New
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Green philanthropy

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Funding charity solutions to environment problems

A guide for donors and funders

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This report was funded by The Ashden Trust, The Esmee Fairbairn Foundation, The Tubney Charitable Trust, and a number of family charitable trusts and private individuals.

Cover Photograph

Wetlands International is working with local communities in Kalimantan (Borneo), Indonesia to reforest burnt peatlands, returning economic and social value for locals, protecting the region's biodiversity, and preventing the release of millions of tonnes of carbon into the atmosphere. The vast peatlands of Indonesia have been ravaged by deforestation and drainage, which is largely driven by illegal logging and the global demand for palm oil plantations.

Photograph supplied by Wetlands International/Wim Giesen

Executive summary

Charities play key roles in addressing environmental challenges

Charities are making a crucial contribution to tackling environmental problems, as pioneers, leaders, managers and guardians. They flag up vital issues, produce ground-breaking research and reports, and develop and implement innovative solutions. Much of this work leads to policy action by governments, and changes in business practices and consumer behaviour. Charities also encourage and foster a willingness to protect and care for the environment at all levels of society.

We know now that we ignore these problems at our peril. If we address climate change, we can limit the impact of rising sea levels and changing weather patterns, and reduce the loss of freshwater resources and fertile farmland. Wise husbandry and protection of natural resources, ecosystems and biodiversity will allow us to pass on a viable world to future generations. Efficient disposal of waste into the air, waters or ground will keep the planet clean. Our wider ethical responsibilities also need to be considered: as the planet's top predator, we have the power to allow millions of other species to live and flourish, or to wreak havoc on them and their habitats.

We also know now that the world's poor will suffer earliest and most from environmental damage. This can already be clearly seen where the degradation of local environments has caused or exacerbated poverty, in North East Africa, for example. Issues are often inter-related: carbon emissions and destruction of rainforests affect climate; climate change affects the health of land and seas. Humans are consuming more (and creating more waste) than the planet can sustain, but seem unwilling to arrest the damage.

Charities offer hope: environmental problems are soluble, and charities can provide opportunities for people to act. Charities move faster than governments to produce information, alert the public to pressing issues, and experiment with solutions. Charities operate independently and across jurisdictions. Charities can help businesses to balance economics with the environment.

Funding is inadequate

NPC has found that funding of environmental charities is woefully inadequate. Less than **2%** of the annual grant-making of the 100 largest UK charitable trusts—**£18.1m** out of £1.1bn—is allocated to environmental causes. With the exception of a handful of foundations in the US and the UK, the new philanthropy of the last decade has been overwhelmingly focused on human and social welfare issues. The general public's priorities in the UK are similar: only **5%** of UK private donors give to the environment.[51]

Similar trends emerge from the public sector: environment budgets of UK and other governments belonging to the Organisation for Economic Cooperation and Development (OECD) are substantial in the domestic context, but resources for international work—especially in the critical tropical and sub-tropical countries that house the most threatened and the most valuable natural assets—are negligible. Just **2%** of the UK government's £2.1bn aid budget is channelled into environment protection.

But without meaningful resources, environmental charities struggle to maximise their impact.

Poor information inhibits donors and funders

Until recently, difficulties in assembling convincing data to demonstrate the gravity of environment problems resulted in uncertainty over the need for action. Poverty and disadvantage are visible now: environmental degradation is often seen as remote from our everyday lives, with consequences to be felt in the future.

This is changing. Landmark reports from the International Panel on Climate Change (2001 and 2007) and the Millennium Ecosystem Assessment (2005) indicate that the scientific community has achieved an unprecedented level of consensus on environment problems, and is providing the public with comprehensive evidence on the current state of the planet.

Too little information about the size and shape of the charity 'marketplace', and insufficient analysis and guidance on the performance and results of charities inhibits donors in any sector. NPC was set up to address these issues in the human welfare arena, and has since found them amplified in the environmental sector. NPC found that many donors—including younger philanthropists—want to give to environment charities but are held back by uncertainty over the most effective ways to contribute.

What can donors and funders do to help?

NPC has identified six overall priorities for funding environment charities. The first three are needs of the sector itself:

More funders

There is an over-reliance on a handful of charitable trusts, which does little to encourage confidence that innovation and ambition will be rewarded by increased support from many donors. An increase in the number of funders is the sector's most pressing need. So the simple act of joining efforts helps to address this problem.

Better knowledge-sharing

Knowledge-sharing and dialogue among funders and charities is essential. When networks and forums work well, lessons learned can be absorbed by others, groups can act in concert, and greater progress can be made. The sheer scale of environment problems demands more of this sort of collaboration.

Better information and analysis

Information, analysis and guidance are essential ingredients of success. Yet right across the environment charity landscape, further progress is being constrained by their absence. In many cases the primary data already exists, but a lack of energy, confidence and will has allowed a vacuum to develop, especially in the critical area of policy guidance. Funders could turn this parlous state of affairs around within a few years.

The next three concern funding practice, and the relationship between donors and funders and charities:

Long-term funding

New funders who make a commitment to provide grant-making programmes for the long term—eg, a decade—will make an immense contribution, especially if funding support is provided tocharitable infrastructure as well as on-the-ground activity.

Funding charities fully and flexibly
Funders should fund the costs of organisations fully. The misconception that on-the-ground costs are good, and management and administration are bad, has been enormously damaging to the development of charities in both the environment and social welfare fields. Funders should also be flexible about how the funds they provide are used. Circumstances often change at short notice. Charities need funders who understand this and are willing for funds to be reallocated if circumstances change.

Funding charities to assess and articulate their effectiveness
Charities need to evidence, where possible, that their actions are effective and articulate their successes loudly and publicly. What is the evidence that this reserve or that species re-introduction programme is working? Is there potential for a business income stream that will contribute to the social and economic prosperity of local communities? Charities are frequently unable to do this because of lack of resources. Donors should support charities to evaluate what they do and then disseminate the results.

Donors and funders who have encountered NPC research before will be familiar with these recommendations about how to fund. The funding needs of environment charities are much the same as those of social welfare charities, although the needs of the sector (quantity of funders, knowledge-sharing, etc.) are particularly more pronounced.

Section summaries

1. The case for donor action

Environmental threats are real: mounting scientific evidence suggests that climate change needs to be taken seriously, and is likely to affect many regions of the world; natural resources are being extracted and used up faster than the planet can regenerate them; many of the planet's species face extinction over the next century. Charities can, and do, provide effective responses to these challenges.

However, in spite of increasing public concern, resources for the environment are meagre. Donors are deterred by the size of the problems, uncertainty over data and lack of guidance. The support of donors is crucial if charities are to rise to these enormous challenges.

2. Environment problems, causes and consequences

Climate change is likely to result in rising global temperatures of between 1.8°C and 4°C by the end of the century. Worst case scenarios predict an increase as high as 6.4°C. Rising sea levels will cause extensive flooding in coastal areas; weather patterns may damage fragile ecosystems; desertification will increase. Our natural resources are being decimated through unsustainable use: the destruction of forests will worsen climate change, while the disappearance of fish will eliminate a primary source of protein for a billion people.

Increasing consumption and population are the main drivers of environmental problems. Greater consensus on the nature of these problems and their causes and consequences is opening up opportunities to redress environmental damage.

3. Responses

Although the UN is the main conduit for international agreements, it has struggled to fit the environment into its priorities. International agreements are essential as a means to address environmental problems, which are not bound by state borders. But implementation often lags behind. The EU appears to enjoy greater success in influencing its member countries to deploy environmentally friendly legislation than the UN. Without the EU, UK policy could well be lacklustre. Regardless of these frustrations, charities have no option but to keep pressing national and international policymakers. It is difficult to see how progress will be made in the long term without support from national governments.

In the meantime, the business sector is waking up to its responsibilities, spurred on by a growing consumer demand for better environmental practice. This has presented an opportunity for charities to foster a more environmentally sensitive marketplace and push businesses to change practice.

Mobilising the general public to generate a strong social movement for the environment has been slow work. It has not yet reached the level of mobilisation seen in other historical social movements, such as the abolition of the slave trade. This needs to change. Environment charities can be effective, and work with policy-makers, business leaders and the general public to promote change, but they are held back by a lack of funding and undeveloped infrastructure in the sector.

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4. The work of environment charities

Six key environmental issues are covered in this section. They are treated separately, while keeping in mind the web of interrelations between them.

4.1 Climate change

Scientists broadly agree that man's activities have been increasing global temperatures over the past two centuries. Energy and transport emissions are not the only culprit: the continued decimation of forests and peatlands also contributes to increased greenhouse gases held in the atmosphere. Multiple solutions and long-term commitments are needed to solve climate change.

Charities help by applying pressure on governments to change policy—and on individuals to act. Their most striking achievements, however, have been in generating information to help governments, businesses and people to reduce their own greenhouse gas emissions, and protecting ecosystems that absorb or lock up carbon, such as forests, wetlands and peatlands.

4.2 Natural resources and consumption

The decimation of the planet's natural resources is fuelled by unsustainable growth: of consumption in the wealthiest countries and population in the poorest countries. As our per capita ecological footprint is six times greater in the wealthiest countries than in the poorest, wealthier countries could show the way by managing their own consumption.

Population growth is set to strain the ability of ecosystems to support life: between now and 2050, the world's population is expected to climb from six and a half billion to just over nine billion. The need to feed growing populations is conflicting with the need protect natural resources. Many threatened resources are part of the 'global commons'—the vast expanse of our oceans, for instance, lie outside national jurisdiction. So no single nation can protect such resources.

Solutions to these problems lie with governments, businesses, consumers and charities acting together. In wealthy nations consumers can change shopping habits and buy certified furniture from forests or fish from fisheries that are responsibly managed. Businesses can recognise 'green' shopping as a business opportunity and encourage customers to buy ethical goods.

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n an ideal world, national governments and international bodies such as the UN and EU would be passing effective policies to regulate the extraction of natural resources. They are not. Until that time, charities are stepping in to hold businesses accountable by investigating and reporting on illegal logging or human rights violations in other countries, publicising corporate emissions data, and influencing industrial practises through certification schemes.

4.3 Poverty and environment

Almost two billion people live in rural areas and survive on less than $2 a day. As rural populations in poor countries are far more dependent on their natural assets, the environment should be central to international policy on poverty alleviation. Yet less than 2% of the UK's aid and development budget is allocated to the environment. At the same time almost 95% of future population growth will occur in the developing regions of Africa, South America, Asia (excluding China) and the Middle East. So it is in these regions that good environmental practice to conserve scarce resources is most needed.

Charities have been much quicker to recognise and respond to the challenges posed by the relationship between poverty and environmental degradation than other sectors. Environmental charities are showing how the restoration and management of ecosystems can improve the livelihoods of local people in the developing world: sustainable forestry allows communities to benefit financially from their natural resources, without losing the other important services that these forests provide; restored mangrove ecosystems along coasts and wetlands can provide an important protection barrier against extreme weather events.

4.4 Ecosystems and biodiversity

The case for conserving ecosystems and biodiversity can be made for economic, social and aesthetic reasons. Healthy ecosystems help the world to produce food and other materials: crops will not pollinate without bees; rainforests provide timber but also house medicinal plants that contain remedies for human diseases. People also value the natural world for social, cultural and spiritual reasons. Ecosystems and biodiversity are under threat from human mismanagement of resources, the destruction of habitats, pollution, the introduction of alien species and diseases, and climate change. Humans and ecosystems are often in conflict: but in many situations this can be resolved, as a range of sustainable livelihoods projects demonstrate.

Charities have been involved in conservation since the nineteenth century. Since then, they have acquired—or helped others to acquire—12% of the world's landmass as protected areas. Beyond this, charities are also the originators of much vital research into the status of the world's ecosystems, and the causes and rates of decline (or recovery) of certain species. However, underfunding of charities means that this important information is often not being translated into good policy action, especially internationally.

4.5 Energy, pollution, waste

Energy use is projected to grow by over 50% between now and 2030. Seventy per cent of this will come from developing countries, such as China and India. Pollution is a growing problem in these regions, but it also has clear consequences globally. The developed world (OECD countries) generates four billion tonnes of waste a year, and this will grow 45% by 2020; as disposal becomes more difficult, rich countries are increasingly exporting waste to poor countries.

Charities are adept at pioneering initiatives —recycling, clean-up operations, and new technologies—at the local level that can be adopted more widely and have an impact far beyond the time and place of their inception. Charities also guard against corporate irresponsibility on pollution, which often intersects with human rights. Business-led projects providing poor people with cheap renewable energy sources also provide an interesting option for donors.

4.6 Sustainable development and living: the UK

With 60 million inhabitants, most of whom have a 'carbon footprint' six times greater than their developing country counterparts, the UK seemed as good a place as any to explore the concept of sustainability. Making our society more sustainable means reducing the emission of carbon and pollutants; stabilising the consumption of resources

and production of waste; and increasing human health and well-being.

Donors can support numerous campaigns targeting a particular aspect of how we live, such as: individualised transport; think tanks and research institutes working to understand how society can be better off and environmentally responsible at the same time; local sustainability projects that are tackling local food production, distribution and consumption; or provide funding for local or national campaigning and lobbying against unsustainable road-building and airport extensions.

The environment sector is often associated with highly visible forms of protest. This is an important element of activity, but tends to overshadow the range and variety of charity activities.

5. Charitable approaches

Which are the best routes to solving particular environmental problems? Should donors contribute to rehabilitating orang-utans orphaned by loss of habitat, or fund a charity lobbying the Indonesian government to stop further logging in Borneo? Or are other approaches required? All may be needed, but donors need to weigh priorities.

The environment sector is often associated with highly visible forms of protest. This is an important element of activity, but tends to overshadow the range and variety of charity activities. These include research and dissemination of valuable information; other facets of campaigning and lobbying, such as corporate monitoring and participating in the policy process; educational initiatives; a vast range of local projects; and meeting the burgeoning interest in market-based and enterprise solutions.

Donors can choose whether to support local, tangible projects, with more certain outcomes but narrow impact, or more difficult initiatives trying to tackle the social causes of our global problems, where impact may be broad but outcomes much less certain.

6. Funding for the environment

The environment sits low on funding priorities. Less than 2% of annual grant-making by UK charitable trusts is spent on the environment; NPC estimates that less than 5% of public donations are directed towards the environment. Resources supplied by international institutions and national governments, especially for work in the key tropical and sub-tropical regions, are similarly meagre.

Active environment funders, as well as charities, report that the lack of critical mass—as much a function of there being too few funders as the total quantity of funds available—is a serious constraint to creative development.

7. Sector analysis and donor support

Donors and funders are now awash with scientific information, but little guidance on what and how to fund is available. Support of other kinds, for example, collaborative networks and knowledge-sharing, is also weak. Better knowledge-sharing between charities and donors would also improve outcomes. More funding for the infrastructure of the sector—such as coalitions, umbrella bodies and forums—will help to avoid unnecessary duplication and give new charities more support.

8. Call to action

Future generations cannot undo the damage we cause in the twenty-first century, but we could limit our damage before it is too late. Charities are in the forefront of efforts at damage limitation. To achieve the maximum effect, more donors with a real long-term commitment to the environment are needed. Donors willing to commit time and effort to understanding how charities can fulfil their potential as agents of change will be well rewarded.

Funding is needed across the environment sector, but specific areas where new support could make a significant difference include:

- seed funding for charities in the emerging field of climate change;
- championing of sustainable livelihoods projects in developing countries;
- scaling up and replication of environmental certification schemes;
- thoughtful and targeted support for campaigning and lobbying; and
- a strategic approach to helping ecosystems and biodiversity charities achieve more progress.

About the report

Genesis of the report

The gap between growing concern on the state of the global environment on the one hand and the apparent lack of funding for charities working in this field on the other spurred NPC into action in 2006. Why is it that less than 2% of UK charitable trust grants are channelled into environment charities? Why does the UK government allocate only 2% of its bilateral aid budget to environment work in developing countries?

With support from leading UK charitable funders active in this area, NPC set out to explore the state of environment funding for charities working domestically and internationally, from a UK perspective. The first step was to hold extensive consultations with funders, charities, practitioners and other participants in order to build an understanding of the thinking that underpins funding strategies. As well as consulting with environmental leaders, we also sought the views of organisations whose principal interests lie outside of the environment, including charitable trusts focusing on aspects of human welfare, and some international development charities.

How the research developed

We quickly established that the project brief needed to be widened beyond analysis of grants and financing mechanisms. The reasons for low funding levels were not, we discovered, a function of financial technicalities. The feedback from consultations pointed to wider issues.

Both funders and charities highlighted constraints that are connected to the value society places on the environment, and where it is positioned in relation to other priorities. Uncertainty on the scale and gravity of environment problems was another barrier. Marginalisation of the environment within government, leading to scarcity of public sector funding, also hinders private funding.

The awareness of environmental issues is relatively new, and this is a handicap for charitable trusts in adapting to meet the challenge. Charitable trusts were originally created in response to human and social welfare issues and the deterioration of the arts, and as such they have historically focused on these needs. This has resulted in a lack of critical mass of funders and funds active in the environment, and has also contributed to perceived tensions between human welfare and environment goals.

Purpose of report

A daunting body of information is already available to donors and funders on *why* action is needed on the environment. The consequence is a surplus of scientific knowledge and a deficit of funding analysis and guidance. NPC exists to help donors answer the equally important questions of *where* and *how*.

NPC is a charity that advises donors and funders on how to give more effectively. To date, NPC's focus has been on human welfare charities in the UK. It has completed research on 17 areas of social need in the UK.

NPC's vision is to develop a charitable market where funding is provided for those charities that are achieving excellent results. It has created a research and advisory capability for donors (individuals, foundations and corporates) that is unique in the UK.

Scope

Green philanthropy is NPC's initial overview of the role of charities across the whole environmental landscape. It does not seek to provide encyclopaedic treatment of all environment issues and all of the charities working in this field. The report would never have been completed had we attempted this. Instead, it aims to analyse and articulate the challenges, options, barriers and opportunities from the perspective of donors and funders. The intended audience has also had a bearing on the selection of material and presentation:

- The report is primarily intended for UK- and EU-based funders and donors who are interested in supporting environment charities working in the UK, the EU or internationally.
- The work of North American charities and funders (and those based in other regions) in their domestic context lies outside the scope of this report.
- There is some assessment and analysis of the international activity of US and other North American charities and funders, but the bulk of research was focused on UK-based organisations.

While the report has a strong focus on the state of environment funding, it is not an analysis of the flow of funds. This is in part because there is no adequate and credible global dataset on fund flows to environment charities, and in part because NPC's research is principally focused on understanding the results that charities achieve, rather than measuring aspects of the supply and demand for capital.

Finally, as an overview of environment charities, the report does not provide the level of detailed charity analysis that can be found in NPC's sector reports and charity recommendations on human welfare issues in the UK. NPC plans to undertake further research into the environment, examining specific topics in greater depth. This is of course dependent on funding and other factors.

> This project could lead to the development of services that increase the quantity and quality of giving by wealthy individuals to the environment.

Lessons from the consultations

People's responses to the environment and the challenges faced by our planet vary widely, and reveal big disparities between personal beliefs. Our consultations with over 100 charities, funders and experts produced a diversity of views on challenges and opportunities. The range of opinion on priorities was reflected in the responses to the consultation draft of the report. Contradictions between responses were commonplace. Some readers, for example, felt that the gravity of the biodiversity crisis was insufficiently highlighted, with too strong an orientation toward the urgent need to

tackle climate change; some gave a diametrically opposite response. Even within NPC, there was lively debate on issues of content, depending on the perspectives of the protagonists.

In NPC's experience, such a level of debate is unusual. Reaching consensus on issues between both expert and lay participants in research has been easier in most social welfare reports.

Areas where respondents felt more emphasis should have been given included:

- the role of corporate interest groups in blocking progress (for example, resistance of the auto industry to tougher fuel economy standards), and the consequent limiting of the effectiveness of environmental charities that lobby for regulatory change;
- the causal relationship between corrupt and non-democratic over-exploitation in the global South in order to supply demand in the wealthy global North and the over-consumption that it represents;
- the potential of local organic production and consumption of food to reduce environmental pollution and cut wastage; and
- impact that very small campaigning groups can have.

NPC will consider these questions in future research.

This feedback illustrates just how poorly donors and funders have been advised to date. Each of the points above (and no doubt many others) may well prove to be areas where more charitable activity and more charitable funding are needed. All ask questions that require more research and better quality public debate.

Next steps

NPC intends to publish more detailed sector research on some of the issues identified in this report. This sector analysis would include analysis of charities working in the field. NPC has developed a list of over 20 possible topics. However, in the short term, it has identified the following priorities for research as soon as funding can be found:

- marine biodiversity and resources, initially starting in the North Atlantic and European waters;
- deforestation and its effects in any of three critical regions—South-East Asia, West and Central Africa and Latin America;
- the role of social and environmental certification schemes; and
- sustainable living in the UK.

Navigating the report

Green philanthropy is an overview of environment issues, challenges and opportunities, from the perspective of donors and funders with an existing or potential interest in supporting charities in this area.

The report is divided into the following sections:

1. The case for action (page 10)

Makes the case for donor action and asks: are environmental threats real? Is funding environment charities an effective response?

2. Environment problems, causes and consequences (page 15)

Explores the nature and causes of climate change, loss of natural resources and other environment problems, and their current and future impacts.

3. Responses (page 23)

Examines responses from all parts of society, why they matter, and how they interact. Includes coverage of the role of the UN, the EU, the UK government, the business sector, civil society, philanthropy and charities.

4. The work of environment charities (page 39)

Covers six distinct issues, and the role of charities in addressing the challenges:

- climate change
- natural resources and consumption
- poverty and environment in developing countries
- ecosystems and biodiversity
- energy, pollution and waste
- sustainable development and living in the UK

Coverage of each area is broadly structured along the following lines:

- problems and challenges
- charitable responses
- achievements and prospects
- priorities for donors and funders

5. Charitable approaches (page 100)

Looks at the work of environment charities from a different angle, by exploring the types of approaches (or interventions) that are being used, how they interrelate and cut across the range of issues and challenges:

- research and information
- campaigning
- policy work
- service delivery
- market-based and enterprise solutions
- local projects
- education

6. Funding for the environment (page 112)

Explores the current state of funding for environment charities, including analysis of the role of grant-making trusts and foundations, private donors, governments and international institutions, and other funders. It also includes feedback and commentary on funding issues from NPC's consultations carried out for this report.

7. Sector analysis and donor support (page 120)

Examines the infrastructure supporting the work of environment funders and charities, including the state of environment research and the role of networks and umbrella bodies in helping the sector to maximise impact.

8. Call to action (page 123)

The conclusions of this report are summarised in the last section.

About the author

Bernard Mercer was NPC's first chief executive, from 2001–2004. He is now an adviser to NPC on environment issues. He is also the founder of the NHBS Environment Bookstore, an adviser to the Ashden Trust and the Ashden Awards for Sustainable Energy, a former chairman of the Bat Conservation Trust, and the new chairman of the BBC Wildlife Fund.

Photograph supplied by Bat Conservation Trust / Hugh Clark

Bechstein's bat was once the most common species of bat in Britain, but the steady loss of woodland habitat has made it now one of the rarest.

‘It has not entered our consciousness that if the planet suffers, we suffer, and that we have nowhere else to go. We have lost sight of ourselves as being a part of nature and that destroying the natural world means we destroy ourselves. We have reduced nature, and by extension ourselves, to an exploitable resource.’

Fazlun Khalid[66]

Contents

The case for action

1

> Perhaps the time has come to cease calling it the "environmentalist" view, as though it were a lobbying effort outside the mainstream of human activity, and to start calling it the real-world view.
>
> E.O. Wilson

Concern for the state of the global environment is at odds with the apparent lack of funding for charities working in this field. Only 2% of UK charitable grant-making funding is allocated to the environment. Only 5% of UK private donors give to the environment. These sums are inadequate. Charities stand in where government and business are either unwilling or unable to go, and as such play a vital role in tackling environmental problems: they highlight emerging issues, produce new knowledge, work towards changing individual behaviours or government policy, and implement innovative projects on the ground. Clearly donors and funders need persuading that the environment deserves support, and that there are ways of supporting the cause effectively.

Is the environment in trouble?

Evidence is mounting that climate change is real, that it is manmade, and that the consequences are very likely to be serious. Although uncertainties exist, ignoring the probability of manmade climate change is very risky indeed. In the absence of a convincing alternative hypothesis, the proposition that rising global air temperature is caused by burning fossil fuels and deforestation must be accepted as the basis for a programme of action.

Inaction now could exact a very high price in the future. The majority scientific view is that global air temperature will probably increase by 1.8°C–4°C in this century due to human activity. Less likely, but still highly possible should greenhouse gas emissions continue to increase exponentially, is an increase of up to 6.4°C.* Any increase beyond 2°C would probably trigger a range of damaging consequences, including desertification and loss of fertile farmland, loss of freshwater, rising sea levels, flooding, and extreme weather events. This would have particularly disastrous effects in tropical and sub-tropical regions, where many hundreds of millions of people rely on their immediate environment for food and livelihoods, and are therefore extremely vulnerable to environmental degradation.

These areas are also home to the world's highest concentrations of wild animals and plants—known together as 'biodiversity'—and these too would face severe threats from the impacts of climate change.

The first comprehensive planet-wide assessment of the state of natural resources and biodiversity was published in 2005. This shows that many ecosystems—including tropical forests, wetlands and other sources of freshwater, and the oceans—have deteriorated sharply in the last 50 years. More than 60% of ecosystem services used by humanity (food, freshwater, energy, fibres and materials) are in decline.

There are several causes, many of them inter-connected. Logging, fishing, mining and industrial-scale agriculture in developing countries are depleting natural resources in order to supply consumers in wealthy developed nations. Uncontrolled exploitation of timber and other natural assets by undemocratic regimes (such as Liberia under Charles Taylor, and Cambodia under the Khmer Rouge) has caused extensive damage in the recent past. Poverty has also led to environmental degradation (eg, the Sudan, Madagascar), where the need to survive has driven communities to use up forests and water supplies.

Economic growth in wealthy nations, including the rapidly developing nations such as India and China, is fuelling increases in per capita consumption of resources at an unsustainable rate. The doubling of the global human population since 1960 is also adding to the stress on the planet's carrying capacity. Yet population growth is rarely discussed in environmental circles.

These environmental challenges, as illustrated in Figures 1, 2 and 3, are all inter-related. The box on the left represents the ecosystem—biodiversity, natural resources and 'services'; the top and bottom represent the direct environmental consequences and material outputs of human activity; finally, the box on the right represents the final outcomes of this activity for society. Figure 1 is an idealised or hypothetical picture of how humans used to live in balance with the planet: the sustainable use of natural resources provides the material basis for society, while keeping within the limits of the environment's ability to absorb pollutants and regenerate.

* IPCC (2007) Fourth Assessment of the Intergovernmental Panel on Climate Change predicts two ranges of global temperature increases throughout the twenty-first century due to human activity: a 'probable' range of 1.8°C-4°C, and a 'possible' range of 1.1°C-6.4°C.[61]

Figure 1: Healthy planet in balance

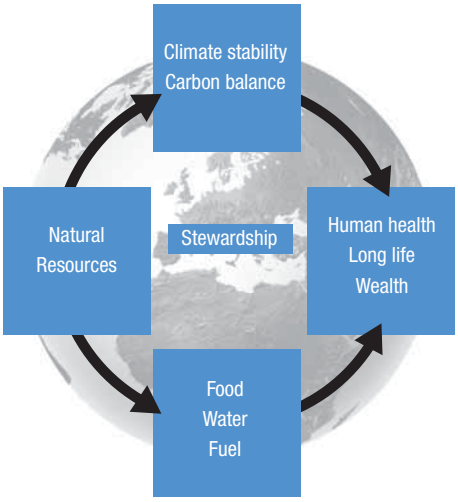
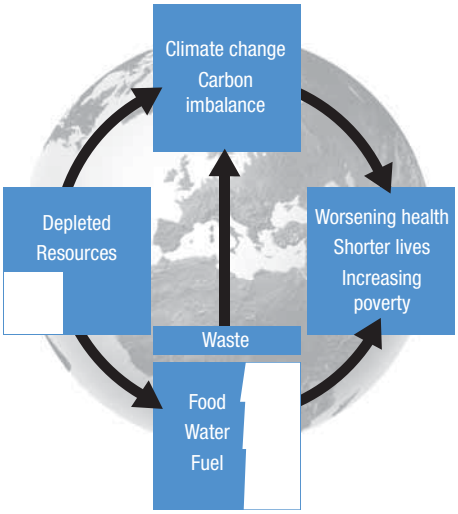


Figure 2 illustrates the current state of the environment and man's role in shaping it: ever increasing levels of consumption and population growth are driving the use of natural resources to unsustainable levels. This is increasing the production of waste and release of carbon and other greenhouse gases into the atmosphere. The consequence for society is decreasing health and worsening poverty for those who still depend on their immediate environments.

Figure 2: Unhealthy planet degraded



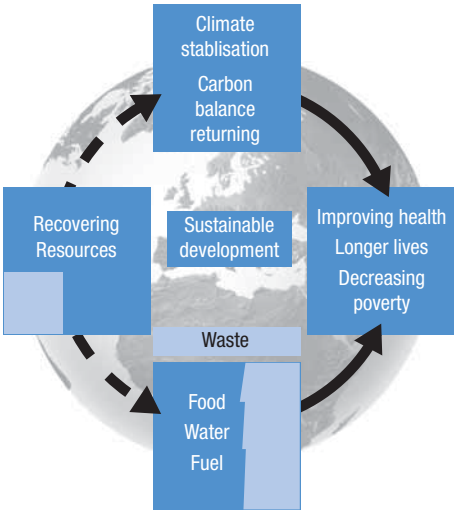
Can anything be done?

Success on some fronts, such as the elimination of chlorofluorocarbon (CFC) emissions following the Montreal Protocol, and the positive effect this has had on the ozone hole, shows that success is possible and could be replicated when dealing with other problems. Scientists suggest that stabilising climate change can be achieved through the reduction of greenhouse gas emissions and maintenance of the planet's carbon sinks—ecosystems, primarily oceans and forests, which naturally absorb carbon from the atmosphere, either storing it or using it to grow while releasing oxygen. Action on multiple fronts will work best. Our resources and biodiversity could be protected without necessarily impoverishing the poor. However, no single action will remedy all problems: work is needed on many fronts, simultaneously.

This report provides examples of progress. But converting modest gains into greater success in restoring balance to the planet will require effort at all levels: national, international, personal and technological.

Figure 3 is a simple illustration of how the principles of sustainable development and living suggest we can return society to balance with the planet and restore environmental health.

Figure 3: Restoring the planet to health



Current efforts need to be scaled up. Concerted action is vital. Charities are a key component of the global response. Donors may suppose that faced with such vast problems, only institutions on the scale of national governments, the UN and large multi-national corporations can take the necessary steps. Policy initiatives, regulation and market-based solutions are essential on many issues, from strategies to reduce emissions to dealing with deforestation and over-fishing.

However, governments and politicians face competing demands on their time, resources and energy; those politicians sincerely interested in the issues struggle to make the environment a priority. The primary focus of business, on the other hand, is making money; while many corporations are now realising that securing a long-term profit means taking the environment into account, many have not. So governments and corporations can be slow to respond, and should not be relied upon as the primary agents of change. Charities help to stimulate change, as well as playing other vital roles, in a wide range of contexts.

Less than 2% of the annual grant-making of the 100 largest UK charitable trusts—£18.1m of £1.1bn—is allocated to environment charities.

Why support charities?

Charities have a strong track record in identifying and solving environmental problems. Although collectively the charity sector is much smaller than governments and businesses, much of our understanding of the scale of environmental challenges—and, crucially, their solutions—began with charities.

Examples include: recycling bottles; buying and preserving land; publishing data as a prelude to reducing corporate carbon emissions; fishing sustainably and eating sustainably sourced fish products; identifying the costs of illegal logging; questioning the impact of biofuels on deforestation; highlighting links between poverty and the environment; lobbying the EU for tighter regulation on the use of toxic chemicals in industrial and domestic products.

All of these fields have entered public consciousness and altered the buying habits of consumers, the behaviour of companies and the attitudes of policy-makers, as a consequence of charitable efforts.

Charities produce essential information; they help to shape policy; they influence behaviour; and they trial new approaches. The spectrum of charitable activity on environment issues is rich and diverse, with many potent contributions, both in the past and the present. And because charities are independent, they will take up causes that are unpalatable to corporations or governments.

The **Carbon Disclosure Project**—which provides a secretariat for the world's largest institutional investor collaboration on the business implications of climate change—has transformed our knowledge of corporate greenhouse gas emissions. The **Marine Stewardship Council** certification logo is appearing on more and more fish products in retail outlets and in schools. Undercover investigations by the charity **Global Witness** have exposed human rights and environmental abuses resulting from illegal logging and mining practices in Cambodia, Liberia and the Democratic Republic of Congo. The **Greenpeace** soybean campaign has propelled the scale of tropical deforestation in Brazil caused by soybean cultivation into public view, catalysing new sustainability commitments from producers and retailers. In the Tsunami-hit communities along South Asian coastlines, **Wetlands International** is leading the way in reconstruction projects that are bringing economic prosperity through local involvement in restoration of mangrove ecosystems.

The picture that emerges is of a charitable sector that has the capacity and the talent to lead, innovate, produce new and better information on environmental trends and play governments, businesses and individuals—as well as running the many local projects for which it is best known.

The unique attributes of environment charities put them in a position to act as honest broker in public and private debates and negotiations. Charities working in this field can focus all their efforts on environment goals, driven by commitment and expertise. This is in sharp contrast to governments and businesses, for which the environment is just one of many issues jostling for attention.

The independence of charities—without shareholders and without short-term political pressures—is also a major asset. This confers a freedom to highlight and combat environmental abuses and wrongs without being compromised by dependence on those that they are seeking to oppose or influence.

However, success and impact, some of which may require long-term horizons before the benefits are apparent, can be difficult to measure. NPC does not believe, though, that investors should play a game of 'wait and see': problems are accumulating so fast that we need to take some risks now to arrest them.

Are charities well enough supported?

For charities to play these vital roles they need better funding. Philanthropic funding for environment charities is pitiful. As we have already seen, less than 2% of the annual grant-making of the 100 largest UK charitable trusts—£18.1m of £1.1bn—is allocated to environment charities.* Taking all UK registered charitable trusts as a whole, annual environment grants amount to no more than £35m. Government funding and voluntary donations from the public follow the same trend. For example, just 2% of the UK government's £2.1bn of annual bilateral aid is channelled into environment protection. Fewer than 5% of private donors in the UK support environmental causes.[67] NPC estimates that public charitable giving (donations, legacies and so on) in the UK would also lie in this region, less than 5% of the £9bn given away each year. (See Appendix VI for calculations.)

As a result of funding shortages, many innovative, pioneering and important charitable initiatives based in the UK have had to turn to the US for development funding. Weak supply of financial support is a cause for concern: existing charities need to gear up to respond to global environment challenges, and new charitable ideas and entrepreneurial energy should be nurtured and encouraged.

Charities are not alone in trying to secure funding. The environment lags on the agendas of governments as well. However, charities,

* CAF data,[125] from which this figure comes from, coincides with the analysis of Cracknell & Godwin (2007) Where the Green Grants Went 3: a sample of 176 grant-making trusts made grants to environmental charities worth £33.6m in 2004/2005, representing just 1.6% of the £2.04bn given by 498 of the UK's largest grant-makers for that year.[395]

with support from donors, need to break down barriers to secure funding.

Donors consulted by NPC identified a number of barriers to funding the environment. NPC believes that donors can help charities to overcome these barriers. They can do this by:

- providing funds themselves to under-funded areas;
- supporting efforts by charities to access other funds; and
- putting pressure on charities to improve their case.

What inhibits funding for the environment?

Environment problems and data are daunting

The scale and nature of environmental challenges may tempt some funders to withhold support from charities. This would be a mistake. The problems that charities are seeking to tackle are daunting, and this may lead to funders losing confidence in the ability and capacity of charities to make a significant impact. But as this report demonstrates, charities are achieving tangible success, and making remarkable in-roads in the case of seemingly intractable difficulties. With more funding, they could achieve much more.

Donors imagine that they must master an avalanche of data on the science of greenhouse gases and the complex taxonomy of priorities for the reduction of emissions. Arguments for the conservation value of rare and endangered species appear to demand a familiarity with advanced concepts in evolutionary biology.

Presenting large quantities of scientific data on the problems does not necessarily make the best case for funding. A better approach is providing evidence for the ability of charities to solve problems as and when they arise. Donors should support charities to do this.

Human welfare competes with the environment for attention

The perceived conflict between environmental and human welfare issues remains as a barrier that environmental charities have to overcome.

These tensions are less pronounced than in the past, however, as evidence for the inter-connectedness of people and nature has continued to mount. In the field of rural development, for example, the linkages between poverty and the environment in developing countries have become better understood in the last decade. The evidence suggests that environmental protection is not an option that can be ignored. Action to protect fragile natural resources can lead to greater rather than less prosperity.

Conversely, inaction can intensify poverty, as has happened in many parts of Africa. Ultimately all humans—rich and poor—will be reliant on a stable environment. Helping the environment can help people. Sustainable livelihoods projects and initiatives developed over the last decade have demonstrated that bringing human welfare and environmental objectives together can benefit both sides.

However, the potential for conflict between these competing demands is real; better communication and a preparedness to engage in debate are needed. Many environment charities believe in the intrinsic value of the environment as a primary motivation of their work, while human welfare charities place the well-being of people at the top of their agendas.

Charities need to find better ways to bridge this divide, as it remains a barrier to increased giving.

Where projects are inherently environmental in purpose, framing them in terms of their additional human benefits (in order to acquire funding, or mollify other stakeholders) is not the answer. Instead, environment charities should be more robust and more effective in the way that they communicate the case for the intrinsic value of the natural world. Evidence to demonstrate the strong attachments that many people have—across socio-economic groupings and the North/South divide—to wildlife, wild places, countryside, and clean and healthy environments, needs marshalling and expressing.

Scientific and moral uncertainty is daunting

Uncertainty about environmental trends has held back funding support. For much of the last quarter of the twentieth century, many economists and other influential figures remained sceptical about the extent and gravity of environmental problems. This was fuelled in large part by a lack of certainty in the extrapolation of trends, especially at the global level.

Uncertainty has also led to fractures in consensus. Scientists urging action to stem the accelerating loss of biodiversity and natural resources were unable to win sufficient support in the critical policy circles. Debate on the consequences of rapid human population growth all but ceased, muted by fears over the implications of population control measures for human rights. Rising consumption was welcomed as a key contributor to greater prosperity, with environmental impacts downplayed. Climate change causes and trends were fiercely contested.

The perceived conflict between environmental and human welfare issues remains as a barrier that environmental charities have to overcome.

> Don't it always seem to go that you don't know what you've got 'til its gone. They paved paradise and put up a parking lot.
>
> Joni Mitchell

Current policy priorities mirror these conflicting views. The framing and implementation of the UN's seventh Millennium Development Goal on environmental sustainability is widely recognised as one of the weakest components of this over-arching framework for tackling global poverty and inequities.* This has contributed to the low allocation of resources for environmental protection within governmental and multilateral aid and development programmes. Uncertainties over environmental costs and benefits are also contributing to low prioritisation elsewhere. The ten major global challenges defined by leading economists who collaborated in the influential Copenhagen Consensus in 2004 include climate change, but omit loss of natural resources and biodiversity; and climate change projects do not feature in the experts' top ten priority list for advancing global welfare.

That is the past and the present. For the future, these uncertainties and fractures will increasingly dissolve, as more and more evidence on environmental impacts and trends accumulates. This will lead to a greater appreciation of the importance of initiatives such as those provided by charities.

Charities underplay their role

Charities are playing key roles on a much wider range of fronts than is generally realised. Most donors and funders will know that environment charities manage nature reserves and campaign against threats to the countryside from road building and housing developments. Other charitable activities, as we explore in Section 4, are much less well known. While charities cannot hope to solve environment problems on their own, there is abundant evidence that they are making a vital contribution. If their achievements were more widely known, more funding would be likely to materialise.

Why should donors act?

If we are to tackle environmental problems, we need to address the needs of charities and increase support for their work. We cannot wait for governments, business or the general public to act. Charities need more and better funding now to continue as pioneers in finding solutions to the planet's problems. Public attitudes about the environment have already started to shift. Behaviour of individuals and companies has also started to change and politicians are following suit. Private money could provide a powerful lever to accelerate the pace of change.

For those prepared to embrace the challenge, there are a plethora of opportunities available for donors and funders interested in making their philanthropy greener. The options and priorities available are explored throughout this report.

Photograph supplied by Greenpeace/Novis

* The eight Millennium Development Goals were agreed upon by the member states of the UN in September 2000. Goal seven, to 'ensure environmental sustainability', is to be achieved following ten recommendations, including: improve small-scale agricultural production systems; promote forest management for protection and sustainable production; address the threats to fisheries and marine ecosystems; mitigate the anticipated effects of global climate change; and correct market failures and distortions.[68]

Environment problems, causes and consequences

2

Contents of section

Comprehensive scientific reports published over the last six years show that the planet's environment is degrading fast. Consensus among scientists, politicians and business leaders that humans are contributing to climate change, and agreement about the seriousness of the consequences of climate change, has grown markedly during this time. There is also a growing sense of urgency about the future of the planet's biodiversity and ecosystems and the natural resources they provide, such as timber and seafood, if current rates of consumption and population growth continue unabated. Within the charity and government sectors, there is increasing awareness of the relationship between poverty and environmental degradation, and the need for successful development programmes to address both.

Problems

The depletion of global natural resources

Stocks of most biological and other natural resources have declined sharply in the last 50 years.* Indicators of deterioration include precipitous falls in ocean fish populations, accelerating deforestation in tropical countries, increases in air and global surface temperatures and a lengthening list of endangered species. Unsustainable agriculture, industrial production and mineral extraction have wrought ecological damage to fragile ecosystems. Although usually associated with solely with climate change, increases in global temperatures are adding to environmental degradation: Africa and Asia contend with increasing desertification, with many regions reporting freshwater shortages.

The loss of natural resources is as much a threat to human well-being as climate change. All people in the world depend on the planet's ecosystems for 'services'—from food to water and other materials that provide the conditions for a decent, healthy and secure life. Over the past 50 years, man has changed ecosystems more rapidly than in any comparable period of time in human history, largely to meet growing demands for food, fresh water, timber, fibre and fuel. These changes are leading to serious deterioration of natural resources, with 60% of ecosystem services now degraded or used unsustainably.[8]

Climate change

Before the Industrial Revolution, greenhouse gas levels were 'normal' (at 280ppm—or parts per million) in the overall context of human history. We have now reached 430ppm. The scientific community widely agrees that 550ppm marks a 'tipping point', after which the consequences for atmospheric temperatures and weather patterns become increasingly extreme. By the end of this century, global temperatures are likely to rise between 1.8°C and 4°C; if greenhouse gas emissions are allowed to continue increasing exponentially, this could be as high as 6.4°C.[61] No one knows the precise result, but the mainstream scenarios point to rises in sea levels leading to flooding and submergence of coastal areas, and changes in rainfall patterns. The consequences of such large-scale environmental changes for our society will be severe: crop failure and the loss of global food security, widespread breakdown of infrastructure and attendant economic disruption, not to mention loss of life.

Climate change and loss of natural resources are inter-connected, but not all environment problems are a function of climate change; many have come about because of damage to planetary ecosystems that has nothing to do with global warming—such as the fall in fish stocks and pollution of the oceans. Other environment problems are 'double whammies', threats in their own right and contributors to global warming. Deforestation and peatland drainage and burning are the most prominent examples. In both cases, loss of biodiversity and loss of ecosystem services go hand in hand with increases in carbon emissions.

At present, attention is strongly focused on the need to combat climate change by reducing greenhouse gas emissions from fossil fuel burning in power generation, transportation, industry, waste disposal, and domestic and office energy use, which

The loss of natural resources is as much a threat to human well-being as climate change. All people in the world depend on the planet's ecosystems for 'services'.

* Natural resources are the earth's ecosystems and their contents—the atmosphere, oceans, forests, wetlands, rivers, lakes and other freshwaters, drylands, fertile agricultural land and soils—and the trees, plants, fish and other marine and freshwater life, terrestrial animals, insects and microbes that live within them (often referred to as 'biodiversity'). They also include resources that are below ground or beneath the ocean floor—metals, oil, natural gas and other minerals.

Box 1: Natural resources and climate change problems

Over-fishing

- One quarter of marine fish stocks are over-harvested, with 70% of marine fish species in danger of collapse by 2048.
- Fish consumption has doubled since 1973.[7]

Deforestation

- 20% of global CO2 emissions come from tropical deforestation. The total tropical forest area continues to shrink at 5% per decade.[19]

Agriculture

- Ecosystem loss has been driven by the need to increase food production. More land was converted to cropland in the 30 years after 1950 than in the 150 years between 1700 and 1850.

Fresh water

- Water withdrawal for irrigation, household and industrial use has doubled in the last 40 years.
- In the Middle East and North Africa, usage runs at 120% of renewable supplies.

Mangroves and coral reefs

- 35% of mangroves and 20% of coral reefs have been lost since 1980.

Biodiversity

- 12% of birds, 25% of mammals and 32% of amphibians are threatened with extinction over the next century.

Climate change

- 60% of current greenhouse gas emissions have been emitted since 1959.
- Emissions increased by more than 50% since 1750, from 280ppm to 430ppm in 2006.*
- Probable temperature rise by the end of the century will be between 1.8°C and 4°C, possibly up to 6.4°C.
- If no action is taken, there is a 50% risk of exceeding a 5°C increase – this would be beyond the experience of human civilisation.

Sources (unless otherwise stated): *Millennium Ecosystem Assessment (2005)*;[8] Stern (2006) *Stern Review: The Economics of Climate Change*;[55] IPCC (2007), *Fourth Assessment Report, volume 1*.[61]

together are responsible for 68% of emissions (see Figure 10, Section 4.1). This is clearly a core problem that must be addressed.

But 32% of global carbon emissions result from agricultural and land-use activities. Over half of this total (or over 18% of total global emissions) is a by-product of deforestation and peatland destruction.[55]

Despite this evidence, most commentators consistently ignore the connection between climate change and the over-exploitation of natural resources. As we will see throughout this report, pushing natural resources to the top of environment agendas is an urgent priority for funders and charities.

See Section 4 for more in-depth coverage of environment problems and responses, where the material is organised around six issues: climate change; natural resources and consumption; poverty and environment in developing countries; ecosystems and biodiversity; energy, pollution and waste; and sustainable development and living.

Environmental degradation and poverty

Dwindling natural resources and climate change are major social problems that will loom as large in the twenty-first century as poverty, health, education and social deprivation did in the twentieth century.* The world's rural poor are already beginning to suffer the consequences, from the pastoralists of northern Kenya struggling with drought and desertification to threatened communities of forest peoples throughout Latin America and Asia.

We in the rich, urbanised West are not immune; environment problems will affect everyone in the long run, and the failure to act now will leave future generations with a very different planet.

Growing awareness

Awareness of global environment problems is relatively recent. In the UK, environmental concern before 1945 was largely confined to worries about over-development of the British countryside. Recognition of the existence of international environment challenges barely registered. Many issues that are now features in the environment landscape—such as waste, pollution, recycling, endangered species, over-fishing, deforestation and transport—first emerged in the 1970s. On climate change, widespread understanding of the gravity of the problem only dates back little more than five years.

Since 2000 convincing evidence has mounted on the depletion and degradation of the global environment. *The Global 2000 Report*[70] commissioned by US President Jimmy Carter in 1980 identified many key global environment problems, including rises in air temperature, tropical deforestation and the expansion of drylands. Published in an election year, its findings were largely ignored in the Reagan era.

Subsequent attempts around the world to put environmental issues on the mainstream political agenda followed this pattern, in part because they were let down by the lack of a comprehensive and compelling base of scientific evidence. But since then, the body of knowledge on greenhouse gas emissions, rising air temperatures and the deterioration of natural resources, ecosystems and biodiversity has steadily mounted, leading to a majority consensus within the scientific community, and forcing political decision-makers to pay attention.

* J.F.Rischard, author of *High Noon: 20 Global Problems, 20 Years to Solve Them*, lists six environment problems in his overview of 20 global issues for the twenty-first century (global warming; biodiversity and ecosystem losses; fisheries depletion; deforestation; water deficits; and maritime safety and pollution).[69]

We in the rich, urbanised West are not immune; environment problems will affect everyone in the long run, and the failure to act now will leave future generations with a very different planet.

Box 2: The world's rural poor are especially vulnerable to degradation of their environments

- Two billion people live in dry regions where food, water and livelihoods are threatened by desertification.[8]
- 800 million people live in or around tropical forests.[19]
- 70% of the one billion people living on less than $1 a day are in rural areas where they are highly dependent on agriculture, grazing, and hunting for subsistence.[8]
- One billion people depend on fish as their primary source of protein, with over 60% living in developing countries in Africa and Asia.[48]
- 200 million people live in coastal floodplains around the world, with those living in Africa, Asia and on small islands particularly vulnerable to flooding.[55]

Table 1: Climate change and natural resources loss—the evidence and consequences

Third Assessment of the Intergovernmental Panel on Climate Change (IPCC), 2001.[71] The Third IPCC report was compiled by over 1,000 scientists, and is widely accepted as the most comprehensive and up-to-date evaluation of global warming. Its findings have been the basis for international climate negotiations.	The assessment included the first authoritative statement attributing climate change to anthropogenic (human-induced) factors: '*there is new and stronger evidence that most of the warming observed over the last 50 years is attributable to human activities.'*
Fourth Assessment of the Intergovernmental Panel on Climate Change (IPCC), 2007.[61] As this report went to press, the IPCC was close to finalising its Fourth Assessment report (AR4) on climate change. Drawing on the large body of climate research carried out since the Third Assessment of 2001, the report's findings include: it is 'very likely' [more than 90% probable] that human activities are causing global warming.	• Probable temperature rise by the end of the century will be between 1.8°C and 4°C • Possible temperature rise by the end of the century ranges between 1.1°C and 6.4°C • Sea levels are likely to rise by 28–43cm • Arctic summer sea ice is likely to disappear in the second half of the century
Millennium Ecosystem Assessment (MEA), 2005.[8] Commissioned by Kofi Annan on behalf of the UN, the MEA project was a collaborative worldwide effort involving over 1,300 scientists and experts over a five-year period, at a cost of $20m. It is the first comprehensive overview of planetary resources, and provides an extraordinarily detailed assessment, including past, current and likely future trends.	• In overall terms, the MEA finds that 60% of ecosystem services (the food, freshwater, energy and materials provided by nature to the human population) are in decline.
Global Footprint Network (GFN), 2005-06.[17] The GFN is a tool that measures people's use of renewable natural resources, relating it to the total biologically productive capacity of the Earth. In 2005-06 the tool was used to analyse the ecological footprint in three regions: Europe, Asia-Pacific and Africa. It is also the basis of the annual WWF Living Planet Report.[72]	• In 2001, humanity's Ecological Footprint was 2.5 times larger than in 1961, and exceeded the Earth's biological capacity by about 20%.
Stern Review on the economics of climate change, 2006.[55] Sir Nicholas Stern was asked by the Chancellor of the Exchequer, Gordon Brown, to conduct a review of the economics of climate change and its implications for the UK during 2006. The Review concludes that climate change *'is the greatest and widest-ranging market failure ever seen.'*	• The cost of inaction is likely to *'reduce welfare by an amount equivalent to a reduction in consumption per head of between 5 and 20%.'* But early and comprehensive efforts to stabilise greenhouse gases is achievable in economic terms, costing no more than 1% of annual global GDP by 2050.
Ice core analysis in Antarctica. From 1989–2004, the Vostok/IPIECA project in Antarctica obtained a remarkable body of knowledge on past climate change, through analysis of ice cores.	• Current levels of carbon dioxide and methane in the atmosphere are higher now than at any time in the past 650,000 years.[73]
Other evidence is extensive and growing rapidly: there is now data available on shrinking summer ice in the Arctic and the melting icecaps of Greenland, and how this is affecting ocean circulation in the Atlantic. There is also a growing body of specialised reporting on the loss of natural resources, such as forests and ocean fish. [19,7]	

Causes and consequences

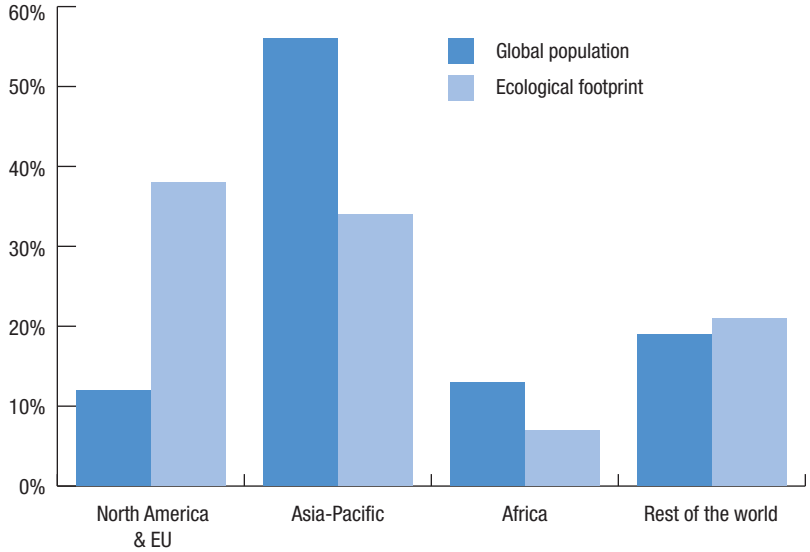
The root causes of environmental problems are unsustainable consumption of indigenous and imported natural resources in the UK, US and other EU and OECD countries; and poverty leading to unsustainable use and destruction of natural resources in developing countries. Related to both of these drivers is the rise in the global human population from one billion in 1804 to 6.5 billion today. More than half of this increase over the past 200 years has come about since 1960.[23]

Unsustainable consumption

Forty per cent of the increase in greenhouse gas emissions in advanced economies is directly attributable to our unsustainable consumption of the natural resources we more commonly call fossil fuels: oil, coal and natural gas. Unsustainable use is manifested right across the spectrum of modern life, from energy inefficient offices and homes to cars, planes and other transportation, and electricity consumption for washing machines, televisions, refrigerators and electronic equipment. Waste is becoming an ever greater problem. Failure to reuse and recycle only exacerbates the problem (see Section 4.5).

We consume a wide range of wood-based products, such as the chipboard used in buildings, which we can trace back to forests around the world. Some are harvested sustainably, especially in temperate regions; but many are not. Unsustainable (and often illegal) logging averages 40% of timber production in China, Russia and tropical countries, much of it imported by EU countries.[74, 75] The many agricultural commodities used in food, drink and domestic products (eg, cleaning fluids), including soybean, palm oil, coffee, tea, sugar and bananas are rarely grown and harvested sustainably. Most of these commodities are imported from developing countries.

Figure 4: Global population and ecological footprint by region, 2006



Global Footprint Network (GFN), a US-based charity, has developed data that define the 'ecological footprint' (or impact) on a per country basis. This shows that consumption of natural resources has accelerated in recent decades, in part to satisfy domestic demand in newly prosperous countries in Latin America and Asia, but also to supply the increasingly affluent advanced economies. Looking forward, the projected economic growth of developing countries in the next several decades, particularly in China, India and Brazil, will further accelerate natural resource consumption.

To some extent this is already happening. For example, China is now a substantial importer of African oil, gas and timber. The Chatham House *Illegal Logging* website notes that in 2003, Gabon alone supplied 40% of China's log imports from the West/Central Africa region (46% of Gabon's total forest exports). Gabonese law requires processing before export, yet China's demands are for raw logs.[76]

Per capita consumption in the wealthiest countries is six times greater than in the poorest. The GFN calculates that in 2001, humanity's ecological footprint was 2.5 times larger than in 1961, and exceeded the Earth's biological capacity by about 20%.

When the consumption of natural resources is analysed by region and by size of population, a wide disparity in per capita use between developed and developing nations can be seen (Figure 4). For example, 12% of the world population lives in North American and EU countries, but they account for 38% of the total ecological footprint. By contrast, people living in Asia-Pacific countries make up 56% of the world population, but account for only 34% of the world's ecological footprint. In Africa, the world's poorest continent, 13% of the world's population have a footprint that is only 7% of the global total. See Section 4.2 for more on global footprints and natural resources.

Poverty

Extreme poverty is both a cause and consequence of environmental degradation. At the most fundamental poverty level, people around the world destroy their own natural resources to survive on a day-to-day basis; for example, the cutting down of forests in Madagascar and Ethiopia for firewood. At the next level up, the need for food and economic prosperity often leads to forest clearance and wetland drainage in order to obtain more cropland. More land was converted to cropland in the 30 years after 1950 than in the 150 years between 1700 and 1850.[8]

Poor countries with corrupt or non-democratic regimes are particularly vulnerable to over-exploitation of natural resources. Examples include large-scale deforestation to generate

timber trade revenues in Liberia under the Charles Taylor regime and in Cambodia under the Khmer Rouge.[77,78] Poor peoples around the world are also deprived of their natural assets by their governments through exploitative logging, mining and agricultural concessions, often abetted by financing from Export Credit Agencies and other financial institutions.[79]

Historically, development economists have assumed that sacrificing some environmental quality and assets in the first phase of economic development was unavoidable, and could be rectified later. But work by the late David Pearce, a leading British environmental economist, and others over the last decade has produced a growing evidence base of poverty-environment linkages, showing that, in many areas of the world, poverty is both a root cause of natural resource destruction, and a consequence of their degradation.[22] For more on this theme, and analysis of the allocation of the world's aid budget to environment protection, see Section 4.3.

Population growth and natural resources

Human beings have been using natural resources unsustainably since Neolithic times (when much of the forest cover of the UK, Western Europe and the Middle East was cleared), but the overall impacts on the planet were modest by comparison with the period since 1750, in large part because the total human population did not reach one billion until 1804.

By 1927 the total had risen to two billion, then three billion by 1960, four billion in 1974, five billion in 1987. Now 6.5 billion, global population is expected to reach 8.9 billion by 2050, with 90% living in developing countries, compared to 80% today.[23]

Perhaps unsurprisingly, there is little research or public debate on the question of natural resources and their relationship to the total human population. In part this is because population concerns in the 1960s were seen by many as unwarranted scaremongering, with some commentators pointing to the successful leap forward in global food production that kept step with population increases.

Today, concern is mounting once more. Can global food production be doubled again without causing irreversible loss of ecosystems on which humanity as a whole is reliant? There is also growing recognition that the poor are most vulnerable in countries where the ratio of population to available natural resources is at its most disadvantageous.

Photograph supplied by istockphoto.com

Consensus and action

Publication of the Third and Fourth assessments of the Intergovernmental Panel on Climate Change (IPCC), in 2001 and 2007 respectively, were major milestones in the history of global warming.[80,61] These landmark reports have reflected the majority scientific view on climate change: that it is happening, and that rises in air temperature and in greenhouse gas emissions are 'very likely' to be anthropogenic (caused by human action), through the burning of fossil fuels, deforestation and other man-made changes to the natural environment. On natural resources, publication of the Millennium Ecosystem Assessment in 2005 has had a similar impact, commanding wide support from biologists and ecologists.

Box 3: Soybean and palm oil are agents of tropical deforestation

Brazilian soybean

In 2004/2005, 1.2 million hectares of the Brazilian Amazon rainforest were planted with soya, 5% of the country's total production. Brazilian soya is a cash crop for export, destined for the European animal feed market.

Source: *Eating up the Amazon. Greenpeace International report, 2006.*[12] (See Section 4.2 for a profile of the Greenpeace soybean campaign.)

Palm oil from Malaysia and Indonesia

Palm oil is a major ingredient in about one in ten products in UK supermarkets, including margarine, ice cream, crisps, chips, instant noodles, pastry, chocolate, soaps, shampoo, cosmetics and detergents. Most are labelled as containing 'vegetable oil':

Malaysia and Indonesia produce 85% of global palm oil, primarily for export;

By the beginning of 2004, there were 6.5 million hectares of oil-palm plantations across Sumatra and Borneo. Of this total area, almost 4 million hectares had previously been tropical rainforest.

Source: *The Oil for Ape Scandal. Friends of the Earth, 2005.*[38] (See Section 4.4 for a summary of the impact of palm oil plantations on orang-utans.)

Box 4: Paper published in Science finds overwhelming consensus on climate change in the scientific community

A much-quoted paper by Nancy Orestes, published in 2004, analysed 928 abstracts published in refereed scientific journals between 1993 and 2003, with the keywords 'climate change'.

Of these, 75% explicitly endorsed the consensus position (that climate change is 'anthropogenic' or human induced). 25% dealt with methods, taking no position on the climate change debate. ***'Remarkably, none of the papers disagreed with the consensus position.'***[16]

On current trends, one thing is certain: we are likely to bequeath fewer and lower quality natural assets to our children and their children.

Consensus

The state of scientific consensus on the actual consequences of global warming and natural resources loss is less clear. Both the IPCC and the MEA provide a number of scenarios for the twenty-first century that predict a wide range of consequences. Implicit in the data provided is awareness that climate change and natural resources modelling are emerging disciplines. Many scientists are also conscious of the dangers of extrapolation from uncertain data, which in the past has led to criticism of 'environmental catastrophe theories'.[81, 82]

The other side of this debate is that avoidable environmental damage may occur if we wait until all scientific uncertainty is removed. In order to circumvent this difficulty, environment scientists have largely backed the Precautionary Principle. First developed in Germany in the 1930s, this proposes that prevention today is sensible as a means to avert potentially irreversible consequences in the future. The Principle is at the heart of many international environmental agreements, including the Montreal Protocol and the Rio Declaration (see Section 3).* For more background on the evidence base supporting climate change and the depletion of natural resources, see Appendix V.

The extent to which there is consensus on environment problems across society is a key question for donors and funders. If consensus is weak, and disagreements are fierce and numerous (for example, within political parties, or amongst economists and other influential advisers on policy) then the impact of funding to tackle problems may be weakened. Conversely, strong consensus may open up funding opportunities to press for more ambitious solutions. This is especially true on international issues, where philanthropic support is often predicated on leveraging governmental and intergovernmental funding to build on success.

Uncertainty and risk

The reality is that the mobilisation of society on climate change, deforestation, over-fishing, poverty-environment linkages and other environment issues is still at an early stage. A number of different factors need to be separated to understand why this is so:

- As we have shown above, compelling evidence on the existence and nature of global environmental problems has not been available until recent years.
- The problems, although inter-connected, are not homogenous; and there are widely differing views on their seriousness. Some, for example, accept the urgent need to address greenhouse gas emissions, while doubting the urgency of stemming biodiversity and ecosystem loss.
- There are major economic challenges in moving from recognition of problems to implementation of solutions.

Perhaps the greatest barrier to achieving consensus is that the major problems transcend national boundaries. Many environmental assets (the atmosphere, high seas, and many areas of land) are part of the 'global commons'—either outside of any national jurisdiction, or set aside by governments as the property of all.

Garrett Hardin's 1968 paper, *The Tragedy of the Commons,*[83] argues that these assets can easily be undervalued or not valued at all, and are remote from the everyday activities of many, especially people living in developed countries. Those who pay the eventual price for deterioration of the global commons (eg, desertification resulting from global warming, extinction of ocean fish populations) may not be alive today, raising the issue of 'intergenerational equity'. On current trends, one thing is certain: we are likely to bequeath fewer and lower quality natural assets to our children and their children.

* Principle 15 of the Rio Declaration: 'In order to protect the environment the Precautionary Approach shall be widely applied by States according to their capabilities. Where there are threats of serious or irreversible damage, lack of full scientific certainty shall not be used as a reason for postponing cost-effective measures to prevent environmental degradation.'

The need to protect the global commons has been understood for more than three decades, and many international environmental agreements have been created to further this goal (see Section 3). However, as we explore below, success has been variable, and in many cases quite limited. Why has it proved difficult to achieve the strong backing needed to make significant progress?

One part of the explanation lies in the complexity of the knowledge-base required. Working on environment problems draws on the expertise of academics in many disciplines. Addressing climate change and poverty-environment issues is as much the province of economists as biologists and ecologists. Sustainable development has applicability in architecture, industrial design and other areas that are only indirectly related to the natural environment.

This gives rise to a range of viewpoints, theories and models. For example, environmental economists argue for the 'internalisation' of 'environmental externalities' —the 'polluter pays' principle.* But other economists dispute this approach, maintaining that environmental dangers are over-stated, or are too expensive to redress.

Looking forward, arguments on the existence of environment problems will probably recede as evidence on the scale and extent of environment problems continues to mount. Instead, debates are likely to refocus on the advisability of particular solutions, with greater scrutiny of potential costs and benefits.

Remaining cautious

The history of science is littered with examples of minority thinking that has turned out to be right, and prevailing majority consensus that has been wrong—from Galileo to Edward Jenner and Charles Darwin. Might this also not be the case on climate change, or indeed on other aspects of the environmental challenge?

In the 1980s and early 1990s, scientists and environmentalists arguing that global warming is human-induced were frequently cast as heretics, struggling against mainstream orthodoxy. Now the positions are reversed, with climate sceptics maintaining that they are the upholders of independent enquiry.

Unquestioning acceptance of orthodoxy can be counter-productive and, in some cases, positively dangerous. Rather than dismissing climate change and biodiversity sceptics as heretics, we should scrutinise their arguments as part of the ongoing questioning that is so vital if we are to avoid big mistakes and miscalculations.

These can come about through ill-advised leaps to solutions that cause as much or more harm than the problems they seek to overcome (see Box 14 on biofuels in Section 4.1). Another pitfall relates to estimation of the costs and benefits of a particular course of action. For example, while it may be deemed desirable to conserve all endangered species, the costs of doing so may be out of all proportion to the value of the result. In addition, specific goals may be unachievable. This is an issue of huge importance to funders of conservation projects, yet there has been little economic analysis to assist them.

The costs of protection programmes for particular species pale into insignificance compared to the global costs of avoiding climate change. The *Stern Review on the Economics of Climate Change* calculates that policies to stabilise greenhouse gas emissions at near current levels would cost about 1% of world GDP by 2050, and on this basis it concludes that it is possible to 'decarbonise' countries while maintaining economic growth.[55] But not all economists agree with these calculations. This is clearly a critical debate that must be continued rather than squashed.

Criticism of the Stern review (see Box 5) centres on three points: that it has exaggerated the economic costs of allowing climate change to remain unchecked; that it underestimates the costs of mitigating emissions; and that it has employed an incorrect discount rate (the assumed value of money today compared to the value of money in the future).

A fourth area of concern (which has yet to receive much serious attention) is the potential for climate change mitigation strategies to exacerbate social and economic inequity. For example, one by-product of ambitious attempts to curb emissions might be to greatly inflate energy prices. This would have a disproportionate impact on the poor and the disadvantaged that would be most acutely felt in developing countries, but also elsewhere. Funders and donors need to remain alert to these moral hazards.

Some proponents of early and comprehensive action to reduce emissions have responded by labelling such questioning as heretical and misplaced. This is quite wrong. The debates (and further research) are essential. Curbing emissions involves some very big economic bets. If these are based on equally big miscalculations, the consequences could be highly damaging.

Rather than dismissing climate change and biodiversity sceptics as heretics, we should scrutinise their arguments as part of the ongoing questioning that is so vital if we are to avoid big mistakes and miscalculations.

