Half way to the Millennium Development Goals

An assessment of the progress made on MDGs and the environment

9 July 2007

Introduction

The Millennium Development Goals (MDGs) have been agreed by the world's nations as a framework for action to reduce poverty and to achieve sustainable development objectives. They are an outcome of the Millennium Declaration, which was agreed by the heads of state and government of the United Nations during the Millennium Summit in September 2000.

The Live Earth concerts took place around the world on 7 July, a date that also marked the halfway point in the time alloted to achieve the Millennium Development Goals. The goals recognise that the environment and environmental sustainability are fundamental to human wellbeing, and MDG 7 specifically states this as a goal.

The Millennium Declaration pleaded that we must 'spare no effort to free all of humanity, and above all our children and grandchildren, from the threat of living on a planet irredeemably spoilt by human activities, and whose resources would no longer be sufficient for their needs'. A healthy and thriving environment lies at the very basis of human development, so achieving the MDGs on a long-term basis will depend on how we treat natural resources and the environment.

The most urgent environmental challenge today is climate change, as unabated global warming has the potential to obstruct or undo many of the development efforts currently under way. The International Panel on Climate Change concluded that 'over the next half-century, it is very likely that climate change will impede achievement of the MDGs'[i].

But other natural resources such as water, forests and fish are also crucial for human development.

To safeguard long-term success in meeting the MDGs, environmental sustainability needs to be higher up the political agenda still. The rhetoric has finally started changing, and new activities and programmes are being developed. However, the scale of the challenge to reverse environmental loss is enormous, and much more needs to be done more urgently. Without such an approach, any development gains will be transitory and inequitable. This paper provides an analysis, at the mid-point towards 2015 – the year set to achieve the Millennium Development Goals – of what has been achieved thus far on the environment.

Key findings

Poor people depend most on the environment, and degradation of the environment impacts most on them.

Poor people depend most directly on the services delivered by natural resources and ecosystems. They depend on them for food, water, fibres, fuel and income. Natural resources are often the few assets poor people have, and their degradation has a direct negative impact on these people's livelihoods. It makes the poor even more vulnerable, and exposes them to increased frequency and impact of droughts, floods, landslides and other natural disasters. In the context of climate change, vulnerability increases dramatically in the face of environmental degradation.

MDG 7 is the only Millennium Development Goal where the overall situation is getting worse, with ecosystems being depleted at a rate faster than they can be regenerated.

The Millennium Development Goals agreed in 2000 include MDG 7: ensuring environmental sustainability. But this is the only goal where the overall situation is getting worse rather than better. This is the case across a wide range of ecosystems, particularly forests, freshwater sources, fish stocks and climate regulation. The loss of these natural resources and unabated climate change are putting the achievement of all other development goals at risk, particularly beyond 2015.

Urgent action needs to be taken to manage our freshwater resources, halt deforestation, protect and restore our fisheries, and cut carbon emissions.

The international community needs to urgently address rapid natural resource loss and put mechanisms in place to ensure environmental resources are safeguarded in the future. This means taking urgent action to:

- ensure integrated management of freshwater resources;
- halt deforestation by ensuring sustainable investment in the forest sector and making it illegal to import illegal and unsustainable timber and wood products;
- work for sustainable fisheries by ensuring markets do not launder illegal catches; and
- rapidly cut carbon emissions to ensure we stay below a 2°C increase in global temperature, and develop finance mechanisms for adaptation.

Because of the impact of their production and consumption patterns, rich countries have the greatest responsibility to act.

Rich countries have the greatest responsibility to act because they are one of the main drivers of natural resource loss and climate change through their global consumption and production methods. If everyone lived as we do in the UK, we would need the resources of three planets to sustain ourselves. Developing countries also need to play their part by strengthening governance in their countries. But as the nations with the biggest ecological footprint, the rich countries need to act first and most dramatically. As well as ensuring that international trade and investment structures do not take advantage of weak governance in developing countries they also need to provide capacity and resources to help developing countries implement the international environmental agreements they signed up to.

Background

The first signs of human-induced climate change – in the form of changing seasons, abnormal weather, heatwaves, droughts and floods – have finally made wider society, including the media, politicians and business realise that the environment matters for humanity and for development. While poor people, such as the pastoralist people in northern Kenya, have contributed least to the problem of carbon emissions, they are already feeling serious impacts on their lives and livelihoods.

But the environment is much broader than the climate alone. Climate regulation is crucial, but is only one of the many natural ecosystems that form the basis of all life on Earth. Other natural resources also underpin human wellbeing, such as fresh water, food, clean air, wood, fisheries and productive soils. These are all relevant for various elements of human wellbeing, including security, health, good social relations, and basic materials for a good life.

