: The long shadow of global climate change

At the northern tip of the Andes mountain range, on top of the world's highest coastal mountain range, live several groups of indigenous peoples – the Arhuaco, Kogi and Wiwa – who have made their home there since having survived the Spanish conquest nearly five centuries back. Unlike most indigenous peoples across the world whose languages or cultures face a real threat of extinction in the next few generations, these communities maintain strong and vibrant cultures. Although certainly affected directly by encroachment from agricultural 'colonists', incursions of narco-traffickers and other armed actors in Colombia's internal conflict, they maintain their language, socio-political institutions, cultural traditions and agricultural practices intact. Their strengths are reflected in deeds: in an agreement with the Colombian Government, they successfully negotiated access rights to the sea in the late 1980s; they thrilled many development activists by rebuffing an offer of a development loan from the World Bank.

In an unprecedented move after centuries of deliberate isolation from those of us they refer to as 'Younger Brothers', they formed a representative organisation in 1987 to '...enter into formal relations of mutual respect with the outside world.' Despite their strengths, these peoples have met a

¹⁹ From author's review of Oxfam's, programme information system (OPAL), December 2005 (explicit mention does not mean relevant projects / programmes focus exclusively on environment and natural resources; in most cases it is only one component of integrated programming).

²⁰ For a full discussion see: 'Linking Poverty Reduction and Environmental Management: Policy Challenges and Opportunities,' DFID, EC, UNDP, World Bank, July 2002.

²¹ M. Cone (2005), *Silent Snow: The Slow Poisoning of the Arctic*, New York: Glover Press, p. 80, quoted in Linda Greer et al. (2006), 'Curtailling Mercury's Global Reach,' Chapter 6 in WRI (2006), *State of the World 2006, Special Focus: China and India*, New York: W.W. Norton & Co.

challenge that worries them. The Sierra Nevada of Santa Marta is changing: the forest has been reduced to only 12% of its original area; all 30 of its river basins are drying up. Although they don't use the terms 'global warming' or 'climate change', they are worried about the world as a whole, in line with their belief systems. They live with a conscious belief in their special responsibility to steward their mountain home. As Wiwa Mama (leader) Ramón Gil asserts, 'If this mountain isn't taken care of, the whole world will fall ill.'

Sources: <http://www.tairona.org/org-en.html> and Stephen Ferry, 'Guardianes del mundo,' *National Geographic*, Vol. 15, No. 4, Octubre de 2004 p. 59 (Spanish edition, author's translation).

The report, *World Resources 2005*, helped address an important gap by emphasising the fact that the natural resource base often holds the domestic wealth-creating assets that have the greatest potential to finance poverty reduction.²² Unfortunately, as the report also points out, this potential wealth can seldom be realised given that poor people lack effective access, ownership or control over natural resources. Still, the arguments it outlines are central to an understanding of why poverty reduction efforts are doomed to failure unless they comprehensively incorporate an analysis of the potential for, and barriers to, natural resource management as a poverty reduction strategy.

Given this reality, it is ironic that poor people are often named as the agents of environmental degradation. The typical argument asserts that poor people don't have sufficient resources to invest in environmental conservation, and are driven to over-exploit natural resources by their immediate consumption needs. Additionally, high population growth rates in poor countries are tagged as leading drivers of rising consumption and associated environmental degradation. Such arguments have been used to justify growth-first options (since if poor people are the cause of environmental degradation, improved environmental quality requires wealth – see discussion of EKC, above), to prioritise population control measures and also to justify control and ownership of natural resources by more powerful agents.

Such arguments are now largely history and most observers agree that environmental degradation is caused overwhelmingly by wealthier segments of societies and rich countries, which maintain much higher levels of consumption and therefore bear greater responsibilities for conservation.²³ Important findings from rigorous studies into the question of poverty as a driver have come out saying that improvements in natural resource stewardship can be made even amongst the very poor.²⁴ The grossly unequal shares of natural resource consumption and pollution between rich and poor were discussed in Oxfam's 1995 Poverty Report and have been widely discussed elsewhere before and since.²⁵ Equally dramatic is the inequality in exposure and vulnerability to climate-related disasters. Of the 262 million people affected by such disasters between 2000 and 2004, more than 98% lived in developing countries.²⁶

Another common view that continues to help undermine a more positive relationship between poverty reduction and environmental conservation holds that one can come only at the expense of the other. The by-line of a recent *Economist* article tells all:

*'Brazil struggles to put the brakes on rampant deforestation without throwing tens of thousands of loggers and farmers into poverty.'*²⁷

The argument here is that tough trade-offs have to be made in allocating limited resources between these competing objectives.

