

Sustainable Development and the Natural Heritage





Background

In 1987 the World Commission on Environment and Development published '*Our Common Future*' (the Brundtland Report), which defined 'sustainable development' as.

'Sustainable development is development which meets the needs of the present without compromising the ability of future generations to meet their own needs... in essence, sustainable development is a process of change in which the exploitation of resources, the directions of investments, the orientation of technological development, and institutional change are all in harmony and enhance both current and future potential to meet human needs and aspirations' (WCED, 1987).

A UK Strategy for Sustainable Development was published in 1994 and updated as '*A better quality of life - a strategy for sustainable development for the UK*' (DETR 1999). A UK Commission on Sustainable Development was set up in October 2000 to promote sustainable development across all sectors in the UK, to review progress and to build consensus on what needs to be done. In 2000 a Cabinet sub-committee on Sustainable Scotland was set up and is now chaired by the First Minister. The Scottish Executive published '*Meeting the Needs... Priorities, Actions and Targets for Sustainable Development in Scotland*' in April 2002.

'Sustainable development is development which meets the needs of the present without compromising the ability of future generations to meet their own needs.'

SNH and Sustainable Development - “in a manner which is sustainable”

Our founding legislation, the Natural Heritage (Scotland) Act 1991, says the general aims and purposes of SNH are:

“to secure the conservation and enhancement of, and to foster understanding and facilitate the enjoyment of, the natural heritage of Scotland; and... (to) have regard to the desirability of securing that anything done, whether by SNH or any other person, in relation to the natural heritage of Scotland, is undertaken in a manner which is sustainable.”

Our interests in sustainable development lie in the messages about wise use of natural resources and how the quality of people’s lives depends on a

healthy and attractive environment as well as robust social structures and economic wellbeing. Our vision is that anything which makes use of or affects the natural heritage of Scotland should be environmentally sustainable. These activities should not lessen the quality and value to people of Scotland’s natural heritage, so that future generations can continue to enjoy the same benefits and services.

A full policy statement from SNH on Sustainable Development and the Natural Heritage is available on our website at:

<http://www.snh.org.uk/pdfs/polstat/susdev&NH.pdf>

Sustainable Development and the Natural Heritage

The Natural Heritage Scotland Act 1991 defined ‘the natural heritage of Scotland’ as:

“the flora and fauna of Scotland, its geological and physiographical features, its natural beauty and amenity.”

This natural heritage is not limited to particular places or special areas. It includes countryside and coast and also the green spaces in and around towns and cities. It is subject to both natural change and changes caused by human use. Managing this change needs to be guided by recognition that human well-being now and in the future depends on looking after our complex environment.

We rely on the natural heritage in a number of different ways:

- **life-support systems** – the natural resources that provide us with clean air, clean water, our food, and the genetic material that makes all this possible; and ‘services’ such as creating soil, lessening the effects of floods, protecting the coast, disposing of waste, and regulating the climate.

- **enriching our lives** – our quality of life and sense of place is influenced by the landscapes and wildlife amongst which we live, work, and take our leisure. The natural heritage also tells us about our own evolution, history and where we are going.

- **livelihoods** – farming, forestry, fisheries and the raw materials for industry all depend on the natural heritage. A high quality environment helps to create income from tourism and recreation, adds value to natural products, and helps stimulate inward investment from businesses moving to where people choose to live.



Sustainable Development in practice

Development means changes that benefit all aspects of people's lives, going wider than economic well-being and standards of living to include aspirations for more fulfilling lives, through stronger communities, deeper understanding, and improved surroundings.

Sustainable reflects concerns about the effects of pollution and how we use resources, and how our activities depend upon the environment. We have no choice but to live within natural limits, but there is no single blueprint for a sustainable future. Sustainability is found not in any one project or activity, but in the sum of all activities, considered overall.

Sustainable development combines these social, economic, and environmental perspectives. Each of these strives for equal standing, but must be seen within the overriding goal of making sure that people live within the environment's limits.

Achieving this needs wider thinking: from the short-term to the long-term, from on-site to local, regional and global impacts and from sectoral interests to multiple stakeholders. Sustainable development means working together to link the aims and activities of different sectors and, while guiding social change

and economic development, also maintaining the integrity of ecosystems and the quality of the natural heritage. This approach should accommodate differences between social, economic and environmental objectives and allow all parties to be sensitive to each other's need.



