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Understanding the social context of the Environment Agency's work – policy and literature review

Science Report SC010044/SR1

The Environment Agency is the leading public body protecting and improving the environment in England and Wales.

It's our job to make sure that air, land and water are looked after by everyone in today's society, so that tomorrow's generations inherit a cleaner, healthier world.

Our work includes tackling flooding and pollution incidents, reducing industry's impacts on the environment, cleaning up rivers, coastal waters and contaminated land, and improving wildlife habitats.

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Authors:

Diane Warburton (Shared Practice), with additional research by Roger Levett and Alison Pilling (CAG Consultants)

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Research Contractor:

Shared Practice LLP, 11 Clifton Street, Brighton BN1 3HH
Tel: 01273 774557

Environment Agency's Project Manager:

Dr John Colvin, Social Policy Manager, Rio House, Waterside Drive, Aztec West, Almondsbury, BRISTOL BS32 4UD

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Science at the Environment Agency

Science underpins the work of the Environment Agency, by providing an up to date understanding of the world about us, and helping us to develop monitoring tools and techniques to manage our environment as efficiently as possible.

The work of the Science Group is a key ingredient in the partnership between research, policy and operations that enables the Agency to protect and restore our environment.

The Environment Agency's Science Group focuses on five main areas of activity:

- **Setting the agenda:** To identify the strategic science needs of the Agency to inform its advisory and regulatory roles.
- **Sponsoring science:** To fund people and projects in response to the needs identified by the agenda setting.
- **Managing science:** To ensure that each project we fund is fit for purpose and that it is executed according to international scientific standards.
- **Carrying out science:** To undertake the research itself, by those best placed to do it - either by in-house Agency scientists, or by contracting it out to universities, research institutes or consultancies.
- **Providing advice:** To ensure that the knowledge, tools and techniques generated by the science programme are taken up by relevant decision-makers, policy makers and operational staff.

Professor Mike Depledge Head of Science

Preface

A key role for the Environment Agency is to act as a champion for the environment 'in the context of sustainable development'. Guidance from Government – both Defra and the National Assembly for Wales – recognises that our environmental work needs to take account of social considerations and wider impacts on society.

The Environment Agency agreed its Social Policy in July 2003. The aim of this policy is to set out further clarification of 'social considerations', so that we can work within a clear framework and set of boundaries. The policy sets out three principles that define our work in this area:

1. understanding and communicating the social impacts of our work, including opportunities to deliver combined environmental and social benefits;
2. addressing environmental inequalities;
3. transparency, information, and access to participation.

Drawing on these principles, the policy commits the Environment Agency to:

- formulating policy for our regulatory and operational activities in ways which, where appropriate, minimise any negative social impacts and maximise positive social benefits;
- developing our advice to Government and others in ways that takes account of people, whatever their backgrounds;
- ensuring that our policy development process takes account of the social dimension of the Agency's business;
- developing evidence to support our work on social considerations;
- reporting progress to others, including Government.

This report addresses the fourth of these commitments – to develop the evidence base. During 2001-2004, the Environment Agency undertook a major research study – known as *Joining Up* – to clarify the nature and extent of the social dimension of our work and ensure that our social policy is firmly rooted in this evidence base. Evidence was developed in a number of ways, including through a literature review, interactive regional workshops and a series of pathfinder studies.

This report presents the literature review. It focuses on both the policy context and the practitioner and academic literature relevant to the key social themes underpinning the Environment Agency's work.

The report has already proven its value in providing an evidence base for the development of work on several policy, operational and science themes during 2003 - 04. These include:

- work internal to the Environment Agency on sustainability reporting;
- further research and policy development on the environmental contribution to wellbeing and quality of life;
- internal policy and an external position statement and policy advice on social and environmental justice;
- internal policy and an external position statement and policy advice on urban and rural regeneration;

- guidance on working with local communities;
- further research on environmental citizenship;
- guidance on stakeholder involvement at strategic and local levels; for example in relation to integrated river basin management;
- guidance of working with local strategic partnerships (LSPs);
- further research on developing partnerships with the voluntary and community sectors;
- application of systemic thinking and practice in relation to strategic waste and river basin planning;
- action research as a basis for policy development on addressing environmental inequalities.

The wealth of material contained within this report should continue to enable the Environment Agency to become increasingly 'socially literate' in the years to come. In pursuit of this goal, this material will be:

- placed on the social policy team Easinet website for easy reference by any member of staff wishing to develop their understanding of the social dimensions of our work;
- made available as an Environment Agency science briefing on any theme that requires further development;
- used as a basis for the development of the social science strand in the Environment Agency's new five-year science strategy (2005-09).

John Colvin
January 2005

Executive Summary

Introduction

This report provides an overview of the social issues that are most relevant to the Environment Agency's work. In particular, Part 1 of the report provides some background to the Environment Agency's commitment to understanding social issues and to developing a social policy. The main drivers and opportunities can be summarised as follows:

- Internal Environment Agency developments, such as the Vision, the Environment Agency's values, Making it Happen, and the 2002 Defra guidance on the Environment Agency's objectives. All these internal developments stress that the Environment Agency needs to work differently (especially working with others) and to recognise the social and economic implications of its work;
- Corporate social responsibility – As a major public institution, the Environment Agency must act responsibly and comply with the growing array of international standards and guidance on ethical, social and environmental principles of good practice;
- The Environment Agency's role within the wider context of sustainable development. As sustainable development becomes increasingly central as a guiding principle in Government policy, the Environment Agency has recognised the importance of understanding and reflecting the social and economic implications of its work alongside the environmental imperatives;
- The importance of issues of social equity in Government policy, reflecting growing concern within the UK (and more widely) over issues including environmental equality, social exclusion, rights (including to information and participation), and quality of life;
- Working with new governance levels – there is a need for the Environment Agency to adapt to working with the new decentralised government in Wales and also manage any government work administered on a regional level.

Method and approach

The Environment Agency conducted an initial review of relevant policy, practitioner and academic literature in 2001. The first part of this report (completed in 2002) provides an overview of the changing policy context within which the Environment Agency operates. This illustrates the increasing importance of linking the Environment Agency's environmental priorities with social and economic policy themes (part 2).

The remainder of the report was completed in 2004, and is broadly categorised under three subject headings: Social impacts, Social processes, and Values and perspectives. These are broadly consistent with the main principles set out in the

Environment Agency's social policy. The issues addressed under these three subject headings are as follows:

- the **social impacts** of the Environment Agency's work, including health, employment, education, levels of deprivation and social exclusion, and quality of life (part 3);
- the **social processes** of communication, relationships and decision-making that underpin everything the Environment Agency does. These, in turn, reflect issues of trust, openness, risk management, involvement, consultation, participation, inclusion, partnership, influence, education, learning, ownership, authority, power and control (part 4);
- the different **social values and perspectives** through which members of society (including the Environment Agency) define the environment and the ways in which it matters (part 5).

The wider policy context

Part 2 of the review covers the period between 1997-2002 and reports on the following areas:

- the Environment Agency's increasing policy and strategy requirement to take account of social considerations;
- the increasing requirement within Government sustainable development policy and wider sustainable development practice to take account of social considerations;
- a shifting focus from *government* to *governance* – which requires new social processes for involving stakeholders in decision-making.

Social impacts

Part 3 of the review summarises some of the main drivers and opportunities for the Environment Agency in considering the social impacts of its work. These include:

- The importance of the Environment Agency conforming to **corporate social responsibility** good practice in reporting on its own activities, and in the way it assesses the performance of those it regulates;
- The links between Environment Agency activities and physical and mental **health**, with particular emphasis on the links between environmental factors, deprivation and health, and including consideration of the possible implications for future policy decisions that may further widen health inequalities. Also, current policy thinking on **quality of life** and **wellbeing** in relation to sustainable development, especially through the 'wellbeing' power given to local government under the Local Government Act 2000;

- the role of the Environment Agency in contributing to **social and environmental justice**, reducing poverty and tackling regeneration in considering its contribution to sustainable development. In particular, how the Environment Agency ensures its activities conform to principles of environmental justice and do not exacerbate inequalities;
- the value for the Environment Agency in considering how its activities impact on **local communities**, including understanding the complex concept of 'community' in current policy, and how the concept of 'sustainable communities' may provide a vision of a 'good' community in wider policy terms. This section also explores the role of social capital in creating strong communities, and the extent to which government agencies can facilitate the development of social capital within the existing internal and external policy context.

Social processes

Part 4 of the review identifies some of the key social processes through which the Environment Agency can deliver on its responsibilities for environmental protection and regulation within the context of sustainable development. These include:

- the role of **stakeholder involvement** in sustainable development theory and practice, and the relevant policy and legislative drivers for the Environment Agency; the literature on methods for working with stakeholders, choosing stakeholders and measuring the success of stakeholder involvement; and some of the main criticisms of these approaches;
- the need for the Environment Agency to work in **partnership** with others to participate in more robust projects that will deliver wider benefits, recognising that the Agency cannot and should not aim to achieve its objectives alone. The challenges of partnership working, and principles for successful approaches, are covered;
- the role of **science** in the Environment Agency's work in relation to managing risk, trust and uncertainty is covered. 'Sound science', 'social science', 'systems theory' and 'action research' are all considered as offering potentially valuable new approaches to Environment Agency activities, to contribute to reputation management and in building public trust;
- the value of **learning** in achieving sustainable development; in formal educational settings (schools, colleges etc) but also through community education, capacity building, professional development, action learning, learning networks and communities of practice, and evaluation. The particular links between learning and organisational change and development are explored here.

Values and perspectives

The final section of the review (Part 5) summarises some of the literature on the different values and perspectives related to environmental regulation and protection, and their relevance to the Environment Agency's work:

- the section explores the nature of **values**, and the importance of incorporating public values into environmental policies and programmes. It also considers how public values can be developed through appropriate involvement of the public early on in the shaping of policies and programmes;
- some of the **valuation methods** used to identify the 'worth' of environmental activities (for example, cost benefit analysis with contingent valuation, multi-criteria analysis and quality of life capital) are summarised;
- finally, the section examines the rationale used to define the **principles** of sustainable development, which are largely based upon values. The way in which these values are applied to environmental decision-making processes are also considered, alongside, the values developed to guide the Environment Agency's own work.

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1. Introduction

The 'Joining Up' science project was established by the Environment Agency in 2001. Its aim was to raise awareness, internally and externally, of the social dimensions of the Environment Agency's work, within the context of sustainable development. Its particular aim was to help Environment Agency staff to use social knowledge and social science, and consider social priorities, more effectively in their work.

Phase 1 of the Joining Up Project (HOCO 400) sought to evaluate the social context of the Environment Agency's work. This was achieved in part by conducting a literature review (this document) and providing a summary of our existing work (see Warburton, 2005a). A series of five interactive regional workshops was also held to consider how social issues impact on our work. A draft Social Policy Framework was produced (in November 2001), followed by an interim science report (in January 2002: Christie *et al.*, 2005).

Phase 2 of the Joining Up project (E2-057) was designed to build on the findings of Phase 1 through pathfinder projects, and further work involving Environment Agency staff. The purpose of Phase 2 was to:

'...strengthen the Environment Agency's contribution to sustainable development by delivering an Agency social policy, embedding this within operational activities and increasing knowledge and learning within the Agency through targeted support to *Making it Happen*' (the Environment Agency's Corporate Strategy for 2002-2007).

This report provides an overview of the social issues that are most relevant to the Environment Agency's work. In particular, it provides some background to the Environment Agency's commitment to understanding social issues and to developing a social policy. The main drivers and opportunities can be summarised as follows:

- Internal Environment Agency developments, such as the Vision, the Environment Agency's values, Making it Happen, and the 2002 Defra guidance on the Environment Agency's objectives. All these internal developments stress that the Environment Agency needs to work differently (especially working with others) and to recognise the social and economic implications of its work;
- Corporate social responsibility – as a major public institution, the Environment Agency must act responsibly and comply with the growing array of international standards and guidance on ethical, social and environmental principles of good practice;
- The Environment Agency's role within the wider context of sustainable development. As sustainable development becomes increasingly central as a guiding principle in Government policy, the Environment Agency has recognised the importance of understanding and reflecting the social and economic implications of its work alongside the environmental imperatives;
- Social equity - the importance of issues of social equity in Government policy, reflecting growing concern within the UK (and more widely) over issues including environmental equality, social exclusion, rights (including to information and participation), and quality of life;

- Working with new governance levels – there is a need for the Environment Agency to adapt to working with the new decentralised government in Wales and also manage any government work administered on a regional level.

Phase 1 of the Joining Up project identified a growing interest within the Environment Agency to understand the social implications of any work carried out. It also revealed an interest by staff to adopt a more co-operative approach to their work. However, the necessary expertise to incorporate this interest into mainstream work programmes was limited and only a few examples of good practice were available (see Warburton, 2005a). Furthermore, there were few mechanisms available to enable the capture, articulation and sharing of learning from those examples.

Any such learning needs to take place within a good understanding of the social issues relevant to the Agency's work. This report highlights the main social issues, both theoretical developments and practical policy drivers, which are likely to be of concern to the Environment Agency. The report is structured according to the following main areas, originally identified in 2000 by the National Centre for Risk Analysis and Options Appraisal (NCRAOA):

- the **social impacts** of the Environment Agency's work, including health, employment, education, levels of deprivation and social exclusion, and quality of life;
- the **social processes** of communication, relationships and decision-making that underpin everything the Environment Agency does. These, in turn, reflect issues of trust, openness, risk management, involvement, consultation, participation, inclusion, partnership, influence, education, learning, ownership, authority, power and control;
- the different **social values and perspectives** through which members of society (including the Environment Agency) define the environment and the ways in which it matters.

Before this detailed analysis, Section 2 provides an overview of the changing policy context within which the Environment Agency works. It also illustrates the need to consider social issues in all areas of work relating to the environment.

The research for most of this review was completed in 2002. It provided the necessary information for developing work in Phase 2 of the Joining Up project. The sections on social processes, values and perspectives were completed at the end of the project (2004), and therefore include more recent information.

2. Policy Context

2.1 Internal Environment Agency Context

The Environment Agency's Vision statement (also known as 'the Vision'; Environment Agency 2001a, p3-4) established sustainable development as the direction and framework for all its activities:

'The Environment Agency is committed to meeting the [environmental, social and economic] challenges and to pursuing sustainable development in the interests of society ... Our vision for the environment and for a sustainable future is: a healthy, rich and diverse environment in England and Wales, for present and future generations.'

The Vision identifies nine specific goals designed to guide the Environment Agency's future work. The first two of these set out the overall aims of the Environment Agency's work, which are to achieve:

- a better quality of life;
- an enhanced environment for wildlife.

The remaining seven goals concern:

The environmental outcomes which the Environment Agency strives for:

- cleaner air for everyone;
- improved and protected inland and coastal waters;
- restored, protected land with healthier soils.

The changes the Environment Agency will seek:

- a 'greener' business world;
- wider, sustainable use of natural resources.

The risks and problems the Environment Agency will help manage, prevent and overcome:

- limiting and adapting to climate change;
- reducing flood risk.

Many of these goals cannot be achieved by the Environment Agency alone. Therefore, in order to find a way forward, five key roles for the Environment Agency were identified in *Making it Happen* (the Agency's Corporate Strategy for 2002-2007). The Environment Agency should aim to be:

- an efficient operator;
- a modern regulator;
- an influential partner;
- an informative communicator catalysing change;
- a champion of the environment within the context of sustainable development.

Within the Vision, each of the nine themes is further analysed in terms of the objectives (goals) and the outcomes the Environment Agency wishes to achieve, and what it will do

to achieve them (including how the Environment Agency will work with others). For example, under 'A better quality of life', the objective is specified as:

'People will have peace of mind from knowing they live in a healthier environment, richer in wildlife and natural diversity – an environment they care for and can use, appreciate and enjoy.' (Environment Agency 2001a, p20)

To achieve this, the Vision states that:

'The Environment Agency will work with all sectors to enhance the quality of the environment and the services it provides – for business, anglers, the boating community and other users of the waterways, farmers, planners and all sections of the community". (Environment Agency 2001a, p20)

Other outcomes specified in the Vision include numerous statements about partnership working, public understanding, securing the trust of the community, and changing public perceptions about the state of the environment (as well as physical improvements). Though environmental achievements, and physical improvements, remain central to the Agency's priorities, the way those changes are understood by the public and other constituencies is also recognised as vital to the Environment Agency's operations.

The significance of this new approach is explicitly recognised in the Vision's description of new ways of thinking, particularly with regards to:

- working step by step to achieve change;
- prevention being better than cure;
- working with others to create shared solutions;
- consulting widely and delivering results (Environment Agency 2001a, p14-17).

Since the Vision was published in 2001, the Environment Agency has continued to develop thinking nationally on how it will work. It has also clarified its roles, values and has set out targets and measures for each theme. The Making It Happen process aimed to finalise strategic objectives by summer 2002. Part of this process was for each Region and Area to prepare Local Contribution documents to describe local outcomes and targets, with the involvement of staff and external stakeholders. After this was completed in June 2002, a Corporate Strategy was published.

All the statements in the Vision, and subsequent internal policy developments, are based on the recognition that **the Environment Agency cannot achieve its fundamental goals alone**. The entire thrust of the new approach requires the Agency to engage in a mixture of education, awareness-raising, participation and partnerships with public, private, voluntary and community sector organisations, and with the public.

The Vision also recognises the need for fundamental social reform:

'that society has to change, and to change in ways that move it towards integrated, sustainable development' (Environment Agency 2001a, p7).

The role for the Environment Agency, within the Government's overall strategy for sustainable development, is to:

'help everyone to:

- understand society's effects on the environment;
- develop new attitudes and behaviour towards the environment;
- ensure that industry reduces its impact on the environment and recognises its dependence on it;
- take care of resources and deal with their own waste;
- recognise that the natural environment has always changed, but that emissions of 'greenhouse gases' could accelerate climate change and lead to severe disruption of natural systems' (Environment Agency 2001a, p7).

The Vision sets out the need for imaginative new approaches if these themes and roles are to be fulfilled, and lists four approaches:

- changing attitudes and behaviour
- growing collaborative partnerships
- exploit technological innovation
- developing social awareness (Environment Agency 2001a, p10).

Three of these new approaches are concerned with 'social' issues, with particular focus on the Environment Agency roles and the proposed approaches to increase understanding, changing attitudes and behaviour, advocacy and partnership – alongside technological innovation and scientific knowledge and expertise.

Social issues permeate the Vision. But the four proposed innovative approaches (outlined above) crystallise the way the Agency wishes to channel its energies. The last approach – 'developing social awareness' – is particularly relevant in this context:

'Developing social awareness. The Agency needs to be more aware of the social issues raised by its work in protecting and improving the environment: for example the needs of people in poverty who often live in the most polluted neighbourhoods. This means becoming more active in decisions on integrating environmental sustainability with social justice and a more dynamic economy' (Environment Agency 2001a, p10).

The key theme of the Agency's annual general meeting (AGM) in September 2000 was how the Agency's work makes a difference to social justice and equality, and how the pursuit of social and economic equity will impact on the environment, and on environmental policy and priorities. Debates and panel presentations covered issues of rights and justice (including environmental equality), finding new ways for the public to have a voice and for the Agency to engage with people (and ensuring resources are available to achieve that), linking environmental standards with public values and linking regulation with equality.

Sir John Harman (chair of the Environment Agency Board) said:

'Good regulation is, in itself, a force for equality. Contaminated land, water and air, the disposal of municipal, commercial and radioactive waste, flooding and climate change all have social and economic impacts, and these are not evenly distributed across communities. The potential for the Agency to tackle environmental inequalities is therefore considerable' (*Achieving Environmental Equality*, Agency AGM Report 2000).

From the debates at the AGM, six action points for the Environment Agency were agreed, and set out in the report of the AGM *Achieving Environmental Equality*:

- mapping out and identifying where there are social and environmental inequalities and sharing this information;
- working with business to ensure that our regulation work improves the environment for everyone;
- providing better information and consultation techniques to contribute to community plans, local waste strategies, local transport plans and local land use;
- working with key national and regional initiatives that tackle social exclusion;
- further developing the skills and capacity of our people to work with stakeholders;
- understanding how the international dimensions of environmental equality affect us.

The Environment Agency has since made substantial progress in understanding how it might best contribute and work with others to tackle environmental inequalities (Environment Agency 2004).

The broader role of the Environment Agency in developing public awareness of environmental problems and the need for change were outlined in the Environment Agency consultation document *The Business of Learning. Investing in a sustainable future* (January 2001). The document was based on the Environment Agency's education pathfinder project, which looked at how influence and learning initiatives could help the Agency deliver its long-term sustainable development objectives, recognising that "effective regulation requires more than just licensing and enforcing" (John Harman in Environment Agency 2001). Particular attention is given to preventing environmental problems from arising in the first place, thus reducing the costs of enforcement to the public purse and to business.

The education pathfinder consultation paper suggested that most Environment Agency initiatives on education have, in the past, been directed to the formal education sector (schools, colleges, universities) and to communities. Activities have included supporting calls for sustainable development to feature in the national curriculum, supporting in-service training for teachers (INSET), the production of teaching materials and the establishment of award schemes. Some educational work has also taken place through social inclusion and outreach projects.

The consultation paper went on to argue, though, that wider audiences need to be reached, especially business. Partnerships are identified as the way forward for the Environment Agency to engage in new educational initiatives, to create more robust projects with wider benefits and to develop learning by working alongside new partners in working to achieve sustainable development.

Following the development of the Environment Agency's Vision in 2002, the Environment Agency and Government (Defra) agreed on new statutory guidance for the Environment Agency under Section 4 of the 1995 Environment Act, the legislation under which the Environment Agency was established (Defra 2002b). The Environment Agency was able to clarify that its role, and its contribution to sustainable development within the UK Strategy for Sustainable Development, is to deliver its objectives in a way that takes account of economic and social considerations. The guidance requires the Environment Agency "to protect or enhance the environment in a way which takes account of (economic and) social considerations" (para 3.4). This is to be regarded as "an integral part of the Environment Agency's normal business," (para 3.5) and, in turn, requires that

the Environment Agency "develops and maintains...adequate experience and understanding of the interactions between environmental practice and social (and economic) factors" (para 3.12).

The importance of social relationships is underlined in one of the Environment Agency's twelve objectives, as agreed with Government, within the Section 4 guidance:

'Reflecting on and building upon the principles of public accountability, develop a close and responsive partnership with the public, local authorities and other representatives of local communities, regional chambers and other regional bodies, other public bodies and regulated organisations, and adopt effective procedures to manage these relationships' (Defra 2002, pp10-11).

In addition to this specific guidance to the Environment Agency, the Treasury's 'Green Book' guidance on *Appraisal and Evaluation in Central Government* now includes, for the first time, adjustments to the valuation of monetary benefits. This is to reflect differences in their value to people with differing degrees of affluence, aiming to "enhance understanding of the fairness of proposals, their social impacts and their scale" (para 3.2.4). All central Government projects and programmes therefore need to take social impacts (particularly the distributional impacts) into account in delivering their objectives. More detail on addressing social impacts through social appraisal appears in a separate report from the Joining Up project on social appraisal (Warburton 2005b).

In summary, therefore, the Environment Agency must take account of the social impacts of its work and develop appropriate social processes and social relationships to meet its objectives. This policy and literature review is therefore designed to provide some detail on the policy and theoretical context for considering the social issues relevant to the Environment Agency.

2.2 Sustainable development

Sustainable development remains a contested concept. But there are a number of areas where there is clarity. These will be explored below. First, though, the concept of sustainable development needs to be set within its historical context to show how it has emerged as a policy concept.

The generally accepted starting point for the concept of sustainable development was in the report *Limits to Growth*, first published in 1972. This analysis was produced by an international group of scientists, researchers and industrialists, known as the Club of Rome. This group met to discuss the future of the planet and its inhabitants. The resulting report provided a solid critique of the problems of pursuing conventional approaches to economic growth in a finite global system (i.e. that infinite material growth in a finite physical system is impossible). The report concluded, however, that:

'It is possible ... to establish a condition of ecological and economic stability that is sustainable far into the future. The state of global equilibrium could be designed so that the basic material needs of each person on earth are satisfied and each person has an equal opportunity to realise his individual human potential.' (Meadows *et al.* 1983).

Limits to Growth brought together the critique of conventional growth and development and the need to consider the environmental problems facing the world (especially the use of finite natural resources and increases in pollution), alongside the concept of meeting basic human needs. These factors reappear in all discourses on sustainable development, to varying degrees.

Limits to Growth was followed by a whole series of United Nations and other initiatives in the 1980s, including the Brandt Commission on international development and North / South inequalities, and the World Conservation Strategy (both in 1980). Both these initiatives explored similar ideas of how to solve problems of poverty and inequality while not exacerbating environmental problems and limits.

The Brundtland Commission on Environment and Development (established in 1983) published its report in 1987 that first coined the definition of sustainable development that is now used as the basis for almost all other national and international work in the field:

'Humanity has the ability to make development sustainable – to ensure that it meets the needs of the present without compromising the ability of future generations to meet their own needs.' (World Commission on Environment and Development 1987, p8)

The next major international turning point was the United Nations Conference on Environment and Development (UNCED) in Rio de Janeiro, Brazil, in 1992, known as the Earth Summit, and at which the Agenda for sustainable development in the 21st century was signed: Agenda 21. This was followed by the UN conference in Johannesburg, South Africa, in 2002, to celebrate 10 years since the Earth Summit and to review progress and establish new priorities.

After the Rio summit, initiatives in many individual countries and across global regions developed more specific strategies for sustainable development and ideas of sustainability began explicitly to underpin European and wider approaches to development and to environmental protection. In the UK, the first formal strategy for sustainable development was published in 1994, and was followed by the publication of *A Better Quality of Life* in 1999 (DETR 1999).

It is worth recalling exactly what was important in Agenda 21, the agenda from Rio for the 21st century. The first paragraph reads:

'Humanity stands at a defining moment in history. We are confronted with a perpetuation of disparities between and within nations, a worsening of poverty, hunger, ill health and illiteracy, and the continuing deterioration of the ecosystems on which we depend for our wellbeing. However, integration of environment and development concerns and greater attention to them will lead to the fulfilment of basic needs, improved living standards for all, better protected and managed ecosystems and a safer more prosperous future. No one nation can achieve this on its own; but together we can – in a global partnership for sustainable development.' (Agenda 21, paragraph 1.1)

Though the environmental implications have only ever been *part* of sustainable development, it has been the environmental aspects that have received the most

attention. This priority has always been a matter for debate. Indeed, the Brundtland Commission's report specifically says that:

'When the terms of reference of our Commission were originally being discussed in 1982, there were those who wanted its considerations to be limited to 'environmental issues' only. This would have been a grave mistake ... the 'environment' is where we all live; and 'development' is what we all do in attempting to improve our lot within that abode. The two are inseparable.' (WCED 1987, pxi)

The environment is only one aspect of sustainable development. Without the involvement of environmentalists and the environmental movement in debating and promoting sustainable development, though, it is unlikely that the concept of sustainable development would have retained its centrality to policy. And it is certainly primarily in relation to environmental policy, at UK and European levels, that sustainable development has been most influential. This trend is clear even in terms of how Government sees sustainable development. The UK Government's Sustainable Development Unit is located within the Department of the Environment, Food and Rural Affairs (Defra), and the environmental dimensions have been the primary elements of work on Local Agenda 21s (LA21s) in the UK.

From another perspective, the focus on the environmental dimensions of sustainable development, within LA21 and other policy developments, has meant that the other elements (the social and economic) have received far less attention. Indeed, there is little shared understanding of what the social and economic dimensions of sustainable development actually are.

The definitions of the economic aspects of sustainable development have tended to polarise between the need for what Brundtland called a different 'quality of growth' and the insistence of most Western governments on maintaining high levels of conventional economic growth and employment as key economic aims. They assess the latter through conventional economic indicators such as gross domestic product (GDP) and the proportion of people in full-time employment. Different types of indicators for Brundtland's different 'quality of growth' have been proposed (e.g. MacGillivray and Zadek 1996), but these have yet to be widely accepted. The social aspects of sustainable development tend to be less fundamentally contentious, perhaps because they are even less well developed.

These principles can be seen clearly in the four objectives for sustainable development as outlined in the UK Strategy for Sustainable Development (DETR 1999), which the strategy makes clear have to be met at the same time. These four objectives are:

- social progress, which recognises the needs of everyone;
- effective protection of the environment;
- prudent use of natural resources;
- maintenance of high and stable levels of economic growth and employment.

These objectives are supplemented by a further 10 guiding principles of sustainable development:

- putting people at the centre;
- taking a long-term perspective;
- taking account of costs and benefits;
- creating an open and supportive economic system;

- combating poverty and social inclusion;
- respecting environmental limits;
- using the precautionary principle;
- using scientific knowledge;
- transparency, information, access to justice and participation;
- making the polluter pay.

The Government objectives and guiding principles provide the background to the Government's 15 headline indicators for sustainable development (Defra 2002a):

Economic

- H1 Economic output (GDP at constant prices)
- H2 Investment (current prices)
- H3 Employment (percentage of working-age people in work).

Social

- H4 Poverty and social exclusion (selected indicators)
- H5 Education (percentage of 19-year-olds with level 2 qualifications)
- H6 Health (expected years of healthy life)
- H7 Housing (non-decent homes)
- H8 Crime (violent crime, theft and burglary).

Environment

- H9 Climate change ('basket' greenhouse gases)
- H10 Air quality (days of moderate or higher air pollution)
- H11 Road traffic (vehicle miles)
- H12 River water quality (percentage of total river length)
- H13 Wildlife (populations of wild birds – especially farmland and woodland birds)
- H14 Land use (percentage of new homes on previously developed land)
- H15 Waste (arising and management)

The Government's social indicators for sustainable development can be further broken down as follows:

- H4 Poverty and social inclusion. Focuses on:
 - single elderly households experiencing fuel poverty;
 - children in low-income households;
 - working-age people with no qualifications (especially basic skills, e.g. literacy and numeracy);
 - working age people in workless households.
- H5 Education
 - raising numbers of / per cent of 19 year olds with level 2 qualifications.
- H6 Health (life expectancy and expected years of healthy life), focusing on:
 - health inequalities, especially affecting infant mortality and disparities in life expectancy between different localities and the particular problems of disadvantaged groups;
 - related Public Service Agreement (PSA) targets mentioned here are:
 - Department of Health: reducing mortality from heart disease, cancer and suicide;

- Defra: improving air quality.