Degradation of the natural environment has profound negative impacts on human beings, such as increased conflict and migration owing to the scarcity of natural resources. It has been shown that a healthy environment underpins all other Millennium Development Goals. It is for this reason that one of the MDGs – MDG 7 – explicitly refers to environmental sustainability (see Box 1). However, instead of environmental concerns being brought into the mainstream, they have often been sidelined and ignored within development institutions.

Box 1: MDG 7: Ensure environmental sustainability	
Target 9: Integrate the principles of sustainable development into country policies and programmes and reverse loss of environmental resources.	**Indicators:** 25. Proportion of land area covered by forest. 26. Ratio of area protected to maintain biological diversity to surface area. 27. Energy use (kg oil equivalent) per $1 GDP (PPP). 28. Carbon dioxide emissions per capita and consumption of ozone depleting CFCs (ODP tons). 29. Proportion of population using solid fuels.
Target 10: Halve, by 2015, the proportion of people without sustainable access to safe drinking water and basic sanitation.	30. Proportion of population with sustainable access to an improved water source, urban and rural. 31. Proportion of population with access to improved sanitation, urban and rural.
Target 11: By 2020, to have achieved a significant improvement in the lives of at least 100 million slum dwellers.	32. Proportion of households with access to secure tenure.

Based on the current targets and indicators, the UN reviews annual progress towards the Millennium Development Goals. For MDG 7, environmental sustainability, the Millennium Development Goals Report 2007[ii] reviews progress on the following indicators:

1) proportion of land area covered by forests;
2) emissions of carbon dioxide;
3) proportion of population using improved sanitation; and
4) urban population living in slums.

The report clearly shows that overall, MDG 7 is one of only two goals where the situation has deteriorated rather than improved, particularly on forest loss, carbon emissions and slum conditions. The only other goal that seems to be globally off track is MDG 6 (combating HIV/Aids, malaria and other diseases), particularly on the prevalence of HIV and deaths from Aids. This echoes the 2007 UN Progress Chart, which shows MDG 7 covered with red boxes in most continents, meaning that there is 'no progress, reversal or deterioration' happening on many of these issues[iii]. This is particularly the case for forest loss and sanitation.

However, it is widely recognised, including by the UN, that the current formulation and measurements for MDG 7 are not sufficiently coherent and fail to cover some key areas, such as healthy ecosystems[iv]. A review process of MDG 7 has recommended that a better formulated, new target should be adopted on environmental sustainability, which will focus on biodiversity and reversing biodiversity loss. This target will be in force in July 2007, and will be followed by the development of clearer and more measurable indicators later this year or early in 2008.

In anticipation of the new targets and indicators, in this paper we assess the status of MDG 7 by looking at the current state of some key natural resources and environmental issues, which all underpin human wellbeing and development, as explained in Box 2.

Box 2: How biodiversity contributes to achievement of the Millennium Development Goals[v]

MDG 1: Eradicate extreme poverty and hunger
Biodiversity and ecosystem services are essential to the productivity of agriculture, forests and fisheries. The soil fertility, erosion control and nutrient cycling provided by ecosystems enables people to derive food, water, fibres, fuel, income and livelihoods from natural and managed landscapes. Degraded ecosystems make the poor more vulnerable to increased frequency and impact of droughts, floods, landslides and other natural disasters.

MDGs 2 and 3: Achieve universal primary education; Promote gender equality and empower women
When biodiversity and ecosystem services are degraded or destroyed, the burden falls disproportionately on women and girls, who are forced to travel farther and spend more time in the search for drinking water, fuel wood, and other forest products. This increased burden limits their opportunities for education, literacy and income-generating activities.

MDGs 4, 5 and 6: Reduce child mortality; Improve maternal health; Combat major diseases
Genetic resources are the basis for modern and traditional healthcare treatments. Some 80% of the world's people rely on traditional healthcare systems that use traditional medicines, mostly derived from plants found in the local environment. The global pharmaceuticals industry also depends on genetic diversity: of the 150 most frequently prescribed drugs, more than half are derived from or

patterned after the natural world. Also affecting maternal and child health is the increased spread of malaria, dengue fever, and other insect- and water-borne diseases linked to degraded ecosystems. Loss of biodiversity and ecosystem function can lead to economic disruption, population dislocation and urban crowding, which encourages the spread of communicable diseases such as tuberculosis, hepatitis and HIV/Aids.