* For example, tropical deforestation can result in a *market failure* because forest goods and services are undervalued or not valued at all. The cost (loss of biodiversity and ecosystem services, carbon emissions) has been externalised—imposed on others who were not party to the transaction. The alternative is internalisation—including costs to society within the pricing mechanism for forest goods and services. See *Can Tropical Forestry be Made Profitable by Internalising the Externalities?*[84] for an exploration of the issues. Internalisation has been adopted in environment legislation in many OECD countries on pollution.

Box 5: The Stern Review on the Economics of Climate Change—supporters and critics

In spite of sceptics, it is worth reducing climate risk

Martin Wolf, Financial Times, 6 February 2007 [9]

'What then do economists object to in the arguments for early and forcible action to halt the increase in the stock of greenhouse gases? In essence, they make three arguments: first, the Stern review has exaggerated the economic costs of climate change; second, it has underestimated the costs of mitigating emissions; and, third, it has employed the wrong discount rate for relating near-term costs of mitigation to the costs of continuing on our present course. … My answer to these important points is that the problem of climate change should not be viewed as just another investment decision. It is a question of insurance against an uncertain, but possibly world-transforming outcome. … These economists are performing a valuable service by forcing policymakers to understand the nature of the decision they confront. My conclusion, however, is that it still makes sense to try to reduce the risks of extreme outcomes. … the only way we can find out what stabilising emissions would cost is to try.'

On climate change and good sense

Samuel Brittan, *Financial Times*, 9 February 2007[41]

'In its detailed calculations, the Stern Review uses a pure rate of time preference (the value of jam today compared with jam tomorrow), not literally zero but 0.1%. … There is, however, an interesting admission by Sir Nicholas in the technical annex to his postscript that using a pure discount rate of 1.5% would reduce the loss from business as usual in the basic case from 5% to 1.4% of world GDP. This does not go far enough. The least bad guide to average pure time preference is probably world long-term interest rates, which now average 2% for the main industrial countries … we are then left with an effective discount rate of, say 3.5% for the base case. This still leaves global warming as a problem, if not quite on the scale Sir Nicholas envisages. The report's remedies are: establishing a realistic (that is higher) international carbon price; an end to gas guzzling; research on low-carbon technologies; improving information and regulation; action to reduce deforestation; and help to poorer countries to adapt to climate change. Most of these policies are desirable on old-fashioned anti-pollution and environmental grounds.'

A Review of the Stern Review

Richard Tol and Gary Yohe, *World Economics*, October-December 2006[59]

'Skeptics and opponents will welcome an open discussion of the Review as long as it focuses on the economic estimates and not the schematic portrait of climate risks. Why? Because those estimates are vulnerable to valid criticism. … Stopping, or even significantly slowing, climate change will require deep emissions cuts everywhere. This project will take 50 years at least, but probably a century or longer. The political will to support climate policy has to span across the parties, continents, and generations. We think—and this is supported by a vast collection of climate studies —that it is in the self-interest of the vast majority of people to support climate policy. Unfortunately, rather than being a voice of reason, the Stern Review provided more mud to be slung right back at the proponents of immediate action. It is a missed opportunity to make a real contribution.'

The Stern Review: A Dual Critique

Robert Carter, Ian Byatt et al, *World Economics*, October-December 2006[64]

'… As to specifically economic aspects, we have noted among other weaknesses that the Review: systematically overstates projected costs of climate change, partly though by no means wholly as a result of its failure to acknowledge the scope for long-term adaptation to possible global warming; underestimates the likely cost—including to the world's poor—of the drastic global mitigation programmes that it calls for; proposes worldwide adoption of a specially low rate of interest for discounting the costs and benefits of mitigation, on the basis of inadequate analysis and without regard for the problems and risks that would result. So far from being an authoritative guide to the economics of climate change, the Review is deeply flawed. It does not provide a basis for informed and responsible policies.'

Climate change should not become an ideological battleground. A more valuable response is to call for (and fund) attempts to assess costs and benefits. Swedish energy company Vattenfall has produced a series of roadmaps for achieving carbon reductions across various energy, transport, industrial, and natural resources sectors, which stands as a good example of how understanding can be improved through research and analysis.[85]

Finally, the low prioritisation of environment issues in some contexts ought to be a spur to further research. A case in point is the Copenhagen Consensus (CC).[86] This initiative, a collaboration of leading economists, seeks to apply cost-benefit analysis to global problems. In the 2004 exercise, climate change is included in the list of the world's top 10 challenges, but no action plans are included in the 15 high priority projects. Natural resources and biodiversity do not figure at all. Rectifying these omissions may be a daunting challenge for environmental economists, given the difficulty of placing values on natural assets, but it is a vital exercise.

Action

Action on environmental problems has been hampered by a combination of factors:

- lack of consensus, particularly among decision-makers, on environmental issues and the best means of solving them;
- difficulties in attributing responsibility for the 'global commons' and the well-being of future generations; and
- the need to remain cautious and critical in the search for solutions.

In spite of these prevailing obstacles, the last several years have seen governments, businesses and communities respond more seriously to global warming, the depletion of natural resources, and the ever increasing production of waste. This has not occurred in the absence of charities, and it is hard to imagine how the progress that has been made so far, small though it is, could have occurred without their input. The next section of the report explores these responses in greater detail.

Responses

3

Contents of section

All areas of society are responding to environmental problems in their own way. How they are responding depends upon their own interests, capacity and structure. In the government sector, the UN is providing a forum for pursuing international, yet non-binding, environmental agreements; the EU is issuing directives and action plans on shifting to sustainability; and, often following their lead, national governments are developing their own policy and enacting legislation. Business and industry, meanwhile, are responding to an increasingly environmentally sensitive market with their own initiatives. And the general public are responding in their capacity as voters, consumers, and members of civil society organisations.*

Throughout this report, we argue that these responses would not be happening, at least not to the same extent, in the absence of charities. They are highlighting issues and previously unseen problems; working with and against governments and businesses through campaigns and partnerships; managing natural areas and local projects; and providing services and advice.

Understanding which environment charities are working effectively, and why, is as much about gaining a grasp of the context in which they operate as the detail of their operations. In particular, it is very helpful to have a clear perspective on how the work of charities relates to the environmental goals, programmes and activities of other organisations in society.

In this section we provide an overview of how international and national (UK) government, the business sector and the general public are responding to environment problems, and how philanthropy and the charity sector fit into the picture.

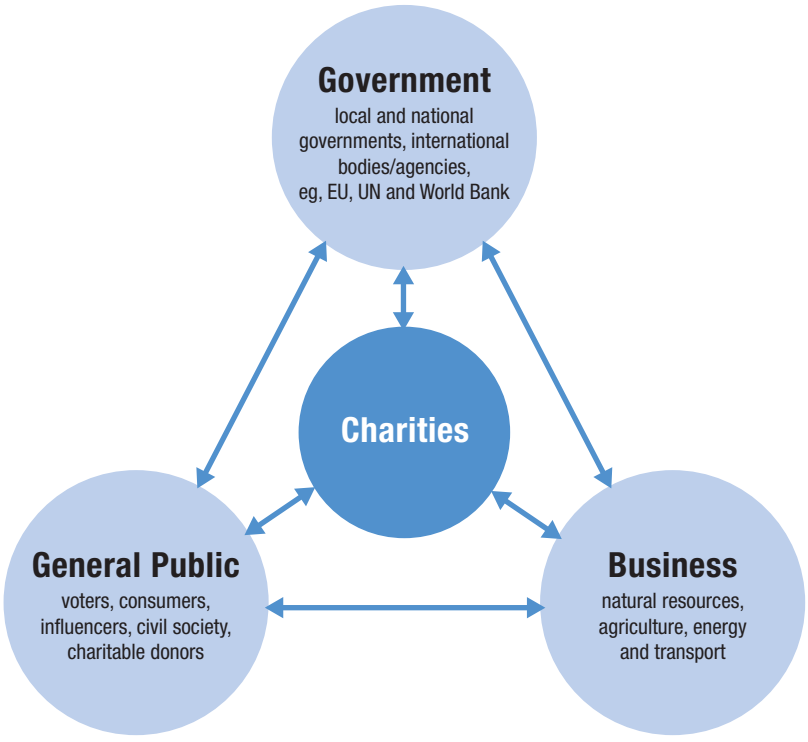
Figure 5 offers a simplified view of how government, business, the general public and the charity sector interact. Later figures will explore these interactions in more detail.

Introduction

At first glance, the responses of the international community, the UK government and the business sector are impressive. There are hundreds of international agreements, including the Kyoto Protocol on climate change, and others covering biodiversity, trade in endangered species, protection of wetlands and regulation of the transportation of hazardous chemicals, pesticides and waste. The EU has put a raft of directives in place since the 1970s that have provided significant improvements in environmental protection and quality, especially on waste disposal, pollution control and protection of habitats and species. More recently, the EU called for a 30% reduction in developed countries' greenhouse gas emissions by 2020—the most ambitious proposal yet unveiled.

Companies have to be convinced, by the brute force of consumer demand, that adopting these initiatives will pay off economically.

Figure 5: Simplified model of the organisational landscape



* Civil society organisations are also known as 'voluntary associations', meaning that their formation and continued existence is not mandated by either law or market-forces, but is rather willed by its members. 'Civil society' is the collective term given to these organisations, which include sporting clubs, community organisations, faith-based groups, self-help groups, professional associations, social movements, unions, advocacy groups, etc.

† CEOs and business leaders at the 2007 Davos World Economic Forum voted 71% against the proposition 'Markets are superior to regulation in leading corporations towards "greener" solutions,' and 64% against the proposition 'A global Carbon Tax will do more harm than good.'[87]

†† In a February 2007 report, the Senior Economic Policy Advisor at Lehman Brothers noted 'we see a greater than 50% likelihood that some sort of global emissions trading system will be in place within five years.'[88]

On climate change, there is growing recognition within governments and the business sector that further regulation is essential if we are to achieve reductions in greenhouse gas emissions.[†,††] This is likely to extend to greater protection of natural resources and biodiversity as the scale and severity of these problems becomes better understood.

It would be wrong to view the stream of initiatives and announcements as purely rhetorical. Concern amongst many decision-makers is spreading and deepening rapidly. But the reality of current environmental policy, regulation and business practice—especially on the protection of the global commons and the safeguarding of critical environmental assets in developing countries—is a very long way short of a decisive response. Tropical deforestation and over-fishing of the world's oceans continue unchecked. There is no post-Kyoto climate change deal on the table, or a comprehensive strategy to protect the livelihoods and environments of the world's rural poor.

For humanitarian relief and development charities, their *raison d'être* is the alleviation of poverty through the provision of basic services and health and education in situations where governments, businesses and the international community are either unable or unwilling to take the necessary action. The *raison d'être* for environment charities is fundamentally similar. **Oceana** and other marine protection charities are campaigning to end the hugely destructive practice of ocean-bottom trawling (carried out largely by EU-registered vessels) because nobody else is dealing with the problem. **BirdLife International** has recently arranged a tropical forest protection deal for an area of Indonesia the size of Greater London—because there are no alternative solutions on the immediate horizon. Innumerable other examples could be cited, on global, national and local scales.

The UN has struggled to fit environment into its priorities.

These illustrations convey a sense that environment charities are principally engaged in rearguard actions; and there is a school of thought that sees charitable activity as a form of fire fighting, providing a collective thumb in the dyke. This underrates the extent to which charities are proactive and innovative. For example, **Global Witness** has applied the skills and methods of investigative journalism to expose the illegal logging trade in Cambodia and Liberia; the **Marine Stewardship Council** has developed a certification system for sustainably caught fish in our supermarkets; the **Carbon Disclosure Project** has persuaded hundreds of the world's biggest companies into disclosing their carbon emissions by creating the first open access carbon registry.

However, although some environment charities have been far more successful than some governments and businesses, their potential as problem-solvers should not be over-estimated either; every sector of society has a part to play in averting future environmental disaster.

What we can say with certainty is that charities have a presence right across the environment spectrum; and this offers donors and funders the potential to provide support to organisations with appropriate positioning, specialisation, expertise and experience. In effect, a distribution channel exists for funders who wish to support research, lobbying, campaigning, local projects, and many other forms of activity.

The existence of a structure or network of environment charities is a first step; the issue of the impact being achieved is another question, which we look at in later sections. As we will see, understanding where the limits to private action lie, and where the need for policy change begins, is one of the critical judgements that charities and their funders have to make.

International and national government

The government sector continues to play perhaps the most important role in implementing solutions to environmental problems. Securing legislation for the protection of a particular species or area, or the regulation of greenhouse gas emissions, can make one of the greatest contributions to protecting the environment. Progress can be slow, particularly at the national level. Charities sometimes have to push governments over a long period. The role that charities play in the policy process is illustrated in Figure 6 and Figure 7.

Figure 6 shows the charity sector working to influence government through a combination of public campaigning to mobilise the electorate on the one hand, and lobbying and policy work on the other. Once a piece of environmental legislation or policy is realised, charities continue to play an important role in overseeing its implementation; monitoring its effectiveness and highlighting problems, holding businesses to account, and providing information and advice to the general public about complying with the new laws. Figure 7 shows this process in action.

The United Nations

The UN is the main conduit for international discussion, negotiation and agreement on matters of international concern. It has one undisputed environmental achievement to its credit—the Montreal Protocol, which dealt decisively with the threats to the ozone layer

posed by chlorofluorocarbons (CFCs). The record on other issues is mixed, which leads some to look elsewhere for global solutions. The reality is that we cannot do without the UN, as the many environment charities that work to advance international action are well aware.

The UN has struggled to fit environment into its priorities. Peace and security, equal rights and self-determination of peoples, international cooperation and development have historically ranked more highly than environmental concerns within the UN system. The founding UN Charter set out in 1945 did not mention the environment at all.[91] In recent years concern has grown about the capacity and coherence of UN institutions that have environmental responsibilities. The United Nations Environment Programme (UNEP) is the principal agency, but it is far smaller than comparable agencies, such as the United Nations Development Programme (UNDP).[92] Additionally, environment policy and activities are fragmented across many UN organisations, leading to lack of cohesion and strategic vision. For more on international environmental policy and institutions, see Appendix II.

There are some indications that UN priorities may be changing. The Council of the European Union called for major strengthening of UNEP in 2006.[93] Others have called for a United Nations Environmental Organisation (UNEO), similar in scope and powers to the World Trade Organisation.[94] The initial response of the UN was to recommend strengthening UNEP.[92] In another sign of shifting thinking, Germany placed biodiversity alongside climate change at the top of the agenda for the summer 2007 G8 meeting, arguing that *'biodiversity is "fundamental" to economics.'*[95]

International environmental agreements

Agreements (sometimes called treaties, conventions or protocols) are the main instruments of international environment policy. These are created by international negotiations that usually take place under the auspices of the UN, through secretariats that are constituted with UN support and funding. Signatories to agreements are national governments, with the act of signing distinct from ratification.

Agreements are not binding in themselves. The translation of agreement into law is achieved by *ratification*, a process whereby a national government commits to pass binding domestic legislation to implement an agreement (thus becoming a 'Party'). In the US, President Clinton signed the Convention on Biological Diversity (CBD) in 1993, and US Vice-President Al Gore signed the Kyoto Protocol in 1998. To date, the US has not ratified either agreement. In contrast, the UK has signed and ratified both agreements.

Figure 6: Working with government, phase 1 – influencing government through campaigning and policy work

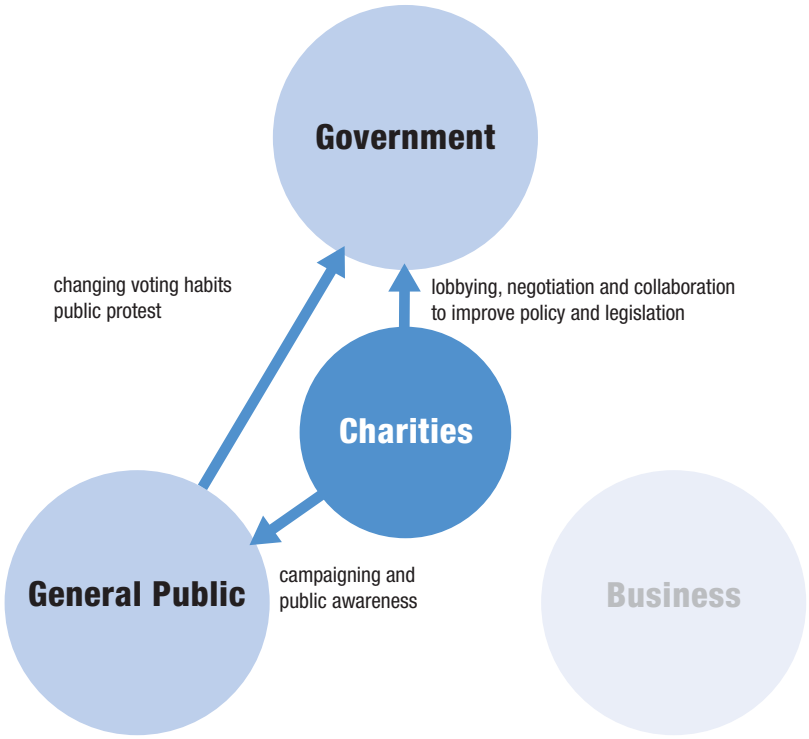
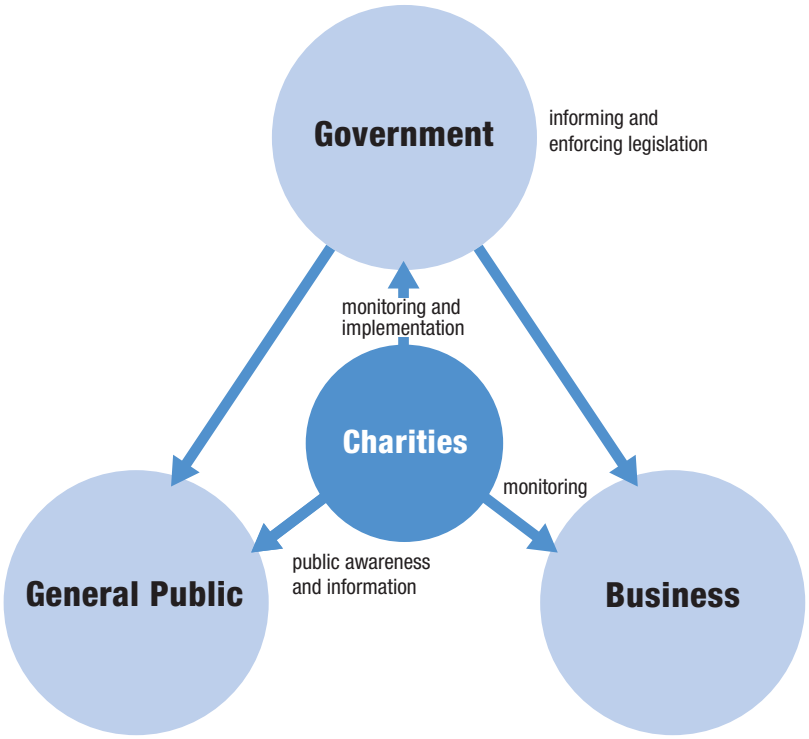


Figure 7: Working with government, phase 2 – monitoring implementation of new legislation



Box 6: Major international environmental agreements

1971—**Ramsar Convention on Wetlands.** Signed in Ramsar, Iran, this treaty provides the framework for national action and international cooperation for the conservation and wise use of wetlands and their resources. 1,636 wetland sites covering 145.7 million hectares are included in the Ramsar List of Wetlands of International Importance.

1973—**Convention on International Trade in Endangered Species (CITES).** Aims to ensure that international trade in specimens of wild animals and plants does not threaten their survival. CITES accords varying degrees of protection to more than 30,000 species of animals and plants, whether they are traded as live specimens, fur coats or dried herbs.

1987—**Montreal Protocol on Substances that Deplete the Ozone Layer.** Widely regarded as the most successful international environmental agreement, which led to elimination of CFCs from aerosols and other goods, following the discovery of the Antarctic ozone hole in 1985. The hole has now stabilised and will close over time.

1992—**Basel Convention on the Control of Transboundary Movements of Hazardous Wastes and Their Disposal.** Designed to control the international trade of toxic waste, particularly from developed to developing countries. Its creation was spurred by a notorious incident in which a ship carrying toxic incinerator ash from the US dumped half of its load—14,000 tons—on a beach in Haiti.

1992—**United Nations Convention on Biological Diversity (CBD).** The international framework and organisation for the conservation of ecosystems, species and genetic resources.

1992—**United Nations Framework Convention on Climate Change (UNFCCC).** Like the CBD, the UNFCCC is an agreement and an organisation. The objective was to tackle the problem of rising greenhouse gas emissions. The agreement did not set mandatory limits on emissions, but provided for 'protocols' that would do so. This mechanism led to the 1997 Kyoto Protocol (see below).

1992—**Agenda 21.** A detailed blueprint for the implementation of sustainable environmental practices. Agenda 21 is regarded by many as the most lasting achievement of the Earth Summit, in part because many local and municipal authorities implemented local versions of the plan.

1997—**Kyoto Protocol to the UNFCCC.** The Kyoto Protocol committed signatories to individual, legally-binding targets to limit or reduce their greenhouse gas emissions. When aggregated, the targets are due to deliver a total cut in greenhouse gas emissions of at least 5% from 1990 levels in the commitment period 2008–2012.

2003—**Cartagena Protocol on Biosafety.** Designed to control the trade and use of all living modified organisms (including genetically modified organisms) that may have adverse effects on biological diversity and human health.

2004—**Stockholm Convention on Persistent Organic Pollutants.** Signatories agreed to control the use of a list of 12 particularly toxic chemicals—outlawing nine organo-chloride pesticides and industrial chemicals, limiting the use of the synthetic pesticide DDT for the control of malarial mosquitoes, and discouraging the creation of two groups of dangerous industrial by-products. Mechanisms were included to allow parties to add more toxic chemicals to the initial list.

2004—**Rotterdam Convention.** Promotes the adoption of safety procedures in the trade of hazardous chemicals, such as correct labelling, safe handling, seeking consent and sharing information.

Many of the agreements listed in Box 6 are evolving rather than static. Some have yet to become mandatory. Most agreements also have in-built mechanisms that allow parties to alter the conditions of a treaty (eg, extend the scope of a ban), to accommodate for the fluctuating status of endangered species, and the invention of new technologies and chemical compounds.

Overall, there are some 700 multilateral environmental agreements with three or more member countries, and over 1,000 bilateral agreements between two countries, but only a relatively small number play a major role in global policy.[96]

Charities' role in international agreements

Since the 1972 Stockholm conference, charities have taken part in discussions and negotiations that have led to international environment agreements. In some cases they are represented in the decision-making councils; in others they work to raise visibility through parallel events, as happened at the Earth Summit in Rio de Janeiro in 1992, and the follow-up conference in Johannesburg in 2002. Attributing outcomes is difficult, in part because there has been little research on the role of charities in this context.

Where charitable activity has been documented, the evidence shows that the input is substantial. A 2004 paper[97] found that the contributions of charities to the Kyoto Protocol were significant, including work on framing and drafting by the **Center for International Environmental Law (CIEL)**[98] and the **Foundation for International Environmental Law and Development (FIELD)**,[99] as well as lobbying and other participation by **Greenpeace**, **Friends of the Earth**, **WWF** and the US charity, **Environmental Defense**.[100]

What success have international environmental agreements achieved?

The Montreal Protocol is generally acknowledged as the most successful international environmental agreement. Agreed and implemented in less than two years, industry rapidly developed alternatives to the CFCs that were damaging the ozone layer. As Al Gore notes in the film, *An Inconvenient Truth*, the key to its success was unanimous backing from the G7 industrialised countries.[101]

Turning to the two agreements that have the greatest potential to protect the global environment—the Convention on Biological Diversity (CBD) and the United Nations Framework Convention on Climate Change (UNFCCC)—it is clear that these have achieved some success. The CBD has proved valuable as a policy framework (for example, UK domestic biodiversity policy has been based on the agreement since 1992). And the UNFCCC has, through the Kyoto Protocol, created a much-needed framework and baseline for negotiations on reducing greenhouse gases.

In terms of direct success, the CBD's target of halting global biodiversity loss by 2010 is unlikely to be met, in part because many biodiversity-rich developing countries have

not adopted measures to implement the agreement. And Kyoto has several fundamental flaws, including the refusal of the US and Australia (two of the world's biggest greenhouse gas emitters, per capita) to ratify the Protocol, and the failure to mandate reductions on developing countries (including big emitters like Brazil, China and India).

Since international environmental agreements have only achieved partial success, it is possible to conclude, as some do, that these and other efforts to arrive at collective international action on the global environment are of limited value. Such a view runs the risk of throwing out the baby with the bathwater. Individual governments, businesses, environment charities and philanthropists cannot secure the necessary sea change in attitudes, funding and delivery of solutions by simply getting on with the job and ignoring international institutions, agreements and initiatives.

On balance, as we illustrate in Box 7, we are better off with the Kyoto Protocol than without it. It could be argued that the UK's draft Climate Change Bill is a direct descendant of the Protocol.[102] Rather than giving up on international policy, key participants should redouble their efforts to influence and galvanise international action. Instead of defeatism, the conditions that enabled the Montreal Protocol to achieve such remarkable success should be analysed and replicated in the other key areas. This has implications for donors and funders, as charitable activity to influence policy is one of the key (and often under-funded) areas of the work of environment charities (see Section 5).

For more on natural resources policy issues, see Section 4.2. The role of the Millennium Development Goals in achieving environmental sustainability for the world's poor is covered in Section 4.3. Further background on international environment policy is given in Appendix II.

The European Union

The EU is arguably the most powerful force in environmental policy. Its directives and policy instruments have already had a significant impact on the environmental behaviour of individuals, businesses and governments across the 460 million-strong Union. And in recent years, the EU has started to address challenges that transcend EU borders, from a new directive on chemicals that will have a profound impact on global product quality standards, to the carbon trading market brought into existence by the EU Emissions Trading Scheme (EU ETS), and a new policy action plan on natural resources.

At the same time, the EU is also home to 'perverse subsidies' for the agriculture, fishing and forestry industries of EU Member States, which have a distorting effect on international trade and in many cases encourage the continuation of environmentally-negative production practices. The EU is also the principal customer for some of the most environmentally destructive commodities, including Brazilian soybean and Indonesian and Malaysian palm oil. And EU-registered fishing vessels are engaged in two particularly damaging activities—bottom trawling of the oceans, and unsustainable industrial fishing off the coast of West Africa.

While the EU is unwilling to concede economic advantage to competing trading blocs and countries by imposing environmental tax and regulatory burdens that are too costly for EU producers, it is prepared to create market conditions that reward businesses and consumers when they adopt environment-friendly goals and choices.

How is the EU responding to global environmental problems?

The EU has recognised the need for a step change in its approaches to the major challenges of climate change and protection of natural resources, and this is a vital and welcome development. Powerful directives on these issues would have an enormous impact. The initiatives are at an early stage:

- **Energy Policy for Europe**[103]

Unveiled in January 2007, this proposal from the EC calls for a 30% cut in developed nations' greenhouse gas emissions by 2020, and for the 27 EU states to adopt a legally-binding unilateral target of at least 20%. This is by far the most ambitious binding target to be tabled in international discussions;

Box 7: The Kyoto Protocol

The Kyoto Protocol was adopted in 1997, but did not come into force until February 2005. Kyoto committed signatories (sovereign states) to individual, legally-binding targets to limit or reduce their greenhouse gas emissions. When aggregated, the targets add up to a total cut in greenhouse gas emissions of at least 5% from 1990 levels in the commitment period (2008–2012).

The refusal of the US and Australia to ratify Kyoto is often cited as an example of the weakness and lack of impact of international environmental agreements. There is no doubt that non-ratification has slowed progress in emissions reduction, both in those countries and through the loss of leadership internationally. Does this mean Kyoto is fatally flawed?

The other side of the coin is that the governments of 165 countries have ratified the Protocol. On implementation, the UK, the EU, the State of California, and an alliance of cities in the US and elsewhere in the world all took steps in 2006 to bring in greenhouse gas emissions reduction measures. If the Kyoto Protocol did not exist, would these changes have happened?

At the same time, Kyoto has some serious structural deficiencies, and in the long term these may prove as damaging as the US and Australia's failure to ratify the Protocol. Kyoto does not impose any obligations on developing countries (including China, India and Brazil) to curb their greenhouse gas emissions. Kyoto also does not recognise protection of existing forests as a positive act of carbon retention, and it does not distinguish between biodiversity-poor and biodiversity-rich plantation forestry.[35]

In some instances, backing EU or UN focused charities may be a better option than funding charities working to bring about change at UK government level.

Box 8: Sixth Environment Action Programme of the European Community, 2002–2012[5]

Seven themes have been identified, for which the European Commission produced Thematic Strategies:

- **Air Pollution.** Sets health and environmental objectives and emission reduction targets for pollutants, to be attained by 2020.
- **Prevention and Recycling of Waste.** Goals are to implement and improve the already large body of EU waste legislation.
- **Protection and Conservation of the Marine Environment.** Proposes a new Marine Strategy Directive. This will define common objectives and principles, leaving implementation to Member States.
- **Soil.** Proposes a Framework Directive. Implementation to be handled by Member States; Sustainable Use of Pesticides. Notes that existing EU legislation has failed to bring about a decrease in the use of pesticides in the EU between 1992 and 2003. Proposes a new Framework Directive.
- **Sustainable Use of Resources.** Addresses natural resources use for the first time at EU level. Goals are primarily focused on capacity building. No concrete, resource-specific targets are set.
- **Urban Environment.** Seeks better implementation of existing EU environment policies and legislation at the local level.

Box 9: The EU directive is perhaps the most effective form of environmental legislation ever devised

Most UK environmental legislation has been enacted in order to comply with EU directives, including: incineration of waste, discharges of pollutants into the land, sea and air; drinking water and wastewater; greenhouse gas emissions from vehicles; energy efficiency in buildings; landfill waste disposal; environmental impacts of packaging; eco-labelling; promotion of the use of biofuels and other renewables; and conservation of wild birds, habitats and wild fauna and flora.

See Appendix III for more information on EU environmental directives and policy.

- **Thematic strategy on the sustainable use of natural resources**[104]

Published in 2005, this is the first time the EU has addressed the natural resources problem. The thematic strategy notes that '*if the world as a whole followed traditional patterns of consumption, it is estimated that global resource use would quadruple within 20 years. The negative impact on the environment would be substantial.*' Rather than calling for a comprehensive package of EU legislation, it focuses on capacity building, including proposals for a European Data Centre to monitor and analyse inputs and outputs of natural resources. No concrete, resource-specific targets are set (eg, on importation to the EU of unsustainably produced agricultural commodities). The overall context is a time-frame of 25 years to achieve 'decoupling' (where the rate of growth of environmental impacts of resource use is negative while economic growth is increasing).

How can pressure be applied to hasten these initiatives?

The potential of the natural resources strategy is limited by the fact that it is framed over 25 years. Data from the Millennium Ecosystem Assessment and other studies show that many natural resources are unlikely to survive the next quarter century unless action is taken now. At the same time, the significance and potential of the strategy should not be understated. As there are no comparable UN or US initiatives, this is currently the best available opportunity for making policy progress on natural resources

Can a greater urgency be injected into EU processes? Perhaps—but this requires the application of pressure from all sides of society, not least the charitable sector. As we explore in Sections 4 and 5, some environment charities and funders have recognised that they can potentially play a key role in lobbying the EU and holding it to its environmental commitments. For further detail on EU environment policy, see Appendix III.

The UK government

UK environmental legislation and international agreements

The UK is often praised for its leadership on international environment policy. It has been lauded for its strong support for the Kyoto Protocol; and for efforts on many other fronts, including the long-standing commitment against the resumption of commercial whaling, to championing of the Convention on the Illegal Trade in Endangered Species (CITES).

But the legislative record appears to indicate that, on most environment issues, UK government strategy is to a large extent linked to EU and international action, rarely moving significantly ahead. When international action is decisive, the effect is powerful and far-reaching, as we have seen with the Montreal Protocol. And EU directives on waste, protected areas and other environmental issues have been a driving force behind much of the UK's national legislation.

But international and EU progress is often very slow, particularly on protection of natural resources and climate change. When this happens, the consequence of the tracking approach is to constrain swift action at the UK national level. For example, there is no UK legislation to prohibit importation of unsustainably produced soybean from Brazil or palm oil from Indonesia and Malaysia, even though their devastating impact on tropical forests is well documented. This is because—as noted above—there is no EU directive covering these issues.

This has implications for funders assessing where and how to channel their support for policy work. In some instances, backing EU or UN focused charities may be a better option than funding charities working to bring about change at UK government level.

The UK government's environment agenda

The UK government's core environmental agenda is *Securing the Future: delivering UK sustainable development strategy* (2005).[30] This is an unprecedented document, expressing mainstream environmental thinking in a UK political context for the first time, ranging from policy on sustainable living by individuals, families and communities to approaches and initiatives that deal with climate change, protection of natural resources, energy, waste—in the UK and globally—setting the policy agenda across all government departments.

The accompanying frameworks, task forces, strategies, position papers and action plans are rarely accompanied by the promise of major legislation, with the exception of plans for environmental protection of Britain's territorial waters through a forthcoming Marine Bill. On the major environment problems, the agenda mirrors the difficulties that are holding back progress at the UN and EU:

- Decisive action on climate change lies in the future. The draft Climate Change Bill was published in March 2007. But it is unclear if the Bill will mandate annual CO2 emissions reductions.[102]
- Policy on natural resources is pegged to the EU thematic strategy. The government's environment department—the Department for Environment, Food and Rural Affairs (DEFRA)—is currently holding consultations on natural resources in the context of the EU thematic strategy, and there appear to be no plans to tackle international natural resources problems on a faster timetable or on a more ambitious scale.
- Environment is not integrated within development policy. The Audit Commission and the House of Commons Environmental Audit Committee have been highly critical of the failure to integrate environment priorities into the UK's development assistance programmes and strategies. See Section 4.3 for further detail.

For more on UK government environment policy, see Appendix IV.

The business sector

Businesses have enormous power for good or ill on global environmental problems, and because of this, the corporate sector looms large in the thinking and actions of environment charities, far more so than in many areas of human and social welfare. Much of this power comes from the fact that the business sector operates on a global scale, and is not constrained by state boundaries. Charities have a clear role to play in fostering this power for good, as illustrated in Figure 8.

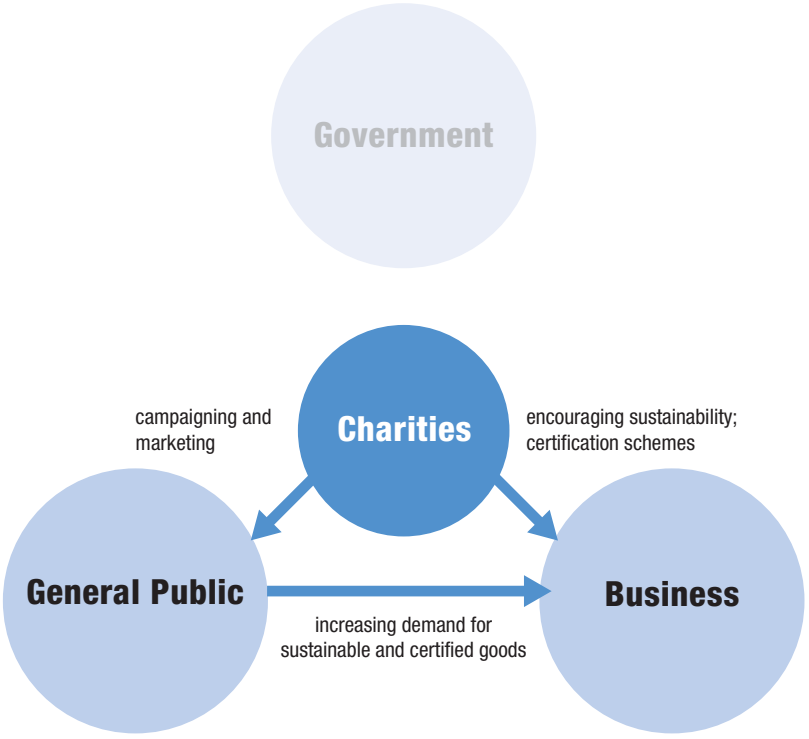
Box 10: UK Sustainable Development Strategy

'The past 20 years have seen a growing realisation that the current model of development is unsustainable. On the one hand we see the increasing burden our way of life places on the planet on which we depend… [this leads to] the consequences of already unavoidable climate change, increasing stress on resources and environmental systems—water, land and air—from the way we produce, consume and waste resources, and increasing loss of biodiversity from the rainforest to the stocks of fish around our coast.

On the other hand we see a world where over a billion people live on less than a dollar a day, more than 800 million are malnourished, and over two and a half billion lack access to adequate sanitation. A world disfigured by poverty and inequality is unsustainable. While increasing wealth is most often associated with depletion of environmental resources, extreme poverty can also leave people with no option but to deplete their local environment—so sustainable poverty eradication depends on the poor having access to adequate natural resources and a healthy environment.'

Securing the Future: delivering UK sustainable development strategy (2005).[30]

Figure 8: Influencing the market through campaigning and presenting ecological alternatives to business.



Persuading companies to practise environmental responsibility means more than just developing and promoting certification schemes (see Section 4.2) or publicising data on greenhouse gas emissions. Companies have to be convinced, by the brute force of consumer demand, that adopting these initiatives will pay off economically. Public campaigning, to raise consumer awareness of both environmental issues and the availability of environmentally friendly choices, is therefore a fundamental part of any attempt to influence the business sector.

Positive initiatives

Many companies are directly involved in activities that can have environmentally damaging effects, from power generation and

When corporate activity is harmful to the environment, damage can be wreaked on a spectacular scale... When action is taken to build environmental considerations into commercial strategy the benefits have the potential to be equally great.

other carbon-emitting processes to mineral extraction, logging, aquaculture and agriculture. But they are also at the forefront of the drive to develop renewable energy technologies and environmentally-friendly innovations in production and distribution.

When corporate activity is harmful to the environment, damage can be wreaked on a spectacular scale, for example, the extensive logging of many rainforests in South-East Asia in the last two decades, and many mining operations throughout developing countries. When action is taken to build environmental considerations into commercial strategy the benefits have the potential to be equally great. For example, in early 2007 Marks and Spencer announced a five-year £200m 'eco-plan' to become carbon neutral, send no waste to landfill, extend sustainable sourcing, set new standards in ethical trading and help customers and employees live a healthier lifestyle.[105] Other corporates that have recently adopted carbon neutral and other environmentally sustainable strategies include Man Group plc, BSkyB, Goldman Sachs, General Electric and HSBC.

Positive responses from the business sector to environment challenges are on two broad fronts: corporate environmental responsibility initiatives; and investment in new for-profit environmental business models and ventures. The latter category is growing rapidly, especially in the energy sector, with companies in the vanguard of innovations and research and development in renewable technologies (often supported by a degree of government subsidy). Environmental business is an exciting area, with huge potential to contribute toward greater sustainability. However, this report focuses on the role of charities and charitable funders, and it is thus not considered here.

Box 11: Worldwide Fund for Nature (WWF) and Lafarge

Lafarge is one of the world's leading companies in construction materials. In 2000 it became the first industrial group to enter into a conservation partnership with WWF, the leading international environment charity. WWF is contributing expertise to enable Lafarge to develop and improve its environmental policies and practices and to raise awareness of the importance of sustainability and biodiversity conservation. Achievements to date include:

- **Eight performance indicators defined, independently monitored and results published annually (environmental audits of sites, quarry rehabilitation plans, greenhouse gas emissions, water, energy and raw material consumption, waste generation, dust emissions and recycling);**
- **80% of 800 quarry sites now have biodiversity rehabilitation plans;**
- **Significant progress in reducing CO_2 emissions, far above targets set under the Kyoto Protocol;**
- **The percentage of substitute raw materials used in production of cement was 9.8% in 2004 (target was 10% by 2005) and 50.5% in the production of gypsum in 2004 (target was 45% by 2005).**

Source: WWF website[28]

Readers interested in this field will find valuable introductions in books by Paul Hawken,[106,107] Jonathon Porritt[108] and Gretchen Daily.[109]

Corporate environmental responsibility initiatives

Some companies are adopting corporate environmental responsibility (CER) measures, through voluntary codes of conduct such as the Equator Principles, an initiative of financial institutions on social and environmental issues in development project financing.[110] Others have joined the World Business Council on Sustainable Development (WBCSD), which has created a number of sectoral groups such as the Cement Sustainability Initiative and the Global Mining Initiative.[111] However, significant challenges remain. Membership of environment initiatives is often modest. The WBCSD only has 180 members, even though it is the premier sustainable development network for corporates worldwide.

Another strand of CER is the move toward more transparent environmental accounting, and incorporation of sustainability factors into corporate valuations. Leading organisations in this area include Generation Investment Management, chaired by Al Gore, Trucost plc,[112] the Global Reporting Initiative and the Coalition for Environmentally Responsible Economies (CERES). Some CER activity results in charity-business partnerships and interactions. An example is the **Energy and Biodiversity Initiative**,[113] which counts the environment charities **Conservation International**, **Fauna and Flora International (FFI)**, **The Nature Conservancy** and the World Conservation Union (IUCN) as members, alongside Shell, BP, Chevron-Texaco and Statoil.

Finally, there has been a rapid growth in the application of business models and approaches to environment-related issues that traditionally have been outside of mainstream commercial thinking. Businesses have been applying models in the environment field that have been developed by 'social entrepreneurs' in areas of human welfare—for example, microfinance schemes to provide poor communities with solar panels. (See Section 4.5) Other ideas, such as carbon trading and 'ecosystem services', are means of internalising negative environmental impacts within the market.

Corporate contributions to tackling environmental problems

Some charities view partnerships with the business sector as an essential component in their strategies. This view is based on the assumption that CER will evolve to the point where 'licence to operate' (especially for mining, energy and natural resources companies in developing countries) will imply due care and diligence for natural assets within

and around corporate property. Examples often quoted are the partnership between WWF, the international environment charity, and Lafarge—one of the world's leading companies in construction materials—on restoration of quarries and reduction of emissions from cement production (see Box 11), and the work of Fauna and Flora International (a UK-based wildlife conservation charity) to improve biodiversity protection at Rio Tinto's mines (see Box 12).

In the US, the failure of environment charities fully to engage with the business sector was roundly criticised in the influential 2004 report, *The Death of Environmentalism.*[114] There are indications that this is changing, through initiatives like the Apollo Alliance (AA), which is seeking to build action and consensus for a clean-energy based American economy. AA is supported by labour unions and businesses, as well as environmental and other charities.[115]

Others in environment charities still view the business community with suspicion and distrust, noting that only a handful of large corporates have demonstrated serious commitment to environmental protection. Meanwhile, corporate natural resources destruction and foot-dragging on moves to reduce carbon emissions continue.[116]

Assessing the current and future contribution of the business sector to combating environment problems is challenging. From the perspective of donors and funders, one clear area of opportunity is through financial support for charities that are working with businesses to develop solutions. As we explore in Sections 4 and 6, the credibility of charities operating in this way is reliant on funding streams that are independent from business.

The general public

Profound social change has been driven by social movements at different times and in different settings. Social movements are organised and carried by people through a variety of voluntary associations, including charities, trade unions, professional associations, think tanks, faith-based organisations and community groups. Together, these organisations make up what is known as civil society, through which the public organises to express a political will.

The campaign for the abolition of the slave trade in the 18th century and the civil rights movement in the Southern US in the 1960s stand as two prominent examples of social movements in modern history. More recently, the Jubilee debt forgiveness and Make Poverty History campaigns have played a major part in raising awareness of global poverty issues. We have not yet seen any public demonstrations on the environment comparable with these or other human rights issues.

Box 12: Fauna and Flora International (FFI) and Rio Tinto

Rio Tinto's long-standing partnership with FFI operates at both strategic and site level. FFI has contributed to the development of the mining company's biodiversity strategy, specifically in order to assist Rio Tinto with achievement of its declared aim of a Net Positive Impact (NPI) on biodiversity. FFI is providing technical input to Rio Tinto's standards and procedures on biodiversity offsets, performance measures and the management of ecosystem services, and is working with the company to design biodiversity action plans at specific mine sites. These plans aim to incorporate biodiversity conservation and sustainable livelihoods into the management and rehabilitation of mine sites in Brazil, Madagascar, Guinea and South Africa, also addressing secondary or indirect biodiversity impacts as significant business risks. This is an important partnership because of the direct impact of natural resource extraction on biodiversity and the potential positive impacts of enhancing non-mined areas under the company's management for the conservation of biodiversity.

Source: FFI website[27]

Figure 9: Campaigning to change public attitudes and behaviours

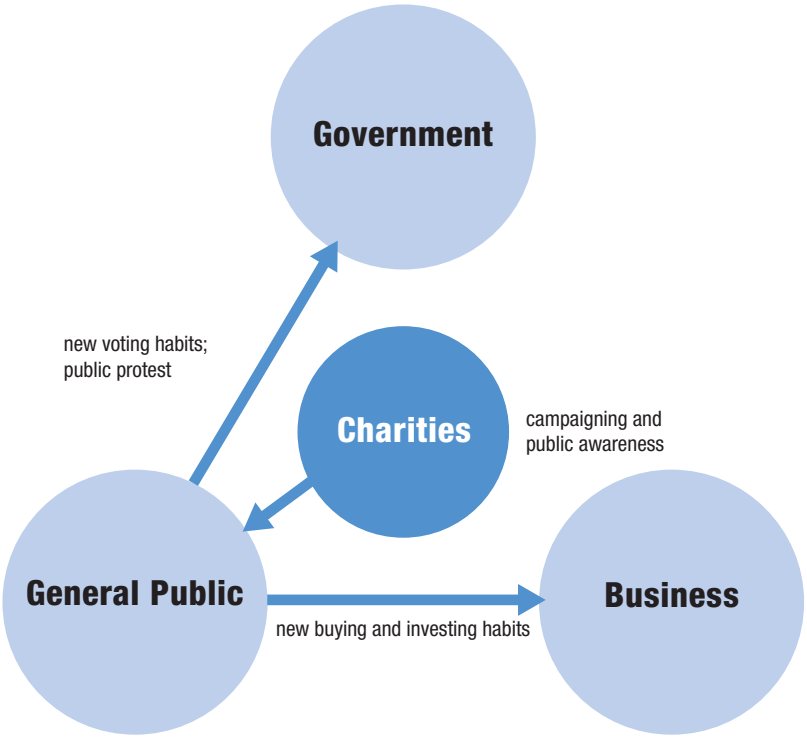


Figure 9 is a simple diagram focusing on the function that charities have played in these movements; it also illustrates how charities try to initiate long-term structural change in the smaller, single-issue campaigns that they are often known for.

Public campaigning on the environment tries to achieve multiple aims:

- increasing public awareness of environmental problems;
- fostering new cultural norms and environmental values; and
- subsequently, bringing about more environmentally sound behaviours.

This has important implications for the government and business sectors. Individuals are voters and consumers after all, but fostering a more environmentally aware culture is also an end in itself, and an important part of achieving long-lasting change. See Section 5 for a more in-depth examination of public campaigning.

Civil society and the environment

There are some indicators of gathering 'social momentum' on environment problems, through organisations like **Stop Climate Chaos Coalition**[117] (an alliance of most of the major environment, development and faith-based charities) and the Campaign Against Climate Change[118] (led by George Monbiot and a number of politicians, including Labour's Michael Meacher) in the UK, and the Alliance for Climate Protection[119] (chaired by Al Gore) in the US.

These organisations are still at an early stage of development, and currently do not operate at anything like the scale of the movements mentioned above. They also do not embrace other environment problems, such as dwindling natural resources. There are initiatives that work to a wider brief—such as the Earth Charter[120] with its 16 principles for a stable, prosperous and sustainable global society, and the **Earth Day Network**[121]—but these are also not yet of a scale or visibility that bears comparison with other past or present social movements. If momentum does build further, it could command substantial public support. A Globescan poll of 33,237 people in 30 countries between October 2005 and January 2006 found that 90% were seriously concerned about the risks posed by climate change.[122]

Funding efforts to mobilise civil society is risky and uncertain, but the results can be immense. History shows us that very significant change can be triggered by the actions of a few individuals and organisations. The campaign for the abolition of the slave trade was driven by the Clapham Sect, a small group of evangelical reformers that started when William Wilberforce moved to South London in 1789. When Emmeline Pankhurst formed the Women's Social and Political Union in 1903 she was widely regarded as a dangerous militant, yet today she is honoured for her role in advancing women's rights.

One of the characteristics of social change is that, once it has happened, we look back in amazement, wondering why and how it did not happen sooner. There are numerous environment-related examples. In 1961 and 1962, the UK ornithologist Derek Ratcliffe discovered that the organochlorine pesticides, DDT and dieldrin, were devastating peregrine falcon populations in the Lake District, through field research carried out under the auspices of the bird conservation charity, the British Trust for Ornithology.[123] Today, organochlorine pesticides are banned, and peregrines are legally protected and flourishing.

Julian Huxley's 1961 articles in *The Observer* newspaper on threats to wildlife in East Africa led to the creation of the WWF and the first fundraising campaigns in UK national media, raising £60,000 within a week of a special publication by the *Daily Mirror* on the plight of black rhinoceroses.[124] The first Friends of the Earth campaign in 1971 was the dumping of empty glass bottles on the doorstep of Schweppes, the soft drink manufacturer, because they were not recyclable—then a novel concept. Six years later, the first bottle banks appeared in the UK.

The charity sector

As in other areas of the charitable landscape, scoping the size and capacity of the environment charity sector is hampered by the absence of comprehensive and reliable data. The latest report (2007) in the *Where the Green Grants Went* series (published on behalf of the **Environmental Funders Network**) provides a detailed breakdown of income data for a sample of 75 UK environmental charities, some of which are operating internationally.[359] However, further analyses of how well resourced environmental charities are in relation to the problems they are tackling has not been comprehensively addressed.

While building a systematic big picture remains elusive, sampling analysis reveals interesting

Photograph supplied by Carbon Disclosure Project

Al Gore and Adair Turner at the launch of Carbon Disclosure Project's CDP4 Report in New York, 2006.

insights and trends. The larger charities derive the bulk of their income from member and supporter fees and donations, and from trading activities. Grants and contracts from government are significant in the UK context, but not internationally. New charities clearly struggle to acquire adequate funding. For more assessment of funding issues, see Section 6.

Current limits to effectiveness

What is the competitive advantage of environment charities? As we see throughout the report, charities may be tiny when set in the context of the resources that governments and businesses command; but size and money are not the only ingredients of success. Charities have the advantage of independence: free of the imperative to satisfy voters or shareholders, they can instead focus on the needs of the environment. They are also often staffed and led by people with an extraordinary commitment to their cause and an unmatched level of expertise. These attributes are as valuable in the charity sector as they are in business.

As in other charitable areas, there is little available data and analysis on the response of the sector to environment challenges. Investors in commercial and financial markets are able to access a wide variety of data and analysis by sector, geography and by individual company. By contrast, in most areas of the voluntary and community sector, donors and funders wanting to direct their support where it is most needed and where it can have the greatest effect, have to make do with remarkably sparse data and very limited analysis. The environment charity sector is no exception. As a result, gaining an overall perspective on the sector remains an elusive goal.

The sector does not speak with one voice, and coordinated responses are few. As we saw earlier, several coalitions of charities have formed in recent years to build momentum for action on climate change, in the UK and the US. But in other areas—natural resources, biodiversity, sustainable development—there is little evidence of collective activity. And as we explore in Section 7, there is no over-arching network or umbrella body for environment charities and funders working on an international scale. For example, there is nothing akin to the Development and Emergencies Committee (DEC) that coordinates the work of UK humanitarian charities, or the Global Funds for AIDS and human rights.

Nevertheless, there are plenty of encouraging signs that environment charities are making an impact. If overall data on the sector is poor, and there is an absence of collective approaches, how can donors and funders assess the response of environment charities to global challenges? One approach is to look at the activities of groups of charities in particular areas, as we have done for this report. Our findings show a number of encouraging trends, and some barriers to progress, which we touch on briefly below. For more in-depth coverage, see Sections 4 and 5.

- **Responses to climate change are in an early phase.**

New charities like the Carbon Disclosure Project and the **Climate Group** have emerged, and more will follow. But there is a shortage of seed funding to support innovation and fresh thinking.

- **Specialised approaches to natural resources issues are promising.**

Charity-led certification schemes for coffee, timber and fish are making headway, and these could be replicated for many other commodities and products. Campaigning and lobbying are also making an impact in specific contexts. However, at the big picture level, there is a lack of leadership and vision, with no comprehensive agenda for natural resources protection on the table.

- **Sustainable livelihoods projects have been successfully piloted but not yet taken to scale.**

There is a mounting body of evidence to show that, in the right conditions, rural communities in environment-rich but economically-poor regions can be helped to conserve their natural assets in ways that also deliver higher per capita incomes. But few donors and funders seem to be aware of the potential to replicate successful models.

- **Protected areas are the backbone of biodiversity conservation strategies.**

Twelve per cent of the world's landmass is now protected, compared to five per cent in 1992. Charities have been key players in this progress, and now possess strong scientific and management expertise. Beyond protected areas, strategies are unclear, and progress may be handicapped by continuing difficulties around the evidence on effectiveness.

On the other major environment issues—energy, waste and pollution, and sustainable development and living—responses are diverse and not easily summarised. Charities are making key contributions (for example, on sustainable energy provision in developing countries, and through enterprise solutions to environment problems). However, their role is often unclear, with governments more active as regulators (at least domestically) than in other areas, and more engagement from the business sector apparent (eg, in the development of renewable energy technologies).

Charities have the advantage of independence: free of the imperative to satisfy voters or shareholders, they can instead focus on the needs of the environment.

Out of £1.1bn granted to charities by the 100 largest charitable trusts (excluding lottery and landfill funds), only £18m—less than 2% of the total—was granted to environment charities.

Financial capacity

Perhaps 5% of the UK's top 200 charities specialise in the environment, and 2% of the total income of the top 500 charities is allocated to the area.[125,359] This and other data need to be treated with circumspection, because of definitional problems.* (See below for more data relating to funding of environment charities in the UK.)

Worldwide, the data is even sketchier. Including all local charitable activity, the global total of environment charities is perhaps in the tens of thousands. One yardstick is the grant-making record of the Global Environment Facility (GEF), the multilateral institution that is the world's biggest environmental funder: since inception in 1992, GEF has supported 7,000 projects.[126] The number of charities working at an international scale is far smaller, perhaps no more than one or two thousand.

For this report, we analysed the sources of income for a basket of environment charities working in the UK and/or internationally, including the largest, and a selection of others. The analysis confirms the low income stream from UK charitable trusts, and shows that membership subscriptions and donations are significant sources, especially for the larger charities. For further details, see Section 7.

Better data across the voluntary and community sector would enable all donors and funders to understand where funds are currently allocated. This would help identify under-funded areas. For example, our consultations with environment charities indicate that campaigning and policy work is significantly under-funded; according to *Where the Green Grants Went 3*, only 14% of grant-maker funding went to 'campaigning and advocacy'.[359]

Analysing environment charities

We need further research like the sector analysis that NPC has carried out on various aspects of UK charitable activity in human welfare fields, in order to measure the effectiveness of environment charities. (NPC's previous reports on subjects ranging from domestic violence to refugees can be downloaded from the NPC website at www.philanthropycapital.org.) This environment report is rather different. It does not provide the detailed analysis of interventions and results that are given in other reports. This is because the aim is to give an overview of a wide and diverse area that NPC has not looked at previously, indicating where there are opportunities (or barriers) for donors and funders wishing to support environment charities.

Following on from this, NPC aims to work in partnership with charitable trusts and other donors to carry out further environment research that can explore particular areas, or 'sub-sectors' within the environment field in greater depth. See Section 7 for more on this topic.

UK charitable funding

How are UK charitable trusts and foundations responding to environment challenges? In the context of support for charities working at a global scale, the answer is dismal. For domestic work, the picture is slightly better; but taking the two together, less than **2%** (£18m) of the £1.1bn total annual grants of the 100 largest UK trusts are allocated to environment charities. In overall terms, no more than £35m out of the £2.7bn annual grant-making of all UK charitable trusts is channelled into environment charities and projects.

One of the startling consequences is that several new UK charities have had to turn to US foundations for support in the critical early phase. What is particularly worrying is that this group includes some of the most innovative and entrepreneurial charitable start-ups of recent years: Marine Stewardship Council, Carbon Disclosure Project and The Climate Group. We explore the reasons for this state of affairs below, and in Section 6.

For donors and funders who are considering adding environment to their portfolios, the issues are straightforward:

- there are big problems, and charities are demonstrating some traction in tackling them;
- charitable funding is hugely valuable (and not just because of the relative absence of other sources); and
- the dearth of funding means that there are some great opportunities to make a substantial difference.

Funding of environment charities in the UK is low, by the total number of funders and by volume of money. There are remarkably few UK charitable trusts and foundations that have significant funding programmes on international environment issues. In 2003/2004, only two—the Shell Foundation (£5.97m) and the Rufford Maurice Laing Foundation (£2.59m)—had international environment grant-making programmes above the £2m level.[125] By comparison, Comic Relief made international grants of £34.7m in support of charitable work with children and vulnerable communities in the same year.[125]

* Some classifications include the built environment, natural heritage (eg, country houses open to the public) and animal welfare within a definition of environment. This can cause considerable distortion. For example, just one animal welfare charity—the Battersea Dogs' and Cats' Home— recorded an income of £11.5m in the year to 1 January 2005.[125]

Looking at the overall charitable trust landscape in the UK, the allocation of charitable trust funding to environment is extraordinarily low. The following figures demonstrate trends in charitable trust giving to environmental charities for 2003/2004.

- Out of **£1.1bn** granted to charities by the 100 largest charitable trusts (excluding lottery and landfill funds), only **£18m**—less than **2%** of the total—was granted to environment charities.
- Those charitable trust funders that have the 20 largest funding programmes for environment charities (domestic and international) made environmental grants totalling **£26.9m**. Of these 20, just eight have grant-making programmes distributing more than £1m to environment projects per annum. Between half and two-thirds of these programmes were directed toward UK domestic charitable activity.
- The total grants provided by the 20th charitable trust in the list amounted to **£178,000**. Beyond the top 20, we were able to identify only a further 10 charitable trusts providing environment grants in excess of £100,000 per annum.
- On this basis, the annual environment grants total from UK charitable trusts is unlikely to be much above **£35m** a year. Data from the Directory for Social Change[127] and Charities Aid Foundation[67] indicate that total UK charitable trust annual grant-making is in the region of **£2.7bn–£3.1bn**; this indicates that charitable trust environment funding is in the region of **1.1%–1.3%** of the total.
- The environment grants of UK charitable trust funders are dwarfed by the support provided through The Big Lottery Fund, the Heritage Lottery Fund and the Landfill Communities Fund. In 2003/2004 these three made environment grants totalling **£128.6m**, or **12%** of the lottery and landfill total. It should be noted that almost all of lottery and landfill environment grants are provided in support of UK action, not international action.
- Giving to the environment by the UK public is also limited. Data from Charities Aid Foundation (CAF) suggests that just 5% of UK private donors give to the 'environment'.[51] CAF analysis also suggests that 10% of private donations to the top 500 charities go to the 'environment'.[128] However, CAF's definition of 'environment' includes 'environment, heritage and conservation'. For instance, the National Trust accounts for much of the funding contained within this analysis, and the many of the National Trust's resources are allocated to the upkeep of 'heritage' buildings and gardens. NPC's own analysis estimates less than 5% of UK public donations go towards what *Green philanthropy* would consider the environment. (See Appendix VI.)

Philanthropy and environment in the UK

Why are so few UK charitable trusts engaged with one of the most important challenges of our time, especially internationally? There are a number of possible explanations:

- **Many charitable trusts were established before the emergence of environment problems.**

Poverty, education, health and social welfare issues have been the focus of philanthropic attention for well over a century, both in the US and the UK. By contrast, environment issues have only been on the world's radar since the 1960s, and have only moved to centre stage since the turn of the millennium.

- **Environmental scepticism is only now beginning to recede.**

The lack of consensus on loss of natural resources, climate change and poverty-environment linkages has likely played a part in discouraging charitable funders.

- **Environment problems are often remote and intangible.**

This can act as a barrier to funding, as the nature of the need may not be as visible as many areas of social welfare.

- **International charitable trust funding is low across all areas.**

Most UK charitable trusts concentrate on domestic issues. In the consultations for this report, several funders cited the costs and difficulties of carrying out due diligence on international projects as a barrier to entering into international funding.

The lack of funding for new UK charities working internationally is a worrying indicator. Several of the UK-based charities consulted for this project have been created or have grown rapidly in recent years, including Marine Stewardship Council, Climate Group, Carbon Disclosure Project, E3G and Global Witness. All encountered difficulties in acquiring adequate funding from UK charitable trusts in the crucial early phase of development; several were substantially supported through this period by US foundations. This may be a function of cultural outlook rather than being specifically related to environment; commitment to international work has long been one of the strands of US philanthropy.

These examples point to a worrying shortage of UK-based philanthropic funds. There is likely to be a growth in the creation of new UK-based environment charities in the next several years, as a response to the need to tackle

There are some indications that philanthropic concern for the environment is on the increase... This appears to be most noticeable amongst younger philanthropists.

environment problems at the global level. This will in overall terms be a welcome development, as new charities are likely to provide new ideas, models, innovations and solutions. A valuable first step would be the development of a seed funding capability.

There are some indications that philanthropic concern for the environment is on the increase. Through our consultations we found encouraging signs that a number of charitable trusts and individual philanthropists are concerned and alarmed by the scale and gravity of environment problems, and are beginning to look for ways in which they can provide support, although this trend is not yet discernable in the data. This appears to be most noticeable amongst younger members of family foundations and individual philanthropists in the 30–45 age range.

For more on environment funding, including analysis of income streams from multilaterals, governments, corporates, US charitable foundations and public donations, see Section 6.

How big is big? Some analysis of leading environment charities

Lack of data means that assertions on the size and capacity of charities are frequently made without reference to any context that would make the observations meaningful. Thus, there is a widespread view that '*big charities have got plenty of money*.' Conversely, there is often an assumption that small charities with a high profile have greater resources than they actually possess.

How big are environment charities, relative to each other, and to other charities? How would we know if the largest and the smallest are either crippled by under-funding or awash with resources that they cannot expend?

There are no complete answers to these questions, but sampling of publicly available data provides some interesting insights. In Table 2 we show annual income and net assets for a range of environment charities, and in Table 3 we give comparative data for charities in other fields, both in the UK and the US.

Several leading environment charities, including Greenpeace, WWF, the **Wildlife Trusts** and Friends of the Earth are networks of national or regional charities, with a secretariat or head office coordinating activities. Unlike publicly listed companies, charities are not legally required to provide consolidated accounts for all their operations worldwide, although some do (see Greenpeace and WWF above). Mandatory disclosure varies according to the laws for charitable organisations on a country by country basis. Because of these factors, understanding the complete financial picture for some charities can be daunting—yet without it, donor and funder decision-making can be hampered.

Income and net asset data can easily be misconstrued on a number of other fronts. For example, The Nature Conservancy (TNC) is very much larger than the other charities listed on the basis of the data shown in Table 2. But this does not mean its expendable resources are greater. TNC specialises in the purchase of land for conservation protection. TNC's net assets include valuations for land purchased, and its income streams include charitable donations and federal grants for 'conservation easements.' In the UK, the **Royal Society for the Protection of Birds (RSPB)**, the **Woodland Trust** and the Wildlife Trusts are also involved in land purchase as part of their activities.

By contrast, the income and net assets of Conservation International (CI) do not fully reflect the $296.94m (£151.34m) granted to the organisation by the Gordon & Betty Moore Foundation since 2001.[139] These grants are drawn down in the years in which the funds are expended, and thus their full impact is not apparent when viewing data for one year in isolation. As CI's model is principally based on the provision of management services for protected areas rather than land purchase, these sums are very significant in terms of available resources.

The data also does not distinguish between 'restricted' and 'unrestricted' funds. *Restricted* normally means that the provider of funds has designated them for a particular purpose; because of this they cannot be applied to cover other expenses. Closer analysis of the accounts referred to above might show that financial resources over which the charity has discretionary power (for example, funds that could be drawn on in order to react quickly to a newly perceived need for action) are much lower than the total funds apparently available.

Another area where data can be easily misunderstood is that types of activity are not uniform in financial terms. New Economics Foundation (nef) is a think tank that produces policy guidance on environmental and other matters. The financial model for this type of organisation is very different from a charity that manages a protected area. Because of these differences, it is dangerous to assume that income is a proxy for activity or effectiveness.

For example, the annual income of Global Witness is a fraction of many of the other charities shown above. This does not mean that its activity is proportionate. In fact Global Witness has current programmes in a wide range of countries, including Cambodia, Liberia and the Democratic Republic of

Table 2: Income and net assets for a range of environmental charities

	Charity	Base	Financial year end	Income £m	Net Assets £m
	Bioregional Development Group[129]	UK	31/03/06	1.3	0.6
	Climate Group[165]	UK	30/06/05	2.3	(0.3)
	Conservation International[130]	US	30/06/05	47.2	88.1
	Fauna and Flora International	UK	31/12/05	11.5	3.3
	Global Witness[131]	UK	30/11/05	2.0	0.4
(a)	**Greenpeace International**[132]	Global	31/12/05	114.6	79.6
	Marine Stewardship Council[133]	UK	31/03/06	2.5	1.2
	New Economics Foundation	UK	30/06/06	2.9	1.4
	Rainforest Alliance[134]	US	30/06/05	6.4	0.1
	Royal Society for the Protection of Birds[135]	UK	31/03/06	88.3	88.7
	The Nature Conservancy[136]	US	30/06/06	553.3	2,169.5
(b)	**The Wildlife Trusts**[137]	UK	31/12/03	53.6	n/a
	Wildlife Conservation Society[138]	US	30/06/05	78.1	310.7
	Woodland Trust[255]	UK	31/12/05	20.9	69.6
(c)	**Worldwide Fund for Nature Network (WWF)**[72]	Global	31/12/05	247.0	n/a

All data in this table and Table 3 below are referenced to most recent annual accounts on charity websites, as at 12 February 2007. Where no reference is given, the source is the Charity Commission Register of Charities.[125] Exchange rates: £1 = EUR1.514, USD1.962, CHF (Swiss Francs) 2.457.

Notes

(a) Consolidated global income and net assets for all Greenpeace national organisations worldwide.

(b) The Wildlife Trusts is the overall organisation for the 47 separate UK county Trusts.

(c) Consolidated global income for the WWF family of national organisations.

Congo. Assessing the charity's effectiveness involves assessment of factors that cannot be directly derived from analysis of income or net assets.

Donors and funders also need to be aware that superficial impressions of the activities of environment charities may not equate to the reality. This is in part a function of the nature of branding. WWF is closely associated with pandas and other 'charismatic' animals. It does indeed carry out conservation work for these species; but it is also involved in a very wide range of other approaches, from campaigning to halt the over-fishing of blue fin tuna in the Mediterranean to working with rural communities in China on sustainable livelihood projects. RSPB runs projects on sustainable farming and renewable energy alongside its more direct bird conservation activity. Understanding the full range of a large charity's activity involves extensive analysis to ascertain the relevant costs and results.