H7 Housing (reducing non-decent homes), includes focus on:

- degree of thermal comfort (so energy efficiency), as well as standards of repair and level of facilities;
- social housing in the most deprived areas.

H8 Crime (reducing violent crime, theft from vehicles and domestic burglary). Related PSA targets include a focus on drug-related crime.

The other headline indicators for sustainable development that have a social component include:

H3 Employment (percentage of working people in employment)

H10 Air quality (days when air pollution was moderate or higher)

H11 Road traffic

- aim is to improve access for people and goods, while reducing traffic growth and tackling congestion and pollution;
- related PSA targets include:
 - increasing rail and bus use;
 - reducing road accidents.

H14 Land use (percentage of new homes on previously developed land)

- related PSA target: by 2008 60 per cent of new housing should be on previously developed land and building conversions.

H15 Waste (waste arisings and management). Aim here is to reduce waste by:

- improving resource efficiency;
- reducing landfill;
- increasing recycling and composting.

The 2001 annual report from Government on sustainable development also identified some Government priorities for sustainable development. These were:

1. **Economic priorities.** The overall priority is to increase and improve the quality of growth, while reducing pollution and the use of resources. This requires:

- a sustainable economy = resource productivity / efficiency
- corporate social responsibility
- electronic / digital developments
- rural economy
- adult skills
- information about environmental regulations
- reducing pollution.

2. **Building sustainable communities.** The overall priorities are to share prosperity more widely and fairly around the country (reduce regional disparity) and to make towns and cities better places to live and work in whilst retaining the special characteristics of landscape we most value. This requires the following:

- Strengthening regional and local communities;
 - producing regional sustainable development frameworks (now available in every region);
 - local strategies (i.e. community strategies).

- Meeting people's social needs (promoting better health, housing and access to services and recreation);
 - tackling health inequalities;
 - tackling homelessness;
 - transport issues (Transport Plan).
 - Improving local surroundings (revitalising town centres, tackling degraded urban environments and ensuring that development respects the character of the countryside);
 - tourism;
 - planning;
 - urban communities;
 - heritage;
 - rural communities.
 - Reducing crime and the fear of crime;
 - Addressing problems of poverty and social exclusion in the most deprived communities;
 - neighbourhood renewal;
 - 'New Deal for Communities';
 - fuel poverty strategy.
 - Co-ordinating policies to bring these objectives together.
3. **Managing the environment and resources.** The overall priority is identical to the economic priority mentioned earlier, that is, improving the quality of economic growth, whilst reducing pollution and use of resources. This requires tackling:
- the impact of climate change
 - sustainable energy (energy efficiency and renewables)
 - air quality
 - soil
 - diffuse pollution (nitrates, transboundary air pollution)
 - biodiversity
 - waste.
4. **International co-operation and development.** The overall the priority is to contribute toward achieving sustainable development on a global level, in particular for those in extreme poverty. The factors identified to achieve sustainable development internationally are:
- Working with others to eliminate global poverty and raise living standards in developing countries;
 - Millennium Declaration goals
 - focus on young and poor
 - least developed countries
 - better health for poor people
 - environmental democracy, as defined in Principle 10 of the Rio Declaration (i.e. 'the promotion of access to environmental information, justice and participation in decision-making'), and the Aarhus convention.
 - Working with others to tackle global pressures on the environment and resources;
 - Promoting a fair and open trade system that respects the environment (WTO and Doha);
 - Strengthening the position of sustainable development in international organisations (OECD).

In spite of the range and number of initiatives to promote sustainable development in the UK and internationally, it would be a mistake to assume that the basic concepts are accepted by all – even by all environmentalists:

- Many environmentalists have accepted the imperative of development to tackle poverty, deprivation and inequality. Some still do not, though, accept this imperative, and continue to argue that no further development is possible if the Earth is to survive. Many still argue that priority should be given to the search for the scientific evidence that will win the technical argument for environmental protection, or for the professional solution that will solve the problem. For them, sustainable development is just the next stage in the battle for environmental issues to be taken seriously in public policy and commercial strategies.
- Many in the development movement internationally have accepted that development proposals need to take all the social, economic, environmental and political impacts of development into account. Here, too, there are different viewpoints. Some in the development movement have not accepted the analysis that led to the concept of sustainable development and continue to argue for conventional economic growth, wealth accumulation and trickle-down approaches to development.

It is clear that some of the more fundamentally challenging implications of 'sustainable' development are far from universally accepted. For those who do support the wider principles, though, sustainable development offers a new way of thinking about development and a new model of progress. This model requires new analyses of the ways in which development can take place, of the possible negative impacts and how to reduce them, and of new methods of measuring success, progress and 'growth'. The Environment Agency, therefore, faces a formidable task in delivering on its environmental objectives within the context of sustainable development. Some of the social implications, as currently understood by Government have been outlined above. But there are also others:

1. Sustainable development qualifies the social and economic drivers of 'meeting needs' to the extent that *impacts* matter (especially environmental), and that *methods* matter (sustainable development requires new means as well as different ends).
2. Sustainable development is generally understood to be about social and economic development and environmental sustainability. The concept of sustainable development attempts to create a coherent policy link between social development (especially to tackle poverty) and the environmental impacts of development. A further quote from the Brundtland report emphasises these links:

'Poverty is not only an evil in itself, but sustainable development requires meeting the basic needs of all and extending to all the opportunity to fulfil their aspirations for a better life. A world in which poverty is endemic will always be prone to ecological and other catastrophes.' (WCED, 1987)

Much of the existing policy development work on sustainable development has therefore concentrated on the areas where the environment and development most overlap, such as tackling poverty and inequality, transport, energy use and fuel poverty, housing

development, regeneration, land use and planning, food production, work, consumption, and so on.

Though much of the emphasis in UK policy on sustainable development has been on the environmental aspects, social development is both an end and a means of sustainable development. Environmental sustainability is both a constraint on that development and, increasingly, an opportunity (through policy ideas such as environmental modernisation and resource productivity). The balance between the social and economic means and ends remains disputed, and differs according to different sources.

3. Sustainable development is explicitly values-led. NGOs have been partly responsible for articulating these values, but so have governments, and grassroots movements. There are issues here of the extent to which the developed North imposes values on the South, and these issues are increasingly being raised and debated.

Nonetheless, the values base of sustainable development is becoming widely accepted, as illustrated by the following comment from the Royal Commission on Environmental Pollution:

‘Achievement of sustainable development may well depend on the extent to which the principle of reconciling environmental protection, material wellbeing and equity becomes an internalised value. There is some evidence that this is already happening to a significant extent’ (RCEP 1998).

4. Sustainable development originally grew out of a concern over international policy (that is, because conventional development approaches were seen to have failed). There was also growing understanding about global environmental problems. But sustainable development is increasingly understood as being as relevant to domestic and international policy in the North as in the South. The new policy priority under sustainable development is that domestic policy must be set within a global context, a concept that is much more widely accepted now than it was when sustainable development was first promoted in the 1980s. The 1999 UK Strategy for Sustainable Development recognised this, explicitly stating that the UK’s four objectives for sustainable development need to be met not only at the same time, but also in the UK and the world as a whole (DETR 1999).

As the concept of sustainable development becomes more widely articulated in the UK and internationally, the struggles to understand the real practical implications continue. For example, in terms of land-use planning, it has been argued that:

‘Sustainable development cannot be understood simply as an agreed or universal template to be applied by planners in different local contexts. Rather, the very process of planning must be seen as providing the forums for contesting and defining sustainable development in different communities ... In planning for sustainable development, the process of deliberation and agreement becomes as important as the product.’ (TCPA 1999.)

The importance of the processes of sustainable development was recognised right from the start. The Brundtland Report states, quite clearly, that it is not just old methods of economic development that need to change:

'The time has come to break out of past patterns. Attempts to maintain social and ecological stability through old approaches to development and environmental protection will increase instability. Security must be sought through change.' (WCED 1987, p309.)

A crucial part of the new approaches to environmental protection (as much as to social and economic development) was what the Brundtland Commission argued for as the *very first* requirement in the pursuit of sustainable development: 'a political system that secures effective citizen participation in decision-making.' (WCED 1987, 65.) The Brundtland Commission recognised that:

'The law alone cannot enforce the common interest. It principally needs community knowledge and support, which entails greater public participation in the decisions which affect the environment. This is best secured by decentralising the management of resources upon which local communities depend, and giving these communities an effective say over the use of the resources. It will also require promoting citizens' initiatives, empowering people's organisations and strengthening local democracy.' (WCED 1987, 63.)

Agenda 21, the agenda for the 21st century agreed at UNCED, contains extensive reference to community participation and empowerment, including much emphasis on capacity building (Warburton 1998) within the wider principle that sustainable development requires engagement from all sectors of society.

The Environment Agency itself has contributed to this debate. As well as various publications on the nature of sustainable development in relation to its own work, the Agency has also funded the development of a new model of sustainable development. This new model takes into account national and international government thinking, and the priority placed by the current UK Government on social welfare and public involvement, based on research by the Environment and Society Research Unit (ESRU) at UCL for the Environment Agency (ESRU for EA 1999).

The ESRU model is one that is "dynamic rather than static, and which conceptualises sustainability as a process of negotiation which seeks to identify the correct trajectory society should take" (ibid). This is "a new, socially informed model of sustainable development ... [which] is underpinned by principles of inclusion, equity, precaution and the polluter-pays principle". A new decision pathway is created in this model to ensure that the social benefits of the environment are reflected in policies and working practices, which will involve the Environment Agency in (all direct quotes from ESRU report):

- Building partnerships including those with business where involvement with environmental issues remains highly variable;
- Ensuring that disadvantaged groups are not further disadvantaged by sustainable development policies;
- Engaging regional and local interests in decision-making processes;
- Promoting a higher profile for LA21 in local communities.

The ESRU report recommends that the Environment Agency should supplement existing approaches and tools with new methodologies, especially "new forms of dialogue and institutional responses to secure the increased participation of communities at

international, national, regional and local levels." It points out that "the least well developed aspects of sustainable development models are those of 'society' and 'governance'." (ESRU, 1999 p17)

The debate about sustainable development continues, including about exactly how the concept should be described. There are those who argue that the terms 'quality of life' and 'wellbeing' should be used instead of the words 'sustainable development'. Past Government policy has reinforced this, including naming the 1999 UK Strategy for Sustainable Development *A Better Quality of Life* and the naming of the power given to local authorities to ensure the integration of social, economic and environmental issues under a general power of 'wellbeing' (see below for details). Some argue that sustainable development is a slightly clumsy phrase and that it can be open to misunderstanding (if sustainable is taken simply to mean long term). Others argue that it is a coherent and unique philosophy, and that it needs a term that will become familiar in the public mind as part of implementation.

There are also issues of whether sustainable development requires a 'balancing', 'integrating' or 'reconciling' of the social, economic and environmental elements and priorities. This, too is being reassessed, in three ways:

1. It is increasingly argued that the focus on balancing and reconciling assumes a level of conflict, whereas there is no *necessary* opposition between environmental, social and economic interests.
2. Where there is conflict, it has been argued that development can only be considered sustainable "if it increases human wellbeing within certain environmental constraints" (TCPA 1999). This is harder than it sounds, but at least it provides some parameters.
3. There are debates about whether, in situations of conflict between environmental, social and economic interests, those interests should be 'balanced' or 'traded-off'. New mechanisms are being developed for grappling with these issues, such as the concept of 'quality of life capital' developed by the Environment Agency in partnership with the Countryside Agency and English Nature (Countryside Agency et al, 2001). Others, though, argue that some environmental assets, such as some human rights, cannot (and should not) be 'traded off'. Concepts of *critical* and *constant* environmental capital are becoming influential in this debate. (See section 5.4 for more on quality of life capital.)

These complexities are not intellectual games of no relevance to practical projects and programmes. As sustainable development is more widely seen as an underpinning set of principles for development in the UK and more widely, these are issues that have to be grappled with on a day-to-day basis. Whatever the final assessment, it is clear that the conventional approach of a purely technical analysis leading to a professional decision, with no debate with stakeholders about the ethical implications or social and other impacts, is no longer valid.

2.3 Governance and government

Use of the term 'governance' has become much more prevalent in recent years. It is used to explain the shift in the way power has become diffused from state governments to a myriad of different institutions, sectors and individuals that all affect and are affected by political decisions. The shift from government to governance is closely allied to the growing acceptance of the need to involve these myriad stakeholders in policy development in all sectors.

Essentially, governance refers to the *processes* – and the political, legal and administrative *institutions* – through which decisions are made, and how these processes and institutions are managed and held accountable. Governance processes include, but go beyond, governments. The complexity of decision-making and the web of impacts, rights and responsibilities across sectors, countries and continents mean that a system of governance is required that combines the state government, global governance structures, local governance, civil society and corporate activity.

These distinctions and complexities are particularly relevant to sustainable development, which cuts across traditional institutions as well as across academic disciplines and professions.

The ESRU report (ESRU for EA 1999) proposed that governance is a set of principles and processes that seek to:

- influence the social construction of shared beliefs;
- establish principles upon which resources are allocated;
- articulate rules of behaviour for actors;
- establish a language of collective interests e.g. the 'common good';
- allocate and regulate rights and responsibilities;
- legitimate initiatives taken by the polity.

2.3.1 International governance

On an international level, governance is considered to be crucial for development:

'The greatest challenge posed by globalisation is that of good governance in the broadest sense ... By good governance is meant creating well-functioning and accountable institutions – political, judicial and administrative – that citizens regard as legitimate, through which they participate in decisions that affect their lives, and by which they are empowered.' (Kofi Annan, Secretary General of the United Nations; address to the UN General Assembly, 1998.)

Globalisation presents particular challenges to governance. This is because although corporations may operate globally, there are currently no truly global institutions that meet the criteria laid down by the UN and articulated Kofi Annan's 1998 address to the UN.

Various commentators (e.g. UNDP 1999, Real World Coalition 2001, Carley and Christie 2000, Monbiot 2003) have therefore called for two things. First, more international systems of governance. Second, for a strengthening of democratic and other institutions (globally and locally) that provide a system of checks and balances on these growing trends and through which ordinary citizens can express their views. For example, it is

proposed that any system of global governance must integrate both horizontally (that is, between sectors within and between countries), and vertically, (linking 'top-down' and 'bottom-up' efforts towards the same goal) (Carley and Christie 2000).

There is a growing unrest among many parts of civil society, some state governments and some countries in the South about the role and accountability of these global institutions. The findings of a national poll of public opinion in the UK in 1999 showed that many people did not feel that these institutions related to their lives (New Economics Foundation 1999). The survey found that 81 per cent of those surveyed could not say what body was responsible for setting the rules for international trade. This poll was carried out in the run up to the WTO talks in Seattle, where civil society demonstrations disrupted official talks and prevented agreements from being reached.

Some politicians dismiss demonstrations such as these. Other commentators argue, though, that these are the tip of an iceberg of public concern over unregulated global companies – and agreements between states. For example, it is argued that with increasing pressure on the world's commons and resources, and with revolutions in communication, travel and global economics, much more co-ordination and co-operation between states is required and is developing. The major global governance structures include multilateral organisations such as the United Nations (UN), International Monetary fund (IMF), World Trade Organisation (WTO) and World Bank, international organisations such as North Atlantic Treaty Organisation (NATO) and regional governments such as the European Union (EU) (Carley and Christie 2000).

The main debates relating to the role and structure of the global institutions (particularly those that relate to the governance of resources and trade, but also those relating to the development process) are about equity, and participation and accountability:

'The real debate associated with globalisation is, ultimately, not about the efficiency of markets, nor about the importance of modern technology. The debate rather, is about inequality of power.' (Sen 2000.)

Proposals for change to global governance include the following:

1. The Commission on Global Governance (1995) called for a value-based global governance system. Recommendations included environmental taxes to implement the 'polluter pays' principle; a democratically reformed IMF; and a Global Competition Office to deal with the rising power and concentration of multinational corporations (New Economics Foundation 2000).
2. Jubilee 2000 co-ordinated a worldwide campaign to cancel unpayable debts of the world's poorest countries. This was an example of a civil society coalition to challenge decisions made by amorphous groupings of nation states and individual governments and commercial institutions.
3. The UN Human Development Report 1999 called for an agenda of action including a "more coherent and more democratic architecture for global governance" (UNDP 1999).
4. Charter 99 was established to create and gain acceptance for a charter for global democracy to set out the core principles for global governance as openness and

accountability, environmental sustainability, security and peace, and equality and justice.

The links between local and global protest movements are now profound. The 'anti-globalisation' demonstrators (e.g. at Seattle) are often simply an international coming-together of local protest groups formed around very specific local issues such as traffic, road building, etc (in the UK these have included Reclaim the Streets, Critical Mass, the Land is Ours, road-building demonstrations and anti-capitalist marches). Such movements make use of increasing access to information via the internet and draw attention to the issues of concern over the accountability, participation and trust of governance institutions – from state governments to NGOs.

The localisation of many global trends has resulted in many of the same issues affecting even the smallest villages in the UK. Citizens who may want to express views about new industrial developments proposed by multinational companies find the existing governance institutions apparently unable or unwilling to tackle these issues.

2.3.2 Changing trends in governance in UK policy

In the UK, the new Government followed its election in 1997 with a series of major initiatives designed to improve governance and democracy and increase voter turnout. The Government-established, but independent, Commission on the Voting System recommended an alternative to the current First-Past-The-Post system, though Government policy on this issue has yet fully to be formulated. Other initiatives on devolution and regionalisation have begun to challenge the centralisation of government that had taken place over the previous 20 years.

The structural reforms that have been achieved may, though, be being undermined by a failure to extend the democratic mandate (Real World Coalition 2001). The new elected parliaments and assemblies established in Scotland, Wales and Northern Ireland, under different (more proportional) voting systems, and with different powers, have been criticised as holding devolved responsibility but without adequate power and resources. In addition, there is seen to be a democratic deficiency in some of the reforms, though elected regional assemblies and the final structure for the House of Lords in particular remain matters for debate. There is an apparent contradiction in some of these measures between decentralisation and devolution, and an opposing tendency to centralise Government decision-making to the Prime Minister (and Number 10 special units) and the Treasury (Craig et al 2002).

Administrative changes to government in the UK aim to improve the delivery of services and policy development. Joined-up thinking has been promoted within Government, including through increasing decentralisation of Government functions and services to the regional government offices and special units such as the Social Exclusion Unit (SEU), though these remain to be implemented fully across Government.

At this stage in the development of regional and national institutions in the UK, it is not easy to assess the extent to which sustainability will provide the basis for future policy-making. Some highly innovative developments, though, aim to address these issues. They include proposals in Scotland for salaries for councillors to widen participation, a more proportional voting system for local government, fundamental land reform and community planning (the latter providing the model for community planning in England).

The Regional Development Agencies (RDAs) in England were established for a specific purpose (economic development). While there has been some success in incorporating sustainability into their economic strategies, their focus remains primarily on a conventional business agenda (e.g. competitiveness and inward investment). In practice, it seems that the sustainability aspects have largely been lost in the translation of strategies into action plans. The extent to which RDAs have the knowledge and the political will to make sustainability the guiding philosophy remains uncertain. Research on Environment Agency engagement in economic development in the English regions and Wales in 2000 concluded, however, that:

‘The time would seem to be right for the Agency to engage closely with Welsh and regional government to ensure that environment is fully integrated into economic development at this level, and to help drive progress towards sustainable development.’ (ERM 2001)

A number of significant trends are emerging around issues of governance at UK national and local levels, including:

1. A shift in the role of governments away from direct delivery of public services to a different role focused on **co-ordinating** and **enabling** the delivery of public services by a range of providers;
2. **Subsidiarity**, including both spatial tiering of responsibilities (national, regional, local, neighbourhood) and also some willingness to allow different bodies to experiment and find their own solutions (within overall limits set centrally);
3. **Geographical specificity**. The UK Government accepts – and even promotes – some differences in how different areas are governed in response to different circumstances;
4. **Shared responsibility** between agencies, especially through partnership working;
5. **Transparency and accountability**, especially through published performance information against explicit targets;
6. **Consultation** and involvement of stakeholders, including the public;
7. A **managerialist approach** that ignores questions of 'turf' and ownership (especially in terms of private versus public provision of public services). Though this is often presented (especially by the Government) as a pragmatic rather than ideological approach, it is counter-argued that this is in fact a purely ideological approach – one that favours market-driven solutions over centralised state provision, and that fails to recognise the social values inherent in public services (e.g. the commitment of nurses).

Governments and all public agencies face some important issues within these broad debates about state governance and democracy. The etymological origin of the word 'democracy' is in the Greek word 'demos'. Literally, it means 'rule by the people' and provides legitimacy to a system of governance and power. The basis of liberal democracy is political choice and universal participation.

The involvement of the general public is vital to a government's existence (through the voting system), is the route of accountability and the provider of legitimacy. Representative democracy is, though, seen as weakened throughout the world as a result of trends towards lower voter turnout, particularly in local elections (Real World Coalition 2001).

In May 2000, voter turnout at local elections in England was just 28-29 per cent compared to 41.5 per cent at the same point of the electoral cycle four years previously. Even the very high profile and controversial elections for London's first elected mayor and a new Greater London Assembly in May 2000 managed a turnout of only 33 per cent. These figures compare unfavourably with many other European countries, despite a worldwide trend towards declining voter participation.

These are growing issues for the UK Government, which is making democratic renewal a major plank of its programmes. It has, indeed, initiated wide-ranging constitutional changes during its current and previous terms of office. These include: changes to the House of Lords, the creation of a parliament for Scotland and a National Assembly for Wales, a major programme of Modernising Local Government, regionalisation of economic development and government offices, and a growing focus on neighbourhood management approaches as a central premise of regeneration policies.

The Modernising Government agenda (Cabinet Office 1999) affects the Environment Agency's role as both a public service provider and a government agency. The Government's five commitments for the modernising programme are quoted below:

- 'We will be forward looking in developing new policies to deliver outcomes that matter, not simply reacting to short term pressures.'
- 'We will deliver public services to meet the needs of citizens, not the convenience of service providers.'
- 'We will deliver efficient, high quality public services and will not tolerate mediocrity.'
- 'We will use new technology to meet the needs of citizens and business and will not trail behind technological developments.'
- 'We will value public service, not denigrate it.'

As a public service delivery agency, the quality of Environment Agency services will be affected (and assessed) by local people (among others). The extent to which the Environment Agency can respond to the needs of citizens and consumers will depend on the extent to which it can enable those citizens and consumers to articulate their needs, and change its own policy and practice as a result.

The Modernising Government agenda is closely linked to the 'Modernising Regulation' agenda, also led by Government, which declares its principles as proportionality, accountability, consistency, transparency and targeting. These principles underpin various proposed changes to Environment Agency regulatory practices. There are also, though, social implications: the principles of accountability and transparency will clearly affect the Environment Agency's social impacts and the way the Environment Agency

works with others (social processes), and social issues will guide Environment Agency action on proportionality, consistency and targeting (e.g. impacts on disadvantaged areas).

Running consistently through this agenda, and many of the other priorities of Government, are a number of themes:

1. **Social justice/equity/social exclusion:** the idea that special efforts are needed to help individuals and communities that are excluded from society as a result of poverty, disadvantage, inequality etc;
2. **An emphasis on quality of life:** recognition that quality of life is more than economic activity – but with the assumption maintained that economic growth is always good for quality of life;
3. **Effective management and joined-up public administration:** the aim is to make different organisations – and different departments, professions and specialisms within each of them – work together to a common agenda instead of pursuing independent and potentially clashing aims;
4. **'What works' and evidence-based policy making:** the aim is to shift away from 'ideologies' of any sort and towards practical, effective, efficient solutions;
5. **Partnership:** the assumption that cooperation between different organisations and sectors will be the norm and that action by a single body is an exception requiring justification;
6. **Area-based targeting:** the preference for special initiatives targeted at particular geographical areas of high need rather than universal changes;
7. **Performance measurement and audit:** the discipline that all public services should systematically be audited against explicit, quantifiable performance measures, and that the private sector will set benchmarks and targets for improving reporting on performance on social and environmental impacts;
8. **Vision based local governance:** the idea that policies and programmes at local level should be guided and informed by some coherent and explicit 'vision' of a desired future;
9. **Consultation and involvement:** the principle that relevant 'stakeholders', including local people, should be consulted on and involved in decisions at all levels from the kinds of overall visions referred to above.

The role of local government in environmental protection and governance is often underestimated (especially historically, as local government was originally established to focus on public health – and thus environmental – issues such as water and air quality). It is a far greater investor in and provider of local services than often understood, with the 469 principal local authorities in the UK together spending around £75 billion per year, which is about 25 per cent of total public spending.

Local government has been the focus of much of the Modernising Government agenda, with its own set of principles designed to improve the effectiveness, responsiveness, and accountability of local government (DETR 1998), including:

- separation of 'executive' from 'scrutiny' roles of elected members, intended to make both more effective;
- more attractive and convenient mechanics of elections and voting;
- implementation of Best Value;
- local taxation and financial control, including abolition of 'crude and universal' capping and more freedom for councils to make their own political decisions over taxation;
- ethical standards of members and officers, and the enforcement of these standards;
- consultation and involvement of the wider community in decision-making;
- creation of a broad strategic vision for the future of an area, with input from the community and stakeholder organisations;
- quality of life as an overarching goal, with integration of economic, social and environmental aspects;
- coordinated planning of actions and initiatives bringing together different specialisms, sectors and organisations;
- partnership between different sectors and organisations in implementing action plans.

Much of this has now been legislated for, and some aspects of these developments are covered in more detail below. The extent to which it will govern work at local level by national government agencies such as the Environment Agency remains unclear. In addition, there are some very practical questions raised by these themes:

1. **Implementation.** How far, quickly and consistently will it be implemented? And how far will a range of concepts and commitments that all appear individually self-evidently admirable prove compatible in practical implementation? The last comparably ambitious package of reforms around 35 years ago – including, among other things, slum clearance, comprehensive redevelopment, comprehensive schools, New Towns and urban ring roads – all seemed like good ideas, and were promoted with the same confident idealism of current ideas, until the negative implications began to emerge.
2. **Where is the environment?** The coherence of the social / economic / governance programme has rather ignored the environment. There has been enlightened progress on various environmental issues separately, but they have conspicuously not been connected to the social / economic policy agenda. Tony Blair's October 2000 and March 2001 'green speeches' were significant both for giving the environment higher priority and for acknowledging the need to connect environmental with other policies. The speeches, though, framed this in terms of reconciling environmental protection with economic progress by stimulating improvements in resource productivity. Apart from reference to the greater exposure of poor people to poor environments, there was no discussion of the relationship of environment to social issues.
3. **Vision based local governance.** How will visions be produced; how will they be made specific enough actually to guide policy and programmes (avoiding empty platitudes) while not becoming enmeshed in practical details?
4. **Consultation and involvement.** How will the complexities of identifying / defining 'stakeholders', communities or 'constituencies' be resolved? Will the professional officers responsible, or the 'appropriate' communities and stakeholders, be able and

willing to participate to the degree now expected? How does direct consultation relate to representative democracy in terms of legitimacy and accountability? What are the advantages and pitfalls of working with interest groups, or the general public?

5. **Joined-up public administration.** How will the huge barriers of vested interest and the organisational dynamics of 'empire building' and 'professionalisation' be overcome? These continue to exert huge pressure for 'baronialism' and the increasing technical sophistication of many services, as do rising expectations of professional qualification, and the increasing need for public bodies to demonstrate professional competence as protection against legal challenge, compensation claims.
6. **Partnership.** How will the practical difficulties of creating successful partnerships be resolved? Difficulties include: meeting the greater transaction costs of negotiating and maintaining partnership methods (especially at local levels); the vulnerability of partnerships to changes in the aims and agendas of participants and the lack of clear accountability. There is also the danger that central requirements / rewards for partnership elicit 'partnerships of convenience', with no logic or benefit beyond enabling the partners to qualify for partnership-linked funding.
7. **Area-based initiatives.** Problems include 'boundary' and 'displacement' effects such as the big differences in subsidies, tax breaks and opportunities that depend (literally) on which side of the road you live on. There is also the risk that people and businesses will simply move into favoured areas from close by, so the designated areas merely suck in desired amenities from neighbouring areas with little or no net gain. Further complications arise from many different permutations of overlapping area designation, adding to the obscurity and transaction costs of support measures.
8. **Performance measurement and audit.** The difficulty in framing measures that are objectively measurable, meaningful *and* that neither oversimplify nor distort action. Also, the potential unfairness of 'league tables' and the complications of responding to them (e.g. by measuring 'value added' rather than just outcomes); the huge and demoralising burden of monitoring, recording and reporting performance data on 'front line' professionals (such as teachers).

Three points emerge from these questions:

1. The lack of consideration of the costs of the new ways of working which, though they may save resources (and costly mistakes) in the long run, are being introduced without appropriate training for professionals, public and other participants and without adequate resources for that training - raising expectations that these new ways of working can be introduced in addition to existing performance indicators and priorities.
2. The threat to the public service ethic, which has been undermined for decades, and which may finally succumb to the 'market economy' in public services favoured by the current Government and its focus on 'choice'; threatening the impulse to innovation, collective working and resource efficiency in the public good.
3. The lack of any overall 'big idea' of what all these changes are for. The resistance to any 'ideology' other than that of market economics, which has reduced the potential for debates on such values and principles.

2.3.3 The role of civil society

The role of civil society in the delivery of public services, and in broader issues of governance, has changed significantly over recent years. Though the term 'civil society' is widely used, it is rarely adequately defined. Civil society is defined by some as including all social institutions that are separate from the state (i.e. it includes the domestic world, the economic sphere, cultural activities and political interaction). It is, though, more often used to refer to all social institutions apart from the state and the private sector (with the private sector defined as both the commercial sector and the private domestic world). In these terms, 'civil society' thus still encompasses religious organisations, voluntary and community sectors, charities, trade unions, national and international NGOs, cultural activities, not-for-profit enterprises etc. As such, 'civil society' encompasses the vast range of organisations, institutions and groupings that involve and represent people on a non-governmental basis.