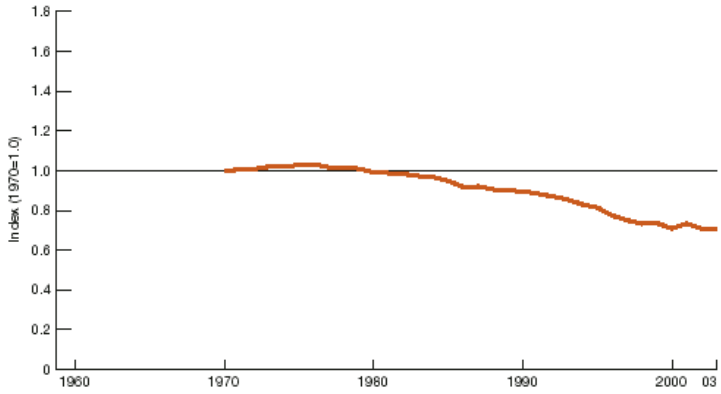
MDG 8: Develop a global partnership for development

Maintaining biodiversity and the integrity of critical ecosystem functioning will require global partnerships – encompassing government, the private sector and civil society in developing and industrial countries. MDG 8 embodies, among other things, the commitment of the developed countries to increase development assistance and open their markets to developing-country products – efforts that should be undertaken in ways that support rather than degrade the biological resource base on which achievement of the MDGs ultimately depends.

Progress on the MDGs and the environment

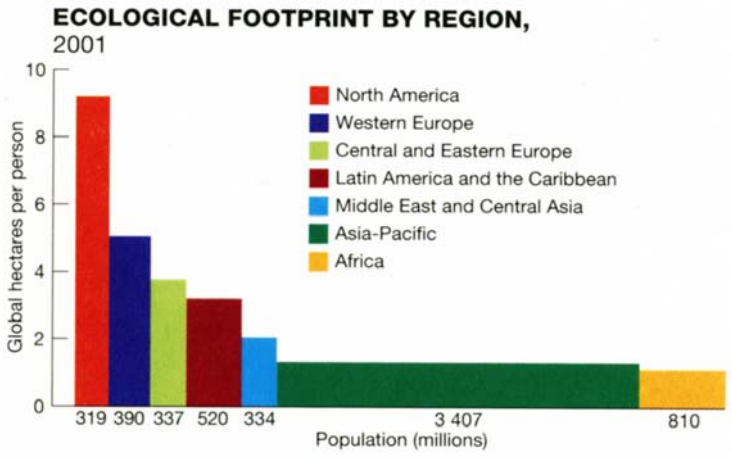
So, seven years after the Millennium Development Goals were agreed, how far have we progressed on the environment? The most recent figures available are alarming. The Millennium Ecosystem Assessment (MA)[vi] found that approximately 60% of ecosystem services are being degraded or used unsustainably, including fresh water, capture fisheries, air and water purification, and the regulation of regional and local climate, natural hazards and pests. WWF's own most recent *Living Planet Report* (2006) confirmed that we are using the planet's resources faster than they can be renewed, and that humanity's ecological footprint has more than tripled since 1961. This is having an enormous impact on global biodiversity, with populations of vertebrate species (freshwater, terrestrial and marine) having declined by about one third since 1970 (Figure 1).

Fig. 1: **LIVING PLANET INDEX,** 1970–2003



In the face of the enormous scale of these problems, it is the wealthy nations of this planet that have the responsibility to act. With their production and consumption patterns, the richest and emerging countries make use of almost three-quarters of the Earth's biocapacity. Looking at per capita consumption, it is mainly North America and Western Europe that are stepping heaviest on the Earth (Figure 2). WWF calculated that if everyone lived as we do in the United Kingdom, we would need three planets to sustain us – but of course we have only one.

Figure 2:



This paper looks at some of the key environmental resources and issues, including water, forests, fish and climate change, and evaluates the state of each at the mid-point towards 2015. It calls on rich countries to take urgent action to place MDG 7 and the environment at the centre stage in the development agenda, to urgently address rapid natural resource loss, and to do more to reduce and redirect their own ecological footprint on the world.

WATER

Facts

2.6 billion people do not have adequate sanitation, 2.2 million people a year die of water-borne diseases, and every week an estimated 42,000 people die from diseases related to poor quality drinking water and lack of sanitation. Over 90% of this occurs in children below the age of five.

One-third of the world's population lives in countries that are experiencing moderate to high water stress.

More than 20% of the world's 10,000 freshwater species have become extinct, threatened or endangered in recent decades[vii].

The biggest threats to sustainable freshwater flows are water infrastructure (including dams), over-extraction of water, and climate change. The quality of water is also affected by activities such as overfishing and pollution, which has negative consequences for humans and for nature and wildlife.

Water resources that are reliable, in quantity and quality, are a prerequisite for the provision of water and sanitation and the reduction of poverty.

There is a global crisis in water supply and sanitation. It is a crisis fundamentally driven by a failure to deliver development, exacerbating inequality and poverty. More than one billion people worldwide do not have access to clean freshwater. Some 2.6 billion people do not have adequate sanitation services, and the annual death toll from water-borne diseases is estimated at more than two million (WWF). It is a crisis that is killing as many as 5,000 children a day – this is the equivalent of 20 jumbo jets filled with children being lost every day to an entirely preventable public health crisis. Official estimates show that as many as 90% of the fatalities attributable to water-related diseases are children[viii]. But less than 20% of developing countries are on track or have achieved the 2015 target to increase access to water, and less than 35% have increased access to sanitation. Sub-Saharan African countries are lagging behind other regions[ix].