Even greater care needs to be taken when comparing charities across different sectors. This is because it is invidious to use financial analysis in order to 'rank' one social problem over another. However, a comparison snapshot does assist donors and funders to gain a sense of where charitable support is being given.

Comparing international environment charities with humanitarian relief and development charities would appear to show broadly similar resources. For example, **ActionAid** has a similar annual income to Greenpeace. However, the data given is not comprehensive. Thus, Oxfam International's Annual Report 2005 quotes a figure of $582m for worldwide programme expenditure in 2004/2005, exclusive of management costs.[140] Consolidated accounts for Oxfam (not currently shown on Oxfam websites) would likely show that the group is now considerably

larger than WWF, the charity to which it is often compared.

As in for-profit investing, assessing the financial health and needs of environment charities needs to be executed with care and caution. Ultimately, donors and funders will be best served by charity research that produces informed analysis.

Potential for charitable impact

Despite the sorry state of funding for environmental charities, in the UK and internationally, these charities have continued to be very active and have achieved considerable impact in some areas. The environment charity sector is small and poorly resourced in comparison to the government and business sectors, but it does have some key advantages.

- **A degree of independence allows charities to focus on the environment as their top priority.**

For politicians and business leaders, environment is one of many issues jostling for attention and resources. By contrast, environment charities are free from the pressure to satisfy voters and provide a return for shareholders. As such, they can put the environment first. In the corporate world, specialisation and focus have long been recognised as critical factors in achieving success. It is no different in the charitable sector.

- **Commitment and expertise are big assets.**

Despite difficulties in acquiring adequate funding, many environment charities are able to do remarkable work because their people have conviction, commitment, determination and in-depth knowledge and understanding.

- **A transnational scope gives charities an advantage over states.**

The development of communications technologies over the last few decades has allowed many environmental charities to operate at the global scale that corresponds with their global concerns.

- **These advantages together create the potential for innovation.**

For environment charities, environmental return is the measure of success—the extent to which environment problems are resolved or improved as a result of charity action. When all the conditions are right, the potential to achieve success is a powerful spur to innovation in the charitable sector. With adequate funding, imagine what these organisations could achieve.

Throughout the next two sections, we explore how environment charities are using these advantages to make an impact on environment problems.

Table 3: Income and net assets for leading non-environment charities, UK and US

	UK	Financial year end	Income £m	Net Assets £m
(a)	ActionAid[141]	31/12/05	110.9	44.5
	Cancer Research UK[142]	31/03/06	423.3	190.0
	National Society for the Prevention of Cruelty to Children[143]	31/03/06	116.2	78.4
(b)	Oxfam UK[144]	30/04/06	310.5	75.2
	Royal National Lifeboat Institution[145]	31/12/05	128.6	483.5
	Royal Society for the Prevention of Cruelty to Animals[146]	31/12/05	100.0	163.9
	Save the Children[147]	31/03/06	163.2	51.6
(c)	US	Financial year end	Income US$m	Net Assets US$m
	American Cancer Society	31/08/05	71	1,300
	American National Red Cross	30/06/05	445	2,650
	The Arc of the United States	31/12/04	62	714
	Feed the Children	30/06/05	26	167
	Goodwill Industries International	31/12/05	143	1,540

Notes

(a) Consolidated income and net assets for ActionAid organisations worldwide.

(b) Affiliated Oxfam organisations in other countries are not included.

(c) Income and net assets figures for US charities are from Forbes' list of the 200 largest US charities.[148]

The work of environment charities

4

Charities play a key role in tackling environmental problems: they are frequently the first to identify issues and bring them to society's attention; they have the drive and the expertise to take action where governments and business are either unwilling or unable.

In this section we examine what charities around the world are doing on six major issues:

- climate change
- natural resources and consumption
- poverty and the environment in developing countries
- ecosystems and biodiversity
- energy, pollution and waste
- sustainable development and living in the UK

The aim of this section is to describe the state of play: what charities are doing in response to different environmental problems, the obstacles and challenges that are holding them back, and the successes they are achieving.

Although treated separately, the issues are of course inter-related: deforestation in Indonesia both threatens local biodiversity and contributes significantly to climate change; indoor wood and charcoal-fired cooking causes serious health problems in communities in Africa and on large scales actually leads to deforestation; and the production of pollution and waste is damaging the planet's ecosystems and hastening the extinction rate of many species.

Each sub-section follows a similar structure:

- **Problems and challenges**

A look at the nature of the issue, elaborating on the broad picture drawn in Section 2.

- **Charitable responses**

A brief overview of some significant charities and projects working in the field. This is not intended to be an exhaustive list, but rather to demonstrate the variety of approaches that charities are taking in response to each issue.

- **Achievements and prospects**

A survey of some significant past achievements, and a critical look at future prospects and barriers to further progress.

- **Priorities for donors and funders**

Each sub-section concludes with a summary of the funding priorities for donors and funders.

Section 4.4, Ecosystems and biodiversity, diverges from this pattern because of the subject matter. The final sub-section, Sustainable development and living, is a brief look at how charities are trying to initiate the transition to a more sustainable way of life, using the UK as a case study. Because of the immaturity of this area, the section offers only the briefest of outlines and should not be regarded as an exhaustive overview.

Like other NPC reports, the commentary is framed from the perspective of donors and funders who are either interested in giving to environment charities or further increasing their support in the area. However, unlike other NPC reports, this is a first step rather than a comprehensive analysis of the sector and the issues. NPC is interested in the prospects for further research on the environment charity sector. Any future work will build upon this report to examine specific areas in much greater depth.

Climate change

4.1

> Forget about making poverty history; climate change will make poverty permanent.
>
> Nazmul Chadhury, Practical Action[6]

Contents of section

Funding priorities

The scale of the problem means that funders need to be prepared to make long-term commitments to provide charities working to tackle climate change with ongoing support.

Furthermore, funders must be aware that there is no single solution to climate change; funding regimes need to be flexible.

Seed funding for new charities and innovative projects is also crucial in helping this very new area grow in size and effectiveness.

It is important, however, in the rush to find quick solutions to climate change, that new proposals are not adopted over-enthusiastically without question. Funders can help in this by supporting charities that are conducting research into the pros and cons of different proposals.

Climate change is one of the greatest challenges of the twenty-first century, with multiple causes and no single solution. The correlation between greenhouse gas emissions and rising air temperature is 'very likely' rather than absolutely proven. The balance of evidence indicates, however, that there is an overwhelming imperative to act now to reduce emissions from fossil fuels and deforestation, in order to avoid potentially catastrophic impacts on people and nature. This will require cooperation and determination across society and the planet. Efforts will range from UN protocols to the choices that all of us make as individuals.

Charities, like the rest of society, are beginning to move from recognition of the problem to action. Early evidence indicates that they are making headway, and could accelerate progress if the quality and the quantity of charitable funding improved.

What do we need charities to do? Is climate change really just about governments taking action? We explore these issues throughout this section, concluding that charities are invaluable on just about every front, from lobbying the international community for a decisive post-Kyoto deal through to influencing the behaviour of businesses, individuals and communities—often devising innovations and new courses of action in the process. They can also act as watchdogs of the coming climate change gold rush, in which apparent solutions that do more environmental harm than they avert will be confronted.

Why charities? As we noted earlier, the fundamental attributes of good charities—independence, focus, commitment, expertise—are strengths right across the environmental landscape. In this area, the tension between the urge to act and the danger of an ill-considered response is particularly acute, so these qualities are doubly critical.

Photograph supplied by Greenpeace/Beltra

Though deforestation accounts for around 20% of global greenhouse gas emissions, measures to regulate deforestation are noticeably absent from climate change policy at all levels of government.

Initially, the main funding priority is for more funders to engage with the issues with patience and commitment. Building a critical mass of charitable trusts and private donors who master the issues and develop their understanding as well as providing financial support will encourage entrepreneurial energy and innovation.

Problems and challenges

The emergence of climate change as a major environment problem has occurred very recently. Although climate change has been an international issue since the early 1990s, the shift to centre stage took place with the publication of the Intergovernmental Panel on Climate Change's (IPCC) Third Assessment Report in 2001.[71] Since then, a torrent of additional scientific climate change research has fuelled mounting concern, with scepticism receding markedly. The publication by the UK government of the *Stern Review on the Economics of Climate Change* in 2006[55] (see Box 13 and below) and the forthcoming Fourth Assessment Report from the IPCC in 2007[61] have added to the momentum, and the consensus on the need for decisive action.

Consensus on greenhouse gas emissions

The majority scientific consensus is that the observed increases in air and surface temperature are largely due to anthropogenic (human-induced) factors, particularly the burning of fossil fuels in power generation, transportation and other industrial processes, and through deforestation and other changes in land-use that result in the release of greenhouse gases into the atmosphere.

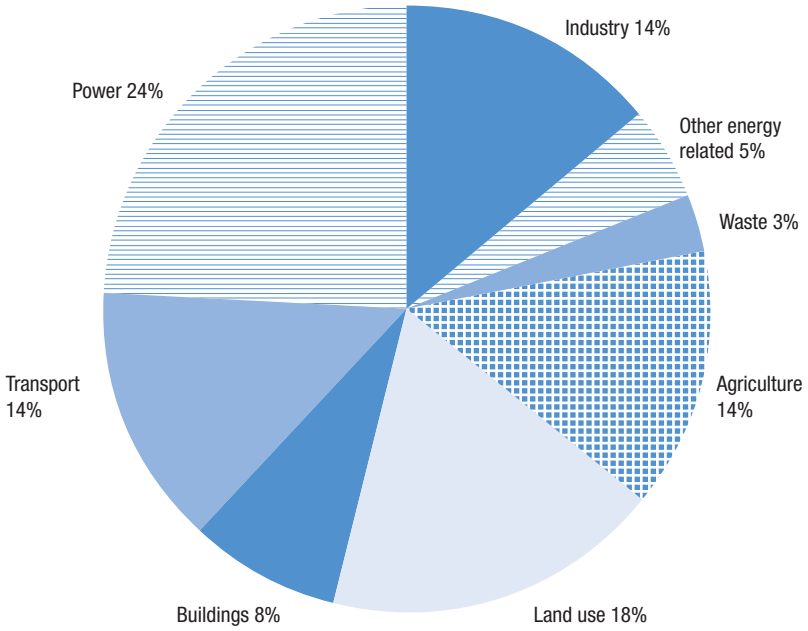
Catastrophic consequences if emissions are not reduced

Without substantial reductions in the next critical three decades, the concentration of greenhouse gases in the Earth's atmosphere could rise from current levels of 430ppm (parts per million) beyond an identified 'tipping point' of 550ppm. It is already likely that this century will see the planet's temperature rise by 1.8°C 4°C; if this tipping point is passed, this could be as high as 6.4°C.[61] If this were to happen, IPCC and other scenarios show widespread and devastating consequences, from threats to coastal cities from sea level rises (especially in Asia and Africa) to spreading desertification and massive loss of ecosystem services and biodiversity. For a more detailed look at the projected consequences of climate change, see Appendix V.

No single cause

Analysis by sector shows that the burning of fossil fuels in cars, other transportation and power generation are major sources of emissions that must be tackled. However,

Figure 10: Greenhouse gas emissions, by source, 2000[55]



32% of emissions come from agriculture and land use, and over 18% of this total can be attributed to deforestation (see Figure 10).[55] The geographic picture is changing rapidly, with China's rapid growth triggering soaring energy use. Recent data show that China added 102 gigawatts of new capacity in 2006—the equivalent of twice the capacity of California.[149] Most of this power generation is coal-fired. The wider social and environmental implications—over and above the emission of greenhouse gases—are enormous.

Back in 2004, Goldman Sachs Asia noted that 70% of power generation in China is driven by coal, creating heavy pollution that consumes the bulk of the energy produced, once pollution control measures, public health expenditure and labour losses to society are taken into account.[150] And in Indonesia, a recent study by the charity **Wetlands International** argues that emissions from peatland degradation are far greater than previously thought. If these are included, Indonesia is the third largest producer of CO_2 in the world.[151]

Despite the recent and projected sharp increases in emissions from developing countries, particularly in Asia, the OECD countries of Europe and North America are still the greatest carbon emitters per capita (Figure 11 & Figure 13). There is a danger that increased emissions from the developing world will distract attention away from the need to act on the already high emissions in developed countries. Leadership on domestic emissions in OECD nations is a key requirement if collective global initiatives are to have authority and impact.

There is a danger that increased emissions from the developing world will distract attention away from the need to act on the already high emissions in developed countries.

Figure 11: Share of global carbon emissions by region for 1973 and 2004[153]

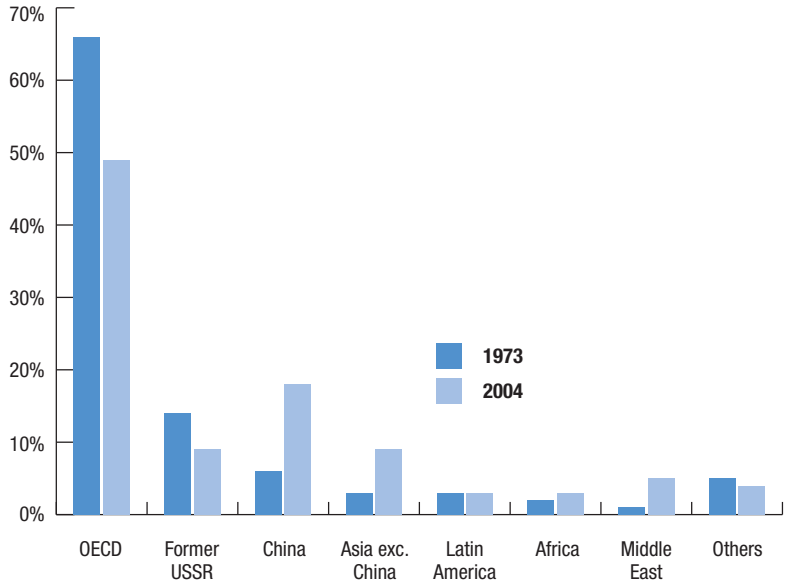


Figure 12: Socolow's Stabilisation Wedges[154]

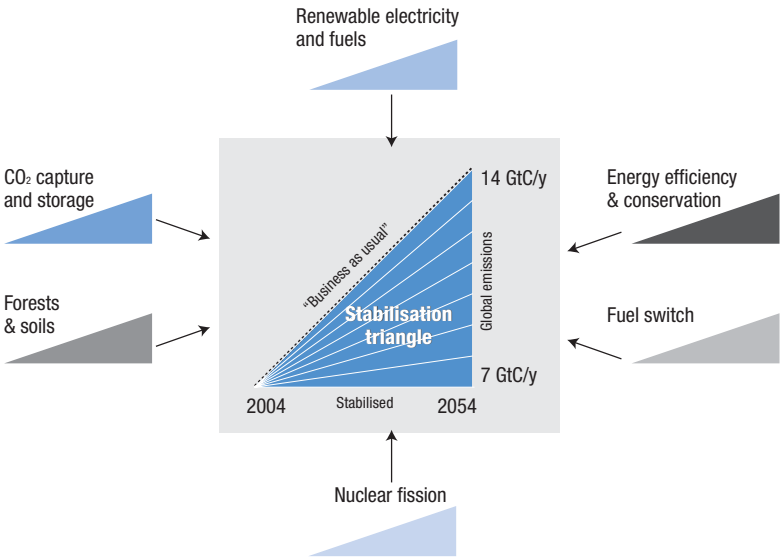
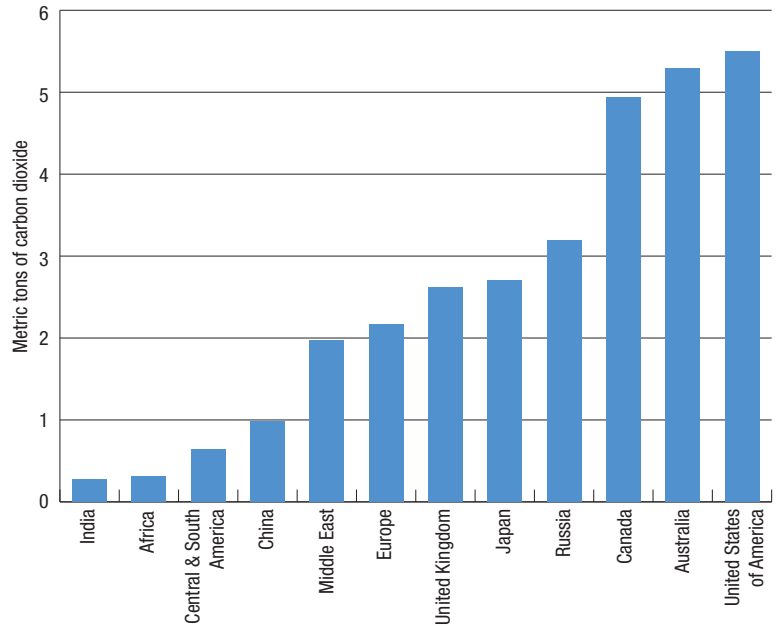


Figure 13: Carbon emissions intensity (per capita) by country 2004[156]



Box 13: Greenhouse gas emissions

- Probable temperature rise by the end of the century will be between 1.8ºC and 4ºC.
- Greenhouse gas emissions increased by more than 50% since 1750.
- 60% of current greenhouse gases have been emitted since 1959.
- Without significant reductions, the stock of greenhouse gases could more than treble by the end of the century, giving at least a 50% risk of exceeding 5ºC global average temperature change—as much again as the increase since the last ice age.

Sources: IPCC 2001, 2007; Stern 2006.

No single solution

One of the leading current proposals for tackling greenhouse gas emissions was first published by Stephen Pacala and Robert Socolow in a 2004 paper.[152] This puts forward a plan for meeting the world's energy needs over the next 50 years while at the same time avoiding a doubling of the pre-industrial concentration of atmospheric CO2—that is, keeping greenhouse gas emissions below the 550ppm danger level.

Pacala and Socolow argue that there is no single solution that can achieve this goal. Instead, a range of strategies are proposed, and grouped under six categories:

- a large-scale switch to renewable energy sources, like wind, solar, hydro and geothermal;
- improved energy conservation—better fuel economy in cars, or energy efficiency in buildings;
- increased use of low-carbon fuels for ground transport, such as hydrogen, biofuels, or synthetic fuels from coal and natural gas (through capture, storage and reuse);
- increased use of nuclear power;
- better management of forests and soils, with sharp reductions in deforestation and conservation tillage on croplands; and
- the capture and storage of CO2 under the surface of the Earth (instead of being released into the atmosphere).

Each strategy across these six categories represents one 'stabilisation wedge', or one gigatonne (one billion tonnes) of avoided carbon emitted per year in 2054 (represented in Figure 12 by the unit GtC/y). Pacala and Socolow claim that seven such strategies, or wedges, will be needed to keep global greenhouse gas emissions at current levels (7 gigatonnes of carbon per year) and avoid the 'business as usual' scenario (emissions continue to increase at current levels to reach

14 gigattones per year by 2054). The total avoided emissions proposed in this model amounts to 25 gigatonnes over 50 years.

These are huge and seemingly ungraspable numbers, and can easily deflect attention from the core Pascala and Socolow message: that there is no quick fix. Action needs to be taken on many fronts simultaneously.

Solutions are far from straightforward

Several solutions to climate change are controversial for two reasons. Firstly, the evidence of efficacy may be unclear. For example, is the purchase of a carbon offset to cancel out emissions from a plane journey an effective way of reducing an individual carbon footprint? A 2006 joint statement from **Friends of the Earth**, **Greenpeace** and **WWF** notes a number of pitfalls (eg, large-scale monoculture tree plantations often have negative impacts on the environment, and local and indigenous communities), and makes the point that these schemes do not reduce the overall footprint.[155]

Is carbon trading through schemes like the European Union Emissions Trading Scheme (EU ETS) a more effective approach than a carbon tax or a per capita carbon quota system, as proposed by the Global Commons Institute[157] and others? Carbon trading sees heavy polluters having to buy 'credits' from light polluters after they have gone beyond a set allowance or face harsh penalties, while a carbon tax would tax the burning of fossil fuels in proportion to their carbon content. Both schemes have the same aim—decreasing emissions through the introduction of economic incentives—but the arguments relating to the relative effectiveness and administrative costs of each are complex.

Questions over the effectiveness of different solutions also reflect uncertainties within scientific arguments. For example, is it cost-effective to sequester (capture and store) carbon from the atmosphere through geological storage when restoring tropical forests may be a much more effective route?

Any action to reduce emissions may as a by-product cause other environmental damage; filling a petrol tank with biofuel, harvested from palm oil or sugar cane plantations, to take two examples, can cause additional tropical deforestation (see Box 14). Not only does deforestation cause the destruction of natural resources and biodiversity, it also creates yet more carbon emissions. Wind farms are also problematic. They generate much-needed carbon-free energy, but can also harm birds and bats and disrupt local ecosystems.

There is a need for much more coherent analysis of the environmental costs and benefits of different technologies and solutions. As we show below, some charities are beginning to pay attention to this need, but this work needs to be ramped up as a matter of urgency.

Box 14: Without charities, would we know that biofuels can be environmentally damaging?

Biofuels are liquids derived from biological materials (sugarcane, vegetable oils) that can be used in cars and other transportation and power generation. The US and UK governments and the EU all have policies that aim to increase the use of biofuels as an alternative to fossil fuels. Most recently (March 2007) the US signed a new memorandum with Brazil to expand ethanol production into Central America and the Caribbean. This is despite clear evidence of the environmental damage to ecosystems that biofuel production (from sugarcane and from palm oil) has already wreaked in Brazil and Indonesia. It has been left to charities to warn of these impacts, clearly demonstrating the value of independence from governments and business.

BirdLife International and others

In June 2006, three leading environment charities—**BirdLife International, the European Federation for Transport and the Environment (EFTA)** and the **European Environment Bureau (EEB)**—issued a press release warning of the potential environmental damage that could be caused by the EU's Biofuels Directive. The release warns that:

'Biofuels are not an unlimited resource. We need land to grow biomass for fuel, and our fuel demands are so vast that even small targets require major land-use changes. This has a major impact on bio-diversity and the environment. A Commission-sponsored study found that meeting the EU's target of replacing 5.75% of fossil fuels with biofuels would consume 14-27% of EU agricultural land. To meet the biodiesel target, 192% of 2005 EU oilseed production would be needed—or 14% of the forecast world production in 2012. This target cannot alone be met by domestically-produced biofuels. The EU will need major imports of biofuel and biofuel feedstocks to supplement domestically-produced crops.' [40]

Biofuelwatch

Source material on biofuels signposted on the Biofuelwatch.org website shows that there is widespread concern on the biofuels issues amongst environment charities.[52]

Jeffrey McNeely, BBC Green Room

Concerns have also been voiced on the moral hazard implicit in biofuels, as Jeffrey McNeely's BBC Green Room article notes: *'The grain required to fill the petrol tank of a Range Rover with ethanol is sufficient to feed one person per year. Assuming the petrol tank is refilled every two weeks, the amount of grain required would feed a hungry African village for a year.'* [58]

Oxfam, Greenpeace, RSPB, WWF, Friends of the Earth

In a 20 March 2007 press release, leading environment and development charities warn that UK government policy on green fuels could be bad for the planet:[63]

'The Government's dash for biofuels is ill thought out, lacks appropriate safeguards and could be creating more problems than it solves. The Government proposal—known as the Renewable Transport Fuel Obligation (RTFO)—could, in its present form, see businesses producing biofuels by destroying rainforests and wetlands, not only threatening endangered habitats and species but also releasing far more carbon into the atmosphere than could ever hope to be saved by replacing fossil fuels. The groups are demanding the Obligation is tightened up so that biofuel producers must meet minimum greenhouse gas and sustainability standards, with environmental audits of the whole life-cycle of the fuels, from growing the crop to transporting it to the pump.'

Phil Bloomer, Oxfam's Director of Campaigns & Policy, said: *'Biofuels could offer a way out of poverty for poor farmers and agricultural workers around the world. However, under this proposal they may do more harm than good, as deforestation is associated with land-grabbing, human rights abuses and deepening poverty. The Government must take the lead in designing policies which ensure that biofuels do not come at the expense of vulnerable people's livelihoods.'*

Table 4: Some charitable projects and initiatives on climate change

Coalitions and networks	
Alliance for Climate Protection[119]	A US organisation set up in 2006 at the instigation of Al Gore, the Alliance brings together unions, businesses and civil society organisations to build public momentum for policy action
Stop Climate Chaos[117]	Coalition of 45 UK environment and development charities, trade unions and faith, humanitarian and women's groups that aims to mobilise awareness through public meetings and events
Environment and development	
Oxfam[144] and **Tearfund**[158]	Both of these development charities have policy teams that campaign and lobby governments on the relationship between climate change and poverty
Working Group on Climate Change and Development[159]	Network of 21 environment and development charities, which highlights ecological and human vulnerabilities to climate change through a series of reports
Carbon Disclosure Project[90] and **CERES**[160]	CDP has created an open-access register of corporate carbon emissions. CERES is a counterpart of CDP, working with the US corporate community
Climate Institute[162] and **Pew Center on Global Climate Change**[163]	US charities that are active participants in global policy discussions and initiatives
E3G[164] and **The Climate Group**[165]	New UK-based charities that broker dialogues with governments and business leaders
Friends of the Earth[166]	'Big Ask' campaign in 2006 played a part in encouraging UK government to announce a forthcoming Climate Bill
Greenpeace[167]	Campaigning for a new decentralised energy strategy in the UK that would boost renewables and reduce emissions
Capefarewell Project[168]	Brings artists, scientists and educators together to collectively address and raise awareness about climate change
Climate Outreach and **Information Network (COIN)**[169]	Oxford-based charity that uses local radio and events to encourage climate-friendly behaviour
Global Cool[170]	Seeking to influence individual behaviour through a mix of educational programmes and celebrity-driven events
Watchdog monitoring and campaigning	
Climate Justice[171]	International charity that seeks to tackle greenhouse gas emissions using legal measures
Biofuelwatch[52]	Collates material and evidence on the 'biofuel gold rush'—especially on the damaging impacts of palm oil production in Malaysia and Indonesia
SinksWatch[172]	Scrutinises the effects of carbon offsetting schemes on the landscape, biodiversity and local communities where tree planting for carbon credits is taking place
Wetlands International[151]	Research and local projects on deforestation and peatland degradation
New Economics Foundation[174]	Produced the Up in Smoke reports on current and future climate change impacts in Africa and Latin America, from an integration of development and biodiversity perspective
World Resources Institute (WRI)[48]	Leading US charitable information provider with a major international climate change and energy programme

The economic case for early action

Publication of the *Stern Review on the Economics of Climate Change* in late 2006 was a significant step in the shift from recognition of the scale of the climate change problem to strategies for action. Although written from a UK perspective, the Review has been widely noticed around the world and is likely to influence the policy responses of other national governments. As noted in Box 6 in Section 2, the Review marks the beginning of debate on the costs and benefits of various mitigation options.

This is a far from trivial issue, and donors and funders should be aware of the dangers of unquestioning acceptance of 'climate change orthodoxy.' As the quotations from Martin Wolf, Samuel Brittan and others show, economists are by no means unanimous in their support for the Review's findings and calculations. More philanthropic funding for charitable think tanks and researchers working on the economics of climate change would be a valuable means to ensure the best possible quality of public debate.

Charitable responses

Activity in this area is proliferating fast, with many new charities, projects and initiatives joining the fray. This growth is likely to continue unabated over the next few years, making it difficult for donors and funders to find their way around a crowded landscape. The overview below provides an initial fix on some of the players.

Although some charities have been working on climate change since the early 1990s, it is only since 2000 that established environment charities have developed climate change projects and programmes, with some placing the problem at the forefront of their work. The new charities that are springing up to address the issue are in the main struggling to attract UK charitable funding. There is plenty of entrepreneurial energy; but the lack of support (especially seed funding) may be holding innovation back.

Charitable efforts to mobilise a social movement have begun, and there are a raft of initiatives that seek to influence individual behaviour, but these are new and evolving. The most commonly proposed solution for individuals is neutralisation of carbon emissions through an offsetting scheme. Many are commercial operations, but this is often not immediately apparent; and whether for-profit or charitable, evidence of effectiveness is unclear. Activity aimed at influencing business and government is at a similarly early phase.

Achievements and prospects

At first sight, defining success in this area seems to be impossible. The charities and projects are mostly very new, with little track record for donors and funders to examine. Because there is no single solution and much debate over the efficacy of various strategies, agreeing on a definition of success appears to be an immediate obstacle.

The key is to differentiate between absolute success (reducing global greenhouse gas emissions below the danger level) and achieving results that constitute steps toward that goal. Organising a successful public event could shift the way that many thousands of people think and act on climate change. Highlighting the risks of an environmentally damaging solution could forestall extensive damage. A single policy paper from a think tank might exert enormous influence on key decision-makers.

Funding policy work on climate change

Realising change at the policy level has the potential to substantially reduce greenhouse gas emissions. Environment charities have contributed to the development of many agreements, protocols and conventions relating to other issues in the past, and it is safe to say that they will continue to do so on climate change. This is high risk work—assessing the likelihood of success is difficult—but the case for funding policy work is strong:

- Decisive action to mitigate the effects of climate change cannot possibly be achieved without coordinated action by national governments, whether singly or in concert through international and supranational institutions like the UN and the EU. This action will include elements of legislation, taxation and the development of market mechanisms such as emissions trading schemes.
- Politicians and their advisers are answerable to electorates, and businesses to shareholders. This makes them vulnerable to pressure from a range of powerful interests, who may resist unpalatable but necessary solutions.
- Charities and other civil society organisations, meanwhile, are not answerable to either voters or shareholders. While this makes them potentially unaccountable, it also confers independence and thus the capacity to 'keep society honest' by voicing concerns and propounding solutions that will help propel action beyond immediate self-interest.

There are very few UK charitable funders with an ongoing commitment to climate change… In several instances, new UK charities have had to close the funding gap by obtaining support from US foundations.

Box 15: Carbon Disclosure Project

Founded in 2000, The Carbon Disclosure Project (CDP) provides a secretariat for the world's largest institutional investor collaboration on the business implications of climate change. CDP represents an efficient process whereby many institutional investors collectively sign a single global request for disclosure of information on Greenhouse Gas Emissions. The number of institutional investors backing CDP and the number of companies responding to the annual questionnaire have grown substantially.

The first CDP request (CDP1) was sent to the FT500 companies, of whom 71% responded, with 45% answering the questionnaire in full. The request was signed by 35 institutional investors who collaborated to provide an efficient mechanism for disclosure of this information.

By 2006, CDP4 elicited 950 answered questionnaires from FT500 corporations and other large companies around the world

The CDP5 information request, signed by 280 institutional investors with assets of more than $41 trillion, was sent to 2,400 companies in February 2007, with publication scheduled for September 2007.

The CDP website, www.cdproject.net, is the largest registry of corporate greenhouse gas emissions in the world. Responses from corporations can be downloaded without charge.

- Charities have been working in this way on climate change issues from the 1987 Montreal Protocol on Substances that Deplete the Ozone Layer to the formation of the United Nations Framework Convention on Climate Change at the 1992 Earth Summit, and on the 1997 Kyoto Protocol and beyond.
- It is difficult to attribute the degree of success that they have achieved, given the complexity of international negotiations and the wide range of players involved. However, we can certainly say that they have been present, and are likely to have had some (perhaps considerable) influence. One study of the work of charities in the construction of the Kyoto Protocol shows they played a very close role in the process.[97]
- Looking forward, the existence of a number of environment charities with policy experience is a potential asset in the many rounds of discussion and negotiation that will take place on climate change over the next several decades. Funding their work could help guide policy in the right direction.

That is the theory, but how about the practice from a funder perspective? The rationale for charities to encourage low-carbon thinking and actions by businesses, communities and individuals is probably clearer to donors and funders than the case for policy engagement. This is partly because it is usually easier to see results from charitable activity in areas where government is not present. For example, a local charity could organise a project to arrange voluntary car-sharing schemes in rural areas. Funders of such work would be able to see tangible results if the initiative were successful.

Funding the salary of a policy officer working for an international environment charity is a different proposition. Such work involves attending international climate change negotiations, developing a network amongst politicians, policy-makers and business leaders, and drafting and presenting documentation with the aim of influencing the policy positions, statements and agreements of national governments and the international community. What would be the likely result? In the worst case, nothing might materialise, with the policy officer sidelined in key discussions. In the best case, the charity might develop a proposal to amend a draft policy statement or legislation—or put forward a wholly new initiative—that leads to far-reaching change.

How can funders decide which charities to back in this arena? A starting point is to look at the charity's experience and capacity. Does the policy team have a track record of past policy achievements? Other factors to evaluate include: the capacity of the charity to use new funding; the clarity and achievability of strategic goals; and the extent to which the organisation has built a coalition with other organisations.

Examples of success

Wetlands International exposes the huge scale of CO_2 emissions from peatland degradation in Indonesia

Peatlands, which are made up of undecomposed plant material, are storehouses of CO_2. Some of the most extensive peatlands (21 million hectares) are found in the lowland rainforests of Indonesia. Nine million hectares have been drained in order to make way for oil palm and pulp wood plantations. Once drained, the peatlands start to oxidise on contact with the air, leading to emissions of carbon dioxide. The process is accelerated by wildfires. These have been very extensive, with 1.5–2.2 million hectares burning in Sumatra and Kalimantan in each of the three worst years for peat fires (1997, 1998 and 2002).

In 2006, **Wetlands International (WI)**, a Netherlands-based international environment charity, commissioned research on peatland degradation in Indonesia. The findings show that Indonesia's CO_2 emissions in the three years noted above were equivalent to 3,000–9,400 megatonnes, up to 40% of global emissions.[151] The research was made available at the November 2006 United Nations Framework Convention on Climate Change (UNFCCC) summit in Nairobi. Subsequently, an article based on the research was published in February 2007 on the BBC's website.[175] The result is still a long way short of the ultimate goal—ending peatland burning—but by researching the problem and disseminating the findings, WI has pushed this specific climate change issue up the agenda.

UK-California collaboration on climate change

In July 2006, **The Climate Group**, a London-based international charity, convened a group of CEOs and business leaders from leading California and international companies, together with UK Prime Minister Tony Blair and California Governor Arnold Schwarzenegger at a roundtable discussion to share ideas on how business and government could work together to reduce greenhouse gas emissions.

Following the roundtable, a joint UK-California collaboration on climate change and clean energy was announced. Separately, California passed a Climate Bill in September 2006 ('AB32'), which calls for a cap on greenhouse-gas emissions statewide, and a 25% reduction by 2020. Clearly it is difficult to assess the extent to which The Climate Group played a part in these developments. The issue of attribution of results is an ongoing difficulty in all areas of charity policy work. From a funder perspective, it is wise to assume that charity involvement is contributing to success, in the absence of evidence to the contrary. Otherwise, a key ingredient might be overlooked. This is particularly important in areas like climate change, where the number of charity participants is limited.

Carbon Disclosure Project and corporate greenhouse gas emissions

Carbon Disclosure Project (CDP) has succeeded in galvanising a significant number of large companies to disclose their greenhouse gas emissions on an open-access register (see Box 15). To what extent is this a result? Disclosure is obviously not equivalent to emissions reduction, and there is no firm evidence to date that corporate emissions are dropping. However, CDP's work has brought details of corporate emissions into the public domain for the first time. This is in itself an incremental result, on two counts.

Firstly, we now have an understanding of a significant segment of emissions output, and because the register is updated annually, we can track how this is changing (or not changing) over time. CDP has in effect created an information toolkit that can be used by many different people and organisations. Secondly, the existence of information shifts the cultural outlook. If each annual update of the registry shows a growth in the number of corporates providing disclosure (as has happened to date), more and more corporates are likely to feel pressure to declare their emissions. Over time it will become possible to identify under- and over-performers relative to their industries and geographies. The ultimate effects are not readily calculable, but what we can say is that CDP's work has opened up ways of engaging corporates over their role within the climate change problem that did not previously exist.

CDP's charitable status has been valuable in a number of ways. By making the registry freely available, and not charging a fee for disclosure, CDP has avoided conflicts of interest that may have arisen if it had been created on a for-profit basis. Charitable status also safeguards the independence of the registry.

Acceptance of the need for charities in this area seems to be borne out by a recent Globescan poll. In a 2006 survey of 270 sustainability experts, Globescan asked respondents to choose two types of organisations that they predict will be the most effective at developing and implementing climate change solutions over the next ten years. Sixty-five per cent pointed to the business sector. National governments and the EU polled 57% of votes, and NGOs (charities and other non-profits) were in third place with 31%.[122]

Barriers to effectiveness

- **Funding**

There are very few UK charitable funders with an ongoing commitment to climate change. The funding shortage is particularly acute in the first phase, with little or no seed funding available. In several instances, new UK charities have had to close the funding gap by obtaining support from US foundations. For both Carbon Disclosure Project and the Climate Group, US charitable backing was a lifeline in their early histories.

Grant funding from UK government and international institutions for charities working on climate change is similarly limited, with most Global Environment Facility (GEF) funds inaccessible to most charities. For more on funding, see Section 6.

- **Confusion over climate change organisations**

This can be challenging for private donors looking for a climate change charity to support. For example, **The Carbon Trust** is a high profile non-profit organisation that provides advice and information on climate change to businesses and individuals.[176] But it is principally funded by government. Other prominent climate change organisations are companies rather than charities, including the Carbon Neutral Company (formerly Future Forests), Climate Care and Climate Change Capital. The distinction between commercial and charitable status is not always clearly visible, especially in the carbon offsetting and carbon trading fields where many organisations are operating.

- **Think tanks and research institutes provide limited guidance**

Amongst think tanks and advisory organisations, New Economics Foundation (nef), Institute for Public Policy Research (IPPR), Green Alliance, Worldwatch Institute, Resources for the Future, World Resources Institute (WRI) and International Institute for Environment and Development (IIED) are active in the climate change area. Output is small when compared to guidance on education,

It will take decades to tackle climate change; supporting charities in the early stages of start-up and innovation is just the first step.

health and other areas of social concern, and is primarily focused on the politics of climate change, with little serious scrutiny of the arguments for and against the efficacy of biofuels, carbon offsets, emissions trading, carbon sequestration and other approaches.

Priorities for donors and funders

Seed funding for new charities and projects

Because climate change is a new problem, solutions are only just beginning to emerge. This puts a high premium on innovation, entrepreneurial energy and ideas. But there is currently a lag between recognition of the challenge and deployment of resources for action, with a shortage of charitable funding in the UK. The need for seed funding is a top priority, particularly in the very early stages of charity formation. For many new charities and projects, access to funds in the £10,000–£100,000 range will make a very significant difference.

Funding to scale up and replicate proven initiatives

It will take decades to tackle climate change; supporting charities in the early stages of start-up and innovation is just the first step. Once models and approaches are proven, the need will be to help successful organisations scale up and replicate. This calls for some funders to make long-term commitments to addressing the problem, preferably charitable trusts and foundations that are able to commit to ongoing grant-making programmes in three- or five-year cycles.

Avoiding mistakes will be as valuable as producing effective solutions

Funding the development of information and analysis is a key priority. There is a real danger that tackling climate change will turn into a gold rush, with genuine progress on emissions reduction becoming more and more elusive. The best way of dealing with this is to acquire and disseminate credible evidence on what works, and what does not. Charities are ideally placed to perform this role, but they need adequate funding to succeed.

No single approach provides a silver bullet, and support needs to be flexible

Like any emerging market, winners are hard to pick in advance. We do not know which approaches are going to yield the best results; success is likely to be a function of leadership, creativity and determination rather than any given model. This argues for funding strategies that are as open and nimble as possible, discarding preconceived notions about the value of community work versus policy lobbying, or the virtues of public events over closed-door brokering and negotiation.

Table 5: Funding climate change charities: some illustrations

Climate change and developing countries	
Adapting to climate change project in a desertifying area of West Central Africa	£25,000 funds a team of development workers to hold meetings in rural communities for a year
Working to influence governments and business	
Lobbying at international climate change talks and negotiations	£80,000 funds an experienced policy officer and expenses for a year
Convene three high-level meetings of business CEOs to promote carbon neutrality	£35,000 funds the cost of meetings and staff time to research and market the events
Working to change individual and community behaviour	
Run 10 introductory workshops on climate change in UK village halls	£5,000 funds an outreach worker and expenses and hall hire
Fund a TV documentary on people who are making climate-friendly choices	£1m-£3m production costs
Watchdog monitoring and campaigning	
Website to monitor and publish climate change impacts of tropical deforestation	£250,000 a year funds research, website costs, PR and marketing
Think tanks and research institutes	
Review emissions reduction potential and effectiveness of carbon offset schemes	£50,000 funds research and marketing costs of a six-month project
Produce a short paper that argues for early adoption of the new EU climate change proposals	£15,000 funds the research and dissemination to business leaders and policy-makers

Natural resources and consumption

4.2

Contents of section

- Problems and challenges
- Charitable responses
- Achievements and prospects
- Priorities for donors and funders

Funding priorities

The combination of on-the-ground investigative research, government and corporate lobbying, and public campaigning employed by charities working on **conflict resources in the developing world stands as a proven model** that deserves continuing support from funders.

Certification schemes have the potential to be effective in the absence of legislative authority. But this is heavily dependent upon funding for expansion into more vulnerable areas, and the public campaigning that is needed to support them.

Funders interested in this area should also **encourage charities to pursue more ambitious policy goals**, and not limit themselves to the private sector solutions above.

The evidence showing the sharp deterioration of global natural resources since 1945 is just as compelling as the climatology that has driven recognition of the need for action on climate change. The response so far has been very different. The UN, the EU and many governments routinely talk about the need for 'one planet living', yet there has been little appetite to translate the rhetoric into action. There is no natural resources policy framework equivalent to Kyoto, no initiative to bring about international regulation of ocean fishing, no proposal on the table for ending tropical deforestation (despite it being a major source of carbon emissions), and no outline strategy for tackling environmentally damaging agriculture and mineral extraction.

This stark picture needs some qualification. The absence of comprehensive solutions does not mean that nothing is happening. The EU has developed its first thematic strategy on natural resources, and the UK and other governments are working to take this forward. Progress in some areas is faster than in others. The EU appears to be doing little to stop vessels registered in its territories from hoovering up fish along the coasts of Africa, but it is seeking to end the importation of wood products that are the result of illegal logging. The challenge is to find ways to prod decision-makers into faster action. The EU strategy is fine conceptually, but setting a deadline of 25 years is tantamount to postponement. As with climate change, the mainstream scenarios show that action must be taken much sooner.

What have charities and their funders done in response to this state of play? At the policy level, the answer is not much. There are no broad-based coalitions of the type that have emerged on HIV and AIDS, human rights, poverty and debt forgiveness. Somewhere in the aftermath of the 1992 Earth Summit—with its failed attempt to create an international agreement on forests—the environment charity sector and its allies seem to have lost the will to do battle on natural resources on the international stage. Perhaps the time is right to rebuild momentum, by working for an agreement to sit alongside the climate change and biodiversity conventions.

Outside the policy sphere, the record of achievement is much stronger. This has come about through specialisations, from human and environmental rights and natural resources campaigning to the innovative certification schemes that are stimulating sustainable production and consumption of fish, timber and wood-products, coffee and bananas.

For funders, this is an area with great potential. Unlike climate change, many of the charities working on natural resources have been through the start-up phase. They have spent a decade or more piloting and refining research, campaigning, monitoring and certifying models and approaches, and are now looking to expand and scale up their activities.

There is also plenty of scope for replication. For example, only a few of the more than 20 agricultural commodities traded on the world's exchanges have certification schemes in place. And in the finished products market, the process of certification has barely begun. As one expert in the field noted, *'the coffee in my kitchen and the table in my dining room are sustainably produced—what about all the hundreds of other objects?'*

> "Destroying rainforest for economic gain is like burning a Renaissance painting to cook a meal."
>
> E.O. Wilson

Unsustainable consumption is the prime cause of natural resources loss; per capita consumption in the wealthiest countries is six times greater than in the poorest.

Problems and challenges

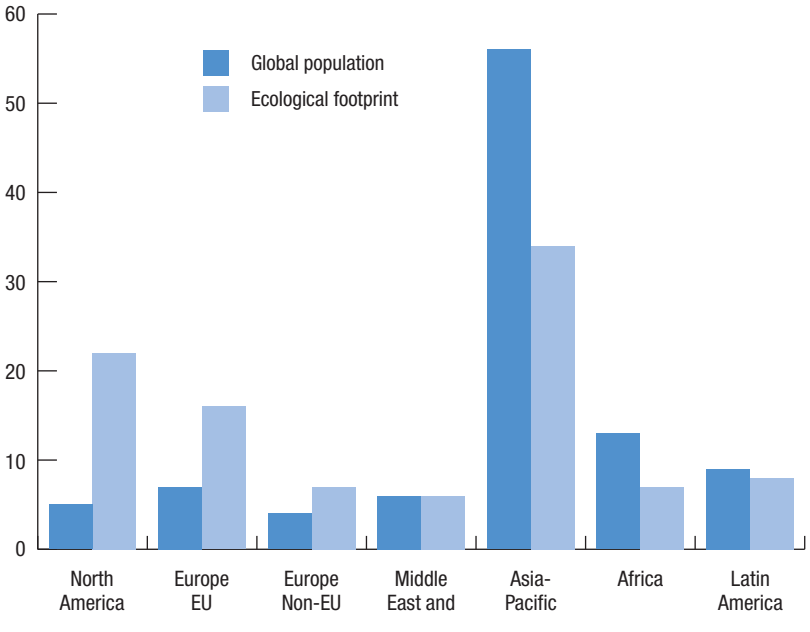
Our natural resources are the Earth's ecosystems and their contents—the atmosphere, oceans, forests, wetlands, rivers, lakes and other freshwaters, drylands, fertile agricultural land and soils—and the trees, plants, fish and other marine and freshwater life, terrestrial animals, insects and microbes that live within them (often referred to as 'biodiversity'). They also include resources that are below ground or beneath the ocean floor—metals, oil, natural gas and other minerals.

Most natural resources have taken a big hit in the last 50 years, leading to precipitous falls in fish stocks, accelerating deforestation in tropical countries, sharp increases in air and global surface temperatures, substantial loss of biodiversity and a lengthening list of endangered species, freshwater shortages in some regions, desertification, ice melting in the Arctic and Antarctic, and ecological damage brought on by unsustainable agriculture, industrial production and mineral extraction. For more on biodiversity and ecosystems, see Section 4.4.

Per capita consumption

Unsustainable consumption is the prime cause of natural resources loss; per capita consumption in the wealthiest countries is six times greater than in the poorest. The charity **Global Footprint Network (GFN)** developed the 'ecological footprint', a tool that measures people's use of renewable natural resources, relating it to the total biologically productive capacity of the Earth.[177] In 2001, humanity's ecological footprint was 2.5 times larger than in 1961, and exceeded the Earth's biological capacity by about 20%.

Figure 14: Ecological footprint and global population by region, 2006.



Source: WWF and GFN, Living Planet Report 2006[72]

Correlating natural resources consumption by country and by size of population demonstrates the wide disparity in per capita use between developed and developing nations (see Figure 14). The implications are profound.

Making sure the world's growing population can eat and simultaneously protecting natural resources is a major challenge (Box 17). In the 1960s and 1970s, agricultural scientists were able to increase production of rice and other staples so that total world food supply ('food security') kept pace with the rapid growth in the human population. But as the Millennium Ecosystem Assessment shows, the price was an unprecedented conversion of forests and other ecosystems to cropland.

Population growth

Looking forward, world population is projected to increase from 6.5 billion to 8.9 billion, almost as much again as the doubling between 1960 and 2000. Most of the increase will take place in developing countries, particularly in Africa (see Section 4.3). Can food production scale up to meet demand, without endangering the ecosystem services on which all depend? This begs the question of what is meant by 'sustainable agriculture, aquaculture and forestry.'

For some, the answer is to redouble efforts to develop technologies that can increase outputs, including appropriate use of genetically modified crops, fish and trees, as the United Nations Development Programme argued in the controversial 2001 Human Development Report.[178, 179] More recently, the Bill and Melinda Gates Foundation and the Rockefeller Foundation launched the Alliance for a Green Revolution in Africa (AGRA), aiming to develop 'appropriate seeds to attain the best yields in the diverse environments of Africa and working to make sure these high-quality seeds are delivered to farmers who need them most.'[180]

For others, the answer is to reduce fertiliser input and move toward large-scale organic production. But as the UN's Food and Agriculture Organisation (FAO) notes, 'no global evaluation on the contribution of organic agriculture to food security exists, essentially due to the small place it occupies within the agriculture sector as a whole.'[181] The debate is complicated by the lack of a clear definition of 'organic', and the fact that the term is not interchangeable with 'sustainable.'

For example, the current standard for organic cotton is framed around the non-use of synthetic fertilisers and pesticides. It does not set limits on the water that can be used to grow the crop. Yet this is a major environmental consideration, with 7,000-29,000 litres of water required for each kilogram of cotton produced. If cotton was a

minority crop, the drain on freshwater resources might in global terms be limited. But as cotton accounts for more than half of the world's irrigated agricultural land-use, this is clearly a major environmental issue.[182]

The challenge of providing global food security and protecting natural resources is formidable, and ultimately requires international action to regulate agricultural production and trade. Little progress has been made at the policy level to date, but there are some signs that this may be changing. As noted in Section 3, the EU has launched a thematic strategy on natural resources, and the UK government has recognised the need to address natural resources issues in its sustainable development strategy.[30]

Climate change and natural resources problems are very similar. Neither has a single solution. Both ultimately require international action for success to be achieved; in both cases, this has not so far been forthcoming, although climate change negotiations are further advanced than those on natural resources. However, the parallel should not be pressed too far. On climate change, greenhouse gas emissions are a kind of constant in the debates, or a baseline against which all actions can be judged. There is no obvious equivalent in the assessment of natural resources. Judgements on what constitutes a 'healthy' forest or fish population are subject to many qualifications.

Perhaps as a consequence, many of the responses are localised or specialised in nature. For example, proposals for protection of fish stocks in the North Sea are different from those that seek to control or end bottom trawling of the ocean floor in areas that are outside national jurisdictions. Campaigns to end environmentally unsustainable production of soybean in Brazil, or palm oil production in Malaysia and Indonesia, call for changes that are tailored to the particular local context. The result is a plethora of initiatives and specialisations, some instigated and executed by governments and businesses, some by charities.

Charitable responses

No single model or approach is dominant and charities are proving adept at configuring themselves in different ways in order to achieve results. Several new charities are developing certification schemes to bring about sustainable production and consumption of fish, coffee, bananas and other commodities and products.

Others are campaigning and lobbying at the interface of human rights and natural resources. In some cases charities are working at all levels to address a single problem, such as protection of the oceans. (One of the key responses—creating and managing protected areas—is dealt with as a biodiversity and ecosystems approach. See Section 4.4.)

In some of the larger and established organisations, campaigning on natural resources issues has long been at the forefront of their work, often at a generic level. In recent years there has been a noticeable shift toward more focused activity, with teams and programmes put together in response to particular problems, such as threats to blue-fin tuna populations in the Mediterranean, and to tropical forests from soybean and palm oil cultivation.

Both in the UK and the US, a raft of new charities working in this area have sprung up over the last decade. Many are run by leaders who have brought new skills and expertise into the environment charity sector, sometimes from business and financial services, but also from investigative journalism and the communications industry. Many of the new organisations and initiatives are broadly in favour of working with corporates to achieve change; but not all. Charities acting as watchdogs on corporate environmental malpractice are alive and well, often using the internet and other technologies to great effect.

Box 16: Tropical deforestation

'The tropical forest estate, extraordinarily large at the middle of the twentieth century, is shrinking at about 5% a decade. By the middle of the twenty-first century only shreds of this once-vast forest may be left. Unless trends change, the consequences will be severe: three billion tons of carbon dioxide (CO_2) added to the atmosphere each year, intensifying climate change; loss not just of many species but also entire ecosystems; and across the tropics, widespread changes in water flows, scenery, microclimates, pests, and pollinators. These environmental damages would touch people near and far.'

Source: World Bank report, October 2006[19]

Box 17: Food security and natural resources

In 1945, the need to increase global food production ('global food security') to feed rapidly increasing populations was an overwhelming imperative of international institutions and national governments. Investments in agricultural research led to greatly increased crop productivity ('the Green Revolution'). Food production between 1960 and 2000 increased 2.5 times, keeping pace with the doubling of human population in the same period.

A by-product of the drive for global food security was a massive expansion in land devoted to agricultural production. More land was converted to cropland in the 30 years after 1950 than in the 150 years between 1700 and 1850. This has done more than anything to put terrestrial natural resources under strain.

Looking forward, the global human population is still increasing. The UN estimates that it will grow from 6.5 billion in 2000 to 8.9 billion by 2050, with 90% living in developing countries, compared to 80% today.[23] The Millennium Ecosystem Assessment has factored the projected increase in population into its scenarios for the next 50 years:

- a further 10–20% of grassland and forestland is projected to be converted by 2050;
- demand for food crops is projected to grow by 70–85% by 2050; and
- water withdrawals grow by 30–85%, but global water availability only increases by 5–7%.

In the policy area, charities are attempting to leverage legislation where it exists (for example, on importation of illegal logs and wood products to the EU); and in some cases this extends to proactive activity (for example, lobbying work for a UN resolution on conflict resources).

Achievements and prospects

Many of the charities working on natural resources are at a more mature organisational stage than those that are tackling climate change. One consequence is that there is more clarity on the achievements to date and the prospects for the future. **Marine Stewardship Council (MSC)** has a growing list of major retailers that are selling MSC-labelled fish products. Meanwhile, the **Forest Stewardship Council (FSC)** has certified over 80 million hectares of forest and plantation across 82 countries.[46] **Global Witness** can demonstrate tangible results from its work to expose natural resources abuses in Cambodia and Liberia. **Greenpeace** has spurred key players from across the soybean production and consumption chain into negotiations on more sustainable approaches.

Impact

The success achieved to date by campaigning and certification approaches has been incremental. Fish populations are still falling, deforestation has not slowed, destructive industrial agriculture continues, and human and environmental rights abuses are widespread in many developing countries that have critical but fragile environmental assets. If charities are to play a leading role in halting and reversing these trends, then it is legitimate to ask how they intend to make this happen.

Table 6: Some charitable projects and initiatives on natural resources

Certification	
Forest Stewardship Council (FSC)[46]	An international charity that has certified forestries operating in more than 80 countries, covering over 84 million hectares of forest. Several thousand products now use FSC certified wood and carry the FSC trademark.
ISEAL Alliance[183]	Association of voluntary international standard-setting and 'conformity assessment' organisations that focus on social and environmental issues. Members include MSC and FSC.
Marine Stewardship Council (MSC)[133]	International charity working with fisheries and retailers to harness and encourage consumer preference for seafood products bearing the MSC label of approval.
Rainforest Alliance[134]	New York-based charity that works to conserve biodiversity and ensure sustainable livelihoods by transforming land-use practices, business practices and consumer behaviour.
Campaigning and policy	
Banana Link[184]	Small cooperative that campaigns for a fair and sustainable banana trade, working in partnership with Latin American banana workers trade unions, and small Caribbean farmers.
Deep Sea Conservation Coalition[50]	Coalition of the leading marine conservation charities, which is working to achieve a UN moratorium on high seas bottom trawling.
Friends of the Earth palm oil campaign[38]	Campaign to halt deforestation in Malaysia and Indonesia driven by the spread of oil palm plantations.
Global Witness[78]	UK-based campaigning charity that works to expose the corrupt exploitation of natural resources, end impunity, resource-linked conflict, and human rights and environmental abuses.
Greenpeace soybean campaign[12]	Based on a 2006 research project on the role of soybean production in deforestation of the Amazon rainforest, has led to changes in soya production and trading.
Oceana[185]	US-based international charity that campaigns to protect and restore oceans. Also active in Europe and Latin America.
Rainforest Action Network (RAN)[45]	Based in San Francisco and Tokyo, the network runs market campaigns to align the policies of multinational corporations with widespread public support for environmental protection.

Table 6: Continued

Watchdog monitoring	
Bank Information Center (BIC)[186] and **Bretton Woods Project**[187]	Charities that monitor the social and environmental impacts of the lending policies and activities of the World Bank Group and the IMF. BIC is US-based; Bretton Woods is located in the UK.
Earthworks[188]	US-based charity with an international programme on protecting communities and the environment from irresponsible mining, including campaigns on the Rosia Montana, Romania, and Buyat Bay, Indonesia gold mines.
Corporate Watch[189] and **Our World Is Not For Sale (OWINFS)**[190]	Both organisations monitor corporates, the former from a UK base, and the latter on a worldwide basis.
ECA Watch[191] **and CEE Bankwatch**[79]	Charities that monitor the activities of Export Credit Agencies, the public sector organisations that provide government-backed loans and other finance to corporations.
Forests Monitor[192]	Research-based UK charity that scrutinises the forest industry.
Global Timber Trade[193]	Small UK charity that collates data and information on the global timber trade.
Mines and Communities[194]	Monitors mining operations worldwide, focusing on the social and environmental impacts on communities.
Sakhalin Environment Watch[195]	Small charity monitoring the oil and gas development projects on and around this Russian island in East Asia.
Research and information	
Global Footprint Network[17]	US-based charity that has developed the ecological footprint tool.
Illegal Logging (Chatham House)[76]	UK-based website that monitors illegal logging worldwide. Run by Chatham House, an organisation that works on international issues.
WWF blue-fin tuna[196] and **illegal logging reports**[75]	WWF is one of the leading charitable producers of environmental research and information.

Can charities build on the footholds they have established to grow activity and reach? In the certification area, the challenge can be framed in much the same way as we think about the expansion of businesses. If a certification charity has 2% of the global banana market, can this be scaled up to 20–40% over time, and what resources would be needed to make this happen? If a particular campaigning approach has exposed natural resources abuses in one area of a large developing country, can this be replicated across the nation and in other countries? These questions (and others on the rationale for focusing on a particular issue and the environmental gains received or expected) need to be posed by funders when weighing up the option of starting or increasing support. Encouragingly, many of the charities in this area are already thinking in these terms, and assessing their own activity on this basis.

Photograph supplied by istockphoto.com

The global demand for palm oil products is leading to the destruction of the orang-utan's habitat in the tropical jungles of Indonesia.

Box 18: What is certification?

Environmental certification is a way of giving consumers the choice to buy products or services that are best for the environment. This is done by creating a set of rules that producers must abide by if they want to have the certification marque (or logo) 'on the product'. For example, many bags of barbecue charcoal on sale in the UK now carry the Forest Stewardship Council (FSC) label. This 'certifies' that the charcoal has been produced within FSC certification guidelines. A key feature of certification schemes is a 'Chain of Custody' so that the certified goods can be traced all the way from the point of origin to the consumer.

These schemes define sustainability in the context of local environmental conditions and the species of flora or fauna being harvested. For example, the size of a sustainable fish catch will vary from region to region and from one species of fish to another. Similarly, growing coffee in a mountainous area of Latin America will involve different solutions to protect local biodiversity than those needed in a lowland forest.

Certification schemes are voluntary agreements that do not have any legally binding status in international or domestic law. Instead, they get their binding authority from the market. This means that if certification is to be successful, there must be sufficient demand for certified products. And this is where charities can step in.

Environmental and social certification take the same approach to different ends. An example of the latter is the Fair Trade Labelling Organisation (FLO),[34] which is primarily focused on the social and economic conditions of workers. Some schemes do aim at both ends—the FSC, for example, declares its goal to be *'to promote [the] environmentally responsible, socially beneficial and economically viable management of the world's forests.'*[46]

Certification schemes and charities

Environmental certification schemes emerged in the early 1990s. As the rapid globalisation of trade steadily undermined the state's power, charities were encouraged to seek alternative, non-state means and mechanisms for halting the destruction of the Earth's ecosystems.[197,198] For environmental charities, whose frame of reference has always been the entire planet, this was a welcome and logical progression, and one that was also necessary to keep pace with the transnational trade of natural resources.

Neither industry nor government could be expected to lead on a certification scheme that had real impacts on destructive harvesting practices.

Certification is therefore an innovation rooted in the culture of the private sector: it sees charities side-stepping government, which has traditionally been approached as a policy-making 'middle man', to influence the market directly. In taking this approach, charities tacitly accept the globalised market, along with its 'bottom-line' rationality, as an unavoidable new reality and so try to work within it rather than challenge it. The primary tool for change therefore becomes the introduction of market-based incentives that encourage sustainable production.

The first models for sustainable production through certification schemes were developed by the Forest Stewardship Council (FSC) and **Rainforest Alliance**, focusing on forest products, and some agricultural commodities, such as coffee and bananas. By 2000, there was sufficient confidence in the effectiveness of the model for the principal charities to create the ISEAL Alliance as a membership body for certification organisations. ISEAL embraces *social* as well as *environmental* certification, with the Fairtrade Labelling Organisation sitting alongside environmental charities. Looking forward, the goals include integration of social and environmental production standards, and extension of the certification model to many more products and services.

Some commentators question why charities are needed to make certification schemes happen, arguing that they are market-based solutions that would be better run by industry with governments acting as regulators. This overlooks the crucial role that charities have played historically in the creation of certification schemes, and will continue to play in their implementation. Neither industry nor government could be expected to lead on a certification scheme that had real impacts on destructive harvesting practices.

First, certification schemes would not have emerged without charities: though it was up to charities to compel the industry and government to bring 'externalities'—things such as the diversity of plants and animals, the sustainability of ecosystems—within the consideration of the market.

Second, certification schemes draw their potential from their freedom from the more static and territorially bound nature of 'top down' state power; in the age of globalisation, trade and environmental issues are more than ever beyond the power of any single nation state.

Finally, the market appeal of a certified product rests on the integrity and credibility of that specific certification scheme. Charities, as independent advocates for the common good, can lend credibility to a scheme that cannot be matched by industry or government-led schemes.

These considerations have not stopped industry and government from trying to establish their own certification schemes. Soon after the founding of the FSC in 1993, there emerged a raft of government and industry-initiated 'competitor' schemes, beginning a trend that has followed the FSC across every country where it has managed to get a foothold.[197] Timber industries and governments were attracted to the idea of certification, and the potential brand-value and increased international market access that it could bring, but found the FSC's criteria were too stringent and gave too much weight to non-business voices.

These alternative schemes, such as the American Forestry & Paper Association's Sustainable Forestry Initiative (SFI) and Brazil's CERFLOR,[199] were far more business-friendly and reaffirming of national sovereignty. But

they lacked the inclusion of ecological and social interests and the global scope that gives charity-led certification schemes (such as the FSC's) the potential to be so effective.

Campaigning

There is a clear role for charities to play as advocates for certified products. One expert consulted for this project noted that *'you need hard-edged campaigning alongside partnership with industry—the campaigning drives them to the table.'* Campaigning and certification are in a sense two sides of the same coin. Further progress in the area of certification rests upon the ability of campaigning charities to increase the overlap between economic and ecological interests—to increase consumer demand for certified products, thereby increasing the market incentive to comply with certification. Consumers have to be convinced that certified products are worth the extra price they often carry. This means increasing consumer awareness of the environmental issues surrounding the unsustainable exploitation of resources; improving the marketing, visibility and accessibility of certified products; and building up the credibility of certification schemes and the charities behind them. For more on campaigning, see Section 5.

If consumer demand is not apparent, producers and retailers themselves will not be convinced that the costs of compliance are outweighed by the benefits of increased market share. The visibility of certification labels is a key factor. A report by **WWF** suggests that the poor visibility of the MSC eco-label on the vast majority of MSC-certified Alaskan salmon sold in the US is partly to blame for MSC's modest impact to date in the US seafood market.[200]

Limits of a market approach

The source of certification's potential—the use of transnational market-based authority, rather than the state—is also the source of its weakness; as certification schemes rely solely upon market mechanisms, they are subject to the same limitations as the market, insofar as it is used as a mechanism for change. Many of the main challenges facing certification's expansion, especially into the developing world industries of the tropics, arise from the absence of legislative authority. Factors that constrain the success of certification include:

- The illegal harvesting of resources, such as seafood and timber, leading to depletion, and the flooding of global resource markets with cheaper, low-quality products that prevent certified products' market share from growing.[197]

Box 19: Greenpeace Amazonian soya campaign

In April 2006, Greenpeace published 'Eating up the Amazon', a report that drew on satellite mapping and local investigations to document the role of soya production in driving the agricultural frontier deeper into the intact forest. The analysis showed that, in 2004, an amount of the Amazon nearly the size of Belgium was deforested, three quarters of it illegally, while at the same time an area four times this size was planted with soya, significant amounts of it on recently cleared land.

The report highlighted the key role of three US commodities corporations—ADM, Bunge and Cargill—along with Deyfus (French) and Amaggi (Brazilian) that dominate the soya trade. It focused on Mato Grosso state and traced how soya, grown on forest cleared illegally and using slave labour, ended up providing feed for chickens in Europe, which were in turn bought by restaurant chains and supermarkets. Greenpeace activists drew media attention to the issue by blockading Cargill's soya port at Santarém and hanging a banner from a conveyer belt.

The campaign also involved lobbying the Brazilian government to create a 'green wall' of reserves around the edge of the forest so as to discourage further encroachment from logging, cattle, soya or the potential future threat of biofuel cultivation.

Achievements

The first success came in July 2006, when McDonalds, Asda, Waitrose and Marks & Spencer agreed to stop buying meat from animals fed on soya that had been grown on land recently cleared of rainforest. Shortly thereafter the five major soya traders committed to a two-year moratorium. Greenpeace proposed mechanisms to end deforestation for agricultural expansion, including satellite mapping of the rainforest and the location of existing farms, monitoring of farmer compliance and developing new governance and legislation. In October 2006, these proposals were agreed to by all parties and a working group was set up to ensure its implementation, including the traders, Greenpeace and other charities.

The future

The shortcoming of having a two-year moratorium is that it typically takes three years to prepare land for soya planting. In the first year the forest is slashed and burned; in the second year, the tree stumps are pulled out and rice planted; soya is only planted in the third year, which would be after the moratorium expires. The work on implementing the soya moratorium could require the commitment of significantly greater resources than the initial investigation that brought the issue to light.

Photograph supplied by Greenpeace/Cesar

The deforestation of the tropical forests of the developing world is driven largely by consumer demand in the developed world; here in the Amazon, the agriculture industry's demand for soya is the culprit.

Box 20: Marine Stewardship Council

The Marine Stewardship Council (MSC) develops and promotes a voluntary standard for certifying fisheries and the products drawn from them. The MSC standard was developed over two years through a consultative process and is consistent with UN guidelines. Fisheries can be assessed against the MSC standard by any certification bodies that are accredited by Accreditation Services International.

The three core principles of the MSC standard relate to the health of the target fish stock, the impact of the fishery on the ecosystem and the performance of the fishery management system. There are 23 criteria related to these principles and further sub-criteria. Key performance indicators (KPIs) that are relevant for a particular fishery are identified during the certification process. After a public consultation, these criteria are used to assess the fishery.

Products drawn from MSC certified fisheries are permitted to display its blue eco-label, use of which is regulated by 'Chain of Custody certification' along the supply chain to ensure that labelled products do genuinely originate from a certified fishery.

As well as maintaining and developing the quality of the certification process, MSC works on outreach amongst fisheries, retailers and consumers. One of MSC's programmes is Fish 'n Kids, which was launched in May 2006 to teach children in the UK about the impacts of over-fishing and encourage them to ask for MSC-certified fish in their school lunches.