²² *World Resources 2005: The Wealth of the Poor*, WRI, UNDP, UNEP and World Bank

²³ DFID, EC, UNDP, World Bank, July 2002, Op. Cit.

²⁴ Scott Swinton and Roberto Quiroz, 'Are Poor Farmers to Blame for Environmental Degradation? Results from the Peruvian Altiplano,' Staff paper 2002-14, University of Michigan, Department of Agricultural Economics, July 2002.

²⁵ See Gray and Moseley, 2005, *op. cit.*

²⁶ UNDP, *Human Development Report 2007-2008*, Chapter 2.

²⁷ *Economist*, 'How Green was my Valley,' Vol. 379, Issue 8475, 04/29/2006, pp. 39-40.

Of course, other isolated examples can be found to support this argument. But in general, such trade-offs present false dichotomies that do not reflect meaningful choices in the context of a framework that takes sustainable development and human rights seriously. They can be misleading because they are set-up to compare present and future gains or losses without discounting for the difference, for example. Or they limit the decision frame and restrict the possibility of other, win-win options. In the case of the *Economist* by-line, above, for example, the 'trade-off' that is presented is between unsustainable use and management practices today and unemployment today. Neither is a good choice from a rights-based perspective. Finally, many such trade-offs are framed in ways that (falsely) ignore or deny any crossover costs or benefits from one effort to the other. In the case of the Brazilian Amazon mentioned above, rampant deforestation surely cannot be sustainable for either the loggers or farmers for any length of time. And, couldn't introduction of sustainable use and management practices benefit all interests concerned as well as generate the resources necessary to pay for themselves?

4. Trends and dynamics

The extensive dependence of poor communities on the natural environment, their exclusion from access and control over the resources it provides, and the overall downward trend in environmental stocks and services make realisation of Millennium Development Goal 7 (ensure environmental sustainability) and Target 9 (reverse the loss of environmental resources) nearly impossible to envision. But the Millennium Project Task Force on Environmental Sustainability makes clear that all of the other MDGs cannot be achieved or maintained if these goals are left unfulfilled.

Looking forward to 2015 and beyond, achieving these goals will depend on both direct and indirect drivers of environmental change. In terms of direct drivers, these include:

- Changes in local land use and cover
- Species introduction or removal
- Technology adaptation and use
- External inputs
- Resource extraction and harvesting
- Climate change
- Natural, physical and biological drivers.²⁸

Under all of the four alternative scenarios developed by the Millennium Ecosystem Assessment for the first half of this century, trends in the pressures exerted by these drivers remain constant or growing. Climate change and pollution from inputs are both anticipated seeing very rapidly increasing impacts.

There are two principal indirect drivers that underpin direct drivers and which lie at the centre of the poverty-environment dynamic: demographic change and patterns of consumption and production (which, in turn are dictated by socio-political, economic, scientific, technological and cultural factors). Population growth rates around the world have dropped sharply in recent decades, meaning that largely this aspect of future change is predictable. This is because we have a high degree of certainty about past, current and future population levels as well as about what works in addressing high population growth rates through access to reproductive health care services.

Experience has shown that the most effective way to address population growth in relevant contexts is a comprehensive strategy of poverty reduction, provision of adequate health services (including addressing the unmet need for contraception and reproductive health services), access to education (particularly for women), promoting gender equity (including getting men to accept their responsibilities in birth planning and child rearing), all with full respect for human rights. This view is widely accepted by other experts

²⁸ From MEA, 'Ecosystems and Human Well-being: Synthesis', 2005

and practitioners in the field, particularly as a result of the International Conference on Population and Development held in Cairo in 1994.²⁹

Discourse on sustainability often includes suggestions that population controls should be prioritised, since on-going population growth is an important driver of consumption and thus an additional strain on resource availability. Given that the global population in 2050 is predicted to include some 37% more people than today, it is undoubtedly true that demand for resources will increase significantly. However, beyond investing in the comprehensive strategy mentioned above – which is certainly worthwhile (and which Oxfam does already support) there is little scope for otherwise altering the global population trajectory in any significant way. Put otherwise, only changes in other areas (i.e. consumption patterns, energy technologies and land use management) promise a scale of change that is commensurate with the drastic shift in resource use or carbon emissions required to make a difference.