Water resources that are reliable in quantity and quality are a prerequisite for the provision of water and sanitation and the reduction of poverty. Water scarcity and declining access to fresh water are a globally significant and accelerating problem for 1-2 billion people worldwide, hindering growth in food production and harming human health and economic development.

Future impacts of climate change are expected to put increased pressure on already-stressed water systems and, consequently, on water and sanitation services. But even without warmer temperatures threatening to melt glaciers that provide water resources, rivers such as the Indus face scarcity due to over-extraction for agriculture.

The need for water to grow food will only continue to increase with a growing population. Furthermore, badly managed water resources threaten fish populations, which are the main source of protein and the overall life support system for hundreds of thousands of communities worldwide. Integrated water resource management is therefore essential for the long-term sustainability of water supplies for both human needs and nature.

Article 25 of the Plan of Implementation of the World Summit on Sustainable Development (WSSD) called on all countries to develop Integrated Water Resources Management (IWRM) and water efficiency plans by 2005. An informal survey in February 2006 found that only 21% of the 95 countries at the summit have plans or strategies in place or well under way; 53% have initiated a process, and the remaining 26% have made only limited progress[x].

Recommendations

While this is an important beginning, much more needs to be done, and with greater urgency. As part of the End Water Poverty campaign, WWF calls for:

- a global action plan for sanitation and water, monitored by one global task force;
- 70% of aid money for sanitation and water to be targeted at the poorest countries; and
- water resources to be protected and shared equitably.

There is an urgent need to speed up progress on the development and implementation of national integrated water resources and water efficiency plans, as agreed in the WSSD Plan of Implementation.

WWF also calls on governments to promote and accelerate UN Conventions to protect many of the world's river basins, which cross international borders, sustain millions of people and support vast ecosystems[xi]. In this context WWF is campaigning for the UK government to ratify the UN Convention on International Watercourses, which will set an international legal framework for negotiation of regional agreements over shared water resources.

FORESTS

Facts

60 million indigenous people depend on forests for their subsistence, and 1.2 billion people worldwide depend on forests for their livelihoods.

The global trade in timber is worth an estimated US$345 billion per annum.

An estimated 90% of the global trade sits outside any form of guarantee of either legality or sustainability.

Each year, 13 million hectares are deforested – that's around 36 football fields every minute.

Deforestation is responsible for 18% of global greenhouse gas emissions.

The total cost of the global illegal trade in timber is estimated to be US$10-15 billion per year.

Forests provide us with an incredible array of natural resources such as timber products, wood fibre for paper, wood fuel and medicinal plants that treat everything from the common cold to cancer. It is estimated that some 1.2 billion people worldwide depend on forests for their livelihoods, with 60 million indigenous people depending on forests for their subsistence[xii]. Forest loss means the people and wildlife that depend on forests are increasingly marginalised, and that environmental goods and services including carbon sinks and regulation of water flows are severely disturbed and compromised.

Deforestation continues at an alarming rate – about 13 million hectares per year[xiii] (that's 200 sq km per day, which equates to 25 hectares or 36 football fields every minute). The ceaseless spread of urban development, illegal logging, the additional pressure of economic growth in key countries such as China and India, conversion for agriculture, road building, mining, and forest fires all contribute to deforestation. New threats to forests are emerging, including droughts because of climate change and encroachment by ill-planned plantations of biofuel crops such as soybean and palm oil. The Stern Review also estimates that land use change is responsible for 18% of global emissions, almost entirely due to deforestation[xiv]. This makes deforestation the second-largest source of emissions after heat and power generation, and significantly greater than the emissions from the global transport sector.

Forest planting, landscape restoration and natural expansion of forests have significantly reduced the net loss of forest area, but newly replanted land does not have the ecological value of older, more biologically diverse forests, and does not provide the same benefits and livelihoods for local communities[xv]. Discussions are now under way to include deforestation as a major source of emissions in the Kyoto post-2012 framework. A framework that helps reduce emissions from deforestation and degradation, respects biodiversity and social and cultural values, and ensures attention to rights, equity and livelihoods could be a valuable tool in protecting standing forests.

The key causes of forest loss are illegal logging and conversion, much of it driven by unsustainable consumption in rich countries and unsustainable forest management by producing countries. The total cost of the global illegal trade is estimated to be US$10-15 billion, and developing countries with rich natural resources are the ones that lose out most[xvi]. For example, more than 70% of forest loss in Indonesia is illegal, and costs the country about US$1 billion a year. With regards to Tanzania, trade statistics show that China imported 10 times more timber products from Tanzania than appear on Tanzania's own export records, indicating that only 10% of revenue due from these exports is collected, and that a large proportion of logging is illegal[xvii].