Achievements

As of December 2006, there were over 450 seafood products available with the MSC eco-label across 25 countries; 63 of these products are currently available in the UK; 22 fisheries have been certified and a similar number are currently undergoing assessment. About 6% of the global wild edible catch, including 42% of salmon, is now certified or undergoing assessment.

2006 saw substantial developments with fish buyers. Tesco achieved Chain of Custody certification to display MSC certified fish on its fresh fish counter. Walmart made a groundbreaking pledge that, within three to five years, it would only sell wild-caught seafood if it meets MSC standards. In November 2006, the Japanese retailer Aeon launched a range of MSC products and soon afterwards Carrefour, the world's second largest retailer, announced that it would do likewise. McDonald's has indicated an intention to shift away from the dwindling stocks of Russian pollack to more sustainable sources, including the MSC-certified Alaskan pollack.

The future

MSC has developed a strategic plan to extend its reach by certifying more fisheries and increasing the retail penetration of its eco-label in key markets. It aims to achieve a critical mass, firstly in the UK and Germany and then elsewhere in Europe, the US and Asia. It also has initiated a series of long-term projects to improve its methodology and address the shortcomings of its model, such as the need to work with small-scale and developing world fisheries that find the current certification process too burdensome.

At present, the vast majority of MSC-certified fisheries operate in the seas of developed nations, and were already well-managed prior to receiving certification. The real potential of MSC's ecological impact will become more apparent when poorly managed fisheries are brought under certification.

- The unfeasibility of complying with certification schemes for small and developing world businesses stands as a significant barrier to certification being extended beyond the industries of the developed world.[197, 201]
- Some of the world's largest markets for natural products, such as China, Japan and the US, are relatively insensitive to the conditions under which they were harvested and produced. Industries exporting to these markets are subsequently not compelled to seek certification.[197, 200]
- Competition between charity-led and business/industry-led schemes can leave consumers confused about the merits of certification and hamper uptake.

Potential for replication

Certification schemes have made some significant headway, but the challenge lies in replicating schemes for new products and expanding into the developing world.

Replication for more commodities

In principle, the certification concept can be extended to cover almost any commercial good, and even some services, as seen with the emergence of ecotourism. Yet despite demonstrable viability, certification schemes are currently limited to a small number of agricultural commodities and other products.

In *World Agriculture and the Environment,*[182] Jason Clay provides overviews of the environmental status and impacts of 21 agricultural commodities that are traded on the global markets. Of these, there are environmental certification schemes for just four—coffee, bananas, wood pulp and salmon. Efforts to construct schemes for palm oil, soybean and shrimp are ongoing at the present time, but not yet fully developed. Amongst the remaining commodities, several have very significant negative environmental impacts when produced unsustainably, for example, sugarcane, cotton, tobacco, rice and beef.

Expansion into the developing world

Bringing more producers into certification schemes, especially in developing countries, is as critical for long-term success as stimulating consumer demand. Charities can help smaller, less developed businesses achieve certification by increasing its feasibility. The FSC and MSC are creating more streamlined certification schemes for community, indigenous and developing world operations, which set more appropriate criteria.[202] Meanwhile the WWF's Global Forest and Trade Network has been increasing much-needed market access for the sustainable forestry industry, in both the developed and developing world.[203] Without market access, the absence of consumer demand will not give forestry owners any incentive to become certified.

Natural resources and human rights campaigning

Natural resources are often discussed at a very abstract level, as if they are merely economic assets in the global marketplace. This perspective glosses over the substantive and tangible costs that are incurred on the ground when natural resources are unsustainably exploited: the loss of biodiversity and violation of the human rights of indigenous peoples and local communities.

From the copper mines of Katanga in Zambia to the logged forests of Cambodia, local peoples suffer from human rights abuses that occur in the context of natural resources extraction. They are often forced into mining

and logging gangs out of economic necessity (and sometimes by coercion), working in ways that flout basic labour and sanitary conditions. Local peoples are also being plundered of their own natural resources, on which they depend for livelihoods and as potential sources of prosperity. In some cases, human rights abuses extend across communities and tribes, leading to displacement and eviction.

Human and environmental rights abuses connected with the harvesting or extraction of natural resources occur most frequently in contexts where the rule of law is weak, and where corporate behaviour is not subject to scrutiny by market regulators and media visibility. The last few decades have seen some parts of the developing world ravaged by bloody civil conflicts that were fuelled by the extraction and trade of natural resources: the Khmer Rouge's timber trade in Cambodia, and the 'blood diamonds' of Sierra Leone are two notorious examples. In these instances, charities can play a vital role by exposing the consequences of political and market failure.

Some charities, like Global Witness (see Box 21), are using a combination of under-cover investigation allied with campaigning against corporates and governments that are complicit in the trade of conflict resources, and lobbying for policy change at the UN and the EU. Others, like Mines and Communities, are playing a monitoring and watchdog role, collating information on abuses and threats from around the world.

Barriers and constraints

In our consultations, charities working on natural resources all noted that securing funds from charitable foundations was at once the most desirable source, and the most difficult to access. Desirability is a function of several related reasons:

- **Corporate funding can lead to conflicts of interest**

For charities campaigning on mining and logging, accepting donations from the natural resources industry is clearly a threat to credibility and integrity. Charitable funding is therefore highly valued. Some charities refuse all corporate funding. Others will only accept funding within ethical guidelines. Global Witness, for example, does not accept funding from the extractive, timber or arms industries, but does accept funding from companies that have an ethical giving or ethical trading policy.

- **Charities running certification schemes have particular funding difficulties**

Certification schemes cannot be run without incurring costs. How are these to be funded? Receiving financial resources from producers has obvious pitfalls and dangers for a certification charity. Charging consumers is equally unattractive. The solution to this dilemma involves a mix of charitable funding and, in some cases, a fee charged to producers in return for the right to place the certification logo on products that have been successfully certified.

- **Many campaigning charities receive little funding from members and supporters**

Campaigning charities are often run by small, dedicated teams. Independence is critical, especially for those with a monitoring or watchdog role. The focus is usually on provision of information on an open-access basis, through a website, or reports. The rationale for building and developing a member or supporter base in such organisations is weak, and because of this public donations are rare.

- **Government funding can also be problematic**

Some campaigning groups are focused on critiquing government policy and action as well as (or instead of) working to reform corporate behaviour. When this happens, accepting government grants or contracts can undermine credibility and independence.

But few charitable funders are active in this field, either in the UK or the US. Like climate change, few established charitable trusts and foundations have an ongoing commitment to grant-making in the natural resources area. A major exception is the Sigrid Rausing Trust, which is a key supporter of Global Witness and other UK and US charities and non-profits that are working on human, social and environmental rights. On certification, the Esmée Fairbairn Foundation has been a major funder of the Marine Stewardship Council, and Rockefeller Brothers Fund and the Packard Foundation have also provided key strategic support.

For charities campaigning on mining and logging, accepting donations from the natural resources industry is clearly a threat to credibility and integrity. Charitable funding is therefore highly valued.

Photograph supplied by Marine Stewardship Council

Sardines being caught in a fishery in Venezuela. The challenge of expanding certification schemes into the developing world is making them practicable for small scale, low-tech industries, while still having a significant impact on unsustainable practices.

Box 21: Global Witness and forests

Global Witness (GW) was founded in 1993 by three former members of the Environmental Investigations Agency (who continue as its directors today) to address the Khmer Rouge's secret timber trade with Thai logging companies that was devastating virgin forest and financing the civil war in Cambodia. Since then its work has expanded to cover misuse of natural resources in general. In particular it has taken a lead in analysing and addressing the 'resource curse', which is so named because many countries that derive a major share of their wealth from natural resources —such as oil and gas, minerals and timber—are mired in poverty, conflict, human rights abuse, corruption and environmental destruction.

GW's methodology involves rigorous on-the-ground (and often dangerous) investigations, detailed reporting and then lobbying of the relevant companies, financial institutions and countries. It often seeks to establish international frameworks to promote equitable, transparent and sustainable use of natural resources. It also supports the development of local civil society organisations that are capable of holding their own governments and companies to account in the management of natural resources.

Part of its work is focused on the trade in blood diamonds and rooting out corruption in the oil and gas industry. Around a third of its work currently concerns forests, including investigating conflict timber (eg, in Cambodia and Liberia), monitoring illegal logging and challenging industrial logging practices.

Since 1999 it has been developing Independent Forest Monitoring by civil society organisations with the agreement of state authorities. This helps to uncover corruption and violations of forest law (such as over-cutting or logging in a prohibited area), which assists national authorities in making prosecutions.

GW is supplementing its reactive investigations and advocacy with a proactive 'meta' campaign to prevent the resource curse from taking root in the first place. This work includes developing an agreed international definition of conflict resources and making such misappropriation of natural resources an international crime.

Achievements

GW's investigative work has resulted in a series of impressive victories. Its first project led to the closure of the Thai-Cambodia border to timber trading, which deprived the Khmer Rouge of $90m a year and contributed to its collapse. In Liberia, it stimulated UN sanctions on the export of timber in 2003, which cut off the main stream of revenue to President Charles Taylor that was fuelling the conflict in West Africa, and in 2006 it provided evidence that helped a Dutch court convict Gus van Kowenhoven for trading timber for arms in Sierra Leone. Most recently, its investigations into (and advocacy with the EU on) illegal logging in Burma, which has destroyed large areas of extremely biodiverse virgin forests, resulted in the closure of the Chinese/Burmese border to the $250m a year timber trade.

Its Independent Forest Monitoring operations in Cameroon resulted in $7.5m of fines for logging companies violating forest laws. The EU is now incorporating requirements for Independent Forest Monitoring into its system of importing timber products through the Forest Law Enforcement and Governance and Trade (FLEGT) initiative.[57]

The future

GW is aiming to build on these successes on a number of fronts. Its work in Burma has initiated an engagement with China, increasingly searching for natural resources in Africa and elsewhere, which will be significant in the coming years.

A major new piece of work beginning in 2007 is a programme to reform industrial logging. GW will be focusing particularly on the Democratic Republic of Congo, where an end to major conflict and the election of a new government is likely to lead to an intensification of industrial logging. This could seriously damage the world's second largest remaining rainforest and threaten the livelihoods of 70% of the population who are dependent on the forest for subsistence. GW is working to convene a roundtable of leading thinkers—politicians, NGOs, academics and forest peoples themselves—to identify alternative forest uses that benefit the poorest people, the national economy and the environment. A DFID/World Bank/charity grouping has already been established to pursue this issue.

GW is also seeking to build on its successes in the policy area through work that tackles problems at the global level, as well as specific instances of misappropriation of natural resources. The aim of this is to ensure that the corporate and governmental commitments on the use of natural resources that have been agreed to date are properly implemented.

Challenges in enforcing

Charities running certification schemes and campaigning on human rights protection have achieved considerable success in bringing about the more sustainable use of natural resources; and there is clear potential for expansion and replication. However, in overall terms, a comprehensive approach that would, for example, halt the downward trends chronicled in the Millennium Ecosystem Assessment is still some distance away.

Donors should also beware of the assumption that all over-exploitation of natural resources is taking place in developing countries with corrupt or despotic regimes. Democracy is not necessarily a safeguard. In the North Sea, fish quotas continue to be set far above the level advocated by UK and EU scientists. In Alaska, controversy over drilling for oil in the vast Arctic National Wildlife Refuge has been ongoing for three decades. In Australia, logging of Tasmania's 'old growth' forests attracted A$289m in

government subsidies in 2005/2006.[204] In London, of the £7.5bn of new issue capital raised from October 2000-September 2005 on AIM, the city's secondary stock market, 16% (£1.18bn) went to 123 oil, gas and mining companies.[205]

Are sustainability criteria and practices guiding the deployment of this very significant pool of capital? In some cases, according to watchdog charities such as **Mines and Communities**[194] and **Corporate Watch**,[189] there is evidence to suggest that some of the companies are responsible for environmentally and socially destructive extraction. Although there are a number of social and environmental codes of conduct (such as the Extractive Industries Transparency Initiative[206]) these are voluntary, meaning that there is little systematic (or statutory) scrutiny of natural resources companies, and thus no transparent process for confirmation or rebuttal when accusations about unsustainable practices are made.

These challenges point again to the need for concentrated efforts to achieve better international governance of natural resources. Market-based solutions like certification and conflict resources campaigning are part of the answer, but supporting charitable policy work, especially at the UN and the EU level remains vital.

Priorities for donors and funders

Campaigning

Charities have achieved some tangible successes in highlighting human rights abuses connected to the illegal and harmful exploitation of natural resources in countries plagued by civil war and instability. By harnessing investigative research with corporate and governmental lobbying, previously unnoticed problems have gained high visibility. Most of this work is being carried out by small charities with dedicated and determined teams. More funding would enable them to pursue lobbying more vigorously, and to extend their reach into the many other regions where this approach could be utilised.

Certification schemes

Certification models have been subjected to a lot of operational testing, and in principle should be replicable to many other commodities and products. Charitable funding is vital for both the maintenance and improvement of certification schemes, and the public campaigning that is needed to support them. This funding has proven hard to come by, which is surprising given the enormous potential leverage.

Policy work

Charities need to be challenged to set more ambitious policy goals. Certification and conflict resources campaigning important, but the policy vacuum at the international level and within developing countries continues to hamper the prevention of environmentally destructive practices. Charities should be challenged to work toward more ambitious goals, such as 'filling' this policy vacuum with regional or international frameworks for comprehensive natural resources protection.

Table 7: Funding natural resources charities: some illustrations

Research and information	
Study of fish purchasing by leading restaurant and hotel chains	£50,000 funds research costs for a six-month project
Watchdog monitoring	
Website to monitor mining operations in an Asian country	£250,000 a year funds research, website costs, PR and marketing
Certification	
Programme to encourage sustainable consumption of fish in schools	£25,000 funds nationwide marketing of scheme for a year
Open an office to promote certified wood products in China	£100,000 funds the office over an initial two-year period
Pilot scheme for a new certification scheme	£250,000 funds initial development of the core model
Campaigning and policy	
New investigation of natural resources abuse in an African country	£10,000 funds initial visit and research
International lobbying for regulation on industrial logging in developing countries	£100,000 funds the core costs of a small team over two years

Poverty and environment in developing countries

4.3

Contents of section

Funding priorities

Development and environment charities need to be encouraged to work towards common goals, particularly in the developing world where these issues are heavily interrelated.

Charities **lobbying governments to include the environment within their international development aid programmes** find it very difficult to get funding; private funders have a vital role to play here in the absence of public (government) support.

There are currently few sources of funding available to charities pioneering **sustainable livelihoods projects.**

Similarly, funders interested in the environment issues surrounding **human rights or population growth** will find many charities in urgent need of financial support, but the options must be assessed carefully.

Global poverty is still predominantly rural. Almost three billion people around the world survive on less than $2 a day; about two thirds of these people live outside cities. Despite rapid urbanisation in developing countries, 60% of the world's poor are still expected to be living in rural areas 20 years from now. In terms of livelihoods, nature still provides direct employment for a sixth of humanity; within this total, 1.3 billion people depend on fisheries, forests and agriculture for work.

Overlaying the map of poverty on the environmental map reveals striking correlations. Throughout tropical and sub-tropical regions, the poor are concentrated in many areas that also have the greatest concentrations and diversity of wild animal and plant species, and critical ecosystems that provide water and other resources.

Rural poverty intensifies as environmental quality degrades from the impacts of climate change (desertification, freshwater shortages) and loss of natural resources driven by consumption (deforestation, over-fishing, mining). In the worst scenarios, poor communities use up their last remaining natural assets for firewood and food.

Until recently these have not been central issues in development economics and strategy, with most efforts in the post-war period concentrating on helping to create the conditions for economic prosperity and on education, health and social welfare issues.

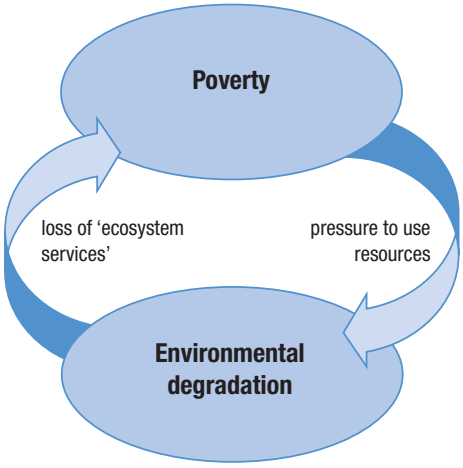
But research over the last decade by environmental economists and others has advanced understanding of the linkages in developing countries between poverty and environmental degradation. In broad terms, the rural poor are better off when their natural resources are protected and managed wisely.

How is this understanding translated into action? At the international level, aid-flows from OECD countries are refracted through the prism of the Millennium Development Goals. Environmental sustainability is in a formal sense on a par with the other eight goals for reducing global poverty and inequities. In practice, it has largely been ignored by policy-makers. We found that funds allocated to environment-related activity are no more than 4% on average. OECD analysis indicates that in overall terms, just 1.6% of government development aid is channelled into environment protection.

If the world's $50bn–$80bn a year aid budget is neglecting environment priorities, how can charities and their funders hope to make an impact? The evidence from a range of on-the-ground projects pioneered by environment charities is that, when the conditions are right, communities can become more prosperous and look after their environmental assets, often by earning income through sustainable fishing, forestry and agriculture, but also through social enterprises, local businesses and ecotourism. These successes are not widely known, and few donors and funders are currently providing support and encouragement.

Figure 15 is a simplified picture of the vicious cycle of decreasing environmental quality and increasing poverty in the world's poorest regions.

Figure 15: Poverty-environmental degradation cycle



In regions where people still rely heavily on the natural resources and 'services' provided by their immediately surrounding environment, significant degradation of this environment has direct consequences on people's livelihoods, health and well-being. In turn, the loss of livelihood, income and stability drives people to use up their resources in the urgency to satisfy their most immediate needs—food, warmth and shelter. To prevent this trend from taking hold, charities and development agencies must begin to recognise the environmental dimension of poverty.

The pressure on the development community to bring these considerations into their thinking and planning will grow, in line with rising awareness of climate change impacts and deterioration of natural resources. The prioritisation of climate change by Oxfam, Tearfund and other development charities is an early indicator.

Set against this changing background, funding sustainable livelihoods projects (especially attempts to replicate the most successful) starts to seem a potentially powerful and catalytic option, rather than a lost cause.

Problems and challenges

2.7 billion people live on less than $2 a day, and 1.8 billion of them live in rural areas. When the map of global poverty is overlaid on the map of biodiversity, striking correlations emerge. Research by the US charity **Conservation International** shows that high malnutrition exists in 16 of the 25 hotspots,* while four hotspots occur in parts of sub-Saharan Africa with the highest HIV levels.[207] Biodiversity hotspots also show a strong correlation with the map of 'ecosystem services'—the regions of the world that provide people with food, water, fibre and other essentials.

Poverty-environment linkages are not straightforward, and it is dangerous to generalise. For example, it is not uniformly the case that protecting biodiversity will also contribute to economic prosperity of local peoples. Poverty is also not necessarily the principal driver of environmental degradation. Civil instability, corruption and the financial potential of agricultural crops, the timber trade and large-scale aquaculture are major factors. However, there is a growing body of knowledge that shows how poverty is both a cause and a consequence of environmental deterioration in many parts of the world, especially in developing countries. This is nowhere more striking than in the example of Haiti and the Dominican Republic (see Box 22).

Rural poverty

Arguments over the most appropriate development routes for poor countries have in the past tended to overlook the reliance of rural populations on natural assets. This has distracted attention from the essential role that they play in the lives of millions, as sources of food and other materials, and for employment and income.

Box 22: Haiti and the Dominican Republic

The island of Hispaniola in the Caribbean encapsulates the best and the worst approaches to relationships between people and their environment, as shown in the aerial photograph below.

On the west of this island is Haiti, one of the world's poorest countries. Deforestation has been going on in Haiti for over 200 years, starting with land clearance by French colonists for sugar plantations. By 1950, forest cover had declined to 25%. Today it is just 1.4%. In consequence, Haiti is now highly vulnerable to flooding, as biomass to absorb rainfall is minimal. This is leading to massive soil erosion, and threats to the lives of Haitians from flooding disasters. The situation is exacerbated by the preference of Haitians for domestic cooking using charcoal as fuel, thus further depleting the dwindling timber stocks.

Photograph supplied by NASA

On the eastern side of the island lies the Dominican Republic. GDP per capita is circa $6,000, compared to $1,600 in Haiti. One third of the land area is set aside as parks or reserves. Deforestation rates are much lower, income from ecotourism is a significant revenue stream, and forests act as a buffer to hurricanes, with much lower rates of soil erosion. As Jared Diamond explains in *Collapse: How Societies Choose to Fail or Survive*,[31] the country is by no means free of social and environmental problems (such as the continuing use of chemicals banned in developed countries), but by comparison with Haiti, it is in a far better condition.

Source: NASA, 2002.[43]

* The concept of 'biodiversity hotspots' was pioneered by Russell Mittermeier of Conservation International in the late 1980s. It refers to geographic areas that possess the greatest diversity of plants and animals, sometimes referred to as 'endemism' (the occurrence of species that are not found elsewhere). The global hotspots map defines 25 areas, most of them in the tropics or sub-tropics.

Box 23: Recent history of international action on human population growth

During the 1970s and 1980s, the population issue was considered a matter of legitimate public debate. Several national family planning programmes were run successfully (on a voluntary basis) in developing countries, with encouragement from the international community and charities and other civil society organisations. But at the same time, the one child policy was instigated in China, and forced sterilisation took place in parts of India. The recent report from the UK's All Parliamentary Group on Population, Development and Reproductive Health argues that the approaches adopted by China and India 'led to the use of the language of population growth being associated with coercion.'[25]

By the time of the 1994 UN International Conference on Population and Development in Cairo, the coercion issue had moved to centre stage, alongside a shift to more focus on broader reproductive health, and the importance of asserting the rights of women to decide about their own child-bearing. Then, in the late 1990s, the AIDS epidemic shot to the top of international agendas. *'AIDS was seen as the new health problem, leaving high fertility as yesterday's problem. The impact of population growth in the world's poorest countries was barely noticed.'*[25]

Budgets allocated to family planning were severely curtailed. Foreign aid purchases and shipping of contraceptive commodities fell. Today, many poor countries find themselves without adequate supplies. *'As a result of decreased attention to population and family planning since Cairo, earlier gains in the use of contraception in many poor countries have stalled. The use of modern contraceptive methods is the main factor to affect birth rates anywhere, but in Africa it has changed little in the past decade and is still very low. In western and middle Africa, it exceeds 10% in only two countries with recent surveys.'*[25]

Source: Report of the All Parliamentary Group on Population, Development and Reproductive Health, January 2007[25]

> "Many parts of the world are caught in a vicious downwards spiral: poor people are forced to overuse environmental resources to survive from day to day, and their impoverishment of their environment further impoverishes them, making their survival ever more difficult and uncertain."
>
> Our Common Future (The Brundtland Report), 1987[13]

But in the last decade, researchers have examined these issues in some detail, including work by the World Bank environmental economist Kirk Hamilton. He found that 'environmental wealth' is 26% of total wealth in low-income countries, compared to 2% in OECD countries.[39]

This pattern is also reflected in employment data. Analysis of the global workforce engaged in agriculture, fisheries and forestry shows that this is 7% for developed countries, but much higher in developing countries. In some areas of sub-Saharan Africa there are few alternatives. In Ethiopia, for example, 82% of the active workforce is employed in these activities, rising to 88% in Niger and 92% in Burkina Faso. Globally, 1.3 billion people work in these sectors.[48]

When we look at the picture from the perspective of dependence on types of food source and ecosystems, the same trends emerge: one billion people depend on fish for their primary source of protein, with over 60% living in developing countries in Africa and Asia; two billion people live in dry regions where food, water and livelihoods are threatened by desertification; 800 million people live in or around tropical forests.

We have already seen (Section 4.2) that the pressure on natural resources in developing countries has to date been largely driven by consumption in wealthier nations, with ecological footprints that are six times greater than in the poorest states. These pressures on the natural environment and the world's rural poor are exacerbated further by the impacts of climate change, and by another factor—the growth of human populations, especially in the poorest countries.

Human population levels and the planet's carrying capacity

The growth in the global human population is a major contributory factor in the deterioration of natural resources, and this will intensify as the world population grows from 6.5 billion today to 8.9 billion by 2050 (see Figure 16).

Since the 1994 Cairo Conference (see Box 23) there has been little research or public debate on the question of the relationship between the size of the total global human population and the earth's carrying capacity. As the President of the Royal Society, Professor Chris Rapley, noted in a 2006 BBC article, the increasing human population is *'a bombshell of a topic, with profound and emotive issues of ethics, morality, equity and practicability.'*[208] It is interesting to note that charities working on population issues struggle to secure funding, with only the David & Lucile Packard Foundation operating a major ongoing grants programme in this area.

In *The Tragedy of the Commons,*[83] published in 1968, Garrett Hardin argued: *'A finite world can support only a finite population; therefore, population growth must eventually equal zero.'* He goes on to explore the tensions inherent between the Universal Declaration of Human Rights (which asserts the inalienable right of the family to decide its size) and the increasing exploitation of 'the global commons'—those portions of the earth that are held under common ownership, such as the oceans and the atmosphere. He concludes: '*to couple the concept of freedom to breed with the belief that everyone born has an equal right to the commons is to lock the world into a tragic course of action.'*

One does not need to subscribe to Hardin's logic to recognise the environmental stresses and strains caused by exploding population growth. As we note in Box 23, the debate on human population issues and options is only now regaining momentum after more than a decade of inaction.

Population growth

The main conclusion of the 2007 report of the All Parliamentary Group is that the Millennium Development Goals will be difficult or impossible to achieve with the current levels of population growth in the world's poorest countries and regions. Others who have added their voices to the debate include Adair Turner,

former Chairman of the UK Pensions Commission and Chair of the Economics and Social Research Council,[209] and Sir David King, UK Government Chief Scientist.[210] Turner argues that fears over the ageing demographics of Europe are misplaced, and that the projected increases in the population of Niger, Uganda, Yemen and other poor countries are a major cause for concern (see Table 8). King notes that population increases in Africa over the next 50 years will worsen food security, accelerate irreversible losses of biodiversity and have negative impacts on human health.

Policy challenges

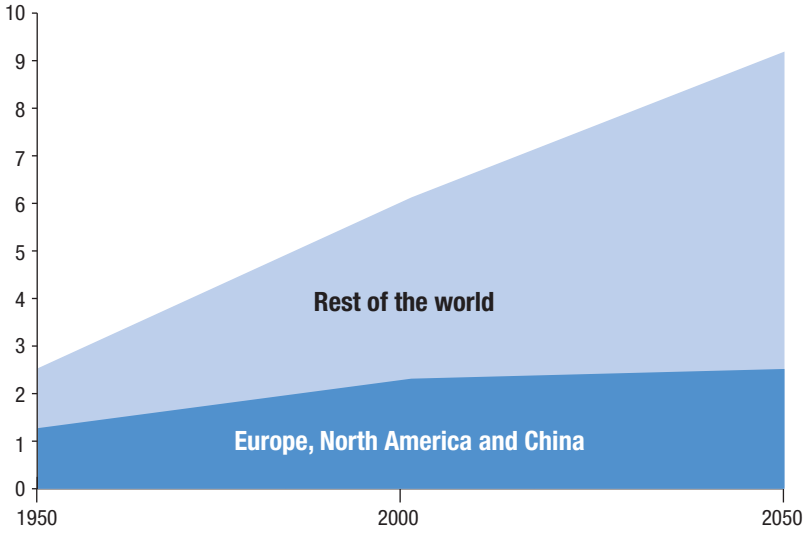
The UN Millennium Development Goals (MDGs) set an ambitious target-based framework for tackling the world's major social problems over a 15-year period. One of the eight MDGs sets three targets for environmental sustainability, covering integration of sustainable development into national planning systems, safe drinking water and sanitation, and improvement in the lives of slum-dwellers. In overall terms, environmental sustainability is seen as a cross-cutting issue that should be integrated into all eight goals.*

The absence of more tangible targets—for biodiversity, climate change, and protection of natural resources—has considerably weakened international environmental policy in the context of development strategy and funding. This is because the MDGs have become the 'asset allocation mechanism' for bilateral assistance (aid provided by a single country) and multilateral assistance (aid provided jointly by several governments, usually through international institutions such as the World Bank). As the world's $50bn–$80bn a year aid budget† dwarfs all other sources of finance for environmental purposes, the extent to which environmental priorities are being integrated into development aid is a critical issue.

Within development assistance, Poverty Reduction Strategy Partnerships (PRSPs) have emerged as the key vehicle for delivery of aid into national government planning in developing countries. Our research indicates that the allocation to environment within PRSPs is no more than 4% on average (see Appendix VI for details of calculations).

This data is supported by the comments of many international environmental charities during our consultations. Most noted the ineffectiveness of the MDG on environmental sustainability, and the low priority given to environment by bilateral funders. One comment was typical of the responses: *'Jeff Sachs and the MDG team have done a fantastic job in creating a clear framework. But the environment goal, unlike others, does not have clear targets on biodiversity and ecosystems, and that is why the bilateral donors can ignore it. They also do not seem to understand that we completely buy "sustainable livelihoods" for the world's poor. We are fully committed to poverty reduction strategies, but they do not really embrace the sustainable part.'*

Figure 16: UN global population projections (billions)[65]



Source: UN Department of Economic and Social Affairs—Population Division, as cited in Turner, A. (2006)[209]

Table 8: UN population projections (millions)[65]

	1950	2000	2050
Afghanistan	8.2	20.7	79.4
Bangladesh	43.9	139.4	254.0
Egypt	21.8	66.5	121.2
Niger	2.2	11.1	53.2
Uganda	5.2	24.7	92.9
VietNam	27.4	79.0	120.0
Yemen	4.3	18.0	58.0

UK development assistance and environment

In the UK, the Department for International Development (DFID) has responsibility for development assistance. In 2004/2005, DFID's

* See UN Millennium Project (2005) *Environment and human well-being: a practical strategy* for more detail on the composition of the seventh MDG on ensuring environmental sustainability.[68]

† OECD data for 2005 put the total at $106 billion, but this includes assistance to Iraq and debt forgiveness to Nigeria. Funds directly allocated to environment protection through bilateral aid programmes is estimated at just 1.6% of the total.[4]

Box 24: DFID and environment-development

The House of Commons Environmental Audit Committee published a critical appraisal of environment policy and strategy within DFID, following the publication of the White Paper in July 2006, Eliminating world poverty: making governance work for the poor.[11] The Committee notes:

'There does not appear to be any sense of urgency within DFID in dealing with the very serious problem of integrating the environment into direct budgetary support. … in the long term it is entirely unacceptable that the UK should be providing aid to developing countries regardless of the environmental consequences.'[33]

Criticism of the White Paper has also come from the Development and Environment Group (DEG), an umbrella group for environment and development charities. The DEG notes:

'There is not one single reference to "biodiversity", "conservation", "ecosystems", "ecosystem services" or support for meeting international environmental commitments targets or agreements. … This is despite there being a prolific rise in knowledge, science and global awareness of environment-poverty and sustainable development linkages. Most notably through the World Summit on Sustainable Development (2002), the Millennium Ecosystem Assessment (2005) and the work of the Poverty Environment Partnership.'[53]

In 2004/2005, DFID's budget was £3.84bn. Of the bilateral component (£2.14bn in 2004/2005), 2% was directly allocated to environment.

budget was £3.84bn.[211] Of the bilateral component (£2.14bn in 2004/2005), 2% was directly allocated to environment.[11] The department was criticised by the House of Commons Environmental Audit Committee on environment-development issues, and by an umbrella group of development and environment charities (see Box 24).

There are some indications of a forthcoming repositioning of the UK development aid budget. The 2007 Budget announces 'a new international window' of the Environmental Transformation Fund (ETF) with £800m of official development assistance to support *'development and poverty reduction through environmental protection, and help developing countries respond to climate change.'* [212] However, whether this commitment represents new funding or a re-allocation of existing funds, or how it will be spent, is not yet clear.

Charitable responses

Environment charities working on rural poverty-environment linkages in developing countries are using a range of approaches to protect natural assets and safeguard the rights and livelihoods of local and indigenous peoples and communities.

Sustainable livelihoods projects

Sustainable livelihoods projects (sometimes referred to as Integrated Conservation and Development Projects—ICDPs) were first piloted in the early 1990s, when several leading conservation and development charities (including **WWF** and **CARE International**) began to focus their attention on the need to combine the two strands of activity. Since then, there has been a steady growth in the number of projects.

In some cases they are funded by the charities themselves, in others through a mix of charitable funding and grants and contracts from bilateral donors, such as national governments or development banks. To date, projects are principally customised for local conditions, and there appear to be no formal initiatives that aim to scale up and replicate the successful models.

The thrust of sustainable livelihoods projects is to encourage economic activity that generates income for local communities and creates positive benefits for the environment. This often involves trading in wild animals, plants and materials, by applying sustainable techniques to fishing, forestry and agriculture. In some instances, social enterprises and local businesses are provided with seed funding. Ecotourism is also an important dimension. Some of the larger environment charities are at the forefront of this work, but the lack of comprehensive market data on sustainable livelihoods projects probably means that there are many thousands operating worldwide for which information is not readily available.

Approaches that work in one context or region may not be applicable elsewhere. The degree of success attained is in part a function of geography and ecology. For example, generating income and restoring ecosystem health can be achieved much more quickly in wetland areas than in drylands.

Human and environmental rights protection

Other poverty-environment approaches include projects that are focused on protecting the human and environmental rights of local and indigenous peoples, and support for the development of a wide range of social enterprises and businesses that have environmental aspects. Overall, this area is still at an early phase, with much piloting, testing and experimentation going on.

Population issues

Charitable activity seems to be emerging from a long and difficult period in this area, with a network providing opportunities for collaboration and dialogue between funders and charities, and a platform for public debate.

Policy work

At the policy level, some charitable pressure is being applied by individual organisations and through joint action, but this needs to be ramped up if more progress is to be made. One of the limiting factors is that the level of dialogue and cooperation between development and environment charities appears to be quite limited. Allied to this, the output of poverty-environment information, analysis and guidance from think tanks and research institutes is scant in quantity and too descriptive in content. For more on this topic, see Section 7.

Table 9: Some poverty-environment charities and projects

Sustainable livelihoods	
CARE International[213]	US-based international charity working globally on humanitarian and development issues.
Global Greengrants Fund[214]	US-based funder of environmental grassroots and community groups worldwide.
Wetlands International[215]	Netherlands-based international charity working on sustainable livelihoods in wetland areas.
Worldwide Fund for Nature[216]	WWF has been piloting sustainable livelihoods projects since the early 1990s.
Human and environmental rights	
Rainforest Foundation[217]	UK- and US-based charity that works in Latin America and Africa to defend the rights of indigenous and local peoples in forests.
Forest People's Programme[218]	Campaigning and lobbying charity that works on behalf of forest peoples worldwide.
Population	
Population and Sustainability Network[219]	UK network that provides a forum for debate on population issues.
Policy and research	
Development and Environment Group[53]	Working group of the network of environment and development charities, British Overseas NGOs for Development. Brokers debate and publishes responses to UK development policy.
Poverty and Environment Net[220]	Papers and case studies on poverty-environment projects.
International Institute for Environment and Development[221]	International policy research institute and non-governmental body working for more sustainable and equitable global development.

Achievements and prospects

Understanding success in this area is only possible at present on a project-by-project basis. Significant debates about the nature of the relationship between poverty and environment remain. This is perhaps due to the coming together of thinkers from such different fields—economics and conservation. See Box 25 for an example of one debate in this area.* In summary, **Poverty-Environment Partnership (PEP)**, a coalition of development agencies, development banks and international charities, has taken on orthodox development ideology to demonstrate that environmental destruction is not a necessary evil in economic development.

To move beyond the particular, further research is urgently needed to scrutinise the nature of results. For this reason, the examples given below are snapshots of some current initiatives and projects.

Boys collecting wood for fuel in Gambia.

Photograph supplied by istockphoto.com

* For a further exploration of the arguments on poverty-environment linkages within economics, a good starting point is the papers by the late David Pearce—the leading environmental economist—*Sustaining the Environment to Fight Poverty and Achieve MDGs: the Economic Case and Priorities for Action*.[22]

Box 25: Environmental economics and sustainable livelihoods

In the early 1990s, a number of environment charities and organisations began to focus on sustainable livelihoods issues, led by WWF and the World Conservation Union (IUCN). In 2004, concerned that MDG7 (on environmental sustainability) was not being mainstreamed within development programmes, they formed the Poverty and Environment Partnership (PEP) together with other charities and bilateral agencies. Drawing on work carried out by leading environment economist David Pearce, PEP presented a range of papers demonstrating poverty-environment linkages to the UN World Summit in 2005, including Sustaining the *Environment to Fight Poverty and Achieve the MDGs: the Economic Case and Priorities for Action.*[22]

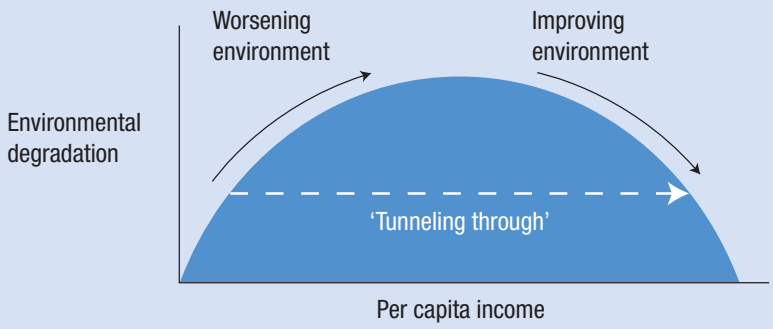
The case made by PEP is based on two fundamentals. Firstly, very large numbers of the world's poor are dependent upon 'natural assets' for their livelihoods, including 800 million on forests, and over one billion for whom fish is their primary source of protein. Research by the World Bank environmental economist Kirk Hamilton and others shows that 'environmental wealth' represents 26% of total wealth for families in low-income countries compared to 2% in high-income OECD countries.[39]

Estimations of the contribution of natural resources to total wealth

Income group	Natural capital	Produced capital	Intangible capital	Total wealth	Natural capital share
Low-income countries	1,925	1,174	4,434	7,532	26%
Middle-income countries	3,496	5,347	18,773	27,616	13%
High-income countries	9,531	76,193	353,339	43,9063	2%
World	4,011	16,850	74,998	95,860	4%

Secondly, PEP disputes the validity of the 'Environmental Kuznets Curve (EKC)' hypothesis, which argues that environmental assets are degraded in the early stages of economic development, only to improve after some income threshold has been passed. This fails to take account of the fact that much of the damage done to the environment, through climate change, desertification, intensive polluting and the exhaustion of natural resources, is irreversible. PEP argues that the EKC hypothesis is based on a misreading of historical development experience, and *'an implicit assumption in the development community that the environment is a "luxury good", something the developing world can buy into when it is richer.'*

Figure 17: The 'Environmental Kuznets Curve'



Furthermore, PEP argues that the EKC overlooks the impact that policy measures can have on trends in environmental degradation. Promoting sustainable agricultural practices, encouraging the growth of a renewable energy industry, or expanding public transport services, enable a 'tunneling through' (see Figure 17) whereby a society can bypass the projected period of environmental decline. In short, the EKC is neither inevitable, nor does it describe a desirable development path.

Useful resources for funders interested in this area include PEP's Poverty Environment Net, a publicly accessible website that contains information on more than 70 projects around the world, together with other resources. These include the reports published by the International Institute for Environment and Development (IIED), and the World Resources Institute's 2005 overview *The Wealth of the Poor: Managing Ecosystems to Fight Poverty.*[48]

Charitable coalitions, joint action and partnership initiatives

The Poverty and Environment Partnership (PEP)[222] brings together major bilateral donors, UN agencies and some environmental organisations (WWF, IIED). PEP had some success in raising the profile of poverty-environment linkages at the 2005 World Summit. It does not, however, include the large US conservation charities like **Conservation International** and the **Wildlife Conservation Society**. The **Development and Environment Group**, as noted above, has played a prominent role in critiquing UK government development and environment policy.

Other initiatives are aligned with climate change and development issues, for example the Working Group on Climate Change and Development (WGCCD) noted in Section 4.1, and the climate change work of **Oxfam**, **Tearfund** and **Christian Aid**. While there is a clear connection with overall poverty-environment issues, there appears to be little tangible evidence of a focus on protection of natural assets.

Box 27 provides a good example of a joint project in Asia that focuses on restoring the valuable natural assets that were destroyed by the Tsunami of 2005: mangroves were planted along coastlines for protection against future Tsunamis, and plans in one region to develop the local lagoon for ecotourism and aquaculture were also put into place.

Locally-based sustainable livelihoods projects

WWF, the World Conservation Union (IUCN) and **Wetlands International** are some of the environment charities taking the lead in this area. Some development charities, notably **CARE International**, are also working on sustainable livelihoods. Amongst funders, Global Greengrants Fund is supporting a range of approaches.

Human and environmental rights of local and indigenous peoples

Charities working on these issues include **Global Witness**, the **Rainforest Foundation** and the **Forest People's Programme**. Their work includes campaigns that highlight the

linkages between local and indigenous peoples and corrupt and exploitative government and business practices, poverty, environmental damage and human rights abuses. Some charities focus on leveraging change through legislation and regulation, especially through the EU; in other cases, charities run on-the-ground projects and work directly with local and indigenous peoples. The Sigrid Rausing Trust is a major supporter in this area.[223]

Charities have had some success in securing indigenous land rights. In December 2006, the Botswana High Court ruled in favour of the Kalahari Bushmen's claim that they were illegally evicted from their ancestral land by the Botswana government in 2002. The Bushmen's court case was largely funded by **Indigenous Land Rights Fund**, a US-based charity that advocates for the recognition of indigenous land rights all over the world.[224] Since the High Court's decision, the Botswana government has continued to discourage the bushmen from remaining on their ancestral lands, but the court ruling should be considered a significant first step that paves the way for further action.

Enterprise solutions to poverty

One of the characteristics of a vibrant, emerging area of philanthropy is the role played by a leading funder not just in terms of financial support, but also as a champion of ideas and organisations. This is the role performed by the Sigrid Rausing Trust in the human, social and environment rights field.

In the social enterprise and poverty area, the Shell Foundation is taking a similar lead. Its influential paper, *Enterprise Solutions to Poverty,* makes a persuasive case for charitable funders to pump-prime businesses in developing countries that are struggling with poverty and low levels of economic activity.[225] It argues that this is an essential counterpoint to governmental funding flows, and also that the separation of financial and social and environmental return is sometimes artificial and counterproductive. For more on the Shell Foundation's funding of energy-related enterprises, see Section 4.5.

Population growth and charities

The value that charities can add by acting as independent organisations that tackle difficult and controversial issues is well illustrated by the **Population and Sustainability Network (PSN)**, a UK-based advocacy group that aims to bring together development, environment and reproductive health charities, government departments, academics and others, to increase leverage on population issues. The presentations by Adair Turner and Sir David King (quoted above) were both made at PSN meetings. Additionally, Richard Ottaway MP, Vice-Chairman of the All Parliamentary Group (also quoted above) made a presentation to PSN, shortly before publication of the report. Assessing the results of these meetings is perhaps premature as they have only occurred recently; but it is clear that by providing a forum, PSN has helped to put better information on a vital topic into the public domain (all presentations are freely accessible on the PSN website).[219]

Box 26: Sustainable farming and fishing at Dongting Lake, China

At Dongting Lake in China, WWF is working to restore wetland areas by removing flood dykes around thousands of hectares of floodplains, once used for intensive rice cultivation and urban settlements.

WWF China offered small grants and technical assistance for farmers who lost their fields to set up organic pig, duck and fish-breeding facilities.

Of 147 participating families, annual income per household has risen from $180 to $395. At the same time, wetland restoration helps the conservation of important fish and waterbird populations.[17]

Development and environment charities

Successful collaborations

Climate change has firmly arrived on the agendas of a number of leading development charities, including Christian Aid, Oxfam, ActionAid and Tearfund, all of whom have launched climate change campaigns that are centred around the impacts on vulnerable poor communities in developing countries. At the same time, as we have seen above, a number of leading environment charities have been working on helping the world's rural poor to achieve sustainable livelihoods in which economic prosperity goes hand in hand with environmental protection. Do these initiatives signal a growing convergence in the activities, goals and assumptions of the two groups of charities? It is difficult to give a clear answer to this question on the basis of the limited amount of information that is publicly available. But some factors can be discerned, as set out below.

- **Development charities: responses to climate change**

Oxfam, Tearfund and others provide summaries of their positions on climate change that recognise the vulnerability of the poor in developing countries to climate change impacts.[226,158] In terms of action, both organisations have created climate change teams and ongoing campaigns. Work to date has included attendance at the 2006 Nairobi climate change talks, and other involvement in policy work. For example, Barbara Stocking, Chief Executive of Oxfam UK, noted in her response to DFID's White Paper on International Development that '*we and the development community as a whole were initially slow to recognise the huge developmental impact of the HIV/AIDS*

Climate change has firmly arrived on the agendas of a number of leading development charities.

Box 27: Community-based management of a wetland area recovering from the Tsunami

A consortium of four charities—WWF, IUCN-Netherlands, Both Ends and Wetlands International (WI)—is managing the Green Coast project as part of post-Tsunami reconstruction efforts. Fatalities from the 2005 Tsunami were lower in coastal areas where mangrove forests had not been removed.[14] This has led to recognition that restoring coastlines to their natural state should be a goal of reconstruction efforts. It was on this basis that Wetlands International became involved (as lead partner and project manager) drawing on its expertise in wetland ecosystems. The project comprises three separate projects, in Indonesia, India and Sri Lanka, funded by Oxfam Novib (Oxfam Netherlands) and the Small Grants Programme of the Global Environment Facility.

Green Coast is an agglomeration of small community-based projects. The model is for WI to identify areas for restoration, and then in concert with the other charities handle all the training of local peoples, purchase of resources and other on-the-ground work.

Community-based integrated lagoon management in Pulot village, Aceh Besar

Before the Boxing Day Tsunami, this was a thriving coastal village, with a river serving as a community fishing ground. The village washed away, and is now in the process of reconstruction. The aim is to develop the existing lagoon so that it can serve as a source of food and as a revenue stream from ecotourism, through a mangrove nursery, sale of fish and crabs and a restaurant. The €50,000 budget is being used to set to up a nursery of mangrove and other plant varieties; to plant 47,500 saplings along the lagoon, to start fish cultivation and to develop the lagoon for ecotourism.

Benefits

Twenty villagers will directly benefit, while the whole village population (441) will benefit in the long term, once the lagoon holds fish and crabs and can be used for ecotourism. Another benefit is that villagers are involved from the start, with a small, motivated and mixed group engaged in nursery and planting activities, for payments of €360 each during the year. The aim is to encourage a sense of ownership and responsibility, and to develop business skills. Discussions are ongoing on a possible repayment option, with money going back into a revolving fund. The village has been very supportive of the project, guided by WI's expert staff.

Source: Wetlands International, personal communication.

pandemic, we believe there is a risk of this happening in relation to climate change. We ourselves recognise that we have a lot to do to become effective in this area. Consideration of climate change should be built into everything that we all do.'[227]

- **Development and environment charities have collaborated on the 'Up in Smoke' reports**

In 2003, the International Institute for Environment and Development and the New Economics Foundation initiated the Working Group on Climate Change and Development (WGCCD), comprising 21 development and environment charities and other civil society organisations, including BirdLife International, Christian Aid, Friends of the Earth, Greenpeace, Oxfam, Practical Action and WWF. The main WGCCD output to date is the *Up in Smoke* series of reports on current and future climate change impacts in Africa and Latin America, with Asia in preparation. As the product of collaboration between environmental and development charities, these reports offer rare and valuable insights: ecological and biodiversity impacts are analysed alongside the social and economic consequences for poor communities.[159]

- **Environment charities are taking the lead on sustainable livelihoods projects**

From the initiatives above, it is clear that development charities are working at the policy level to raise the visibility of climate change impacts on vulnerable communities in developing countries. They are collaborating with environment charities to produce overviews that describe environmental and social problems. There are also some indications that the need to protect natural resources is beginning to surface as a factor in development charities' thinking. For example, Oxfam is a signatory to the recent press release on biofuels and deforestation noted in Section 4.1.[63]

But are development charities incorporating environmental considerations into their on-the-ground projects? The balance of evidence seems to indicate that sustainable livelihoods projects are being piloted and supported by environment rather than development charities (see above). This may be because development charities do not have environmental expertise within their local and regional teams.

Prevailing disagreements

Development and environment charities are not always in agreement on priorities and strategies. The controversy over the gifting of goats, cows and other domestic animals to poor communities in Africa illustrates one of the tensions. The World Land Trust, a conservation charity, argues that '*goats, sheep and other livestock are one of the main causes of habitat degradation and desertification in Africa,'* and suggests that animal gift schemes are *'environmentally unsound and economically disastrous.'*[228] Many development charities, including Christian Aid, Oxfam, World Vision and Farm Africa, have promoted animal gifting schemes in their Christmas catalogues, and have argued vigorously the opposite.

What are donors and funders to think when strategies collide in this way? The answer, as noted in many other contexts in this report, is a pressing need for better quality research and guidance, from independent sources and from charities themselves. If financial support is being sought from the public for specific charitable activities, all those involved have a duty to provide evidence that substantiates the rationale and value of particular interventions.

As noted above, one of the constraints in this area is the apparent lack of major collaborations between development and environment charities. This is mirrored on the funding side, where charitable trusts and foundations with international environment and development grant-making programmes tend to focus on one or the other. Thus, the Ford Foundation and the Rockefeller Foundation

have very substantial programmes on aspects of international development, but without a significant focus on environment issues. In the UK, there is no major charitable funder with an environment-development strategy, other than the human and environment rights grant-making of the Sigrid Rausing Trust and the enterprise approach of the Shell Foundation.

For charities setting out to implement sustainable livelihoods and other people-environment projects in developing countries, funding options are remarkably limited. In the UK there is some limited potential for DFID funding (although this largely channelled through its long-term Partnership Programme Agreements, which only include WWF and IIED from the environment charity sector). DEFRA's Darwin Initiative grant-making is focused on biodiversity rather than sustainable livelihoods, as the latter are seen as a DFID area.

The international funding context is similar, with Global Environment Facility grants concentrating on climate change and biodiversity, with poverty-environment work seen as the province of bilateral donors. For more on funding, see Section 6.

Priorities for donors and funders

Including environment priorities within rural development projects

Provision of food, water and other basic services, as well as healthcare, education and support for disadvantaged and deprived communities, are key priorities in rural development projects. Reducing existing support for these pressing needs in order to fund environment requirements would be disastrous.

But funder options do not need to be framed in this binary fashion. Allocating part of a project's budget to environmental protection could lead to more food and water, and to greater economic prosperity, thus helping pave the way for improvements in health and education. Rather than being at loggerheads with each other, development and environment goals can be complementary.

The problem at present in rural development is that environmental factors are often not taken into account. A good first step for funders is to include environmental considerations within their thinking and planning.

Integrating environment and development goals

Development and environment charities need to be urged to work toward common agendas and goals. These would be particularly valuable for countries like Ethiopia, Madagascar, Sudan and the Democratic Republic of Congo where there are serious social and environmental challenges. Charitable funding could be the catalyst.

Lobbying and policy

Lobbying government to integrate environment issues into its development programme is almost entirely dependent on charitable funding. It is notoriously difficult for charities to secure financial support for this type of activity. As it is improbable that governments will provide resources to fund criticism of their own policies, charitable funding plays a vital role, and the potential rewards are enormous.

Piloting and replicating sustainable livelihoods projects

Seed funding for local sustainable livelihoods projects can produce wider returns. There appear to be few sources of funding available to charities that are pioneering work in this area, yet successful projects not only make a difference on the ground, they can also be promoted and replicated elsewhere.

Rights and population issues

Charities working on human and environmental rights and those working on population issues are treading in difficult territory, where the commitment and maturity of leadership plays a key role. Funders supporting these areas of work are providing precious resources that are usually in short supply—but assessment of the options needs to be carried out with great care.

As it is improbable that governments will provide resources to fund criticism of their own policies, charitable funding plays a vital role.

Table 10: Funding poverty-environment charities: some illustrations

Research and information	
In-country human and environmental rights investigation	£10,000–£30,000 funds initial visit, research and publication
Meetings and presentations on population issues	£30,000 funds eight meetings over one year
Local projects	
Expand sustainable livelihoods programme in an Asian country	£100,000–£150,000 funds programme across one country for four years
Sustainable livelihoods project in a coastal Asian community	£5,000–£10,000 funds initial one-year work in one village

Ecosystems and biodiversity

4.4

Contents of section

- Aesthetic and economic reasons for conserving nature
- Problems and challenges
- Charitable responses
- Achievements and prospects
- Priorities for donors and funders

Funding priorities

There is a distinct need in this field of environment work to strengthen, and make mainstream, **the case for protecting the planet's biodiversity.** The development of arguments that go beyond the economic benefits, to look at social, cultural, aesthetic and spiritual value, should also be supported.

Continuting existing support for restoration projects is important; there is a temptation to presume that current projects are receiving adequate funding and the need is only for new projects.

The possibility of **replicating proven projects** should be explored.

Biodiversity and sustainable livelihoods/ development can and should come together: humans are, after all, unavoidably part of the ecosystem—and funders should venture to support projects that integrate the two issues.

Protecting marine biodiversity and halting deforestation in the tropics are two identifiable priorities for donors and funders to support.

Photograph supplied by Ted Benton/Buglife

Buglife is the first conservation charity in Europe to focus exclusively on protecting invertebrate species, such as this rare and endangered brown banded carder bee.

The problems we have looked at so far have clear social and economic causes and effects. If we do not combat global warming, the planet will become too hot. Misuse of natural resources is endangering supplies of food, water and essential materials. Both contribute to increased vulnerability for the world's rural poor. But what of ecosystems and biodiversity? Are they also threatened, and if they are, what are the implications?

Concern over the state of the world's wildlife and natural places is the longest standing environmental issue, going back to the late nineteenth century, when John Muir led the campaign to create national parks in the US, and Octavia Hill founded the National Trust in the UK. Since then, governments across the developed world have implemented domestic habitat and species legislation; ecologists and conservation biologists have pieced together the science of ecosystems and their populations; and charities have mobilised tens of millions of members and supporters worldwide who share a passion for wild animals, plants and their environments.

Ecosystems and humans—an unseen relationship

The Global Biodiversity Assessment (1995) and Millennium Ecosystem Assessment (2005) are testament to the huge scientific progress that has been made over the last 25 years to fully understanding both the full extent of our planet's biodiversity, and the impact our society is having on it. We now know that—of a possible 10-30 million species—only around 2 million have so far been identified. The insects, so vital ecologically, are the least well documented.

For many ecosystems, communities and species, we have an understanding of the environmental factors that determine their viability. As a result we can see that overall the trends are downward, with some 12% of birds, 25% of mammals and 32% of amphibians threatened with extinction over the next century, in large part because of habitat loss. We also know that the greatest concentration of biodiversity is in the tropics, with a strong correlation to the map of rural poverty. As observed in the previous chapter, this introduces the challenge of alleviating poverty and promoting development without destroying biodiversity in the process.

We have also begun to recognise the often invisible relationships that exist between the natural world and the human world: without bees, many crops would not pollinate; seed diversity decreases the risk of disease epidemics in cereal production; the sharp downturn in global fish populations and loss of microbial diversity in soils threaten the food security of millions; medicines and drugs derived from plants and animals are critical to human health.

The case for the economic value of biodiversity and ecosystems carries the most weight at the policy level, and because of this, other values are often downplayed: the aesthetic value of the natural world, which is demonstrated by the sheer number of visitors to wild places every year; the particular importance of certain species to the health of an ecosystem; or the respect for the right to life of other species.

What can charitable donors and funders do? Three agenda items top the list:

- Continuing support for habitat and species protection.
- Increased funding for research—scientific, economic and social—into the current state of the environment, and the causes and consequences of its decline.
- Supporting any efforts to make the conservation of biodiversity a consideration of mainstream policy work, business and social debate.

The first priority is to help charities continue with the many projects in the UK and globally that are seeking to protect (and in some cases to restore) habitats and species in specific areas. This includes funding for protected areas and for projects that address the needs of local communities and help them to have a stake in the protection of their environments.

Secondly, charitable funding for research and analysis is an urgent requirement. We know too little about the things that matter the most: the benefits to society foregone when habitats and species are lost; the social and emotional contributions to human well-being; and the effectiveness or ineffectiveness of the strategies and approaches that are currently employed by charities, governments and businesses. The contribution that economists in particular need to make is vital. The production of a biodiversity equivalent of the Stern report would be a major contribution toward a better understanding of the 'market failure' that prevents us from placing a true value on biodiversity.

The third priority is to bring ecosystems and biodiversity into the mainstream of public policy, corporate strategy and social debate. This is beginning to happen. Germany is placing biodiversity alongside climate change on the agenda during its G8 presidency. More charitable funding for well-considered and focused policy and lobbying work by charities could help to build on the gathering momentum. Leaders of biodiversity charities complain that they are marginalised in policy circles; but until decision-makers are presented with stronger and better guidance, they will be tempted to continue treating biodiversity as a luxury option.

Aesthetic and economic reasons for conserving nature

People create, join or financially support environmental charities for a range of reasons. We can lay these reasons, and the charities that espouse them, on a scale ranging from aesthetic to economic values. Aesthetic valuations of nature emphasise its priceless beauty and wonder, from the everyday appreciation of birds and flowers in one's garden, or the love of a majestic animal (such as the tiger, dolphin or bear) that may never be experienced first-hand, to a religious or spiritual affinity with the natural world. Economic valuations, on the other hand, emphasise the utility of the natural world.

There is much variation here too. Economic arguments for the conservation of a rainforest, for example, may emphasise a variety of justifications: the potential profits to be made from the discovery of medicines in tropical rainforests; the belief in the fundamental reliance of human society and economy on healthy ecosystems, including forests; and the fact that many indigenous peoples and local communities living around forests still rely heavily on their immediate environment for their sustenance and prosperity.

Environmental charities have to make their case for the value of their work whenever they seek funding. Charities working in the conservation of biodiversity and ecosystems often struggle to do this because the values, motivations and goals that drive their work are often closer to the aesthetic end of the spectrum than those charities working in other environmental areas covered in this report. The economic benefits to be made by conserving some endangered species are often hard to prove.

These schools of thought sometimes come together. Orchards that produce fruit are cared for as economic assets, but may also be valued for their beauty. Plaice and skate are staple dishes on restaurant menus, and admired in aquariums. The beauty and wonder of the Great Barrier Reef, the Grand Canyon and the Himalayas is translated (though not reduced) into monetary value by the millions of tourist dollars brought into these regions every year. But the aesthetic and economic valuations of nature can also collide. The

> "Human genius … will never find an invention more beautiful or more simple or direct than nature, because in her inventions nothing is lacking and nothing is superfluous."
>
> Leonardo da Vinci

Box 28: Economic potential and value of biodiversity and ecosystems

'One example of how this opinion can change is the Pacific Yew, which was considered a trash tree until taxol, a compound found in its bark, was discovered to be a powerful drug against ovarian, lung and other cancers. Another example is the bacterium that lives in the Yellowstone hot springs. This bacterium might have seemed quite worthless before it was discovered to have an enzyme that drives the "polymerase chain reaction," a biochemical process that won the Nobel Prize in 1993 and that is now responsible for billions of dollars of economic activity annually. The point here is that, like books in a library, species have value (some of it practical) that may become apparent only when they are studied closely.

A second point is that, as elements of ecosystems, species contribute to valued ecosystem services: they may help regulate the watershed, generate soil fertility, pollinate crops and contribute to the cycling of water, energy and nutrients. These are important contributors to human welfare, the value of which is becoming more recognized. For example, New York City recently discovered that it will be 10 times cheaper to buy key parts of its watershed and manage them appropriately than to build new water treatment plants. Likewise, Costa Rica has recognized that its protected forests contribute water for power generation that is worth $104m per year (in other words, that is how much it would cost to import enough fossil fuels to produce an equivalent amount of energy). Each species in that ecosystem is contributing to those services, though that contribution has not always been appreciated.'

Thomas Lovejoy, Scientific American[37]

A 1997 paper by Robert Costanza calculated the annual economic contribution of the biosphere at $33 trillion a year, compared to an estimated total annual global GDP of $18 trillion.

Japanese and Norwegian governments and fishing industries wish to legalise whale hunting on economic grounds; other countries (including the UK) and many environmental charities oppose this, arguing that whales should be protected as awe-inspiring examples of the planet's beauty.

The relationship between the two schools of thought can also change and vary in space and time. Elephants are 'charismatic' species that attract visitors to many parts of Africa. This often leads to economic benefits for local communities from ecotourism revenues. In other parts of the continent, elephants are seen as dangerous pests, trampling crops and threatening villagers' lives.

Both aesthetic and economic valuations of nature drive people to donate to, or create, environmental charities and motivate the scientists and practitioners who work for those organisations. We encountered both rationales throughout our research, in differing degrees and combinations.

The economic rationale

The dependence of the human world on the natural world is undeniable. This relationship is clearest in the developing world, where people are still heavily reliant on their immediate natural environment: one billion people depend upon fish as their primary source of protein, and tropical forests still provide food and income for many of the 800 million people who live in and around them. In the developed world, the reality of this dependence is perhaps hidden by our consumer lifestyles: bright packaging, neat supermarket shelves and globalised trade routes bringing produce from far off lands leave no trace of the natural origins of our commodities. The reduction of the natural environment to a mere 'externality' in many economic calculations is perhaps understandable, but still a curious flaw.

Conversly, internalising the scarcity of natural resources and the fragility of ecosystems within the market stimulates the search for sustainable solutions. Furthermore, once this realisation is made we can begin to appreciate the economic utility of the 'services' that ecosystems provide, and the role of conservation and sustainability in their management. The most fundamental 'ecosystem service' is the provision of freshwater.

From the Catskill Mountains above New York to the highlands of West Africa, forests and wetlands act as huge freshwater collection, cleaning and storage utilities. Others include the role of bees in crop pollination; the pharmaceutical value of natural compounds found in plants, many from tropical rainforests (see Box 28); and the greenhouse gas retention properties of a wide range of ecosystems, from the methane deposits stored below the permafrost of Siberia to the giant carbon sink that is the Amazon Basin.

Estimation of the economic value of natural assets is a surprisingly underdeveloped discipline. A 1997 paper by Robert Costanza calculated the annual economic contribution of the biosphere at $33 trillion a year, compared to an estimated total annual global GDP of $18 trillion.[229] These numbers have to be treated as indicative, because natural capital valuation is not embedded in the global financial system. Tracing the 'chain of value' is therefore problematic. The consequence is that natural assets providing economic benefits are often treated as limitless 'free' resources. Put simply, nature provides humanity with food and other materials that are not counted in monetary terms. This can lead to gross under-estimation of inherent value.

This is not just a matter of purely theoretical interest. For example, conservation biologists and economists are currently attempting to measure the carbon retention properties of undisturbed natural rainforests compared to plantation forests in temperate regions. For example we know that, because rainforests are wetter and warmer, they store more carbon. This should imply a higher 'natural asset valuation.' Yet under the terms of the Kyoto Protocol, no differentiation is made between one type of forest and another (for example, between plantation and existing forest). As a result, there is no economic incentive to 'avoid deforestation', even though the Stern review and the Intergovernmental Panel on Climate Change (IPCC) call for the

protection of natural forests as one of the key climate change mitigation strategies.

But on the other side of the balance sheet there are also negatives. In many parts of Africa, elephants and hippos are a serious threat to local communities. Similarly, a range of other species pose health and economic threats to humans, including alligators, tigers, snakes and parasitic insects that are carriers of disease, such as malarial mosquitoes. These are threats that will grow if human populations in tropical and sub-tropical regions explode as projected over the next 50 years, and communities expand further into wild habitats.

The aesthetic rationale

But the economic school of thought is not the only compelling basis for nature protection; the economic value of wildlife and wild places is not foremost in the minds of those who have had the privilege of seeing mountain gorillas in Africa, whales off the coast of Cape Cod, the tropical plants of Borneo, or simply the everyday pleasure of watching birds in British gardens. Neither is economics the main consideration driving those who go on to create, join or support charities that protect these plants, animals and ecosystems; people support these charities because they admire nature.

Aesthetic reasons are expressed very differently from person to person. For some, the protection of nature is a sacred duty, sometimes connected to religious beliefs. This outlook may also be related to a belief that humans have a responsibility of 'stewardship of the earth' arising out of our position as the dominant species on the planet. For others, biodiversity should be protected because of its ecological and biological value—a more scientific perspective.* For still others, amenity value is important: the need to protect areas so that we can visit them for rest, contemplation and recreation. And for those with a historical or cultural perspective, the natural world is a form of heritage, a connection with the past that should be treasured.

Some commentators argue that too much of the work to protect ecosystems and biodiversity is framed only in economic terms, particularly when government or business is involved. Many conservationists regret the emphasis placed at the 1992 Earth Summit on the monetary potential of as yet undiscovered drugs in rainforest plants and trees, to the exclusion of arguments about their beauty, wonder and inherent worth. Others are concerned that the increasing focus on the value of ecosystem services to people, while correct, is dangerously utilitarian and human-centric.

Box 29: Six social values for conserving wildlife

- Human conquest of nature carries a moral responsibility for the perpetuation of other life forms (1914);
- Wanton consumption and merciless slaughter of wildlife is uncivilised;
- Aesthetic and intellectual contemplation of nature is integral to the biological and cultural inheritance of many peoples and monuments of nature, like great works of art and architecture, should be guarded from ruin (1909);
- Healthy ecosystems are necessary to safeguard economic growth, quality livelihoods and social stability (1992);
- It is prudent to maintain the Earth's genetic library from which society has derived the basis of its agriculture and medicine (1979);
- Society has a moral duty to permit traditional peoples inhabiting natural landscapes to choose their own destiny in time-frames appropriate to their history and culture.

Source: Values-led conservation. Paul Jepson and Susan Canney, 2003.[26]

Economists and other social scientists attempt to grapple with the aesthetic dimensions of protecting nature, or 'social benefits' (see Box 29) for much the same reason as they seek to quantify happiness in the context of human welfare. Both are based on the recognition that direct economic benefits (employment, access to goods and services) do not encompass all forms of value. The social quality of life of people living in deprived communities is as much a cause of concern to policy-makers, funders and charities as their ability to secure jobs, healthcare and education.

Similarly, if people place a non-economic value on nature, this should be taken into account in the policy context. Such judgements are commonly found in planning decisions, where the concept of 'contingent valuation' is used to estimate the value of 'non-market' uses. For example, residents in a coastal area of natural beauty might object to buildings that obscure or otherwise detract from natural value.[231]

The dependence of the human world on the natural world is undeniable.

Economic and aesthetic reasons for conserving nature and the work of charities

Both economic and aesthetic reasons underpin the work of conservation charities, to varying degrees: sometimes they are firmly intertwined; sometimes a charity will emphasise economic reasons at the expense of aesthetic ones, or vice versa. **BirdLife International** and the **Wildlife Conservation Society** are carrying out projects to protect rare bird species in the forests of the Congo for no clear economic reasons, but their work is still important. There are many conservation

** In his 1972 book, Conserving Life on Earth, David Ehrenfeld argued that: 'The non-humanistic value of communities and species is the simplest of all to state: they should be conserved because they exist and because this existence is itself but the present expression of a continuing historical process of immense antiquity and majesty. Long standing existence in Nature is deemed to carry with it the unimpeachable right to continued existence.'*[230]

Box 30: At what rate is biodiversity decreasing?