Suggestions that are more dangerous relate to measures that would effectively penalise countries for the size of their current or future populations. While seldom if ever articulated publicly, the view that developing countries now have ‘too many people’, and that they should have fewer rights to the atmosphere or to other resources as a result, is easy to imagine and occasionally only thinly veiled in public comments, e.g. in discussions of the role of China in tackling global warming. In addition to being morally repugnant, such views are ill conceived.

Considering the long lead times and exponential growth rates of human populations, the idea that any government has a meaningful responsibility for the *current* size of its population is far fetched (of course, governments do have significant influence over *future* population size). China’s population has been large relative to the rest of the world for most of the past 2000 years, during most of which it has exceeded 60 million people. But since 1700, when the U.S. population numbered only 250,000 and China’s numbered 140 million, the U.S. population has grown much more than China’s in percentage terms. So, whatever we might think about China’s historically unprecedented population growth in the 20th Century, we can’t say it was a surprise. Its exponential growth was foreseen decades before the current political system of government was even established. Likewise, the impacts of China’s ‘one child policy’ will be far more apparent in coming decades than they have been to date.

Countries can and should take proven measures to stabilise population growth rates to achieve sustainable development. Such measures must help realise, rather than violate, the rights of people – especially the rights of women – to control and manage decisions about their fertility. Irrespective of government policies and efforts in this area, all people have an equal right to development. Although population growth is an important driver of climate change and other resource trends, population policies on their own have no chance of solving the crisis we now face. This requires radical and concerted actions consumption patterns, energy technologies and land use management.

As with fertility decisions that affect population, individuals play a determining role in patterns of demand through the consumption choices they make on a regular basis. Most treatments of sustainability skip over a discussion of consumption. Or, more accurately, such a discussion would typically focus on why constraints on economic growth are a nonsensical means of reducing skyrocketing global environmental impacts. The ‘IPAT’ formula (environmental Impact = Population growth x Affluence x Technology) that features in such presentation reasons: ‘population (too large), technology (not green enough), and economic growth (not enough of it in the right places).’³⁰ Arguably, there is huge potential here to affect resource use or global emissions trajectories – and thus climate change – since aggregate demand for resources and energy-intensive goods and services is the

²⁹ Oxfam GB, ‘Reproductive rights and population issues: Oxfam UK and Ireland’s position,’ Paper C12/94-3, Approved by Council 14 December 1994.

³⁰ K. Conca, T. Princen and F. Maniates, ‘Confronting Consumption,’ *Globale Environmental Politics*, Vol. 1, No. 3 (August 2001), p. 1.

root of the problem. For example, if everyone on Earth with annual income over US\$9,000 reduced their energy consumption in half, we would be well on our way to avoiding dangerous climate change.

Despite huge potential to shift energy systems towards more sustainable, low carbon pathways needed, an entrenched assumption persists that affluence – read as levels of consumption (growth) – is an ever-rising, immutable demand curve that arcs upwards straight through the 21st Century and beyond. But even the most zealous techno-optimists acknowledge the unsettling implications of this assumption, for example by pointing out that even if electric or hydrogen cars become commercially viable, the emissions benefits will quickly be cancelled out by the sheer number of cars on the roads – and the energy (and greenhouse gas emissions associated with) their mass production and supporting infrastructure (roads). Something must be done about affluence.

The answer from IPAT proponents and very well meaning environmentalists over the past three decades has been to individualise responsibility for the world's environmental ills. With personal carbon calculators now widely available to help us determine the exact degree of our individual guilt, we cannot but accept the obvious conclusion to the question of who's responsible for climate change: We are. And, primed by years and decades of fair-trade and organic and bird-friendly labels, rich consumers are far too familiar with the exhortations and dilemmas this responsibility imposes on each of us. 'Change a light bulb.' 'Plant a tree.' '50 simple things you can do to save the Earth.' 'Paper or plastic?'