While China's imports of wood have increased exponentially over the past decade, and it is often blamed for overexploitation of forests, it is important to note that more than 70% of this timber is processed into furniture and exported to the United States and the European Union[xviii]. The UK, for example, is estimated to be the world's third-largest importer of illegally harvested or traded timber and wood products[xix]. Developed countries are sustaining the trade in illegal and unsustainable timber by continuing to drive the markets that take the illegal wood. By way of comparison, the overall cost of illegal logging is equal to between 13% and 19% of overall development aid given by the developed world[xx].

Recommendations

Some progress has been made at an international level to reduce illegal and unsustainable logging through voluntary mechanisms to stop illegal trade, as well as through credible, voluntary certification which is capable of tracking timber and wood products sold, back through the supply chain to responsibly managed forests.

However, it has become increasingly clear that voluntary mechanisms will only take us so far. Incentives for illegal logging will continue to exist as long as the markets that take them are there. WWF is calling on the EU, as a major buyer and importer of illegal forest products, to introduce legislation that makes it illegal to import illegal timber into the EU[xxi] and to ensure that the timber traded has come from sustainably managed forests.

Influencing the finance and investment sector to restrict investments to responsibly produced source timber and wood products can also play a key role in tackling illegal trade. WWF believes forest certification is essential in ensuring that forests are managed in a way that allows us to meet our current needs while retaining the integrity of the forest's resources and production capacity for the future. Forest certification can provide a tool to promote good forest management, be instrumental in helping to curb illegal logging, and ensure sustainable investment capable of delivering long-terms returns.

FISH

Facts

76% of the world's fish stocks are fully exploited, over-exploited or depleted.

Over a billion people in the developing world depend on marine fish for their livelihoods and food security.

Sub-Saharan Africa alone loses about US$1 billion a year from illegal fishing.

80% of reefs are at risk from coastal development, fishing-related pressures and climate change. Coral reefs provide fish and seafood for a billion people in Asia[xxii].

Fish from our oceans provide the principal source of protein for more than a billion people in the developing world. Yet the global fishing fleet takes two and a half times more from the oceans than they can sustainably produce. Worldwide, three quarters of the world's fish stocks are now already fully exploited, over-exploited or depleted. And each year billions of unwanted fish and other animals – such as dolphins, marine turtles, seabirds, sharks, and corals – needlessly die from inefficient, illegal, and destructive fishing practices. WWF is working directly with fishing industries, governments, academia and other non-governmental organisations to develop, test and implement new fishing gear that reduces by-catch (the unintended catch of non-target species). We are calling for a moratorium on bottom-trawling in deep-sea sites until an impact assessment is undertaken and until precautionary measures to prevent destruction of marine life are implemented.

Overfishing and destructive fishing pose serious threats to ocean life and habitats, as well as to people's livelihoods[xxiii]. One of the biggest obstacles to achieving sustainable fisheries is illegal, unreported and unregulated fishing (IUU). Globally, at least US$4 billion of fish is caught

illegally every year. Poor countries suffer the most from this situation. Sub-Saharan Africa loses about US$1 billion a year from illegal fishing, which amounts to a quarter of Africa's total annual fishery exports. In Tanzania, for example, figures from 2001 show that illegal incursions by high seas tuna longliners resulted in revenue losses of some US$20 million[xxiv]. These are all resources that could be used for social spending, such as education and health.

Aside from the reduction in GNP, further revenue is lost through the avoidance of landings fees, licence fees, taxes and other levies that are payable by legal fishing operators. There are also direct impacts on people's livelihoods. These include the loss of income and employment in industries and activities upstream and downstream from the fishing operation itself, with a reduction in demand for fishing gear and equipment, and for labour in processing and packaging.

Local fishing communities are also negatively impacted. A recent report from Pakistan showed that the combination of IUU, weak surveillance and policing, by-catch and discarded fish, and little sanction against unsustainable industrial fishing is now devastating local fishing communities. Fisher folk say they now catch much less, have lost their rights to access fishing resources, and are losing their livelihoods, falling into debt, and going hungry[xxv].

One of the main drivers for illegal, unreported and unregulated fishing (IUU) is the global overcapacity of fishing fleets, primarily caused by subsidies. Estimations of global fisheries subsidies annually paid to the sector vary between US$10-20 billion[xxvi] and US$30-34 billion[xxvii], which is equivalent to 20-25% of the revenues of the global fisheries sector.