We cannot be precise about the overall scale of the change, since it is estimated that science has only identified some 10% of the species on Earth. But we can say that the majority of species across a range of different categories such as amphibians, farmland birds, and Carib-bean corals are declining in abundance or in the area occupied by their populations.

Some 12% of birds, 25% of mammals, and at least 32% of amphibians are threatened with extinction over the next century.

Although actual disappearance of a recognised species is quite rare in terms of human time scales, it is estimated that human changes to ecosystems may have increased the rate of global extinctions by as much as 1,000 times the "natural" rate typical of Earth's long-term history.

Source: Millennium Ecosystem Assessment.[8]

charities with highly specialised programmes focusing on a single family or order of animals, such as **Save the Rhino International**[232] and **BlueVoice**[233] (dolphin and whale conservation). On the other hand, **Wetlands International**'s work to restore wetlands in Asia fulfils both rationales, restoring a beautiful ecosystem that is under threat in the region while providing local communities with work and increased tourism.

Charities working within a single field may still differ over their reasons for doing so: charities such as the **World Rainforest Movement**, **Conservation International**, **WWF**, the **Forest People's Programme** and the **Rainforest Action Network** are motivated to conserve forests for a range of reasons, including the belief in their priceless beauty, or because they provide sustenance and livelihoods for local and indigenous peoples, or because of the potential medicines (and profits) yet to be found in tropical plants.

The 1990s saw some biodiversity conservation charities begin to consider the relationship between economic and aesthetic valuations of nature. The WWF, for example, started to develop integrated conservation and development programmes (ICDPs), which addressed the social and economic needs of communities or indigenous people, along with local environmental issues.

From the perspective of donors and funders, both schools of thought need to be recognised and understood. Otherwise a distorted perspective might govern key decisions. A case in point is the role of biodiversity protection in poverty alleviation programmes. While there are many examples of projects where livelihoods are enhanced by biodiversity protection, it is important that this dual result is not overstated. In some instances poverty alleviation is minimal or entirely absent. When this happens, the case for doing the project could still be valid in biodiversity terms.

Problems and challenges

Background

The world's species are dynamic and evolving. The birth of new species and the extinction of others is an intrinsic feature of ecological life. Before human history, planetary events and phenomena—global warming and cooling; eruptions from earthquakes and volcanoes; asteroid and comet strikes; tectonic movements in the Earth's crust—all had impacts on natural ecosystems and their biodiversity. Over the last 50,000 years, humans have themselves made significant additional impacts on the natural world, largely through the conversion of forests, grasslands, wetlands and other ecosystems for the harvesting of crops and urban expansion.

Until the 1600s and 1700s, most large-scale modifications in the composition of habitats and biodiversity took place in temperate areas in Europe, North America and Asia. Since then, the process has been repeated across tropical, sub-tropical and boreal regions, spurred by the demand for coffee, sugar, timber, oil and other commodities that fuelled the colonial age and continues to define north-south relations to this day.* The consequence is that threats to biodiversity have substantially increased, because the tropical and sub-tropical regions contain a greater number of species than anywhere else on the planet. In the last 50 years, activity has intensified greatly, leading to the accelerated loss of habitats and species.

Human modifications to the landscape have led to much local extinction through recorded time, from the disappearance of the wolf and the bear from Britain and lions and other big cats from the plains of central China. However, complete extinction of species was until recently mostly confined to island ecosystems where endemism (occurrence of species not found elsewhere) is more marked. Many endemics became extinct during the waves of colonisation that spread out from Europe from the 1500s. Well known instances include the dodo in Madagascar and the flightless birds of New Zealand.

Anthropogenic (human-induced) drivers of biodiversity loss

The Millennium Ecosystem Assessment (MEA) of 2005,[8] the first comprehensive sourcebook on the current state of ecosystems and biodiversity at the start of the twenty-first century, shows that human activity is almost exclusively causing rapid ecosystem and biodiversity change (see Box 30 and 31). The MEA finds that the main drivers are:

- **Habitat destruction**

Agricultural land is expanding in about 70% of countries; forest cover has declined by 40% in

historical times, of which 4.2% has been felled or degraded since the 1990s. Many habitats have become fragmented, leading to pressure on migratory and mobile species that need large territories.

• **Introduction of alien species**

Humans have been introducing animals and plants to new areas for thousands of years, but improvements in transportation and the globalisation of trade have increased introductions. Invasive species can have a major impact on native biodiversity, by acting as direct predators, as competitors, as vectors of disease, or by modifying the habitat. An example is the water hyacinth, a freshwater plant. A native of the Amazon basin, it has invaded more than 50 countries in five continents. First sighted on Lake Victoria on the borders of Uganda, Tanzania and Kenya in 1989, water hyacinth now covers 90% of the lake's shoreline, causing competition for oxygen with native plants, fish and frogs, leading to asphyxiation and the massive loss of animal and plant life.

• **Over-exploitation**

Among the most commonly over-exploited species or groups of species are marine fish and invertebrates (such as Atlantic salmon, Mediterranean bluefin tuna and cod), trees, animals hunted for bushmeat (including gorillas, chimpanzees and other apes), and animals harvested for the medicinal and pet trade (tigers and rhinoceroses).

• **Disease**

As with alien species, globalisation and increased international travel facilitate the spread of pathogens. An example is the 20% decline of the lion population in the Serengeti in Tanzania, caused by the canine distemper virus, transmitted to wild carnivores from domestic dogs introduced by the local communities around the park. Infectious disease is also a serious problem in aquaculture. When infected farm fish escape, they can transmit diseases and parasites to wild stock.

• **Pollution**

Many threats to biodiversity are traceable to pollution, especially in the oceans and as a result of the application of fertilisers and their consequent contamination of freshwater systems.

• **Climate change**

Climate change will have the greatest impact on species that live within limited climatic ranges and isolated or small populations, or have restricted habitat requirements.

Ecosystems and biodiversity in the UK

There are differing perceptions of the state of UK biodiversity and countryside; and the lack of consensus may in itself be the major challenge for funders and charities working in this area. Many people argue that the UK has one of the best protected natural environments in the world; and it should therefore not rank high in policy or philanthropy priorities.

Box 31: Biodiversity in the 21st century

"Extrapolation from current trends suggests that both the amount and variability of nature will continue to decline over much of Earth. The exception is likely to be in some industrial countries, where forest cover may continue to increase and, with it, the population sizes of many forest-dependent species. In contrast, clearance of natural habitats, reductions of populations, and the associated loss of populations and indeed species looks set to persist and even accelerate across much of the tropics and across many if not most aquatic systems. Particularly vulnerable areas include cloud forests, coral reefs, mangroves (threatened by the synergistic effects of climate change and habitat clearance), all but the very largest blocks of tropical forest, and most freshwater habitats. Particularly vulnerable taxa include large marine species, large-bodied tropical vertebrates, and many freshwater groups."

Source: Millennium Ecosystem Assessment.[8]

The UK's biodiversity and countryside have improved in the last couple of decades. Biodiversity declines have been halted for a range of species, and the rate of loss of habitat has slowed. For example, UK wild bird populations appear to be stabilising after 20 years of progressive decline.[234]

Offsetting these successes are concerns over many plants and insects that are integral to a healthy natural environment. Based on research funded by the Esmée Fairbairn Foundation, the UK charity Butterfly Conservation found that two thirds of UK moths studied over a 35-year period (226 species) show a decreasing population trend.[235] There is also a large body of evidence indicating that the absence of legislation to protect the UK marine environment has resulted in species declines and deterioration in ecological health (see Section 5 for coverage of the forthcoming Marine Bill).

The picture worsens when comparisons are made with pre-Second World War Britain, the period that preceded expansion of the national road network, growth of towns and cities and the adoption of industrial approaches to

Photograph supplied by Stuart Crofts/Buglife

Saving the UK's endangered invertebrate species from extinction, such as this iron blue mayfly, is far less popular among donors and funders than international causes to protect large mammalian species, such as the tiger or rhinoceros.

agriculture. In *Trees and Woodland in the British Landscape,*[236] the environmental historian Oliver Rackham notes that as much ancient woodland was lost or damaged between 1946 and 1975 as in the previous 400 years.

Policy challenges

The absence of biodiversity targets within the Millennium Development Goals (MDGs) is a barrier to greater progress on the integration of biodiversity priorities into development strategy. For more on this topic, see Section 4.3. The international agreement on biodiversity—the Convention on Biological Diversity (CBD)—has been influential in some respects but implementation has been uneven and limited, especially in biodiversity-rich tropical countries. (See Section 2 and Appendix II.)

There appears to be little chance that the 2010 Biodiversity Target[237] to halt biodiversity declines will be met. However, the thinking and frameworks of the CBD have been influential in some contexts. The UK's Biodiversity Action Plan (BAP) owes much to the CBD, and has been highly influential as the driver of UK government biodiversity funding and strategy.

Charitable responses

Origins and funding

Charities in the UK and the US began work to protect their domestic habitats and species over a century ago. The two initial strategies—protection of habitat through the creation and management of nature reserves and parks, and projects to conserve particular species—are still core approaches today, and have been extended since the 1960s into substantial international programmes.

In the US (but not the UK), family foundations and individual donors have emerged as substantial funders of conservation in the last two decades.

These origins have shaped a charity landscape quite different from other parts of the sector. On both sides of the Atlantic there are a small number of established larger charities— such as the **WWF**, **Greenpeace**, **Fauna and Flora International** and **BirdLife International**—specialising in habitat and species conservation, sometimes purely in the domestic or international context, sometimes in both. Subscriptions and donations from members and supporters provide a strong income stream, especially for the oldest charities. In the US (but not the UK), family foundations and individual donors have emerged as substantial funders in the last two decades.

Substantial resources are provided by governments in the US and across the EU, reflecting the compliance cost of extensive legislation, including the US Endangered Species Act (1973), the UK Wildlife and Countryside Act (1981) and the EU Habitats Directive (1992). These funds are accessible to charities through a number of routes, including Big Lottery Fund and landfill grants, EU programmes and (in the US) through tax incentives for land purchase, as well as direct grant and contract funding from a plethora of government departments and agencies.

However, the overall supply and demand of capital is significantly unbalanced. As we have seen above, the need for action is most urgent in tropical regions, yet almost all governmental funding is only available for domestic activity. In principle, the Global Environmental Facility (GEF) and bilateral donors are the sources of governmental capital for international work; but as we saw in the previous section, there are problems with the integration of environment into development assistance—and GEF grants, like World Bank loans, are largely channelled through governments in developing countries. The consequence is fierce competition for the limited amount of international governmental funding, and widespread reliance on unrestricted funding from members and supporters, especially for UK-based charities.

Activities

What do ecosystems and biodiversity charities do? The acquisition and management of nature reserves and parks, and projects to conserve species are core activities. They probably account for the largest proportion of expenditure, but a lack of data on allocation of resources makes this hard to verify. Within protected areas budgets, the majority of funds are likely to be earmarked for management costs rather than land acquisition, because most protected areas are owned by governments rather than private organisations. But again, this must remain a supposition in the absence of reliable information.

The dominance of these activities can easily lead to the assumption that making a donation will help to fund the salary of a wildlife ranger. In some cases it will. But the reality is that ecosystems and biodiversity charities employ a wide range of approaches in their work. These include: policy advocacy and campaigning; research and capacity building of local charities in developing countries; work on wildlife crime, trafficking and trade; habitat and species monitoring; endangered species conservation *in situ* and in zoos, botanic gardens and aquaria; educational programmes in schools and natural history museums; and sustainable livelihoods projects, ecotourism and biodiversity businesses.

Another easily made assumption is that all of the activity is carried out by larger charities. As in several other areas of the sector, there are a large number of small and medium-sized organisations. Many are specialised in some way, either through focus on a local area, or on a particular species or group.

Table 11: Some charities specialising in ecosystems and biodiversity [a]

International	
BirdLife International[238]	Global partnership of national organisations (RSPB is the UK partner), with a focus on management of key bird biodiversity areas.
Born Free[239]	Takes action worldwide to protect threatened species and stop individual animal suffering. Believes wildlife belongs in the wild and works to phase out zoos.
Conservation International (US)[240]	One of the largest environment charities, with a focus on management of key biodiversity hotspots worldwide.
Environmental Investigation Agency[241]	Campaigning and investigative charity that exposes environmental crimes. Two of three main programmes are on threatened species and forests.
Fauna and Flora International[27]	World's longest established conservation charity, runs many species and habitat conservation projects, particularly in Africa, and increasingly in the Americas, Asia-Pacific and Eurasia.
World Conservation Union (IUCN) (Switzerland)[b][242]	Multi-faceted global organisation working on species conservation, policy lobbying, partnerships with business, protected area management.
RARE (US)[243]	Equips local conservationists with media, marketing and business tools to mobilise community support. Operates in more than 40 countries.
Taiga Rescue Network (Sweden)[244]	Supports local groups and conservation across the belt of coniferous dominated forest (taiga) encircling the Northern hemisphere—one third of the world's forests by area.
The Nature Conservancy (US)[245]	Large charity focused on habitat and species protection in the US and globally, often through land purchase.
Wetlands International (Netherlands)[215]	Exclusively focused on wetlands worldwide (eg, Mekong River Basin), strong activity in Asia and Africa, based on sustainable livelihoods approach.
Wildlife Alliance/Wild Aid (US)[246]	Aims to end illegal wildlife trade, by campaigning and on-the-ground work to investigate crimes and training of rangers and enforcement teams.
Wildlife Conservation Society (WCS) (US)[138]	Based at the Bronx Zoo in New York, WCS has expanded in recent years, and is now one of the largest charities. Works globally, focusing on protected areas and species management.
World Land Trust (WLT)[228]	Founded in 1989, WLT purchases and protects key habitats around the world, and helps build capacity of local communities to manage them.
World Resources Institute (US)[247]	Think tank and advocacy organisation that works in partnership with many leading charities as an information and research provider.
Worldwide Fund for Nature (Switzerland)[216]	Global charity that operates across all environment issues, with a strong habitat and species conservation/sustainable livelihoods focus.
UK [c]	
Bat Conservation Trust[248]	National organisation that runs habitat and species conservation projects, monitoring, education programmes and advice to house owners.
British Trust for Conservation Volunteers[249]	Operates a wide range of projects where volunteers contribute to biodiversity protection, sustainable communities and ecotourism. Originally UK only, now also working worldwide.
BugLife—The Invertebrate Conservation Trust[250]	Founded in 2002, BugLife is the first conservation organisation in Europe to focus exclusively on invertebrates.
Butterfly Conservation[251]	National charity working on all aspects of butterfly and moth conservation, including some reserves.
National Trust[252]	Works to protect the coastline, countryside and buildings of England, Wales and Northern Ireland. Has 3.4 million members.
PlantLife[253]	Founded in 1989, works in the UK and internationally to protect wild plants and their habitats, through policy and advocacy, reserves and field projects.
Royal Society for the Protection of Birds (RSPB)[135]	Works to protect wild birds in the UK through habitat and species protection (including many reserves), education, scientific research, policy lobbying and many other approaches.

UK (continued)	
Wildlife Trusts[(d)254]	Locally based habitat and species conservation across the UK. Collectively, the trusts represent one of the largest environment charities.
Woodland Trust[255]	Leading charity focused on woodland conservation, protecting 1,100 sites, many owned by the Trust. Also runs a range of education projects.

Notes:

a) Unless otherwise stated, charities are UK-based. This is far from a comprehensive list of charities working in this area. Many organisations noted in other sections also work on these issues (eg, Oceana, Greenpeace and Friends of the Earth). There is no comprehensive registry of ecosystems and biodiversity charities, but a good starting point for those wishing to explore this field is the *World Directory of Environmental Organizations,* now available online.[256]

b) UCN is technically neither an inter-governmental body (IGO) nor a non-governmental organisation (NGO). IUCN's network brings together 82 states, 111 government agencies, more than 800 NGOs and some 10,000 scientists and experts from 181 countries.

c) Some charities listed also work internationally, as noted.

d) The Wildlife Trusts comprise 47 separate trusts, 36 of them in England (largely based on the old county boundaries, or small groupings of them), with a single Trust covering Scotland; six in Wales, plus Trusts for Ulster, the Isle of Man, Alderney and the Isles of Scilly. A separate charity, the Royal Society of Wildlife Trusts (RSWT) operates as an umbrella group. RSWT is also a significant grant-maker, through its role as distributor for landfill tax credits, and some Big Lottery Fund and Heritage Lottery Fund programmes.

Box 32: Three successful conservation projects

Flower Valley Project, South Africa[3]

Flower Valley Farm was purchased in April 1999 by the Flower Valley Conservation Trust (FVCT) with help from Fauna & Flora International's Arcadia Fund. FVCT is a social enterprise, which aims to achieve sustainable livelihoods for employees and other local peoples through a biodiversity business, cultivating wild flowers for sale throughout the region, and for export. Harvested flowers are supplied to many retail outlets around the world, including Marks & Spencer (M&S) in the UK. Supply to M&S has been helped by the Shell Foundation, which is working in partnership with the retailer to introduce sustainability into the supply chain.

Research is helping to achieve the optimum balance between conservation and sustainable use. There are environmental guidelines for the harvesting of the wild growing flowers and greens, to guard against over-harvesting or picking of threatened species.

Flowers are also provided from a supply network of privately owned farms and state conservation areas covering 20,000 hectares, mostly based in the threatened Agulhas Plain. Without this income these farmers would have to seriously consider sacrificing the natural flora for other agricultural uses. In order to prevent this, FVCT's strategy is to improve the market positioning of wild harvested fynbos (shrubland vegetation), using eco-labelling to add value, gain market access and a price advantage.

International Gorilla Conservation Programme, Africa[42]

In the late 1970s, the Fauna & Flora Preservation Society (now Fauna and Flora International) launched a fundraising campaign for mountain gorillas in Central Africa, in response to a letter from Dian Fossey on the alarming fall in gorilla populations from poaching. The campaign was remarkably successful, and mountain gorillas achieved international visibility.

Today, there are now more gorillas and the local economy is benefiting from tourism. Throughout the programme's 30-year history, there have been many difficulties and struggles to maintain protection. Throughout, the role of private donors has been critical, especially during periods of civil instability and turbulence.

Community Turtle Conservation Project, Costa Rica[56]

This project, run by a local NGO called ANAI, provides a revenue stream for villagers on the Caribbean coast of Costa Rica by bringing in volunteers to protect turtles in the breeding season. Volunteers stay with local families on a B&B basis. Income generated per family is approximately $10,000 per annum, significantly greater than can be earned as a worker in a banana plantation, which is the principal employment opportunity in the region. As a result, the black market trade in turtle eggs (which was driven by the need to supplement household income) has declined, and turtle populations are recovering.

Achievements and prospects

It is easy to identify specific achievements of ecosystems and biodiversity charities. Flower Valley in South Africa, gorilla conservation in the Virungas in Africa, and protecting turtles in Costa Rica are all examples where the impact has been positive and tangible (see Box 32). Assessing which approaches or interventions are proving most effective, and looking at the overall impact of charitable activity on a bigger scale (for example, in West and Central Africa) is far more difficult. Some of the toughest questions are connected with protected area strategies, especially in the tropics. What evidence do we have of success, in conservation terms? Are habitats and species thriving more than they would have done if left in an unprotected state? These questions are tough in large part because a lot of time needs to elapse in order to assess ultimate impact, perhaps as much as several decades. Meanwhile, donors and funders need to decide whether to start or continue providing support.

Another challenging topic is the extent to which biodiversity conservation (both inside and outside protected areas) can truly be beneficial to local human communities. As we noted in the previous section, there has been a growth of sustainable livelihoods projects, many of which are clearly achieving a degree of success in protecting the natural environment while at the same time boosting economic prosperity. But is this balance being achieved across the board? Are biodiversity projects sometimes harmful to local communities, and vice versa?

In this report we do not aim to provide a full examination of these issues and questions, which require a separate and substantial piece of research to do them justice. Instead, we give a brief summary of some of the points that donors and funders might wish to

consider, together with a few examples of UK and international projects.

Charities' activities fall into five key areas:

- the creation and extension of protected areas;
- the restoration of habitats and species;
- policy development and public campaigning;
- research into the current state of ecosystems, and the sharing of knowledge; and
- localised, 'on-the-ground' projects, which often involve working with local communities.

Protected areas

Before the 1960s, most nature reserves and parks were created in the developed world, led by the UK and the US. Since then—and in particular since the formation of Conservation International as a major force in international biodiversity conservation in the late 1980s—protected areas to conserve the most biodiversity-rich regions have been at the forefront of biodiversity strategy.

As a proportion of the world's landmass, protected areas have increased in size from 5% in 1992 to 12% in 2003. Much of the credit for this can be attributed to the work of The World Conservation Union (IUCN) through the World Parks Congress (held every ten years, most recently in Durban, 2003).

Critics of the emphasis on protected areas point to four problems:

- the lack of a coherent strategy for ecosystem and biodiversity protection in the remaining 88% of the landmass limits effectiveness;
- protected areas probably absorb the bulk of ecosystem and biodiversity funding, perhaps leading to inadequate resources for other approaches;
- lack of evidence that the focus on protected areas is leading to conservation success needs redressing; and
- many areas that are counted as protected are, in fact, inadequately policed and become subject to logging and other incursions (so-called 'paper parks').

On the other side, defenders of protected areas argue that:

- In many countries, strong legislation provides ongoing security for an area with protected area status, thus ensuring that protection occurs.
- Many areas around the world have been successfully protected for decades, some for more than a century, and have thriving ecologies and species diversity. If this result can be obtained, the environmental return on investment is likely to be very great.

Box 33: BirdLife International and the Harapan rainforest, Indonesia

Background

The lowland rainforests in Sumatra are amongst the most biologically diverse in the world, and the most threatened, principally from pressure for timber extraction and conversion into palm oil and pulp and paper plantations. Deforestation rates in the region are some of the highest anywhere. Of 16 million hectares existing at the beginning of the 20th century, only an estimated 2.5 million remained in 1997. Today, only about 500,000 hectares still stand.

New model for avoiding deforestation in Indonesia and the region

To tackle this problem, Burung Indonesia (BirdLife Indonesia) engaged with the Ministry of Forestry in designing a new and innovative mechanism for restoring forest ecosystems. A new category for production forest was created—the 'ecosystem restoration' concession. The aim is to revolutionise the current logging cycle, in which forest is cleared, burned and converted to plantations. The ecosystem restoration concession introduces a new tool for the long-term utilisation of forest resources, preventing deforestation and change in land use of sensitive and high-value forested areas. At the same time, regulations were amended to enable coalitions of charities to take on full responsibility for the management of restoration concessions.

The Harapan forest

The Indonesian Minister for Forestry issued the decree enabling restoration concessions in 2004, and in February 2006 the BirdLife Alliance won the bid for a licence to operate a concession on an area of 101,355 hectares—about the same size as Greater London. BirdLife has named the area Harapan, which is Indonesian for 'hope.' In January 2007 the Indonesian Parliament incorporated the restoration concession into forest law. Licenses are for 100 years.

Harapan supports a wide variety of wildlife. Preliminary surveys have already revealed 37 mammal species, as well as an amazing diversity of plant and tree species. There are 62 threatened species in total.

Ecosystem services and greenhouse gas emissions

Rainforest ecosystem services generated by Harapan include water regulation, flood control, soil formation and prevention of soil erosion, timber and fuel wood, fibres, bio-chemicals and a formidable pool of genetic resources. On climate change impacts, it is estimated that 20% of all global greenhouse gas emissions come from deforestation and forest fires. In recent reports including emissions from forest fires, Indonesia ranks third in the list of the world countries responsible for CO_2 emissions. The protection of Harapan rainforest thus has a clear benefit in terms of greenhouse gas emissions.

Working with local people

The indigenous people of central Sumatra traditionally followed a semi-nomadic lifestyle in the island's forests. In the past, they gathered forest products such as rattan, resins and honey from the forest for use in cooking and building, and for small-scale commercial sale. They fished in the rivers, and practised shifting cultivation: burning small patches of forest and cultivating the nutrient-rich soil left behind. They would leave the land to regenerate into natural forest as they moved on to the next patch.

Very few native people are still able to follow this lifestyle due to the pressure of deforestation and development all around them. There are about eight indigenous family groups living within the proposed boundaries of the Harapan Rainforest, and others on the forest's edge. Harapan provides an opportunity for them to preserve aspects of their forest-dependent lifestyles. Burung Indonesia will work closely with community-based organisations around the area to facilitate local communities' input into forest management and to make sure they benefit from the initiative.

Management and finance

The annual management cost for Harapan is estimated at $650,000. The challenge is to secure funding for the long term, and the BirdLife Alliance is therefore seeking to establish capitalisation of a fund to achieve this.

Source: BirdLife International.

Box 34: Great Fen Project, Eastern England, UK

The Great Fen Project aims to restore over 3,000 hectares of Huntingdonshire fenland habitat to create a very large site with conservation benefits for wildlife and socio-economic benefits for people.

The project aims to combine nature conservation and management with tourism and other income-generating activities. It could also play a strategic role by storing winter water for the homes, farms and businesses that depend on the system.

The project aims to achieve its goals in three main stages. Each stage will be a worthwhile target in its own right. When the project is complete, the area will be enhanced to the extent that new species will breed there. The Great Fen Project is managed in partnership by Natural England, the Wildlife Trusts, Huntingdonshire District Council and the Environment Agency.

Stage 1: Restore Woodwalton and Holme Fens to favourable conservation status

Significant alterations took place during 2002–04 to remove invading scrub and trees and to install better visitor facilities such as new bird hides.

Stage 2: Connecting Woodwalton Fen to Holme Fen

Joining these two sites together will remove the barrier that arable land presents to less mobile invertebrates and plants. The large area that will be created will provide more space for habitats and species and will enable a network of paths and watercourses to be developed. This will create a nature reserve of roughly 1,500-2,000 hectares, which would be one of the largest in lowland England.

Acquisition of land is likely to be the most cost-effective way of achieving the project's goals over the long term, and the project will therefore seek to acquire land as and when it comes on the market, or when farmers indicate an interest to negotiate with the project. If the project has funds, it will approach landowners to initiate discussions. As land comes up for sale, the project will seek to acquire external funds to help with land purchase. The project can receive funds from sources such as Big Lottery Fund, but requires matched funding for this purpose.

Stage 3: Enlargement

The final stage is to enlarge the reserve to roughly 3,700 hectares and develop infrastructure such as visitor centres, boat moorings and cycle paths. The sheer size of the resulting reserve will ensure the future of this internationally important site. It will also provide an attraction for tourists from abroad.

Source: The Great Fen Project.[49]

- Advances in habitat and species conservation management in the last 50 years provide many protected areas with a high probability of achieving the best result—the widest and healthiest biodiversity possible in that ecological and geographical context.
- Even in countries where protected areas legislation is weak, and ensuring adequate policing and management is challenging, it may still be possible to achieve protected areas success, if the sponsoring organisation (eg, a charity) has sufficiently strong in-country standing, reputation and capacity.
- There can be strong social benefits, through the many millions who visit protected areas annually to enjoy wildlife and wild places, and local economies can benefit economically through ecotourism revenues.
- It may also be the case that creating a protected area—although only a partial solution to the problem of conserving a whole ecosystem—is also the best available short-term option.

Restoration

Improvements in conservation science mean that restoration of ecosystems and habitats, and re-introductions of species are now possible in many areas. This is a very exciting field, providing many opportunities for funders to support improvement to the natural environment, rather than simply halting deterioration (see Box 34 below for a profile of the **Great Fen Project**). Some commentators are advocating large-scale restorations at 'landscape-level', particularly in the EU where the Habitats Directive provides a strong legislative framework. For example, there are outline plans for a possible European Wild Land Network.[257]

Wildlife conservation charities in the UK have had a lot of success in small-scale restoration projects around the country. **The Wildlife Trusts**[254] is a coalition of 47 Wildlife Trusts working to undo the damage done to local ecosystems by industry and inappropriate development. **The Royal Society for the Protection of Birds (RSPB)** is also involved in the restoration of habitats. Since it bought 17,600 acres of peatlands in the Flow Country in Northern Scotland, the RSPB has worked to remove coniferous plantations and install drains to dry the land for grazing.[135] On the international scale, **BirdLife International** carries out some impressive restoration projects in the tropics (see Box 33).

Environmental charities have also managed to reintroduce species that were once forced to extinction. The reintroduction by the UK charity **Fauna & Flora International (FFI)**[27] of the Arabian oryx to Oman in 1982, ten years after the last wild oryx was shot, is one famous example of success.

The oryx—a large antelope—is still listed as an endangered species, however, and poaching and the wildlife trade have continued to threaten its recovery. The practical work of restoring ravaged ecosystems and reintroducing endangered species is just the first step to achieving success in conservation. As long as threats such as poaching, pollution and unsustainable development remain, there will always be a role for charities in policy work.

Policy

How much success is being achieved at the policy level? At first sight, progress appears to be limited, largely because the Convention on Biological Diversity has not been implemented in many key biodiversity-rich nations. But as we noted earlier, framing success or failure in absolute terms can lead to tangible achievements being overlooked. The situation is no different in many areas of human welfare, where charities are working at the policy level to end poverty and deprivation. Resolution of these problems is not in sight. This does necessarily imply that policy activity has been fruitless.

One area where there has been demonstrable progress in the biodiversity arena is the regulation of wildlife trade (see Box 35). More coverage of the role of charities in environmental policy is given in Section 5.

State of research and guidance

Is progress being made on measuring biodiversity success? In the UK, the Cambridge Conservation Forum (CCF),[258] supported by funding from the MacArthur Foundation, is developing a framework that will be very useful in the conservation field. And the Species Survival Commission (SSC)[259] and the World Conservation Monitoring Centre (WCMC)[260] play important roles on species and habitat conservation measurement respectively (see Section 5). Given the immense complexity of global ecology, measurement of success will continue to be a major challenge. Examining existing data, however fragmentary, is infinitely preferable to no analysis.

Concern about success measurement may, however, be missing the point. A greater worry is the absence of public debate over biodiversity strategy. If strategies are not working, no amount of impact measurement will make things right. Yet little analysis and guidance on this front is in the public domain. How might it be possible to end deforestation in Indonesia? What is the best available plan for protecting the vast West and Central African rainforests? Is there a realistic strategy for halting the decline of fish populations? These are critical issues, on which there is little analysis and guidance in the public domain. The think tanks and research organisations active in biodiversity seem to avoid these tough issues, electing instead to create information resources and provide detailed research on particular on-the-ground projects and activities.

As a consequence, policy guidance is poor, leading to marginalisation of biodiversity and ecosystem issues at the policy level. The situation is exacerbated by the publication of key scientific contributions in learned journals, which are not accessible to many.

Box 35: International policy and the illegal trade in wildlife

Since the 1970s, two principal organisations have been working to monitor the international trade of endangered species: the Convention on International Trade on Endangered Species of Wild Fauna and Flora (CITES)[10] and TRAFFIC.[21] CITES was founded by the IUCN to monitor, regulate and minimise the trade of endangered flora and fauna and their products.

TRAFFIC was also set up by the IUCN, with the WWF as a co-founder, to boost the effectiveness of the CITES scheme. Between them, the two organisations conduct research in the trade of endangered species; raise awareness among consumers, and train customs authorities in identifying illegal products; and develop, implement and improve databases for tracking the trade of illegal goods.

CITES is both an international agreement between governments, and an organisation. Although CITES is legally binding on the signatory countries, it does not take the place of national laws. Rather it provides a framework to be respected by each country, which has to adopt its own domestic legislation to ensure that CITES is implemented at the national level.

Successful reduction in the wild cat trade

All wild cats were placed on the CITES register in 1975, alongside a complete ban on international trade of all large cat furs, including tiger, leopard, and jaguar, and many of the smaller South American species. CITES began collecting trade figures from governments in 1978. By 1993, trade in all wild cat furs had dropped to 12,000 per year, compared with 450,000 in 1978.

The vast majority of fur traded is now legal, with only one spotted cat still threatened by the illegal (and therefore unregulated) trade of its skin: the leopard cat of China. Only one big cat, the tiger, remains threatened by trade, through the use of its bones and organs in traditional Chinese medicines.

Failure to eliminate trade in rhinoceroses

African and Asian rhinoceroses are highly sought after for use in traditional medicines, potions, and ornaments. The illegal trade in rhino horns to the Far East for medicine, and the Middle East for dagger handles is largely responsible for the rhino's steady decline.

All species of rhino were completely banned from international trade by CITES in 1977. This appears to have had insufficient impact. Black rhino populations have plummeted from an estimated 65,000 to 2,400 in the past 25 years; Sumatran rhino populations fell from 1,000 in 1990 to 300 in 1995. This has led some to suggest, including officials in South Africa (where 70-80% of the world's population of rhinoceros reside), that it would be more effective to make the trade of endangered species (and their products) legal, and therefore capable of being monitored and regulated. This might also increase the economic incentive for local peoples to conserve their local species.

Source: The Effectiveness of Trade Measures Contained in the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES).[62]

Local projects

Returning to the opening points, there is a great deal to be said for immediate, on-the-ground action, because local projects so often show that tangible success can be achieved in a specific context. Looking at local projects is also an important way of not becoming too fixated on one particular model or approach. Quite often, the greatest success happens where different approaches are combined—for example, biodiversity businesses that flourish within protected areas. For further information, see the **Whitley Fund for Nature**,[261] a charity that runs an annual awards scheme for biodiversity projects. **The World Land Trust**[228] also provides access to information on a wide variety of international projects around the world.

Efforts to conserve biodiversity and ecosystems are held back because the arguments for action are poorly framed and presented.

Priorities for donors and funders

Arguments for biodiversity

Efforts to conserve biodiversity and ecosystems are held back because the arguments for action are poorly framed and presented. Funders can help by supporting work to strengthen the case.

The core proposition, advocated by conservation biologists and ecologists, is that biodiversity is a prerequisite of continuing evolution. Allied to this are collateral concepts, such as stewardship of the Earth, planetary ecological health, and the right to life of all living organisms. These are necessary but not sufficient arguments. The case needs to be strengthened on three additional fronts to achieve the shifts in societal attitudes that will underpin more effective global action:

- a much better understanding of the reasons why many millions of people enjoy and value wildlife and wild places (the social benefits);
- the production of a biodiversity and ecosystems equivalent of the Stern review on climate change, articulating the economic case for preventative action, including the calculations to demonstrate the 'market failure,' which prevents us from placing a true value on biodiversity; and
- the conservation strategies that are most urgently required—the geographies, species and ecosystems that should top priority lists, and the action plans that would deliver success.

On all three fronts, available research and guidance is lamentable. Few economists and social scientists seem to have turned their minds to exploration of the social benefits, in the way that they have done on happiness and quality of life issues in human welfare contexts. Yet until our social dependence on nature is proven more obviously, wide backing is unlikely to materialise.

On economic benefits, the extensive literature on valuation of natural assets seems to fall far short of full-blown global cost-benefit analysis. Turning to strategic imperatives, there is no visible sign in the public domain of a comprehensive effort to identify the specific geographies, species and places where work needs to be concentrated. Should the top priorities include the West and Central African rainforests, fish breeding grounds in the Pacific and Atlantic, the wetlands of South-East Asia? Until conservation charities and their supporters sort out a game plan, holders of governmental purse-strings are likely to ask—and rightly so—why they should pour money into a bottomless pit.

A big step forward could be taken within a few years, probably for no more than a few million pounds. The real heavy-lifting (acquiring the baseline scientific evidence) has already been done. A small number of charitable trusts and private donors, backed up by determined and able management teams, could identify and nurture the research institutes and think tanks capable of delivering the data, analysis and guidance that would push the issues to the top of policy and media agendas.

Continuing existing project support

Ongoing support for many existing projects and initiatives is vital. As we outlined in the introduction to this section, there is a temptation to assume that the need is only for new initiatives and projects that take big steps forward to more effective conservation of ecosystems and biodiversity. It may be that there is an implicit assumption in the minds of funders that the 'business as usual' activities of charities working in these areas is already adequately funded.

Our view is that, while new and more ambitious work is certainly required, both on the ground and at the policy level, many important current projects are under-funded, especially in the critical tropical and sub-tropical regions.

Expanding and replicating projects

Boxes 33-35 highlight a range of projects that are already making headway, from forest protection in Sumatra to curbing the illegal trade in wildlife. All are works in progress, where more support from charitable funders can help to ensure their continuation. At the same time, there are likely to be opportunities for expansion and replication. Can **BirdLife**'s work in Indonesia be repeated in other Asian tropical forests? Is there potential to apply the restoration expertise being developed in the Great Fen Project to other areas in the UK, or elsewhere in temperate regions? Is it possible to fund further development of Flower Valley's biodiversity business, and create a network of others across southern Africa?

Management

Managing protected areas, species protection programmes and community projects aiming to develop biodiversity businesses are big challenges, which need to be based on sound conservation science and in-depth knowledge of local culture, politics, economics and geography—especially in developing countries.

Funders need to be satisfied that the management team has got the necessary expertise in place, working effectively towards a clear goal. This might seem to imply a bias

toward the larger charities with adequate operational capacity and a range of specialisations within the employee base. In some instances, this may be true. Negotiating with a national government for the conversion of a logging concession into a protected forest is likely to be beyond the capabilities of most smaller charities.

But this logic is not inexorable. Several biodiversity charities that are now well established **(Conservation International, Environmental Investigation Agency, Wild Aid)** were created by entrepreneurial conservationists leaving existing organisations in order to create new charities where they could put innovative ideas and approaches into action. Funders could be doing more to encourage this trend, perhaps through tendering processes that invite project management applications.

Urgent priorities

Pending better strategic guidance, some areas of need where success can be built upon include:

- Rainforest systems around the world, but particularly in West and Central Africa, Indonesia and Brazil are amongst the most threatened environments in the world, yet are the most biodiversity-rich. Funding rainforest protection can have a triple impact: saving biodiversity, addressing human needs and mitigating climate change by conserving precious carbon sinks.
- Supporting projects that bring biodiversity conservation and economic and social prosperity together will do the most to secure the long-term future for wildlife and people.
- Conservation of marine life is a critical need. The oceans and their treasure trove of fish, invertebrates and other marine life are just as threatened, and even harder to protect. More funding is badly needed, but so is pressure from funders on charities to up their game on the crucial policy battles.
- Habitat restoration projects in the UK and Europe offer exciting opportunities to improve the natural environment, not just to halt declines. When successful, they can lead to re-introductions of species that used to occur in the locality.

Table 12: Funding biodiversity and ecosystems charities: some illustrations

Research and information	
Research paper analysing strategic plans of leading conservation charities	£50,000 funds a six month project
Local projects	
Species conservation project in the West African rainforest	£30,000 funds one year costs
Wetland habitat restoration project in Eastern England	£100,000 funds one year management costs
Management of a large-scale rainforest protection project in Indonesia	£650,000–£1m funds management costs of 100,000 hectares for one year
A local turtle conservation project in the Caribbean	£20,000 funds one year management costs

Photograph supplied by istockphoto.com

Energy, pollution and waste 4.5

Contents of section

Funding priorities

Developing the renewable energy sector is not just a question of government and industry developing infrastructure. Charities often raise issues associated with a new technology that government and industry may have overlooked. They also conduct research into unexplored areas, improving our knowledge of the costs and benefits of the alternatives available and feeding into public debate.

There is also a clear role for charities to play in **energy efficiency and sustainability projects with socially deprived communities,** both within the UK and in the developing world. There are many small charities working at the local level on these issues that lack funding.

The place for charitable funding in waste is less clear. Many large charities involved in waste and recycling in the UK appear to receive a large bulk of their funding from government. In developing countries, the problem is almost the opposite: the weak government regulation has failed to provide space for charities.

Photograph supplied by istockphoto.com

Energy, pollution and waste—these are the inputs and outputs of human life. As the planet's population grows the demand for energy grows, and the amount of pollution and waste increases—contributing to climate change, over-exploitation of natural resources and unsustainable development.

These are formidable challenges. World energy consumption is set to increase by over a half between now and 2030, with fossil fuels powering 83% of new demand. Regulation of pollutants in developed countries has improved air and water quality in many regions, but across the developing world discharges from industry and agriculture are posing serious threats to the natural environment and human health. OECD estimates suggest that waste in the EU will increase by 45% by 2020.

If unchecked, the consequences will be disastrous. Mitigation and abatement strategies need to include a drive for much greater energy efficiency in homes, offices and industrial and domestic products and processes; development of renewable energy sources based on sound environmental cost-benefit analysis; enabling socially deprived communities in developed and developing countries to acquire sustainable energy; reductions in the generation of waste and cleaner disposal technologies; and big increases in recycling rates.

Can charities play a part, or are these issues that governments and businesses are able to resolve? Both the public and the private sector are very active on energy, pollution and waste, with EU directives underpinning extensive regulation in the UK and across the Union. The UK government is providing much stronger funding streams here than it is on some other environment issues, through subsidies for the renewable energy industry and the creation of a number of non-profit organisations that are, in effect, delivery agents for government policy.

Only a limited amount of research has been carried out for this report on the role of charities in tackling energy, pollution and waste problems, and more is needed to reach a comprehensive understanding of the opportunities for donors and funders on these issues. But the initial findings show that charities are clearly helping individuals and communities in the UK to improve energy efficiency, to use renewable energy sources and to reduce waste and pollution. They are also working to highlight just how much remains to be done in the UK and other wealthy nations to tackle these problems. And

in the developing world, lack of regulation and government support give them a strong remit.

On priorities for donors and funders, there is a demonstrable need for more resources to fund research on the environmental costs and benefits of alternatives to fossil fuels. Other areas of opportunity include funding for charitable work in developing countries, and more resources for community energy and waste projects in the UK.

Problems and challenges

Global energy consumption, waste generation and production of pollutants have all increased substantially in the last three decades, largely as a function of the increase in world GDP. Data from the International Energy Agency, the OECD and the EU indicate that, while there has been some success in curtailing and reducing some of the harmful environmental consequences (for example, improvements in biological and chemical inland water quality in some OECD countries), a range of projections show that, in overall terms, these trends are set to continue over the next three decades.

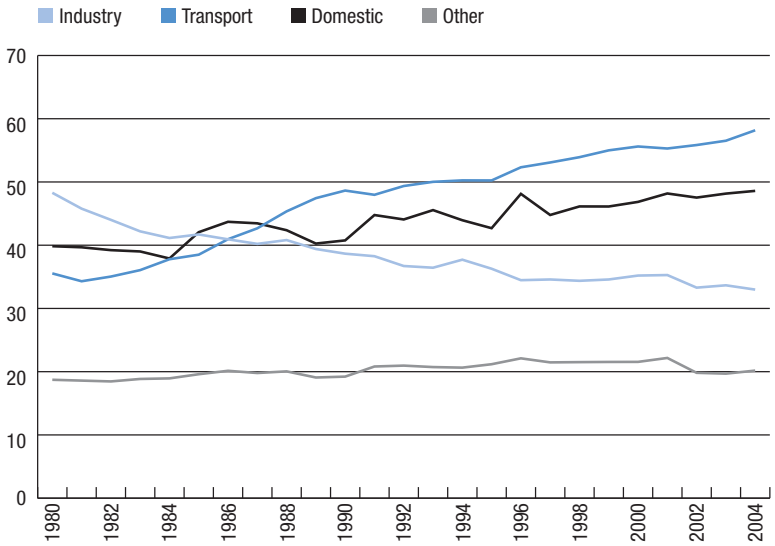
Global energy demand and fuel mix

In its 2006 outlook, the International Energy Agency (IEA) sees global primary energy demand increasing by just over a half between now and 2030—an average annual rate of 1.6%, with demand growing by more than a quarter in the period to 2015.* Over 70% of the increase in demand from now until 2030 will come from developing countries, with China alone accounting for 30%. Almost half of the increase in global primary energy use will go to generating electricity and one-fifth to meeting transport needs—almost entirely in the form of oil-based fuels.

The projection shows global CO_2 emissions increasing by 55% between 2004 and 2030, or 1.7% per year, with power generation contributing half of the increase in global emissions. Overall, emissions are projected to grow slightly faster than primary energy demand—because the average carbon content of primary energy consumption will rise, due to the projected increase in coal consumption. Coal overtook oil in 2003 as the leading contributor to global emissions.

Developing countries account for over three-quarters of the projected increase in global CO_2 emissions between 2004 and 2030, overtaking the OECD as the biggest emitter soon after 2010, and reaching one half of all emissions by 2030.[153]

Figure 18: Final UK energy consumption, 1980–2004 (million tonnes of oil equivalent)[262]



Energy in the UK—sources and consumption

Between 1980 and 2004 energy use for transport increased by 62%, mainly as a result of an 83% increase in road traffic over the same period (Figure 18). Domestic energy consumption rose by 21% between 1980 and 1996; it has levelled off since and in 2004 domestic consumption was 22% above the 1980 level.

Electricity generation is the main driver of energy consumption and the most significant source of emissions of greenhouse gases and air pollutants. Between 1990 and 2003, use of electricity in the UK increased by 23%, while GDP increased by 35%. Fossil fuels (coal, oil, gas) and nuclear are the principal fuels, with renewables accounting for only 4.2% of electricity generation in 2005. Across the EU, the total is higher—12.6% in 2004—due to the impact of hydropower (10.6%). EU electricity powered by wind, wave and geothermal technologies is less than 3% of supply.[263]

Total energy used by home electronics rose by 30% in 1999-2005 (Figure 19), while consumption by 'white goods' (fridges, freezers) decreased by 17%. In absolute terms the main use of energy is for heating—81% of all household energy use.

Waste

Waste is generated by a wide range of activities, including mining and quarrying, construction and demolition, sewage sludge, dredged materials, and commercial, industrial and domestic waste. In the 25 OECD countries, four billion tonnes of waste are generated annually. Within the EU, the annual output is two billion tonnes, of which 700 million is a by-product of agriculture. Between 1990 and 1995, European waste increased by

Developing countries account for over three-quarters of the projected increase in global CO_2 emissions between 2004 and 2030.

** This may be a conservative scenario. A recent report from Lehman Brothers notes that the long-term energy consumption growth rate is 2.5%.*[88]

Figure 19: UK household energy consumption[262]

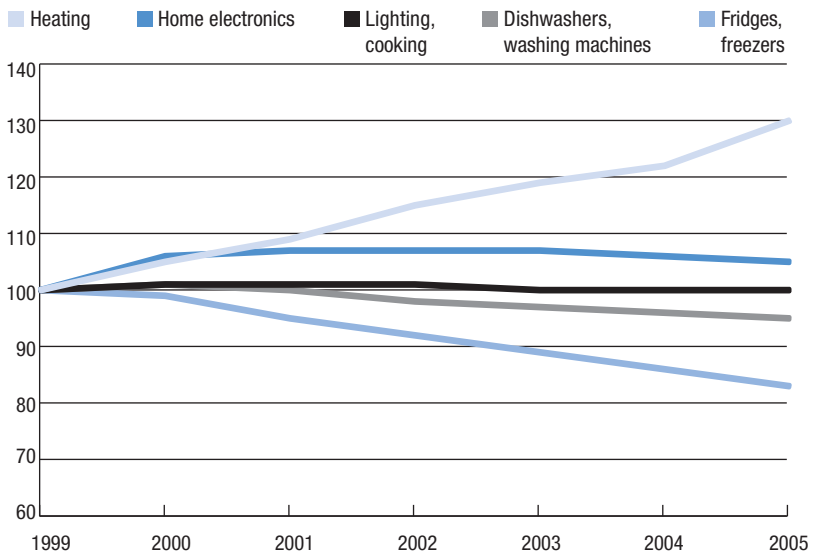
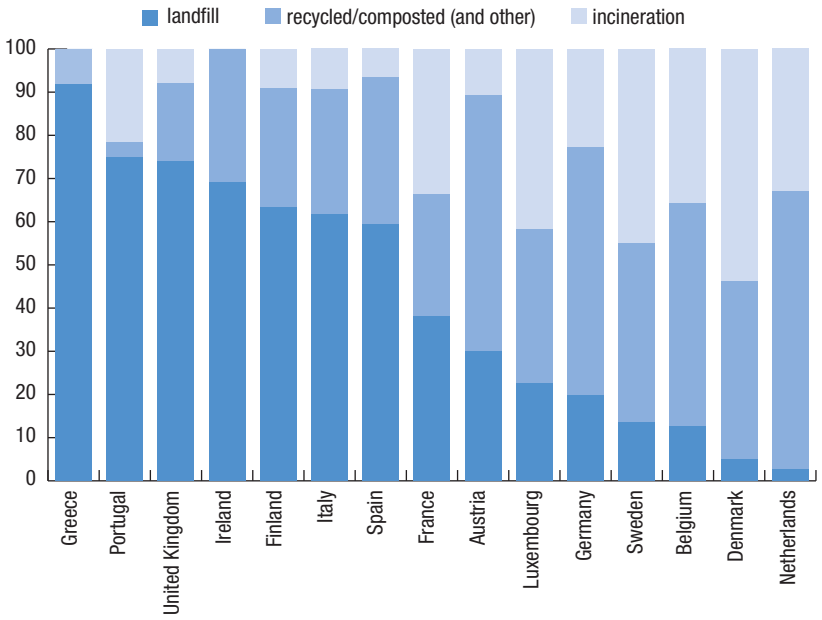


Figure 20: Municipal waste management in the European Union[262]



10%, and if current trends continue this will grow by 45% by 2020, according to OECD estimates.[264]

Much of the concern centres on municipal waste—waste from households, offices, gardens, street sweepings and the contents of litter containers, and chemicals used in cleaning. The definition excludes waste from municipal sewage networks and treatment, as well as from construction and demolition.

A keynote report in 2004 estimated that global municipal waste in 2004 was 1.84 billion tonnes, an increase of around 7% on 2003, with a projected growth rate of 31% by 2008.

The report concludes that the regions facing the greatest waste management challenge are developing economies that have high GDP growth rates and industrial facilities that produce an increasing proportion of the world's goods.[265] Within the EU, 42.6% of municipal waste is disposed of through landfill, 22% is incinerated and 35.4% is recycled or composted (Figure 20). The UK is therefore a poor performer within Europe, recycling only 18% of municipal waste. The vast majority of waste is sent to landfill (74%), with the remaining 8% incinerated.

UK domestic waste

The UK produced 335 million tonnes of waste in 2004, almost one third of which came from mining and quarrying, another third from construction and demolition, and most of the remainder from households, the commercial sector and industry (see Figure 21). Household waste accounts for about 9% of the total (Figure 22), 26.7% of which is recycled.[266]

Global pollution

The scale of global pollution is difficult to assess. Emissions from greenhouse gases are major pollutants that are contributing to global warming (see Sections 2 and 4.1). But other sources of pollution cause harm to the environment and to people, including air pollution from sulphur dioxide, nitrogen oxide and ozone concentrations. Pollution from phosphates and nitrates in inland waters and in the marine environment also impact on biological and chemical water quality. In many developed countries, including the UK, some pollution indicators have shown improvements over the last few decades. But as the *Environmental Performance Index* shows, pollution remains a major problem in many poor and developing countries.[268]

Challenges

As discussed earlier, the need to generate energy from sources that do not contribute to greenhouse gas emissions is one of the great challenges of the twenty-first century—as is the need to manage natural resource use sustainably. Tackling the problems of energy, pollution and waste involves taking action to reduce reliance on carbon and to encourage more sustainable consumption. Some specific challenges are:

- **Energy inefficiency**

Technological expertise and capacity to improve energy efficiency in buildings, industrial and domestic products and processes is ahead of implementation and practice. In the UK, business leaders have called for strengthening of energy-related product and building regulations and greater efficiency across the commercial sector.[269]

- **Developing renewable energy sources**

Although the contribution of renewables to power generation has grown in the UK and other developed countries, it is still a small constituent of the overall energy mix. Within renewables there are clear environmental problems with biofuels, and other options (nuclear power, wind) remain controversial.

- **Access to sustainable energy and the link to social deprivation**

The high current cost of energy efficiency devices and renewable technologies in domestic buildings is a major constraint for many people who wish to reduce their consumption and emissions, especially those living on low incomes in areas of social deprivation throughout developed countries. The problems are even more acute in developing countries, where millions are dependent on charcoal and wood-based indoor cooking that is at once environmentally damaging and harmful to human health.

- **Sustainable waste technologies and recycling**

Disposal of waste through landfill or incineration has negative environmental impacts. The alternative is to recycle. In the UK, 77% of people think that recycling should be made compulsory, according to one survey.[270]

- **Reducing waste**

The best solution is to generate less waste. However, the environmental costs and benefits are often contentious. Cold storage of food, for example, creates an increase in emissions (through refrigeration) but a decrease in waste. Overall, efforts to reduce waste generation are probably being constrained by a lack of clarity on the most effective options.

- **Waste and pollution and social and environmental equity**

The globalisation of world markets has increased the international trade in waste and pollutants, with the result that outputs from the wealthy are often passed to the poor, raising issues of social and environmental equity.

Roles of government and business

In the UK and other developed countries, government is far more dominant as a funder and regulator of energy, pollution and waste issues than in other environmental areas. These are also major sectors of commercial activity.

As noted in Section 3, the EU is the driver of much of the regulation that has subsequently been passed into law in the UK. Directives such as the WEEE (Waste Electrical and Electronic Equipment Directive, which came into force in the UK in early 2007) have a significant impact. Within the UK government,

Figure 21: UK waste by sector[266]

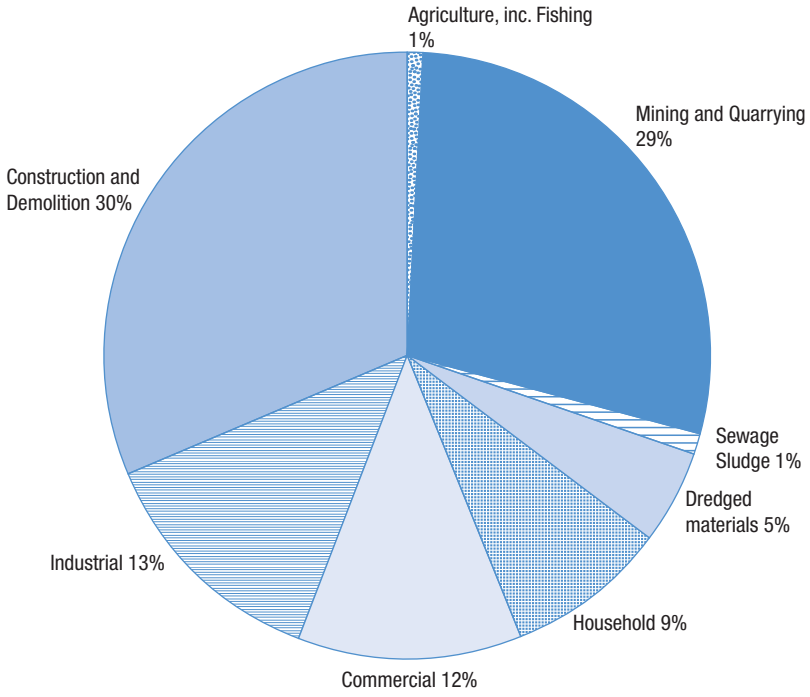
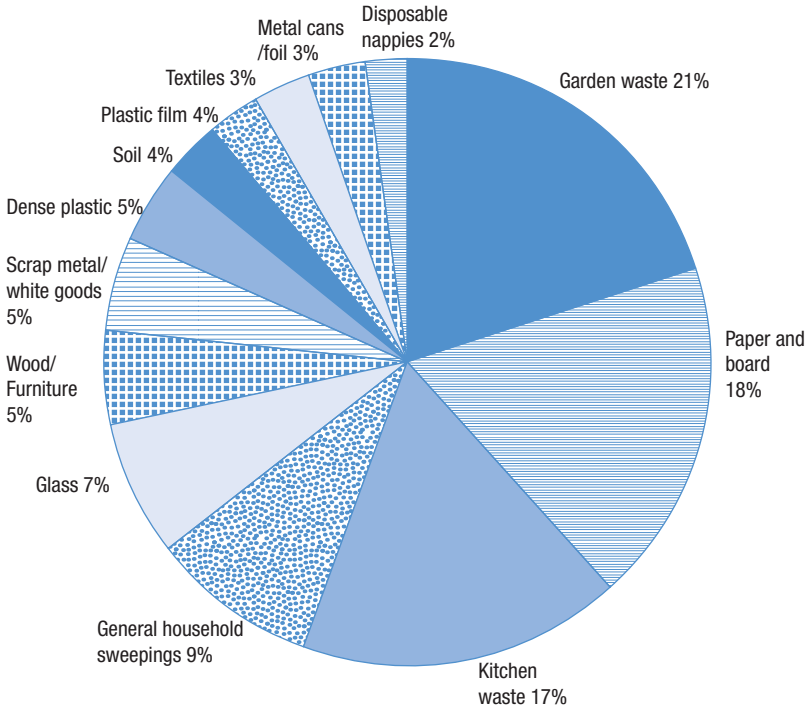


Figure 22: Composition of household waste[266]



Box 36: Sustainable energy and the world's poor

Social costs of solid fuel domestic cooking

- Three billion people worldwide use wood, animal dung and crop waste as fuel for domestic cooking – almost half of the global human population. This is because cleaner fuels – electricity, gas – have not reached vast numbers of people, especially the rural poor, who comprise 70% of the one billion people living on less than $1 a day.
- Indoor air pollution (IAP) generated from solid fuel domestic cooking is a huge social problem, causing the deaths of 1.6 million people each year.
- IAP is responsible for 2.7% of the global burden of disease, making it one of the top ten global health risks.
- This rises to 3.7% in high-mortality developing countries, making it the most lethal killer after malnutrition, unsafe sex and lack of safe water and sanitation.

Environmental costs of solid fuel domestic cooking

- Wood gathered from forests is the principal fuel source for hundreds of millions of domestic stoves.
- Deforestation accounts for 20% of global annual greenhouse gas emissions – more than the entire transport sector.
- Electrification and gasification in developing countries is problematic.
- Conventional large-scale projects to provide energy to the world's poor are capital intensive, logistically daunting, and carry a high potential emissions load from fossil-fuelled power generation.
- Alternatives to fossil fuels are hugely attractive, from economic and environmental perspectives.
- Solar, wind, wave, biogas (harnessing the carbon dioxide and methane released from decomposing manure, and domestic and food waste to produce energy) and other renewables are all options that need to be considered.

responsibility for energy, pollution and waste is shared between the Department of Trade and Industry (DTI) and the Department for Environment, Food and Rural Affairs (DEFRA), with a number of non-departmental public bodies and agencies involved in compliance and service delivery (see Appendix IV). UK domestic waste service collection and disposal is the responsibility of local authorities, with services often subcontracted to private companies.

Government is also much more active as a funder of initiatives to improve energy efficiency and reduce waste than it is on some other environment issues. In direct terms, UK government has provided substantial funding to businesses working in the renewables field. The energy industry regulator, Ofgem, calculates the value of subsidies provided to energy generators under the Renewables Obligation at £740m for the period 2002-2004.[271]

Government is also a major funder in other ways. Since 1997, a number of non-profit organisations have been created that are wholly or largely government funded, as shown in Table 13. Most are involved in the provision of information and advisory services, either to businesses, individual consumers or communities, and sometimes to all three groups. Funding is significant. For example,

Table 13: Energy, pollution, waste: role of UK government and the business sector

Government funded non-profit organisations	
Business Resource Efficiency and Waste Programme (BREW)[272]	DEFRA administered and funded programme. From 2005-08, BREW is returning £284m of additional receipts from increases in Landfill Tax to business.
Carbon Trust[176]	Aims to help businesses and the public sector move to a low carbon economy by reducing carbon emissions and capturing the commercial opportunities of low carbon technologies.
Community Renewables Initiative[273]	Helps communities devise and deliver renewable energy schemes that suit their locality. Funded by the DTI, DEFRA, Natural England and the Forestry Commission.
Energy Saving Trust[274]	Funded by DEFRA, DTI, Department for Transport (DfT) and the private sector, provides energy advice to consumers and local authorities, and runs grant-funding schemes for community heating systems.
Waste and Resources Action Programme (WRAP)[275]	Created in 2000 as part of UK government waste strategy, WRAP makes market interventions to stimulate more recycling and less landfill. Primarily funded by DEFRA.
Industry associations	
British Hydropower Association[276]	Formerly the National Association of Water Power Users, promotes the use of hydropower. Members include manufacturers of all kinds of equipment used in the industry.
British Wind Energy Association[277]	Trade and professional body for the UK wind and marine renewables industries. Formed in 1978, it has 310 corporate members.
Renewable Energy Association[278]	Represents British renewable energy producers and promotes the use of sustainable energy in the UK. Formerly the Renewable Power Association.

the Sustainable Development Strategy committed £192m of funding to the Carbon Trust over the period 2005-2008.[30]

On the business side, trade associations (of producers and manufacturers in various areas of the renewables industry in particular) are also playing a prominent role. These are usually non-profit bodies, with activity funded by corporate member subscriptions.

The Landfill Communities Fund is another source of government funding. Introduced in 1996, (formerly known as the Landfill Tax) the tax is levied on the tonnage of all material disposed of in landfill sites. This has generated considerable revenues, much of which have been passed to charities by ENTRUST, the landfill tax watchdog and distributor. In 2003/2004, £45.4m was donated to natural environment projects.

Charitable responses

Because of the leading roles played in these areas in the UK by government and by businesses, the role of charities and their need for charitable funding is less clear cut than in some of the environmental fields. This largely comes down to the fact that, in many instances, large-scale energy and waste infrastructure projects are simply beyond the financial and operational capacity of the charitable sector. For this report, a limited amount of research on charitable activity in energy, pollution and waste has been carried out, and further work is needed. However, from the evidence accumulated to date, there is a clear remit for charities in developing countries, where there are very extensive problems and limited amounts of government and intergovernmental funding.

In the UK charities are making contributions through research and campaigning on energy and waste strategies, and by helping individuals and communities to improve energy efficiency, use renewable sources, and reduce waste and pollution. Some of the charities operating in this landscape are shown in Table 14.

Achievements and prospects

Reducing emissions from power generation and renewable energy in the UK

Neither the renewables industry nor the non-profit organisations have provided clear guidance in the public domain on the environmental *negatives* of some of the renewable options, notably biofuels and wind power. Issues surrounding the use of alternative energy sources have been raised by several organisations, including **Biofuelwatch**, **BirdLife International** (see Section 4.1), **Yes to Wind**, the **Royal Society for the Protection of Birds (RSPB)** and the **Council for the Protection of Rural England (CPRE)**.

In the case of wind power, there are different points of view within the environment charity sector. **Friends of the Earth**, **Greenpeace** and **WWF** have backed the technology in broad terms, through support for Yes to Wind.[292] RSPB in principle welcomes appropriately positioned wind farms, but in practice objected to 76 wind farm proposals (on and offshore) between 2000-2004, noting that evidence from the US and Spain confirms that poorly sited wind farms can cause severe problems for birds, through disturbance, habitat loss and/or damage or collision with turbines. The RSPB has raised concerns about a further 129, and also recently objected to a proposed 234 turbine wind farm on the Isle of Lewis in the Hebrides.[135] CPRE has also objected to wind farms in a number of cases, on the grounds of detriment to the landscape.[293]

These differing points of view reflect the complexities and challenges of the move from fossil fuels to renewable energy sources. The fact that this shift is desirable does not necessarily mean the solutions are without environmental costs. Charities that point out these difficulties may be lambasted for standing in the way of a cleaner world, but if their objections are based on sound evidence, then they are performing a vital watchdog role. As we have seen in the biofuels debate, the transition to sustainability is as much about avoiding mistakes as adopting the right solutions.

One of the dangers of the debate about renewables is that they are assumed to be a greater proportion of the energy mix than is actually the case. The UK government has a target of generating 10% of electricity from renewables by 2010, with an aspiration to increase this to 20% by 2020. Even if these targets are met (and opinion is divided on whether they will be), that still leaves fossil fuels (largely gas and coal) as the dominant source of most power generation. Is this being managed efficiently? A 2007 report by the WWF maintains that the UK power sector's carbon emissions have rocketed by nearly 30% since 1999 with a rise of 6% in 2006 alone, driven by a return to coal use because of high gas prices, and by increasing electricity demand.[294] An earlier report by Greenpeace (2006) argues that there is a strong case for a more decentralised approach to power generation.[295]

These reports are important contributions to the energy debate. As we have noted elsewhere in this report, the role of charities in 'keeping society honest' is vital. Perhaps this is especially important on energy, because the desirability of moving to energy sustainability may mask actual progress.

A 2007 report by the WWF maintains that the UK power sector's carbon emissions have rocketed by nearly 30% since 1999 with a rise of 6% in 2006 alone.

Table 14: Some energy, pollution and waste charities and projects

UK	
Community Can Cycle[279]	Community Can Cycle was started in 2000 by a group of local people who identified the need for a bicycle repair service for the children of low-income families in Castlemilk, Glasgow.
Community Composting Network[280]	The Community Composting Network supports and promotes the community management and use of waste biodegradable resources.
Community Recycling Network[281]	The Community Recycling Network UK is the national umbrella organisation for community-based, not-for-profit and cooperative waste management groups that work in reduction, re-use and recycling.
Furniture Re-Use Network[282]	The national coordinating body for 400 furniture and appliance re-use and recycling organisations in the UK that collect a wide range of household items to pass on to people in need.
Timber Recycling Information Centre[283]	Aims to encourage, inform and enable users and specifiers of timber to reduce the amount of timber in the waste stream.
Waste Watch[284]	The largest waste charity, originally funded by DEFRA, but now also funded by charitable trusts, corporates, the National Lottery and individuals. Waste Watch works closely with WRAP, for example, on the Recycle Now campaign.
International	
Blacksmith Institute[47]	Identifies severely polluted areas in developing countries, carries out assessments and brokers solutions with governments and multilateral institutions.
Energy Foundation[285]	A partnership of the Hewlett, MacArthur, McKnight, Mertz Gilmore and Packard foundations, the EF distributes $27m in grants annually, directed at the development of work on clean energy technologies, principally in the US and China.
Business & Human Rights Resource Centre[286]	A business watchdog charity, monitoring businesses across international borders and 'naming and shaming' serious offenders on its website. In the environmental field, the Resource Centre holds corporations to account on issues of pollution and environmental rights in particular.
Practical Action[287]	Formerly the Intermediate Technology Development Group (ITDG), Practical Action works on sustainable energy solutions (including micro/pico hydropower and energy efficient stoves) in many developing countries.
Pesticides Action Network[288]	Network of over 600 participating non-governmental organisations, institutions and individuals in over 90 countries working to replace the use of hazardous pesticides with ecologically sound alternatives.
Shell Foundation[289]	The leading UK charitable foundation supporting sustainable energy initiatives, many of them social enterprises.
Solar Electric Light Fund[290]	US-based charity founded in 1990 to promote, develop and facilitate solar rural electrification and energy SELF-sufficiency in developing countries.
Campaigning and lobbying	
Airport Watch[291]	Airport Watch aims to oppose any expansion of aviation and airports likely to damage the human or natural environment, and to promote an aviation policy for the UK that is in full accordance with the principles of sustainable development.