There is a fundamental problem with this individualised solution to the consumption question: it doesn't work. Three reasons. First, one problem with energy conservation is 'rebound' – if people save money through acts of voluntary simplicity (turning off the lights, buying a bike instead of a car, etc.), the money they save simply gets diverted to other carbon-emitting activities like a dishwasher or a foreign holiday. Even savings (unless it's cash under the mattress) are subject to this displacement, since banks invest them in productive economic activities with the highest economic returns, not the environmental impacts.³¹ Without major structural changes to our economies, individual actions – even at the scale required to make a difference – would simply push the location and channel of impact elsewhere in the system.

No doubt, positive individual choices are highly relevant to bringing about change in this area. This is not to denigrate the value and importance of individual lifestyle choices in the least. But it is to say that for the purposes at hand (e.g. stopping dangerous climate change), they're not going to be determinate in solving the problem. The fact that we instinctively know this is the second problem with this approach. You can't plant a tree to save the world. The danger in continually telling people there are 10 simple, little, painless things they can do is of course that they quickly grow cynical: 'You mean after fifteen years of washing out these crummy jars and recycling them, environmental problems are still getting worse – geesh, what's the use?'³²

The point is, individual action is important and a critical part of the solution to the consumption problem, so long as it is first about collective citizen action and secondly about actual everyday consumption choices. The fact that the individualisation of consumer responsibility is increasing at the same time as popular awareness of global environmental crises such as climate change is no coincidence:

Given our deepening alienation from traditional understandings of active citizenship, together with the growing allure of consumption-as-social-action, it's little wonder that at a time when our capacity to

³¹ See P. Wapner and J. Willoughby, 'The Irony of Environmentalism: The Ecological Futility but Political Necessity of Lifestyle Change,' *Ethics & International Affairs*, Vol. 19, No. 3, November 2005, pp. 77-89.

³² M. Maniates, 'Individualisation: Plant a Tree, Buy a Bike, Save the World?' *Global Environmental Politics*, Vol. 1, No. 3, August 2001, p. 44.

*imagine an array of ways to build a just and ecologically resilient future must expand, it is in fact narrowing.*³³

This is the third reason why individual consumer-oriented action won't work, and it's the reason why individual decisions about consumption and lifestyle are relevant to policy. The idea that 'green consumption' is a foundation of meaningful social action diverts attention from the fact that institutions and political forces frame our control over consumption choices. This has long been a topic to avoid in polite society, and certainly in policy-making circles. Acknowledging this reality means discussing some very tough issues, long ago relegated by economists to the black box of consumer sovereignty: consumerism, 'manufactured needs', limits, global inequity, coercive policies, happiness, how much is too much or enough? Who decides? Who wins and who loses? As issues that are purely about individual freedoms and choices, we have been led to believe (and accept) that these questions are not policy-relevant.

For this reason, the IPAT policy formula and treatment of environmental issues in the social sciences (with only a handful of exceptions) has deliberately avoided these issues for decades, conveniently spreading responsibility across north (for over consumption) and south (overpopulation). At their most radical, solutions offered are about getting rich consumers and poor producers to demand green technologies and let the markets rip. While the logic of the formula is hard to dispute in physical terms, it is politically naïve as a basis for understanding how change might happen. As any individual who has tried it knows, walking or cycling through an area designed for high-speed driving is not an option open to human beings, no matter how committed, green or ethical they are. Forces and decisions outside the realm of individual control increasingly determine most of the consumers 'choices' available.

The IPAT formula needs to be reworked so that concerned individuals the world over can engage in policy debates that actually connect issues that matter to them to pressing policies choices forced by climate change. Rather than decide between a hybrid car or biofuel-powered car, consumers need to be part of the choice that eliminates mass transit options from their world. Illustrative alternatives have been offered that help achieve this re-connection. For example, take 'IWAC': Impact = quality of Work x meaningful consumption Alternatives x political Creativity.³⁴ Embracing questions about work – job security, gender balance in the workforce, conditions and worker satisfaction – opens the policy discussion to issues people care deeply about but also those that matter from a climate perspective. The same goes for a framing that includes alternative consumption options and creative political solutions.