Some of these subsidies have enormous negative environmental, social and economic effects, which prompted members of the World Trade Organisation (WTO) to include reform of fisheries subsidies in the agenda of the Doha round of trade negotiations, in November 2001. The process of 'clarifying and improving WTO disciplines on fisheries subsidies'[xxviii] is progressing well, with members actively negotiating and proposing rules on banning harmful subsidies and allowing subsidies that promote transition to sustainable fisheries and promotion of responsible fisheries management practices.

Other major threats to sustainable fisheries and ocean ecosystems are primarily climate change, but also tourism, shipping, oil and gas development, and aquaculture.

Recommendations

As the largest fisheries market and importer of fisheries products in the world, the EU has a specific responsibility to ensure that its market is not used by illegal operators to launder their catches, thus indirectly supporting IUU activities in external waters, particularly those of developing countries who have less capacity and fewer resources to regulate their fishing grounds.

EU measures should include: making the confirmation of the flag state of ships and submission of catch certificates conditional for imports, and prohibiting imports of fisheries products from non-abiding states; ensuring a level playing field for sanctions and penalties; setting up a traceability scheme and a database of IUU vessels; providing technical assistance and information to affected parties, particularly developing countries; and ensuring that developing country perspectives are heard and taken into account.

CLIMATE CHANGE

Facts

The world is warming. A recent IPCC report asserts with 'very high confidence' that already many natural systems are being affected by climate change, and that human systems such as coastal zones, agriculture and forestry management, and human health are also suffering its effects[xxix].

With only a 0.5-1.5°C increase, the small glaciers in the Andes will disappear entirely, threatening water supplies for around 50 million people. In Asia, millions of lives will be affected as stronger summer monsoons will make it warmer and wetter, increasing flood risks. Lower yields of maize are predicted across South America[xxx] with only a 0.5-1.5°C increase.

Sea level rise because of warmer temperatures will impact on developing countries in particular. With only a 1-2°C increase in global temperature, sea levels are estimated to rise between 1 and 5 metres, affecting at least 56-245 million people in developing countries[xxxi].

With increases in temperature of 1.5-2.5°C, around 20-30% of plant and animal species are at increased risk of extinction. When ecosystems are destabilised, the people who directly depend on them for their livelihoods are also threatened.

By 2010, the UN estimates that there could be as many as 50 million refugees as a result of the effects of environmental deterioration[xxxii].

Average global warming of 2°C above pre-industrial levels will result in dangerous and irreversible effects, which rapidly worsen above 2°C warming. While the window of opportunity of staying below 2°C is closing very fast, it is still possible[xxxiii].

The G8 countries (Germany, France, Italy, Japan, Canada, Russian Federation, United States and United Kingdom) produced total carbon dioxide emissions of 11.3 billion tonnes in 2004, which is 43% of the world's total emissions. Also, developed countries polluted the atmosphere with an annual average of 13.2 tonnes of carbon dioxide per inhabitant, compared with the global average of 4.2 tonnes[xxxiv].

Greenhouse gas emissions from the world's developed countries are largely responsible for global climate change, which threatens human wellbeing, ecosystem functioning and biodiversity. Recent figures show that, globally, the 11 warmest years yet measured have been in the last 15 years[xxxv]. The Stern Review on the Economics of Climate Change estimates that irreversible damage to the world from unabated climate change could entail a cost equivalent to a permanent drop of 5-20% of global per capita consumption, with that cost being disproportionately borne by the poorest people who have been least responsible in causing climate change[xxxvi]. This drop in GDP could cause as many as 220 million people in Africa and South Asia alone to remain below the $2 a day poverty line at the century's end[xxxvii].

The development challenge will become more daunting and more urgent the longer we delay serious action to combat climate change. Once temperature increase rises beyond 2°C above pre-industrial levels, up to four billion people could experience growing water shortages. Agriculture will cease to be viable in parts of the world and millions will be at risk of hunger. This rise in temperature could see an extra 40-60 million people exposed to malaria in Africa. Changing precipitation patterns, extreme temperatures, increasingly violent storms and rising sea levels could also lead to massive migration and increased conflict. The threat from

desertification, which already costs the economy US$42 billion a year, will increase. But the human cost is incalculable – some 135 million people, the combined populations of France and Germany, are at risk of being displaced[xxxviii].

A business as usual scenario in terms of carbon emissions could see the rise in average global temperature eventually exceed 5 or 6°C. At these levels, no one can predict what will happen to ecosystems and the people that depend on them, as this rate of temperature increase is beyond anything experienced in the last 10,000 years.

It is crucial and urgent to curb further emissions in order to keep global warming levels below two degrees. While this is by no means 'safe' and there will still be serious consequences, it is likely that this will limit the worst effects of climate change and avoid the most dangerous climate change[xxxix].

The worst polluters have the responsibility to provide sufficient resources for the cost of adaptation that developing countries will need to incur to prepare for climate change. Oxfam has estimated that adaptation in developing countries will cost at least US$50 billion each year[xl], but so far only a meagre US$48 million has been pledged towards adaptation. The polluting developed world has a moral responsibility to provide finance for adaptation to poor countries and vulnerable communities who have done nothing to cause the problem.