Notes

Friends of the Earth and Greenpeace, although not listed above, both have major programmes (FoE on waste, Greenpeace on toxic chemicals). For information on Biofuelwatch, see Section 4.1.

Energy inefficiency, sustainability and social deprivation

UK

As we show through the case study in Box 37, there are clear links between energy inefficiency and sustainability and social deprivation in the UK, and charities can play an important role in bridging the gap. At the same time, this appears to be an area that funders are currently overlooking.

A Community Energy Plus feasibility study in 2006 for the Energy Efficiency Partnership for Homes found that many funds theoretically support community groups seeking to carry out non-capital energy efficiency projects, especially in areas of social deprivation.[60] But in practice, existing sources of charitable funding (and funding from non-profit organisations such as the Energy Saving Trust) are very limited, despite the low level of funds required (£5,000-£15,000 per group). The study identifies three factors that act as barriers to funding:

- energy efficiency, ie, reducing the waste of un-used excess energy, is confused with renewables/alternative energy sources;
- both community groups and funding facilitators are often confused about what energy projects are possible and think it is too difficult to even start; and
- relatively few groups are concerned with taking action to reduce energy use, despite major moves towards waste reduction over the last few decades.

Developing countries

The issue of alternative energy options in developing countries marks a convergence of human health and natural environment issues. The **Shell Foundation**'s Breathing Space programme and the **Ashden Awards for Sustainable Energy** are leading the efforts to support development and distribution of alternative cooking approaches.[289] Many of the world's rural poor are dependent on indoor cooking using charcoal or other carbon-based fuels. This is the cause of 1.6 million deaths from fume inhalation a year. On larger scales, it is even responsible for deforestation.

This is a more complex challenge than might immediately appear to be the case. Culinary practices and habits play a part, as do local availability of alternative cooking fuels and materials for stove construction. In a welcome departure from rigid grant-making criteria, both Shell and Ashden focus on achieving results, supporting projects that are wholly or partially driven by social enterprise.

Many of the world's rural poor are dependent on indoor cooking using charcoal or other carbon-based fuels. This is the cause of 1.6 million deaths from fume inhalation a year. On larger scales, it is even responsible for deforestation.

Photograph supplied by The Ashden Awards for Sustainable Development: Ecotricity Ltd., Reading, UK

Past winners at the Ashden Awards have included many business-led projects, such as the 2007 winner Ecotricity Ltd, one of the UK's largest providers of wind-generated power.

Box 37: 'Home Health': bringing energy efficiency to communities in deprived areas of Cornwall

Although Cornwall is a favourite UK holiday and retirement destination, it also has large areas of deprivation, both urban and rural. Many of the most needy people do not take up energy-improvement measures, even if these are free, because they are unaware of what is available, do not understand the information provided, or do not trust the organisations involved.

Community Energy Plus (CEP) is a charity working on sustainable energy in the county, through community outreach, public advice and engagement and education of different partners. CEP set up the Home Health programme to provide free energy efficiency advice and efficiency measures to communities in deprived areas. The programme uses a variety of approaches to contact householders, including local community and health service referral networks. The use of 'trusted' people has encouraged large numbers of households to have their energy efficiency needs surveyed. In some areas, 67% of households contacted in this way have been interested, compared with normal mail-shot response rates of below 5%.

Energy-efficient installations

Most of the efficiency measures installed are familiar technologies, which are proven to be cost-effective in reducing energy demand. Insulation is provided for lofts, cavity walls and hot water tanks, along with draught-proofing. Thermostatic valves are fitted on radiators, and incandescent bulbs replaced with compact fluorescent lamps. Some homes are fitted with condensing boilers, under the 'Warm front' programme. Many homes do not have cavity walls, and some of these have been fitted with external insulation.

Number of surveys and installations

From 2002 to 2005, 5,036 homes were surveyed and of these 3,023 had major energy efficiency measures installed. This is a very high rate of take-up, and shows the effectiveness of the referral network in identifying households that could benefit from the programme. All installations are carried out by experienced local firms.

Benefits and replicability

- A direct benefit to residents is a warmer, more comfortable home. This brings other advantages too. If children can study more comfortably then school performance improves.
- The incidence or respiratory diseases decreases when homes are warmer and less damp.
- Using national average figures from industry regulator Ofgem, CEP estimate that the measures installed under the Home Health scheme between 2002 and 2005 are bringing savings of 324 tonnes of CO_2 per year.
- These energy savings also bring substantial financial savings to households. Energy represents a much greater proportion of expenditure for poor households than for the better-off, so these savings are of real benefit.
- The payback time for the energy efficiency measures used is typically only three years.
- The programme has also been able to act as a referral network for other problems. Over 1,000 households have been referred for help in other areas (eg, Help the Aged and the National Debt Line).

Funding of installations in low-income households

The *Energy Efficiency Commitment (EEC)* is a statutory obligation for energy supply companies with more than 50,000 customers to meet an energy savings target in the domestic sector, with particular emphasis on households receiving income-related benefits. In Cornwall, British Gas and EDF have EEC obligations. By combining EEC payments with matched funding from local councils, the South West regeneration budget, and the Innovations programme of the Energy Savings Trust (EST), CEP has been able to provide users with installations at no cost to the householder.

Funding of 'Home Health' operational costs

Initial finance came from Carrick District Council, Cornwall and the Isles of Scilly Health Authority, and the Energy Saving Trust. CEP won an Ashden Award in 2005.

Sources: Community Energy Plus and the Ashden Awards for Sustainable Energy.[60,36]

Non-charitable organisations: options for donors

Some energy efficiency and renewable energy ideas and solutions do not attract large-scale commercial interest or public sector support, yet may be valuable steps forward. This opens up the possibility that in the energy field some of the best ways of achieving environmental and social results may come through grants to companies, schools and local authorities as well as charities.

This can be seen in Table 15, which shows the UK winners of Ashden Awards for Sustainable Energy in 2005 and 2006. The Ashden Awards are supported by a dozen UK charitable trusts and five corporates. Of the 15 winners, seven are charities or non-profit organisations, but four are companies, two are councils and two are schools. Some Ashden Awards for international projects have also been made to non-charitable organisations (see Box 38). The trend of supporting businesses was even more pronounced in 2007; shortlised projects included businesses providing communities in the developing world with cheap solar panels, more efficient water mills and biogas plants (using the carbon and methane released by the composting of animal dung or domestic waste to generate energy for lighting, heating and cooking).

These awards illustrate the different kinds of value that can be created by philanthropy. While assessing the impact of the winning organisations is beyond the scope of this report, what we can see is that information on a range of approaches to sustainable energy is now available in the public domain. This is in itself a contribution to better understanding of the options.

Photograph supplied by The Ashden Awards for Sustainable Development: BIOTECH, India

This biogas plant is one of thousands set up by the Indian charity BIOTECH to convert decomposing manure and domestic waste into gas for households to use in cooking and heating.

Table 15: UK winners of an Ashden Award for Sustainable Energy, 2005 and 2006[36]

Charities and other non-profit organisations		
ALIEnergy	Established as an independent charity by Argyll and Bute Council—bringing sustainable energy to remote communities on the west coast of Scotland	2005
Bioregional Development Group	'TreeStations'—establishing a local supply of wood-chip from waste	2006
Centre for Sustainable Energy, UK	Advancing sustainable energy policy and practice for over 25 years	2005
Community Energy Plus	'Home Health': bringing energy efficiency to communities in deprived areas of Cornwall	2005
Energy Audit Company (EAC)	Cavity wall insulation for all	2006
Gloucestershire Warm and Well	Widespread improvements in energy efficiency and comfort	2006
Thames Valley Bioenergy	A wholly owned subsidiary of Thames Valley Energy (TVE), part-funded by DEFRA—establishing a woodfuel economy in the Thames Valley	2005
Companies		
Good Energy	Home Generation: rewarding local renewable electricity generators	2006
Renewable Devices Swift Turbines, UK	Building-mounted wind turbines	2005
Second Nature	Developing a high-quality insulation for buildings, made of sheep's wool	2005
South Somerset Hydropower	Electricity generation from historic water mills	2005
Local authorities		
Barnsley Metropolitan Borough Council	District heating from local tree waste	2006
Kirklees Metropolitan Borough Council	Solar villages in Huddersfield	2006
Schools		
Cassop Primary School	Sustainable energy in schools	2006
Eastchurch Primary School	Good energy housekeeping	2006

Founded in 2001 by the Ashden Trust, one of the Sainsbury Family Charitable Trusts (SFCT), the Ashden Awards for Sustainable Energy have rapidly become established as one of the leading philanthropic initiatives in the energy field. The Awards seek to reward and promote excellent local sustainable energy solutions in the UK and the developing world, and to raise awareness of the huge potential of local sustainable energy to both tackle climate change and improve the quality of people's lives. Awardees include charities, companies, local authorities and schools.

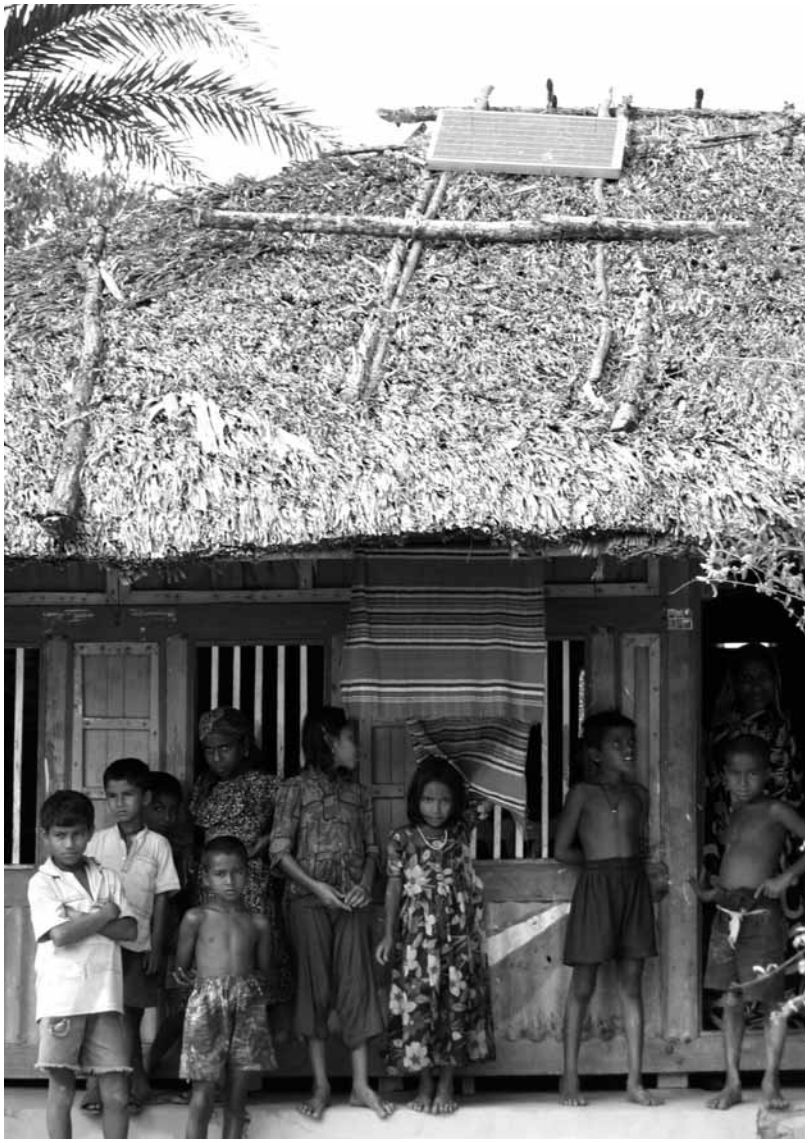
Box 38: Grameen Shakti, Bangladesh—solar home systems

Grameen Shakti has sold and installed over 65,000 solar home-systems (SHS) in rural Bangladesh, and brought major benefits to its users. Nearly 70% of households in Bangladesh are not connected to the electricity grid and depend on kerosene for lighting. This includes most rural areas and extends as far as the fringes of the capital, Dhaka. There are plans to extend the grid, but there is little prospect of substantial change in the foreseeable future.

By selling SHS, Grameen Shakti has provided lighting, communications (especially mobile phone charging) and TV, and has increased employment opportunities. It is the largest single installer of SHS in Bangladesh. The impressive number of installations has been achieved by enabling users to purchase their systems on micro-credit with affordable terms, tailored to their specific needs. Funding for the micro-credit system comes from the World Bank and GEF via the Infrastructure Development Company Limited (IDCOL), which provides Grameen Shakti with both subsidy and concessional loans.

The cash pool from credit repayments will enable Grameen Shakti to continue the scheme when the subsidy, which is being phased out, ceases in 2008. Grameen Shakti has also started a network of technology centres throughout the country to manage the installation and maintenance of SHS locally. It emphasises the importance of technicians who know local customs working through local branches, and has trained 2,000 (mainly female) technicians. It aims to install 100,000 systems by 2006 and sees the potential to install one million systems by 2015.

Source: Ashden Awards for Sustainable Energy.[36]



Photograph supplied by The Ashden Awards for Sustainable Development: Grameen Shakti and Rahimafrooz Batteries Ltd, Bangladesh

One of 65,000 houses in Bangladesh fitted with a home solar system by the non-profit company Grameen Shakti.

Waste and pollution

In 1971, **Friends of the Earth** was launched through a campaign that dumped empty glass bottles on the doorstep of Schweppes, the soft drink manufacturer, because they were not recyclable—then a novel concept. Six years later, the first bottle banks were installed in the UK. In 2001, the charity began campaigning for doorstep recycling services to be provided by local authorities.[296] In 2003, the Household Waste Act was passed. This mandates local authorities to provide every household in England with a separate collection of at least two types of recyclable materials by 2010. At present, only 40% of households have this option.

While Friends of the Earth has not been the only force in society seeking to improve UK recycling rates, there would seem little doubt that its commitment and accumulated expertise has played an important role, illustrating the value that charities can bring when they act proactively to move environmental issues beyond the status quo. What else can be done by charities to improve recycling, reduce waste generation and make disposal more sustainable? These are questions that NPC aims to address in a future research project.

Waste and pollution are also major problems in developing countries, often arising from trans-shipments from wealthy nations (intermediate points along trade routes between wealthy nations, often for the purpose of transferring goods to another mode of transport), or from the absence of adequate health and safety regulations. Other than the Blacksmith Institute (see Box 39) and **Pesticides Action Network** (see Table 14) charities and funders focusing on these issues seem to be scarce.

Priorities for donors and funders

Renewable energy

Research, lobbying and campaigning

Charitable research, lobbying and campaigning can play a valuable role in establishing the environmental costs and benefits of various renewable energy alternatives, disseminating findings, and improving the quality of debate and public understanding of the challenges. Charitable funding of such work (and similar activities on waste generation and disposal) is helpful, both in enabling charities to retain independence and resourcing them at adequate levels.

Social deprivation, poverty and energy efficiency and sustainability

Community projects

In the UK, there appears to be a clear need for funding of community groups that are tackling energy efficiency issues in areas of high social deprivation. It may also be the case that social and environmental results in the energy field can be achieved by funding schools, local authorities, social enterprises and for-profit organisations as well as charities. In developing countries, there are severe energy and waste problems. More funding support and encouragement for the relatively limited number of charities tackling them is needed.

Waste and pollution

This is a puzzling area. More research is needed before advice can confidently be given to donors and funders. In the UK, many of the leading charities appear to derive the bulk or all of their funding from government, which might indicate a more limited role for philanthropic funders than on other environment issues. Internationally, the problem seems to be a lack of charitable attention, with few specialised organisations and projects visible, despite considerable evidence of the scale of waste and pollution problems in developing countries with weak or non-existent regulatory regimes.

Box 39: Blacksmith Institute and pollution clean up in developing countries

Founded in 1999, **Blacksmith Institute** is a US-based international charity that works cooperatively with partnerships of donors, governments, NGOs and others to provide strategic, technical and financial support to local champions tackling specific, pollution-related problems in their communities.

The rationale for creating Blacksmith was the recognition that there was no 'brown environmental charity' focused on pollution problems in developing countries. In the US and other OECD countries, national legislation since the 1970s has provided a regulatory framework for dealing with discharges of pollutants from industrial installations. As a result, government-funded environmental protection agencies seek to ensure that polluters (usually corporations) are obligated to carry out remediation work to remove pollutants, and, if necessary, to pay compensation to local residents and others who have been affected. But in developing countries, the agencies either do not exist or have no capability, finance or regulatory framework.

The problems are widespread. Since inception, Blacksmith has identified 300 sites where there is a severe pollution problem. The ten worst sites identified in its 2006 survey are in Russia, China, Peru, Ukraine, Kyrgyzstan, the Dominican Republic, Zambia and India.

The Blacksmith approach

Identification of polluted sites is carried out through a combination of nominations by pollution experts and Blacksmith's own advisory team. Candidate sites are visited and an initial assessment is made, which looks at the nature of the problem and its impacts, and provides the design for an intervention. Blacksmith then seeks to build the partnerships that are necessary for successful action. These include finding a local champion (government official, civil society organisation leader) with a commitment to solving the problem, and finding co-financing for the clean-up costs, which is sometimes provided by institutions such as the World Bank, and sometimes through other routes, including charitable funding.

Success

Blacksmith lists 24 'success stories' on its website, ranging from a composting and dual waste collection system to reduce pollution from agricultural chemicals in China, to removal of toxic lead from soils in Zambia. In the latter instance, Blacksmith is overseeing a World Bank project in a city of 300,000 people.

Source: Blacksmith Institute website[47]

Table 16: Funding energy, pollution and waste charities: some illustrations

Research and information	
Research on environmental costs and benefits of renewables	£200,000 funds a research project and ongoing updates for a three-year period
Local projects	
Small-scale energy and waste projects in the UK	£60,000 funds a pilot phase
Community energy and waste projects in the UK	£35,000 funds an outreach worker for a year
Sustainable energy projects in developing countries	£60,000 funds first year of a biomass or solar energy project in a rural community

Sustainable development and living in the UK 4.6

Sustainable development is 'development which meets the needs of the present without compromising the ability of future generations to meet their own needs.'

Our Common Future, the Brundtland Commission, 1987

Contents of section

Funding priorities

Seed funding local initiatives and experimental projects is a sensible first step. 'Thinking globally, acting locally' has small direct impact in the grand scheme of things, but successful projects may deliver practical lessons and replicable models that will prove valuable well beyond the time and place of their conception.

Funding for research, both technological and sociological, is also needed to help shed light on the means of transitioning to a more sustainable way of life.

Donors can also throw their weight behind **public campaigns,** advocating anything from using public transport to reducing ecological footprints.

With 60 million inhabitants, most of whom have a 'carbon footprint' six times greater than their developing country counterparts, the UK seemed like a good place to explore the concept of 'sustainable living'. The concept of 'sustainable living' encapsulates the themes of previous chapters and aims to reduce emissions, the destruction of resources and the production of pollution and waste; to balance society's consumption with the planet's regeneration; and to increase health and well-being.

There are many charitable options. Donors can target a particular aspect of how we live, such as transport; support think tanks and research institutes working to understand how society can be better off and environmentally responsible at the same time; back local sustainability projects that are tackling local food production, distribution and consumption; or provide funding for local or national campaigning and lobbying against unsustainable road-building and airport extensions.

Defining sustainability

The language of sustainability is often used by those working at the intersection of environment and poverty issues in developing countries, as covered in Section 4.3. In that context, sustainable development refers to theories, models and approaches that attempt to alleviate poverty and promote economic growth without compromising biodiversity and the health of local ecosystems. What relevance does it have then in the UK, a country that is wealthy and heavily urbanised, where nature often seems very distant?

In this case, sustainability means a transition from the current society to one that is more in balance with nature. In an idealised UK, energy consumption would be driven by clean fuels that emitted minimal greenhouse gases and other pollutants; the use of natural resources would be managed so that ecosystems and biodiversity remained in a healthy state; and widespread recycling systems would simultaneously reduce our need for natural resources and the generation of waste.

Unlike the previous sections in this report, this one should not be considered a fully researched study of the work that charities are doing in sustainable development and living. Rather, it should be thought of as a case study of what is happening in this area in the UK, for the purpose of pointing towards further areas for research. This is still a very new area; greater research is needed before judgements about effectiveness can be made with confidence.

What does 'sustainable development and living' mean?

The sustainable development concept was first brought to a wide audience through the publication of *Our Common Future* by the World Commission on Environment and Development (the Brundtland Commission) in a report for the UN in 1987.[13] The report defined sustainable development as *'development which meets the needs of the present without compromising the ability of future generations to meet their own needs.'* As the Sustainable Development Commission notes, this is commonly referred to as the 'original' or 'classic' formulation of the term. Many variations of the concept are in use, with differences in interpretation mostly stemming from how each of the three goals or 'pillars' of sustainable development—environment, society and economy—are emphasised.[297]

The concept makes the most sense when it is applied to something tangible.* In the architects profession, Bill Dunster is famous

** For more background on sustainable development ideas and applications, see the websites of the Sustainable Development Commission and Forum for the Future.* [297,298]

for his work on Zed (zero [fossil] emissions developments) buildings.[299] In a different context, Forum for the Future identifies opportunities for sustainable business, and works with leading companies to help them develop sustainable procurement and innovation strategies.[298]

The idea of 'sustainable living' is an extension of the concept. On transportation, the UK charity **Sustrans** works to help people travel in ways that benefit their health and the environment. Another UK charity, **Global Action Plan**, operates a programme in East London that works with disadvantaged communities on issues such as energy and fuel poverty, waste, pollution and healthy eating.

To what extent can we assess the current state of sustainability? The framework of indicators developed by the *Environmental Performance Index* is a valuable first step toward an international benchmark. This shows broad correlations with other data and trends noted throughout this report. For example, wealthy developed nations score highest on the index. The bottom four countries (Mali, Mauritania, Chad and Niger) all have high levels of poverty and diminishing natural resources.[268]

UK government policy

As we noted in Section 3, the UK government has embraced sustainable development theory and practice, publishing *Securing the Future: delivering UK sustainable development strategy* in 2005.[30] This sets out sustainable development targets for all government departments. As part of this 'mainstreaming' of sustainable development, the government also strengthened the role of the Sustainable Development Commission (SDC) as an independent watchdog within government, reporting to the Prime Minister and the First Ministers of Scotland and Wales.[297] Through advocacy, advice and appraisal, the SDC aims to put sustainable development at the core of government policy.

Charitable responses

Unlike the other themes covered in this report, the common thread for charities working on aspects of sustainable development and living is more of a philosophy and outlook, rather than the specific problem they are addressing, or approach they are following. Ideas of sustainability are the basis of charitable activity in a multitude of settings, from construction and transportation to the renewal of community life in cities and villages, and the reform of financial reporting in the business sector. Many, but not all, are participatory and collaborative in style and intent. Another strand, as we show in the campaigning section below is harder-edged, seeking to halt or roll back the tide of unsustainable development.

The aims of many projects in this area are twofold: to encourage sustainable living at the local level, and to integrate sustainability priorities within community projects that traditionally have concentrated on health, education and social welfare. Much of the funding is concentrated on supporting rural projects.

However, there are a few initiatives that are attempting to bring environment and sustainability into urban settings. Notable examples are the five-year funding provided to the London Sustainability Exchange by the Bridge House Trust,[300] and the launch of a 'Local Action on Global Issues' fund by the Community Foundation for Tyne and Wear and Northumberland in autumn 2006.[301]

Campaigning

In the 1920s, the leading architect William Clough-Ellis wrote *England and the Octopus*, a powerful polemic against the unrelenting growth of cities and roads, and their encroachment on the countryside.[302] Clough-Ellis became a co-founder of the **Campaign for the Protection of Rural England (CPRE)** and his book remains a potent articulation of the reasons for resisting unbridled development. CPRE is still at the forefront of countryside campaigning, much of it directed against unsustainable house building, transport policy and airport expansion.

Others include **Airport Watch** and the funding provided to community-based campaigns by the **Manuka Club** (see Box 40). With an area equivalent to the size of Southampton being concreted over each year, these efforts are an essential part of the work of the environment charity sector.

The Green Thing is a new initiative to change behaviour which is due to be launched in autumn 2007. Its approach is radical, high risk and untested. The Green Thing aims to make green behaviour pleasurable and fun, rather than a chore. Having engaged people, via email and internet in a light-hearted manner, it then aims to change behaviour more deeply and seriously. Its founders are from the advertising and internet industries and their ambitions are global. The picture below shows a typical Green Thing cartoon designed to motivate its members to green action—in this case, to simply walk to work, school, or the shops.

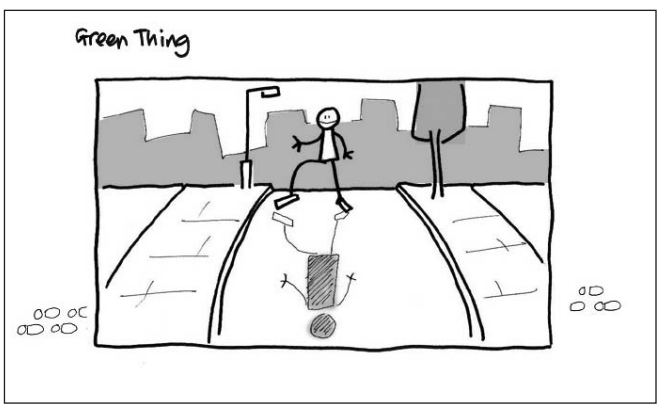


Illustration supplied by The Green Thing

Seed funding encourages experimentation, and leads to a better understanding of the issues and options.

Policy

In the policy area, New Economics Foundation (nef) and Green Alliance are think tanks with a UK-environment focus. nef, for example is currently carrying out a project on well-being, which sets out to answer the question 'what would policy-making and the economy look like if their main aim were to promote well-being?' Think tanks in this area struggle to obtain funding, yet their work is an important route to understanding problems and solutions. Some charities working on policy issues have a specialised remit. Two of the most prominent are focused on transport—**Sustrans** and the **Transport 2000 Trust**.

Funding

In the last few years a number of charities have received support from DEFRA's Environmental Action Fund (EAF), a funding scheme that helps voluntary and community sector groups to further the government's sustainable development objectives within England.[316] Some local authority funding has also been made available.

Some charitable funding is coming from a range of sources, including the Esmée Fairbairn Foundation (EFF),[317] and the new environment grant-making programme launched by **Bridge House Trust** and the Manuka Club. These funding initiatives take in organic farming, local farmers' markets, allotments in deprived urban areas, city farms and community gardens, involvement of children and their parents in sustainable community initiatives, local recycling and composting, urban biodiversity, ethnic minority participation in sustainable development and sustainable energy.

Box 40: Manuka Club[1]

The Manuka Club was founded in May 2003 by Ben Goldsmith as a donor network for individuals to support community groups that campaign to protect the British countryside against irresponsible development. The Club is the UK's only dedicated source of funding for community-based campaigns, and is in touch with over 50 different local groups.

The Club was launched against the background of several major new government initiatives that pose urgent threats to Britain's open spaces. These are:

- a major increase in house-building, with up to 1.2 million new homes planned for the south of England alone in Deputy Prime Minister John Prescott's Sustainable Communities Plan;
- a green light for the building of toxic waste incineration plants in order to comply with the requirements of the EU Landfill Directive;
- a return to the 'predict and provide' traffic growth model with plans for a series of major road-building schemes; and
- approval of massive increases in airport capacity to accommodate rising demand.

How successful are local campaigns? Can they really defeat nationally determined development plans? The cancellation of the UK government's road-building programme in the 1990s following the Twyford Down, Newbury and North London M11 protests demonstrates the power of local campaigns.

Despite the potential of grassroots campaigning, scoping research undertaken prior to the Club's launch revealed that only a tiny fraction of environmental grant-making filters down to groups working at this level. To help address this problem, the Club operates a 'small grants' fund where grants of £2,000 or less are made available at short notice to pay for campaign materials, media work, research and other activities.

Such modest sums can make a huge difference to local campaigns, which rely largely upon the time and energy of volunteers. The Club has made over 50 small grants to date, prioritising campaigns that have significance beyond their local level.

Priorities for donors and funders

Seed funding for local projects and initiatives

'Thinking globally, acting locally' has a small direct impact in the grand scheme of things, but successful projects may deliver practical lessons and replicable models that will prove valuable well beyond the time and place of their conception.

Local projects to help individuals, businesses and communities live more sustainably are proliferating across the UK, from schemes to encourage farmers' markets and local produce to cooperative endeavours on waste, recycling and energy saving. Towns such as Totnes in Devon and Lampeter in Wales are committed to reducing their dependence on oil by changing the way people live and work. The towns are developing local production and consumption of goods and services, auditing the oil use of businesses and supporting them to find alternatives, providing training in horticulture, and a range of other interventions conceived and implemented by the community itself.

These are valuable initiatives seeking to pioneer new approaches. Seed funding encourages experimentation, and leads to a better understanding of the issues and options. 'One-off' community-based projects may seem minute in the scheme of things, especially in the context of global climate change, but projects or models that have demonstrated their effectiveness could be replicated on a much larger scale.

Supporting research

As well as practical knowledge, scientific research and the development of ideas are valuable for any new field such as this one. This report has continually made the case that charities can make unique contributions to society's body of knowledge when they are provided with funding for research. Think tanks and research institutes can also shed light on how society can be better off and environmentally responsible at the same time.

Public campaigns

Donors have numerous options for supporting campaigns encouraging people to start thinking about how they can reduce their impact on the planet and live more sustainable lives. Many campaigns focus on single

issues—such as recycling, saving energy or water, walking, cycling or taking public transport to work—while others are concerned with reducing carbon emissions or ecological footprints more generally.

As we have noted at other points in the report, the outcomes of public campaigns may seem quite intangible. But, over time, well-managed campaigns make significant contributions to fostering a culture of sustainability.

Table 17: Some UK charities and projects working on sustainable development and living

Local projects	
Bioregional Development Group[129]	Develops commercially viable products and services that meet everyday needs from local renewable and waste resources.
Common Ground[305]	Works to link nature with culture, focusing on the positive investment people can make in their own localities, to improve the quality of everyday places.
Community Service Volunteers, Action Earth campaign[306]	Enables people to take part in practical conservation projects across the UK.
Federation of City Farms and Gardens[307]	The representative body for city farms, community gardens and similar community-led organisations in the UK.
Global Action Plan[308]	Works with companies, schools and communities to make positive changes at home, at work, at school and in the wider community.
Groundwork[310]	Federation of Trusts working to improve the quality of local environments and communities.
Growing Communities[311]	Social enterprise in Hackney, London, working to make the food system more sustainable by supplying good food to benefit the environment and the community.
National Federation of Women's Institutes, 90@90 project[312]	Project running until 2008, which aims to promote sustainable consumption (food, the home, transport) among the WI and their communities.
Somerset Trust for Sustainable Development, Community Choices for Sustainable Living[313]	Aims to give people and communities in Somerset, Dorset and Devon the support they need to choose a more sustainable way of living.
Sustrans[314]	Sustainable transport charity, working on practical, innovative ways of dealing with transport challenges.
Research and information	
Forum for the Future[298]	Works with businesses and the public sector to find practical ways to build a future that is environmentally viable, socially just and economically prosperous.
New Economics Foundation[174]	Independent 'think-and-do tank' that carries out research and promotes solutions that challenge mainstream thinking on economic, environment and social issues.
Green Alliance[309]	Independent think tank that produces policy research and guidance on UK environmental issues.
Campaigning	
Campaign for the Protection of Rural England[304]	Campaigns for a sustainable future for the English countryside, highlighting threats and promoting positive solutions.
Sustrans[314]	Sustainable transport charity, working on practical, innovative ways of dealing with transport challenges.
Carplus Trust[303]	National charity promoting responsible car use. Carplus plays a bridging role between the green transport organisations and the motoring lobby.
Transport 2000 Trust[315]	Independent national body that encourages less use of cars and more use of public transport, walking and cycling.

Charitable approaches

5

Contents of section

Assessing whether or not charities are using the most effective routes to solving problems is a difficult judgement for donors. The effectiveness of an approach is often determined by the policy context in which the problems emerge. Here are two examples:

i) If over-fishing, deforestation and uncontrolled carbon emissions are happening because of weak or non-existent legislation, does it make sense for charities to concentrate their resources on campaigning to change public consumption habits, or should they get governments to introduce stronger legislation?

ii) If orang-utans are in immediate danger of extinction from the spread of palm oil plantations in Indonesia, is land purchase and management the top priority, or are attempts to negotiate a political solution the best route?

NPC's research found that donor and funder understanding of the value of different options is uneven. There is a discernable bias in favour of small, local projects and an overall lack of support for more indirect approaches, such as research, lobbying and campaigning. This is unsurprising in the absence of published research on charitable approaches in the environmental field.

In the previous section, we looked at environmental issues and charities from a thematic perspective. This section asks which approaches charities are using to respond to environmental crises. It discusses the range of approaches, so that donors can become more familiar with the pros and cons of supporting one approach over another. It also outlines some of the opportunities and challenges.

NPC has identified seven main areas of activity:

• Research and information

Universities and other scientific institutions produce the bulk of quantitative environmental research. However, charities also play a major role, commissioning or compiling research work in order to produce an evidence base for new action. Charities carry out important research that may not otherwise be a priority. Charities are also valuable for communicating environment issues to a large audience, particularly through the internet.

• Campaigning

Campaigning can range from grassroots protests on local issues, to targeting particular companies or industries for poor environmental track records. Campaigning can change public and political opinion. We found that campaigns can be remarkably successful, sometimes achieving results with a fraction of the financial resources that would be needed in alternative approaches.

• Policy

Most of the larger environment charities devote significant resources to policy advice and lobbying. This work sits closely with campaigning, but is targeted at governments and often involves detailed negotiations and collaboration. This type of work is not as well known as field projects and other more visible programmes. However, with charitable support the benefits can be significant.

• Practical action: service delivery

Government policy, new and existing, needs implementing and monitoring. Charities can provide services to help. Taking the UK as an example, charities manage nature reserves, are involved in waste and energy services, and also provide vital educational capacity in zoos and parks. Much of this work is publicly funded. In developing countries, where charities may be heavily involved in protected areas, public finance is scarce and these services may rely more on private funds.

• Practical action: independent and local projects

Local projects form the backbone of the sector, both in the UK and internationally. Local projects not only help the local environment directly, but also provide research of wider importance. Supporting direct action is one of the most tangible ways that donors and funders can make a difference. Its impact is best maximised, however, if funds are also available to use the fruits of experience in policy and campaigning as well.

• **Market-based and enterprise solutions**

Some problems are best solved using markets to influence people's consumption patterns, or to develop ideas that may have both environmental and economic value. Ideas developed in the social enterprise and social investment fields are beginning to be applied in pursuit of environmental goals. Looking forward, there are likely to be a wide range of opportunities for entrepreneurial funders.

• **Sector infrastructure**

The environment sector suffers from quite poor infrastructure. By this we mean that there are few umbrella bodies to share resources or best practice; few forums for debate and knowledge sharing; and little guidance for donors on funding opportunities (see Section 7). In NPC's experience, sectors that have good infrastructure display better collaboration between charities. This results in more and better policy wins. Sharing of best practice improves the overall effectiveness of the sector. Healthy debate calls into question methods that are outdated.

Introduction

A common perception of environmental charities is that public protests and publicity stunts are the dominant modes of action. This dates back to the highly visible campaigns against nuclear testing in the Pacific and commercial whaling in the 1970s and 1980s, and efforts to prevent construction of the Newbury bypass and a new runway at Manchester Airport in the 1990s. These tactics are still part of the toolkit. In the summer of 2006, banners hung by **Greenpeace** from Admiralty Arch in London drew attention to the use of illegally logged timber from the rainforests of Papua New Guinea in the renovation of government offices.

Many supporters of environment charities are proud of the successes achieved through these means; and it is wrong to view public protests and campaigning as inherently subversive. It is often forgotten that some of the best-known charities in Britain—including the **Royal Society for the Protection of Birds (RSPB)** and the **National Society for the Prevention of Cruelty to Children (NSPCCC)**—came into being as a result of public outrage. Protest can exert great influence on events, often for the better. If Emmeline Pankhurst had not chained herself to the railings outside parliament, would the movement to enfranchise women have had the same momentum?

At the same time, it is misleading and distorting to freeze frame a picture of environment charities through the lens of public campaigning. This is only one aspect of their work. The bulk of activity is much less visible, from the physical work involved in managing nature reserves and the training of local people in sustainable livelihoods projects, to dialogues with government officials and business leaders.

Defining the scope of charitable activity

The absence or existence of regulation shapes charitable activity perhaps more than any other factor. In the UK, a range of domestic environment issues (such as protected areas, species and waste) are highly regulated, relative to developing countries. A consequence of legislation is that governments provide resources to ensure compliance. This in turn leads to a role for charities in service delivery, funded wholly or partially by public sector grants or contracts, eg, managing nature reserves.

By contrast, legal protection of the global commons (the high seas, the atmosphere) and the natural environment in many poor and developing countries is weak. Charities respond to this state of affairs in different ways. Some have created alternatives to legislation, such as certification schemes for the sustainable production and consumption of fish, coffee and timber. Some try to hold governments or businesses accountable to (non-binding) international laws or standards. Some campaign and lobby for changes in international law, and some play a direct role in environmental protection in developing countries where governments do not have sufficient resources—for example, **BirdLife International**'s restoration project on a 100,000 hectare piece of tropical rainforest in Indonesia (see Box 33 in section 4.4).

Understanding the regulatory and governmental context is a helpful perspective for donors and funders, and a useful antidote to the fixation on particular models that can sometimes arise. For example, in many developing countries, local businesses and social enterprises may be best placed to implement sustainable energy technologies, such as solar grids in rural areas. But lack of development capital often prevents this from happening. Charitable funding can in some cases play a catalytic role. In effect, philanthropic resources provide a substitute for the government funding that would likely be available in developed countries.

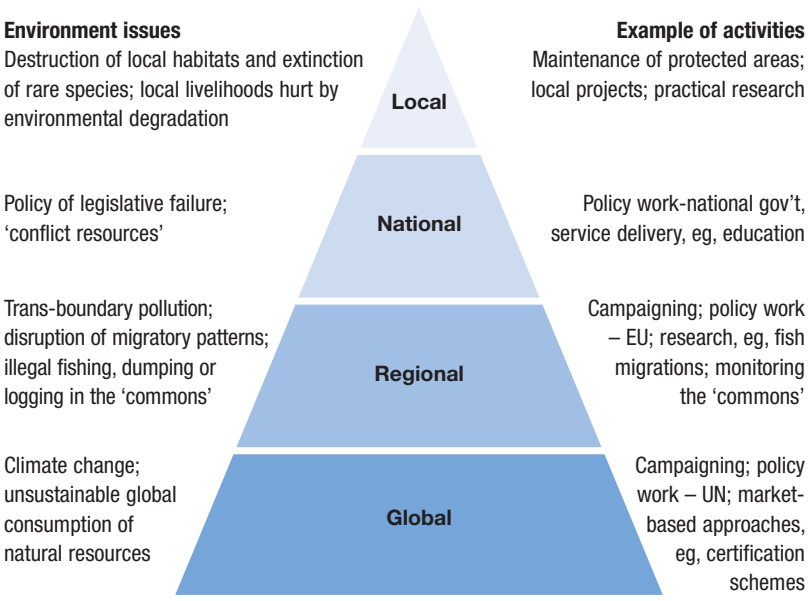
There is no comprehensive body of research on the environment charity sector that compares interventions and analyses results so that donors and funders can assess the potential success of a particular approach in a particular context. However, looking at specific instances can provide valuable insights.

Tool for helping donors select priorities

Figure 23 shows how donors can direct funds at different types of activities. At the top of the triangle are tangible, local projects where the

It is misleading and distorting to freeze frame a picture of environment charities through the lens of public campaigning.

Figure 23: Charitable approaches—different activities from local to global



outcomes are quite specific and measurable, such as protecting a species in an area or improving local livelihoods. The impact tends to be felt most locally. Further down the triangle, charities are trying to tackle problems more widely, eg, through work to improve regional fishing policy so that fish stocks are preserved. But the outcomes of such work rely on several steps to achieve the ultimate goal (more fish) and so are harder to assess outcomes. At the bottom of the triangle, efforts are global, eg, changing people's consumption of fossil fuels and resources to prevent climate change. Assessing outcomes at this level is harder still, but the potential impact is enormous.

Research and information

Environment charities are large users of available research, but they also carry out research themselves, or commission others to produce it. Although there is research capability within universities, industry and government agencies, charities can supplement this work. As we show in the examples below, the research conducted or commissioned by charities raises questions and addresses issues that are being neglected by governments and universities. Field research also underpins many important projects.

Box 41: The Species Survival Commission

The Species Survival Commission (SSC) maintains the Species Information System (SIS), the world's only online searchable database on endangered wild animals and plants. Data is obtained from a network of 7,000 volunteers (usually zoologists and botanists working in the field or in museums or botanic gardens) who carry out surveys and report the results to the SSC. Increasingly, the SIS is being used as a means to understand trends in biodiversity decline, such as the spate of amphibian extinctions in Latin America, and the decline of coral reefs worldwide.

The GEF is now using SSC data as one of the factors driving the allocation of resources, as are the World Bank and the International Finance Corporation.18 Recognising the importance of matching resources to needs, in 2005 the Global Environment Facility of the World Bank instituted a new Resource Allocation Framework for its $1bn annual budget, as a means to allocate resources to countries that can 'generate global environmental benefits.'

Evidence base for action

Successful environment campaigns are frequently built around a specific piece of research that arms a charity with convincing evidence of the existence of a problem. The campaigns run by **Global Witness**, for example (see Section 4.2), are driven by research findings. Sometimes, funding a research project can bring unexpectedly fruitful results. **Wildlife Conservation Research Unit (WILDCRU)** is an Oxford University based charity specialising in conservation research and consultancy. Their research work on conserving water voles near Pagham Harbour in Sussex has led to an increase in the number of farmers working with the **Farming and Wildlife Group (FWAG)** to manage their farms in ways that benefit wildlife generally. The cost of the research was met by a grant from a charitable foundation, the Holly Hill Charitable Trust, which focuses on supporting conservation projects in the UK and internationally.[318]

Holly Hill Charitable Trust has also used research as an intervention in a community reforestation project in Ecuador, funding the project coordinator to work with scientists at the University of Plymouth. The collaboration led to local farmers changing agricultural practices, which in turn has enabled reforestation to flourish.[319]

Catalytic effect

Specific pieces of charitably funded research can be influential. In environmental economics, demonstrating the linkages between poverty and the environment has long been a major barrier to better integration of environment within mainstream development projects. The work of David Pearce for the **Poverty and Environment Partnership (PEP)** enabled this coalition of charities and government agencies to get poverty-environment linkages on the agenda of the 2005 World Summit, as a first step toward raising the visibility of the issue.[22]

Another example is the **Ecological Footprint**, developed by Mathis Wackernagel and William Rees through their charitable research institute of the same name.[177] This tool demonstrates the extent to which natural resources are being used up as a consequence of human consumption, rendering the results in a powerful graphical form. **WWF**'s influential

annual *Living Planet* report, which promotes the concept of 'one planet living', is itself derived from Wackernagel and Rees' work.[72] The WWF report is quoted in the Prime Minister's preface to the UK government's sustainable development strategy.[30]

Data provision

Before the 1960s, the body of knowledge on the populations and distribution of wild animals and plants was incomplete and uneven, largely dependent on the research of museum-based scientists. In response, Sir Peter Scott invented the concept of the 'Red List' as a means both to find out which species were threatened (usually by loss of habitat) and to raise the visibility of extinction threats. The Red Lists (of birds, mammals, amphibians, insects and plants) rapidly became essential references, helping to guide conservation efforts and fundraising where it was most needed.

This research was initially funded by WWF, and is now carried on by **The Species Survival Commission (SSC)**.[259] As we show in Box 41, SSC data is becoming a key driver of Global Environment Facility (GEF) funding allocation. Why is this essential data not produced by governments or the business sector? The funding of global ecological datasets is another instance of the difficulty of protecting the global commons. The information is vital as a tool for understanding planetary ecology. However, the responsibility for producing and maintaining data does not easily sit within existing institutions: GEF has a remit to fund on-the-ground programmes rather than development of databases; state governments are focused on domestic data of clear benefit to the nation; and ecological data has few direct commercial applications.

Public education

Charities use the internet and digital technology to good effect. The technology has given specialised environment institutions—zoos, museums and so on—a new lease of life, enabling them to disseminate knowledge beyond the physical confines of their buildings. For many this is a work in progress, as digital conversion is an expensive process. These technologies have also created an opportunity for new charities, unencumbered by the past, to broadcast environment information that exists only in electronic form. For example, ARKive is a website of the **Wildscreen Trust**, a UK-based charity dedicated to providing downloadable images and associated information on the world's endangered species.[320] Other projects in this area, such as Species 2000, have come from the scientific community, built around a goal of making ecological information freely available across the world.[321]

Photograph supplied by Carbon Disclosure Project

Some information provision overlaps with environmental services, such as the **Carbon Trust**, **National Energy Foundation** and **Energy Saving Trust**. These services are explored later in the section.

An example of success

Funding research projects can be one of the most rewarding ways to support environment charities. Such funding is highly prized by charities because it does not jeopardise their independence. This is especially important when the purpose of research is to bring pressure to bear on governments and business.

A recent example is the work of WWF Spain, which produced a report in the summer of 2006 showing that blue fin tuna are being fished to near extinction in the Mediterranean and the Eastern Atlantic as a result of illegal, unreported and unregulated catches.[196] The research was carried out by an independent consulting company with expertise in the fishing industry. Funding was provided by the Oak Foundation, a leading US funder of environment charities. Since then, a November 2006 meeting of the International Commission for the Conservation of Atlantic Tunas (ICCAT) agreed a 15-year recovery plan for bluefin tuna.

The ICCAT agreement gradually reduces the total allowable catch from 32,000 tonnes in 2006 to 25,500 tonnes in 2010.[322] Some would argue that this action does not go far enough or quickly enough. The negotiations between the 40 member states of ICCAT will have been driven by a range of political and economic issues, and it is difficult to assess the level of influence that the WWF report achieved. Nevertheless, it is reasonable to conclude that progress through ICCAT and the publication of the report a few months earlier are related. In this case, **WWF** has clearly developed valuable expertise on the tuna

Funding research projects can be one of the most rewarding ways to support environment charities. Such funding is highly prized by charities because it does not jeopardise their independence.

problem and has the capacity to carry on with this critical work over the next few years.

Funding for charities and research

Funding research is not without its dangers. Research can become an end in itself rather than a step toward a result. One way to guard against this is by ensuring that it is understood how the research will be used. Funding marketing and dissemination costs as well as research, or at least ensuring that an adequate budget exists, is helpful.

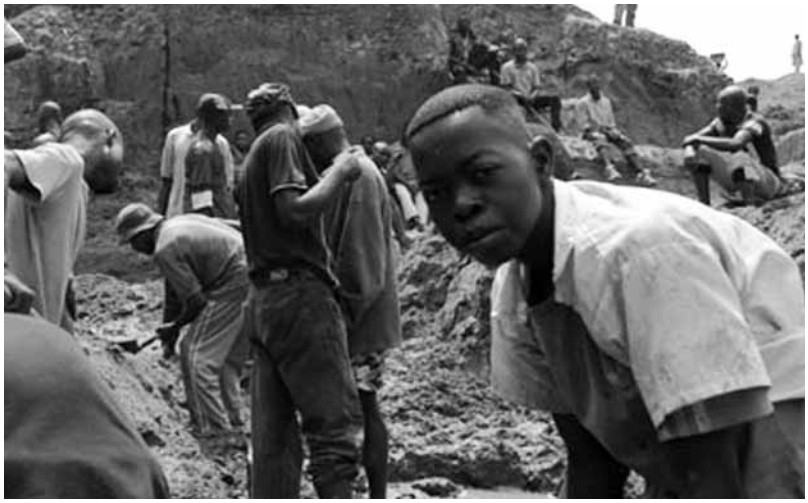
There are inherent risks in any research work. The research may be inconclusive or badly executed. Scrutinising the track record of a research organisation or a particular individual is a useful step in this context.

Campaigning

For some, environmental campaigning defines all that they detest: protesters seeking to undermine the drive toward prosperity, attacking successful businesses, institutions and governments that are providing employment, generating wealth and guaranteeing order and civil liberties. They argue that campaigners are driven at best by a spirit of unrealistic idealism, and at worst by a dark anarchic impulse that strikes at the heart of modern society.

For others, environmental campaigning charities are visionary organisations, courageously tackling global environmental problems on behalf of the citizenry, working to expose corporate malfeasance and to pressure governments and the international community to take action.

Both positions contain some truth. The evidence base for some environmental campaigns is questionable, and the goals of some groups and organisations may not be solely a desire to redress environmental wrongs. But it is also the case that campaigning has achieved some major environmental successes, often supported by powerful evidence.



Photograph supplied by Global Witness

Diamond diggers in the Democratic Republic of Congo. Charities like Global Witness monitor resources sectors in developing countries where state regulation is lacking.

An example of success

There is now widespread recognition that post-war industrial-scale agriculture in the UK caused great damage to the British countryside. Hedges and woodlands were ripped out, ponds and wetlands drained and extensive applications of nitrates and fertilisers led to diminishing populations of many birds, insects, plants and other wildlife. A number of environment charities campaigned against these abuses for many years, including **RSPB**, **WWF**, **Greenpeace** and **Friends of the Earth**.

At the time, these efforts were far from popular within the farming industry and in other parts of society. Many commentators decried much of the campaigning, arguing that environmental concerns were unjustified. With hindsight we can see that much of the concern was justified. DDT was found to be the cause of the fall in peregrine falcon populations in the 1960s (see Section 4.4). Hedges are now being replanted across many parts of the UK, in recognition of their key ecological role. The peatlands of the Flow Country in northern Scotland are slowly reviving, following the **RSPB** campaign against tree planting in the area.

Today's challenges

The climate change-related campaigns that have sprung up in the last few years will come up against many of the same challenges that environmental campaigns of the past faced. Groups like **Biofuelwatch**, **Sinkswatch**, **Airport Watch** and **Plane Stupid** (see Sections 4.1 and 4.4) are taking a line that will make them unpopular in some quarters. Governments and many businesses are enthusiastic about biofuels and carbon offsetting; and consumers queuing in congested airports do not want to hear that building more runways and scheduling more flights is wrong. But if the charities are right, then these are important messages that need to be heard.

Areas of focus

Deforestation, mining and environmental rights are particular areas of focus for campaigning charities. Campaigning charities also target the funders of activities that are detrimental to the environment. As we have seen earlier (Sections 4.2 and 4.3), charities like **Rainforest Foundation** and **Mines and Communities** work on behalf of local and indigenous peoples as well as highlighting the need for natural resources protection. Within this field, charities hold a range of positions, from **Amazon Alliance**[323] and **Amazon Watch**,[324] which are focused on the rights and

livelihoods of Amazonian peoples, to **Human Rights Watch**,[325] which is dedicated to protecting the human rights of all peoples around the world, and Global Witness, which campaigns on human rights in the context of conflict resources.

Organisations like the World Bank, the IMF and the European Bank for Reconstruction and Development (EBRD) have very significant power to improve or worsen environmental conditions. In the 1970s and 1980s, for example, multilateral lending for dam construction was a major cause of environmental destruction, and lending to developing country governments for logging and mineral and energy extraction is still a feature of international finance.

In response, a number of watchdog charities have formed. These include **Bank Information Center**[186] and the **Bretton Woods Project,**[187] which seek to influence World Bank and IMF activity; **ECA Watch,**[191] a group that campaigns for reform of the export credit agencies of national governments, which provide much of the finance for large development projects; **CEE Bankwatch,**[79] which monitors the EBRD, the European Investment Bank and other EU-based financial institutions; and the international programme of **Environmental Defense,**[100] a leading US environment non-profit, which monitors and campaigns for reform of export credit agencies and multilateral banks. In common with most campaigning charities, these organisations are independent of business-led initiatives such as the Equator Principles, which was set up as a benchmark for the financial industry to manage social and environmental issues.[110]

Some of the most vigorous environmental campaigning is on mineral and energy extraction, from the work of **Sakhalin Environment Watch**[195] in South-East Asia to the ongoing monitoring and information outputs of Mines and Communities.[194] Many of these groups see themselves as fighting two campaigns simultaneously; exposure of corporate wrongdoing, and exposure of the sheen of environmentally-friendly rhetoric produced by corporate PR departments, commonly known as 'greenwash.'

Campaigning on deforestation started in the 1960s and 1970s, when the first studies emerged on the scale of the problem, especially in the tropics. Within this area, there are several specialisations. Some charities, like **Illegal Logging,**[76] **Global Timber Trade**[193] and **Forests Monitor**[192] focus on the activities of the forestry industry; others, like **Rainforest Foundation**[217] and **Forest People's Programme**[218] concentrate on the rights and livelihoods of local and indigenous peoples. Some, like **Banana Link**[184] are dedicated to a particular industry or commodity. **Forest Ethics**[326] and **Rainforest Action Network (RAN)** both campaign against corporates, and work to broker agreements with retailers and logging companies. The RAN campaign to reform Citigroup's financing strategy is one of the most famous—and successful—environmental campaigns ever mounted. For more details, see Box 42.

Box 42: Rainforest Action Network and Citigroup

Citigroup is the world's largest project finance bank, providing financing for mining, logging and oil exploration projects around the world, some of them in biodiversity-rich ecosystems in developing countries.

In April 2000, the Rainforest Action Network (RAN) launched a Global Finance Campaign, with Citigroup as the target. The goal was to convince Citigroup, and eventually all lenders, to stop financing destructive activities in areas of high ecological value and priority. RAN wrote to Citigroup, urging it to address its role in financing the destruction of the world's remaining old-growth forests and the acceleration of climate change.

Over the next four years, RAN arranged demonstrations across the US, instigated a peaceful occupation of the Mindo Nambillo Cloud Forest Reserve in the Ecuadorian mountains to halt construction of a heavy crude pipeline financed in part by Citigroup, and blockaded every Citibank branch in downtown San Francisco's financial district during the morning rush hour.

In 2003, Citigroup approached RAN to begin discussions and negotiations on environmental standards. In January 2004, RAN disbanded its campaign after Citigroup announced the most far-reaching set of environmental commitments of any bank in the world.

Why did RAN target Citigroup? According to Executive Director Mike Brune, *'companies were more responsive to public opinion than certain legislatures were. We felt we could create more democracy in the marketplace than in the government.'*

Ilyse Hogue, RAN's campaign manager for the Global Finance Campaign noted: 'Citigroup had poured $100m into its brand image, most recently on its *"Live Richly" marketing campaign, which was predicated on the notion that "there is a lot more to life than money." We saw a company that was investing a lot in making the public believe that they operated in line with common social values. Part of Citi's vulnerability was the juxtaposition of what Citigroup articulated to the public with what we saw on the ground from Citi's finance activities.'*

Since 2004, Goldman Sachs and JP Morgan Chase have adopted environmental policies similar to Citigroup, and RAN continues to work through the Global Finance Campaign to persuade other financial institutions involved in project finance to follow suit.

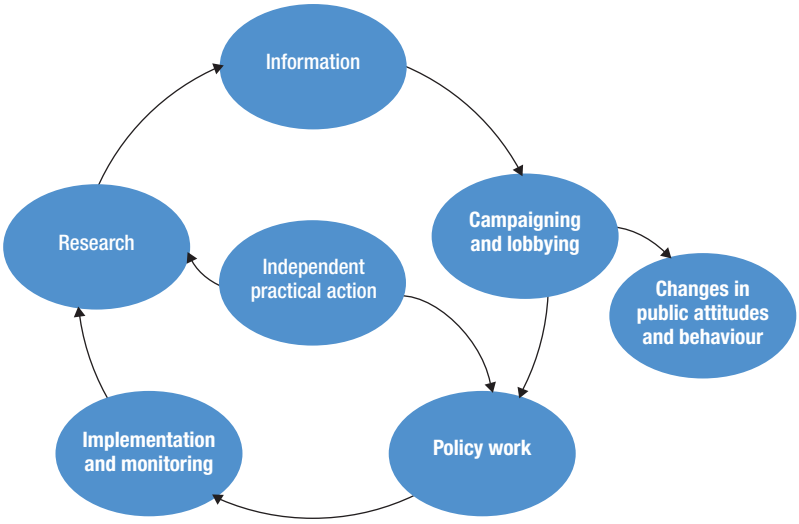
Sources: Rainforest Action Network;[45] Anatomy of a Corporate Campaign: Rainforest Action Network and Citigroup, Stanford Graduate School of Business.[54]

Funding for campaigning charities

Supporting campaigning can be one of the most attractive options available to funders. By comparison with other interventions (such as land purchase for conservation), campaigning can produce outcomes for relatively small donations.

In order to safeguard their integrity and independence, charities involved in campaigning often impose restrictions on the funding that they can accept (see Section 4.2). Charitable funding from non-corporate trusts, foundations and individuals is highly valued because it carries less risk of conflict of interest.

Figure 24: Charities' changing role throughout the policy cycle



Box 43: Wildlife and Countryside Link and the UK Marine Bill

The Wildlife and Countryside Link (WCL), a coalition of environment charities, has been calling for marine legislation since the early 1990s. In 2001 it launched a Marine Charter outlining priorities, and the Link Marine Campaign in 2002, led by the Marine Conservation Society, RSPB, Whale and Dolphin Conservation Society, the Wildlife Trusts and WWF-UK.

In the 2003/2004 parliamentary session, 315 MPs from all parties signed an Early Day Motion calling for comprehensive legislation to protect the UK marine environment. In March 2005, the government announced that it intended to introduce a Marine Bill in the next parliament. In March 2006, The Department for Environment, Food and Rural Affairs (DEFRA) produced a consultation document on a proposed Marine Bill in March 2006. In its provisions, the draft Bill includes proposals for a network of marine protected areas in UK territorial waters.

WCL participated fully in the consultation, producing a comprehensive response in June 2006.29 It has also generated a range of Marine Bill Working Papers, Marine Bill Bulletins, Parliamentary Bulletins and has held a large number of discussions with Ministers and their officials, charities and others.

The Marine Bill was not announced in the Queen's Speech in autumn 2006, although the government produced a Marine Bill White Paper in March 2007,[44] and has confirmed that it intends to introduce the bill before the end of the current parliament.

Funding for some aspects of WCL's work on the Marine Bill has been provided through grants from the Esmée Fairbairn Foundation, Lisbet Rausing and Peter Baldwin, and the Tubney Charitable Trust.

Source: Wildlife and Countryside Link[29]

Policy

As noted throughout this report, policy work forms a strong component of many charities' work, from the Global Witness project to bring about a UN resolution on conflict resources, to the lobbying of the EU by **Forests and the European Union Resource Network (FERN)**[327] on the prevention of illegal timber importation. This aspect of environment charity activity, while challenging, can also be highly valuable and rewarding.

Figure 24 shows how charities can help the policy cycle, and how policy work fits with other activities such as research, campaigning and other services.

Role of charities in policy processes

Charities are a key part of the policy process. They are involved in highlighting the need for change, framing new legislation and monitoring its implementation. Tackling environment problems can be thought of as a project cycle, with charities involved at each point in the process. This begins with recognition of a problem, often through research. The next step is to increase visibility and stimulate debate on the need for policy change—enter campaigning charities. When campaigns are successful, the international community or national governments begin to draw up plans for legislation. Here charities continue to play a vital role with policy work.

In the first part of the policy phase, charities participate in the drafting of legislation, sometimes as official advisers, but more often through contributions in a consultation process. This will vary from country to country. Consultation is now embedded in both the UK and EU levels of the policy process.

Current examples are the role of **Wildlife and Countryside Link** in the passage of the Marine Bill (see Box 43), the work of the Green 10[328] group of environment charities in Brussels on the REACH directive on chemicals,[329] and the efforts of **The Deep Sea Conservation Coalition** to secure a UN moratorium on ocean bottom trawling (see Box 44). Through their involvement in the consultation process, charities can maximise the potential to influence legislation. And, having participated at this point in the cycle, charities are then well placed to play an influential role, through dialogues with officials and ministers as legislation moves from framing to passage into law, and then to implementation.

Why policy work is interesting now

Many of the detailed arguments for supporting policy work have been made in earlier sections. In overall terms, it can be argued that conditions are now ripe for a drive to secure ambitious international environmental legislation and regulation.

- **Economic effect of environmental legislation**

Most advanced economies have had domestic environmental legislation on pollution, waste disposal and protected areas for a decade or more. Fears that environmental legislation would impair economic competitiveness have proved to be unfounded.

- **Effectiveness of international agreements**

International environmental agreements are an established and necessary part of international machinery. They have not achieved all that

their supporters would have wished, but if they had not been created at all, the balance of evidence suggests that the world's environment would be significantly less protected than it is today. For example, there are 1,671 wetland areas in the world, totalling 151 million hectares, which are protected under the terms of the 1971 Ramsar convention on wetlands. If the Ramsar machinery, processes and authority had not been created, many of these places would probably have been converted to farmland, or appropriated for housing or industrial development.

- **Effectiveness of UN and EU**

While environmental governance within the UN system continues to be problematic, the EU has emerged as a powerful environmental champion, most recently with the January 2007 call for a 30% reduction in emissions by 2020.[103] As noted earlier, EU directives have proved highly effective instruments on environment issues; the EU may therefore be well placed to lead the international community.

- **Increasing concern of electorates**

Perhaps the strongest factor in the case for a focus on policy is the rising environmental concern of politicians and their electorates. Ideas for protecting the environment are being listened to as never before.

Funding policy work

There is a clear potential for conflicts of interest if governments were to become funders of charitable policy work. Charitable funding, from trusts, foundations and individual donors, is therefore highly desirable because these sources are not themselves implicated in the policy processes.

There are some sources of charitable funding for policy work. The Sigrid Rausing Trust is a significant funder of charities working on policy issues at the EU. See Box 44 for an example of charitable trusts collaborating in a UK policy context. These are the exceptions. Few other funders are known for their commitment to this approach.

Box 44: The Deep Sea Conservation Coalition (DSCC)

Until 30 years ago, it was assumed that there was little life in the cold and dark waters of the deep sea, which covers more than half the world's surface. Since then, new marine exploration technologies have shown that the deep sea is teeming with life, most of which remains undiscovered. As many as ten million species may inhabit the deep sea: biodiversity comparable to the world's richest tropical rainforests.

This biodiversity lives in cold-water coral ecosystems that are under threat from the growth of another new technology: deep sea bottom-trawling. More powerful engines, bigger nets, more precise mapping and advanced navigational and fish-finding electronics have enabled fishing vessels to drag fishing gear across the ocean bottom, down to a depth of 1.2 miles, causing unprecedented damage to the deep-sea coral and sponge communities. EU-registered vessels dominate the bottom-trawling industry, accounting for 60% of the catch in 2001.[24]

In response, leading environment charities and non-profits (including Greenpeace, Oceana and Seas at Risk) formed a new campaign platform in 2004, the Deep Sea Conservation Coalition (DSCC), which calls for a UN moratorium on deep sea bottom-trawling. A December 2006 UN General Assembly meeting failed to agree a moratorium, but did strengthen the standard for the management of deep sea bottom fishing activities.

DSCC noted: 'Although the Sustainable Fisheries Resolution adopted today falls well short of the moratorium on high seas bottom trawling advocated by many countries and the DSCC, it does contain far reaching measures which, if fully implemented, could bring an end to the wholesale destruction of fragile deep sea ecosystems on the high seas by bottom trawl fishing over the next one to two years. This, however, is a big if but we hope that statements made today signal a clear commitment by high seas fishing nations to effectively regulate their deep-sea fishing fleets.'

Source: Deep Sea Conservation Coalition[50]

Practical action: service delivery

In various human welfare fields, charities work as 'service providers' in areas that government and business are unable or unwilling to operate in—for example, running hospices and community drop-in centres. Environment charities are also engaged in the provision of services to people, including visitor access to nature reserves and the educational experiences offered by zoos, museums and aquariums. In effect, governments contract with charities to implement policy and monitor compliance.

In some cases, all funding is provided by the public sector, but even in the UK, provision of services tends to come from a range of funding sources. In developing countries, public funding is scarce, so private support is welcome.

UK—protected areas, sustainability and information

Three areas of public sector service delivery where environment charities and other not-for-profit organisations play a role in the UK are biodiversity, information services and education (see Table 18). In the information services field, the government has shown a preference for not-for-profit organisations that to date are largely (or wholly) government funded. Examples are the Carbon Trust, National Energy Foundation and Energy Saving Trust (see Section 4.5).

There is a clear potential for conflicts of interest if governments were to become funders of charitable policy work.

A fourth area is likely to become more significant in the next few years—the integration of sustainability into UK rural and urban community projects. As noted in Section 4.6, DEFRA's Environmental Action Fund has made grants to a range of charities working on sustainability, and several charitable trusts have also entered the field. This is a fascinating area for funders to consider, although more research on charity approaches and effectiveness is needed to show where and how success is being achieved.

Some private sector service provision is funded because government has framed legislation and policy that influences the distribution of environmental taxes and lottery proceeds. One of the main funding streams comes through the Landfill Tax Scheme (or the Landfill Communities Fund as it is now known), regulated by ENTRUST.[330] The Heritage Lottery Fund[331] and the Big Lottery Fund[332] have significant environment programmes that include service delivery elements. For further details, see Section 6.

Most of the remaining private sector service provision is in the nature conservation and countryside area, led by **RSPB**, the **Wildlife Trusts**, the **Woodland Trust** and **Groundwork**.[310] In recent years there has been an increasing emphasis on providing better access to a greater proportion of the UK's population, as can be seen in the Woodland Trust's 'Space for People' project.[255] This is based around the Woodland Access Standard, which helps identify where new access opportunities are needed, either within existing woodlands or by creating new woodlands.

In the US, **The Nature Conservancy**[245] and other charities have had considerable success in securing large charitable donations from private individuals and companies to establish or maintain nature reserves. In the UK, most charitably owned or managed reserves are funded by the aggregate donations of charity members and supporters, with few protected areas supported by a single individual.

UK—education

Education is a long-established approach of environment charities. It includes schools, natural history museums, zoological parks, aquaria and countryside/field study centres. Most of these organisations have charitable status. In some cases (but not all) they are largely funded by government, at national, regional or local level. In the UK, many are recipients of support from the Heritage Lottery Fund and the Big Lottery Fund. Charitable funding is often of great importance.

'Visited institutions' (eg, The Natural History Museum[333] in London and the Royal Botanic Gardens at Kew[334]) often combine research, conservation and educational functions. Some institutions play a key conservation role, for example through captive breeding programmes that enable populations of endangered species to be restored to the wild. Examples would include the restoration of the Arabian oryx, orchestrated by **Fauna and Flora International**,[27] and the work of Sir Peter Scott and the **Wildfowl and Wetland Trust**[335] to increase numbers of the Hawaiian goose (Nene), of which only 20 or 30 were in existence in 1949 when captive breeding began. Some institutions, like the **Eden Project**,[336] are developing new ways of communicating environment issues. Increasingly, the major environment problems of climate change and protection of natural resources are likely to feature in institutional offerings.