Civil society acts as an arena for people's involvement and a channel through which people's views come to influence the wider governance structure. It has a particular role in developing a strong society: "When we fail to nurture a vigorous civil society, many people suffer more than hardship and poverty: they also lose all sense of power, self worth and political responsibility" (Michael 1998).

Civil society has grown in importance as the role of government has shifted (as noted earlier) from direct delivery to 'enabling' and as systems of political power have broadened from government to governance. Both these shifts imply much more complex policy-making and delivery processes that involve partners outside government and the state, and civil society has taken a growing role here (Craig et al 2002). Participatory exercises (such as citizens' juries), consultations on policy (such as community planning), partnerships panels and boards (Local Strategic Partnerships, for example) all seek to widen civil society involvement in governance processes.

These more participatory approaches can be seen as complementing, as well as challenging, long-held power structures. They require the development of participative capacities within these existing power structures (Clarke and Stewart 1999). They raise issues for public agencies, particularly in relation to building appropriate processes and skills, and also wider issues for civil society:

1. **Balancing independence and co-option.** Civil society occupies a delicate space between independence, legitimacy and influence. Funding and political patronage offer a particular challenge to the sector to remain independent, while still being influential (Edwards and Hulme 1995, Dahrendorf 2001).
2. **Representation, membership and accountability.** The legitimacy of civil society institutions often lies within the 'constituency' they represent, and the accountability of civil society institutions to this constituency are an essential part of their legitimacy (Raynard and Murphy 2000).

Consumer power has also grown substantially within the wider context of civil society, possibly also as a result of the lack of trust of politicians and conventional political systems. Consumer campaigns target protest where a lot of power is seen to reside – with multinational corporations. Some consumer campaigns, such as protests against

genetically modified (GM) food, have been conspicuously successful. Others (such as those that are pro-quality food, organic food, farmer markets and localised food production) have yet to prove themselves in the long term.

While civil society has traditionally had close links with government and public bodies (Craig et al 2002), closer links between civil society and the commercial sector are also beginning to develop. Some forward-thinking companies have taken on a proactive role in this field, with strong institutional links with civil society (such as the UN Global Compact on Human Rights), as well as stakeholder involvement in company decision-making (e.g. Shell on the fate of the Brent Spar platform). Commentators and researchers such as the Copenhagen Centre have also started to examine the role of companies within civil 'partnerships' with governments and non-governmental organisations (NGOs) (e.g. Nelson and Zadek 2000).

2.3.4 Implications of governance trends for sustainable development

The current UK Government has placed social and governance issues alongside effective economic management (prudence, stability etc) at the top of its agenda. The most obvious link between governance and sustainable development has been at local level, through Local Agenda 21. Chapter 28 of the original Agenda 21 documents called for local authorities to produce Local Agenda 21s – a global exhortation that was strengthened by UK Prime Minister Tony Blair's deadline of December 2000 for every local authority in the country to have an LA21 strategy in place. A survey by the Government's Sustainable Development Unit in December 2000 found that 93 per cent of local authorities had completed LA 21 strategies (SDU 2001). Of course, producing a strategy is not any guarantee that broader policies and programmes will change as a result. It has been suggested that:

'LA21 might not have achieved everything it could have (we need to be honest – it rarely managed to reach the whole community, was predominantly focused on the environment, and didn't connect with the heart of authorities)' (Bennett and Pilling 2001).

The hope among those committed to sustainable development was that the work started through LA21 exercises would be continued through the development by local government of Community Strategies. Certainly, the Government made clear in the formal guidance, and elsewhere, that they "expect community strategies to build on the best of the work done to prepare Local Agenda 21 strategies, both of which have the aim of sustainable local communities at their heart" (Hughes 2001). How much this hope would be realised as community strategies are fully developed remains unclear. For many, the concern is that environmental issues will, once again, be excluded from mainstream consideration in favour of social and economic priorities.

Chapter 28 of Agenda 21 stresses the importance of involving all sectors of society in LA21, especially those that are often excluded from policy processes (such as women, and young people, for example). Paragraph 3 of Chapter 28 defines the process of Local Agenda 21:

'Each local authority should enter into a dialogue with its citizens, local organisations and private enterprises and adopt a Local Agenda 21. Through consultation and consensus-building, local authorities would learn from citizens and from local civic,

community, business and industrial organisations and acquire the information needed for formulating the best strategies. The process of consultation would increase household awareness of sustainable development issues.'

There has been considerable national and international policy pressure continuing this theme of the importance of greater participation in sustainable development as a key element of the changing governance requirements of sustainable development. As a report from the International Council for Local Environmental Initiatives (ICLEI) suggests:

'Governments cannot hope to achieve sustainability without the active and willing participation of their citizens and their trust that government is acting for their best interests. Good governance has been held back by sceptical views of government, including a lack of accountability to constituents, insufficient involvement of citizens in the political process, inadequate representation of all stakeholder interests, insufficient transparency in the governing process, and corruption.' (ICLEI 2001.)

The UN Commission for Sustainable Development (CSD) has stated its renewed commitment to participatory approaches:

'Participation generates shared values, mutually reinforcing commitments, joint ownership and partnership, which are crucial to achieving sustainable development' (CSD 2002).

Local governments clearly have a key role as champions and facilitators of sustainable development, with a crucial part of their role being to have "developed participatory, multi-stakeholder strategies to implement sustainable development. They have promoted local governance involving the recognition of the importance of transparency, accountability and participation in governance", among other priorities (e.g. the importance of integration of policy and practice, strategic partnerships and information, knowledge and capacity building) (ICLEI 2001). Local governments have also "come to recognise the importance of information-sharing, enhanced roles for civil society and other partners, and a participatory and integrated approach to the incremental implementation of sustainability" (ICLEI 2001).

The continuing emphasis on participatory working does, however, place new responsibilities on Government at all levels to develop its capacity to evaluate how and why these new approaches are working. And at present, there is little guidance available to help them. As the CSD points out, there is a need for:

'Capacity development in monitoring and evaluation approaches, to support the learning and to improve public sector management and performance, including the use of participatory approaches and sustainable development indicators and complementary qualitative techniques' (CSD 2002, para.241).

Research shows that in 1999, 72 per cent of local authorities in England, Scotland, Wales and Northern Ireland had completed LA21s (IDeA 2000). Seventy per cent of these authorities had provided support for community and voluntary groups as part of their awareness raising approaches; forty-two per cent had multi-stakeholder forums co-ordinating their strategies and 30 per cent had involved the community.

These self-reported findings may not always have lived up to the full potential implied in these results. Nevertheless, as the latest UK Government research suggests that 93 per cent of local authorities had completed LA21 strategies by December 2001 (SDU 2001), with still more under development, this is a major activity for local government.

Similar results appear in wider surveys. The ICLEI survey suggests that, worldwide, 70 per cent of local governments with LA21 strategies in place solicit multi stakeholder input, and many have established formal partnerships across different sectors (ICLEI 2001). Research by the Local Authority Self Assessment of Local Agenda 21 (LASALA) shows that 74 per cent of LA21 co-ordinators provide information to the wider public; 67 per cent have an LA21 Forum or Group in their areas (87 per cent in the Western Europe region); forty-nine per cent have active and representative community involvement in the LA21 implementation process (LASALA 2001).

The types of activities used to encourage participation in LA21 are varied. LASALA research found that 80 per cent of LA 21 co-ordinators ran workshops and seminars and 72 per cent did work in schools; 66 per cent had working groups; 63 per cent had an LA21 Forum or similar; 34 per cent ran visioning exercises and 24 per cent ran Planning for Real exercises.

Earlier research (Young 1996, 1997 and 1998) had already shown that LA21 had promoted many innovative approaches to community participation in the UK, including visioning, community profiling and village appraisals, focus groups, 'Planning for Real' exercises, forums, round tables, citizens juries and advisory committees. LA21 processes had also encouraged local community partnerships to undertake projects with social, economic and environmental benefits including on recycling, housing co-ops, Local Exchange and Trade Systems (LETS), credit unions and environmental improvements.

These local projects, in turn, emphasised local democracy and citizen involvement, especially of excluded social groups. While a full analysis of the implications of all these results remains to be undertaken, the interim conclusions are that:

'LA21 participatory programmes have become a conduit for the unleashing of energy and ideas into the wider area of the attempts to regenerate local democracy' (Young 1998).

LA21s may not (yet) have succeeded in making the UK more sustainable in terms of social, economic or environmental development. But LA21 exercises have clearly contributed to the development of policies and practices on governance:

'Whilst many of the claims about LA21 are intractable to test, there is some evidence of genuine attainment. This relates mainly to processes of strategy production, stimulation of environmental citizenship, inclusion of various sectors, challenging traditional assumptions and actions, and assisting local democracy'" (Selman 1998).

Various hypotheses have been offered to explain the emphasis on public participation in LA21 programmes. Young (1998) suggests that LA21 may have been seen as a unique opportunity for local government at a time of major resource constraints on other programmes, alongside some genuine fascination with the potential for innovation through sustainable development programmes. He also points to pressure from NGOs (such as the UK World Wildlife Fund (WWF UK), see Webster 1998) and practical

guidance from local government support bodies (e.g. LGMB 1994) as other possibly important stimuli.

Young (1998) also suggests that the focus on participation developed as a result of the backgrounds and interests of those individuals who are responsible for delivering LA21 at local level. They drew from their experience in community development, adult education and involving people in environmental activities (again NGO-led, such as the British Trust for Conservation Volunteers (BTCV) and Groundwork trusts). These approaches were well understood in planning departments, where LA21 activities were most often located, and where participatory working was widespread as a result of years of policy guidance and practice on land use planning dating back to the 1960s (e.g. Skeffington 1969).

An analysis of the broader actions local authorities are taking to mainstream sustainable development (above and beyond LA21) has been developed for Defra's Sustainable Development Unit (Defra 2001). This analysis divides local authority actions on sustainable development into five activities:

- recognising collective aspirations of the community as a proxy for sustainable development;
- dismantling tribal thinking;
- providing community leadership;
- getting their own house in order;
- increasing their capacity to influence.

It was concluded that these activities, although ambitious, were considered achievable. The best approaches were considered to be those that address the complexities of sustainable development and see it as "improving quality of life now and for future generations". Three levels of engagement with sustainable development were identified:

- The 'green circle' approach, which has an emphasis on environmentalism;
- The 'three circle' approach, which covers social, economic and environmental initiatives; (although each can be considered separately and are not necessarily joined up);
- The 'one circle' or 'inclusive' approach: "In this mature form, sustainable development is an inclusive agenda, characterised by dialogue and a demand-led approach" (Defra 2001).

This research also quotes Rodney Green, Chief Executive Officer of Leicester City Council and a major advocate of local authority environmentalism who established the first 'Environment City'. Green commented that:

'Achieving sustainable development is difficult. It needs political leadership and is undermined by populism. It's easy not to take the tough decisions.'

Here, community leadership is defined in two ways:

- Political leadership, which includes helping elected politicians take the long term, wide angle view;
- Educating and informing the public through citizenship programmes, awareness raising, good practice guides, demonstration and showcase projects, scenario planning exercises, and the use of indicators to review progress.

Certainly, all the policy themes outlined throughout the Modernising Government agenda could be seen as directly relevant to the principles of sustainable development. But it must be acknowledged that the UK Government is not using the concept of sustainable development to provide the overarching policy narrative for these and other 'mainstream' programmes.

While the four objectives of sustainable development set out in the UK Strategy appear to link social, economic and environmental priorities, in practice national Government policy remains dispersed among highly independent (and often competing) Government departments.

There are, though, grounds for optimism. In November 2001, the Treasury issued a press release about the need for sustainable development issues to be considered in all bids under the 2001 Spending Review. This said that "Government Departments have been asked by the Chief Secretary to the Treasury, Andrew Smith, to ensure that sustainable development issues are considered and reflected in their bids for the 2001 Spending Review. This is the first time that specific sustainable development guidance has been provided". This is said in the press release to demonstrate "the importance the Government attaches to its Quality of Life objectives".

There are, however, further opportunities to make explicit links between the social and governance policy themes that are central to sustainable development, and to current Government policy, and to provide an important contribution to the policy debates on sustainability and joining up policy and practice.

The ESRU study, which sought to develop an appropriate model of sustainable development for the Environment Agency, concluded that:

'a key task facing the Environment Agency is to capture and represent the various elements of the social and governance themes in a model of sustainable development.' (ESRU 1999)

For ESRU, the key relevant social and governance themes were:

- social and power relations between individuals and institutions/structures through which innovative change is constrained but also forged;
- communications/discourses (especially relations/dialogues between expert and lay knowledges);
- the plurality of cultures/social groups within particular places, i.e. 'the politics of place' (recognising the significance of stakeholders and the need for greater inclusion in decision-making and ultimately raising questions of social and political accountability);
- the rights and responsibilities which reside at the individual/household level and at the level of organisations (public, private and voluntary sectors) especially in terms of adopting pro-environmental behaviours (sustainable lifestyles);
- articulating cultural values and norms with particular reference to questions of justice and fairness (equity);
- deliberative forms of decision-making (participatory democracy and procedural justice). (ESRU 1999)

In terms of where the key issues for the future lie in the links between sustainable development and governance, the Sustainable Development Research Network at the Policy Studies Institute (PSI) has suggested the following as priorities for research (PSI 2001):

- science in policy (especially in setting strategic objectives and frameworks for regulation);
- scaling issues (temporal and spatial, and subsidiarity as a principle);
- policy integration (balancing specialisation and integration);
- spatial planning (in relation to the land-use planning system);
- legal frameworks (need for new frameworks, barriers etc);
- regulation versus voluntary action;
- participatory decision-making.

Within these priorities, PSI suggest that "the socio-economic interface is the least well-developed aspect of both sustainable development research and policy-making" (ibid). They suggest that these interfaces include:

- community processes (participation generally, social capital, local environmental action, improving social cohesion, social sector groups responding to challenges of sustainable development);
- regeneration and development (environmental impacts, 'liveability', sustainable communities);
- social inclusion (good practice for sustainable development initiatives, environmental values and behaviours of different sectors of society);
- environmental justice (environmental injustice in the UK, pollution and social exclusion, health inequalities, role of legislation and enforcement, environmental policy instruments);
- quality of life (is it a useful concept? links to employment and productivity, conflicting values e.g. nature conservation and consumption);
- consumption, behaviour and lifestyle (education and media, consumer influence).

The remainder of this report considers some of these linkages and provides more detail on the meaning and potential implications of these policy themes.

3. Social Impacts

3.1 Introduction

The social impacts of social, economic and environmental activities within sustainable development are becoming better understood. This section summarises some of the key drivers and opportunities for the Environment Agency to consider the social impacts of its own work.

The issues covered are structured within the following categories:

- corporate social responsibility;
- health and wellbeing and quality of life;
- social inclusion and social justice (including social and environmental justice, poverty and inequality and urban and rural regeneration);
- commitment to communities (including sustainable communities, social capital, trust).

3.2 Corporate social responsibility

There are growing pressures on a whole range of institutions, particularly commercial companies, to accept and take responsibility for their social, environmental and economic impacts. The Environment Agency produces its own annual assessment of good and poor environmental performance by the businesses it regulates in England and Wales. The resulting annual report (the edition published in 2001 for the year 2000) includes league tables of poor performers who were fined and prosecuted for pollution offences.

In October 2000, the UK Prime Minister requested that the UK's top 350 companies produce environmental reports by the end of 2001. This is just one of the many calls for changes in policy and practice related to the public accountability and legitimacy of major corporations.

The spread of reporting on corporate social responsibility has been dramatic. The 2001 Benchmark Survey on the state of global environmental and social reporting (SDRN 19.11.01) analyses the reporting practices of the 100 largest companies in Fortune Magazine's Global 500. It found that:

- for the first time, half the Global 100 firms produced a global environmental report;
- 54 per cent of companies report on corporate social responsibility or corporate citizenship programmes;
- only 13 per cent are prepared to expose their corporate social and environmental reporting to external scrutiny through formal verification;
- 40 per cent discussed product or service sustainability;
- 19 per cent addressed issues relating to social equity.

The Environment Agency's own environmental reports are already considered alongside commercial sector corporate responsibility reports, with some success: the Environment Agency's report was one of 16 short-listed (out of 64 submitted) in the UK Environmental Reporting Awards run by the Association of Chartered and Certified Accountants (ACCA). The ACCA started a parallel set of Social Reporting Awards in 1999, designed to promote

good practice in reporting the social issues that face organisations and to encourage non-reporters to begin to measure and communicate the social impacts of their activities¹.

The Environment Agency reports annually on its own work more generally, with the social impacts growing in importance. The initiatives outlined below may provide some background to the social and environmental impacts most often covered in corporate reporting. The enormous expansion of these corporate social responsibility initiatives needs to be set in context. The drivers for this growth are summarised in the EC Green Paper on corporate social responsibility (CEC 2001), as follows:

- new concerns and expectations from citizens, consumers, public authorities and investors in the context of globalisation and large scale industrial change;
- social criteria are increasingly influencing the investment decisions of individuals and institutions both as consumers and investors;
- increased concern about the damage caused by economic activity to the environment;
- transparency of business activity brought about by the media and modern information and communication technologies.

Though these factors primarily affect commercial operations, public service agencies work in the same context of distrust on the part of citizens, consumers and communities, and they need to consider similar forms of reporting on social impacts to meet social responsibilities. Indeed, there are demands from business leaders for public agencies to report in these ways. Research by MORI (FT 19.6.2001) showed that more than nine in 10 (93 per cent) of business leaders wanted all government departments to adopt social responsibility policies by 2005; 94 per cent thought all large companies should report on social and environmental performance alongside their financial reports.

Corporate responsibility reporting

The EC Green Paper defines social responsibility as:

‘a concept whereby companies integrate social and environmental concerns in their business operations and in their interaction with stakeholders on a voluntary basis.’ (CEC 2001, para 20).

This definition stresses that corporate social responsibility is voluntary, but also that companies are expected to go beyond compliance and invest 'more' into human capital, the environment and relations with stakeholders. Research now shows that there are concrete financial advantages for companies recognised as socially responsible enterprises, as well as other strong drivers for moves in this direction:

1. **Increased stock values.** The Dow Jones Sustainability Index showed that companies listed here had grown by 180 per cent since 1993 compared to 125 per cent growth for the conventional Dow Jones Global Index over the same period (CEC 2001). In 2000, the return on equity of the DJSI averaged 15 per cent compared to eight per cent for the regular index over the first half of the year (Blair 2000).

¹ ACCA awards details at www.acca.org.uk

2. **Increased financial returns.** About half the above-average performance of socially responsible companies can be attributed to their social responsibility, while the other half is explained by the performance of their sector. Overall, socially responsible companies are expected to deliver above-average financial returns as a company's ability to deal successfully with environmental and social issues can be a credible measure of management quality (CEC 2001).
3. **Pressure from institutional investors.** The Association of British Insurers has, for example, published investment guidelines to improve disclosure by British companies of their approach to corporate social responsibility by setting out what institutional investors will expect to see in annual reports (Cowe 2000). The pressure is based on the premise that companies put their business at risk if they fail to respond appropriately to social, ethical and environmental matters, and that they can enhance the value of their companies if they manage the risks and opportunities well. In addition, in Britain, legislation was introduced in 2000 on statements of investment principles that for the first time required pensions funds to disclose whether they take ethical, environmental or social factors into account in their decisions (SDRN 25.2.02 and Blair 2000).
4. **Pressure from consumers.** For example, MORI have found growing public concern about these issues, with nine in 10 consumers taking a company's social responsibility record into account when buying their products and services in 2001, compared to eight in 10 in 2000. A further eight in 10 think that it is important to know about a company's activities in society and the community when forming a judgement about it (MORI Digest 16.11.01).
5. **Political pressure.** In addition to statements from the Prime Minister (above), the British Government was the first to appoint a Minister for Corporate Responsibility (in March 2001) to promote a series of new initiatives designed to encourage more businesses to play a positive role in local communities. These initiatives were based on a joint study by the DTI and Business in the Community (BiTC 2001) (SDRN 25.2.02).
6. **Peer pressure.** More and more major companies are undertaking social and environmental reporting. The results of the 2001 Benchmark Study are noted above. In addition:
 - Business in the Environment publish an index (fifth edition in February 2001) of companies reporting on their environmental impact. The list has grown each year (Brown 2001), with 78 per cent of the top 350 companies listed on the Stock Exchange taking part in 2001;
 - The FTSE4Good Indices², launched in February 2001, takes a similar approach, offering practical guidance alongside listing companies in the indices (first published in July 2001). FTSE4Good's view is that "far from harming a company's prospects, a commitment to the principles of corporate social responsibility may enhance their reputation and reduce their business risks". The FTSE4Good initiative has identified three themes considered essential in assessing or developing corporate social responsibility policies:
 - working towards environmental sustainability;
 - developing positive relationships with stakeholders;
 - upholding and supporting universal human rights.

² FTSE4Good website is at www.FTSE4Good.com

The Environment Agency is, though, aware that the relationship between companies and local communities is:

‘...not a technical issue based on facts but an emotional issue, involving issues of fear, fairness and alienation from decision-making’ (Poole 2001).

In this context, the Environment Agency has recommended that companies take a more proactive approach to links to local communities, including suggesting that they:

‘...involve communities at an early stage; recruit locally, where possible; don't confuse philanthropy with social responsibility’ (Poole 2001).

Similar issues affect all institutions that work at local community level, including public agencies such as the Environment Agency itself.

There are various approaches to corporate social responsibility reporting, including sustainability reporting and social auditing:

- 1. Sustainability reporting and guidelines.** To date, most organisational reporting has been modular – examining environmental and social performance separately from financial reporting. However:
 - 1.1 The Global Reporting Initiative (GRI)** has been developed through a partnership between the Coalition of Environmentally Responsible Economies (CERES) (see below) and the United Nations Environment Programme (UNEP) to encourage NGOs, business associations, corporations and other stakeholders to undertake sustainability reporting. It provides a framework and templates for reporting that integrate the social, environmental and financial issues. The GRI is now recognised as best practice, not least because its guidelines allow for comparisons between companies reporting. It includes ambitious guidelines for social reporting (CEC 2001).
 - 1.2 CERES** brings together environmental, investor and advocacy groups to work for a sustainable future. CERES issued guidelines in 1989 on the protection of the biosphere, environmental restoration and management commitment.
 - 1.3 The World Business Council for Sustainable Development (WBCSD)**³ has issued sustainability guidelines, produced by industry for industry, for specific industries (such as mining), with similar guidelines to follow for other industries (such as cement).
 - 1.4 The European Foundation for Quality Management (EFQM)** has created a 'society results' criterion to address the social aspects of sustainable development (alongside others), as part of its Business Excellence model.
 - 1.5 The SIGMA** project, led by Forum for the Future and funded by the DTI, seeks to develop a new set of tools, including reporting approaches, to manage sustainability within organisations.
 - 1.6** In the public sector in the UK, the **Audit Commission's** Quality of Life indicators provide a framework for sustainability reporting, linked to Best Value reporting.
- 2. Social reporting and ethical auditing.** These involve a variety of approaches. Social auditing was developed as a way to measure and report on social performance through the eyes of stakeholder groups (developed, in the most part, in Europe).

³ World Business Council for Sustainable Development, see www.wbcsd.ch

Ethical reporting (pioneered in North America) tended towards the development of ethical codes of conduct. At international level, increased publicity about child labour led to the development of a range of approaches and codes for international labour standards. In the UK, the public sector has taken the Best Value route, examining the role, scope, approach to and performance of local services through dialogue with local people. All approaches combine the following elements:

- reporting to provide a stronger accountability link;
- stakeholder involvement;
- reporting against targets and indicators;
- commitment to improved performance;
- external verification.

3. Emerging standards and guidelines. In an effort to create a check on the quality and veracity of reporting, a number of emerging standards within corporate social responsibility reporting have emerged (see table 3.2).

Table 3.2 Standards within corporate social responsibility reporting

Standard	Key elements of standard	Target organisations
<p>Global Reporting Initiative (GRI)</p> <p>www.globalreporting.org</p>	<p>Launched 1999/2000. Provides sustainability reporting guidelines on economic, social and environmental performance. Social elements include workplace health and safety, employee retention, labour rights, human rights, wages and working condition in outsourced operations. Provides a common framework for voluntary reporting promoting comparability and credibility for sustainability reporting.</p>	<p>Corporates, NGOs, public sector, other stakeholders</p>
<p>AA1000</p> <p>Institute of Social and Ethical AccountAbility (ISEA)</p> <p>www.AccountAbility.org.uk</p>	<p>Launched 1997. Standard for social and ethical accounting, auditing and reporting based on a number of existing international human rights and labour standards. Comprises principles (characteristics of a quality process) and a set of process standards which include the quality of the dialogue and stakeholder participation. Aims to provide transparent, measurable and verifiable standards for certifying the performance of organisations. Linked to accreditation process for professionals within the field (both for those working within organisations, as well as independent verifiers).</p>	<p>Business organisations, NGOs</p>
<p>OECD Guidelines on Multinational</p>	<p>Finalised in 2000 and adopted by 33 countries. Cover social, economic and</p>	<p>Multinational enterprises,</p>

<p>Enterprises</p> <p>www.oecd.org/daf/investment/guidelines</p>	<p>environmental issues including child labour, forced labour, social relations, environmental protection, consumer protection, transparency and disclosure, fight against bribery, transfer of technology, competition and taxation. Not legally binding, but do encourage governments to promote their observance by companies and include an implementation mechanism involving governments and social partners.</p>	<p>governments, social partners</p>
<p>SA8000</p> <p>CEPAA</p> <p>www.cepaa.org/sa8000</p>	<p>Launched 1997. A social accountability standard focusing particularly on the relationship between an organisation and its employees and suppliers. Based on the principles of 11 Conventions of the International Labour Organisation (ILO), the Universal Declaration of Human Rights and the UN Convention on the Rights of the Child. Certification requires compliance with a set of minimum standards and a mechanism for ensuring ongoing compliance.</p>	<p>International corporate organisations</p>
<p>UN Global Compact</p> <p>www.unglobalcompact.org</p>	<p>Launched in 2000. Nine principles for multinational companies on human, labour and environmental rights. Result of consultation between the UN and business.</p>	<p>Multinational companies</p>
<p>CERES (Coalition for Environmentally Responsible Economies)</p>	<p>Started in 1989. Nine guidelines for sustainability including protection of the biosphere, environmental restoration and management commitment.</p>	<p>Business</p>
<p>Global Sullivan Principles</p>	<p>Started in 1977. Based on self-help, aim to increase corporate social responsibility around the world.</p>	<p>Business</p>
<p>Amnesty International Human Rights Principles for Companies</p>	<p>Nine principles including on health and safety, freedom from slavery, and security. Closely linked to the Universal Declaration of Human Rights.</p>	<p>Business</p>
<p>Eco-Management and Audit Scheme (EMAS) ISO 19000</p>	<p>Scheme promoted by the European Commission to encourage companies and others to set up site or company-wide environmental management and audit schemes that promote continuous performance improvement.</p>	<p>Companies, public sector, other organisations</p>

	The resulting environmental statement is public, and is validated by accredited verifiers. ISO 14000 is similar but does not require external reporting.	
Ethical Trading Initiative www.ethicaltrade.org	An alliance of companies, non-governmental organisations (NGOs), and trade union organisations. Identifies and promotes good practice in the implementation of codes of labour practice, including the monitoring and independent verification of the observance of code provisions. This code has been built upon the ILO labour standards.	Particularly food and clothing industries.
Best Value (DETR / Audit Commission) www.detr.org.uk	Review of the role and standard of local authority services. Based on the views of local people and benchmarking between authorities. Process is based on the four Cs: challenge, compare, consult, compete.	Local government and local quangos (such as housing associations)

All these developments raise some difficult questions, including:

1. **Impact of social and environmental accounting.** There remain many concerns about whether social and environmental accounting actually makes any difference to the ways companies and other bodies operate. Having developed and promoted the social auditing technique for six years, the New Economics Foundation published *Corporate Spin – the troubled teenage years of social reporting*. In it, they question the extent to which the approach has addressed the central social and sustainability issues and whether it has been the catalyst for improved social performance that it was intended. The report recommends five actions for social reporting to have any continued relevance:

- Prove whether or not social reporting can lead to improved performance;
- Standardise a set of tools for social reporting;
- Democratise corporate governance to encompass 'stakeholder governance'.
- Challenge the information (highlighting the role of NGOs, government and journalists);
- Mandate companies to include social information as part of their regular reporting process.

Indeed, frustration with the unfulfilled potential of social reporting is widespread within civil society and the press. SustainAbility reported in November 2000, that "with very few exceptions, the Top 50 reports fail to address what we consider to be the biggest sustainability issues associated with a company's activities...".

2. **Voluntary codes.** The emphasis throughout these standards is on voluntary codes (except for the public sector under Best Value reporting), and on the process rather than substantive nature of many of the standards on social and ethical reporting,

which has meant that organisations can create their own map for reporting. The assertion is that while organisations gain through positive publicity, they use a flurry of incomparable indicators and approaches and an over-emphasis on process at the expense of substance.

There is currently no statutory requirement in the UK for organisations to report on their social performance. The voluntary nature of reporting on social performance, and the plethora of different approaches and techniques available (and indeed of 'standards'), mean that organisations can pick and choose how they report, on what and to whom. This situation is compounded by an emphasis on the *process* of reporting (e.g. Which stakeholders are involved? Have targets been set? Is the report verified?). This process has overshadowed the *substance* of reporting (e.g. Is the organisation using child labour? Is its safety record improving or worsening? Does the organisation respect the rights and opportunities of native people?).

The UK Company Law Review, completed in Spring 2001, did consider a mandatory directors' operating and financial review, within the audited accounts, to cover the management of environmental risks. Various organisations, including Friends of the Earth (FoE) and the New Economics Foundation (NEF) called for mandatory sustainability reporting in the UK. These proposals were not accepted in the final report of the Review.

- 3. Legitimacy and scrutiny.** The legitimacy of social and sustainability reporting is strengthened through the scrutiny of external verifiers. Yet, again, there are inadequacies in current practices, which mean that the overall impact of reporting is reduced.