Addressing lifestyle choice and consumption issues is still widely seen as the Luddite, hair-shirt agenda, and the reaction from policy-makers is to quickly point out that 'going back to the Stone Age' is not an option. But as the former Saudi oil Minister famously said, 'The Stone Age did not end for lack of stone, and the Oil Age will end long before the world runs out of oil.'

Governments and policymakers need to acknowledge that serious, public discussion of what societies – collectively – want and need is a central part of any viable solution to changing the IPAT formula and bending the emissions curve. A useful way to begin this discussion is for governments to facilitate discussion about the implications of alternative policy choices for individual/consumer well-being. Rather than focus on the negative constraints on consumption and freedoms that alternatives imply or require, there is much about low carbon alternatives that is in fact central to people's quality of life: less time wasted in commutes or rush-hour traffic, better air quality, built environments that promote social interaction rather than individual isolation, etc.³⁵

³³ See Maniates

³⁴ Maniates

³⁵ Porritt, 'How capitalism can save the world', Independent Extra, 8-page supplement, Independent, November 4, 2005

One critical concern for Oxfam in opening a discussion about consumption levels is inevitably that it could lead to constraints on consumption levels of poor people, most of whom require increased consumption to realise their rights. Clearly, in an age of unprecedented inequality, there is a need to explore how policy instruments and choices relevant to consumption options can sensibly differentiate between rich and poor. An important development within the climate debate that is relevant to this area is the move on the part of researchers and delegates from China to raise the issue in international fora. For example, one Chinese proposal for an international climate regime starts by differentiating between two types of 'basic needs' (for survival and a decent standard of life).³⁶ Discussions that include explicit recognition of the limits of consumption are not alien to alternative civil society discourse in many countries in which Oxfam works. Now is the time to re-open conversations to help identify and promote standards of sufficiency that poor people themselves are willing to strive for, and to link these to relevant policy discussions in rich countries and internationally.

5. Conclusion

While much has changed since modern efforts to address entrenched poverty began in the 19th Century, the close dependency of poor people on environmental goods and services remains unchanged. In general, a stable and healthy natural resource base remains the most effective safety net and most important wealth base that poor people have to reduce the impacts of economic shocks and finance their escape from poverty.

Unfortunately, this resource base is in rough shape and being depleted at a faster rate than ever by a development model that delivers more and more for the rich minority. The environmental community that has maintained a chorus of concern over the past four decades has often been accused of 'crying wolf'. But with current trends, we now must recall that, in the end, the shepherd *is* eaten by the wolf.

While technology can play a role in reducing the intensity of growth, or material throughput of the economy, this does not mean no action is needed to confront the urgent problems we face. In particular, sustainable agriculture, water resources management and global climate change are three areas where urgent policy action is required to ensure sustainable development and well being for the poorest citizens.

Population growth is undoubtedly linked to growing environmental impacts of human activities but, on their own, population policies have no chance of solving the crisis we now face. This is not to say that countries should not take proven measures to stabilise population growth rates to achieve sustainable development. Such measures must help realise, rather than violate, the rights of people – especially the rights of women – to control and manage decisions about their fertility.

One, often neglected dimension of the solution that is important and increasingly relevant relates to patterns of consumption. Ethical consumerism can play a critical role, not least in stimulating greater awareness of the problems relating to unsustainable resource use. Altered patterns of consumer demand can directly lead to modify corporate behaviour. But active citizenship involves more than consumption; it requires participation in decisions about the political and institutional forces that shape consumption patterns and determine the scope of lifestyle choices. Policy debates about energy futures, deforestation and other aspects of resource use will determine the contours of lifestyle choices and consumption levels in every country. Active citizen engagement with these debates is an urgent need vital to making change happen, and governments can and should do more to stimulate and facilitate this participation rather than ignore, disparage and reject the issue as a matter solely of consumer freedom and choice.

³⁶ <http://chinausclimate.org/downloads/presentations/panjihua.pdf>

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