Modules incorporating information on climate change, deforestation and over-fishing are now being included in many school curricula in developed countries. The modules are supplemented by the work of a number of charities, including WWF-UK.[337] There are also a range of projects in the UK that equip children with first-hand experience of nature. These include programmes run by the RSPB, the Wildlife Trusts and the Woodland Trust. The Field Studies Council runs field courses for GCSE and A-Level students.[338]

Table 18: Government-funded services provided by UK environment charities

Charities/non-profit organisations	Funder	Service
Royal Society for the Protection of Birds,[135] **British Trust for Ornithology,**[339] **Wildfowl and Wetlands Trust,**[335] **The Wildlife Trusts**[254]	Natural England, Department for Environment and Rural Affairs	Bird monitoring and conservation programmes and management of designated nature reserves
Carbon Trust,[176] **Energy Saving Trust,**[274] **National Energy Foundation**[340]	Department for Trade and Industry	Climate change, renewable energy and energy efficiency advice for consumers
Waste and Resource Action Programme (WRAP)[275]	Department for Trade and Industry	Aims to create new markets for materials as a means to reduce the volume of waste being sent to landfill
Natural History Museum, London, and local museums around the UK	Department for Culture, Media and Sport	Free access museums for enjoyment and information on the natural world

International

In some respects, international service delivery is an extension of UK domestic practices. DFID, for example, builds relationships with charities through Partnership Programme Agreements (PPAs).[341] Under these agreements, aspects of the UK's implementation of development strategy are effectively contracted out. Only WWF and IIED amongst environment charities have a PPA. The Foreign and Commonwealth Office (FCO) and DEFRA also provide a number of small grants to UK charities engaged in international environmental work (see Section 6).

More funding of service delivery is provided by international institutions, such as the Global Environment Facility. The work that charities carry out in this context is often at an earlier phase in the service delivery cycle. For example, a number of US and UK international charities have carried out environmental, biodiversity and ecosystem assessments in a range of developing countries, on behalf of international funders. Usually these are steps toward a first national environmental plan, often dealing with issues and problems such as sanitation, water supply, pollution control measures and other policy and legislative issues that, typically, have existed in the US and Europe since the 1970s.

Some international service delivery—especially in protected areas—is largely or exclusively a privately funded activity. **Conservation International (CI)**[240] and the **Wildlife Conservation Society (WCS)**[342] have separately pioneered agreements with national governments in Gabon and Madagascar in which their organisations become responsible for protecting and maintaining large national parks. In other examples, CI, WCS and other international charities are responsible for protected area management on behalf of private philanthropists and charitable foundations who have purchased or leased land from governments or other landowners. At the other end of the scale, there are hundreds of privately financed smaller scale protected area projects, such as Kasanka[343] in Zambia and the Lewa Wildlife Conservancy[344] in Kenya. For more on protected areas and ecosystems and biodiversity, see Section 4.4.

In some instances the work of charities has gone further. In South Africa there is now an extensive network of parks and nature reserves that protect biodiversity and earn valuable ecotourism revenue at the same time. International funders and charities have contributed to the development of many of these 'natural assets.'

Practical action: independent and local projects

Practical action that involves independent and local projects extends across all six of the themes explored in Section 4. This area also overlaps with service delivery, which was discussed above.

Activities embrace social forestry; carbon offsetting schemes; sustainable agriculture; species and habitat protection; pollution clean-up; and alternative energy sources for domestic and industrial use. A diverse range of projects aim to develop sustainable livelihoods for the hundreds of millions of people who depend upon local wildlife and local natural resources for food and trade.

Supporting direct practical action is a valuable and potentially satisfying option for a funder. Instead of waiting for the world to come up with a complete solution, direct action projects can protect vital land or marine and coastal areas and the wildlife that depends on them, and contribute to sustainable livelihoods for poor communities. The fact that the impact is happening in a limited area does not mean the action is pointless. In many cases, projects have the potential to be replicated elsewhere in the same ecosystem, but this process is often held back by lack of funds.

Donors can opt to support international projects, or select an initiative closer to home. Many national UK environment charities are locally based. **Friends of the Earth**, the **RSPB**,[135] **the British Trust for Ornithology**,[339] **Bat Conservation Trust**,[248] **National Trust**,[252] **the Campaign to Protect Rural England**,[304] and **the Wildlife Trusts**[254] all have active local member or supporter groups that underpin their work through volunteering and financial contributions.

Recent evidence seems to indicate that public support and interest in the countryside and wildlife continues to increase, especially when stimulated by media coverage and charity initiatives. Several charities consulted during the project reported an upturn in activity and membership generated by the BBC's Springwatch programmes, which uses the internet to encourage its TV audience (over 3.3 million viewers) to participate through local observation of birds, animals and plants.[345]

Although conservation of nature and the countryside continues to be the primary focus of UK local projects, concerns over climate change and sustainability issues are beginning to lead to the emergence of projects that are tackling environment challenges in new ways (see Section 4.6).

There are at least 10,000 local environment projects around the world that receive part or all of their funding from sources in the UK, US and Europe.

Enterprise ideas for protecting the environment and generating economic prosperity for local peoples are unlikely to produce the level of financial return on investment that would attract for-profit investors.

Funding for local projects

There are at least 10,000 local environment projects around the world that receive part or all of their funding from sources in the UK, US and Europe. The Global Environment Facility's Small Grants Programme[126] alone has supported more than 7,000 projects worldwide since 1992, with an average of $20,000 per grant. Global Greengrants Fund, the US-based charitable funder, made 600 grants averaging $3,700 to 80 countries in 2006.[214] The UK government's Darwin Initiative has committed £45m since 1992 to 400 projects in 100 countries.[346]

Other leading funders of local projects include the Whitley Fund for Nature,[261] the Rufford Maurice Laing Foundation,[347] Ashden Awards for Sustainable Energy and Both Ends.[348] Several are 're-granters'—ie, funds are obtained from bilateral donors and charitable trusts and then re-granted to local projects.

Market-based and enterprise solutions

Certification and trading schemes

The creation of certification schemes in which charities help to bring about the sustainable production and consumption of goods and services is perhaps the most high-profile example of a market-based solution to an environmental problem. But certification is by no means the only approach. Other projects that internalise the environment within the market, such as wetlands mitigation banking, carbon banking and trading, charging for ecosystem services and environmental enterprise, are beginning to take hold and mature—and charities are involved in all of them.

Looking forward, funders will be offered a range of opportunities to tackle environment problems through business approaches that, in many cases, will look and feel more like investing than giving. This is a complex, fluid and developing area that this report can only touch upon. Good starting points for funders interested in the concepts and possibilities are the Ecosystem Marketplace website (www.ecosystemmarketplace.com), the Shell Foundation's *Enterprise Solutions to Poverty,*[225] and the Shell/IUCN study on *Building Biodiversity Business: Report of a Scoping Study.*[349]

Microfinance

Microfinance—the lending of small amounts of money to poor and vulnerable people—has proved to be a very successful model in some parts of the world in recent years, most notably in Bangladesh. In the right conditions, microfinance enables people to earn an income and acquire skills and confidence along the way. Charitable funding is sometimes a vital ingredient. It can help to start microfinance schemes in conditions where economic activity is so low and poverty so deep that 'philanthropic subsidy' is needed to kick-start a market, much as government subsidies have given a boost to new technologies in advanced economies.

The emerging markets in market-based and enterprise solutions to environmental problems are not dissimilar to the microfinance model. Business and enterprise ideas for protecting the environment and generating income streams and economic prosperity for local peoples are unlikely—especially in the critical early stages—to produce the level of financial return on investment that would attract for-profit investors. Charitable funding may play an invaluable pump-priming role.

Environmental entrepreneurship

Since the late 1990s there has been a strong growth in the concept of social enterprise in the US and the UK, driven by Ashoka, the Skoll School for Social Entrepreneurship, and others. The Skoll Foundation defines social entrepreneurs as individuals who 'seek to grow more than just profits.' '*Motivated by altruism and a profound desire to promote the growth of equitable civil societies, social entrepreneurs pioneer innovative, effective, sustainable approaches to meet the needs of the*

Photograph supplied by Marine Stewardship Council

The Marine Stewardship Council has certified the sale of over 450 seafood products in 25 countries around the world; 63 of these are available from supermarkets and small retailers in the UK.

marginalized, the disadvantaged and the disenfranchised.'[350] Some of these organisations embrace the sister concept of environmental entrepreneurship. Ashoka has an Environmental Innovations Initiative, which highlights the work of 350 Ashoka entrepreneurs in improving the relationship between humans and the natural environment.[351]

In practice, many projects of the environment charity sector—especially in the international context—are in reality examples of environmental entrepreneurship, although they may not necessarily be labelled in these terms. Many ecotourism projects involve the generation of revenue from visitors as a means to fund species and habitat protection. And in the sustainable energy field, a number of the **Ashden Awards for Sustainable Energy** have been given to social enterprises or businesses, as in the work of Grameen Shakti in the promotion and microfinance of solar home systems in rural Bangladesh. (See Section 4.5.)

Priorities for donors and funders

Donors may want to use the triangle in Figure 25 to help choose options for funding. The impact from supporting initiatives at the top of the triangle is likely to be quite tangible; results are more observable, and therefore easier to measure. The impact from supporting smaller projects is much more localised, though valuable lessons can contribute to research and successful models may be replicated elsewhere.

Options lower down the triangle attempt to tackle global problems and often involve activities that have less certainty of success. Measuring the impact of attempts to change consumption behaviour in, say, the UK or US, in order to stall climate change, will be a difficult task. However, the global impact of such efforts will be wider than a local project protecting a local species.

Donors may also want to consider cause and effect when deciding where to fund. Research is often the trigger action. Campaigning gets the cause noticed, by the general public and politicians. This then has to be followed up by concerted lobbying and policy work so that good political intentions are converted into real policy. Policy then has to be implemented. This usually involves businesses and charities as well as government.

Local projects may offer numerous practical solutions to problems, that also feed into policy and business frameworks. Good research and information helps to test solutions.

Some areas are under-funded, and donors could concentrate efforts in these areas.

Research, campaigning and lobbying, while necessary in order to achieve widespread change, suffer from under-funding. For donors prepared to embrace the risks of research and lobbying, backing charities with strong track records and relevant expertise is sensible. The vital ingredients for campaigning charities, on the other hand, are entrepreneurial energy and creativity, and leadership and commitment. New campaigning charities emerge as new challenges are exposed: so a track record of success may not be available.

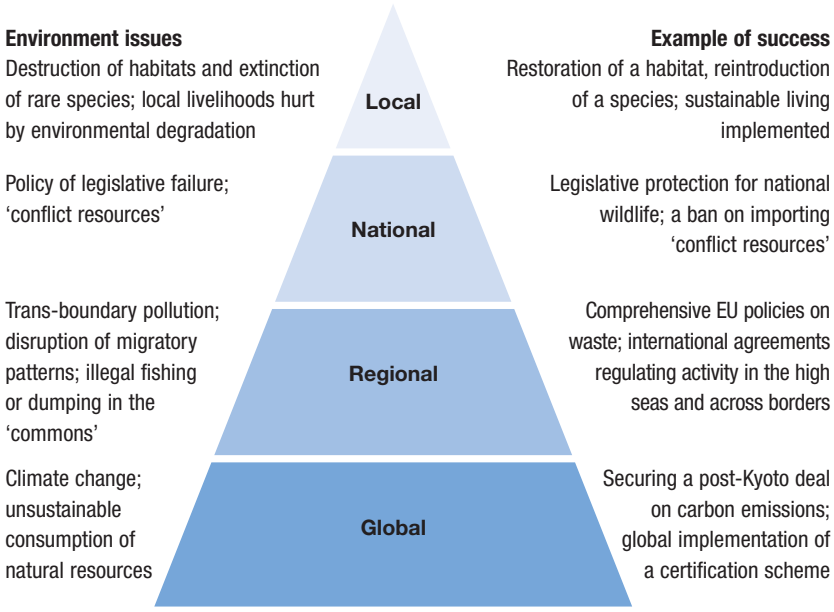
For donors who want to be confident of seeing results within a reasonable time-frame, especially in habitat and species protection, funding service delivery may be the best option.

Projects using business and enterprise models will appeal to donors who see markets as a way of solving problems. There are exciting opportunities in this field. Donors may also want to encourage innovation and support the development of environmental leaders.

Local projects may only make an impact in a specific area, but in that context can deliver strong results that can have the potential for replication elsewhere. They can be hugely rewarding for donors, especially those who are able to visit projects on site, and provide ongoing support over a number of years.

The state of the sector's infrastructure, including guidance for donors, is discussed in Section 7. Support for the sector's infrastructure is a priority.

Figure 25: Environment problems, charitable solutions—examples of success



Funding for the environment 6

> "I know that climate change is a huge problem that must be tackled now. Just tell me who I should write the cheques to."
>
> Donor

Contents of section

Funding for the environment is inadequate: it is not a high priority for grant-making trusts or government. It is rising up the agenda for the general public in private giving, but still lags behind human welfare. The amounts of money are only part of the problem:

- **There are too few funders, and a narrow funding base limits options for charities accessing funds, and funders spreading risks.**
- **Government and grant-making funding practices can be too narrow for environmental charities, so they are excluded from grants programmes, or the funding received (restricted and short term) does not suit the needs of the environment.**
- **The absence of accessible information, guidance and analysis is a major barrier to donors wanting to fund the environment.**

NPC consultations

In order to gain an overview of the state of environment funding and the views of key funders, charities and advisers, the first stage of this NPC research project concentrated on consultations with a wide range of participants, including: charitable trusts and foundations; private donors; corporates; international and national charities; consultants, advisers, think tanks and research institutes; and multilateral, bilateral and governmental bodies and organisations. For more information on consultees and the methodology, see Appendix I.

NPC set out to explore a number of issues:

- Why do some funders include environment within their portfolios, while others do not?
- Is there consensus between funders and the funded on priority areas and interventions?
- Do human welfare and environment funders and agencies work together in an integrated way?
- What is viewed as success in this area, and how is it measured?
- What are the opportunities and the barriers to further progress?

Below we give some highlights from the discussions, with anonymous attribution in order to protect confidentiality.

Findings from the consultations

Donor appetite growing but confused

Our consultations and research revealed a growing sense of urgency on the part of some funders to act decisively and quickly on global environment problems. One wealthy donor told us: *'I know that climate change is a huge problem that must be tackled now. Just tell me who I should write the cheques to.'* Another consultee who had recently attended the launch of Al Gore's climate change film, *The Inconvenient Truth*, observed: *'The atmosphere in the discussions after the film was electric, with an incredible sense of urgency on the need to do something, and fast.'*

But at the same time, the consultations also revealed that a number of innovative environment charities are struggling to acquire adequate funding. There is also widespread confusion and uncertainty amongst donors on how and where they should provide support.

More government funding and leadership needed

A striking feature of the consultations was the near-universal call from funders and charities for government to show strong leadership on environment, both as a funder and as a regulator. This appears to validate the view that the value of philanthropy lies in its catalytic role. Funders and donors have the freedom to take risks and experiment, which is a vital ingredient in tackling global problems; but they do not have sufficient resources to be the principal capital provider.

In UK human and social welfare provision, government (at national, regional and local levels) is a key funder of charities, through grants or contracts. This has encouraged the development of a funding market, in which charitable trusts can incubate charities or projects with new ideas, which can then subsequently access government funding. When this funding cycle works, charitable trusts are able to withdraw or taper down their support, and then move on to a new crop of charities in need of start-up or development funding.

What we heard from the philanthropy community was that government is not playing this role in the environment field, especially on international issues. Charitable trusts with ongoing environment grant-making programmes find it hard to withdraw support for a charity, because alternative sources of finance are not available from government.

Perhaps the more fundamental point is that charitable trusts and private donors alone cannot carry environment charities, any more than they can carry human welfare charities. If that is the case, does government ultimately accept responsibility for tackling environment problems as it does for human and social welfare? All the indications from the sustainable development strategy and other policy pronouncements indicate that it does, at the level of vision. But it has not developed the funding strategy to deliver on the goals.[30]

Environment marginalised within charitable and philanthropic sectors

Amongst current environment funders and charities, there was a strong sense of being marginalised within philanthropy and the charity and community sectors. This could be addressed by strengthening the forums and networks that currently exist to support the environment sector, such as the **Environmental Funders Network (EFN)**,[353] and by looking at the potential for creating new structures where necessary.

More work needs to be done on the charity side of the sector. The National Council for Voluntary Organisations (NCVO) has a wide range of specialist working groups, none of which are environment-related. There is a web page titled 'NCVO and the environment', but rather than providing access to information on the work of environment charities, this merely indicates that NCVO as an organisation is seeking to behave in an environmentally friendly fashion, by using a green energy supplier and other commonly followed 'low-carbon' choices.[354] This really gives the sense that this is a sector still firmly looking out over the human and social welfare terrain.

Feedback from consultations: charities

Barriers to funding

With a few exceptions, most of the charities consulted for this report cited funding constraints as a significant barrier to effectiveness, especially those engaged in international work. Additionally, many charities expressed frustration at not being able to 'reach' funders. Many consultees felt that the reliance of funders on application forms—rather than engaging in face-to-face discussions—was a major barrier. This severely limits the opportunities to hold frank and creative discussions on levels of support and strategies required to achieve success.

These problems are to a large extent generic rather than particular to environment charities; the comments above are just as likely to be heard from charities working on other issues. However, the focus on environment brings additional complexities, not least because of the overall low level of available funding (see below).

- **Charities with new approaches struggle**

The reliance of many charitable funders on application processes appears to be a particular disadvantage to entrepreneurial charities that are basing their strategies on new models and approaches. One charity CEO remarked: *'The sheer newness of our proposition seemed to make us unfundable, because we did not conform at all to funder processes and formats.'*

> "The sheer newness of our proposition seemed to make us unfundable, because we did not conform at all to funder processes and formats."
>
> Charity

Another CEO noted that incurring unusual costs acts as a barrier to obtaining funding: *'To succeed, we have to incur significant costs from ongoing stakeholder consultations that are vital to our model. This level of outlay is not "normal" in the charity world, and we have found most funders are instinctively resistant as a result.'*

- **Fundraising from corporates can be problematic**

As noted earlier, relationships with the business sector can be complex in the environment field. Some charities that are overtly campaigning against corporate environmental abuses do not accept corporate donations under any circumstances. Others are more equivocal. The greatest difficulty appears to occur in situations where charities are auditing corporate environmental behaviour. There may be an expectation from charitable funders that companies will pay for such services. But if the objective is independent evaluation, charging for services (or soliciting corporate donations) may compromise integrity and credibility.

One charity CEO remarked: *'Because we work with corporates, the assumption of many charitable trusts is that the business sector should be our principal source of funding. But from our perspective, asking corporates for financial support could undermine our credibility and integrity.'*

Box 45: Is there potential for an environment fund?

In other areas of philanthropy, the fund model has helped to mobilise support and raised the visibility of global problems.

Fund for Global Human Rights (FGHR)

The International Human Rights Funders Group created the FGHR in 2001, in response to concerns that, while international human rights work on the ground had steadily increased, funding had not. Since the start of grant-making in 2003, the FGHR has disbursed US$7m, all of it contributed by charitable foundations.[15]

Global Fund to Fight AIDS, Tuberculosis and Malaria

This fund was also created in 2001, as a partnership between governments, civil society, the private sector and affected communities, with the aim of bringing an innovative approach to international health financing. Since then it has disbursed $1.5bn in funding to support 154 programmes in 93 countries worldwide.[32] A number of charitable foundations are contributors, including the Bill & Melinda Gates Foundation and the Hewlett Foundation.

> "We are frequently asked to demonstrate that our work leads to a gain in the UK. To us, this seems perverse and somewhat parochial. Our aim is to bring about global change, as well as influencing behaviour in the UK."
>
> Charity

- **UK charitable trusts may not fund international work**

The focus of most UK charitable trusts is on the UK. This creates tensions for charities that are working to achieve progress both in the UK and internationally, as noted by one respondent: *'We are frequently asked to demonstrate that our work leads to a gain in the UK. To us, this seems perverse and somewhat parochial. Our aim is to bring about global change, as well as influencing behaviour in the UK.'*

- **The rigidity of many charitable grant-making programmes works against environment charities**

Like bilateral and multilateral donors, many charitable trusts and foundations are sectorally based. One US consultee noted: *'Our cross-cutting approach to international development runs foul of several foundations which either do agriculture or environment, but not both.'*

- **Full cost recovery problems and restricted funding are challenges for many environment charities**

Several charities are experiencing difficulties on full cost recovery, notably with multilateral and bilateral funders. One UK-based charity received this response from a UK government department: *'in principle we do not have a problem with full cost recovery; but we consider an overhead rate of more than £100 per day to be too high.'* The charity had used the Association of Chief Executives of Voluntary Organisations (ACEVO)/NPC full cost recovery framework to demonstrate the validity of its overheads. Overall, the consultations showed that the continuing emphasis on funding projects rather than organisations is a handicap, especially for international charities.

High net worth donors and environment charities

There appear to be few examples of individuals making substantial donations to environment charities. One CEO noted: *'No one has built a donor network* [for environment] *in the UK. Donors do not even know each other. This is not the case in the human welfare sector where they socialise and meet at fundraising dinners.'*

Another CEO commented: '*Unlike the human welfare charities, the environment sector just does not have access to people in London's financial services businesses. The biggest single donation we have ever received out of the City is £20,000.'* One US-based charity noted that environment fundraising is least successful in large cities, presumably because human welfare problems are very dominant in urban areas.

Environment and development

Some development charities are being asked by their supporters to take account of environmental issues in their strategies and on-the-ground projects.

One senior development charity team told us that pressure from supporters and staff working in the field had led to a higher prioritisation of environment issues within their organisation. This also appears to have happened in comparable organisations, indicating that more people are making connections between social and environmental issues.

Need to scale up

The consultations with charities elicited a number of interesting responses to questions about expansion of capacity and activity if additional funds were available. Most charities are of the view that, in the short term, they would be able to expand by up to 20-30% of current capacity. Several biodiversity charities noted that substantial sums (figures of £20m and £50m were quoted) could be effectively deployed immediately through large-scale land purchases or management agreements to protect tropical forests and wetlands in developing countries.

Some international charities have developed strategic plans that look forward over the next ten years. In several cases, these indicate that income and capacity need to double from current levels for strategic goals to be achieved.

Funding from international agencies and governments

Some of the larger international environment charities access funding from the Global Environment Facility and government donors, such as the Dutch Foreign Ministry and the Swedish International Development Agency (SIDA). Our consultations revealed a range of challenges, some of which will be experienced by human welfare charities too.

- **Most government donor programmes are still sectoral**

This poses difficulties for international charities seeking funding for sustainable livelihoods projects that cut across agriculture, forestry, fishing, poverty alleviation, climate change and biodiversity. Some government approaches are at odds with the thrust of the MDGs, which are seeking to address problems through integrated, or holistic approaches.

- **Matched funding requirements increase costs**

Many national government and multilateral funders require matched funding (sometimes called co-financing) as a condition of providing financial support. One CEO remarked: *'The insistence on co-financing makes fundraising much more expensive and time-consuming.'*

- **One-year EU funding is highly problematic**

Several charities noted the difficulty of handling financial support from the EU, which is often available as a one-year contract. This hampers efforts to develop and execute medium-term strategies.

- **The Scandinavian, Dutch and US bilateral agencies provide more funding support than DFID**

Most of the international environment charities noted that they had not been able to access funding support from DFID, but many have developed ongoing relationships with bilateral donors elsewhere in Europe. One CEO remarked: *'DFID have a very narrow concept of poverty alleviation that does not include environment.'*

Feedback from consultations: donors

Individual donors

One consultee remarked: *'I regularly donate to environment charities, but am held back from more substantial giving by a lack of information on effectiveness.'* Another expressed disillusion with 'big charities', but when this was explored further, lack of information on effectiveness appeared to be the principal roadblock.

Several donors focused on problems of strategy in international charities as a barrier to giving. Commenting on a specific charity, one remarked: *'They have not decided what they are, and do not have a strategy and vision. The problem is lack of robust leadership.'*

All the individual donors canvassed cited the lack of UK government action on environment problems as a major barrier. This appears to confirm what has been well documented in human welfare areas—many donors recognise the catalytic power of philanthropy, but if government budgets do not exist, the take-up of innovations and ideas pioneered at a small scale will be constrained. One donor commented: '*The real value of individual philanthropy is the freedom to experiment, in ways that big charities and governments cannot.'* He went on to note that his goal was to demonstrate that a particular approach could work, leading to replication by others.

A striking feature of the consultations with individual donors was their sense of isolation. Many have little dialogue with others interested in environment (with one donor confessing that the consultation was the first time he had discussed his environment philanthropy in any detail). As noted in Section 7, the lack of a membership-based network that donors and funders can join may be making it harder for those who are new to the field to exchange information and learn from others. The consultations revealed wide awareness of the urgency of global environment problems. One donor noted: *'We do not have the luxury of just doing demonstration projects—we must find ways to galvanise governments.'*

> "DFID have a very narrow concept of poverty alleviation that does not include environment."
>
> Charity

Charitable trusts and foundations

To some extent there appears to be a generational shift occurring, with younger members of family foundations showing a marked increase in their concern over environmental issues, both in the US and the UK. One experienced US grant-maker saw this as a *'clear trend amongst those in the 30s and 40s,'* running alongside increasing support for microfinance and social enterprises in developing countries.

Of the several UK charitable trusts consulted who do not currently have environment programmes, one stated that this was because *'our charitable purposes were laid down years ago, when social welfare problems were totally dominant and environment issues were just not on the horizon.'* Other reasons cited for the exclusion of environment from grant-making were: existing commitments mean that no funds are available to start new programmes; lack of information on areas of environment where more funding is urgently needed; and '*we have just not considered environment as an option.'*

Of those charitable foundations consulted that do have an ongoing environment commitment, all identified *'government indifference'* as the primary barrier in environment philanthropy. One charitable trust noted that the low priority that government affords to environment '*makes it difficult to fund environment policy lobbying and advocacy, because there is a good chance the work will go unnoticed.'*

A number of other concerns were voiced by charitable foundations with active environment programmes:

> "I regularly donate to environment charities, but am held back from more substantial giving by a lack of information on effectiveness."
>
> Donor

- **Too few trusts and foundations are active in environment, leading to a lack of critical mass**

This was commented on by almost all consultees. One observed that there appear to be hardly any European foundations with an interest in the environment, and even in the US, where environment philanthropy is stronger than the UK and Europe: *'Very few of the major foundations have any interest in environment, despite our best efforts to engage them.'* One foundation referred to the problem of 'grant orphans'—charities that receive support from a foundation, but when that money runs out, *'they have nowhere else to go.'*

- **Better quality public information and debate is needed**

One consultee noted the dearth of high quality environmental journalism, and others mentioned the challenge of *'getting column inches for thoughtful op-ed pieces.'*

- **Lobbying the EU is an under-funded and under-exploited avenue for achieving policy change**

A US and a UK charitable trust pointed to the potential to achieve large-scale change through EU policy and legislation. Both believe that charities lobbying the EU are seriously under-funded.

- **Lack of government funding is holding charitable philanthropy back**

Echoing the points made by some individual donors, one charitable trust made the point that: *'It is disheartening to provide seed funding that produces a successful result, and then find that there is no pool of government funding to take over where we leave off.'* This consultee also noted that '*the government funded infrastructure of the environment sector is weak. There is no environment equivalent of the Futurebuilders Fund.'*

Current state of environment funding

As we noted in Section 3, data on the volume and allocation of funds to tackle global environment problems is poor and fragmentary. As a result, it is not possible to provide reliable estimates of total funds currently available, or analysis of the funding mix. However, some insights and perspective can be obtained by looking at funding activity in particular areas—for example, the environment grant-making of UK charitable trusts, the funding provided by the Global Environment Facility, and the proportion of global development assistance allocated to addressing environment issues. Some of the headline numbers are shown in Table 19. See Appendix VI for background information on some of the figures and calculations.

Table 19: Summary data on environment funding

UK and US charitable trusts and foundations	
Environment grant-making by the 100 leading UK charitable trusts[a]	• Granted to all charitable sectors: **£1.137bn** • Granted to environment charities: **£18.1m** • Proportion of total: **1.6%**
20 leading UK charitable trust funders of environment charities	• Total annual environment grants: **£26.86m** • 8 of 20 trusts grant more than £1m per annum to environment projects • **50–70%** allocated for domestic charitable activity • The twentieth trust made grants of **£178,000** per annum
Total UK charitable trust funding for environment charities	• Outside the top 20, only 10 more trusts make environment grants of more than £100,000 per annum • Total environment grants: c. **£30m–£35m** • Or **1.2%–1.3%** of the **£3.1bn** total UK grants
US charitable foundations[b]	• US foundations are estimated to give $1bn per annum to environment non-profits, mainly for domestic activity[355] • Aggregated annual environment grant-making of seven leading US foundations is **$126m** • One foundation has made grants of **$759m** to science and conservation since 2001[139]
Global Environment Facility (GEF)	
The GEF126 is the world's largest environment funder, distributing $1bn of grants per annum provided by over 50 donor nations	• Most GEF grants are routed through governments in developing countries • **60%** of funds are allocated to biodiversity and climate change • Separate Small Grants Programme has provided **$247m** since 1992, funding 7,000 projects at up to $50,000 each
Global Official Development Assistance (ODA) and environment[c]	
Within global ODA, the principal delivery mechanisms are the Poverty Reduction Strategy Partnerships with individual countries (PRSPs)	• OECD estimate is $106.8bn, but this includes Iraq and debt forgiveness to Nigeria. Underlying bilateral aid in 2005 was **$94.6bn** • Within bilateral aid, allocations for environment protection are **$1.5bn**—less than **2%** of the total • Average allocation to environment within PRSPs: **4%**
UK Official Development Assistance	
Department for International Development[d]	• Annual budget: **£3.85bn** • Bilateral aid: **£2.145bn** • Allocated to environment: **2%** of bilateral aid • Plus **£40m** to the Global Environment Facility
Lottery and landfill funding for environment charities[e]	
Big Lottery Fund, Heritage Lottery Fund, Landfill Communities Fund	• Annual environment grants: **£128.63m** • **12%** of total grant making • Over **90%** allocated to domestic activity
UK government domestic expenditure on environment[f]	
The UK government budget for services on environment protection in 2005/2006 is estimated at **£8.5bn**, in the context of overall expenditure of £502.4bn	• Refuse disposal: **£2.36bn** • Environmental health: **£1.1bn** • Flood management: **£374m** • Natural Environment Research Council: **£302m** • Nuclear power station decommissioning: **£288m** • English Nature (Natural England): **£68m**

UK government environment grant funding programmes	
These four programmes provide a total of **£15.9m** per annum	• Darwin Initiative:[346] **£7m** per annum for international biodiversity projects • Foreign Office Global Opportunities Fund:[356] **£4.7m** per annum for climate change and energy • DEFRA's Environmental Action Fund:[316] **£2.2m** per annum for environment projects, principally in the UK • DEFRA's Climate Change Fund:[357] **£2m** per annum for UK projects
Other sources of funding	
Public donations and subscriptions from members and supporters, and income generated from trading activities are significant sources of income for many environment charities	• Charities Aid Foundation (CAF) estimate a total of **£10.4bn** of individual giving in 2004/2005.67 • **5%** of UK donors give to environment charities.51 • CAF also suggests that 10% of private donations go to 'environment, conservation and heritage,'[128] we estimate that less than **5%** goes to the environment specifically. (See Appendix VI for more on calculations.)

Notes

(a) Analysis based on the top 100 GMTs as found in the Directory of Social Change's *Guide to the Major Trusts 2005-2006*, and accounts filed with the Charity Commission.[125]

(b) The seven US charitable foundations are *Hewlett Foundation, Packard Foundation, MacArthur Foundation, Oak Foundation, Rockefeller Brothers Fund, the UN Foundation* and *The Christensen Fund.*

(c) Data is from OECD[4] and NPC analysis of PRSPs for Bhutan, Ghana, Cambodia, Cameroon, Cape Verde, Madagascar, Nicaragua, Senegal, Tanzania and Zambia.

(d) DFID data is from *Statistics on International Development 2005*.[11]

(e) Data is from websites and personal communications with staff at BLF,[332] HLF[331] and ENTRUST.[330]

(f) Data is from *Public Expenditure Statistical Analyses (PESA) 2006* and personal communication from HM Treasury.[211]

Sources of information on environment funding

There have been very few studies of environment funding in the UK or internationally. The *Where the Green Grants Went*[358,359] reports published by the Environmental Funders Network provide some valuable information on UK charitable trust giving, which broadly track the data shown in Table 30. The 2007 report analysed grant figures from 176 leading trusts funding environmental and conservation work, and found that these made 1,788 grants of over £33.6m in financial year 2004/2005. This amount represents just 1.6% of the £2.04bn given by 498 of the UK's largest grant-making trusts for that year. The report also includes an analysis of the income sources of 75 UK environmental charities.

Needs and challenges

In overall terms there is serious cause for concern over the inadequacy and lack of structure that is currently available in terms of funding for environment charities. In the UK, most funding resources are concentrated on UK charitable activity, yet as we have seen throughout this report, environment problems are global in nature and extent. The UK charitable trust sector, such a strong supporter of educational, health and social welfare causes, is (with a few outstanding exceptions) strikingly absent as a funding force.

Looking at other sources of funds, the financial resources provided to environment charities by the UK government are negligible; only a few per cent of the world's aid budget is devoted to tackling environment priorities; outside the Global Environment Facility and a handful of US charitable foundations, there are no major providers of international environment grants; apart from Gordon Moore and Ted Turner in the US, substantial new philanthropy has to date avoided environment issues.

If donors and funders, governments and international institutions are providing little support, how are environment charities able to operate? The answer is two-fold: established charities that have achieved scale are underpinned by donations and dues from supporters and members; newer and smaller charities struggle with inadequate resources. The picture that emerges is of a sector that is not financially well-equipped to handle the huge tasks that lie before it. Three particular problems give rise to the greatest concern:

- **The funding base is too narrow**

Time and again throughout our consultations with charities, the names of the handful of charitable trusts that support environmental concerns were recited with gratitude,

becoming a familiar litany. This is not healthy. The existing funders often feel they cannot exit, because other funders are unlikely to step forward; this in turn leads to high levels of 'pre-allocation' within grant-making programmes, the effect of which is to limit the supply of resources that can be applied to new ideas.

- **Innovative charities are often unable to access funds from members and supporters**

The new ideas of the environment charity sector—certification, investigative research, innovations in campaigning and policy, the focus on influencing corporates—have in the main emerged from charities that do not have a significant base of members or supporters. In some cases the model is unachievable; for other charities there are good reasons to avoid it. Given the paucity of other funding sources, the consequence could be a form of funding starvation for producers of new solutions.

The member/supporter model seems to work best when there are benefits (such as access to a nature reserve) for members, or when there is a cause around which supporters can rally (such as **Friends of the Earth's** Big Ask campaign). This model seems to be least appropriate for information providers and some campaigning and lobbying charities. For example, several new campaigning charities work exclusively through a website, and do not get involved with on-the-ground activity. As a result, these charities may feel that there is limited scope for developing a supporter network.

- **The lack of experienced and committed philanthropy may be weakening effectiveness**

Too often, debates on funding revolve around amounts of money, as if the presence or absence of cash is the only consideration. Our work for this project suggests that the knowledge, expertise, experience and commitment of charitable trusts and individual philanthropists are at least as valuable as the funds that they provide. Their backing enables charities to take risks, pursue ambitious goals and build the organisational confidence and human resources that are so critical to success. When it is present, the invigorating effect is tangible; the existence of so little backing of this type must raise questions about the future capacity and effectiveness of the sector.

Environment expenditure and valuation

There are no official statistics available from the UN, the EU or national governments about the total global annual expenditure on combating environment problems. Outside of official statistics, other publicly available information and analysis on global environment funding is sparse and fragmented. Some estimates (see papers by Castro,[360] Bayon,[361] and Lapham and Livermore[362]) put the global spend on combating environment problems at between $3bn and $10bn annually, but these figures are principally focused on biodiversity rather than the full spectrum of environment issues, and they do not take account of the substantial domestic environmental expenditure by OECD countries.

Is it possible to relate expenditure to natural asset values? How do we put a valuation on the environment? In 1997, Robert Costanza *et al* published a paper in *Nature* that estimated the value of the world's ecosystem services and natural capital at an average of $33 trillion a year.[229] In 1999, Alexander James *et al,* in another paper in *Nature*[363] asked the follow-up question—how much should we spend to protect the environment? The paper estimates current global biodiversity expenditure at $6bn, and concludes that $300bn annually would provide a comprehensive global conservation programme to protect biodiversity (the scenario does not include climate change and other environment issues). This is compared to 'perverse' subsidies of $950bn–$1,450bn per year for agriculture, fishing and other activities harmful to the environment.

Philanthropic giving could not, of course, be expected to fill gaps in funding as large as those posited by James et al, or by Stern in The Stern Review—an estimated1% of global GDP.55 Such huge figures can act to uphold the perception that environmental problems are far too big for charities to have any significant impact, and inadvertently discourage individuals and foundations from giving to environmental causes. Perhaps this perception originates in the first instance from the idea that environment charities are limited to localised conservation projects and ineffective (or just plain disruptive) public campaigning. As explored in the previous sections this is far from the case.

Many environment charities are developing and implementing innovative schemes to engage with the government and business sectors, and use their political or economic power to initiate substantive change—and this is with the inadequate funding environment illustrated above. The catalytic and innovative power of the charity sector comes from its voluntary structure, but without increased support from donors and funders environment charities will lose this power and cease to fulfil their unique function in tackling the problems we have created.

Sector analysis and donor support

7

Contents of section

There is cause for concern about the size and mix of the environment funding base, and the volume of funds available. But building a stronger environment charity sector is about more than money. There is greater need for good quality information and analysis on the one hand, and networks, umbrella bodies and greater collective action on the other.

A stronger sector infrastructure would support donors trying to understand needs and prioritise spending. It would also provide comfort that the issues within the sector were being rigorously debated so that charities could pursue the best routes to success.

In this section we look at some of the factors that can constrain or encourage donors and funders, and the charities they support.

> "No one has built a donor network [for environment] in the UK. Donors do not even know each other. This is not the case in the human welfare sector where they socialise and meet at fundraising dinners."
>
> Donor

Information and analysis

Better information and analysis help funders to allocate resources

There is an immense volume of environmental information, which is likely to carry on growing exponentially. This is used by scientists, the media and charities to batter us with recitations of the scale and gravity of the need. But at the same time, there is little analysis of the effectiveness of strategies, from the UN to the charity level. Funders need to know how they can make the most impact.

The consultations for this project unearthed a wide range of arguments that are going on behind the scenes, with many charities passionately propounding views on what works and what does not, and why. For example, there is intense discussion within the conservation community on the effectiveness of the 'biodiversity hotspots' strategy, and on the models for environment-development projects. These are issues of critical importance to funders, on which there is little public debate and guidance.

Box 46: Fortress academia?

Why is there so little debate on the effectiveness of environment charities in the public domain?

One reason is the preference of scientists for publishing research and opinion in scientific journals. This is particularly true of work on climate change, natural resources, and ecosystems and biodiversity. New ideas, models, refutations and proposed solutions pepper the pages of journals like *Conservation Biology, Science, Geophysical Letters* and *Nature*.

But these outlets are in the main only available on subscription, and are written primarily by scientists for scientists. The result is that debate on many key issues and questions of wide interest is both inaccessible and couched in technical language not easily assimilated by non-scientists.

Policy guidance from think tanks is poor to non-existent

Policy guidance is poor on international environment issues, with hardly any output in the public domain on natural resources, biodiversity and poverty-environment linkages. Funders can redress this by supporting think tanks and research institutes that would like to increase their environment coverage, but are constrained by lack of resources.

In the UK, most of the mainstream think tanks and policy research institutes have until recently carried out little work on environment issues. The rise of climate change on political agendas is triggering new output in this area, with the Institute for Public Policy Research (IPPR) now running a climate change programme.[173]

Other UK think tanks and policy institutes active in the environment sector include: Chatham House[364] (formerly the Royal International Institute for International Affairs), which runs the Illegal Logging website[76] and produces a range of papers on environment and development; Green Alliance[309] and New Economics Foundation,[174] which produce substantial environment output, mostly UK focused; and the Policy Studies Institute,[365] which carries out research on environmental economics and other areas.

Overall there is an imbalance in favour of information rather than policy guidance. For example, International Institute for Environment and Development,[221] World Resources Institute[247] and Resources for the Future[366] all produce excellent information on a range of international-environment issues; but there are no equivalent organisations that concentrate on analysis as a means to provide policy guidance. The approach that needs to be emulated is that of the Overseas Development Institute (ODI),[367] which produces detailed research and guidance for policymakers and practitioners on a wide range of development topics. Unfortunately, ODI does not include environment within its remit (other than some papers on forestry).

As a result, there are many summations of the nature of problems, but little focus on assessing the effectiveness of particular solutions. Or to express this in different terms, there is considerable technical and scientific output, but papers that look at policy options from a strategic or political perspective are rare. This may be in part a function of low prioritisation by governments. One consultee observed that the dearth of think tank environment output *'is because governments are not interested, either as funders of research, or as readers.'*

But it is also about the importance of propounding an argument and holding a position. There is too much attachment to an artificial notion of impartiality within the environmental research community. For example, a recent International Institute for Environment and Development (IIED) paper on biofuels is so concerned about giving a dispassionate account of the advantages and disadvantages (such as the contribution to livelihoods through agricultural employment, versus deforestation) that it fails to communicate to readers the scale of destruction wreaked on Malaysian and Indonesian forests.[368]

Charities communicate poorly

Few environment charities provide clear and articulate explanations of their goals, activities and impact, and independent analysis of charities is lacking. In order to persuade funders to part with their cash, charities need to explain the difference that more funding would make—but this funder guidance is often not forthcoming. The absence of independent analysis of environment charities is also a major barrier to better understanding and effective funding. NPC aims to develop an environment research programme, and as a first step invites interested donors and funders to share their thoughts and interests with us.

What analysis and guidance is needed?

At every turn in the work for this report we have been frustrated to discover the absence of research on many key issues for funders. A partial shopping list would include:

- What can donors do to help protect the marine resources and biodiversity of the oceans?
- What are the best available strategic plans to win the battles on deforestation, particularly in the tropics?
- How effective are certification schemes, and for which commodities and products could the model be applied to greatest effect?
- Taking the UK as an example, is it possible to develop a sustainable living model in a wealthy economy?

Box 47: BBC Green Room:[2] Informative op-ed environment articles

In early 2006, the BBC launched The Green Room, a new website-based forum for debate on the environment, with weekly opinion pieces written by a wide range of experts on topics ranging from biofuels to rare plant conservation.

These are excellent examples of one strand of guidance that is needed—yet the Green Room is unique in UK media. In the US, Grist[20] performs a similar function.

- What are the potential environmental gains and costs of biofuels, wind power and other climate change solutions?
- What are the conditions for achieving success with a sustainable livelihoods project in developing countries?
- What are the most effective approaches for protecting biodiversity, especially in difficult regions such as developing world countries?
- How do schemes that offer carbon offsetting to the public compare with each other, and relative to fully negating carbon outputs?
- What might a project plan to achieve a Convention on Natural Resources look like?
- Where has there been success, and where has there been failure, in protected area programmes and of the various financial models employed, which gives best value for money?

Networks, umbrella bodies and collective action

Funder networks

In the US, there are two nationwide networks for environment funders: the Consultative Group on Biodiversity[369] for biodiversity grant-makers, and the Environmental Grantmakers Association[370] for charitable funders with wider remits. The EGA does have an international chapter, but it currently only has one UK member (the Esmée Fairbairn Foundation). The Bellagio Forum for Sustainable Development (BFSD),[371] based in Germany, is a membership organisation for charitable foundations and corporations with an interest in funding international sustainable development projects. The BFSD currently has four UK members.

In the UK, the Environmental Funders Network has played an important role in fostering knowledge sharing and dialogue between charitable trusts that are active as environment grant-makers. It has also produced invaluable analysis on the distribution of environment grants through the *Where the Green Grants Went* publications in 2004, 2005 and 2007. The recent launch of EFN's website, www.greenfunders.org, will hopefully make information about activity in the sector much more accessible, and open doors for cooperation and knowledge-sharing.

Few environment charities provide clear and articulate explanations of their goals, activities and impact, and independent analysis of charities is lacking.

In the UK, there is no over-arching body that brings together representatives of environment charities.

Looking forward, the need is for a network of environment donors and funders that encourages all those with an interest in environment funding to participate, perhaps on a membership basis. This would enable charitable foundations and private donors with a burgeoning interest in supporting environment charities to learn from those with experience in this field. Such a network could also play a part in raising the visibility of the environment right across philanthropy and the charitable sector.

Funder-charity networks

The absence of formal dialogue between charitable funders and the charities they fund on strategic goals and problems is particularly puzzling. As is frequently noted by observers, there is a far more dynamic exchange of views and ideas in many commercial sectors, such as the software industry, despite the barriers imposed by confidentiality agreements and the need to secure competitive advantage. The environment sector tracks the overall trend. However, our research found no network that brings committed environment funders and the leading environment charities together to focus on UK or international environment challenges.

Environment-development philanthropy

Internationally, there appears to be no formal dialogue or collaborative platform between charitable foundations (in the US as well as the UK and elsewhere) that fund environment and those that fund development. Relationships between the bilateral and international donors and charitable foundations also suffer from the absence of a formal network to engender dialogue and collaboration. Initiatives are clearly needed to increase and improve collaboration and dialogue on all sides in this area, given the imperative of integrating environment into development.

Charity networks

On environment-development issues, the work of the Development and Environment Group (DEG) within the **British Overseas NGOs for Development (BOND)** network illustrates the value and potential inherent in collaborative approaches. DEG was founded to act as the contact point between development and environment NGOs and the UK government delegation in Johannesburg 2002, at the World Summit for Sustainable Development (WSSD). The group meets with the Environment Policy Department of DFID on a regular basis, which has led to some valuable contributions on the mainstreaming of environment within development.[53]

In the UK, there is no over-arching body that brings together representatives of environment charities, although some specialist networks exist, such as the **Wildlife and Countryside Link (WCL)**, which is the umbrella body for 36 biodiversity and environment charities.[29] WCL acts as a forum for the exchange of information and ideas, but is also active as a coalition lobbying the UK government on legislative matters, such as the forthcoming Marine Bill.

Internationally, environment charities do not appear to have formed any coalitions, alliances or umbrella bodies (WCL is focused solely on the UK), with the exception of the Brussels-based **Green 10** group of environment charities working to influence EU policy.* This is in contrast to the development agencies, which work together in the UK through the Disasters and Emergencies Committee,[373] and in the US through InterAction, an alliance of 160 development and humanitarian NGOs.[374]

** The Green 10 group consists of ten major international environmental charities working on policy at the EU level: Birdlife International; CEE Bankwatch Network; Climate Action Network Europe; European Environmental Bureau; Friends of the Earth Europe; Greenpeace European Unit; Health and Environment Alliance; International Friends of Nature; Transport and Environment; and the WWF European Policy Office.*[372]

Call to action

8

Future generations cannot undo the environmental damage we cause in the twenty-first century, but we are in a position to limit the consequences of what we do now. Charities are at the forefront of this effort, but without increasing support from donors and funders their full potential cannot be realised.

Green philanthropy has explored how:

- **the planet's environment is under threat, with potentially catastrophic consequences—we need to act now;**
- **arresting the damage is possible, but concerted action on many fronts is required;**
- **charities can contribute to global efforts through their leadership, innovation and independence;**
- **some success stories are emerging from the environmental charity sector; but**
- **charities need more funding and support to ramp up their achievements.**

Climate change is the topic that is uppermost in the public's mind at present. However, protecting natural resources and biodiversity, reducing waste, switching to sustainable energy and helping the world's rural poor to live prosperously without destroying their natural assets are equally important. These problems need addressing simultaneously: protecting the planet's resources and species will be fruitless if the climatic changes projected due to anthropogenic global warming materialise; similarly, if greenhouse gas emissions and global temperatures are successfully stabilised (or, indeed, the predicted consequences turn out to be overstated), we may still be left with a severly depleted natural resources base, damaged ecosystems, and the mass extinction of animal and plant species.

Environment charities play a key role in working to surmount environment problems. Charities are active where governments and businesses are unwilling or unable to go. They are originators of new research and ideas; through campaigning and lobbying they raise previously unseen issues with the public, government, and corporations; on the ground, they run innovative projects and provide services to those who could not afford them otherwise.

Charities have very limited resources by comparison with governments and businesses, but also have some real advantages: independence from political pressures and the profit imperative, expertise and commitment. Perhaps their most valuable asset is that their goals are firmly focused on achieving environmental success. By contrast, the environment is just one of the issues jostling for attention inside government ministries and corporate boardrooms.

We found plenty of indications that charities are using these strengths to achieve results on a wide range of fronts. It is perhaps too strong to call this an evidence base, because virtually no research has been carried out to help funders and charities themselves to understand what strategies and tactics are producing the most effective impact.

What can donors do?

NPC has identified six overall priorities for funding environment charities. The first three are needs of the sector itself:

More funders

There is an over-reliance on a handful of charitable trusts, which does little to encourage confidence that innovation and ambition will be rewarded by increased support from many donors. An increase in the number of funders is the sector's most pressing need. So the simple act of joining efforts helps to address this problem.

Better knowledge-sharing

Knowledge-sharing and dialogue among funders and charities is essential. When networks and forums work well, lessons learned can be absorbed by others, groups can act in concert, and greater progress can be made. The sheer scale of environment problems demands more of this sort of collaboration.

Better information and analysis

Information, analysis and guidance are essential ingredients of success. Yet right across the environment charity landscape, further progress is being constrained by their absence. In many cases the primary data already exists, but a lack of energy, confidence and will has allowed a vacuum to develop, especially in the critical area of policy guidance. Funders could turn this parlous state of affairs around within a few years.

The next three concern funding practice, and the relationship between donors and funders and charities:

Long-term funding
New funders who make a commitment to provide grant-making programmes for the long term—eg, a decade—will make an immense contribution, especially if funding support is provided to charitable infrastructure as well as on-the-ground activity.

Funding charities fully and flexibly
Funders should fund the costs of organisations fully. The misconception that on-the-ground costs are good, and management and administration are bad, has been enormously damaging to the development of charities in both the environment and social welfare fields. Funders should also be flexible about how the funds they provide are used. Circumstances often change at short notice. Charities need funders who understand this and are willing for funds to be reallocated if circumstances change.

Funding charities to assess and articulate their effectiveness
Charities need to evidence, where possible, that their actions are effective and articulate their successes loudly and publicly. What is the evidence that this reserve or that species re-introduction programme is working? Is there potential for a business income stream that will contribute to the social and economic prosperity of local communities? Charities are frequently unable to do this because of lack of resources. Donors should support charities to evaluate what they do and then disseminate the results.

Donors and funders who have encountered NPC research before will be familiar with these recommendations about how to fund. The funding needs of environment charities are much the same as those of social welfare charities, although the needs of the sector (quantity of funders, knowledge-sharing, etc.) are particularly more pronounced.

Where to focus funding?

Donors will need to decide where to place their funding in order to balance their appetitie for risk against potential impact. Section 5 discussed the pros and cons of, say, international lobbying versus local projects. Below we summarise the particular needs of each environmental issue.

Climate change

Recognition of the scale of the climate change challenge is very recent, and the transition to action has barely begun. Because responses are needed on many fronts, the most effective approaches are likely to be those that address a specific issue or target a particular segment of society. How do we shift society from high to low carbon? No one really knows. Regulation is part of the answer, but devising and experimenting with new strategies and models to influence change is just as important. This puts a premium on innovation, leadership and ideas. And these characteristics are found in charities.

Donors can help by:

- **providing seed capital to encourage charitable entrepreneurs**

At the moment there is no single advertised source that those with potential solutions can approach.

- **backing charities monitoring what works and exposing 'solutions' that do not**

Some solutions simply replace one environmental problem with another. The current enthusiasm of governments and businesses for biofuels derived from palm-oil is a horrendous misjudgement. There will be many more examples as the green gold rush gathers momentum.

Natural resources and consumption

The work of campaigning and certification charities over the last decade has produced some encouraging results. They are starting to make headway with policy, but need to go further. Charities are in a position to build on these foundations and move to a much more ambitious level of activity, if they can obtain sufficient funder support. Here are some opportunities for funders:

- **certified goods**

Certified goods and products may only account for a tiny fraction of world trade; but the models have demonstrated that the auditing process can work, and producers and consumers are responding. The success of these schemes rests largely upon them being coupled with campaigns to raise consumer awareness about environmental issues and certified alternatives, to ultimately influence consumption patterns.

- **research and campaigning**

Campaigners on natural resources and human and environmental rights have shown that scrupulous research and intelligently applied pressure can galvanise action by governments and business.

The more that is known about the scale and nature of natural resources and human and environmental rights abuses, the more likelihood there is that governments, corporates and the international community can be spurred into remedial and preventative action. This requires skilful and thoughtful support by funders, seeking out those charities with high calibre investigations teams and a demonstrable record of leveraging the results of their work.

Research and campaigning need each other: research needs disseminating; campaigns need good data.

- **policy work**

Policy work is weak in the debate about natural resources and consumption. Far more funding and support is needed—achieving an EU-wide ban on illegally harvested timber, for example, would have a much greater impact on forestry practices in the tropics than certification schemes.

Work with governments, eg, Indonesia and Brazil, is starting to yield results. However, what passes for output in this area is often merely descriptive, without framing the steps toward solutions. Yet there is widespread consensus in the environment community that putting a stop to over-fishing, deforestation and destruction of other natural resources can only be fully achieved through a combination of policy, regulation and market-based solutions.

Poverty and environment in developing countries

For much of the last half century, development assistance, funding and charitable work has been concentrated on investments in the economic and social infrastructure of developing nations—industry, transportation, education, health and social welfare.

But what of the state of the natural environment in developing countries, and the contribution that it makes to the prosperity and well-being of the people living there? Human welfare charities are beginning to acknowledge the value of environmental assets in their development projects. At the same time, environment charities are recognising how increasing the prosperity of local communities, by giving them a stake in their surrounding environment, can contribute to long-term preservation efforts. Donors and funders should encourage these trends and firmly support charities that are furthering the integration of poverty and environment issues.

Donors can help by:

- **providing funding that will enable charities to continue with experimentation and to replicate the most successful approaches;**
- **supporting dialogue between development and environment charities;**
- **backing the lobbying efforts of charities to change the culture within the development community;**
- **supporting charities working on the human and environmental rights of indigenous peoples and local communities; and**
- **supporting charities working on population issues.**

The complexity of these last two issues—the political and ethical questions they entail—demands a greater level of care when considering grants.

Biodiversity and ecosystems

Scientists tell us that action is needed now and over the next decades to reverse this decline before it is too late.

The big challenges are to protect the biodiversity-rich ecosystems in the tropics and sub-tropics, the vast forests across the northern hemisphere, wetlands and coastal areas globally, and the marine fauna and flora—while at the same time maintaining and increasing the already substantial efforts to conserve and restore ecosystems and biodiversity in temperate Europe and North America. Donors and funders can help by:

- **supporting research into the task of effectively articulating the value of ecosystems and biodiversity**

Demonstrating the financial value of ecosystems, in virtue of the 'services' they provide—pollination and fertilisation by bees and other invertebrates, carbon storage and rainmaking by tropical forests—needs more support before their loss is regretted. There also remains a dearth of serious discussion and analysis of the social, aesthetic, cultural and spiritual value of life. Getting these ideas across to government, businesses and the general public is a vital part of making the case for conservation and protection.

- **urgent priorities: marine biodiversity and tropical deforestation**

Priorities in conservation work would include the protection of marine biodiversity and halting deforestation in tropics. These are not the only ecosystems or regions in need of restoration or improved management, but they are experiencing alarming rates of destruction, or seriously lacking legislative protection or even attention from the charity sector itself.

Energy, pollution and waste

These are areas where governments and businesses are more committed and active than on many other environment issues, with extensive regulation in place across the EU and in other OECD countries. In the domestic context, charities play an invaluable role in helping individuals and communities to change their inputs and outputs, especially those on low incomes who can least afford the costs of shifting to sustainability, such as home insulation.

In the developing world, there is often little or no regulation. Sustainable energy is a massive problem, with many millions of the rural poor still reliant on wood-based fuels that are harmful to human health and the environment.

Pollution and waste, often imported from wealthy countries, are also major challenges. Funding support is needed to:

- **help charities compile evidence on the environmental costs and benefits of renewable energy alternatives and waste strategies;**
- **support community-based work in developed and developing countries; and**
- **provide backing for social enterprise solutions to energy, pollution and waste problems.**

Sustainable development and living

If we could live sustainably, many environmental problems would recede. But how practicable is sustainable living? Can charities use sustainable development toolkits to help society move toward sustainability in an integrated way?

Little is known about the efficacy of sustainability strategies. Because of this lack of knowledge, the priority is currently to fund research to explore the options and analyse results and achievements. This will then provide us with answers to how we can live more responsibly.

Embracing green philanthropy

The broad findings of this report suggest that the majority of donors and funders are not convinced either of the reality of environment problems, or that it is their problem to solve. The success that environment charities have had despite the inadequate levels of funding challenges this scepticism.

The charity sector is a powerful medium for achieving change. The potential impact of a charity is heavily influenced by the shape or extent of government or business activity in any area, and no solution to environmental problems will be possible without the involvement of all sectors. However, as this report has tried to demonstrate, the charity sector has been, and will continue to be, a vital part of any solution to environmental problems.

Philanthropists are well aware of the important contribution that charities make to society. Perhaps the most important lesson from this report for those yet to embrace green philanthropy is that the gap between social and environmental problems is not as wide as may have previously been thought.

Photograph supplied by Greenpeace/Rouvillois

Appendices

Appendix I: Project aims and methodology

This 12-month project, starting in January 2006, investigated the funding of environment charities, both in the UK and globally, with a particular focus on the role of trusts, foundations, private donors, corporates and other philanthropic funders that are supporting efforts to combat environmental problems.

We sought to build an understanding of environment funding through:

- analysis of grants and other financing strategies;
- consultations with funders, charities, practitioners and other participants, including government, multilateral institutions, scientists and thought leaders; and
- desk-based research on the environment charity sector.

We focused on the thinking that underpins funding strategies. Why do some funders include environment within their portfolios, and others do not? Is there consensus between funders and funded charities on priority areas and interventions? Do human welfare and environment funders and agencies work together in an integrated way? What is viewed as success in this area, and how is it measured? What are the obstacles to further progress?

Methodology

Consultations were built around a framework of questions. A copy of the questionnaire is available on request. These were modified for the three groups consulted: funders, funded charities, and advisers. Groups were asked about their strategies, progress and achievements. They were also asked about how they measure success, their decision-making processes and how they allocate resources. Risks and obstacles were also discussed.

Project consultation list

Over 100 organisations and individuals were consulted, including funders, charities and advisers in the UK, US and Europe. Organisations and individuals consulted are thanked in the acknowledgements.

Appendix II: International environmental policy and institutions

History

Modern international environment policy dates from the creation of the United Nations in 1945. At foundation, the UN Charter reflected the overriding concerns of that time, with an emphasis on peace and security, equal rights and self-determination of peoples, international cooperation *'in solving international problems of an economic, social, cultural or humanitarian character, and in promoting and encouraging respect for human rights and for fundamental freedoms for all without distinction as to race, sex, language, or religion.'*[91] The environment is not mentioned at all.

The international conferences held in Stockholm (1972), Rio (1992) and Johannesburg (2002) have been the fora for much of the most visible debate and negotiation within the international community on global environmental issues. Out of these events have come international agreements on climate change, biodiversity, biosafety, desertification, and sustainable development. Other milestones in international environmental policy include the Montreal Protocol on Substances that Deplete the Ozone Layer (1987) and the incorporation of an environmental goal into the Millennium Development Goals (2002). Additionally, there has been a raft of more specialised agreements, such as the Convention on International Trade in Wild Species of Fauna and Flora—CITES (1973) and the Aarhus Convention on environmental rights and human rights (1998).

By comparison with the pre-1945 track record of international environmental policy, these efforts to tackle global environmental problems by reaching international accords between sovereign nation states are a remarkable and unparalleled achievement. There are concrete examples of their influence on legislation and policy in some countries.

However, progress has been achieved in piecemeal fashion, and this has meant that some problems have not been addressed (eg, environmental regulation of agricultural commodities). For others, goals have been articulated but the mechanisms to achieve change have not been agreed to or implemented (eg, tropical deforestation and over-fishing).

1948—Universal Declaration of Human Rights

One of the first international agreements to be reached under the aegis of the UN was the Universal Declaration of Human Rights (UDHR), in 1948. While environmental considerations were not fundamental to the UDHR at its inception, the agreement has become a powerful framework for charities and funders seeking to protect the environmental rights of vulnerable peoples.

During the next two decades, the international agenda remained silent on environmental matters, despite the rise of concern over deforestation and exploitation of the oceans that triggered the birth of a number of charities in the UK and the US in the 1960s.

1972—Stockholm Conference

By 1972, environmental issues had gathered sufficient momentum for an international conference to be organised, the United Nations Conference on the Human Environment (the Stockholm Conference), which was attended by representatives of over 100 countries, government agencies with responsibility for environment matters and 400 inter-governmental and non-governmental organisations. The 26 'Principles of the Stockholm Declaration' provided the first international agenda of global environmental problems requiring attention.[375] As Kofi Annan noted in his foreword to *Global Environmental Outlook 3:* '*That landmark event is widely credited with having put environmental issues on the international agenda, leading in turn to the establishment of environment ministries at the national level and increased awareness of the impact that even local decisions can have on the global environment*.'[376]

The Stockholm Principles stressed the importance of stewardship of ecological and natural resources for the benefit of future generations. But they also noted that most environmental problems in developing countries '*are caused by under-development*,' and that '*environmental policies of all States should enhance and not adversely affect the present or future development potential of developing countries, nor should they hamper the attainment of better living conditions for all*.'

By linking environment and development in this way, the principles endorsed the consensus view in development economics that priority should be given to economic growth as the best means to tackle poverty and poor living conditions in developing countries. Yet in the same year as the Stockholm Conference, the best-selling *Limits to Growth* was published by the Club of Rome, an Italy-based think tank. This argued that economic growth could not continue indefinitely, because of the limited availability of natural resources, particularly oil.[377]

1987—Montreal Protocol on Substances that Deplete the Ozone Layer

Following the discovery of the Antarctic ozone hole in late 1985, governments recognised the need for stronger measures to reduce the production and consumption of a number of CFCs (chlorofluorocarbons, used in the manufacture of aerosols, refrigerators and other goods and products) in order to maintain the stratospheric ozone layer that shields the Earth from damaging ultra-violet radiation. The Protocol was negotiated and agreed remarkably rapidly, coming into force on 1 January 1989, and is widely regarded as the most successful international environmental agreement.

1987—Our Common Future

In the same year as the Montreal Protocol was signed, the international community also took a significant step on from the Stockholm Conference, with the publication of *Our Common Future*.[13] This was the output of the UN World Commission on Environment and Development (also known as the Brundtland Commission). This consolidated the approach taken at Stockholm. Critical environmental problems were stated as being primarily the result of enormous poverty in the South, and non-sustainable patterns of consumption and production in the North. The report called for a strategy that united development and the environment, coining the term **sustainable development**: *'Sustainable development is development that meets the needs of the present without compromising the ability of future generations to meet their own needs.'*

Our Common Future had a powerful and immediate impact. After debate at the 1989 UN General Assembly, a UN conference on environment and development was called for, taking place just three years later in Rio.

1992—UN Conference on Environment and Development (UNCED)—the Earth Summit

Attended by 172 countries (108 at the level of heads of state or government), 2,400 representatives of NGOs (and a further 17,000 at the parallel NGO Forum), the Earth Summit was unprecedented in scale and scope. The extent to which its outputs have led to concrete advances in tackling global environmental problems remains a matter of debate; at the level of shaping the international agenda, UNCED has had very significant influence. The principal outputs included the following:

United Nations Convention on Biological Diversity (CBD)

The CBD is still the only international framework for the conservation of biological diversity (all ecosystems, species, and genetic resources—now commonly known as 'biodiversity'). Biotechnology issues (including transboundary movement of genetically modified organisms) are included within the CBD remit (as expressed in the separate Cartagena Protocol on Biosafety). 188 countries are 'Parties' to the CBD, and thus have accepted a legally binding obligation to implement its provisions. Some signatory countries (including the UK) have established Biodiversity Action Plans to do so. The CBD is at once an agreement, and an organisation. Its governing body is the Conference of the Parties (COP), which has been convened eight times (COP 8 was held in 2006). The most visible goal of the CBD is the 2010 biodiversity target, which seeks to halt the loss of biological diversity at all levels by 2010. The US is a signatory to the CBD but has not ratified the agreement.

Some of the consequences of international environmental agreements are hard to quantify, especially where they have influenced the cultural outlook on a particular issue. A message emerging from our consultations with a number of past and present participants in international environmental negotiations was that the Convention on Biological Diversity (CBD) had 'created a problem' because it placed considerable emphasis on the financial potential of biodiversity through the patenting of genetic resources. One consultation source commented: '*We gave the impression there was a crock of gold in the rainforest, and neglected to point out the spiritual value of wildlife to peoples around the world.'*

United Nations Framework Convention on Climate Change (UNFCCC)

Like the CBD, the UNFCCC is an agreement and an organisation. As framed at Rio, the objective was to tackle the problem of rising greenhouse gas emissions. The agreement did not set mandatory limits on emissions, but provided for 'protocols' that would do so. This mechanism led to the 1997 Kyoto Protocol (see below). UNFCCC signatory countries were divided into three groups: Annex 1, OECD industrialised countries plus Russia and former Soviet Union countries; Annex II, the OECD member countries only; non-Annex 1, mostly developing countries. Annex II countries:

'are required to provide financial resources to enable developing countries to undertake emissions reduction activities under the Convention and to help them adapt to adverse effects of climate change. In addition, they have to "take all practicable steps" to promote the development and transfer of environmentally friendly technologies to EiT Parties [post-communist countries with 'Economies in Transition'] and developing countries.'378

Agenda 21

Described by the UN as '*a comprehensive plan of action to be taken globally, nationally and locally by organisations of the United Nations System, Governments, and Major Groups in every area in which human impacts on the environment*,'[379] Agenda 21 refers to the twenty-first century, and is a detailed blueprint (running to 40 chapters) for the implementation of sustainable environmental practices. Agenda 21 is regarded by some as the most lasting achievement of the Earth Summit, in part because many local and municipal authorities implemented local versions of the plan ('local agenda 21', or 'LA21'). It was also the basis of the next major UN conference in Johannesburg (see below).

Forest Principles

The Forest Principles were adopted by 178 governments, but unlike the CBD and the UNFCCC, this had no legally binding provisions. The 15 principles confirm '*the sovereign and inalienable right [of States] to utilize, manage and develop their forests in accordance with their development needs and level of socio-economic development*'; and also proclaim that '*forest resources and forest lands should be sustainably managed to meet the social, economic, ecological, cultural and spiritual needs of present and future generations*.'[380] The tensions are evident throughout the document, reflecting the polarisation of debate between the G77 group of developing countries, (which sought aid finance to set aside forest reserves, a demand rejected by developed countries). An Intergovernmental Panel on Forests (IPF) was created after the Earth Summit to take the Forest Principles forward, mutating over time into the Intergovernmental Forum on Forests (IFF), and then to the UN Forum on Forests (UNFF) in 2000.