Firstly, social auditors check and comment on the process of reporting, and on the veracity of information, rather on whether or not a company has positive or negative social impacts. This has left a gap in the scrutiny of reports which has meant that they often go unread and ignored, with the fact that an organisation has reported at all on its social performance taken to indicate that it is a 'good' organisation.

Secondly, mainstream consultancies such as PriceWaterhouseCoopers and KPMG are beginning to dominate the social auditing profession. While they have the capacity to examine and comment on the veracity of a report, they often do not have the *legitimacy* to explore what is *missing* from a report. NEF, Oxfam, Transparency International and others are calling for a more active civil society involvement in the process of scrutinising and commenting on the content of, and gaps in, social reporting.

- 4. Stakeholder engagement.** One of the key criticisms of Shell during the Brent Spar process was that it did not engage in a civil dialogue process with a range of different 'stakeholders' about the course of action it should take. Stakeholders, in this context, were seen as people or groups who affect or are affected by, the decision. When Shell did develop a dialogue process, the ideas were incorporated into the reporting process of social auditing to (in theory at least) link stakeholder views with the reporting and accountability process for the organisation.

Other major commercial enterprises are also turning to formal stakeholder consultations, for various reasons (some not unrelated to focus group / market

research approaches to inform internal practice rather than deal with fundamental concerns). During the run-up to bidding for the second National Lottery franchise, Camelot developed a stakeholder panel to oversee the reporting on its social impact and help set targets for improved performance.

There are, of course, many unresolved methodological issues here. The social auditing methodology suggests that reporting should particularly incorporate the views of those stakeholders whose voices are traditionally not heard. Differences in power between the organisation and stakeholders, and between stakeholders and their differing viewpoints, mean that there is huge potential for misrepresenting, or simply not representing, some stakeholder views.

At the other end of the scale, the power imbalance also means that stakeholders can become (or be seen to become) 'co-opted' by the organisation. This is a particular issue for the pressure group sector, which has increasingly sought to work on 'solutions' to sustainability issues *with* the private sector and government, rather than simply campaign against it. There is potential for loss of independence of view and a loss of legitimacy in this situation, alongside the benefits of access to decision-makers (Craig et al 2002).

- 5. Wider accountability.** Within the context of calls for stronger, mandatory social reporting by companies are more informal approaches to strengthening accountability to stakeholder groups. The power of consumer action has increased the supply of organic food and challenged the profits of oil companies (and, perhaps more controversially, taxation by government). Shareholder power has also demonstrated its potential. But it has yet to lead to major changes in action.

3.3 Health and wellbeing

This section covers the main social policy developments that may affect the way the Environment Agency sees its social impacts in relation to health; quality of life and wellbeing.

3.3.1 Health

The connections between environmental regulation and protection and human health are well known. The World Health Organisation (WHO) pointed out the connections in a report produced for the Earth Summit in 2002: "Human beings are at the centre of concerns for sustainable development. They are entitled to a healthy and productive life in harmony with Nature".

The Environment Agency already recognises its responsibilities to take into account the impacts on human health of its work, and the issues it deals with (flooding, for example), and has begun various strands of work to examine these impacts and their implications (see *Joining Up* report E2-057/SR2). Consideration is already being given to actual and perceived health impacts of Environment Agency actions, and to issues of mental as well as physical health.

The areas where mainstream health policy is the most relevant to the work of the Agency are where links between environmental factors and health are also associated with links between deprivation and health. Peter Townsend devised one of the most well known indices of deprivation: the Townsend score. Townsend recognised that one of the missing dimensions of deprivation indices concerned the quality of the environment and exposure to pollution (Pless-Mullooli and Phillimore 2001). Townsend's analysis was an exception to the general lack of information on these issues, though there have been some other links made between health inequalities and environmental issues. Nevertheless, "We are a very long way from mapping and assessing how severely the impact of economic disadvantage and social exclusion may be compounded or compensated for in any neighbourhood by the impact of a polluted or favourable environment" (Pless-Mullooli and Phillimore 2001).

There has, however, been considerable research on the links between deprivation and health, some of which links to environmental factors. Relevant findings include:

1. Child health and infant mortality (deaths of babies under 12 months) are affected by poverty. Child mortality is at least twice as high in poor areas of Glasgow and Manchester as in well-off areas of the home-counties. More widely, infant mortality for babies from 'unskilled' classes was almost twice that in professional classes. In the past decade, premature death rates for children and adults under 65 in areas of Glasgow, Liverpool and Newcastle are 2.6 times the rates for south Suffolk, Buckinghamshire and Berkshire (Dorling 1999).
2. Children in poor and damp housing (especially in temporary accommodation as a result of homelessness) suffer more ill health than average, including respiratory problems, stomach upsets, fatigue and nervousness, as well as behavioural difficulties leading to disrupted schooling (Shelter 1998).
3. People experiencing poverty and inequality have poorer general health and more long-standing illnesses which limit quality of life (Department of Health 1998), and have a poorer diet: diet quality decreases with decreasing levels of household income, qualification and social class (Moore 1999). Recent research suggests that welfare benefits in the UK are too low to provide the essential prerequisites for health, particularly a good diet (Whitehead 1999).
4. 1.6 million homes are unfit for human habitation – one in 14 homes (JRF 1997); these may be houses that suffer from damp and mould and that lack basic amenities for cooking and washing, with obvious health and energy consumption implications. The largest proportion of unfit housing is in the private rented sector (more than 15 per cent of the total, compared to six per cent local authority stock) (DETR 1999).

A more complex analysis was done in research for the 1998 Health Education Monitoring Survey (HEMS 1998), which introduced a new set of demographic and socio-economic indicators to contribute to the debate on the links between social inequalities and health. The social measures included household income levels, economic activity, educational qualifications and housing tenure. The health measures were self-reported 'less-than-good' general health, long-standing illness that limited an active life, large amounts of stress, smoking, drinking, physical activity, diet. The new indicators also included a series of factors associated with the social and political relationships people were engaged in. These covered:

- satisfaction with the amount of control over decisions affecting life;
- perceived ability to influence neighbourhood decisions;
- neighbourhood social capital score (summarising views and feelings about the neighbourhood such as feeling safe, neighbours looking after each other, good facilities for children, good public transport);
- personal support group (the number of people who could be called on at a time of serious personal crisis);
- community activity (participation in the last two weeks in adult education, voluntary or community groups or religious activities).

The research showed that there was an increased likelihood of reported poorer health generally, higher stress levels, higher prevalence of smoking, and poorer diet quality among people who felt they had a lack of control over decisions affecting life and a lack of influence over neighbourhood decisions. Reported poorer health was also found among those with no involvement in community activities, those living in more deprived areas with a low neighbourhood social capital score and, especially for men, those with no personal support group.

Overall, particular groups appeared consistently across the health measures to be those with less healthy attributes. These were people with no educational qualifications, no personal support group, those not involved in community activities, those lacking control over decisions affecting their lives, and those with low 'neighbourhood social capital'.

Cause and effect in health are difficult to prove. But this research shows close correlations between those who feel empowered to make their own decisions, are engaged in community activities and live in places with strong neighbourhood social capital, and those who are more likely to be healthy and to live healthy lifestyles.

More direct links are beginning to be found between health, deprivation and environment as illustrated below:

- The WHO has developed a 'health and environment cause and effect framework', which was then used to develop indicators which cover both poverty and air pollution (although they do not make allowance for interaction between the two).
- Research in Teesside concluded that current levels of industrial pollution were not associated with differentials in acute respiratory ill-health, or other non-specific symptoms, but did find higher death rates linked to industrial pollution in the past. (Pless-Mullooli and Phillimore 2001):

Research by FoE and others has found that:

- Sixty-six per cent of carcinogen emissions to air were in the most deprived 10 per cent of wards; 82 per cent were in the most deprived 20 per cent of wards. Only eight per cent were in the least deprived 50 per cent of wards (FoE 2001).
- Respiratory problems in London concentrate in the poorest areas and correlate with high traffic levels (Stephens et al 2001); negative impacts are concentrated in more deprived areas, though these areas typically have the lowest levels of car ownership (FoE 2001).

Concerns about the health impacts of landfill sites on local communities have also surfaced following epidemiological studies through the EUROHAZCON study published in *The Lancet* in 1998, and reviewed by the Department of Health (DoH) Committee of Toxicity later in 1998 (Elliott et al 2001). The combined results from the 21 sites studied suggested that "women who lived within three kilometres of a landfill site were more likely to have a malformed foetus than women living further away from the site."

The DoH committee concluded that the study was well-conducted, but that further research was needed to establish cause and effect, and proposed another study. That study, by Imperial College (completed in 2001), noted that:

- Populations within two kilometres of a landfill site 'tended to be more urban and deprived than that beyond two kilometres, with 34 per cent versus 23 per cent of the population in the most deprived tertile of the Carstairs score';
- For special waste landfill sites, there was a higher still proportion of the population in the most deprived tertile;
- The risk ratio of 1.07 for congenital abnormalities merited further investigation.

The DoH committee concluded that "although this study found at most only small differences in adjusted rates of some birth outcomes between the study and reference populations, when considering landfill sites in general it remains possible that there are some sites (or subset of sites) which significantly affect the health of the local population".

Pless-Mullooli and Phillimore conclude that there are many problems with these data, including:

- there is a very complex mixture of data (historical, pollution, health, poverty);
- there is very little past data;
- there is much suspicion on all sides – from industry, local authorities and the community – and there needs to be "recognition of the distrust, stigma, inequality in access to information and disempowerment as contributors to how risks and uncertainty are perceived".

Pless-Mullooli and Phillimore conclude, though, that though few epidemiological studies have investigated the issues in depth, "because poor neighbourhoods are more likely to be located near major emitters of pollution both industrial and road traffic, they are more likely to be affected by long-term chronic pollution-health associations".

Their conclusion is that "We know that socio-economic factors are not distributed independently of air pollution exposure, that pollution is an aspect of poverty and compounds it. What we don't know ... is by how much lives are shortened, how this shortening is distributed across rich and poor and other groups of the population, and whether the magnitude of effect varies by particle type. Another gap is the relative contributions of poverty and air pollution on long term health in UK populations." (Pless-Mullooli and Phillimore 2001). Their view is that researchers need to work together more on these issues in multi-level, interdisciplinary and multi-agency fora.

These examples illustrate the type of research on links between the environment, deprivation and health, some of which have led to a programme of Government action

focused on deprivation and health. The Government launched a detailed consultation in March 2002 under the title *Tackling Health Inequalities*. This drew on Sir Donald Acheson's inquiry into *Inequalities in Health* (Acheson 1998), which found that the poorest groups in society face the worst health risks and suffer the worst health problems.

The 1998 Acheson report recommended that "as part of health impact assessments, all policies likely to have a direct or indirect effect on health should be evaluated in terms of their impact on health inequalities, and should be formulated in such a way that by favouring the less well off they will, wherever possible, reduce such inequalities".

The Government has accepted this recommendation and the Environment Agency has been exhorted, in the statutory guidance to the Agency from Defra (2002), to bear in mind *Policy Appraisal and Health. A guide from the Department of Health*, and *An Introductory Guide to Health Impact Assessment*, by the Health Development Agency. Health Impact Assessments (HIAs) have been summarised as "the estimation of the effects of a specified action on the health of a defined population" (Scott-Samuel 1998, quoted in Stephens et al 2001).

These policy initiatives also informed the Government's decision to include a healthy community as one of its key targets in its national regeneration strategy, with clear targets for improving the health of those living in the most disadvantaged areas. Though very much within the conventional responsibilities of health care professionals, these activities do have a greater emphasis on prevention, which is also been one of the key factors in the restructuring of the National Health Service to focus on Primary Care Trusts. This assumes a focus on early preventative health care rather than on emergency and crisis services through specialist treatments in hospitals.

Certainly, in terms of the Government's regeneration activities, the development of a 'healthy community' focuses on conventional health care plus health awareness campaigns (especially around smoking, diet and exercise). There is also an emphasis, including through the New Deal for Communities programme, for physical improvements to housing, community facilities (including shops, leisure facilities), open spaces, landscaping and litter (NRU 2001) to create a healthier living environment.

Finally, the role of local authorities on these issues deserves brief attention. Historically responsible for public health programmes long before the National Health Service was established, local authorities retain responsibility for environmental health, especially around hygiene, pest control and food safety. Under the Health and Social Care Act 2001, local authorities have been given new responsibilities to scrutinise (through the new local government scrutiny committees) and report on matters relating to the health services in their area (Audit Commission 2001). This builds on long-standing partnership panels and boards in many localities where health and social services have worked closely together to plan services. These partnership arrangements have often formed the basis for the new Local Strategic Partnership structures, which often continue to reflect these priorities of health and social care.

3.3.2 Wellbeing and quality of life

Wellbeing has now been formally identified as an aim of central Government policy, and a new 'power of wellbeing' has been proposed as a major objective for local government. Official DETR Guidance says (DETR 2000):

'Part I of the Local Government Act 2000 creates a new discretionary power for principal local authorities in England and Wales to do anything they consider likely to promote or improve the economic, social or environmental well-being of their area.'

This is intended to correct the problem of 'powers':

'For many years, innovative actions by local authorities have been stifled by concerns over the scope of their powers. While some legislation contains deliberate and specific constraints on local authority activities, there has been considerable uncertainty over the boundaries of the enabling powers that have been conferred on councils. The result has been a necessarily cautious approach to innovation and joint action, and a concomitant limitation of councils' contribution to the improvement of their communities' quality of life. The Government's purpose in introducing the wellbeing power is to reverse that traditionally conservative approach, and to encourage innovation and closer joint working between local authorities and their partners . . . Specific examples of the kind of action that can be taken . . . include incurring expenditure, providing staff, goods or services to any person, entering into partnership arrangements and carrying out the functions of other bodies.'

Environmental and sustainable development questions are singled out as likely to benefit:

'In particular, local authorities will want to consider how the power can promote the sustainable development of their area by delivering the actions and improvements identified in their community strategies, which could include tackling social exclusion, reducing health inequalities, promoting neighbourhood renewal and improving local environmental quality. Authorities will also wish to consider how the new power can help them to contribute locally to shared national priorities, such as action to combat climate change and encourage the conservation of biodiversity...'

The power extends one already created to enable joint working between local authorities and health authorities:

'Section 2 builds on the provisions in the Health Act 1999, which provide health authorities and local authorities with powers to work with one another where there are common goals between the services being commissioned and provided by the local authority and NHS bodies. Joint working under the Health Act can take the form of pooled budgets, lead commissioning and integrated provision of services. The wellbeing provision extends the ability of local authorities to work in partnership with other bodies, in addition to the NHS.'

The Environment Agency warmly welcomed the proposals for a power to promote or improve wellbeing when it was announced. Sir John Harman responded to the formal consultation paper by saying that the Environment Agency saw the power as a positive move to further joined up thinking and action on the ground:

'Many of the issues facing local communities today, including environmental issues, can only be tackled effectively by working together at the local level with a variety of partner organisations' (letter to DETR, 6 February 2001).

These developments offer potential opportunities for connections between environment and health and wellbeing, though the implications are not yet clear.

Quality of life has been much more problematic than the relatively narrowly defined use of the term wellbeing. Quality of life is sometimes used as a 'simpler' way of expressing the concept of sustainable development. But it is not simple, nor does it express all the elements of sustainable development (notably the futurity aspect i.e. future generations, and the global aspect).

In their contribution to the first Sustainable Development Research Conference in December 2001, Paul Ekins and Roger Levett summarised the territory covered by quality of life in relation to sustainable development (Ekins and Levett 2001). They suggest that quality of life goes beyond the satisfaction of needs and is a multi-dimensional concept, drawing on the following types of ideas:

- As to do with the 'good life', as identified by Perri 6 and Ian Christie, and encompassing:
 - satisfaction of basic needs;
 - satisfaction of wishes and desires;
 - fulfilment of important purposes and projects;
 - life that exhibits social meaning.

- Using Geoff Mulgan's summary of the characteristics, which are:
 - belonging to family and community;
 - material means of sustenance, play, adornment;
 - health environment;
 - spiritual dimension;
 - strong relationships;
 - material plenty;
 - good health;
 - membership of religion.

- The OECD list of human needs that sustainable development should provide (OECD 2001):
 - adequate means of livelihood;
 - decent living environment;
 - good health;
 - harmonious social relations;
 - security;
 - freedom of action.

Ekins and Levett conclude that there is no clear or shared definition of quality of life, nor is it a given – it is subject to manipulation (by the media, advertising, politics, ideology) and thus constantly developing and changing.

In spite of these complexities, the Government nonetheless attempts to quantify quality of life, primarily through the growing library of indicators co-ordinated by the Audit Commission, which include a set of quality of life indicators (Audit Commission 2001). As Ekins and Levett suggest, though, while indicators can measure satisfaction of needs, it is not obvious what level of satisfaction would be compatible with sustainability, or whether indicators can currently measure both.

Quality of life has also been closely associated with another policy euphemism – local environmental quality. This grew from Prime Minister Tony Blair's speech on *Improving Your Local Environment* in Croydon in April 2001. He introduced a range of other characteristics by saying that we "need stronger communities and an improved quality of life ... when the environment in which we live fosters rather than alienates a sense of local community and mutual responsibility ... public squalor can undermine the benefits of private affluence ... run-down and demoralised public services reduce people's quality of life, even though they may be getting richer. They are better off as consumers, but worse off as citizens ... 'public goods' such as clean, safe and attractive streets and public spaces need investment alongside growing private affluence".

3.4 Social and environmental justice, poverty and regeneration

Social and environmental justice have gained considerable external profile in the Agency's work priorities during 2001, as can be seen from the *Achieving Environmental Equality* booklet (reporting on the Environment Agency's AGM in 2000), and the Environment Agency's Vision statement. This section covers:

- sustainable development, social and environmental justice;
- poverty, inequality and social exclusion;
- urban and rural regeneration.

There are also strong links to other sections in this paper, particularly section 4.1 on Stakeholder involvement, and section 3.5 on Commitment to communities.

3.4.1 Sustainable development, social and environmental justice

Justice has two main meanings (Rawls 1999): first, equity and fairness; second, rights and duties (the legal connotations).

Social justice is much less well or widely understood. In his professorial inauguration lecture, the first Professor of Social Justice in the UK (Professor Gary Craig) has argued that social justice in current social policy has a number of elements (Craig 2001):

1. Social justice is to do with 'fairness', and particularly with the ways in which major social institutions distribute fundamental rights and duties and determine the division of outcomes / advantages from social co-operation (Rawls, in Craig 2001).
2. Social justice is an essentially political project. The first common usage of the term 'social justice' was in the Commission for Social Justice, established in 1994 by John Smith when he was leader of the Labour Party. The political project of social justice is, according to Craig, informed by values concerned with rights, and with the acceptance of difference and diversity, and also:
 - achieving fairness, and equality of outcomes (not just equality of opportunity);

- recognising the dignity and self-worth and encouraging the self-esteem of all;
- the meeting of basic needs;
- reducing inequalities in wealth, income and life chances;
- the participation of all, including the disadvantaged.

Social justice thus incorporates ideas of equity / fairness, rights and duties, valuing diversity, meeting basic needs, tackling poverty and inequality, and political processes, particularly greater participation.

Principles of justice and equity provide some of the moral and ethical underpinning to sustainable development, with sustainable development focusing on three main elements of justice:

1. **Intergenerational justice.** Responsibilities to future generations and justice and equity within and between generations;
2. **Environmental justice**, which is growing in importance (see below);
3. **Global justice and equality.** This involves tackling inequalities between rich and poor countries especially North and South, between rich and poor people, and between powerful and less powerful people. These are basic principles of sustainable development on the moral grounds that it is simply *wrong* in a rich society / world that some people live in poverty, with all the disadvantages that entails (Real World Coalition 2001, p93), and wrong to destroy the earth for short-term gain.

Longstanding UN declarations on human rights and environmental rights underpin the basic agreements on sustainable development (for example, the Rio Declaration and Agenda 21), and there are more recent developments in human and environmental rights:

1. **Human rights.** The UN Declaration of Human Rights in 1948, and recent EU Human Rights legislation enacted in the UK focus on *human rights* such as respect for life, liberty, justice, equality, tolerance, mutual respect and integrity. The recent UK legislation, the Human Rights Act 2000, incorporates civil and political rights. It has been argued that "The new laws allow human rights to be perceived as an integral facet of social justice and environmental protection, because acts leading to environmental degradation may constitute an immediate violation of internationally recognised human rights" (Stephens et al 2001).
2. **Environmental rights (and duties).** The 1972 Declaration from the UN Conference on the Human Environment, held in Stockholm, formalised concepts of *environmental rights and duties* as covering both the physical and social conditions of human life. The first principle of that Declaration was:

'Man has the fundamental right to freedom, equality and adequate conditions of life, in an environment of a quality that permits a life of dignity and well-being, and he bears a solemn responsibility to protect and improve the environment for present and future generations.'

In April 2001, human and environmental rights were brought together again when the UN Commission on Human Rights agreed "everyone has the right to live in a world free from toxic pollution and environmental degradation".

- 3. Rights to information.** One of the most important recent developments in this field has been the signing of the UN Economic Commission for Europe's Convention on Access to Information, Public Participation in Decision-Making and Access to Justice in Environmental Matters, known as the Aarhus Convention. The UK signed this agreement in 1998, and the agreement is now being enacted into European and UK law. The Convention has three main elements:
 - the right to know: rights to environmental information;
 - the right to participate in decision-making processes: the right to be consulted and participate in proposals, plans or activities;
 - the right to access to justice: a guaranteed right to the enforcement of the above rights via access to courts or other independent bodies.
- 4. Statutory environmental rights.** FoE argues for the introduction of statutory environmental rights for all people:

'Every citizen should enjoy inalienable environmental rights to clean air, pure water, uncontaminated land, wholesome food and peace and quiet, guaranteed by the state. Other enabling rights, such as access to data on the state of the environment ... would give people the tools to lead sustainable lives and help Government and industry to do the same' (Real World Coalition 2001, p72).

Environmental justice builds on these concepts of social justice and environmental rights. The environmental justice movement grew from the recognition that it is the poorest people who suffer most from environmental pollution and have least access to environmental resources. It also recognises that environmental inequalities (as do all forms of social exclusion) worsen health, hamper economic performance and destroy social cohesion (less trust, loss of community, more crime). Environmental problems are "a component of social exclusion and an issue of social justice" (Boardman et al 1999).

Environmental justice comprises two main issues – tackling the unequal distribution of environmental pollution and hazards, and access to environmental goods. Access to environmental goods tends to mean access to green spaces, affordable housing, clean air and water, health and affordable food, though this is an area where there is little current research. Tackling the unequal distribution of environmental pollution and hazards has resulted in much more recent research. Findings in the US include:

- As long ago as 1980, studies showed that race was the most significant element in predicting the location of commercial hazardous waste facilities (Berglund 2000);
- More recently, it has been shown that 75 per cent of toxic waste in the southern US is disposed of in black communities, which make up 25 per cent of the population (Boardman et al 1999);
- Communities of colour are 19 times more likely to be near contaminated areas than are wealthy white people (Faber and Krieg 2001).

And in the UK:

1. Air pollution in cities, mostly from traffic, is responsible for up to 24,000 premature deaths per year in the UK. Though people on low incomes have the lowest levels of car ownership, air pollution is most severe in areas where poverty is most concentrated as they have more roads, giving rise to higher respiratory mortality rates. In addition, road noise creates stress and loss of sleep (Boardman et al 1999).

Respiratory problems in London have been found to concentrate in the poorest areas and correlate with high traffic levels (Stephens et al 2001); negative impacts are concentrated in more deprived areas, though these areas typically have the lowest levels of car ownership (FoE 2001).

At the same time, changes to public transport systems in recent years have resulted in a rise in the costs of rail and local bus fares of nearly 33 per cent in real terms since 1980 (DETR 1998), while services and standards have declined. By contrast, motoring costs have decreased by five per cent. One in three homes in Britain (around 13 million people), do not have a car. More than four in 10 women do not have a driving licence and 74 per cent of people living in the 20 per cent of households with the lowest incomes do not own a car or van (Boardman 1999). Travel poverty also affects other vulnerable groups such as young people, elderly people and people with physical disabilities who are unable (or do not want) to drive themselves.

2. Factories emitting toxic pollutants are disproportionately located in poorer areas (ibid):
 - 662 polluting factories in the UK are in areas where the average household income is less than £15,000, and only five are in areas where the average household income is more than £30,000;
 - In London, more than 90 per cent of polluting factories are in areas with below average incomes; in the North East of England, the figure is more than 80 per cent.
3. As mentioned previously in section 3.3.1, 66 per cent of carcinogen emissions to air are in the most deprived 10 per cent of wards; 82 per cent are in the most deprived 20 per cent of wards. Only eight per cent are in the least deprived 50 per cent of wards (FoE 2001).
4. There is significant bias towards 'hazardous substances consent sites' being located in wards with higher proportion of ethnic minority populations (Stephens et al 2001).
5. There are particular inequalities around the use of domestic energy ('fuel poverty'). Climate change, global warming, acid rain and radioactive pollution are all recognised as being at least partly the result of energy production methods using fossil fuels and nuclear power. At the same time, vulnerable low-income families who live in cold, damp homes with inadequate heating systems and poor standards of insulation have to spend proportionally more of their income on paying for the large quantities of energy they need to combat these conditions while the better-off can afford to waste energy:
 - More than 4.3 million households in England are 'fuel poor', spending 10 per cent or more of their income on keeping warm; nearly 800,000 of these people spend 20 per cent or more (DETR 1999);

- The 30 per cent of householders on the lowest incomes live in the country's least energy efficient housing (Cook 1999). Yet the most energy-efficient homes now being built can deliver the same level of comfort for one tenth of the energy cost and use of the average house (Boardman et al 1999);
- 76 per cent of households earning less than £4,500 cannot afford to heat their homes to minimum health-based standards – usually due to poor quality housing with low levels of energy efficiency. Trying to keep warm costs households on low incomes more. This is because they use more energy, with obvious environmental impacts (ibid), and because of the structure of most fuel price tariffs: poorer households currently pay 20 per cent more per unit of energy than the average cost (ibid) through slot meters, advance payment arrangements and standing charges.

Government measures have been designed to tackle some of these problems. From April 2000, increased payments out of the Home Energy Efficiency Scheme (HEES) doubled the maximum grant (to £700) and substantially increased the overall budget of the scheme (from £75 million to £300 million over two years). They also provided extra help for elderly people under the New HEES Plus scheme (grants of up to £1,800 are available to pensioners on benefit to install central heating) (Cook 1999). At the same time, the energy regulator produced a Social Action Plan, which sought to ensure that the benefits of liberalisation of the domestic gas and electricity markets were spread fairly among everyone, including the most vulnerable customers.

More recent research has examined the attitudes of disadvantaged groups to living with environmental problems (Burningham and Thrush 2001). They found that:

- Disadvantaged groups often suffer most from environmental problems. Those on low incomes are the most likely to live near polluting roads or factories and to endure the poor quality housing and amenities;
- The health and safety implications of the dirty and run-down state of the area are of particular concern;
- There is a general acceptance as a 'fact of life' of what outsiders would describe as environmental problems (e.g. busy roads or a nearby chemical factory)
- People reacted badly to descriptions of their area as 'polluted'; they saw it as stigmatising;
- The major concern was pollution of all types (though this was not necessarily seen as an environmental issue) because "it is relatively easily understood ... many have directly experienced it, particularly in deprived neighbourhoods ... individuals identified local incidents as part of a wider problem."

In the US, the focus for work on environmental justice has been on environmental racism. In the UK, the focus has been more on environmental exclusion and how the social implications of the spatial distribution of hazards affect the poorest people and disadvantaged neighbourhoods generally (which have tended to be less racially segregated than in the US). These concerns are becoming more widely recognised in UK policy and environmental organisations. For example:

1. Location of factory sites and acceptability of potentially polluting facilities:

"When you say that [incineration] is acceptable, it is acceptable to the more articulate sections of the population. From what you have said, the incinerator ends up in the

less articulate sections of society. I do think we ought to make that quite clear" (Lord Judd in Ryder 1999).

2. **Equitable access to social and environmental goods:** "Everyone should share in the benefits of increased prosperity and a clean and safe environment. We have to improve access to services, tackle social exclusion and reduce the harm to health caused by poverty, poor housing, unemployment and pollution. Our needs must not be met by treating others, including future generations and people elsewhere in the world, unfairly" (DETR 1999).
3. **Tackling current and historical inequalities:** "Ensuring environmental justice requires policies and actions which treat people equitably, and politics and actions to redress current and historical injustices" (Stephens et al 2001).
4. **Environmentally disadvantaged communities:** "Poor people, and disadvantaged communities, often get penalised twice. Not only do they live with fewer economic resources, they often – indeed almost always – live in environments which exact an additional toll on their well-being, through being unhealthier, less accessible, and literally more expensive places in which to survive" (Worpole 2000). This is likely to involve poor quality housing, high traffic-densities, lack of amenities, vandalism, dereliction, poorer access to healthy affordable food etc.
5. **Processes to tackle environmental inequality:** "Research indicates that the procedures and processes needed to tackle negative environmental impacts are neither fully developed nor accessible on an equal basis to different social groups" (Stephens et al 2001, p11).

To achieve environmental justice, four broad areas where changes in policy and practice are needed have been identified (Stephens et al 2001, p11):

- **Rights and responsibilities.** Ensuring a right to a healthy environment is an overarching aim of policy that must be supported by placing responsibilities on individuals and organisations to ensure this right is achieved.
- **Assessment.** Projects and policies need to be assessed for their distributional impacts.
- **Participation and capacity.** Decision-making should involve those affected. Groups or individuals enduring environmental injustices need support in order to increase their control over decisions that affect them.
- **Integration.** The aims of social and environmental policies need to be better integrated with each other.

The environmental justice movement is growing in the US, the UK and elsewhere. There is an Environmental Justice Resource Centre in the US, and a new NGO in the UK called Capacity and the linked UK Environmental Justice Network, both of which focus on environmental justice. In addition, ordinary citizens are increasingly taking legal action against polluting factories. The unfortunate side-effect of the success of some these groups is that polluting industries relocate to parts of the world where the regulations and enforcement of pollution controls are much less strict. Or they relocate to other parts of the country where communities are less organised and less able to oppose such moves.