Recommendations

Promises were made at the G8 summit in Heiligendamm to conclude a UN deal by 2009 to succeed the first phase of the Kyoto Protocol, which comes to an end in 2012. But real cuts in emissions still have to be negotiated and countries must urgently recognise the need to stay below a 2°C increase in global temperature. This means cutting emissions rapidly and deeply, far below current levels. Globally, emissions need to be reduced to less than half their 1990 level by 2050. Developed nations, which have high per capita emissions and which have been responsible for the bulk of emissions to date, must reduce their emissions by at least 80% by the same date.

WWF has shown that it is possible to meet the growing global demand for energy using clean and sustainable energy sources and technologies, while protecting the global climate and safeguarding development[xli]. However, urgent action is needed to shift the world's energy systems onto a low-carbon path. On adaptation, developed countries urgently need to develop financing mechanisms that provide sufficient and adequate resources that support the adaptation efforts of developing countries and vulnerable communities.

Conclusion

The international community has pledged to achieve the Millennium Development Goals by 2015. While there have been some successes in terms of poverty reduction, education and water provision, any results achieved will not last in the long term if there is not more progress on MDG 7 to ensure environmental sustainability and ecosystem health, which is the basis for all human development.

The UN's own assessment of MDG 7 does not bode well, as it is one of the only goals to receive many red-coloured traffic lights across all regions. Because the indicators for MDG 7 are weak, WWF has done its own assessment of the state of natural resources. Overall trends are very bleak. They indicate that there has not been a reversal of the loss in natural resources, but on the contrary, natural resources continue to be rapidly depleted as illustrated by the losses of fish stocks, continuing deforestation, and lack of progress on integrated water management and on reducing carbon emissions.

While there are many commitments and international agreements to safeguard the environment, they have failed to translate into international and national programmes for action, and have failed to protect the environment for the benefit of people. Unless more and urgent action is taken by the international community and national governments, we risk compromising the entire Millennium Development Agenda, and failing the poor as a result.

To conclude, WWF calls for:

- The UN to take forward the review process of MDG 7 indicators, to ensure that monitoring and progress reports are meaningful.
- Concerted action at all levels (UN, G8, EU, regional and national) to place MDG 7 centre stage in a development agenda. This includes ensuring that the environment is brought fully into the mainstream in policies and programmes of development agencies, trade and industry departments and lending institutions, as well as requiring targeted resources to improve the health of ecosystems and restore their health and resilience, and ensuring that capacity is in place to ensure policy is translated into practice.
- The international community to urgently address rapid natural resource loss and put mechanisms in place to ensure environmental resources are safeguarded in the future. This means taking urgent action to manage our freshwater resources, to halt deforestation, to protect and restore our fisheries, and cut carbon emissions.
- Rich countries to urgently address the impact of their own production and consumption patterns on natural resources and biodiversity. If everyone lived as we do in the UK, we would need three planets to sustain us. Rich countries need to develop innovative ways to develop 'one planet' lifestyles[xlii] to ensure that our natural resource base is maintained and restored to a healthy state and benefits all people on this planet in a fair and equitable way.