1994—World Trade Organisation (WTO), Marrakesh Declaration

The WTO was founded in 1995, following the Marrakesh Declaration in 1994 that concluded the Uruguay Round of trade talks. The preamble to the Declaration states that WTO members recognise:

'that their relations in the field of trade and economic endeavour should be conducted with a view to raising standards of living, ensuring full employment and a large and steadily growing volume of real income and effective demand, and expanding the production of and trade in goods and services, while allowing for the optimal use of the world's resources in accordance with the objective of sustainable development, seeking both to protect and preserve the environment and to enhance the means for doing so in a manner consistent with their respective needs and concerns at different levels of economic development.'

The WTO website adds the following comment: '*the fact that the first paragraph of the preamble recognizes sustainable development as an integral part of the multilateral trading system illustrates the importance placed by WTO members on environmental protection*.'[381]

The WTO has undoubtedly been open to debating trade and environment issues. See for example the summary on labelling requirements for environmental purposes in the 'Environmental Backgrounder' paper on the WTO website.[381] But progress in the critical area of natural resource protection and sustainable consumption is largely being achieved through voluntary certification schemes—and not by implementation of environmental considerations into WTO rules.

1997—Kyoto Protocol to the UNFCCC

The Kyoto Protocol[35] committed Annex I Parties to the UNFCCC (see above) to individual, legally-binding targets to limit or reduce their greenhouse gas emissions. To date, 165 countries have ratified the Protocol, which came into force in February 2005. Of these, 35 countries and the EU nation states are required to reduce greenhouse gas emissions below levels specified for each of them in the treaty. When aggregated, the targets add up to a total cut in greenhouse gas emissions of at least 5% from 1990 levels in the commitment period 2008–2012. Developing countries (including China, India and Brazil) are not included. The US and Australia are the leading Annex I countries that have not ratified the Protocol.

2000—Millennium Declaration

In September 2000, at the United Nations Millennium Summit, world leaders agreed to a set of measurable goals and targets for combating poverty, hunger, disease, illiteracy, environmental degradation and discrimination against women by 2015. Placed at the heart of the global agenda, they are called the Millennium Development Goals (MDGs). The Summit's Millennium Declaration

also outlined a wide range of commitments in human rights, good governance and democracy. ' *The MDGs provide a framework for the entire UN system to work coherently together towards a common end.*'[23]

There are eight MDGs in total; the seventh is a commitment to 'ensure environmental sustainability'. Three targets fall with this goal:

- **Target 9:** integrate the principles of sustainable development into country policies and programs and reverse the loss of environmental resources;
- **Target 10:** halve, by 2015, the proportion of people without sustainable access to safe drinking water and basic sanitation;
- **Target 11:** have achieved by 2020 a significant improvement in the lives of at least 100 million slum dwellers. For each target, there are indicators (for example, the proportion of land area covered by forest).

In September 2006, the UN Secretary-General proposed that a new target should be added under Goal 7: `to significantly reduce the rate of loss of biodiversity by 2010.'

A Task Force on Environmental Sustainability was created to outline the strategy for achieving MDG seven. The Task Force produced a report in 2005, *Environment and Human Well-Being: A Practical Strategy*, which included 10 recommendations.[68]

1. Improve small-scale agricultural production systems
2. Promote forest management for protection and sustainable production
3. Combat threats to freshwater resources and ecosystems
4. Address the threats to fishers and marine ecosystems
5. Address the drivers of air and water pollution
6. Mitigate the anticipated effects of global climate change
7. Strengthen institutions and governance
8. Correct market failures and distortions
9. Improve access to and use of scientific and indigenous knowledge
10. Build environmental sustainability into all development project proposals

These recommendations are the most concrete set of objectives on global environmental challenges to appear in recent years. It is telling that recommendation 10—environmental sustainability should be built into development project proposals—is omitted from the publication's official press release on the Millennium Project website. This is a testament to the ongoing difficulty of uniting environment and development in practice.

2002—World Summit on Sustainable Development (WSSD), Johannesburg

Unlike Stockholm and Rio, the WSSD did not produce any new mandatory environmental agreements. The Johannesburg Declaration on Sustainable Development runs to 37 items, but most are re-affirmations of statements from the earlier conferences.[382] Opinion on the value and utility of the WSSD remains divided.* Reaction from many major charities (including Friends of the Earth and Greenpeace) was largely critical. The positives—as seen by some participants—included the new emphasis on reaching 'Partnership Initiatives' with civil society, business and governments, and the explicit acknowledgement given to the linkages between poverty alleviation and environmental protection.

International institutions

Throughout much of its history, the principal focus of the United Nations has been on development and human rights issues. UNEP, the agency with the principal responsibility for environmental issues was not set up until 1972, 27 years after the founding of the UN.

The growth of concern over the scale of global environmental problems in the last decade has led to questions about the capacity of UN institutions to deal with the formidable challenges of climate change, dwindling natural resources, poverty-environment problems and unsustainable consumption.

** See the Heinrich Boll Foundation website on WSSD (www.worldsummit2002.org) for a useful summary of conference events, outcomes and views of participants and observers.*

A United Nations Environment Organisation?

Jan Eliasson, President of the 60th UN General Assembly, articulated many of these concerns in a background paper sent to UN Permanent Representatives and Observers in January 2006. Eliasson notes:

> *'World leaders at the 2005 Summit recognised the need for more efficient environmental activities in the UN system, with enhanced coordination and improved normative and operational capacity. … At the international/global level these [environment] issues are dealt with by a variety of funds, programmes and agencies within the UN system, including through mandates provided to multilateral environmental agreements. However, issues more cross-cutting in nature tend not to have a central institutional location.'*[383]

In April 2006, the Council of the EU called for the establishment of a '*UN agency for the environment, based on UNEP [United Nations Environment Programme], with a revised and strengthened mandate, supported by stable, adequate and predictable financial contributions and operating on an equal footing with other UN specialised agencies*.'[93] Others have called for a United Nations Environmental Organisation (UNEO), similar in scope and powers to the WTO.[94] The initial response of the UN (late 2006) was to recommend strengthening UNEP.[92]

United Nations Environment Programme (UNEP)

In the current UN system, the United Nations Environment Programme (UNEP), based in Nairobi, Kenya, is the principal UN body in the environment field. Set up after the 1972 Stockholm Conference, UNEP was created by a resolution of the General Assembly, and not by a treaty ratified by all Member States. As a result, it has less political weight than some other agencies. UNEP's budget in 2003 was $200m, compared to $4.44bn for the United Nations Development Programme (UNDP).[92]

Economic and Social Council (ECOSOC) and the Commission for Sustainable Development (CSD)

ECOSOC coordinates the UN's work in the economic and social field, including development and environment. The CSD is a subsidiary body of ECOSOC that is responsible for following up on the outcomes of the Rio and Johannesburg summits.

United Nations Development Programme (UNDP)

The principal global development agency of the UN, UNDP concentrates on achieving the Millennium Development Goals. UNDP is in organisational terms the largest of the UN agencies, with a presence in 166 countries.

Other UN agencies with environment responsibilities

These include:

- The Food and Agriculture Organisation (FAO). Remit covers agriculture, forestry, fisheries, soil management and plant protection.
- The World Health Organisation (WHO). Human health and the environment.
- The United Nations Educational, Scientific and Cultural Organisation (UNESCO). Environmental education, scientific activities, eg, on oceans and solar energy.
- The World Meteorological Organisation (WMO). Atmosphere and climate, including the Intergovernmental Panel on Climate Change (IPCC).
- The International Maritime Organisation (IMO). Marine pollution, dumping at sea and safety in maritime transport of dangerous goods.
- The International Civil Aviation Organisation (ICAO). Environmental aspects of civil aviation.
- The International Atomic Energy Agency (IAEA). Matters relating to nuclear materials, including nuclear safety and radioactive waste.
- The United Nations Conference on Trade and Development (UNCTAD). Linkages between trade, investment, technology, finance and sustainable development.
- The World Trade Organisation (WTO). See above.

UN organisations that exist to implement agreements

Eliasson's background paper (see above) includes an appendix listing the core environmental conventions and related agreements of global significance—40 in all. Most of these have ongoing operational remits.

The World Bank and other multilateral financial institutions

The World Bank was originally founded in 1944 as the International Bank for Reconstruction and Development (IBRD). The current World Bank Group includes the IBRD plus the International Finance Corporation (IFC), the Multilateral Investment Guarantee Agency (MIGA) and the International Centre for Settlement of Investment Disputes (ICSID). Together with the International Monetary Fund (IMF), these institutions are still the world's leading sources of multilateral finance.

In recent years the IMF has incorporated environmental thinking and principles into its activities, but of the two institutions it is the World Bank Group that is most closely involved in environmental issues, through lending, special projects and research.[384] Within the Bank, 'Environment and Natural Resource Management' (ENRM) is one of 11 thematic headings for lending and other operations, organised under seven sub-headings: biodiversity, climate change, environmental policies and institutions, land management, pollution management and environmental health, water resources management, and other ENRM.

Other multilateral finance institutions that operate to an extent in the environmental sphere include the African Development Bank, Asian Development Bank, Inter-American Development Bank, European Investment Bank (EIB) and the European Bank for Reconstruction and Development (EBRD).

Non-UN international initiatives and institutions

Some initiatives of the international community are emerging outside of the UN system. In climate change, these include the coalition of US states to curb greenhouse gas emissions through the Regional Greenhouse Gas Initiative,[385] and the efforts to extend this concept at the global level through collective action by major world cities (the C20: The World Cities Leadership Climate Change Summit organised by the Mayor of London in 2005, and the follow up Cities Action Summit in 2006;[386] and the work of the Clinton Climate Initiative).[387]

In natural resources, the Coalition for Rainforest Nations seeks to underpin lasting environmental sustainability and economic advancement with strengthened technical capacity and international market reform designed to enhance tropical forest stewardship, biodiversity conservation and global climate stability.[388] The coalition's members are countries with significant tropical natural resources, particularly forests and biodiversity. Current members are Bolivia, Central African Republic, Cameroon, Congo, Colombia, Costa Rica, Democratic Republic of Congo, Dominican Republic, Ecuador, Fiji, Gabon, Ghana, Guatemala, Honduras, Indonesia, Kenya, Lesotho, Nicaragua, Nigeria, Panama, Papua New Guinea, Peru, Samoa, Solomon Islands, Uganda and Vanuatu.

Appendix III: European Union environmental legislation and policy

EU environmental legislation is one of the best ways of tackling global environmental problems, despite the complexity of the EU itself and its processes. Charities play a vital role in lobbying for new legislation, and for amendments to existing laws and policy.

History

The EU was originally a product of the need to create security and stability in the aftermath of the Second World War, and did not begin to give consideration to environmental issues until the 1970s.

The first EU organisation was the European Coal and Steel Community, founded in 1951. This transmuted into the European Economic Community (EEC) in 1957 through the Treaty of Rome, becoming the European Community in 1967 and the European Union in 1992 (via the Maastricht Treaty).

The European enterprise was built around 'four freedoms': freedom of movement of goods, services, capital and people. To deliver these, a legislative machinery was developed, comprising Agreements (between the EU and non-EU nation states and supranational bodies), Decisions (laws that apply to specific member states, companies or individuals), Regulations (legislative acts that are obligatory in all elements, and directly applicable to all member states), and Directives (legislative acts that are binding on all member states but must be implemented through national legislation within a prescribed timescale).

The first use of these legislative instruments for environmental purposes was on vehicle emissions in the early 1970s. Since then, hundreds of pieces of legislation have come into effect, covering incineration of waste, discharges of pollutants into the land, sea and air, drinking water and wastewater, greenhouse gas emissions from vehicles, energy efficiency in buildings, landfill waste disposal, environmental impacts of packaging, eco-labelling, promotion of the use of biofuels and other renewables, and conservation of wild birds, habitats and wild fauna and flora.

Alongside this body of law, the EU has developed a variety of policy approaches and initiatives with environmental relevance, for example the Forest Law Enforcement, Governance, and Trade (FLEGT) initiative, which seeks to ensure that only legal timber enters the EU.[57] As we see throughout this report, regulatory and policy frameworks provide a boost and focus for charities seeking to tackle global environmental problems. For example, the 2006 Greenpeace campaign highlighting the use of illegal timber in UK government buildings draws its authority and credibility directly from the FLEGT initiative.[167]

This body of law and policy has had a considerable impact on the production of goods and services, on national legislation in EU member states, and on the activities and goals of some environmental charities. In the UK, for example, most of the national legislation on waste is a by-product of EU waste legislation, which is extensive. As a consequence, this area of environmental activity has become highly regulated, which in turn has influenced the activities of charities.

While the primary goal of EU legislation and policy is to regulate production and activity within the EU, in some cases EU actions result in significant impacts internationally. The Registration, Evaluation and Authorisation of Chemicals (REACH) is a draft EU Directive that (as currently proposed) will give greater responsibility to industry to manage the risks from chemicals and to provide safety information on the substances (including labelling information), pre-registering this data with a new EU Chemicals Agency.[329] This will affect both EU-based companies, and companies seeking to export to the EU (for example, from the US).

Such is the potential impact of REACH that it has spawned a new charitable vehicle, Chemical Reaction, formed as a coalition between the European Environmental Bureau, Friends of the Earth and Greenpeace.[389] It is lobbying for the strongest possible provisions.

Table 20: Milestones in EU environmental legislation

1979	Conservation of wild birds (Birds Directive)
1992	Conservation of natural habitats and wild fauna and flora (Habitats Directive)
1990	Contained use of genetically modified organisms
1999	Landfill of waste
2000	End-of life vehicles
2001	Promotion of electricity from renewable energy sources (Renewables Directive)
2001	On the deliberate release of genetically modified organisms
2003	Waste electrical and electronic equipment (WEEE Directive)
2003	Promotion of the use of biofuels or other renewable fuels for transport
2003	Greenhouse gas (GHG) emissions allowance trading scheme
2004	Mechanism for managing EU GHG emissions and implementation of Kyoto Protocol
2005	Establishment of a FLEGT licensing scheme for imports of timber into the EU
2006	Management of waste from extractive industries
2007	Registration, Evaluation and Authorisation of Chemicals (REACH Directive)

How is the EU responding to global environmental problems?

EU environmental policy is packaged in the series of Environmental Action Programmes that have been in progress since the 1970s. The current version is the *Sixth Environment Action Programme of the European Community, 2002–2012*. Like action programmes in other areas of EU activity, the programme is based on extensive consultation with member states, business and industry, regional governments and environmental organisations, charities and NGOs. The programme is a vehicle for policy formulation and delivery, not legislation; but nevertheless its influence throughout the EU and beyond is extensive, and it gives a clear sense of EU environmental perspectives and priorities.

Sixth Environment Action Programme of the European Community, 2002–2012

Four areas are targeted for priority action: climate change; nature and biodiversity; environment and health and quality of life; and natural resources and waste. Across these areas, seven themes have been identified, for which the EC produced Thematic Strategies:

Air pollution

Sets health and environmental objectives and emission reduction targets, to be attained by 2020, for pollutants (including sulphur dioxide and nitrogen dioxide) that harm EU citizens by exposure to particulate matter and ozone in air, and to protect European ecosystems from acid rain, excess nutrient nitrogen and ozone.

Prevention and recycling of waste

Goals are to implement and improve the already large body of EU waste legislation.

Protection and conservation of the marine environment

Proposes a new Marine Strategy Directive, as a part of the proposed new EU Maritime Policy. '*The Directive will only define common objectives and principles at EU level. The Directive will establish European Marine Regions and identify potential sub-regions as management units for implementation, on the basis of hydrological, oceanographic and bio-geographic features. No specific management measures will be set down at EU level*.'

Soil

Proposes a Framework Directive '*as the best means of ensuring a comprehensive approach to soil protection while fully respecting subsidiarity. Member States will be required to take specific measures to address soil threats, but the Directive will leave to them ample freedom on how to implement this requirement*.'

Sustainable use of pesticides

Notes that existing EU legislation has failed to bring about a decrease in the use of pesticides in the EU between 1992 and 2003. Proposes a new Framework Directive that will instruct member states to produce National Action Plans, and impose additional restrictions on use (eg, prohibition of aerial spraying).

Sustainable use of resources

Addresses natural resources use for the first time at EU level, recognising that '*if the world as a whole followed traditional patterns of consumption, it is estimated that global resource use would quadruple within 20 years. The negative impact on the environment would be substantial*.' As no legislation currently exists, the goals are primarily focused on capacity building, including proposals for a European Data Centre to monitor and analyse inputs and outputs of natural resources, developing indicators to measure progress, creating an international panel (with UNEP) to provide independent scientific advice and development of national programmes by member states. No concrete, resource-specific targets are set (eg, on unsustainably produced soybean, timber or palm oil imports). The overall context is a timeframe of 25 years to achieve 'decoupling' (where the rate of growth of environmental impacts of resource use is negative while economic growth is increasing).

Urban environment

No new legislation proposed. Seeks better implementation of existing EU environment policies and legislation at the local level.

Appendix IV: UK government environmental policy

From the 1972 Stockholm conference onwards, the UK government has had a strong record on environmental policy at the international and EU levels, by comparison with the actions and policies of many other governments. And domestically, effective legislation on many environmental issues has been put in place on waste, pollution, protected areas and species, and other areas.

But on the major environmental problems—climate change, dwindling natural resources, unsustainable consumption and integration of environmental priorities into aid and development programmes—the UK government, like other governments in the developed world, has not yet produced a coherent body of policy and legislation that tackles these issues effectively.

There is a profusion of frameworks, task forces, strategies, position papers and action plans, but these are confusing and daunting for funders looking for guidance and leadership on the areas that need the support and involvement of the environmental charity sector. In addition, the structure and organisation of responsibility for the environment is distributed throughout government, leading to a lack of strategic coherence.

Government understands the causes of environmental problems and recognises the need for action

The central plank of government's response to environmental problems is its sustainable development strategy, *Securing the future: delivering UK sustainable development strategy* (see Section 3).[30] This ranges from policy on sustainable living by individuals, families and communities to approaches and initiatives that deal with climate change, protection of natural resources, energy, waste—in the UK and globally, setting the policy agenda across all government departments. The strategy declares:

> *'The past 20 years have seen a growing realisation that the current model of development is unsustainable. On the one hand we see the increasing burden our way of life places on the planet on which we depend… [this leads to] the consequences of already unavoidable climate change, increasing stress on resources and environmental systems – water, land and air – from the way we produce, consume and waste resources, and increasing loss of biodiversity from the rainforest to the stocks of fish around our coast.*
>
> *On the other hand we see a world where over a billion people live on less than a dollar a day, more than 800 million are malnourished, and over two and a half billion lack access to adequate sanitation. A world disfigured by poverty and inequality is unsustainable. While increasing wealth is most often associated with depletion of environmental resources, extreme poverty can also leave people with no option but to deplete their local environment – so sustainable poverty eradication depends on the poor having access to adequate natural resources and a healthy environment.'*

As an articulation of the causes and nature of global environmental problems, this is strikingly similar to the mission statements and articulations of the leading environmental charities. Indeed, *Securing the future* goes on (p.44) to refer to the WWF 'one planet living' concept:

> *'Sustainable consumption and production requires us to achieve more with less. Current developed country patterns of consumption and production could not be replicated world-wide: some calculations suggest that this could require three planets' worth of resources.'*

In addition to demonstrating its understanding of the causes of environmental problems, the government also recognises the need for action. In his foreword, the Prime Minister notes:

> *'The consultation for this strategy made clear that what was needed in the strategy was a move into action. So the strategy includes clear actions to promote sustainability.'*

Securing the future: implementation

The sustainable development strategy is organised under four priorities: sustainable consumption and production, climate change, natural resource protection and sustainable communities, backed up by a new set of outcome-focused indicators. For each priority there are national and international objectives. Below we summarise the main projects and organisations that are implementing the strategy, and related government activity. Most are fully or largely funded by government. There is a multiplicity of initiatives, and this is by no means an exhaustive list. In some cases, information and material on progress since the publication of *Securing the Future* is included.

Table 21: Securing the Future—summary

Government Departments/Agencies/ Task Forces	Projects/Initiatives
Chapter 2: Helping people make better choices; Chapter 6: From local to global: creating sustainable communities and a fairer world	
Academy for Sustainable Communities (ASC)[390]	Based in Leeds, the ASC is a new national and international centre with a focus on developing sustainable community skills for young people and professionals. Funded by the Communities and Local Government department and Northern Way (three northern UK regional development agencies).
Behaviour Change Forum (BCF)[391]	The BCF was created in 2005 'to evaluate and share what works best in practice … and to promote and support better policymaking to deliver sustained behaviour change.' The forum is led by the Cabinet Office, and includes the major departments across government.
Communities and Local Government, Home Office, DEFRA Community Action 2020—Together We Can[392]	Aims to increase community engagement in solving public problems and improving people's quality of life. There are four strands: Citizens and Democracy; Health and Sustainability; Regeneration and Cohesion; Safety and Justice. Within the health and sustainability strand, the Every Action Counts Consortium is led by DEFRA, working with a range of voluntary and community organisations on four themes: Travel wisely; Save our resources; Shop ethically; Save energy; and Care for your environment.[393]
David Miliband's Priorities for DEFRA[394]	David Miliband was appointed Secretary of State for Environment, Food and Rural Affairs in May 2006. He set out his priorities in a letter to the Prime Minister in July 2006.
Department for Education and Skills[395]	Sustainable Schools is a website set up in 2006 within TeacherNet, designed to support schools on their journey to sustainability, introducing the principles of sustainable development and offering guidance on how to embed these principles into the heart of school life.
Environmental Action Fund (EAF)[316]	EAF is a DEFRA-administered grant-making fund for voluntary and community groups (including charities) to further the government's sustainable development objectives for England. Planned grant disbursements for 2007/2008 are £2.4m.
Improvement and Development Agency (IDeA)[396]	Delivering sustainable communities is a project of IDeA to build the sustainable development skills and capacity of local authority leaders and chief executives.
Sustainable Development Commission (SDC)[297]	One of the outcomes of Securing the Future was the strengthening of the role of SDC, which is now the government's independent watchdog on sustainable development.
Sustainable Development Dialogues[397]	Led by DEFRA, in collaboration with the Foreign and Commonwealth Office and DFID, the Sustainable Development Dialogues are a cross-government initiative working to implement the international goals of Securing the Future. Dialogues are ongoing with India, China, Mexico, Brazil and South Africa.
Sustainability Integration Group (SIGnet)[398]	SIGnet is a network of the bodies that fund, plan and regulate the post-school sector. The network's aim is for members to work together to integrate sustainability literacy into the curricula. SIGnet is coordinated by Forum for the Future, with funding from DFES.
Chapter 3: 'One Planet Economy': sustainable consumption and production	
Business Resource Efficiency and Waste Programme (BREW)[399]	BREW is a DEFRA administered and funded programme. From 2005–08 BREW is returning £284m of additional receipts from increases in Landfill Tax, 'to business, in a manner that will encourage and support resource efficiency.'
Business Taskforce on Sustainable Consumption and Production (BTSCP)[400]	The BTSCP was launched in February 2006, with a two-year life span. The taskforce has been convened on behalf of DEFRA and the DTI by four business networks—Business in the Community, the Business Council for Sustainable Development-United Kingdom, the University of Cambridge Programme for Industry and its Business & the Environment Programme—and with guidance from the Small Business Consortium and the Sustainable Development Commission. To date, there are no public outputs.
Environment Direct Service[401]	Securing the Future announced plans for a new environmental information service for consumers, providing simple information and advice about the impacts of goods and services. DEFRA commissioned an initial scoping report and concept research in 2005, but no further details have been announced.
Environmental Innovations Advisory Group (EIAG)[402]	The EIAG is tasked with identifying practical measures to tackle barriers to innovation in the environmental industries sector. Funded by the DTI and DEFRA. Along with other government bodies, EIAG has responsibility for implementation of the EU Environmental Technologies Action Plan.[403]

Government Departments/Agencies/ Task Forces	Projects/Initiatives
Chapter 3 continued:	
Envirowise[404]	Envirowise delivers a government-funded programme of free, confidential advice to UK businesses, to enable companies to increase profitability and reduce environmental impact.
Market Transformation Programme (MTP)[405]	The Market Transformation Programme (MTP) supports sustainable consumption and production, in particular policies and delivery programmes that encourage competition and innovation in the environmental performance of traded goods and services. An advisory group (MTAG) advises DEFRA on the MTP's direction, operation and management.
Sustainable Development Roundtable (SDR)[406]	The SDR was a joint initiative of the National Consumer Council and the Sustainable Development Commission, funded by DEFRA and the DTI. The roundtable brought together a small group of leading experts in consumer policy, retailing and sustainability to advise government on how to create consumer choices that stay within environmental limits. The SDR's report, I Will if You Will: Towards Sustainable Consumption was published in May 2006.
Sustainable Procurement Task Force (SPTF)[407]	The SPTF was set up in 2005. An action plan was published in June 2006, which gives recommendations on how the UK government can successfully meet its target of being recognised as amongst the leaders in sustainable procurement across EU member states by 2009.
UK Forum for Environmental Industries (UKFEI)[408]	UKFEI provides a national voice for the environmental industries sector in the UK, bringing together businesses, the public sector, regional government and environmental organisations. It works alongside and is supported by the government's Environmental Industries Unit (EIU) and the Environmental Industries Sector Unit (EISU).
Waste and Resources Action Programme (WRAP)[275]	WRAP is a not-for-profit organisation created in 2000 as part of the UK government's waste strategy. WRAP makes market interventions to stimulate more recycling and less landfill. WRAP is primarily funded by DEFRA. It plans to spend £79.1m in 2007/2008.
Chapter 4: Confronting the greatest threat: climate change and energy	
Carbon Trust (CT)[176]	The Carbon Trust is an independent company funded by government. It aims to help the UK move to a low carbon economy by helping business and the public sector reduce carbon emissions now and capture the commercial opportunities of low carbon technologies. The strategy notes that government funding of CT for 2005–08 will be at least £192m.
Climate Change Bill—forthcoming[409]	A Climate Change Bill was announced in the Queen's Speech in November 2006. This will: • put the government's long-term goal to reduce carbon dioxide emissions by 60% by 2050 into statute; • establish an independent body—the Carbon Committee—to work with government to reduce emissions over time and across the economy; • create enabling powers to put in place new emissions reduction measures; and • improve monitoring and reporting arrangements, including how the government reports to parliament.
Climate Change Communications Initiative (CCCI)[410]	CCCI is led by DEFRA in partnership with the Energy Saving Trust, the Carbon Trust, the DTI, the Environment Agency, the UK Climate Impacts Programme and the DfT. Government support is £12m for the 2005–08 period. CCCI's mission is 'citizen-facing'—providing information and advice on how individuals can reduce their carbon footprint. The Climate Change Champions and Climate Challenge Fund are CCCI projects.
Climate Change Levy, Emissions Trading Schemes	The climate change levy was introduced in 2001 as a tax on the business use of energy, providing an incentive to cut usage. The UK and EU emissions trading schemes are major planks of government climate change strategy. For more information, see www.defra.gov.uk/ENVIRONMENT/climatechange/trading/.
Department for Trade and Industry, Energy Review[411]	The Energy Challenge is the DTI's review of UK energy policy, published in July 2006. Recommendations include a range of measures to obtain 20% of UK electricity from renewable sources by 2020; new nuclear power stations; energy efficiency targets; a new Office of Climate Change to monitor carbon reduction targets and actions across government.
Energy Saving Trust[274]	The Energy Saving Trust is a not-for-profit organisation funded by DEFRA, DTI, DfT and the devolved administrations and the private sector. It provides energy advice to consumers and local authorities, runs grant-funding schemes for district/community heating systems, and is piloting photovoltaic projects.

Government Departments/Agencies/ Task Forces	Projects/Initiatives
Chapter 4 continued:	
Foreign and Commonwealth Office's Global Opportunities Fund (GOF)[356]	The GOF announced a Climate Change and Energy Programme in 2006 of £4.7m per annum.
John Ashton's appointment by the Foreign and Commonwealth Office as Special Representative on Climate Change[412]	An article by John Ashton setting out an overview of the climate change challenge was published on the BBC website in September 2006.
Stern Review on the Economics of Climate Change[55]	Sir Nicholas Stern was asked by the Chancellor of the Exchequer, Gordon Brown, to conduct a review of the economics of climate change and its implications for the UK during 2006. Based on extensive consultations and research, both in and out of government, the review was published in October 2006.
UK Climate Change Programme (CCP) 2006[413]	The CCP 'is expected to reduce the UK's emissions of greenhouse gases to 23-25% below base year levels and reduce the UK's carbon dioxide emissions to 15-18% below 1990 levels by 2010. The new policies in the Programme will reduce carbon emissions by some 7-12Mt by 2010.'
UK Climate Impacts Programme (UKCIP)[414]	UKCIP was set up in 1997. Funded by DEFRA and based at the University of Oxford, it coordinates research on how climate change will have an impact at regional and national levels.
Chapter 5: A future without regrets: protecting our natural resources and enhancing the environment	
Commons Act 2006[415]	The Commons Act strengthened protection of common lands in England. About 55% is designated as 'Site of Special Scientific Interest' (ie, valuable wildlife habitat), but 43% of this is classified by Natural England as in poor or declining condition (ie, bad for wildlife).
Darwin Initiative[346]	The Darwin Initiative is a small grants programme that aims to promote biodiversity conservation and sustainable use of resources around the world. The initiative is funded and administered by DEFRA. The annual budget is £7m pa, with £35m granted to 350 biodiversity projects in 100 countries since launch in 1992.
Environmental Stewardship Schemes[416]	Environmental Stewardship Schemes were launched in March 2005. DEFRA has provided £65m to farmers in England, in return for long-term environmental management.
Formation of Natural England[417]	The Natural Environment and Communities Act 2006 established Natural England as the integrated countryside and land management agency, bringing together English Nature, the Countryside Agency and the Rural Development Service. The Act also established the Commission for Rural Communities as the independent adviser, watchdog and advocate for rural people.[418]
Marine Bill—forthcoming[44]	A UK Marine Bill is planned. DEFRA produced A Sea Change: A Marine Bill White Paper in March 2007. In its provisions, the Bill includes proposals for the first marine protected areas in UK territorial waters.

UK international environment policy constrained by the need to calibrate strategy with EU and international efforts

On global issues, UK government strategy is to a large extent index-linked to EU and international efforts, rarely moving significantly ahead. When international action is decisive, the effect is powerful and far reaching. Perhaps the best example of this is the Montreal Protocol on ozone depletion. And as we have shown above, EU directives on waste, protected areas and other environmental issues have been a driving force behind much of the UK's national legislation.

But the reality is that international and EU progress on many global environment problems is slow, particularly on protection of natural resources and climate change. When this happens, the consequence of an index-linked approach is to constrain swift action at the UK national level. This has profound implications for funders assessing where and how to channel their support for policy work. In some instances, backing for EU- or UN-focused charities may be a better option than funding charities working to bring about change at UK government level.

UK and EU approaches to protection of natural resources

Under its natural resource protection priority, the UK government has an objective to develop the evidence base on ecosystems, in order to achieve *'a better understanding of how ecosystems work, their resilience and vulnerability, how they are affected by cumulative and combined pressures, and the value of ecosystem goods and services that they provide. This includes establishing where environmental limits exist.'* The EU thematic strategy on natural resources includes the same objective. An overall comparison of the two strategies shows great similarities, indicating that calibration is going on.

The flaw in this calibration is that the EU thematic strategy, as currently framed, will not deliver any resource-specific targets before 2012. Or, to express this at a concrete level, EU measures to regulate importation of agricultural commodities (such as soybean from Brazil and palm oil from Indonesia) will not be in place in the next six years. Instead, the EU has elected to concentrate on firming up the evidence base, and the UK has pegged its own policy to that approach.

Structure and organisation of government environment responsibilities

Four government departments have substantive responsibility for environment: the Department for Environment, Food and Rural Affairs (DEFRA), the Department for International Development (DFID), the Department for Trade and Industry (DTI) and the Foreign and Commonwealth Office (FCO). Their remits are:

- **DEFRA**—lead responsibility for environment in the UK, and for climate change and biodiversity internationally;
- **DFID**—responsibility for the integration of environment into the UK's international development strategy;
- **DTI**—responsibility for UK energy policy;
- **FCO**—some responsibility for climate change, especially where it intersects with security and diplomatic issues.

Other government departments with some environment responsibility include Communities and Local Government (sustainable communities in the UK), Department of Transport (energy sustainability and transportation), and the Department for Culture, Media and Sport (Natural History Museum).

A large number of Executive Agencies, NDPBs (Executive Non Departmental Public Bodies), Advisory NDPBs, Levy Boards and other bodies support these departments, some of which are shown in the table below.

Table 22: Government agencies with environment responsibilities

Executive Agencies	Central Science Laboratory, Centre for Environment, Fisheries and Agriculture, Marine Fisheries Agency, Pesticides Safety Directorate, Rural Payments Agency, State Veterinary Service, Veterinary Laboratories Agency
Executive Non-Departmental Public Bodies (NDPBs)	Commission for Rural Communities, Countryside Council for Wales, Environment Agency, Joint Nature Conservation Committee, National Forest Company, Natural England, Natural Environment Research Council, Natural History Museum, Royal Botanic Gardens Kew, Scottish Natural Heritage
Levy Boards	Home-Grown Cereals Authority, Horticultural Development Council, Meat and Livestock Commission, Sea Fish Industry Authority
National Park Agencies	Broads Authority, Dartmoor, Exmoor, Lake District, New Forest, North York Moors, Northumberland, Peak District, Yorkshire
Not-for-profit organisations	Carbon Trust, Energy Savings Trust, Waste and Resources Action Programme
Other bodies	English Food and Farming Partnership, Forestry Commission, National Non-Food Crops Centre, Sustainable Development Commission

Perspectives of funders and charities on policy issues

NPC's consultations with charities, funders and advisers revealed widespread concern that UK government environment policy, and initiatives at EU and international levels, are not going far enough, and that there are also failures in the implementation of existing strategies, agreements and legislation. A number of consultations identified the DEFRA-DFID relationship as a cause of the lack of coherence in UK government environment policy, especially in the development area.

Appendix V: Climate change and natural resources: history, evidence and consensus

Climate change—history

In 1896, the Swedish scientist Svante Arrhenius first formulated the idea that changes in the levels of carbon dioxide in the atmosphere could substantially alter the surface temperature of the earth through the greenhouse effect.* In 1939, the amateur British scientist G.S. Callendar argued that the level of both carbon dioxide and temperature had been rising, but his observations attracted little support. It was not until 1957 that the American scientist Roger Revelle, together with Hans Suess, published the first major scientific paper on the rise of CO_2 in the atmosphere, based on data collected from weather balloons launched above the volcanic mountain of Mauna Loa, Hawaii.[419] (Revelle later went on to become a professor at Harvard University in the 1960s, where he introduced Al Gore, then an undergraduate, to the study of global warming). The Mauna Loa observations have continued ever since, now comprising one of the primary datasets on climate change, and spanning 48 years.

Research interest and activity advanced steadily through the 1970s, and in 1985 a French-Soviet drilling team at Vostok Station in central Antarctica produced an ice core two kilometres long that carried a 150,000-year record. This revealed that the level of atmospheric CO_2 had gone up and down in remarkably close step with temperature. Based upon these and other historical observations, many models have since made various projections about future increases in global surface temperatures, given the increasing rate at which anthropogenic greenhouse gases are being released into the atmosphere (see Figure 26).

Figure 26: Historical variations of the Earth's surface temperature and several models predicting anthropogenic changes over the next one hundred years

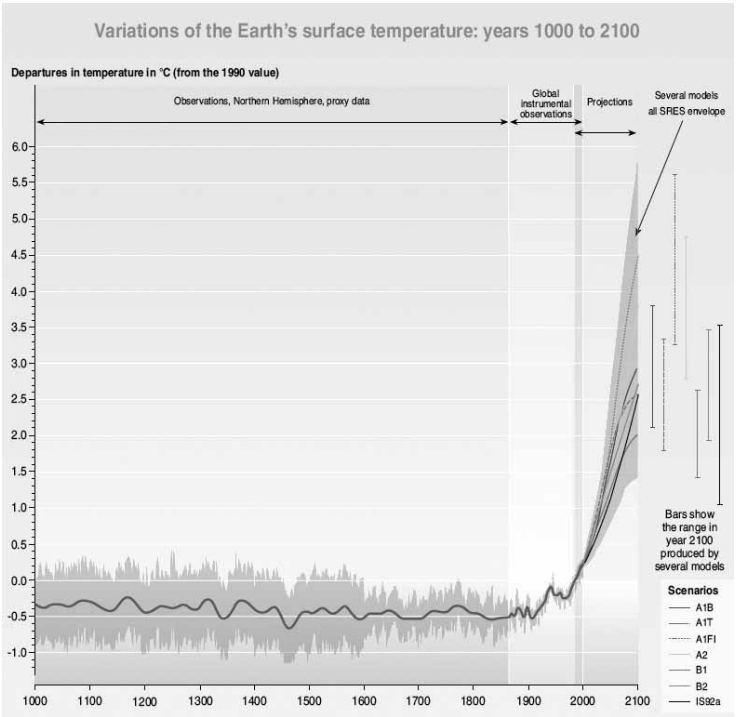


Image courtesy of IPCC, Climate Change 2001 Synthesis Report

Climate change—policy background

Responding to the accumulation of data pointing to anthropogenic (human-induced) global warming, the Intergovernmental Panel on Climate Change (IPCC) was created in 1988 by the World Meteorological Organisation (WMO) and the United Nations Environment Programme (UNEP), drawing in scientific experts to act as representatives of their governments in an assessment of the risk of human-induced climate change. The IPCC produced its first report in 1990, the second in 1995 and the third in 2001.

These reports were the basis for the formation of the United Nations Framework Convention on Climate Change (UNFCCC), which was agreed at the Rio Summit in 1992, and the subsequent Kyoto Protocol to the Convention, which was drawn up in 1997 but did not come into effect until 2005.[35]

** There are several useful books and websites covering the history of climate change, including Spencer Weart's The Discovery of Global Warming (book and website), Tim Flannery's The Weather Makers, John Houghton's Global Warming: The Complete Briefing and Eugene Linden's The Winds of Change: Climate, Weather, and the Destruction of Civilizations. For a history of the IPCC, see www.ipcc.ch/about/anniversarybrochure.pdf.*

Is there scientific consensus on climate change?

The IPCC Third Assessment Report (TAR), 2001

Up until the publication of the second IPCC assessment in 1997, scientific opinion was divided, but since then—and increasingly so since the publication of the IPCC's Third Assessment Report (TAR) in 2001—a majority view has emerged. As explained by IPCC, TAR '*represents nearly three years of work by approximately 450 Lead Authors and more than 800 Contributing Authors. During the expert and government reviews comments from approximately 1,000 government and expert reviewers were received*.'[71] The scale of scientific research on climate change has become very significant in the last 15 years, with global funding estimated at $3bn–4bn a year by the end of the 1990s, and a global workforce of more than 1,000 scientists.[420] Across this community, there is overwhelming consensus—estimated to be above 90%—in support of TAR's findings, including its statement that *'there is new and stronger evidence that most of the warming observed over the last 50 years is attributable to human activities.'*

The IPCC Fourth Assessment Report (AR4), 2007

The final volume of the IPCC's Fourth Assessment Report, was being prepared for publication as *Green Philanthropy* went to press. This report is based on the consolidation of new evidence since the TAR in 2001. When it is completed before the end of 2007 it is expected to further strengthen the scientific and political consensus on the reality of climate change.

Orestes paper: 928 to 0

This much quoted paper, published in 2004, analysed 928 abstracts published in refereed scientific journals between 1993 and 2003, with the keywords 'climate change.' 75% explicitly endorsed the consensus position (that climate change is happening and is 'anthropogenic' ie, human-induced). 25% dealt with methods or paleoclimate, taking no position on the climate change debate. *'Remarkably, none of the papers disagreed with the consensus position.'* [16]

Other notable declarations backing the consensus view include the 2005 joint science academies' '*Global response to climate change'* issued by the G8 nations and Brazil, China and India,[421] and the US National Research Council 2001 report endorsing the IPCC view of attribution of recent climate change as representing the view of the science community.[422]

Is there wider consensus on climate change within global society?

Opinion in wider society has broadly tracked the developing scientific consensus:

- **Opinion polls indicate majority public concern on climate change in most countries.**[122]
- **The governments of over 100 countries have ratified the Kyoto Protocol.**

Only the USA and Australia of the developed economies have failed to do so. Within countries, some governments have passed (or are drawing up) legislation to enforce carbon reduction, including the UK in October 2006, the State of California in July 2006, the alliance of cities in the US and elsewhere in the world, and a raft of initiatives and directives from the EU.

- **Within the business community, opinion has swung against climate sceptics.**

The Climate Change Coalition, the leading alliance of corporates holding sceptical views was dissolved in 1997, shortly after the much publicised withdrawal of BP. Since then, an increasing number of major corporates have backed the TAR consensus, and several have announced significant programmes to develop carbon neutral and other pro-climate change strategies, including Walmart, Goldman Sachs, General Electric and HSBC.

- **Most mainstream media are broadly supportive of the IPCC consensus.**

In the UK, most newspapers and journals have substantially increased their coverage of climate change issues since 2005, with the *Independent* giving particularly prominent coverage. On the internet, the BBC has launched the Green Room, a weekly environmental opinion column with guest writers, carrying many climate change articles. Internationally, media as diverse as *Time Magazine, Newsweek* and *Vanity Fair* all produced leading articles and packages of features on the environment for the first time in 2006. Perhaps the most influential development has been the increasing concern of *The Economist*, which published a special report on climate change in September 2006, which concluded that, on balance, it would be sensible to invest in avoiding climate change sooner rather than later.[423]

- **Stern Review on the Economics of Climate Change, 2006.**[55]

Sir Nicholas Stern was asked by the Chancellor of the Exchequer, Gordon Brown, to conduct a review of the economics of climate change and its implications for the UK during 2006. The review concluded that climate change *'is the greatest and widest-ranging market failure ever seen.'* The cost of inaction is likely to '*reduce welfare by an amount equivalent to a reduction in consumption per head of between 5 and 20%,'* but early and comprehensive efforts to stabilise greenhouse gases is achievable in economic terms—no more than 1% of annual global GDP by 2050.

Critical voices since 2001

The IPPC-based consensus on climate change is not universal, and a number of vocal critics—including scientists, policy-makers and journalists—continue to make interventions against the proposition that climate change is human-induced, arguing that large-scale efforts to avoid climate change through carbon reduction initiatives and other actions are wasteful of resources and unnecessary. Critical voices include: Bjorn Lomborg,[82, 86] the World Climate Report,[424] Nigel Lawson and other economists who responded to an early 2006 paper by Sir Nicholas Stern,[64] the George C. Marshall Institute, the Competitive Enterprise Institute, the Cato Institute and the *Wall Street Journal*.

Natural resources and consensus

Until the publication of the Millennium Ecosystem Assessment in 2005, the debate over the *degree* of natural resources loss was bedevilled by a lack of comprehensive and credible data.[8] The reality of destruction in particular ecosystems—for example in Indonesia and southern Brazil—has been tracked *in situ* by scientists since the 1960s. The actual rate of destruction remained a subject of controversy, in part because the most reliable technology for carrying out large-scale data gathering and analysis—the use of orbital satellites—were not systematically deployed for ecosystem analysis purposes until the latter decades of the 20th century. Difficulties over assessing the state of natural resources were compounded by the related debate on the rate of biodiversity loss within the ecosystems that hold our natural resources, as noted in Bjorn Lomborg's *Skeptical Environmentalist.*[82]

Commissioned by Kofi Annan on behalf of the UN, the MEA project was a collaborative worldwide effort involving over 1,300 scientists and experts over a five-year period, at a cost of $20m. It is the first comprehensive overview of planetary resources to be produced, and provides an extraordinarily detailed assessment, including past, current and likely future trends. In overall terms, the MEA finds that 60% of ecosystem services (the food, freshwater, energy and materials provided by nature to the human population) are in decline.

Appendix VI: Overview of current environment funding

The overall picture

The main sources of environment funding are the multilateral institutions, including the World Bank and the Global Environment Facility; bilateral aid (often referred to as 'overseas development assistance', or ODA) provided by the national governments of OECD countries; domestic environmental expenditure by governments; corporate funding; charitable trusts and foundations; and donations made by members of the public, and members and supporters of environment charities.

Data is available in fragmented form. OECD, for example, provides information on global ODA on its website, including analysis by type of expenditure. Most developed nations provide analyses of their domestic environmental expenditure. But no official statistics are available that bring all of the information together. For charitable trust and foundation funding, sources of information in the public domain are very incomplete. There is no database of global grant-making. Information on corporate funding is similarly hard to ascertain. Finally, there is no global dataset that can provide funders and donors with analysis of sources of income from the recipient charity perspective.

As a result, there are no reliable figures for total global annual expenditure on combating environmental problems. Some estimates put this at between $3 billion and $10 billion annually, but these figures are principally focused on biodiversity rather than the full spectrum of environment issues. Starting points for exploration of environment funding are the report by Nicholas Lapham and Rebecca Livermore on multilateral and bilateral conservation funding,[362] and papers by Castro[360] and Bayon.[361]

Multilateral funding

The world's two leading multilateral financial institutions are the World Bank and the International Monetary Fund (IMF), and both play a significant part in the global environment arena. In recent years the IMF has incorporated environmental thinking and principles into its activities,[384] but of the two institutions it is the World Bank Group that is most closely involved in environmental issues, through lending, special projects and research.

The environment portfolio of projects under the World Bank's supervision amounts to $16.4bn (2002 figures), including the International Development Association (IDA), International Bank for Reconstruction and Development (IBRD), Global Environment Facility (GEF), Montreal Protocol, Carbon Offsets, Debt Service Facility, Guarantees, Rainforest and Special Financing projects. Within this portfolio, the active projects account for $10.7bn, or 11.5% of the bank's total active portfolio. Pollution management and environmental health is the largest share (34%), followed by water resources management (27%).[425] The World Bank is also the Trustee of the GEF, and one of the three GEF implementing agencies, together with UNEP and UNDP.

In addition, World Bank loan financing for mining and forest extraction, and agricultural and industrial development, has great power to strengthen or weaken the environmental fabric of developing countries. Following controversies over dams and other projects in the 1980s and 1990s, the Bank has carried out several reviews of its environmental policies, most recently the 2001 repositioning announced in *Making Sustainable Commitments: An Environment Strategy for the World Bank*.[426] Despite these developments, ambivalence about the merits of the World Bank's activities remains. A number of charities continue to monitor bank activities, including the US non-profits Bank Information Center,[186] and the UK-based Bretton Woods Project.[187] The latter is an initiative of the Development and Environment Group (DEG), a network of UK-based environment and development charities.

As a lender, the bank is principally focused on working with governments. It is not a direct source of funds for environment charities, although this is undoubtedly occurring indirectly. The other major multilateral institutions that are sources of environment-related finance—African Development Bank, Asian Development Bank, Inter-American Development Bank, European Investment Bank (EIB) and the European Bank for Reconstruction and Development (EBRD) operate on broadly similar lines.

Global Environment Facility (GEF)

The GEF is the world's largest environment funder. Since it was founded in 1991, the GEF has provided $6.2bn in grants and generated over $20bn in co-financing from other sources to support more than 1,800 projects that produce global environmental benefits in 140 developing countries and countries with economies in transition. The GEF itself is funded by donor nations, which are providing $3.13bn for 2007–2010.

Like the World Bank, GEF deals directly with national governments in most of its financial agreements (although unlike the World Bank, GEF is a grant-maker rather than a lender). In some cases, charities are involved in project delivery as 'executing agencies'. GEF usually seeks co-finance (often from the recipient governments themselves), which typically provides two thirds of the costs of a GEF project.

International environment agreements are the main drivers of GEF funding strategy, with the Fund serving as the financial mechanism for the Convention on Biological Diversity (CBD), the UN Framework Convention on Climate Change (UNFCCC) and the Stockholm Convention on Persistent Organic Pollutants. GEF financing is provided to eligible countries through the World Bank, UNDP, UNEP, four regional development banks and FAO, International Fund for Agricultural Development (IFAD) and the UN Industrial Development Organisation (UNIDO).

GEF also runs a Small Grants Programme (SGP), which has made more than 7,000 small grants, up to $50,000 each, directly to non-governmental organisations and community organisations. Within the UN system, the GEF is by far the most substantial funder. Although there are many UN agencies and bodies with environment remits (with the lead role assigned to UNEP), the budgets for these institutions are primarily for operational rather than funding purposes.

Table 23: Disbursement of Global Environment Facility grants, 2003–2005[a]

By region	$m	Number of projects
Africa	512.6	203
Asia	385.3	142
Europe and Central Asia	294.2	116
Latin America and the Caribbean	315.4	119
Global issues	307.1	41
Regional issues	29.3	4
Total	**1,843.8**	**625**
By focal area	**$m**	**Number of projects**
Totals for biodiversity	553.2	173
Totals for climate change	535.5	155
Totals for international waters	266.3	35
Totals for land degradation	93.4	21
Totals for multi-focal areas[b]	263.5	159
Totals for ozone depletion	12.0	3
Totals for persistent organic pollutants	119.8	79
Total	**1,843.8**	**625**

Notes

(a) Small Grants Programme not included.

(b) Projects across all environment areas.

Bilateral aid and the environment

Bilateral agencies are the departments of governments with responsibility for distributing official development assistance (ODA). Total world ODA is variously estimated at between $50bn–$100bn per annum. The OECD calculates 2005 ODA at $106.8bn, but this includes $13.9bn to Iraq and $4.4bn in debt forgiveness to Nigeria.[4]

OECD calculates that funds directly allocated for environment protection are **less than 2%** of total ODA. Because of definitional problems, this is likely to be an underestimate. Charities consulted for this project variously estimated environment allocations at 2%–6% of ODA.

Table 24: Global bilateral aid, 2005

	$bn	%
Social infrastructure and services	28. 8	30.5
Action relating to debt	26.0	27.5
Economic infrastructure and services	10.0	10.6
Emergency assistance	9.4	10.0
Multisector/cross-cutting, of which • **general environment protection**	6.1 **1.5**	6.5 **1.6**
Production sectors	4.8	5.2
Administrative costs to donors	3.7	4.0
Commodity aid & general programme assistance	2.3	2.5
Unspecified	1.7	1.9
Support to NGOs	1.2	1.3
Total bilateral aid	**94.6**	**100.0**

Source: OECD, DAC 5: Official bilateral commitments by sector[4]

Poverty Reduction Strategy Partnerships (PRSPs)

Within development assistance, PRSPs have emerged as the key vehicle for delivery of aid into national government planning in developing countries. PRSPs are country-led and authored, with some assistance from the World Bank and the International Monetary Fund (IMF). In strategic terms, PRSPs are the principal vehicles for achieving the eight Millennium Development Goals (MDGs) in many developing countries, including MDG7 on environmental sustainability.

The 2006 tenth report of the UK Parliamentary Environmental Audit Committee (EAC) concluded that PRSPs have not, in the main, dealt well with environmental protection.[33] It cites concerns about '*how strongly the environment fails to feature within PRSPs.'* The EAC notes that '*poor countries with a limited capacity, struggling with more basic governance issues, may be steering development towards health and education at the expense of the environment.'* Environmental agencies within governments frequently lack the clout and experience to enable them to push the environment up the PRSP agenda.

However, it is not just recipient countries that are unwilling or unable to prioritise the environment. In evidence to the EAC, one development economist noted that meeting environmental demands is '*low on the World Bank's and the IMF's agenda'* compared to increasing country revenue. Given that the reports are tailored to access World Bank and IMF funding, this provides little extra incentive for struggling countries to take the environment seriously.[33]

The World Bank's PRSP Sourcebook, the guide available to countries working to draw up a PRSP, includes a section on the environment. This focuses on '*improving environmental conditions* [that] *can help reduce poverty*' rather than on ensuring that '*poverty alleviation should not damage the environment of the poor, which would only substitute gains in one area for losses in another*.'[427] The EAC comments that '*the reasons for this are unclear and [it] raises the question of whether the World Bank has a coherent policy towards sustainable development*.'[428]

Our research shows that allocation of resources for environmental protection within PRSPs varies greatly across countries, ranging from no explicit allocation of money to the environment, to the allocation, in Senegal's 2002 PRSP, of over 15% of total funds to the environment and natural resources. We found that on average 4% of PRSP expenditure was on the environment (see Table 25). Allocations to agriculture, fisheries and mining are included for contextual purposes. The absence of a clear set of criteria on environmentally sustainable practices in these sectors is a barrier to better understanding of the extent to which MDG7 is prioritised within PRSPs.

Table 25: Analysis of allocations to environment and agriculture, fisheries and mining in a range of National Poverty Reduction Strategy Partnerships ($m)[a]

	Environmental protection		Agriculture, fisheries, mining[b]		Year[c]	Total PRSP
Cambodia	3.3	0.6%	9	1.7%	2005	528
Cameroon	19.7	1.0%	98.2	5.0%	2005	1,966
Ghana	19.9	3.1%	59.9	9.2%	2005	651
Madagascar	37.2	5.4%	62.5	9.0%	2005	693
Nicaragua	12.1	4.8%	1.9	0.8%	2005	252
Senegal	63.5	15.8%	82.6	20.5%	2005	403
Tanzania	n/d	n/d	32.6	10.1%	2003	323
Zambia	1.0	0.25%	57.7	14.4%	2004	400

Notes

(a) All data is from the PRSP section of the World Bank website. Amounts and percentages of PRSP totals are annual averages (most PRSP budgets are for three-year periods).[427]

(b) There is no categorisation of natural resources expenditure using sustainability criteria; the figures are included here for comparison purposes.

(c) Figures are for 2005, unless data was not available for that year. Note that this may be planned rather than verified expenditure.

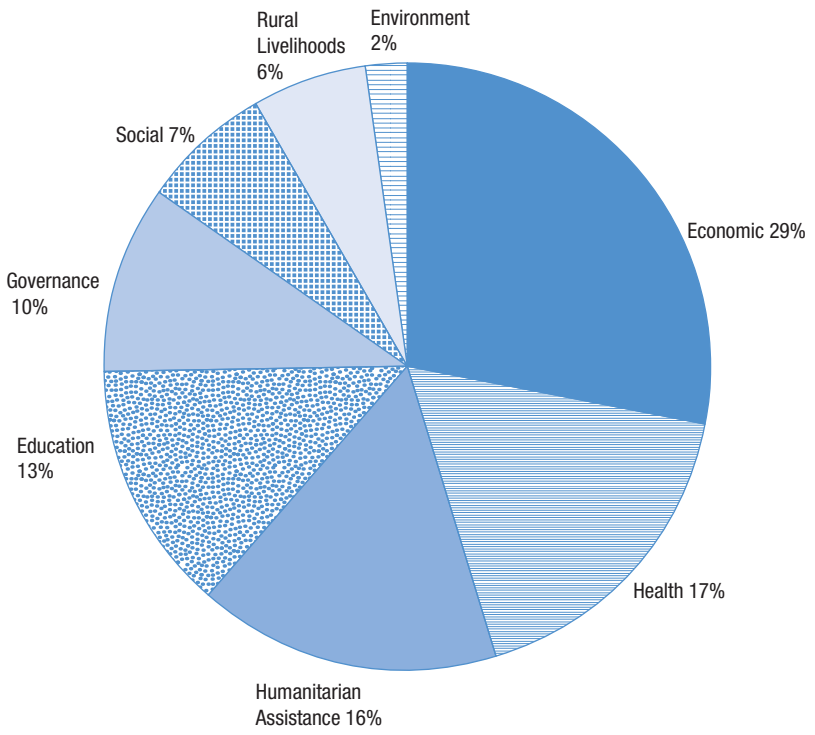
UK bilateral aid and the environment

In the UK, the Department for International Development (DFID) has responsibility for development assistance. In 2005/2006, DFID's budget was £3.85bn (£3.64bn in 200/2005).[211] Of the bilateral component (£2.14bn in 2004/2005), 2% was directly allocated to environment.[11]

DFID's expenditure is allocated across eight broad sectors (Figure 27). The 2% allocation to environment includes funding of the Global Environment Facility (currently £40m per annum). In evidence to the Parliamentary Environmental Audit Committee (EAC), DFID noted that £552.2m of bilateral aid in 2004/2005 could be considered to have a significant environmental component.[428]

DFID's environmental strategy has been criticised by the EAC and by an umbrella group of development and environment charities (see Section 4.3). DFID is also the conduit for passing funds to the GEF (current UK funding of GEF is £40m per annum).

Figure 27: DFID—bilateral aid by broad sector, 2004/2005[4]



DFID and PRSPs

In evidence to the EAC, DFID acknowledged that PRSPs '*have not focused as much as they could do on environment*.' The EAC noted that '*there does not appear to be any sense of urgency within DFID in dealing with the very serious problem of integrating the environment into direct budgetary support.*'[428]

DFID and charities

DFID's current approach to working with the voluntary and community sector is through Partnership Programme Agreements (PPAs) with leading charities and NGOs.[341] Out of the 26 PPAs, only three are with charities that have environment priorities within their strategies (IIED, Practical Action and WWF-UK). In the past, DFID has operated environment grants programmes, but these have been discontinued.

UK government and environment expenditure

Public sector expenditure analysis shows that the UK government budget for services on environment protection in 2005/2006 is estimated at £8.5bn, in the context of overall expenditure of £502.4bn (Table 26).[211] The overwhelming bulk of environment expenditure (more than 90%) is devoted to UK domestic issues, particularly waste disposal, control and regulation of pollution, and care and management of protected areas and biodiversity.

Table 26: UK government public sector expenditure on services, 2005/2006 (£bn)[211(a)]

	£bn
General public services	13
EU transactions	0
International services	6.4
Public sector debt interest	26.6
Defence	31.1
Public order and safety	30.1
Enterprise and economic development	6.6
Science and technology	2.9
Employment policies	3.9
Agriculture, fisheries and forestry	5.9
Transport	18.4
Environment protection	**8.5**
Housing and community amenities	9.3
Health	89.4
Recreation, culture and religion	11.4
Education and training	69.7
Social protection	170.3
Unallocated	-1.2
Total	**502.4**

a) Data from the Public Expenditure Statistical Analyses 2006. Amounts are official estimates. This data captures expenditure as it leaves the public sector. Grant movement between public sector bodies or departments will not be captured, but grants to private sector organisations are included.

Specific government funding programmes for environment charities

Funding programmes that are accessible by environment charities are limited. Most are administered by the Department for Environment, Food and Rural Affairs (DEFRA), which has responsibility for environment domestically, and for climate change and biodiversity internationally.

- **The Darwin Initiative.** Run by DEFRA, this fund provides an estimated £7m per annum to international biodiversity projects.[346]
- **Foreign Office Global Opportunities Fund.** Climate change and energy programme. This is a new fund, with a programme budget of £4.7m for 2006/2007.[356]
- **Environmental Action Fund (EAF).** Run by DEFRA, the EAF makes grants across the whole range of environment issues, with an emphasis on UK activity. Total grants for 2005/2006 amount to £2.2m.[316]
- **Climate Change Fund.** Run by DEFRA, this has £6m to be distributed by March 2008 to UK-based and focused '*communications projects seeking to achieve positive changes in public attitudes about climate change*.'

Lottery and landfill funding in the UK

Monies from the National Lottery and the Landfill Tax Credit Scheme are significant sources of grant income for environment charities. In 2003/2004, grants of £128.6m were distributed. Support is channelled into habitat and species conservation, protected areas and natural heritage, renewable energy and sustainable living. Almost all of the funds are applied to activity in the UK.

Table 27: UK lottery, landfill and aggregate funds for environmental protection (£m)[(a)]

	2003/2004	2004/2005
Landfill Communities Fund	45.4	27.4
Heritage Lottery Fund (HLF)	37.2	23.4
Big Lottery Fund (BLF)	n/d	46.0

Notes

(a) Personal correspondence from Alan Howarth, Entrust Technical Manager, 30 January 2007; Clare Henderson, Information Manager at HLF 22 January 2007; and Stephen Webb, Information Officer at BLF, 16 July 2006.

Landfill Communities Fund

The Landfill Tax Credit Scheme, now called the Landfill Communities Fund (LCF) encourages landfill operators to support a wide range of environmental projects by giving them a 90% tax credit against their donations to Environmental Bodies (EBs). These do not have to be charities, but must have charitable aims. 'Environment' encompasses built, social and natural environment. These donations are capped at 6% of the landfill operator's landfill tax liability. Landfill tax credits can go towards projects that fall within the following categories:

- **Category A.** Projects that involve reclaiming land, the use of which has been prevented by some previous activity;
- **Category B.** Projects that reduce or prevent pollution on land;
- **Category D.** Projects that provide or maintain public amenities or parks within 10 miles of a landfill site;
- **Category DA.** Delivery of biodiversity conservation for UK species habitats (added October 2005);
- **Category E.** Projects to restore or repair buildings for religious worship, or of architectural or historical interest within 10 miles of a landfill site;
- **Category F.** Fund the cost of administrative, financial or other similar services, supplied to other enrolled EBs.

Categories B and DA are most relevant to environment protection, but A and D also have natural environment components. Biodiversity and conservation was added to the agenda in October 2005, but as yet receives relatively little money in comparison to other categories. The following categories relating to waste and recycling were removed on 1 April 2003:

- **Category C.** Projects that encourage sustainable waste management through research, education or information dissemination;
- **Category CC.** Projects that encourage the development of products from waste or markets for recycled products through research, education or information dissemination.

In the 2002 pre-budget report, the government ended the funding of waste management projects through the Landfill Communities Fund (LCF). This was because the Strategy Unit paper 'Waste not, Want not' recommended a more strategic approach to waste management than the landfill tax credit scheme provided.[429] To replace the LCF scheme, a Waste Implementation Unit (WIP) was set up within the Department for the Environment, Food and Rural Affairs (DEFRA) with a budget of £320m over three years. WRAP—the Waste Resources Action Programme—was also greatly expanded.

Although C and CC were dropped in 2003, projects within these categories are still being funded until they are all complete. Funding for waste management and recycling projects is now in the final wind down period. There is a legislative proposal to stop any allocation to these categories by April 2007, though effectively (via policy) this happened in July 2005.

UK charitable foundations, environment funding and public giving

There are remarkably few UK charitable trusts and foundations that have significant funding programmes on international environment issues. In 2003/2004, only two—the Shell Foundation (£5.97m) and the Rufford Maurice Laing Foundation (£2.59m)—had international environment grant-making programmes above the £2m level.[125] By comparison, Comic Relief made international grants of £34.74m in support of charitable work with children and vulnerable communities in the same year.[125]

Looking at the overall charitable trust landscape in the UK, the allocation of charitable trust funding to environment is extraordinarily low. In 2003/2004:

- Out of **£1.137bn** granted to charities by the 100 leading charitable trusts (excluding lottery and landfill funds), only **£18.1m—1.6%** of the total—was granted to environment charities.
- The 20 leading charitable trust funders of environment charities (domestic and international) made grants totalling **£26.86m**. Of these 20, just eight have grant-making programmes distributing more than £1m per annum. Between half and two thirds of grants were directed toward UK domestic charitable activity.
- The total grants provided by the twentieth charitable trust in the list amounted to **£178,000**. Beyond the top 20, we were able to identify only a further ten charitable trusts providing environment grants in excess of £100,000 per annum.
- On this basis, the annual environment grants total from UK charitable trusts is unlikely to be much above **£30m–£35m** a year. Data from the Directory of Social Change and Charities Aid Foundation indicate that total UK charitable trust annual grant-making is in the region of £2.7bn–£3.1bn; this indicates that charitable trust environment funding is in the region of **1.2%–1.3%** of the total.[127, 67]
- The environment grants of UK charitable trust funders are dwarfed by the support provided through The Big Lottery Fund, the Heritage Lottery Fund and the Landfill Communities Fund. In 2004/2005 these three made environment grants totalling **£128.63m**, or **12%** of the lottery and landfill total. It should be noted that almost all of lottery and landfill environment grants are provided in support of UK action, not international.
- Giving to the environment by the UK public is also limited. Data from CAF suggests that 10% of private donations to the top 500 charities go to the 'environment'.[51] However, CAF's definition of 'environment' includes 'environment, heritage and conservation'. The National Trust accounts for much of the funding contained within this analysis, and the many of the National Trust's resources are allocated to the upkeep of 'heritage' buildings and gardens. NPC estimates that less than **5%** of UK public funding (ie. donations, legacies, grants from foundations and membership income) goes towards the environment, as defined by NPC, ie recognised as environment in this report.

On the final point, the basis for this calculation is very conservative. NPC listed 48 environment charities and cross-checked them with CAF's Top 500 charities for 2004/2005.[67] NPC's list was considerably longer than the list of environment charities contained in CAF's Top 500. NPC then totalled the public donations (as defined above) for this list of 48 charities, based on latest available financial data. NPC then made an adjustment for the income of the National Trust, including just a third. This is based on the National Trust spending roughly a third of its capital expenditure on 'countryside and coastal paths'. NPC then took this total as a percentage of income from CAF's Top 500 charities identified as coming from public donations as per the definition above.

This analysis is imperfect: NPC's list of 48 environment charities exceeds the 'catchment' of CAF's Top 500, so technically it is not a comparison of like with like. There is a proliferation of small charities which would be difficult to capture. Data on the Top 500 is readily available from CAF, however, so using this for analysis seemed a realistic approach to estimating UK public spend. Other figures officially available from CAF on environmental spend includes heritage, which distorts the picture, which is why NPC was keen to attempt its own analysis, however flawed.

Table 28: The leading UK charitable trusts with environment grant-making programmes, 2003/2004(a) (£)

	Total grants	Environment grants	Notes
Shell Foundation	6,267,947	5,974,809	Includes the Sustainable Communities Programme, which is not exclusively environment related
Esmee Fairburn Foundation	24,973,000	4,605,755	
Rufford Maurice Laing Foundation	4,118,628	2,594,736	
Garfield Weston Foundation	39,743,941	2,371,174	
Bridge House Trust	19,077,935	2,266,790	These figures are for 2004/2005
Sigrid Rausing Trust	12,783,000	1,885,000	These figures are for 2004/2005
Linbury Trust*	4,512,000	1,866,000	Includes heritage
Tubney Charitable Trust	3,337,330	1,047,074	
Vodafone Group Foundation	13,381,448	712,191	
Arcadia Fund (formerly Lisbet Rausing Charitable Fund)	3,045,774	549,511	
Ashden Trust*	695,227	468,614	
Vincent Wildlife Trust	377,157	377,157	
J J Charitable Trust*	787,131	375,991	
Peoples' Trust for Endangered Species	354,313	354,313	
Whitley Animal Protection Trust	323,005	323,005	Includes animal welfare
John Ellerman Foundation	3,397,858	264,500	
Ernest Kleinwort Charitable Trust	1,235,370	245,450	
Leverhulme Trust	29,737,000	202,012	Does not include grants to individuals, so this may be an underestimate
Westminster Foundation	2,440,442	200,434	
Robertson Trust	7,317,382	178,000	

Notes

* A Sainsbury Family Charitable Trust.

(a) This table of leading environment funders was compiled using data from Caritas and the Directory of Social Change, and the authors' own knowledge. It is not a definitive list and figures may be estimates. Grant amounts are either from the Charity Commission website or from personal communication with funders.

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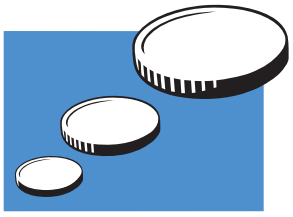

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