Networks of communities are, though, increasingly working together (e.g. Communities Against Toxics, Pesticides Action Network and ALARM) on issues such as road-building and pollution.

Capacity, FoE and others continue to work to ensure that environmental exclusion becomes a key part of work on social exclusion, regeneration and development as well as part of mainstream environmental policy and regulation. This is because improvements to the environment bring disproportionate benefits to the poor and disadvantaged: "if poverty often penalises people twice, once economically and then environmentally, the ways in which poor environments can be improved can deliver double dividends" (Worpole 2000).

As a result of analyses such as these, recommendations are now being made that (e.g. FOE 2001):

- Regeneration should be governed by statutory guidelines to ensure quality growth that does not compromise people's health or the environment.
- Government should introduce an indicator of environmental deprivation in the next update of the Index of Multiple Deprivation.

The Environment Agency has started to identify its own role in environmental justice, following the Environment Agency AGM in 2000 on the topic. At this event, Environment Agency Chairman Sir John Harman commented that

'A small number of people tend to pay most of the price for production in terms of pollution. It is true that access to environmental benefits depends substantially on income'.

The Environment Agency then went on to develop an internal programme of work to take forward the action points agreed at the AGM. These were:

1. mapping out and identifying where there are social and environmental inequalities and sharing this information;
2. working with business to ensure that our regulation work improves the environment for everyone;
3. providing better information and consultation techniques, to contribute to community plans, local waste strategies, local transport plans and local land use;
4. working with key national and regional initiatives that are tackling social exclusion;
5. further developing the skills and capacity of our people to work with stakeholders;
6. understanding how the international dimensions of environmental equality affect us.

The aim of the environmental justice movement in all its forms is that any development should ensure that everyone should live in a healthy environment, and that richer countries should not use more than their fair share of the Earth's resources. This has led to the development of a new set of concepts including ecological debt, fair shares in environmental space, Factor 10, and contraction and convergence. Although focused on international development at present, they may become increasingly relevant at individual country level.

1. **Ecological debt.** The international expression of environmental justice is exemplified in the Ecological Debt (Deuda Ecologica) campaign, which originates in Latin America. This grassroots-led international campaign has argued that the rich North

has polluted the whole atmosphere of the world with its emissions from industry, cars, energy production and consumption etc. The peoples of the South are thus seen to be owed a debt for the damage this does to their environment, including climate problems, because the environmental impacts of the growth of the economies of the rich North are now seen as impacting negatively on the poorer countries of the South.

Ecological debt is not just about pollution (though reducing carbon emissions is a central theme). The campaign also demands the repatriation of cultural and natural heritage, the restoration of areas damaged by extraction of natural resources, and the elimination of the weapons, products and toxic substances that threaten the planet. It is also linked to campaigns against attempts to patent plants and natural occurring substances, and to those challenging the World Trade Organisation (WTO).

2. **Fair shares in environmental space and Factor 10.** UK FoE promotes these campaigns, which aim to link social justice and equity with environmental limits. This approach involves:
 - Defining what are 'fair shares' of the Earth's resources, using calculations of the total amount of energy, non-renewable resources, agricultural land, forests etc that we can use without causing irreversible environmental damage or using up finite resources;
 - Allocating shares of resources to individual countries, based on population size.

Measures are also proposed to redress the balance from the current position where developed countries, with 20 per cent of the world's population, use 80 per cent of the fossil fuels, woods, metals, minerals and other resources extracted every year. To achieve fair shares in environmental space by 2050, FoE calculates that the UK, where we have one per cent of the world populations, would need to:

- produce 88 per cent less carbon dioxide;
- use 27 per cent less land;
- use 73 per cent less timber;
- use 15 per cent less water;
- use 50-88 per cent less virgin materials and metals.

The FoE campaign suggests that the North could cut resource-use by a factor of 10 (the Factor 10 campaign) and increase quality of life by:

- using resources more efficiently;
- using different technologies to meet needs such as renewable energy;
- finding new ways to meet needs rather than continuing to over-consume.

3. **Contraction and convergence.** Like the Fair Share idea, the concept of contraction and convergence (Meyer 2001) calls for the calculation of emissions allowances according to population, which it calls 'convergence'. This is placed alongside proposals for a global cap on emissions, or 'contraction'. This idea has been around for some time (standing behind some of the better known concepts above), emerging from the UK-based Global Commons Institute some 10 years ago. It has since gained support from the UK Royal Commission on Environmental Pollution, the UN Intergovernmental Panel on Climate Change and the governments of many developing countries.

From a social justice perspective, the important aspect of all these approaches is that they take the classic social justice approach of challenging the focus on identifying and

tackling the inadequacies of individual people or countries (e.g. skills), an approach that characterised some earlier approaches to development. Instead, these new campaigns are about finding collective global solutions to problems that are generally recognised to be shared, structural and systemic, *alongside* tackling individual suffering and exclusion.

Some of the analyses and campaigns that link social justice and environmental issues within sustainable development debates are also designed not only to challenge the ways social institutions distribute rights and duties (Rawls 1999), but also, in some cases, to challenge the legitimacy of those institutions. They range, for example, from calling for the abolition of the WTO at one extreme, to demanding radical reform at the least.

3.4.2 Poverty, inequality and social exclusion

Working towards sustainable development requires an understanding that problems of poverty and inequality are not experienced only by the poorest; their ramifications affect wider society, too. The living environments of the poorest people (and their ability to pursue a livelihood as a result) are often diminished and damaged by poverty:

‘Poverty reduces people’s capacity to use resources in a sustainable manner; it intensifies pressure on the environment’ (Brundtland 1987).

Inequality is as damaging as low incomes and lack of opportunities, both to those who are poor and to the wider society (Wilkinson 1999). It affects the success of anti-poverty strategies and overall economic growth in many ways, not least because the higher the inequality, the weaker the poverty-reducing effect of a given growth rate, because a smaller share will go to the poor. The UK Department for International Development (DFID 1999) makes its own practical arguments for reducing inequality to achieve (sustainable) development, including that:

- Inequality reduces the impact of growth on poverty reduction because less goes to poor people.
- Countries with deep inequalities grow more slowly because of disadvantages facing poor people (e.g. less access to credit or assets, poor health and fewer skills etc).
- Rich people use their power to increase the benefits they receive, even if they lead to economic inefficiencies.

Social cohesion is thus undermined by excesses of wealth and poverty. And there is “growing evidence that narrowing the income inequality in a society adds to the overall social quality of life ... In societies where the income distribution is narrow, there is greater social cohesion, less violence and crime” (Boardman et al 1999).

In spite of a flourishing economy, high levels of economic growth and increasing affluence for many people in the UK, poverty and inequality remain major problems. This is a core priority for Government and underpins much other policy development⁴:

1. The UK is one of the five industrialised countries that occupy the lower end of the UN Human Poverty Index (based on 1997 data). More than 13 per cent of the population live on incomes of less than half the average wage and have lower-than-average life expectancy rates. More than 20 per cent of people suffer from functional illiteracy.

⁴ Sources for all statistics in this section: United Nations Development Programme (1999); Joseph Rowntree Foundation (1998d; 1998e; 1999); Dorling (1999); Office for National Statistics (2000).

2. The UK is one of the most unequal countries in the industrialised world with earnings inequality increasing here more than in any other OECD country: average incomes grew by about 40 per cent between 1979 and 1994/95 but this growth was not equally shared - the richest 10 per cent of the population saw their incomes grow by 60-68 per cent while the poorest 10 per cent saw their incomes *fall* by eight per cent (after housing costs). The trends in income inequality did begin to change during the 1990s. Nevertheless, income inequality in the UK remained greater in the mid-1990s than at any time since the 1940s.
3. Child poverty and the problems of families with children in the UK have been seen as particularly intractable. These issues have been the focus of many of the changes to the tax and benefit system since 1997:
 - The number of children living in relative poverty had more than tripled since the 1960s: one third of all children (more than 4.3 million) lived in households with below half average income in 1995/96, up from just 10 per cent (1.3 million) in 1968.
 - 17-19 per cent of children lived in households with no workers; this figure remained steady between autumn 1996 and spring 1999.
 - Between 1991 and 1996, one in five pre-school children lived in households where the income was below the poverty line (in 2000 this would be £180 per week for a couple with two children), for at least half of this period.
 - In the 1980s, the number of families below the poverty line rose by 60 per cent.
 - In 1994/95, at least half the lone-parent households with children had incomes below the poverty line; three-quarters were in the poorest 40 per cent.
4. Women and cultural minorities in the UK continued to experience worse than average impacts from inequality. For example, in April 1999, the average salary for men was £23,000; around 42 per cent higher than that for women. In spring 1999, unemployment rates for men were twice as high for those from black or Pakistani/Bangladeshi groups than for those from white or Indian groups.

Poverty is not static, and people move in and out of poverty as a result of, for example, reductions in income during periods of unemployment or ill-health. Research by the Joseph Rowntree Foundation (JRF 1998) has shown, however, that while there is some mobility out of poverty, some people "drop back after an initial escape, and others stick at the bottom," so a substantial unshiftable 'poverty problem' remains.

Social exclusion is not just a function of poverty; it operates at both ends of the spectrum of wealth. The poor are excluded because they cannot afford to participate in mainstream society; the rich exclude themselves from participation by choosing private (non-social) alternatives (in education, health care and transport). The poor are exhorted to be part of mainstream society, and any opting-out (such as into the 'black' economy) is frowned upon and punished. By contrast, no one questions the morality of the choices of exclusivity that the rich make. But the 'revolt of the elites' (Giddens 1998) in choosing private education or health care is not simply about individual preference and ensuring access to quality services. It is about actively withdrawing from using and supporting shared services beyond paying taxes. The choices of both rich and poor (freely or because there is no alternative) affect the norms, values and ethics of society.

3.4.3 Urban and rural regeneration

Urban and rural regeneration is part of the national policy solution to the Government's priority of tackling social exclusion / inclusion. In practice, this means tackling the whole range of symptoms of poverty, disadvantage and discrimination, such as poor educational achievement, lack of access to employment, poor housing and local public services, poor access to childcare etc.

The concept of social inclusion appears to be more widely interpreted in mainland Europe, particularly in France and Germany. There, it is more a:

'philosophy of integrated social development, aiming to develop participative structures which transcend the old administrative divisions, and in so doing to reinvigorate a citizenship and social cohesion which is everywhere threatened by unemployment and widening inequalities. This involves a shift from outmoded forms of welfare targeted on populations defined by needs (because these merely reinforce marginalisation and in any case are no longer relevant in today's patterns of poverty)' (Cannan 1995, 238).

In the UK, the focus is more on making sure that existing public services do not exacerbate social exclusion. For example, the Modernising Local Government agenda (DETR 1998), which is radically altering the role of local government and the ways in which it delivers services, summarises the inclusion agenda as follows (direct quotes):

- The Government is determined that public services should address the needs of all groups;
- The Government wants a public service which values the differences that people bring to it. It must not only reflect the full diversity of society, but also be strengthened by that diversity.

Since 1997, the UK Government has formally recognised that poverty exists in the UK, and that tackling it must be a priority for any government aiming to promote social cohesion. This is a major change of priority from previous governments. The solutions are, though, complex. Though it has been suggested that working to improve the conditions of disadvantaged and excluded groups 'is not about doing a favour to small groups of people. It is about working towards a vision of an equal society of which we can all be proud' (Judy Ling Wong, Black Environment Network), much Government policy focuses on specific excluded groups and disadvantaged, geographically defined neighbourhoods.

The major regeneration programmes from Government were initially signalled in the Urban and Rural White Papers published at the end of 2000 and in the Neighbourhood Renewal Strategy launched in 2001. All three policy initiatives largely consolidated and built on previous policies, and most of the novelties had been extensively trailed, so they can be interpreted as an evolution rather than a revolution. The key points of each are summarised below.

The Urban White Paper included the following measures:

- a comprehensive £1 billion package of national measures to increase investment in urban areas, including plans to introduce:

- an exemption from stamp duty for all property transactions in disadvantaged communities;
- accelerated payable tax credits for cleaning up contaminated land;
- one hundred per cent capital allowances for creating 'flats over shops' for letting;
- package of VAT reforms to encourage additional conversions of properties for residential use.
- consultation on options for funding Town Improvement Schemes and for a Local Tax Reinvestment Programme;
- new planning policy guidance putting urban renaissance at the heart of the planning system; and new drive to implement planning policy on housing;
- review of planning obligations system and commitment to bring forward new legislation on compulsory purchase as soon as possible;
- a third Millennium Community (four more to follow) and up to 12 more Urban Regeneration Companies;
- comprehensive programme to improve the quality of parks, play-areas and open spaces, including the introduction of a new Green Flag Awards scheme to encourage and recognise excellence.

The Rural White Paper included the following:

- rate relief for schools and shops which have community benefit;
- support for rural post offices and schools;
- a new 'community service fund' (£15 million) to support local enterprises;
- modernise service delivery, e.g. £100 million funding to establish 100 primary care one-stop centres with internet links to hospitals;
- £300 million for more affordable homes in small rural settlements, 'better use of the planning system' to secure more affordable homes as planning gain;
- better buses: £10,000 grants to parishes to develop community transport projects;
- £100 million (£37 million new) to regenerate market towns;
- intentions to reform the Common Agricultural Policy (CAP) and support for farmers to diversify and manage land in ways that conserve and enhance the countryside;
- increase access, including to countryside around towns;
- new powers (and some money) for 'quality' town and parish councils.

The Neighbourhood Renewal Strategy included the following:

- new targets for Whitehall departments to raise the level of the worst neighbourhoods on housing, jobs, crime, education and health;
- insistence that these can be achieved only by departments and other agencies (including local government) working together. Emphasis on the new governance initiatives, notably local strategic partnerships, to help achieve this, and interest in experimenting with even smaller scale 'neighbourhood management';
- £800 million Neighbourhood Renewal Fund to support regeneration in the 88 most deprived local authority districts;
- £45 million of this to be invested in at least two rounds of Neighbourhood Management pathfinders over the three years from 2001;
- communities in the 88 most deprived districts will also get around £400,000 each over three years to help them to participate in LSPs through the Community Empowerment Fund (over £35 million in total); Community Chests worth £50 million in total will fund local small grant schemes so communities can run their own projects;
- new Central Government machinery to coordinate and monitor this.

These three major policy statements share the common theme of seeking to make everywhere decent to live, and the sophisticated recognition that both problems and solutions generally involve the interaction of environmental, social and economic factors. A lot of the language of all three policy themes is strategic. But many of the initiatives and interventions are area-specific. The aspiration is to make everywhere nice, while the activities focus largely on making the nastiest places less bad.

As a result, the targeting of investment to reduce social exclusion has taken a geographical approach to tackling the problems of poverty, disadvantage and inequality (that is, within the poorest neighbourhoods) and addressing what are seen as area-based problems of unemployment, crime, poor health, housing and education. The policy priorities have been identified as (SEU 1998):

- Getting the people to work: tackling unemployment, with a focus on developing skills and access to the labour market;
- Getting the place to work: better area management, including of housing and crime reduction;
- Building a future for young people: Sure Start programmes for young children; motivating children at school and outside school;
- Access to services: agenda for working with the private sector to improve the provision of shops and banks in poor neighbourhoods, and access to information technology;
- Making the government work better: joined-up working through being more strategic, setting goals, getting better information and acting on it, and learning from good practice.

The Government's explicit reason for this geographical targeting is that many of the most severe problems are area-specific. Bad places to live – rough inner city neighbourhoods, 'sink' housing estates, rural ex-mining communities or other depressed rural areas – may be right next to other places that are fine. What distinguishes them, and what has made their problems so intractable, is that they experience a vicious circle of mutually reinforcing deprivations including high crime, low educational and employment aspirations, a loss of civic responsibility, decaying fabric, lack of economic opportunity, stigma, apathy and indifference. Two quotes from the Neighbourhood Renewal Strategy encapsulate this:

'Over the past twenty years, hundreds of poor neighbourhoods have seen their basic quality of life become increasingly detached from the rest of society. People living just streets apart became separated by a gulf in prosperity and opportunity.'

'Many neighbourhoods have been stuck in a spiral of decline. Areas with high crime and unemployment rates acquired poor reputations, so people, shops and employers left. As people moved out, high turnover and empty homes created more opportunities for crime, vandalism and drug dealing.'

The National Strategy for Neighbourhood Renewal concentrates on the most deprived neighbourhoods, where there is a long history of policies "failing to break the vicious circle of unsustainable communities in the past" (IPPR 2000). The Strategy places particular emphasis on:

- investing in people, not just buildings;
- involving communities, not parachuting in solutions;
- developing integrated approaches with clear leadership;

- ensuring mainstream policies really work for the poorest neighbourhoods;
- making a long-term commitment with sustained political priority;
- multi-stakeholder approach to developing communities (through Neighbourhood Renewal, Neighbourhood Management and Local Strategic Partnerships).

All three regeneration strategies work on the basis that a coordinated concentration of interventions is needed to flip these vicious circles into benign ones. Only then will new hopes and opportunities energise people to raise their own aspirations and take charge of their own lives. These improvements will then, in turn, encourage business confidence and investment, which pays (directly and indirectly) for improving the physical realm and better living standards, and so on. All three strategies are based on an analysis that identifies the mutually reinforcing nature of the problems, and the need for multiple interventions. They move away from either trying to point the finger of blame at any one factor in the problems or hoping that any single 'magic bullet' is likely to provide a solution.

There are, though, some inherent weaknesses in this approach. Area-based approaches risk having the 'boundary' and 'displacement' effects whereby a line on a map divides those who can get access to significant resources from those who get nothing. Special treatment for geographically defined areas can be seen as very unfair and apparently arbitrarily discriminatory to those just outside the target area, whose needs may hardly differ. This, in turn, creates further resentment and division. It may also cause opportunity (e.g. jobs) to move across the boundary, merely displacing the problem (e.g. lack of jobs) rather than reducing it.

There are three other problems here:

1. First, the problem of reinforcing the 'victim status' of certain individuals, communities and neighbourhoods in order for them to maintain access to resources. Meekosha argues that "'difference', 'specificity' or 'special needs programmes' can either legitimate inequality or hide inequality from view, as can be demonstrated in housing, health, education and welfare services that become even more selective and 'targeted' as time goes by ... Groups become trapped by the need to continue to demonstrate oppression or disadvantage or victim status for funding purposes, rather than continue the project of social change" (Meekosha 1993, 181 and 188).

As a result, targeted community empowerment may contribute to the disempowerment of targeted communities. Meekosha argues that it is not unity within disadvantaged groups that needs to be developed, but solidarity from the vantage-point of difference. Targeting may be necessary to temporarily shift the balance of investment so that areas suffering from underinvestment are restored to an equal footing in terms of that investment. In the long term, though, strategies for sustainable development will need to examine overall community needs and ensure that traditionally excluded groups are no longer excluded, rather than assume that a focus on the most 'needy' areas will solve the wider problems of sustainable development.

- Second, there is the underlying assumption that poverty and deprivation are the fault of the poor – that they lack the skills, confidence, ambition or drive to move out of poverty. Government remains resistant to analyses that poverty and disadvantage are systemic issues and the inevitable consequences of the current economic system. Government resists, too, the idea that poverty is not just a problem for the poor but for

everyone: that if there is such a thing as society, the whole society suffers if whole groups are excluded.

- Finally, area-based approaches can be seen to treat only symptoms, not causes. 'Regeneration' is still conceptualised and presented as a matter of finite and time-limited interventions to put right things that have gone wrong. The assumption is that each regeneration process will have a successful end, at which point all the special programmes and concessions can taper off and exit gracefully, leaving a healed and fully functioning community standing proudly and confidently on its own two feet. This assumption remains a core principle and is possibly necessary for making regeneration politically acceptable.

There are three very strong political incentives for taking the 'emergency surgery' view of regeneration being promoted by Government.

1. First, it fits the New Labour category of strong and targeted corrective intervention. It avoids any hint of old-style endless drip-feed subsidy – what could be called the 'nursing home' view of keeping moribund communities ticking over.
2. Second, it controls the cost. The more precisely interventions can be targeted on only those who need them, the less regeneration needs to cost the public purse, and the better Government can square the circle of responding vigorously and energetically to problems without requiring politically problematic levels of public spending.
3. Third, it avoids the need for contentious and unpopular broader policy changes. For example, if car-less rural people can be given better access to services through modest bus subsidies and seeding of community transport projects, this will be much less troublesome than either discouraging motoring or requiring retailers to keep commercially inefficient local shops. Vigorous programmes to regenerate the worst areas of deprivation in poorer regions help maintain an impression that Government is 'doing something' about local and regional inequalities.

The 'emergency surgery' view, though, brings the potential danger that if the underlying reasons why areas get into a spiral of decline are not tackled, other areas may be *degenerating* even as current ones are being *regenerated*. The displacement effect already described may even mean that regeneration in some places tips neighbouring places into decline. For example, if employment opportunities continue to concentrate in the South East, efforts to create new employment in the worst-off parts of the North may attract jobs from other northern places rather than from the south. This would, at best, just spread the misery more evenly. At worst, it would leach employment out of northern places that might otherwise continue to get by.

The 'emergency surgery' view may also misrepresent what is going on as a succession of successful initiatives progressing from area to area. It may fail to see that each episode of regeneration was dealing with problems caused partly by previous episodes, and that each was creating problems that will, in due course call for further episodes.

Implications for the Environment Agency

The regeneration agenda has major implications for the Environment Agency's environmental agenda. Much of the regeneration agenda is concerned with where and how development takes place. The issues for the Environment Agency include:

The need for remediation of derelict and contaminated land, which will create consequent demands on the Environment Agency for resources, technical advice and monitoring.

The emphasis on redeveloping urban and brownfield land (apart from contamination issues) may have major impacts on some direct Agency responsibilities such as groundwater replenishment, storm-water retention and flood defences, as well as broader environmental benefits such as biodiversity and recreation. The 'urbanist' development agenda of the Urban Task Force reflected in the Urban White Paper potentially conflicts with some Agency concerns.

The lack of effective sustainable development principles in regional economic policy means that development continues to concentrate in regions (especially the South East) that already have the greatest problems of shortage of resources (especially water) and carrying capacity and infrastructure limits.

There is little reference in any of the three regeneration policy documents outlined above to the environment as a source of either constraints or opportunities for regeneration. Potential issues include:

1. The need for much stronger and more explicit recognition of the environment as a factor constraining where and how it is prudent to develop, especially given the likely and possible effects of climate change. The floods of autumn 2001 greatly increased awareness of the need to take flood risks into account. Drought, storm damage, erosion, sea-level rise, effects of heat and sunlight stress on crops, livestock, wildlife and human wellbeing, are all likely to require similar attention.
2. The DTI Sustainable Development Strategy and the Prime Minister's October 2000 and March 2001 'green speeches' emphasise the opportunities for business development from environmental technologies.
3. The social aspects of the regeneration agenda make very little reference to environment. In so far as environment either has solutions to offer, or should be taken into account in the work, the case remains to be made.

The Environment Agency's own response to the consultation on the National Strategy for Neighbourhood Renewal (Environment Agency 2000) takes a similar line. The Environment Agency had already invested in initial work on the links between social deprivation and the environment (see section 3.4). Its response pointed out that, though it broadly supported the general direction, the Strategy was "strangely silent on environmental issues. It misses not only the environmental dimensions of poverty and social exclusion, but also the key part to be played by environmental issues – and the agencies that deal with these – in developing joined up solutions".

The Environment Agency's response (ibid) also made particular reference to policy priorities for Government already agreed in the UK Strategy for Sustainable Development (DETR 1999), and to sustainable approaches to development more generally. Specific proposals in the Environment Agency's response included:

1. The Environment Agency collaborating with the SEU to enable cross-checking of the Agency's pollution and quality of the environment inventories with SEU data on ward-level deprivation.
2. Adding a fifth to the four principles the Neighbourhood Renewal Strategy outlines for the overall programme:
 - reviving local economies
 - reviving communities
 - ensuring decent services
 - leadership and joint working
 - **protecting and enhancing local environments.**

The rationale for adding this fifth principle is the psychological importance of environmental improvements (in the sense of local amenity) to neighbourhood renewal. Not only would it enable problems of degraded environments to be tackled, but it would also make immediate and very visible improvements to the area while addressing some of the particular environmental problems experienced by poorer neighbourhoods.

3. Ensuring that economic development is sustainable by focusing on using local renewable resources, local goods and services and by turning local problems into opportunities, such as tackling fuel poverty through insulation and renewable energy projects, waste management through recycling, community transport etc. The Agency signals its interest in working with Government to research and provide support in setting up environmental micro-businesses in some of these areas.
4. In discussing the National Centre for Neighbourhood Renewal, the Environment Agency expresses its preference for a network of regional centres "connected through strong mutual learning links" and using an action learning approach.

After this response, the Environment Agency developed its own strategy on urban regeneration (Environment Agency 2002), entitled *Our Urban Future*. In this statement, the Environment Agency aimed to show "how responding to environmental imperatives will get economic and social results at the same time. A high quality environment has a powerful capacity to generate jobs and tackle social inequality". This statement examined the role of environmental action in strengthening urban renewal and limiting negative urban impacts, cutting air pollution, tackling deprivation, enhancing public spaces, tackling brownfield sites, the role of cleaner rivers, reducing car dependency, addressing climate change, cutting energy use, reducing flood risk, making better use of resources and creating less waste.

The Environment Agency's *Our Urban Future* recommended three specific priorities for change:

- Environmental improvement should form an integral part of urban regeneration programmes, given its essential contribution to enhancing people's quality of life;
- New urban developments should minimise the effect they will have on the wider environment by using resources efficiently and limiting pollution;
- Environmental protection and improvement can make a significant contribution to the economic and social objectives of urban regeneration.

3.5 Commitment to communities

This section describes the concept of community, outlines the nature of sustainable communities, briefly analyses the concept of 'social capital', and summarises some key external and internal policy drivers for the Environment Agency. Further analysis of engaging with local communities can also be found in section 4.1 under the heading 'Stakeholder Involvement'.

3.5.1 What is 'community'?

The concept of community is often taken to be unproblematic, but there are many different understandings and definitions. Some common understanding of 'community' needs to be established in order to assess how it may link to sustainable development, though a range of different meanings are likely to exist at any one time.

Community is usually understood as being to do with "locality", with "actual social groups", with "a particular quality of relationship", which is "felt to be more immediate than society". When used in conjunction with other activities such as 'community politics', the concept is "distinct not only from national politics but from formal local politics and normally involves various kinds of direct action and direct local organisations, 'working directly with people'" (Williams 1988).

Community thus often links people (individually and collectively) to a 'sense of place' in a particular relationship:

'The attachment to place – not just natural places, but urban places too – is one of the most fundamental of human needs...The important thing about places, of course, is that they are shared. Each person's home area is also other people's. The sense of place is therefore tied to the idea of 'community'" (Jacobs 1995, p20).

"Community' is that web of personal relationships, group networks, traditions and patterns of behaviour that develops against the backdrop of the physical neighbourhood and its socio-economic situation' (Flecknoe & McLellan 1994, p8).

Thus, 'community' exists somewhere between individualism and traditional collectivism, between family and the more distant 'society', with a predominantly local and geographical focus, though not necessarily one that equates with any formal geographical boundaries (including nation states).

There are, almost always, different sorts of communities within geographical areas: communities that may define themselves by religion, history, ethnic origin, sexuality etc. Indeed, communities are rarely homogenous and are more often diverse, may be fragmented and conflicted, and are constantly changing. Influences for change in communities may come from many directions, as communities are rarely completely isolated and may be linked vertically to all other levels of governance (regional to global) and horizontally (to other communities with common concerns), especially as new communication technologies become more widely available.

In spite of the complexities, 'community' has provided a useful focus for government policies. Modern politics often now invokes it in a number of ways:

1. As an **aim**. Community is used to explain why we are doing various programmes, what we want to achieve and how we want to live (e.g. to 'build' or 'rebuild' community or communities). Here, community becomes the ideal society made up of people who know and care about each other.
2. As the **participants**. Community is used to describe who is involved in policy (e.g. the 'local communities', which are being involved in developing and implementing plans, policies and programmes).
3. To describe the **process**. Community action is used to mean how things should happen (e.g. through participation and involvement, grassroots, local action, self-help).
4. As the **location** for policy. Community is used to describe where policy is enacted (e.g. the local place: neighbourhood, small town or village; places we can know and be known).

Current Government policy seems to draw more on ideas of community developed in the US, particularly Etzioni's communitarianism (Etzioni 1995), rather than on UK concepts of community. In the US, community is used to symbolise traditional social institutions such as the family, church, civic societies and, particularly, schools. It focuses on the role of these institutions as the 'glue' that creates the social, moral and political foundations of society.

There are always dangers in assuming that it is possible to transpose wholesale a model from another country into a very different cultural context. While the basic aim of communitarianism – to find an alternative to the increasingly individualistic and materialistic lifestyles in the modern world – may be equally valid in the UK, the more specific cultural assumptions on which US communitarianism is based may not be appropriate in the UK.

In the UK, community is often understood differently. It has some of the traditional connotations of the US concept, but it has an equally strong history and tradition based on ideas of mutuality and co-operation, on radical liberal politics and on a whole variety of idealistic (and occasionally utopian) initiatives and values (Williams 1988).

What have been labelled 'community initiatives' in the UK include small community projects and campaigns by tenants and residents, community bookshops, community schools and 'alternative' communities set up alongside road protests or land occupations.

There have also been attempts to create much larger utopian communities, from the 17th century and the beginning of the Industrial Revolution (Robert Owen's new communities) through to the New Towns, created between the 1940s and the 1990s to provide better living places than slum inner cities. All these types of 'community' initiatives have an element of idealism, of creating a better world, where people can live together well.

Alongside these positive communities, there has always also been the more cynical use of community to attach a warm glow to deeply unpopular policies, such as the Community Charge ('poll tax').

The ways in which Government policies on poverty and social exclusion have focused around 'community' provide a useful focus for analysis of the concept of community. Indeed:

'Community has become central to contemporary politics. The search for viable forms of community is at the leading edge of politician's attempts to win legitimacy and promote national renewal. Partly as a result of this, community is strongly promoted in politics for social inclusion, especially in the struggle to regenerate deprived neighbourhoods' (Brickell 2000).