Sustainable use includes making sure that settlements retain their distinctiveness

Guidelines for Sustainable Development as it relates to the Natural Heritage

SNH has established five broad guidelines for sustainability and the natural heritage as a basis for what we do and how we advise others.

1 SUSTAINABLE USE

Non-renewable resources should be used wisely and sparingly, at a rate that does not restrict the options of future generations.

Non-renewable resources either cannot be replaced (minerals, fossil fuels) or replace themselves very slowly (peat, etc). The natural heritage is also valuable in its own right. The 'web of life' - of which we are part - depends ultimately on the variety and variability of genes, species, populations and ecosystems, and we should also use it wisely. The same approach also applies to geological features of

scientific interest, landscapes of great aesthetic appeal, or other 'natural' qualities such as tranquillity or wildness, which once lost, are unlikely ever to be recreated.

SNH will:

- suggest different ways to meet needs, such as recycling and reuse, and replacing non-renewable resources with renewable ones
- advocate technological changes which may reduce use of environmental resources
- advocate efficient use of resources
- suggest ways to look after valued parts of the natural heritage which are difficult to replace
- use fewer natural resources ourselves.



Peat is a non-renewable resource, home to a wealth of wildlife and an important carbon-sink



Renewable resources should only be used within the limits of their capacity to regenerate

2 CARRYING CAPACITY

Renewable resources should be used within the limits of their capacity for regeneration.

Natural cycles turn inorganic minerals into living tissue, reassemble living tissue through food chains, and break down waste materials into inorganic minerals again. Biological and physical processes break down organic pollutants, recycle clean air and water, create soil, regulate climate, and control the movement of water and sediments. We use these cycles and processes to help us. However, they all have natural limits. We can exhaust or erode the soil, over-harvest fisheries or forests, cause pollution beyond the capacity of the surrounding area to degrade it, build on river floodplains in ways that cause flood-damage, or change the climate. We must all live within the carrying capacity of the ecosystem.

There are also limits to how much the natural heritage can be changed or used without diminishing its overall diversity and natural beauty. Accumulated development can change the character of a landscape. Land use changes can make species and habitats of nature conservation interest locally extinct. Different landscapes, species and habitats vary in their sensitivity to different scales, types and designs

of development. And different areas can cope with different visitor pressures. Staying within carrying capacity means not detracting from the overall variety and quality of the natural heritage.

SNH will:

- *advocate that the harvesting of renewable resources, such as fisheries, forestry and agriculture should take into account the ability of the ecosystem to maintain levels of yield in the longer term*
- *advocate that pollution should only be allowed if the system can absorb it, without having a significant impact upon valued features of the natural heritage, or upon the health or enjoyment of users*
- *develop and publicise improved understanding of capacity limits in relation to environmental services and the natural heritage.*



Housebuilding in green space can change the character of a landscape



The reputation and products of many industries depend on the quality of the natural surroundings

3 ENVIRONMENTAL QUALITY

The quality of the natural heritage as a whole should be maintained and improved.

The quality of the environment is important for different reasons:

- **functional** – if the environment is to remain useful we need to maintain the productivity of natural ecosystems, including restoring natural functions of the environment where they have been degraded.
- **aesthetic** – these qualities include tranquillity, recreational opportunities, challenge, inspiration, and fulfilment, all of which contribute to the Scottish sense of identity and the foundation of powerful cultural links with the land and sea.
- **scientific** – we need to safeguard the most important places for study and education so that the natural world can continue to give insights into evolution, the ways in which we depend upon our environment, and how our surroundings have changed over time.

- **economic** – the natural heritage is a key resource for tourism as well as supporting jobs in industries such as whisky and salmon whose reputations and products depend upon the quality of the natural surroundings

A high quality environment brings these real benefits. These can be eroded or enhanced, but eroding them risks losing them for all time. Enhancing them, on the other hand, leaves a legacy for future generations. As society becomes materially better off, the value that it places upon a high quality environment will increase yet further.

SNH will:

- *raise awareness of the value of the natural environment, for recreation and enjoyment, and for its contribution to the quality of life*
- *try to show (and when possible measure) the economic value of the natural environment*
- *encourage investment in the natural heritage, and highlight opportunities for restoration where it has been damaged*
- *press for development and land use change to be done in a way that safeguards and improves the variety and quality of the natural heritage.*



Shared benefits means that all people should be able to easily access good quality natural heritage – which is not always the case



Economic production can create attractive farmland and woodland landscapes

4 THE PRECAUTIONARY PRINCIPLE

In situations of great complexity or uncertainty the precautionary principle should be applied.