[i] IPCC, Working Group II, Fourth Assessment Report, 2007.
[ii] The Millennium Development Goals Report, United Nations 2007. http://unstats.un.org/unsd/mdg/Resources/Static/Products/Progress2007/UNSD_MDG_Report_2007e.pdf
[iii] Millennium Development Goals: 2007 Progress Chart. http://www.un.org/millenniumgoals/pdf/mdg2007-progress.pdf
[iv] A review process of MDG 7 is under way to better capture the multiple ways in which the livelihoods of the poor depend on biodiversity and ecosystem services. A better-formulated target will be in force in July 2007, followed by the development of clearer and more measurable indicators later this year or early 2008. In fact, at the World Summit for Sustainable Development in 2002, additional 'MDG plus' targets were adopted relating to biodiversity, water, fishing, marine protected areas, harmful chemical substances, and sanitation.
[v] Taken from *The Millennium Development goals and Conservation. Managing Nature's Wealth for Society's Health*, edited by Dilys Roe. 2005 (second print).
[vi] The Millennium Ecosystem Assessment (MA) was set up by the UN Secretary-General Kofi Annan in 2001 to assess the consequences of ecosystem change for human wellbeing. The MA involved the work of more than 1,360 experts worldwide.
[vii] Commission on Biodiversity, 2005.
[viii] End Water Poverty Campaign http://www.endwaterpoverty.org
[ix] World Bank Global Monitoring Report 2007 www.worldbank.org/gmr2007
[x] Global Water Partnership http://www.gwpforum.org/servlet/PSP
[xi] For more information on WWF freshwater policy work, see: http://www.panda.org/about_wwf/what_we_do/freshwater/our_solutions/policy_practice/index.cfm
[xii] *WWF Forests for Life: Protect, Manage and Restore the World's Forests*, August 2002. http://www.wwf.org.uk/filelibrary/pdf/protectmanagerestore.pdf
[xiii] Based on FAO figures from 2005. For more on WWF work on forests, see: http://www.panda.org/about_wwf/what_we_do/forests
[xiv] Stern et al. (2006), *Stern Review of the Economics of Climate Change*, HM Treasury. http://www.hm-treasury.gov.uk/independent_reviews/stern_review_economics_climate_change/stern_review_report.cfm
[xv] UN MDG Report 2006.
[xvi] *Illegal Logging: Cut it Out! The UK's role in the trade in illegal timber and wood products*, WWF-UK, January 2007. http://www.illegal-logging.info/uploads/cut_it_out.pdf
[xvii] *Forestry, Governance and National Development: Lessons Learned from a Logging Boom in Southern Tanzania*, Traffic East/Southern Africa, 2007.
[xviii] *Rethink China's Outward Investment Flows*, WWF, April 2007. http://assets.panda.org/downloads/wwf_re_think_chinese_outward_investment.pdf
[xix] *Illegal Logging: Cut it Out! The UK's role in the trade in illegal timber and wood products*, WWF-UK, January 2007. http://www.illegal-logging.info/uploads/cut_it_out.pdf
[xx] Overall aid in 2006 was US$103.9 billion, which equals €77.2 billion http://www.oecd.org/document/17/0,3343,en_2649_33721_38341265_1_1_1_1,00.html
[xxi] See: http://www.wwf.org.uk/researcher/issues/forests/0000000284.asp
[xxii] Millennium Project Task Force 2005
[xxiii] For more information on WWF's marine work, see: http://www.panda.org/about_wwf/what_we_do/marine/problems/index.cfm
[xxiv] *High Seas Task Force (2006). Closing the net: Stopping illegal fishing on the high seas*. Governments of Australia, Canada, Chile, Namibia, New Zealand, and the United Kingdom, WWF, IUCN and the Earth Institute at Columbia University.
[xxv] *Taking the Fish*, Actionaid, 2007
[xxvi] World Bank
[xxvii] Recent study by Pauly (http://www.fisheries.ubc.ca/publications/reports/report14_6.php)
[xxviii] At the Fourth Ministerial Conference in Doha, Qatar, in November 2001
[xxix] IPCC, Working Group report II, Fourth Assessment Report, 2007
[xxx] Except in Chile and Ecuador. Lynass M (2007) *Six Degrees: Our future on a Hotter Planet,* Fourth Estate, March 2007.
[xxxi] Dasgupta, S, et al. (2007) *The Impact of Sea Level Rise on Developing Countries: A Comparative Analysis*, World Bank Policy Research Working Paper (WPS4136), February 2007

xxxii World Health Organisation (2006) WHO/UNEP Health and Environment Linkages Initiative (website), WHO, Geneva www.who.int/heli/risks/climate/climatechange

[xxxiii] Climate Change: Why we need to take action now! http://www.wwf.org.uk/filelibrary/pdf/2_vs_3_degree_oct06.pdf

[xxxiv] Federal Statistical Office.

xxxv In descending order, these were: 1998 & 2005 (joint), 2002 & 2003 (joint), 2001, 1997, 1995, 1990 & 1999 (joint), 1991 & 2000 (joint). Compiled by the UK Meteorological Office and the Climatic Research Unit of the University of East Anglia for the World Meteorological Organisation.

[xxxvi] Stern et al. (2006), *Stern Review of the Economics of Climate Change*, HM Treasury.

[xxxvii] Global Monitoring Report 2007, World Bank. www.worldbank.org/gmr2007

[xxxviii] UNCCD press release 14 June 2006, marking World Day to Combat Desertification.

[xxxix] *Two degrees, one chance. The urgent need to curb global warming*. NGO Policy Paper, May 2007. http://www.tearfund.org/webdocs/website/Campaigning/Policy%20and%20research/Two_degrees_One_chance_final.pdf

[xl] Oxfam briefing paper, *Adapting to Climate Change*, 29 May 2007

[xli] *Climate Solutions*, WWF's vision for 2050: http://assets.panda.org/downloads/climatesolutionweb.pdf

[xlii] See WWF's One Planet Living Campaign: http://www.wwf.org.uk/oneplanet/ophome.asp

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The mission of WWF is to stop the degradation of the planet's natural environment and to build a future in which humans live in harmony with nature, by:

- conserving the world's biological diversity;
- ensuring that the use of renewable natural resources is sustainable;
- reducing pollution and wasteful consumption.