For example, the work of the Government's Social Exclusion Unit (SEU) focused on exactly this type of analysis and solutions. The SEU concluded that while the areas targeted suffer from multiple and complex problems, they also contain great resources in terms of the people who live there, and programmes need to recognise their strengths alongside the problems. In his introduction to the first SEU report, Tony Blair said:

'too much has been imposed from above, when experience shows that success depends on communities themselves having the power and taking the responsibility to make things better' (Social Exclusion Unit 1998).

Proposals for the National Neighbourhood Renewal Strategy, for the New Deal for Communities, and for recent rounds of Single Regeneration Budget (SRB) have all included much more encouragement and practical guidance on community involvement. They have moved local management and self-help to the centre of the national policy on local regeneration. The Policy Action Team 8 report on community self-help states that, for the most excluded communities:

'eventually a point of no return may be reached. Community self-help is one of the key ways to deal with this vicious circle. Without effective self-help, it is unlikely that any other measures of community regeneration, however well-resourced, will provide long-term solutions to long-term problems' (Social Exclusion Unit 1999).

Dangers in assumptions about community

National pressure groups and local communities have welcomed many of these policy developments. Some of the underlying assumptions about what is meant by community, though, need to be examined in more detail. These assumptions suggest that:

- everyone shares a view about what 'community' means, and that it relates in some way to idealised (often rural) communities of the past. In practice, there is no shared view of what an ideal community is or would be, and few specific examples of previous communities (other than in fiction) which epitomise those ideal communities;
- poverty and social exclusion are essentially 'community issues' for poor people themselves to solve by gaining skills (through capacity building and training) and access to new opportunities. This assumption avoids any suggestion that poverty and social exclusion may be structural problems created by the nature of current economic and political systems;

- community is a solution for poor people and not for everybody. The focus in community development, community regeneration etc, tends to be on the poorest and most disadvantaged neighbourhoods: "largely targeted at the regeneration of impoverished localities, with little evidence of any broader commitment to supporting or strengthening community in all local areas" (Jupp 1999);
- disadvantaged people need to have their 'capacity' built before they can participate in community action or in decisions that affect their lives and those of their neighbours. No one would suggest that a stockbroker or journalist needs to have her or his capacity built before she or he can engage in political/democratic activity or community action. But these people are no more likely to be able to create responsible, caring, supportive, inclusive community relationships than people living in poorer neighbourhoods;
- the social exclusion of disadvantaged communities is about economic status and skills, and not about politics or power. Generally, much less attention has been paid to political exclusion than to social, economic and environmental exclusion;
- communities are always good and positive. In practice, judgements have to be made about the nature of the community being sought. Historically, communities have not always been ideal: they have often been oppressive, divisive, hierarchical, rigid, sexist, racist. Contemporary communities have some additional negative images: as ghettos, or exclusive, gated communities.

Current UK policy on social exclusion focuses on three of the four strands of 'community' generally found in policy (identified above):

- participants (local residents)
- process (participatory and community-based)
- location (neighbourhood).

But the aim is less clearly defined. The specific policy initiatives are clearly intended to regenerate communities – but what does that mean? It is not clear how that regenerated community (as an idea or a specific neighbourhood) relates to other communities and the wider world, and what qualities that community has.

Visions of a 'good' community are now beginning to be developed. For example:

'In our view, the vision of local community that public policy should promote would be: A rich and diverse array of social ties of a trusting and civil nature, grounded in a basic shared commitment to the local neighbourhood or area' (Nash and Christie 2003).

In general terms, 'ideal' communities tend to be described as diverse (for example, with mixed ages, skills and professions, ethnic backgrounds, religions, wealth), welcoming difference, active and with many opportunities for involvement, and based on extensive social relationships and strong formal and informal networks. Such communities are not, though, something that can be 'rebuilt' or 'returned to' as if there were a golden age of community from some past era. In practice, 'community' may best be seen as an aspiration rather than a return, and as a choice rather than an inheritance.

3.5.2 Sustainable communities

The concept of 'sustainable communities' has been growing in recent years, drawing on a number of definitions and case studies (e.g. Lafferty 2001; Barton 2000; Morehouse 1997). The first summary of what a sustainable community may look like was as follows (directly quoted from DETR, LGA and LGMB 1998):

A sustainable society seeks to:

Protect and enhance the environment

- use energy, water and other natural resources efficiently and with care;
- minimise waste, then re-use or recover it through recycling, composting or energy recovery, and finally sustainably dispose of what is left;
- limit pollution to levels which do not damage natural systems;
- value and protect the diversity of nature.

Meet social needs

- create or enhance places, spaces and buildings that work well, wear well and look well;
- make settlements 'human' in scale and form;
- value and protect diversity and local distinctiveness and strengthen local community and cultural identity;
- protect human health and amenity through safe, clean, pleasant environments;
- emphasise health service prevention action as well as care;
- ensure access to good food, water, housing and fuel at reasonable cost;
- meet local needs locally wherever possible;
- maximise everyone's access to the skills and knowledge needed to play a full part in society;
- empower all sections of the community to participate in decision-making and consider the social and community impacts of decisions.

Promote economic success

- create a vibrant local economy that gives access to satisfying and rewarding work without damaging the local, national or global environment;
- value unpaid work;
- encourage necessary access to facilities, services, goods and other people in ways which make less use of the car and minimise impacts on the environment;
- make opportunities for culture, leisure and recreation readily available to all.

These characteristics have recently been extended to include elements that begin to extend sustainability beyond meeting basic needs towards concepts of fulfilment and making life worth living (Black Environment Network 2001). So, for the Black Environment Network, a sustainable society may also seek to:

Promote inspired living

- enable individual and collective creativity;
- increase personal and community confidence;
- value satisfying personal relationships and personal support networks;
- encourage active and satisfying social roles in the wider community, and extend opportunities for individuals to exercise personal political power through participating fully in civic life;

- promote participatory sustainable development through challenging traditional professional practices and supporting mainstream structural change by encouraging innovation and development in public and voluntary institutions at local, regional, national and international levels;
- increase access to cultural and leisure activities which help develop cultural and social links and opportunities for active engagement;
- promote social harmony, especially the benefits of living in diverse cultures and mixed communities;
- increase access to a wide and diverse range of lifelong learning opportunities and promote intellectual excitement and discovery.

The following initiatives are among several that attempt to create their own visions and manifestations of sustainable communities:

1. SCAN (the Sustainable Communities Agencies Network)⁵ builds support for community-focused work on sustainable development. It brings together organisations and agencies that support work at the community level, including national organisations and non-governmental groups, regional groups and networks, and issue-based networks (such as the Community Development Foundation, Going for Green, and UNED-UK). SCAN's publication entitled *One Small Step* (Church and McHarry 1999) is a guide to local action on sustainable development in the UK.
2. The Millennium Villages programme (DETR 2000) is based on a formula of three elements that Government suggests make up sustainable communities:
 - living within carrying capacities
 - providing for a good quality of life for all
 - sustaining this over time.

The programme aims to raise awareness among developers and housebuilders of the benefits of using the best environmental practice standards and the most efficient construction methods in their building. English Partnerships delivers the programme, working with Regional Development Agencies and local authorities, bringing forward sites and acting as advisers. Greenwich Millennium Village was the first Millennium Community, but others are following at Allerton Bywater, East Manchester and Kings Lynn, with more planned.

3. Zero Emission Developments. A small number of exemplar major mixed housing, business, commercial, leisure and tourist developments (including BedZed in Surrey and Sherwood Energy Village in Nottinghamshire) are being built according to environmental principles. They also incorporate ideas on how to reduce energy use (to the extent that the building and operation of the developments will create zero carbon dioxide emissions). These developments include ideas about stimulating and supporting economic development that is based within and stays within the locality. Some smaller housing developments with similar aims, such as Hockerton Houses⁶, are also being created.
4. Various authors have attempted to move beyond balancing the environmental, social and economic elements expected to form part of sustainable communities (e.g. CAG 1999). CAG stresses the need to 'integrate' rather than balance these elements, and

⁵ For more information, email to info@suscom.org.

⁶ For more information, see www.hockerton-houses.co.uk

to seek a 'conversion rate' – to get "more quality of life for less resources consumed" using tools such as ecological efficiency, footprints, and factor 10 thinking. CAG also suggests that these principles can be extended to seeking "multiple hits from policy interventions" by understanding the broader benefits of services, beyond their core functions. Doctors' surgeries, for example, could be seen as places to make local contacts, access information, and learn about health, rather than simply places to wait before a formal appointment to see a doctor.

5. The Countryside Agency has been working with the New Economics Foundation (NEF) on issues of local economic self-sufficiency, and is developing building blocks for healthy local economies. NEF stated that:

'The difficulty of attracting money on an ongoing basis into poor areas means that it makes sense to make as much as possible of the money that is there. But in our modern economies, money often flows much too quickly out of these local economies – just like a leaky bucket' (NEF 2000).

NEF has also been working, with the Countryside Agency, the Development Trusts Association and others to create a tool that will enable communities to identify leaks and to calculate the value of their local multiplier.

6. The TCPA Sustainable Housing Forum works towards raising sustainability standards throughout the housebuilding industry. It works towards incorporating current best practice in terms of energy efficiency and economy in the use of scarce materials. Through it, people can exchange ideas and experiences and campaign for the housebuilding industry to adopt higher environmental standards of house design and community structure as the norm.
7. Several Local Agenda 21 (LA21) exercises took the idea of sustainable communities as the starting point for their work and created visions and strategies that were intended to create sustainable communities. The formal government guidance on community strategies (DETR 2000) recommends that the data and relationships developed through LA21 should be fed directly into developing and drafting community strategies.

While LA21 did start to address many of the issues of sustainable communities in some places, it has largely failed to reach many of the most excluded groups in society.

8. Avoiding unsustainability. The key to achieving sustainable communities may be to focus on avoiding things that we know to be unsustainable – and we currently know more about what to avoid than we do about what to do:

'Sustainable settlement management is the art of nipping vicious spirals (negative feedback loops which create increasingly more unsustainable behaviour) in the bud' (CAG Consultants 1999).

This analysis sees downward spirals in unsustainable behaviour created by individual behaviour feedback. That is, individual decisions to act, taken in spite of negative impacts on wider society, further undermine co-operative approaches and lead to more, rather than less, sustainable living.

3.5.3 Social capital

Social capital has become extremely influential in underpinning current policy developments in building strong communities (e.g. ONS 2001; PIU 2002; HEMS 1998), and in debates about sustainable communities.

The term social capital was widely popularised by American academic Robert Putnam in his study of civic life in Italy, and it is now widely used in social policy as a shorthand for strong and vibrant communities. Putnam describes social capital as "features of social life – networks, norms and trust – that enable participants to act together more effectively to pursue shared objectives". He argues that the strong civic community is "marked by an active, public spirited citizenry, by egalitarian political relations, by a social fabric of trust and co-operation" (Putnam 1993, 15), expressed in the existence of strong local social institutions and networks in civic society (from labour unions to choral societies).

The ideas of networks, norms, trust and reciprocity have been defined in more detail by the New Economics Foundation (NEF), as follows:

- **Networks and connection.** Networks are groups of people linked either by strong ties (as between friends) or by weak ties (as between acquaintances).
- **Trust.** Trust is the expectation that other members of a community will be honest and co-operative.
- **Norms.** Norms cover standard of behaviour, sanctions for breaking those standards and shared objectives. Norms create expectations that others will be trustworthy and will take part in activities that benefit the group.
- **Reciprocity.** Reciprocity here means that I am prepared to help you when you need it because I know that someone else will help me in my hour of need.

Sullivan (1995, pp28-89) states that Putnam's research provides evidence that a strong civic culture:

'...turned out to be the best (in fact the only strongly significant) predictor of economic success for a locality over the long term ... The key differential factor is the presence of community, specified as those norms of reciprocity and networks of civic engagement which Putnam calls social capital ... social capital is thought of as a moral resource and public good which activates the latest human capital of individuals and populations.'

Putnam's influential analysis of the concept of social capital as fundamental to creating economic success from social investment is based on research into fairly traditional civic organisations in Italy, the archetypal one of which is choral societies.

Others have taken on the basic concepts within Putnam's idea of social capital. The UK Government has formally adopted the OECD definition of social capital as: "networks together with shared norms, values and understandings that facilitate co-operation within or among groups". In spite of its wide use, the concept of social capital has been criticised as having a number of weaknesses:

1. Many of the analyses based on social capital do not recognise sufficiently the importance in Putnam's analysis of actual local groups, associations, organisations and so on that provide the infrastructure for the more nebulous 'qualities of relationship' which tend to be the focus of much work on the subject.
2. Putnam's work focused on the existence, or otherwise, of social capital. He did not address the potential for creating it where it did not exist. Much of the social policy work that followed Putnam had to deal with this gap.
3. Putnam's analysis does not explicitly address issues of power, structural inequality and conflict. For him, the social capital he identifies (and which most critics accept at least on these basic terms) exists beyond any of these more complex hierarchies of power and dispute.
4. Various subsequent uses of ideas of social capital have used the term 'trust' as a shorthand to encapsulate the types of relationships Putnam describes. As with any simplification, this brings dangers. But in this case there are particular problems, as 'trust' already has a wealth of implications that cannot be made synonymous with social capital. (See section 4.3.1 for more on trust.)

Pennington and Rydin (2000) highlighted the relevance of social capital to local environmental policy. Their research concluded that the institutional role of the state (and, by extension, the agencies of the state) is fundamental to the potential to the development of social capital. Furthermore, the development of social capital was more likely to arise when these institutions operate as a 'facilitator' state rather than a 'controller' state, as illustrated in the following quote:

'A facilitator state allows considerable local autonomy to individuals and groups, but provides a supportive framework, including the provision of specialised information, arenas for conflict resolution and the capacity to enforce institutional rules. The emphasis here is on individuals and groups providing their own institutional arrangements to solve collective action problems (i.e. public goods such as environmental quality) and thereby to create social capital'.

The working definition of social capital used by Pennington and Rydin included and extended Putnam's (and NEF's) four characteristics. It covered:

- level of trust;
- extent of networks;
- density of relationships within networks;
- knowledge of relationships;
- obligations and expectations about relationships, leading to reciprocity;
- forms of local knowledge;
- operating norms;
- existence and use of sanctions to punish free-riding.

3.5.4 External policy drivers

Since the New Labour Government was elected in 1997, 'community' has been a recurrent theme in Government policy. Since becoming Prime Minister, Tony Blair has

made 'community' a key feature of his political philosophy. In a speech to the National Council of Voluntary Organisations (NCVO) conference in January 1999, he declared:

'The central belief that brought me into politics, and drives everything that I do, is that individuals realise their potential best through a strong community based on rights and responsibilities. I have always believed that the bonds that individuals made with each other and their communities are every bit as important as the things provided for them by the state.'

In his first speech on the environment, in October 2000, he said it again: "The root of my political beliefs is the idea of community; of solidarity".

More specifically, there has been a whole raft of local policy initiatives focused around 'community' since 1997, particularly on regeneration (see section 3.4.3) and planning (see below), but also on community care, community health and many others.

Community involvement in planning has been part of formal land use planning procedures since the 1960s (e.g. Skeffington 1969), but recent legislation has brought communities, sustainable development and planning much closer together again.

The Local Government Act 2000 places a duty on local government, through Local Strategic Partnerships (LSPs), to create community strategies that go beyond traditional land-use planning and instead aim to "improve local economic, social and environmental well-being". At their launch, Hilary Armstrong (then Local Government Minister) said "the new power will help councils and other local stakeholders work together and respond to the needs and aspirations of their communities", creating "a real cultural shift in the way councils work and how they relate to local people". As part of the development of local community strategies, local authorities are now expected to develop formal 'statements of community involvement' (SCIs).

At national level, the Active Communities Unit (ACU) has been established (formerly the Voluntary Services Unit) at the Home Office to promote active citizenship, volunteering and community action. A key role for the ACU has been the development and promotion of the Compact – a formal agreement between Government and the Voluntary and Community Sector to clarify and improve working relationships.

The Compact describes a shared vision, shared principles, and undertakings made by Government and the voluntary and community sector (Home Office 1998). There are five specific codes of practice to support the Compact: on Community Groups, Black and Ethnic Minority Voluntary and Community Organisations (BME), Volunteering, Funding, and Consultation and Policy Appraisal. There is also guidance on establishing a local Compact; about one third of local authority areas are covered by these formal agreements.

In Wales, there is a formal Compact between statutory environmental organisations and the voluntary sector in Wales, called *Better Working Together for the Environment in Wales* (2002). Three statutory environmental bodies (Environment Agency Wales, Countryside Council for Wales, and Forestry Commission for Wales), and three of the main voluntary organisations in Wales (Wales Council for Voluntary Action, The Wildlife Trusts Wales and Wales Wildlife and Country Link) are all signatories. All these bodies, and many others that were involved through a wide consultation process in drawing up

this Compact, are committed to take forward the principles and agreements for action. This document builds on the National Compact in Wales, which was drawn up in 1998. It is a response to the request from the National Assembly of Wales that each of the Assembly Sponsored Public Bodies develop complementary Compacts for working with the voluntary sector. In England, the Environment Agency is considering proposals for a Compact Group for Defra.

The UK-wide *Code of Practice on Working with Community Groups* is specifically designed to support work with local communities. Voluntary sector involvement in policy-making has increased since the Compact was published (Craig et al 2001), and this Code stresses the importance of giving the community sector the same opportunity. Input from community groups who are in touch with current local opinion or strength of feeling can provide invaluable information. But it can be difficult to reach groups that do not have the information and networking structures that come from being linked to an umbrella organisation or federation. The Code:

- identifies how proposals may affect communities
- demonstrates what role community groups themselves can play in putting this code into practice
- provides guidance on involving new people who might not otherwise take part.

All this guidance, and the many new initiatives and funding streams to support these areas of work, reflect the priority now given in Government policy to community involvement and active communities.

3.5.5 Environment Agency policy drivers

A range of policy guidance, environmental principles, requirements of sustainable development and practical experience underpins the Environment Agency's own work with local communities:

1. **Statutory requirements.** Many of the Environment Agency's activities are governed by statutory requirements for community consultation, laid down by Government and in legislation (for example, the Water Framework Directive, Catchment Abstraction Management Systems, Integrated Pollution and Prevention Control regulations, EIAs and SEAs). (See section 4.1.2 for details.) These provide both opportunities and limitations on Agency work with local communities.
2. **Environment Agency policy.** Examples of existing Environment Agency policy that promote 'the community approach' include:
 - 2.1 Formal organisational statements such as the Environment Agency Vision (see box below), the Corporate Strategy, and the Section 4 guidance (see section 2.1) increasingly stress the importance of working with others, at local and higher levels. The Environment Agency's legitimacy, licence to operate and reputation management are seen to rely on good relationships with stakeholders at all levels.

The Environment Agency Vision

The Environment Agency's Vision statement (2001) outlined the ways in which the Agency would tackle its contribution to sustainable development, recognising the need for new ways of thinking about these issues, particularly:

- finding new ways of measuring progress (including setting new indicators and milestones)
- prevention being better than cure
- working with others to create shared solutions
- consulting widely and delivering results.

The role for the Environment Agency was seen as being to "help everyone to:

- understand society's effects upon the environment
- develop new attitudes and behaviour towards the environment
- ensure that industry reduces its impact on the environment and recognises its dependence on it
- take care of resources and deal with their own waste
- recognise that the natural environment has always changed, but that emissions of 'greenhouse gases' could accelerate climate change and lead to severe disruption of natural systems."

The Vision sets out the need for imaginative new approaches if these themes and roles are to be fulfilled, and lists four approaches:

- changing attitudes and behaviour
- growing collaborative partnerships
- exploit technological innovation
- developing social awareness.

2.2 The Environment Agency is subject to the following five Principles of Better Regulation (Cabinet Office 1997): proportionality, accountability, consistency, transparency and targeting. All five principles require consultation with local people to identify the appropriate actions required to meet these principles.

2.3 Environmental protection and improvement requires changes in attitudes and behaviour (from all sectors of society) as well as regulation and enforcement: "Effective regulation requires more than just licensing and enforcing" (Sir John Harman, in *The Business of Learning*, Environment Agency 2001).

3. Environment Agency staff experience. Environment Agency staff have worked closely with communities, in many areas, for years. Experience covers highly contentious sites (such as licensing nuclear power stations and incinerators for waste), and positive planning (for example, through its own Local Environment Agency Plans (LEAPS) as well as in wider land-use planning strategies) and environmental improvements of wide public benefit.

The Environment Agency has found that relationships with local communities are not always easy. It is often in a difficult position, in which it has to undertake its regulatory activities within tightly defined parameters and cannot get involved in wider issues (for example, the siting of an incinerator), even if it wanted to. As a relatively new body,

the Environment Agency has also found that local communities do not always understand its remit and the limits to its actions.

Environment Agency staff recognise, though, that:

'...there is no such thing as a purely environmental problem", and that as "people are part of creating environment problems, they need to be part of environmental solutions' (Christie *et al.* 2005).

Staff experience suggests that there is usually more than one answer to an environmental problem, and that the best answer may come from talking with and listening to local people (residents, businesses, organisations); others know other realities of local situations. Staff have found that talking to local people at an early stage can often stop problems escalating into crises at a later stage. Environment Agency staff see themselves as "passionate professionals" with both technical capability and commitment to environmental improvement and protection. They recognise the need to deal with emotion as well as facts, and this recognition contributes to effective work with local communities.

The Joining Up science project reports have largely focused on Environment Agency work with local communities. For more information, see report SR2 (Warburton 2005a), which reviews the Agency's social initiatives, including work with local communities. See also science report SR4 on the Stockbridge, which worked with flood-affected communities pathfinder (Wilkinson *et al.* 2005); science report SR7 on the Thames pathfinder, which investigated work with local stakeholders (Porter *et al.* 2005); and the internal report IR1 which examined the Agency role in local communities (Warburton 2004).

In summary, the Environment Agency has begun to respond more strategically to the need to consider the impacts of its work on local communities, by increasing research and on-the-ground practical experience, and aiming to improve both practice and understanding over time.

4. Social Processes

Section 4 covers the key social processes required to enable the Environment Agency to deliver on its responsibilities for environmental regulation and protection within the context of sustainable development. The section therefore addresses issues regarding stakeholder involvement, partnerships, science and education, and learning and evaluation.

4.1 Stakeholder involvement

Stakeholders are those who affect, or be affected by, an action (e.g. policy, plan, programme, project). This can include a very wide range of interests, including the public and local communities. More detail on defining appropriate stakeholders in particular circumstances is given below.

Stakeholder involvement is now an integral part of much public policy making and service delivery. It ranges from involving academics, NGOs, business, government agencies and others in the development of national Government policy (and international policy at EU and UN levels), to very local public involvement over proposals for a specific site. In the UK, there is now extensive stakeholder involvement in policy programmes on regeneration, health management, social exclusion, environmental management, social welfare and youth programmes, and others.

Methods of participation can be as simple as providing more information about public programmes through simple surveys, focus groups and questionnaires designed to test public opinion. It can also stretch to extensively resourced deliberative processes (such as citizens' juries), which take evidence over an extended period of time and come to conclusions. Those conclusions may be binding for the institutions that commission them, whether formal and informal partnerships on boards or panels for single projects or major programmes or community-led programmes resourced by public authorities.

Stakeholder involvement can also embrace independent activities in the 'third sector'. This sector comprises groups ranging from established voluntary organisations (NGOs) to small informal groups that operate 'below the radar' of most public institutions. Such informal groups provide services, undertake practical neighbourhood improvement projects, provide self help support and engage in policy debates, campaigns and protests and can often contribute valuable knowledge to policy processes, as well as developing their own innovative solutions to policy problems.

4.1.1 Drivers for increased stakeholder involvement in sustainable development

There has been a strong emphasis on stakeholder involvement in sustainable development. The Brundtland Commission (the World Commission on Environment and Development – WCED) argued that the first step in pursuit of sustainable development required "a political system that secures effective citizen participation in decision-making" (WCED 1987).

WCED's rationale for highlighting the value of participation is given below:

'The law alone cannot enforce the common interest. It principally needs community knowledge and support, which entails greater public participation in the decisions which affect the environment' (WCED 1987).

The WCED suggests that the best way of doing this is by:

'decentralising the management of resources upon which local communities depend, and giving these communities an effective say over the use of these resources. It will also require promoting citizens' initiatives, empowering people's organisations, and strengthening local democracy' (WCED 1987).

These approaches remain central to all projects that promote wider participation in sustainable development.

Agenda 21 also supports this approach as indicated in Paragraph 3.2, which states:

'An effective strategy for tackling the problems of poverty, development and environment simultaneously should begin by focusing on resources, production and people and ... a democratic participation process in association with improved governance' (United Nations 1992).

These general principles are repeated throughout Chapter 28 of Agenda 21, which stresses the importance of involving all sectors of society, especially those that are often excluded from policy processes (such as women and young people). Paragraph 3 of Chapter 28 defines the process of Local Agenda 21:

'Each local authority should enter into a dialogue with its citizens, local organisations and private enterprises and adopt a Local Agenda 21. Through consultation and consensus-building, local authorities would learn from citizens and from local civic, community, business and industrial organisations and acquire the information needed for formulating the best strategies. The process of consultation would increase household awareness of sustainable development issues.'

Since UNCED in 1992, all environmental and sustainable development policies at global and national levels has emphasised engagement. The UK sustainable development strategy stated that 'public involvement is essential for a truly sustainable community (DETR 1999) and regional and local spatial planning guidance have all encouraged stakeholder engagement.

Working with stakeholders develops an understanding of the changes of attitudes and behaviours that are essential to moving towards a sustainable society. The Royal Commission on Environmental Pollution (RCEP) (1998) stated that:

'Achievement of sustainable development may depend on the extent to which the principle of reconciling environmental protection, material wellbeing and equity becomes an internalised value.'

In the view of the RCEP, public and community participation is essential in enabling people to express and develop personal values (as a result of reflection and debate) in a situation where they can then actually influence outcomes.

The importance of participatory approaches to sustainable development continues to grow. For some, this is linked to growing government and other institutional understanding of sustainable development since 1992. There is now a greater recognition that sustainable development is about much more than the environment. At a local level, it may now include poverty reduction, equity, social justice and security. The participation of various constituencies, stakeholders and citizens, is vital to tackling these issues and to addressing the causes as well as the effects of social, economic and environmental problems in order to make development sustainable (through aiming for prevention as well as cure).

Participation helps ensure that governance systems are seen to be legitimate, credible, respected and trusted by those they seek to serve. As an ICLEI report suggests:

‘Governments cannot hope to achieve sustainability without the active and willing participation of their citizens and their trust that government is acting for their best interests. Good governance has been held back by sceptical views of government, including a lack of accountability to constituents, insufficient involvement of citizens in the political process, inadequate representation of all stakeholder interests, insufficient transparency in the governing process, and corruption’ (ICLEI 2001).

The UN Commission for Sustainable Development (CSD) has stated its renewed commitment to participatory approaches. It has said:

‘Participation generates shared values, mutually reinforcing commitments, joint ownership and partnership, which are crucial to achieving sustainable development’ (CSD 2002).

Local government clearly has a key role as champion and facilitator of sustainable development and a crucial part of its role is to have:

‘developed participatory, multistakeholder strategies to implement sustainable development. They have promoted local governance involving the recognition of the importance of transparency, accountability and participation in governance...’

Other priorities include the importance of integration of policy and practice, strategic partnerships and information, knowledge and capacity building (ICLEI 2001). Local governments have also:

‘...come to recognise the importance of information-sharing, enhanced roles for civil society and other partners, and a participatory and integrated approach to the incremental implementation of sustainability’ (ICLEI 2001).

The continuing emphasis on participatory working does, though, place new responsibilities on government at all levels to develop its capacity to evaluate how and why these new approaches work. At present, there is little guidance available and as the CSD points out, capacity development is required in several areas:

‘Capacity development in monitoring and evaluation approaches, to support the learning and to improve public sector management and performance, including the

use of participatory approaches and sustainable development indicators and complementary qualitative techniques' (CSD 2002, para 241).

The essential drivers for public and stakeholder involvement arise from three main areas (N.B. see section 4.1.3 for further information on the benefits of stakeholder involvement):

1. **Effectiveness.** Projects that are conventional, externally driven and expert-led have frequently failed to achieve their significant long-term objectives (WCED 1987; Oakley 1991, Hastings et al 1996, Rahman 1993). Examples include programmes to tackle urban regeneration, poverty and inequality, agricultural productivity, wildlife conservation, countryside management. Immediate improvements were not being valued or maintained locally and the necessary long-term changes in individual people and social structures failed to materialise. Therefore, innovative approaches that involved citizens in the development and long-term sustainability of their own communities were being tried.

Participatory approaches that brought otherwise marginal groups into development processes and wider decision-making reduced the social divisions that could lead to conflict and therefore increased their overall effectiveness.

2. **Ethics.** The ethical arguments for community participation have shifted over recent years, with a growing focus on 'rights' to participate:

'Forgotten somehow is the fact that participation in the institutions which shape one's life is not a gratuitous privilege, but a basic right' (Kasparson, quoted in Hallett 1987, 5).

The rights-based discourse has a long tradition in United Nations institutions and beyond with rights to development, to environmental health and safety, and to overarching human rights being agreed in the past 50 years. The UNDP Human Development Report 2000 argues that "the fulfilment of human rights requires democracy that is inclusive" and it has been suggested that, therefore, "elections are not enough" (Gaventa 2002).

The focus on rights has moved the debate on participation beyond mechanistic approaches that provide for minimal community consultation and that depend on the responsiveness of institutions for efficacy. The debate has moved into a more powerful political arena, where communities and individual citizens are rightful and legitimate participants in the processes that affect them (ibid).

3. **Demand.** There is a growing split, particularly in certain Western countries, between declining participation in the formal processes of democracy (especially voting and membership of political parties) and growing interest in other forms of political participation including protest movements and direct action. A similar growth of these new forms of political action is now apparent in many parts of the world as Governments are perceived to have lost power in a globalised economy.

There is no doubt, though, that people have less trust in the ability and willingness of governments to act on their behalf (e.g. Beck 1992, Fukuyama 1995). Alternative and more direct participatory processes locally, nationally and globally have certainly

grown in importance. Also, direct authority of all kinds is increasingly challenged, and 'experts' (including scientists) are less trusted (see section 4.3.1).