Scientific uncertainty is common in environmental decision-making. Ecosystems are complex and dynamic, and do not have clear boundaries. It is difficult to predict long-term changes, and chance events are a fact of life. It may be too expensive, difficult, or time-consuming to do experiments or gather data within decision-making timescales.

Existing environmental assessment procedures tend to assume that impacts can be measured, and so outcomes can be evaluated: uncertainty tends to be played down. Against this background, the precautionary principle acknowledges the need to make decisions in uncertain situations. SNH interprets this principle to mean that ‘full scientific proof of a possible adverse environmental impact is not required before action is taken to prevent that impact’.

We favour precautionary approaches that consider first other development options and their potential impacts, and try to reduce uncertainty where possible. Where development can be changed, and where monitoring can confidently be acted upon, we

recommend an ‘adaptive’ approach to monitor the impacts and refine the development accordingly.

SNH’s approach is described in a booklet: ‘Applying the Precautionary Principle to decisions on the natural heritage’ (SNH, 2000).

SNH will:

- *recommend a precautionary approach to developments that could cause significant damage to valued natural heritage resources*
- *encourage changes to laws and policy that allow people to consider adaptive approaches to development.*

5 SHARED BENEFITS

Decisions about development need to look for a fairer share of costs and benefits (material and non-material).

The environment is hugely diverse: its appearance, the life that it supports, and its potential to support economic activities vary widely from place to place. Overlaid on this natural geographical variation are the varied demands of human activity and different kinds of economic development. As a result, the ability of the environment to meet these expectations varies hugely with place and time.

Economic production or trade can have an impact on the quality of the environment. These impacts can be beneficial, such as creating attractive farmland or woodland landscapes, or harmful, such as pollution, use of resources, creating unattractive landscapes or reducing biodiversity. In turn, action to safeguard species or special areas of high environmental quality may have impacts on the opportunities for social and economic development. These impacts, too, can be beneficial - for example in fostering economic opportunities from tourism and recreation - or adverse - in constraining forms of development which are inappropriate in areas valued for their outstanding natural environment, or in requiring higher design quality.

The principle of shared benefits is that these costs and benefits should fall fairly. Where constraints outweigh benefits, special redistributive measures may be needed to make sure that affected communities have a share in the wider public benefit. Sustainable development recognises that if the disparities between those who enjoy the benefits and those who pay the costs becomes too large, they lead to tensions which are to the detriment of all. This relates to both managing environmental change in different parts of

Scotland within our own generation, and to the legacy we hand on to future generations.

In 2002, the First Minister identified the biggest challenge of the 21st century as that of finding ways to combine economic progress with social and environmental justice. He stressed the importance of addressing the needs of people in Scotland who daily cope with the cumulative impacts of living in degraded environments. Such action needs to be achieved within a sustainable development framework: through planning, regulatory and commercial decisions tied to agreed definitions of fairer standards and commitment to more efficient use of resources.

SNH will:

- *question activity which imposes undue environmental costs on one group, while benefiting another.*
- *seek reasonable compensation for such costs for affected communities, where the development is necessary in the interest of the wider public.*
- *resist damage to environmental assets of public importance*
- *press for greater resources for communities in areas of high natural heritage value when this is needed to reach the necessary quality required in development and land use.*

Putting the guidelines into practice

SNH has identified seven ways to help to turn the guidelines into everyday policy and practice.

1 Environmental appraisal - anticipating the effects of our actions on the natural environment

At the project level, all aspects of development and land-use should be appraised for their effects on the environment. Decision-makers and developers need to anticipate the consequences of their choices for the environment, and to be able to suggest how to recover losses where damage occurs. This includes the source and type of materials used; the potential for reuse and recycling; the needs for energy and water during both construction and use; the useful lifespan of the development; and decommissioning.

At the policy level, policy frameworks for land and sea use, transport, energy, and enterprise need to guide overall development objectives to use fewer resources, reduce pollution and safeguard valued elements of the natural environment. Strategic appraisal of policies, plans and programmes is an important way to identify policy options to bring social, economic and environmental benefits.

2 Rethinking policy processes – joined up approaches to policy making that have the environment at their centre

Using natural resources wisely and making development choices that give the best social, economic and environmental benefits requires joined up approaches to policy making, nationally and locally. Nationally, in the same way that SNH has legal 'balancing duties' for social and economic interests, other public bodies involved in social and economic functions should have similar balancing duties for environmental interests.