Public demand for involvement in the decisions that affect them is growing, through NGOs, community organisations, pressure groups, campaigns and coalitions (Craig et al 2002). This is leading to the growing confidence and expertise of these bodies.

4.1.2 Legislation and policy drivers for the Environment Agency

There are also more specific policy drivers for the Environment Agency that are increasing interest in stakeholder consultation:

1. **Developments in Government and parliament.** The Modernising Government agenda stresses the value of openness and accountability for government and its agencies. These principles led to the Cabinet Code of Practice (Cabinet Office 2004) which was itself a response to the Neil Committee on Standards in Public Life, stressing openness and accountability. Other parliamentary statements include the Select Committee on Public Administration's work (2001) which focused on Innovations in Citizen Participation in Government and the House of Lords Select Committee on Science and Technology (2000). The latter stressed that:

'direct dialogue with the public should move from being an optional add-on to science-based policy-making ... and should become a normal and integral part of the process' (House of Lords 2000, para 5.48).

2. **Human rights.** The 1998 Human Rights Act (HRA) became a full part of UK law in October 2000. The Act represents the final stage in enacting the European Convention on Human Rights, which the UK ratified in 1951. However, the HRA "will better safeguard these rights by making them more accessible" (Home Office press release, 12.7.2000). The HRA already impacts on attitudes to rights to information and involvement (see below for information on the Aarhus Convention). In addition,

'European lawyers have identified the potential for objectors to claim infringement of their rights by industrial emissions and their impacts even if the latter may comply with an environmental licence' (Petts and Leach 2000, 14).

Such developments will require much greater openness and access to information for potential claimants.

3. **The EU 6th Environmental Programme**⁷. Environment 2010 covers the main environmental challenges of tackling climate change, protecting nature and wildlife, addressing environmental and health issues, preserving natural resources and managing waste. The Programme stresses that 'this is not only an issue for politicians and industry; it concerns all of us ... we all have a part to play.'

The Programme has five key approaches:

- providing legislation in Europe alongside greater transparency by making information widely available to create public pressure to speed up responses and Government action;

⁷ See www.europa.eu.int/comm/dgs/environment/index_en.htm

- putting environment at the heart of policy making;
- working with the market, making environmental care as important as customer care; 'green growth', reducing negative impacts, green purchasing policy (14 per cent of EU market purchasing is by public bodies), and the 'polluter pays' principle;
- helping people to make environmentally friendly choices: "People want more of a say in how decisions are made which affect the environment, and that means access to clear and trustworthy information." Promoting environmental education, including in school curricula, promoting good practice and sharing information, improving citizens' access to information;
- better use of land through improved environmental considerations in land-use planning processes, including best practice in sustainable planning.

4. **The Aarhus Convention.** The UN Economic Commission for Europe's Convention on Access to Information, Public Participation in Decision-Making and Access to Justice in Environmental Matters, known as the Aarhus Convention⁸. The UK signed this agreement in 1998. The agreement is quoted in the UK Strategy for Sustainable Development, and it is being enacted into EU and UK law. The objective of the Convention is as follows:

"In order to contribute to the protection of every person of present and future generations to live in an environment adequate to his or her health and well-being, each Party shall guarantee the rights of access to information, public participation in decision-making, and access to justice in environmental matters in accordance with the provisions of this Convention." (Article 1)

This objective is set within the context of earlier international principles on the human environment, on environment and development, and on the need to ensure a healthy environment for the wellbeing of individuals. It is based on the affirmation and recognition of the significance of individual citizens, NGOs and the private sector in environmental protection, based on the following set of principles:

- Affirming the need to protect, preserve and improve the state of the environment and to ensure sustainable and environmentally sound development;
- Recognising that adequate protection of the environment is essential to human wellbeing and the enjoyment of basic human rights, including the right to life itself;
- Considering that, to be able to assert this right to live in an environment adequate to his or her health and wellbeing, and the duty, both individually and in association with others, to protect and improve the environment for the benefit of present and future generations;
- Recognising that, in the field of the environment, improved access to information and public participation in decision-making enhance the quality and the implementation of decisions, contribute to public awareness of environmental

⁸ This section on Aarhus draws on the following documents: *Convention on Access to Information, Public Participation in Decision-making and Access to Justice in Environmental Matters*, United Nations ECE/CEP/43, agreed in Aarhus, Denmark, 23-25 June 1998; UNEP Press Release 31, 2 July 1998, 'Thirty European Countries adopt plan to make environmental information more widely accessible'; Environment for Europe Process (www.unece.org/env/pp); Public Participation campaign website (www.participate.org/aarhus); DETR (1999) *A Better Quality of Life. A strategy for sustainable development in the UK*. DETR, London (para 5.18). A footnote explains that the Freedom of Information Act will implement provisions in the Aarhus Convention.

issues, give the public the opportunity to express its concerns and enable public authorities to take due account of such concerns;

- Aiming thereby to further the accountability of and transparency in decision-making and to strengthen support for decisions on the environment.

In summary, the Convention has three main elements:

- the right to know (rights to environmental information);
- the right to participate in decision-making processes (the right to be consulted and participate in proposals, plans or activities);
- the right to access to justice (a guaranteed right to the enforcement of the above rights via access to courts or other independent bodies).

When the proposal for the Convention was adopted, Environment Commissioner Margot Wallstrom declared:

‘Real environmental progress can only be achieved with the participation of the citizens concerned. Ensuring public consultation enhances public acceptance and support for the decisions to be taken. This will enable more informed and accountable decisions to be taken, and greater consensus. It will also facilitate implementation of environmental legislation.’

5. **New thinking on science-based policy making and the public.** The House of Lords Select Committee on Science and Technology said (2000):

‘direct dialogue with the public should move from being an optional add-on to science-based policy-making ... and should become a normal and integral part of the process.’ (See section 4.3 for more on this issue).

6. **Better regulation.** The five Government principles of better regulation (Cabinet Office 1997): proportionality, accountability, consistency, transparency and targeting: accountability and transparency generally imply more open relationships with stakeholders.

7. **The Environment Agency Vision** (see section 3.5.5).

8. **European environmental guidance and legislation**, including:

- **The Water Framework Directive (WFD)** (2000). This requires that a comprehensive River Basin Management Plan (RBMP) is produced for each River Basin District. Article 14 of the WFD requires member states to undertake stakeholder consultation. They must also "encourage the active involvement of all interested parties in the implementation of this Directive, in particular in the production, review and updating of the river basin management plans." Detailed guidance on public participation for the WFD is being produced.
- **The International Pollution Prevention and Control (IPPC) Directive** (1996), implemented through the UK Pollution Prevention and Control Act 1999, which includes formal consultation requirements.

- **The Environmental Impact Assessment (EIA) Directive 1997** (including on planning and land drainage). The formal requirements for consultation are quite limited.

The Environment Agency's own detailed guidance on EIA consultation (SD12) goes beyond the minimum statutory requirements and aims for good practice. In particular, the Environment Agency developed a Communication Plan to comply with the Aarhus Convention. This includes the following specific guidance on reaching excluded groups: "It is important to remember that some of the people and groups with an interest in the project may find it difficult to use traditional methods of making representations, such as letter-writing. Efforts must be made to identify and offer alternative methods of communication and representation (e.g. native language information leaflets where there is a significant ethnic community, surgeries held in centres where relevant groups such as lone mothers or the elderly are known to meet), to ensure that all relevant opinions are taken into account".

- **The Strategic Environmental Assessment (SEA) Directive 2001**, which came into force in 2004 and requires the Environment Agency to undertake SEAs as part of developing its own plans and programmes. As the SEA refers to existing plans, it is expected that consultation on the SEA and on the plans themselves will be co-ordinated. The Directive provides substantial direction on the issue of consultation (Articles 5, 6, 7, 8 and 9). Its definition of stakeholders includes statutory consultees, NGOs and the public.

9. Other Environment Agency regulatory and planning activities, including:

- **Catchment Abstraction Management Strategies (CAMS)**, identified in the Government paper on *Taking Water Responsibly* (DETR and Welsh Office 1999). Public consultation will be a major element of preparing CAMS, with stakeholder groups of eight to 10 people being established for each CAMS, with detailed terms of reference.
- **Shoreline Management Plans (SMPs)**. In these, a coastal group is set up with operating authorities and other relevant interests; the coastal group is expected to consult widely.
- **Catchment Flood Management Plans (CFMPs)**. These require a project board and wider public consultation. They may use the EIA method of developing a Communication Plan. The sub-Flood and Coastal Defence Strategies also require good consultation according to Defra guidance (2001).
- **Coastal Habitat Management Plans (CHaMPs)**. These are not statutory. English Nature and the Environment Agency must, though, prepare a list of sites and programme of action. Initial guidance⁹ says that they should do so with relevant stakeholders: "Stakeholders need to be part of the CHaMP development and implementation process and also have ownership of the outcomes". The guidance suggests that stakeholders are "all operating authorities, planning authorities, non-governmental organisations, landowners

⁹ *Coastal Habitat Management Plans: An interim guide to content and structure*; www.english-nature.org.uk/livingwiththesea/champs

and local community or representative groups with an interest in the future management of the CHaMP area".

10. **Rights to information.** In addition to the Aarhus Convention (above), several other recent developments in regulation and legislation extend rights to information, especially environmental information:

- **The Freedom of Information Act 2000.** This provides statutory rights for those requesting information together with an enforcement regime: "Under the terms of the Act, any member of the public will be able to apply for access to information held by bodies across the public sector"¹⁰. The Act provides a general right of access to information held by public authorities in the course of carrying out their public function. Access is subject to certain conditions and exemptions. A new office of Information Commissioner and a new Information Tribunal to enforce these rights have been created. Public authorities have a duty to adopt a scheme for the publication of information.

To begin implementation of the Act, the DETR launched a consultation in May 2001 (completed end June 2001) on Access to Information in Local Government. The DETR stressed that the basis of the proposals was as follows: "The Government is clear that local people and local stakeholders deserve a consistently high standards of access to information" (para 1.23).

- **The Environmental Information Regulations 1992 implementing EC Directive 90/313/EEC on the Freedom of Access to Information on the Environment.** Regulations came into force in the UK in December 1992 and were amended by the Environmental Information (Amendment) Regulations 1998 in July that year. Under these regulations, the public has a right of access to environmental information held by public authorities and certain other bodies. Requests for information can only be refused in certain limited circumstances. The basic presumption is that information will be released "unless there are compelling and substantive reasons to withhold it." Defra stresses that "making information about the environment publicly available is essential for achieving sustainable development"¹¹.

4.1.3 Benefits of stakeholder involvement

Numerous sources have identified the benefits of stakeholder involvement (e.g. Petts 2001; Wilcox 1994; Bishop 1994; Warburton 1997; DETR 1998; Wates 2000), which are summarised below:

1. Better and more appropriate projects can be developed to tackle specific problems and opportunities by bringing together expert advice and lay knowledge in project design, development and management.
2. People are more likely to invest in and look after something if they have been involved in deciding what is needed and creating it, reducing complaints, reducing repair and maintenance costs on the public purse, and prolonging the relationship of care and concern.

¹⁰ www.homeoffice.gov.uk/foi/foiact2000.htm

¹¹ www.defra.gov.uk/environment/pubaccess/index.htm

3. The potential for conflict can be limited if all the likely stakeholders are involved at an early stage of project development, reducing major problems and costly delays at later stages.
4. Communities and individuals can be strengthened by community involvement: community organisations can become more secure, and individuals can become more confident, more aware and more able to do more. This can contribute to active citizenship, civil renewal and an enhanced democracy.

The benefits of stakeholder involvement can be described as instrumental (a means to an end), or transformative (an end in themselves, and about personal and possibly organisational change) (O'Riordan et al 1999) (See section 4.4.8 on evaluation).

There are significant debates about who actually benefits from stakeholder activity and what they gain from the experience. The beneficiaries may include those running the project, users of facilities or services developed, or those who live locally and benefit from wider, less tangible, improvements in community safety, pride and spirit. For those most directly involved, there can be a range of quite tangible benefits. In particular, they may develop the personal skills and confidence to deal with public institutions without feeling so powerless and alienated.

New social relationships can also lead to other benefits. These include an improved social status and an increase in hope and aspiration (perhaps including learning in more formal settings). There are also more immediate practical benefits, such as improved access to local services and involvement in wider networks that may allow access to further training and employment opportunities. All these benefits depend on a satisfactory experience of involvement which, essentially, means that participants need to know that they have made some difference.

There is some quantitative evidence of the benefits of local community involvement, though these tend to be from the perspective of public agencies rather than local communities. An early study by the World Bank (1994) examined the costs and benefits of participatory and non-participatory programmes funded by the Bank. Its findings showed that, overall, participation by beneficiaries was "the single most important factor in determining the overall quality of implementation". Participation made a significant contribution to project effectiveness, including lower operational costs (such as maintenance). The UK Department of Health (HEMS 1998) did another study. This found that those who felt empowered to make their own decisions, were engaged in community activities and lived in places with strong neighbourhood social capital were less likely to report poor health and less likely to have unhealthy lifestyles.

Work continues on developing broad indicators of community involvement so that more effective evaluations of the immediate and long-term costs and benefits can be assessed. Many draw on the ideas of social capital, developed by Robert Putnam, which views social capital as a key indicator of a strong civic community that is:

'marked by an active, public-spirited citizenry, by egalitarian political relations, by a social fabric of trust and co-operation' (Putnam 1993, 15).

Social capital is expressed in strong social institutions and networks in civic society, from labour unions to choral societies. Putnam argues that social capital is a moral resource and public good that activates the latent human capital of individuals and populations (see also section 3.5.3).

Social capital can also be seen as the product of (and essential lubricant for) strong and involved communities (of interest at broader spatial levels as well as local geographical communities). Other analyses focus on levels of broader issues of power and control. The classic version is Arnstein's ladder of participation. This was devised in 1969 and has been used to analyse levels of community and public participation ever since. Arnstein's ladder has eight levels. The initial rungs (manipulation, education and information) are generally regarded as non-participative approaches. From Level 4, Consultation, participation increases (though this can include passive, perhaps tokenistic, involvement) and rises to full control by those participating in Level 8.

Table 1 Arnstein's ladder of participation

Level 1	Manipulation	These levels assume a passive audience, which is given information that may be partial or constructed.
Level 2	Education	
Level 3	Information	People are told what is going to happen, is happening or has happened.
Level 4	Consultation	People are given a voice, but no power to ensure their views are heeded.
Level 5	Involvement	People's views have some influence, but traditional power-holders still make the decisions.
Level 6	Partnership	People can begin to negotiate with traditional power holders, including agreeing roles, responsibilities and levels of control.
Level 7	Delegated power	Some power is delegated.
Level 8	Citizen control	Full delegation of all decision-making and action.

Peter Oakley's analysis suggests three different broad levels of power related to participation (Oakley 1991):

1. **Participation as contribution.** At this level, control and direction are not passed to stakeholders; they are just asked to contribute resources.
2. **Participation as organisation.** Organisations and institutions are created and/or developed as an important element in participation. Formal organisations (such as trusts) may result from a participatory process, as well as from informal groupings in

which the development of a new (or changed) organisation involves some delegation of power and control.

3. **Participation as empowerment.** At this level, the relationship between power and participation is made explicit: participation is developmental, and power and control are devolved.

Oakley stresses that the first of these types of participation (contribution) is fundamentally different from the other two. Organization and empowerment both involve a transfer of control. The importance of Oakley's analysis is not just in his analysis of shifts of power. It is also in his recognition of the structural as well as personal and practical changes that result from participatory action. Such action is about people as individuals and what they achieve, and also about the new structures (groups, associations, trusts) they establish, which continue to provide mechanisms for participation in the long term.

One of the great strengths of these analyses is the recognition that power and resources are central to any discussion of stakeholder involvement. However, the use of a hierarchy in Arnstein's ladder and Oakley's levels encourage the notion that some levels are *inherently better* than others. In practice, different levels of involvement are appropriate in different circumstances. Arnstein's ladder, in particular, also has some important omissions and does not cover those activities that contribute to democratic activity but are not commissioned, led or controlled by Government or other institutions, including those that are essentially about protest. Arnstein also focuses only on community participation in decision-making, rather than including participatory (including community) action. This raises the important issue of what exactly is being participated in. In most cases, community participation is analysed in terms of participation in public policy programmes led by Government, NGOs or other institutions. But this remains only part of the picture.

4.1.4 Methods of working with stakeholders

Numerous handbooks provide guidance on models, methods and techniques of stakeholder, community and public involvement (in particular Wilcox 1994, Wates 2000, IEMA 2000, DETR 1998, Audit Commission 1999, New Economics Foundation 1999). There are also reviews and analyses of methods and approaches (Petts and Leach 2000 for the Environment Agency, and the Select Committee on Public Administration 2001).

The key guidance for public bodies on consultations is the Cabinet Office Code of Practice (2004) which should 'generally be regarded as binding on UK departments and their agencies' (ibid).

The Cabinet Office guidance stresses the need for consultation to improve decision-making and for everyone to feel they have had their say. Consultation must meet guidance from the Committee on Standards in Public Life (the Nolan Committee), which addresses the need for openness and accountability of Government, and guidance from the House of Lords Select Committee on Science and Technology, which addresses the need for open dialogue in science. The bulk of the Code focuses on some key criteria to be followed in all written consultations. These are:

1. Consult widely throughout the process, allowing a minimum of 12 weeks for written consultation at least once during the development of the policy.

2. Be clear about what your proposals are, who may be affected, what questions are being asked and the timescale for responses.
3. Ensure that your consultation is clear, concise and widely accessible.
4. Give feedback regarding the responses received and how the consultation process influenced the policy.
5. Monitor your department's effectiveness at consultation, including through the use of a designated consultation co-ordinator.
6. Ensure your consultation follows better regulation best practice, including carrying out a Regulatory Impact Assessment if appropriate.

There is little guidance in the Code on methods although a few are mentioned: stakeholder meetings, public meetings, web forums, public surveys, focus groups, regional events, and targeted leaflet campaigns.

The Environment Agency's own science project on *Evaluating Methods in Public Participation* (Petts and Leach 2000) provided useful detailed guidance on methods, based on its own summary of (four) levels of engagement (see Table 2):

Table 2 The Environment Agency's summary of four levels of engagement

Level of engagement	Types of methods
Education and information provision	Traditional methods (e.g. campaigns, publicity etc).
Information and feedback	Traditional methods (e.g. consultation on drafts and plans, surveys).
Deeper consultation	Innovative consultative methods (e.g. workshops, focus groups, interactive virtual methods).
Extended involvement	Innovative deliberative methods (e.g. citizens juries, Planning for Real, consensus conferences).

The Environment Agency's *Local Outreach* science project assessed methods of working with local stakeholders. It developed a ranking of methods, showing which ones Environment Agency staff and other interested parties considered the most successful. The results were:

1. Meeting with stakeholders for a specific purpose was the leading option overall. Methods considered included stakeholder dialogue (used by the Environment Agency in some LEAPs), stakeholder decision analysis (used by the Environment Agency in the New Forest LEAP) and scenario analysis (using scenarios developed by the group).

2. Four other methods for engagement were grouped in the middle:
 - Take part in processes initiated and run by other organisations. Methods considered included Local Agenda 21 and community planning and major exercises such as estuary management strategies.
 - Face-to-face interactions with individual stakeholders. Methods included launches, exhibitions, public meetings, telephone hotlines, and meetings with statutory consultees and regulated organisations.
 - Interaction with groups of citizens. Methods included stakeholder dialogue, participatory appraisal, visioning and focus groups.
 - Ongoing interactions with groups of stakeholders. Methods included statutory and advisory committees (e.g. REPACS and AEGs) and forums.

3. Least popular were traditional consultation methods (that adopt a 'provide and respond' style), and remote consultations with individual citizens. Methods considered here were leaflets, websites and consultation documents (including for LEAPs, Fisheries Action Plans for example), and opinion surveys and citizens panels using questionnaires.

There was also a general aversion towards public meetings among Agency staff. Some argued that public meetings are never useful.

Choosing engagement methods depends on a number of key variables. Some, such as the availability of time or resources, are usually givens. Others need to be assessed on a case-by-case basis. The Petts and Leach research for the Environment Agency (2000) produced guidance on such variables, drawing on earlier work by the Audit Commission (1999). The summary of the results of this analysis are as follows:

Table 3 Summary of key variables identified in Petts and Leach research (2000) for choosing engagement methods

Approach	Relative cost
General survey	Relatively inexpensive for telephone or postal surveys, but more expensive for face-to-face interviews. May require the use of external consultants.
Survey of service users	Inexpensive, especially where there is a 'captive group' of respondents (e.g. at housing benefit interviews).
Panel surveys	Can be expensive to set up the panel, especially if outside consultants are used. But once the panel is established, this is a cost-effective method.
Citizens' juries	Expensive, because of the time commitment for authority officers and the need to pay jury members. Experienced facilitator also needed.
Referenda	Relatively inexpensive way of assessing the opinion of the maximum number of people.
Action planning	Relatively inexpensive per event, though creating a community

	event atmosphere to attract participants has costs.
Neighbourhood forum	Relatively expensive to set up, as dedicated staff resources are needed to organise and service the forums. But inexpensive after the forum structure has been established.
Planning for Real	More expensive than action planning, but can be good value, especially considering the complexities of the 3D neighbourhood models. Models can be used again for future consultations.
Focus groups	Relatively inexpensive to organise but may be expensive if a broad representative sample is needed
Virtual consultation	Can be cheap, but costs can escalate depending on scale and levels of interaction and input by stakeholders

Table 4 shows some examples of costs identified in the Petts and Leach research for more innovative methods. The costs are based on the year 2000, so they are not wholly applicable, but will give an idea of comparative (rather than absolute) costs. One of the difficult elements to cost is the staff time of officers in authorities / agencies. This may be extensive but piecemeal and spread over a long time. Most of these methods involve external / independent facilitation, usually because skills may not be available in-house, but also because independence of the organiser may be an important characteristic in the public mind. Participants' and experts' fees and expenses will also be involved, particularly in relation to citizens' juries and consensus conferences, when people may have to give up whole days of their time and take leave from work.

Table 4 Examples of costs identified in Petts and Leach research (2000) for developing more innovative methods

Method	Cost range
Citizens jury (@16 participants, lasting 4-5 days)	£15k - £30k
Consensus Conference – 16 participants, introductory weekend workshop, 3-4 day conference	£85k - £100k
Community advisory groups – 3 groups x 16 people lasting 6 months, (with associated public information provision)	£100k - £150k (£200k+)

Deliberative processes can be costly but they usually have a broad set of objectives, from promoting citizenship to legitimising decisions which can increase their value. They also usually relate to large-scale, lengthy, or major investment programmes, which may be contentious, so they may save costs that could otherwise arise from conflict. Only effective evaluation, though, will reveal whether such processes represent good 'value for money' in specific circumstances.

4.1.5 Which stakeholders?

Defining the appropriate stakeholders in any specific circumstance will always be complex. In some instances, the starting point is statutory consultees and existing relationships. But there will always be others who have a contribution to make, and others again who perceive themselves to have a stake in the process. The classic 'snowball' research method can be used (asking each contact to suggest others). The Cabinet Office guidance (2004) draws attention to the need to comply with legal duties including under the Human Rights Act and laws against discrimination.

The Environment Agency's own *Local Outreach* research (ESRU 2000) suggests that a potentially useful approach might be to sub-divide local stakeholders into three categories:

- Professionals: public, private and voluntary sector paid staff, including local authorities, environmental pressure groups, business and industry, and others working at local level (but sometimes with a regional or national remit);
- Local groups: non-professional organisations covering communities of interest (for example, wildlife or football), communities of place (for example, residents associations or parish councils), or communities of identity (for example, age, gender, ethnicity, religion). Each may have a different type of relationship to the 'local' community;
- Local publics: individuals who represent themselves (the word 'publics' is used to stress that this category will include very varied individuals with different understandings of environmental problems, not a homogenous mass).

The ESRU research also suggests the importance of acknowledging the range of environmental knowledges, which include:

- specialist knowledge (expertise);
- local knowledge (experience of locality or situation);
- procedural knowledge (knowing how systems and organisations, including the Agency, work).

The ESRU research suggests that using these categories to analyse the stakeholders involved might clarify the context for working with local communities. The study also stressed the risk from consulting only with stakeholders that are easy to work with (usually professionals and sometimes local groups). These groups could become privileged stakeholders, while others (less easy to work with) become excluded. Although there may be more interactions with professionals and local groups than with local publics, it is the quality of those relationships that is important. It was recommended that the Environment Agency should aim to form high-quality relationships with all its stakeholders, regardless of the frequency of interaction.

The ESRU research (ESRU 2000) suggests that decisions about how to work with local communities could include:

- overall context to provide the encompassing circle
- stakeholders
- resources
- decision situation
- engagement process.

Certain stakeholders are often overlooked. The guidance on the Compact between Government and the voluntary sector (see section 3.5.4) provides advice on reaching and working with traditionally excluded groups (such as black and minority ethnic groups). Research suggests an absence from participatory processes of certain groups, especially low-income families, young people, ethnic minorities, older people, women's groups, disabled groups, unemployed people, businesses and unions (Young 1998; Craig et al 2001; LASALA 2001). The absence of the private sector and industry is not often noted, but:

'in general, the participation of business and commerce in LA21 across Europe appears to be very limited' (LASALA 2001).

When participation is seen as an awareness, learning and change exercise in pursuit of sustainable development, the absence of the private sector becomes particularly crucial.

As well as stakeholders with an active interest, there are those with other degrees of interest. They include visitors (e.g. people involved in leisure pursuits), professionals with an interest in the particular project (foresters or conservationists, researchers, architects or engineers), developers and others with a financial or commercial interest. Other stakeholders may be concerned simply with ensuring the continued 'existence' of public and social goods they may never use or even see (e.g. environmentalists concerned about rainforests on the other side of the world) (Jacobs 1995). Such interests may be represented through formal NGOs or through far less formal networks and social movements.

Any discussion of stakeholders has to touch on issues of representation and accountability, particularly because public institutions are often concerned that those they are working with do not represent wider interests. Such a lack of representativeness is highly likely at local levels as many community groups tackle a particular local problem and are simply those local people concerned enough to get involved. Many local groups do make considerable efforts to encourage the widest possible involvement in their activity, not least because large numbers of supporters always encourage authorities to take demands seriously, but these groups are not usually formally elected by all of those in their apparent constituency. And, generally, they do not claim to represent anyone but themselves and their members.

Many local voluntary and community organisations do take accountability seriously. They develop a range of formal and informal structures to ensure that their activities are open and transparent to anyone with an interest (Craig et al 2001). These types of activities can, though, use up significant resources from poorly resourced small organisations and so they tend to be more limited than in public and private organisations with more money. The legitimacy of many voluntary and community organisations comes from their activities to give voice to citizens who would not otherwise be heard, and their commitment to participatory forms of organisation is designed to support that activity by extending their accountability and representativeness to enhance their effectiveness (Craig et al 2002). As always, organisations need to balance these activities with providing effective action and leadership on the issues they work on.

For Government and public institutions, the representativeness of certain groups may become an issue when the group delivers messages that challenge the current orthodoxy. In many cases, though, Government and public bodies tend to value the

quality of the evidence groups can offer, innovation in terms of new ideas and projects, and closeness to the grassroots, more highly than formal representativeness (ibid).

4.1.6 Measuring the success of stakeholder engagement

Assessing the success of stakeholder engagement in sustainable development is relatively new, but there is a growing literature on the subject. The complexities of sustainable development and the evolving understanding of the interrelationships between the issues, in theory and practice, have resulted in the development of many indicators and evaluation processes related to the social, economic and environmental issues. For example:

- quality standards, such as EMAS and TQM, often concentrate on the management *processes* themselves;
- standardised tools or models to measure public sector success or efficiency, such as the Public Administration Excellence Model, evaluate processes but have problems and weaknesses with adaptation for sustainable development;
- local, regional, national and international indicators exist, though these are primarily environmental and very few are associated with participation – even those associated with 'education' are rare: recent research found only 38 per cent of local authorities had educational *targets* in Local Agenda 21s, and only 24 per cent had *indicators* for education (LASALA 2001).

Certainly, the governance elements have received far less attention to date than other elements of sustainable development. There is now some more detailed examination of the issues at international governance levels, with the publication of the EU White Paper on Governance, and the UNCHS Global Campaign on Urban Governance. But these have yet to impact upon practice and evaluation. At national level, in the UK, there are also developments. The Modernising Government programme (mentioned above) is creating pressures for effective assessment methods for participation, and the Audit Commission (December 2001) is developing performance indicators for community involvement.

Work is also now underway on participatory evaluation and the evaluation of participation. A recent working paper by InterAct (2001) clarifies different elements of evaluating participatory projects. It includes making a clear distinction between the evaluation of processes and of products and provides an approach to evaluating participation, and participatory evaluation.

The benefits of developing participative measurement processes might include (NEF 2000):

- demonstrating value for money
- accounting for how resources have been used
- understanding how a project has done
- understanding the wider context of a project
- building community capacity
- networking.

InterAct believe other benefits include (InterAct 2001):

- celebrating success (evaluation as an opportunity to 'strengthen and consolidate the achievements of a project');

- extending involvement (evaluation provides a further opportunity for participation in a project, and the development of greater sense of ownership by those people involved);
- expanding the criteria for evaluating success ('new evaluation methods drawn from participatory practice can introduce new criteria into general assessments of success, which allow participatory working to be assessed as being as valued as other issues').

Evaluation objectives, like those for participation programmes, may be instrumental or transformative (O'Riordan et al 1999):

- **Instrumental** evaluation is a means to an end. Instrumental approaches focus on practicality (e.g. achieving goals more effectively) and the legitimacy of decisions. Outcomes such as strengthened civil society and democracy could also be seen as instrumental. Relevant processes would focus on public reason, persuasion by the best arguments, production of consensus, and implementable and legitimate decisions. Evaluation criteria would be around the extent to which outcomes are do-able, and their legitimacy.
- **Transformative** evaluation is an end in itself, as well as a means to a better product. Transformative approaches would focus on a learning, responding, capacity building, citizenship process and aim for empowerment, creative agency and self-esteem. Relevant processes would be about a sense of recognition and agency and about being part of a shared society through shared stories. Evaluation criteria would include the extent to which a process generated opportunities for learning, a sense of empowerment and agency, social intelligence and self-fulfilment, as well as a sense of belonging to a shared society.