Local, national and global perspectives must be linked too. Local priorities for economic well being have to be achieved in ways that are sensitive to global concerns about resource use and climate change. Equally, global and national priorities such as climate change and biodiversity conservation have



Our lifestyle choices – whether we walk, drive a car or take the bus – generate a range of environmental footprints locally and globally



to be delivered on the ground in ways that are sensitive to local needs. All plans - international to local - should guide decisions at their own level, but should also be informed by, and in turn guide, decisions made at other levels.

Locally, the various frameworks that guide the form, location and scale of development in different places need to be linked. The boundaries for making these decisions vary, for example at the catchment level for rivers, or on landscape character areas for landscapes, or travel-to-work areas for transport and town planning. To avoid conflicts of interest, especially where boundaries overlap, the aims and policies of each framework should be complementary.

3 Getting the signals right - incentives and fiscal signals that work for the benefit of the environment

Environmental degradation often occurs because producers and consumers do not have to pay for the environmental costs of their actions. It is important that economic signals capture all the factors that are relevant to improving human welfare, especially where decisions impact on common environmental resources that are not 'owned' in the traditional sense.

Only Government, through subsidy, laws, or taxes, can make sure that enough weight is given to these factors. In many cases it already does, but there are examples of incentives that go against environmental objectives, such as past incentives for some forms of farming and forestry. Further steps need to be taken to design economic signals to penalise environmental 'bads' and encourage environmental 'goods'. For example, making sure that basic environmental standards are met before financial incentives are given. In some cases taxes that penalise environmental 'bads' may fall more heavily on lower income groups, or in certain locations, and ways may have to be found to avoid adverse social effects through exemptions or redistributive measures.

4 Raising awareness, and changing lifestyles

Decisions about where we live, how far we travel to work, the goods we buy and where they come from, where and how we take our leisure, are guided by personal 'lifestyle' choices as well as price. Sometimes we lose sight of the environmental consequences of all these decisions as we pursue individual goals of a higher standard of living, or a more convenient, mobile lifestyle. Education can help us be aware of and to 'own' responsibility for our impacts upon the environment. Political action also



The future of the natural heritage lies in all our hands

follows public understanding: as awareness increases, governments are able to take some of the necessary steps towards sustainability.

5 Working in partnership

Achieving a more sustainable future requires the development of new forms of governance that encourage wider involvement in policy making, including more opportunities for communities to have a say in decisions that affect them. Public bodies need to work with each other: they also need to work with business and civil society, to help make sure that policy is delivered in a way that is sensitive to the needs of others, and that public objectives for the environment are shared by others.

6 Good science - monitoring and managing environmental change

Good decision-making involves doing the right thing by the environment, so that it is able to support people in the long term, and also provide the quality of life that we now expect. This requires good information, including scientific information. There remains a need for clear scientific explanation, advice and application in management, based on agreement on important trends, while also acknowledging the limits of knowledge.

Indicators to measure progress and trigger action for sustainable development should be based on social and economic data as well as scientific monitoring of the environment. The selection and range of indicators is fundamental to measuring progress on sustainable development, and is likely to influence the action taken. Because of the need to reconcile local, national and global perspectives, they should also allow for comparison of trends in different places.

7 Thinking long-term

Too often, policy making for the long term is constrained by short-term political objectives or because of a lack of informed discussion over the direction and implications of changes to our lifestyles. If we are to address many of the sustainability issues we now face, we need to become better at thinking long-term, and in creating a shared vision of the kind of world we want. Government and its agencies, both locally and nationally, have a key role in facilitating such discussion and in leading its development. In taking forward such thinking, there will be many possible options, but there is also one essential constraint - the finite resources of our planet.





PICTURE CREDITS

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SCOTTISH NATURAL HERITAGE

is a government body established by Parliament in 1992, responsible to the Scottish Executive and Scottish Parliament.

Our mission:

Working with Scotland's people to care for our natural heritage

Our aim:

Scotland's natural heritage is a local, national and global asset.

We promote its care and improvement, its responsible enjoyment, its greater understanding and appreciation and its sustainable use now and for future generations.

Our operating principles:

We work in partnership, by co-operation, negotiation and consensus, where possible, with all relevant interests in Scotland: public, private and voluntary organisations, and individuals.

We operate in a devolved manner, delegating decision-making to the local level within the organisation to encourage and assist SNH to be accessible, sensitive and responsive to local needs and circumstances.

We operate in an open and accountable manner in all our activities.