Sarah White expands these categories into: nominal (evaluation for 'display', e.g. PR purposes); instrumental (as above); representative (opportunities for groups to have a voice and express their own interests); and transformative (as above) (White 1996). Objectives such as strengthening civil society, enhancing democracy and enlargement of citizenship (or facilitation of other (e.g. state) agenda) could fit into either the instrumental or transformative models. That would depend on the motivations of whoever is promoting (and defining the objectives of) the participatory process and/or its evaluation.

Hunt and Szerszynski (1999) identified possible problems or tensions between instrumental and transformative objectives for evaluations. Tensions between problem-solving and relationship building approaches and between cultural empowerment and structural change were among those highlighted. There are also tensions between preserving the authenticity of participants' own words ('authenticity'), while creating outputs that can be digested by institutions in the form of reports and recommendations, requiring 'translation' ('digestibility'). And there may be tensions between recognising shifting policy and political contexts ('ambivalence') while also reaching general conclusions of relevance to decision makers ('consistency').

Tim O'Riordan suggests that: 'the best evaluation is instructive, collective, continuous and appropriately correcting' (O'Riordan 1999). The ideal situation may be to establish a balance between instrumental and transformative objectives, clear ethics and principles, participatory and non-participatory methods, qualitative and non-qualitative indicators that are appropriate (according to various audiences) and verifiable (i.e. numerical but also provide explanations of why and how), and agreement on timescales.

Even where the ideal is not possible, some kind of balance needs to be struck. This would ensure that we at least aim for achievable objectives, ethical principles, appropriate methods and learning from results in a new 'virtuous circle' of learning from experience in ways that also help to develop better methods of assessment. These evaluation activities also need to be undertaken in an appropriate way. And they "need to support the process while at the same time understanding and evaluating it – evaluation should ideally be linked to building capacities" (LASALA 2001).

Two pictures emerge from the evaluations of stakeholder involvement in sustainable development so far:

- Stephen Young (1998) assessed participation in LA21 programmes in the UK. He found that some saw the results of participation as very limited in terms of impacts on policy decisions. This was as a result of resource limits, structural constraints (such as the organisational barriers of hierarchy and 'silo' departmental boundaries) and the fact that local priorities could be undermined by conflicts with, or shifts in, regional or national policy (e.g. on issues such as transport or waste management).

This finding is supported by evidence from LASALA. Seventy-three per cent of LA21 co-ordinators said that their multistakeholder forum influenced decision-making processes to a 'high' or 'some' extent. Although opportunities did exist for citizens to participate in decision-making, it was found that:

'in practice, this is more complex, as accessing certain groups is difficult, and local authorities do not necessarily have the institutional capacity or resources to create real opportunities for individual citizens to participate' (LASALA 2001).

- Selman (1998) found that, while LA21s may not (yet) have succeeded in making the UK more sustainable in terms of social, economic or environmental development, LA21 exercises have clearly contributed to the development of policies and practices on governance:

'Whilst many of the claims about LA21 are intractable to test, there is some evidence of genuine attainment. This relates mainly to processes of strategy production, stimulation of environmental citizenship, inclusion of various sectors, challenging traditional assumptions and actions, and assisting local democracy.'

Selman argues that:

'...sustainability is concerned as much with process as with product ... the journey is as important as the destination, (Selman 1995).

The quality of the process will determine the legitimacy, effectiveness and acceptability of the resulting policy outputs – and thus the extent to which the public (and other stakeholders) will value, accept and 'own' the changes that will be required to lifestyles and aspirations.

4.1.7 Critics of stakeholder involvement

Stakeholder involvement is not without its critics. The theoretical objections have been summarised by Cooke and Kothari (2001). Objections focus on the differences between

empowerment and the change 'promised' as a result of the involvement, and the reality of what is actually changed in practice. In many situations, people's views are ignored or participants are co-opted to follow official views, and inequalities are reinforced rather than challenged.

Cooke and Kothari's analysis focuses primarily on international development, and the experiences and references refer almost entirely to that field. But the three main questions they raise, remain important issues for the legitimacy and validity of all stakeholder involvement processes, that is: decision-making and control in participatory processes; the nature of participatory group processes in reinforcing the interests of the already powerful; and the apparent take-over of traditional methods by participatory approaches.

Cooke and Kothari call for much more genuine and rigorous reflexivity among practitioners of participatory working, that goes beyond the narrow limits of current 'self-critical epistemological awareness' (Chambers 1997).

Petts and Leach (2000) have also identified weaknesses of stakeholder involvement:

- Participation may not lead to a better decision.
- The process can become 'messy', and may result in an increased level of conflict.
- The process can take a long time and compromise decisiveness (a problem if time-limited procedures).
- Additional costs will be incurred, for example, fees for paid participants, external facilitator costs, meeting rooms, refreshments, etc.
- Participation in the implementation at local level of national level policy may result in different approaches being used in different places, leading to possible complaints from other national partners (e.g. industry) who may seek uniformity.
- In some cases, experts may be able to make more robust decisions than the public because they are able to think long term and appreciate technical aspects better.

Petts and Leach conclude, however, that:

'...all of these weaknesses should be able to be managed and reduced through effective implementation.'

Key steps may include (Petts & Leach 2000):

- determining the aims of participation;
- identifying interests (for example, stakeholders, communities, individuals) and dealing with issues of representation;
- dealing with organisational barriers (within the Agency and in other institutions); professionalism and expertise; implications of going beyond minimal compliance; and confidentiality;
- the need for community skills and facilitation skills.

Other key steps are likely to include the provision of adequate time and resources in plans requiring stakeholder involvement (Cabinet Office 2004), and also clear principles.

The Environment Agency has now developed its own set of principles for stakeholder involvement from the *Local Outreach* research (ESRU 2000) and an internal workshop. It

is suggested (Twigger-Ross and Orr 2001) that stakeholder involvement initiatives should be:

1. **Transparent.** All those involved should know at the outset how the process will be run. This requires clarity about boundaries, honesty about power relationships, honesty about the state of knowledge, and explicit procedures for interaction and decision-making.
2. **Open and inclusive.** The process should involve and be accessible to all those with an interest in the issue.
3. **Intelligible.** The issues should always be presented in a manner that is intelligible to all participants. This will mean finding ways of presenting complex issues that can be understood by a lay participant, without 'dumbing down'.
4. **Respect.** Engagement between the Environment Agency and its stakeholders should be based on mutual respect. That is, they should consider each other as equals and also have confidence in each other. Engagement between the Environment Agency and its stakeholders should cultivate empathetic, helpful and courteous behaviour to build trust.
5. **Efficient.** Engagement between the Environment Agency and its stakeholders should make efficient use of both stakeholder and Environment Agency resources, especially time.
6. **Consistent.** Engagement between the Environment Agency and its stakeholders should be planned and include an audit trail such that there is consistency of process between different engagement processes and so that stakeholders know what to expect.
7. **Responsive.** The process should respond to the needs and concerns of participants, to ensure that they are able to participate effectively.
8. **Relevant and Productive.** Participation should lead to a 'better' environment and should be relevant, that is, deal with issues in a way that allows participation to make a difference.

This paper concludes, though, that there are severe limitations on the Agency actually fulfilling these principles, given its narrow remit on regulation, and that the current statutory framework allows the Agency to adhere to some but not all of these principles. Therefore "the current statutory framework needs to be challenged if it is to move towards a 'citizens' science" (Twigger-Ross and Orr 2001).

The Environment Agency has done a great deal of consultation with stakeholders (see separate report from the Joining Up Project: Paper E2-057/SR2 on Agency social initiatives). Key research work includes: *Evaluating Methods for Public Participation* (Petts and Leach 2000); the *Local Outreach* research (ESRU 2000); and the internal *Public Involvement in Agency Activities* workshop. Projects include consultations on cement works licences, flood planning in Wales, flood defences, incinerators, landfill sites, LEAPs, nuclear group participatory work, power generation licences, water abstraction and the Wise Use of Floodplains initiative. Other relevant Environment Agency projects include angling participation, working with people with disabilities, ethnic outreach, formal consultative forums and liaison groups and forums.

4.2 Partnerships

The Environment Agency Vision, Corporate Plan and other strategic documents all stress that the Environment Agency cannot achieve its objectives alone - it needs to work with others. More positively,

'By forming partnerships with other organisations to address all aspects of sustainable development, we will be able to participate in more robust projects that will deliver wider benefits' (Sir John Harman, in *The Business of Learning*, Environment Agency 2001).

The Environment Agency's position reflects the need for partnership in achieving the aspirations for sustainable development as outlined in Agenda 21, the first paragraph of which concludes:

'...integration of environment and development concerns and greater attention to them will lead to the fulfilment of basic needs, improved living standards for all, better protected and managed ecosystems and a safer more prosperous future. No one nation can achieve this on its own; but together we can – in a global partnership for sustainable development' (Agenda 21, paragraph 1.1.)

4.2.1 Principles of partnership

Partnership takes stakeholder involvement to new levels, and creates new challenges for all organisations and individuals concerned. Partnerships are both desirable and necessary when multiple organisations share responsibilities for working on a particular issue, or where better solutions emerge from working closely with others. The Government also, increasingly, encourages partnerships as effective ways of co-ordinating services. Certain regeneration funding programmes can be accessed only through formal partnership arrangements.

Partnership is a very specific form of collaborative relationship. McDonough (1995) offers the following definition:

'Partnership is a process by which several partners of a different nature agree upon a means of achieving some specified objective, the results of which represent more than the sum of their respective parts. It implies sharing both the risks and the benefits with each other in a mutual fashion.'

This definition focuses on the process of partnership. But it also identifies shared objectives and the sharing of risks and benefits. Partnerships are, though, very often also formal organisational structures. Members of the partnership therefore have to behave in a different way. They represent their own organisation, but they also need to work for the new, different, shared objective. This can cause difficulties of branding, identity, responsibility and accountability.

Clarke and Stewart (1997) suggest that community partnerships can add value in various ways:

- resolving community problems that are beyond the capacity of any single organisation;

- building an active relationship with the community, ensuring that policies meet their problems and realise their aspirations and drawing upon their resources of skills and experience;
- ensuring that actions taken by different bodies in dealing with an issue support each other;
- ensuring that resources held by different bodies are fully realised and complement each others in use;
- giving access to experience, skills, information and powers held by different bodies;
- facilitating the bidding process required for Government funds;
- giving access to financial resources not otherwise available.

Wilcox (1994) quotes Maureen Mackintosh's three motivations for partnership working:

- **Budget enlargement.** By coming together, the partners get access to funds that none could access on their own;
- **Synergy.** The partners bring different knowledge, resources and approaches to the initiative, and this generates innovation ... leading to better solutions;
- **Transformation.** Working with people with different backgrounds enhances knowledge and challenges initial assumptions, leading to a permanent change in the partners.

In many partnerships, some partners are more equal than others. Richard MacFarlane (1993) suggests that:

‘...the opportunity for influence will be constrained by the realities of power within the partnership. Having a right to sit at the decision-making table does not confer equal power.’

The amounts of power depend on control of (and access to) money, ownership of land or buildings, control of information, legal power, access to staff and consultants and legitimacy (e.g. from election or conventions which confer legitimacy).

MacFarlane suggests the following as ways in which all partners can maximise the benefits of working in partnership:

- build time for consultation and joint working into the development timetable;
- adopt organisational arrangements that encourage partners to work together in developing both policy and projects;
- develop a culture of joint decision-making in the design and delivery of partnership projects;
- provide time and resources for joint learning;
- allow flexibility in the overall programme so that the joint projects can be introduced after partners have developed confidence in each other.

Clarke and Stewart (1997) suggest that an initial covenant be agreed, so all partners are clear about expectations and have made a shared commitment. Such a covenant should cover:

- the purpose of the partnership;
- any limits placed upon it;
- the expectations of the partners;
- the nature of the contribution that the different partners were expected to make;
- the process of decision-making;

- the style to be sought as well as the formal procedures;
- the intention and the ability to share information;
- the means of reviewing the partnership and its objectives;
- issues of accountability; and
- how disputes will be resolved.

Even with initial goodwill, though, partnerships remain awkward to manage in a way that effectively enables them to fulfil their potential and add up to more than the sum of the parts. Clarke and Stewart (1997) suggest 10 key characteristics of successful partnership, which need to be held together in balance:

1. Co-operation depends on **understanding** of each other's organisation: its requirements and interests; its way of working; its languages and culture; its basis in accountability. Time devoted to building understanding is a necessary investment.
2. Building co-operation requires a recognition of **difficulties** or tensions that are likely to arise, so that how they are to be dealt with is given attention.
3. Co-operation requires the building and sustaining of **trust**. Hidden agendas, manipulation, relevant information not revealed, and game-playing can undermine trust. Trust requires openness between the partners.
4. Co-operation requires **commitment**. Commitment is likely to be achieved by focusing on the subject of collaboration rather than on the need for collaboration. In exploring the subject, the need for co-operation can be recognised and commitment built.
5. Co-operation needs an **internal culture** of co-operation. Co-operation between organisations is unlikely to develop if there is not co-operation within an organisation. The development of co-operation will be frustrated if there are inter-departmental disputes that undermine initiatives.
6. Co-operation is **non-hierarchical**. The instruments that are available in hierarchies are not available in partnerships, and the management of influence becomes a necessary approach.
7. Co-operation is assisted by **ground-rules**, ensuring procedures are perceived as fair and an accepted distribution of both risks and benefits. Ground-rules are not a substitute for trust, but can help to sustain it.
8. Co-operation needs the careful consideration and design of **co-operative processes**, which take account of the obstacles to co-operating both between the partners and back in their organisations.
9. Co-operation requires an understanding of the '**architecture of joint working**', including understanding the complexities of formal / informal, member / officer, direct power / advisory, continuous / time-limited, policy decision / policy influencing, raising money, etc. Agreeing these principles should set the parameters for the design of inter-agency structures.
10. Co-operation is enabled by readily and immediately **achievable aims** on which future development can be based.

Clarke and Stewart conclude that resources, skills, style, structures, systems and processes will all be involved and need careful attention to make any partnership work. In summary, Wilcox (1994), suggest bearing four main issues in mind:

- Informal partnerships work best when the project is specific and can be achieved relatively quickly, when the purpose is clear and the outcomes achievable.
- Where the task is complex and long term, it may be necessary to formalise the partnership through some constitution or contractual arrangement. This provides a structure for decision-making and agreeing ways of working.
- What does not work is trying to tackle a wide range of issues through an informal partnership, particularly if the parties do not know each other well.
- On the other hand, simply setting up a partnership structure does not solve the problems. You still need to work through clarifying joint purpose, values etc.

4.2.2 Local Strategic Partnerships (LSPs)

Local Strategic Partnerships (LSPs) are being established at local authority level as part of the Modernising Government agenda. LSPs fit into the broader picture of changes at local government level, which are designed to foster these new partnerships, including (DETR 2001):

- the introduction of statutory community strategies (required under the Local Government Act 2000);
- steps to rationalise and simplify existing partnerships (of which there are many);
- the piloting of local agreements (e.g. Public Service Agreements – PSAs) between central and local government to tackle key national and local priorities on health, education, community safety and other quality of life issues;
- the launch of a national strategy to renew the country's most deprived neighbourhoods (Neighbourhood Renewal: National Strategy Action Plan).

LSPs are single bodies at local authority area level which:

- bring together people from the public sector, business, voluntary and community sector organisations so that they can better co-ordinate initiatives, plans and activities; they are often led by the local authority;
- are non-statutory, non-executive organisations;
- work at a level that allows strategic decisions to be taken but are close enough to the life of particular neighbourhoods to allow initiatives to be influenced at community level;
- are aligned to local authority boundaries; LSPs can also exist for whole counties and also for the districts, or groups of districts within them.

An LSP will typically include local representatives from public services, local businesses, voluntary organisations, community groups and residents. The members will work jointly to ensure the delivery of effective core services and set out a vision for the future.

LSPs have a range of core tasks:

- preparing and overseeing delivery of a Community Strategy (CS) for their area;

- bringing together local plans and partnerships to provide a forum through which public service providers and other key bodies can work together to meet local needs and co-ordinate plans;
- working with local authorities to help them meet targets in public service agreements (PSAs);
- developing and implementing a local neighbourhood renewal strategy in areas targeted by the ODPM's Neighbourhood Renewal Unit, to achieve basic service targets in deprived areas and close the gap between these areas and the rest.

The first LSPs were established in the 88 Neighbourhood Renewal Fund areas, as the LSP is the central body for this new funding. These LSPs are to be accredited formally as part of that funding process. Elsewhere, Government expected that the pace of development of LSPs would depend on the enthusiasm of local organisations, particularly the local authority. Government also expected that a key focus for the work of these other LSPs would be the PSA targets on education, employment, crime, health and housing.

Though there was no specific mention of environmental targets in the initial guidance on LSPs, there was an expectation that environmental issues would be an important element in community strategies. The aims and objectives of community strategies are as follows (DETR 2000; all directly quoted):

- A community strategy should aim to enhance the quality of life of local communities and contribute to the achievement of sustainable development in the UK through action to improve the economic, social and environmental wellbeing of the area and its inhabitants.
- For this aim to be realised, a community strategy should meet four objectives. It must:
 - allow local communities (based upon geography and/or interest) to articulate their aspirations, needs and priorities;
 - co-ordinate the actions of the council, and of the public, private, voluntary and community organisations that operate locally;
 - focus and shape existing and future activity of those organisations so that they effectively meet community needs and aspirations,
 - contribute to the achievement of sustainable development both locally and more widely, with local goals and priorities relating, where appropriate, to regional, national and even global aims.

A community strategy should contain four key components:

- a long term vision for the area focusing on the outcomes that are to be achieved;
- an action plan identifying shorter-term priorities and activities that will contribute to the achievement of long-term outcomes;
- a shared commitment to implement the action plan and proposals for doing so;
- arrangements for monitoring the implementation of the action plan, for periodically reviewing the community strategy, and for reporting progress to local communities.

The official guidance emphasises sustainable development, quality of life and economic, social and environmental wellbeing, which provides powerful opportunities to make environmental issues a higher priority than the initial PSA targets suggest. The formal guidance specifically suggests (DETR 2000):

'Having set up a broad local strategic partnership, the first stage in developing a community strategy will be to establish a long-term vision for the area, taking into account wider regional and national visions for better quality of life ... Where there are effective LA 21 strategies in place, they should provide a good basis on which to inform the public of the sorts of things to be considered in a long-term sustainable vision for the area. If this is to command support, it is important to involve the widest possible number of local people and organisations at this stage. The aim should be to arrive at a broad consensus about what the area should look like in 10 or 15 years time, and the sorts of communities in which people want to live. The timeframe is something that can only be decided in the light of local circumstances and following the articulation of communities' aspirations. In the key areas of education, jobs, health, crime, and the environment, it is likely that aspirations will only be realised in the long term. However, to ensure that the long-term vision is more than a set of aspirational statements, the local strategic partnership will need to ensure that it includes some explicit outcome targets.

A community strategy cannot realistically attempt to cover every issue that may be relevant to a local community. Rather, authorities and their partners should seek to draw together the views of their communities to identify a number of broad priorities or themes. In doing so, they will also need to take account of what their community strategy might contribute to regional and national priorities and consider how best to balance these priorities with local concerns. Here, too, local authorities should be able to build on existing work and experience, whether it is through Health Improvement Programmes, best value consultation or LA 21 planning.

The long-term vision should provide the context in which all other corporate strategies and plans are grounded. Outcome targets will allow the overall impact of shorter-term activities to be measured and will provide a basis for local strategic partnerships to review progress and adjust their actions' (DETR 2000).

The guidance for LSPs and community strategies strongly encourages extensive (both wide and deep) involvement from other local interests and local communities (formal guidance has been issued by the Community Development Foundation 2000). There are opportunities here, too, for joint work between those concerned with environmental issues to ensure these concerns are reflected in the priorities of the LSP and community strategy.

4.2.3 Partnerships with the voluntary and community sectors

The national Compact between the Government and the voluntary sector, signed in 1998 (Home Office 1998), provides the basis for the Government (and Government agencies) to develop partnerships with the voluntary and community sectors (see section 3.5.4 for details of the Compact).

The Compact is a code of practice based on the philosophy that a diverse voluntary and community sector is fundamental to the wellbeing of society. Though the Compact, and the supplementary guidance, is not legally binding, the Government encourages non-departmental public bodies (NDBPs) such as the Environment Agency to adopt it and use it as the basis of their relationships with voluntary and community organisations.

The Environment Agency could work with the voluntary and community sectors in the following two ways:

1. **On policy development.** In the light of Government emphasis on evidence-based policy development, the voluntary and community sectors have access to specific research and information on the needs of particular groups. The sectors can help establish particular relationships, which can provide direct input from specialist organisations into policy development.
2. **On projects and programmes.** The voluntary and community sectors can work in partnership with the Environment Agency to run local or national projects and programmes. They can provide access to specific sectors of the community (e.g. black and minority ethnic groups) who may otherwise be excluded from Environment Agency activities. The sectors can also provide advice on setting up programmes and projects at local level to ensure they meet local needs and priorities.

The Environment Agency is already involved in a wide range of partnership arrangements with the voluntary and community sectors, and with the private sector, working at national and local level. Some examples are given in the separate Joining Up science report SR2, which reviews Environment Agency social initiatives (Warburton 2005a). Activities include a national Compact between the Environment Agency and environmental voluntary organisations in Wales, Enfys (a Lottery-funded partnership initiative in Wales on green spaces and sustainable communities), the North West Business Partnership, the Shropshire partnership and the Wise Use of Floodplains initiative.

4.3 Science

4.3.1 Risk, trust and uncertainty

The concept of risk has emerged over the past two decades as a central principle both in practical planning and in sociological analysis. The social science perspective is based on original research by Ulrich Beck (1992). This suggests that the politics of environmentalism (among other trends) provided a rationale within which society could question, on political and moral grounds, what before had previously been seen as objective and rational progress through science and social institutions.

Environmentalism was often based on scientific research and technical knowledge. But it presented conclusions that were not necessarily those that emerged from traditional sources. Environmentalism also drew attention to the fact that modern industry has created not just 'goods' (wealth as well as products), but also 'bads' (such as pollution and oppression). Essentially, Beck argued that, as a result, "business and techno-scientific action acquire a new political and moral dimension that had previously seemed alien to techno-economic activity" (Beck 1992, 186), which led to greater uncertainty and insecurity among those affected by it.

Beck suggested that these trends changed the way the public saw the social institutions that were supposed to act in the public interest (academic institutions, the law, elected governments etc). This led to questions about the neutrality and objectivity of these institutions and further increased public awareness of 'risk' and uncertainty. It has been further argued that:

'...the primary risk ... is therefore that of social dependency upon institutions and actors who may well be – and arguably are increasingly – alien, obscure and inaccessible to most people affected by the risks in question' (Lash and Wynne in Beck 1992, p4).

As a result, individuals no longer believe that institutions would protect them from risk, such that trust and credibility are lost.

Beck argued that these risks, and particularly environmental risks, are not only *unquantifiable*, (which thus render them more threatening), but also more *individualised*. Though the problems are widespread and common, the effects are played out on the lives of individuals. It is individuals who face the risk of pollution-induced health problems or loss of employment through changes in industrial practices or location. Beck's arguments (and those of his followers) have been highly influential in structuring recent thinking about risk and uncertainty.

Willis (2000) also argues that we do not face many of the old 'natural risks' any more. Instead, we face many risks that are in fact the result of our attempts to manage 'natural' dangers. One example would be the risk of flooding to houses built on floodplains, once thought safe because of 'better' flood controls. Managing risk is, however, about weighing up known risks against known benefits. In other words, it involves carrying out a risk assessment and making decisions with the full knowledge of what may go wrong. But many of the real 'risks' in our society are much more uncertain than this. It is hard – and yet necessary – to make decisions about whether or not to site houses on or near floodplains. But it may be impossible to know what the longer-term implications of climate change on the safety of those floodplains may be. Jonathan Porritt has used the term 'virtual risk' to describe such uncertainty.

The role of public, corporate, scientific, the media and civil society institutions in relation to making decisions about risk and uncertainty (particularly decisions that relate to public health) has evolved rapidly within the last five years:

- In 1988, the then minister for health, Edwina Curry, lost her job after suggesting that people could contract salmonella from eating eggs;
- In 1990, the then environment minister, John Gummer, fed a beefburger to his daughter in front of the world's press in an attempt to reassure the public that there was no risk of contracting BSE from eating British beef;
- From 1999, and despite ministerial reassurances and (uncertain) scientific evidence, campaigns backed by the public persuaded supermarkets not to stock GM products, and resulted in a global downturn in the GM industry;
- An independent inquiry into BSE found that honesty in the face of uncertainty was best;
- The Independent Expert Group on Mobile Phones laid out existing evidence that both suggested and did not suggest risk from mobile phones, and left the public to choose whether to take risks or not.

Progress on risk communication has been much faster in the US than in the UK, in relation to both the value of public communication and the most effective means. For example, US Government guidance on risk communication was published in 1988. The UK took another 10 years to produce a similar document: *Risk Communication. A guide to regulatory practice*¹², published by the Interdepartmental Liaison Group on risk Assessment (ILGRA) in 1998. This time lag has been blamed on the UK's lack of freedom of information legislation (Petts and Leach 2000). But it may also be related to the fact that the US is a much more litigious society. There is now, though, a rapid swing in the UK to an approach that recognises the public as rational participants in debates about risk.

What emerges from analysis of the guidance on risk communication (e.g. Petts and Leach 2000) is that managing potential conflict well does not depend just on the content of the information being conveyed. It depends too (and just as importantly) on using appropriate procedures at the relevant stage of decision-making. 'Appropriate' procedures have to be identified by considering empowerment of the public, transparency to create trust, access, ability to challenge information, and openness to enhance legitimacy.

Society has become increasingly safety-conscious and litigious. This sits uneasily with moves towards acknowledging uncertainty, inconclusive scientific evidence and the idea, where possible, of leaving the public to make decisions rather than imposing a 'nanny state'. These trends thus shift risk and responsibility onto individual consumer choices rather than providing leadership and guidance. This tension is further stretched by the trend towards expecting greater accountability and social responsibility from private companies and public bodies, and an expectation that science will provide the answers – alongside substantial and growing public distrust of objective science. For example¹³:

- Most British people (71 per cent) look to scientists to give an 'agreed view' about science issues. Nearly two-thirds (61 per cent) expect 100 per cent guarantees about the safety of medicines. Yet most scientists insist that science cannot and should not deliver either.
- The vast majority of the public (85 per cent) feel that scientists need to improve the way they communicate their research findings to the public.
- Most (87 per cent) think that science has had a positive impact on society; only three per cent disagree.
- Scientists who are funded by the Government are less trusted by the public than those funded by academia (seven per cent compared to 26 per cent).

The 18th British Social Attitudes survey (NCSR 2001) reported similar findings. It found that people trust university research centres and environmental groups far more than Government departments or business and industry (see table 5).

¹² www.hse.gov.uk/dst/ilgra.htm

¹³ All these bullet points taken from a MORI poll reported in MORI Poll Digest 5.4.2002.

Table 5 Results of the 18th British Social Attitudes survey (NCSR 2001)

	Trust a great deal / quite a lot	Trust 'some'	Trust not much / hardly at all
University research centre	64%	25%	5%
Environmental groups	54%	31%	9%
Radio and TV programmes	28%	45%	21%
Newspapers	14%	39%	41%
Government departments	13%	47%	33%
Business and industry	6%	32%	55%

The relevance of trust to the Environment Agency's activities has been recognised, particularly the relevance of declining levels of public trust in public agencies. Petts and Leach (2000, p6) suggest that:

‘Trust is recognised as one of the most important influences upon how people perceive risks and respond to communication.’

Petts and Leach (2000) review of the relevant literature suggests that the characteristics of trust are related to:

- **Competence:** degree of technical expertise; accuracy; level of resourcing;
- **Objectivity:** lack of bias in information; lack of vested interest;
- **Fairness or procedural equity:** acknowledgement and adequate representation of all points of view;
- **Consistency:** predictability of behaviour and communication arguments based on past experience;
- **Transparency:** openness of information; access;
- **Empathy:** a perception of goodwill in composing information; caring; recognition of the validity and strength of other concerns.

Robin Grove-White et al (1997) further highlighted the issue of public trust over the decision-making process as one of the core elements in handling risk and uncertainty in research:

‘claims of safety and ‘no scientific evidence of harm’ were treated with scepticism and even derision.’

This report recommends that decision-making structures (particularly those of Government) should be:

‘more attentive to social factors, rather than dismissing public unease as a matter of irrationality and lack of understanding.’

Others concur. The Green Alliance (2000) has outlined the key steps to making decisions in the face of uncertainty. These include: a focus on honest admission of uncertainty; managing risk early on; and involving people in decision-making.

It is clear that:

'The public perception of [risks] ... is influenced by many factors. These include personal familiarity and control, degree of irreversibility, potential for large-scale effects, perceived fairness in the distribution of risks and benefits, the extent to which risk managers are trusted, local history [of these issues] ... and the extent to which risks may affect future generations' (NCRAOA 1998).

The Environment Agency (2000) has suggested that one way of looking at environmental risks is to devise a 'taxonomy of risks', which would include:

- risks that are inherent, but can be reduced (for example, flooding and drought), or that arise from inherited problems (for example, contaminated land);
- risks that are additional (for example, new processes or developments);
- risks that may not arise until some time in the distant future (for example, from radioactive or other forms of waste which has been disposed of).

In this document, the Environment Agency recognises that this type of taxonomy does not necessarily tally with people's perception of risks, which may depend on other factors, such as:

- the nature of the risk, including how uncertain our knowledge is, who might be affected by the risk, any time lags before the risk becomes apparent, and the extent to which any such damage is irreversible;
- who analyses the risk, and what techniques or approaches they use to measure it and to assess the harm;
- who takes that decision, and what values they use to take the decision.

The European Commission has proposed a network for European policy-makers, in different Directorates-General of the European Commission. Led by the Forward Studies Unit, this would consider policy responses to risk and scientific uncertainty. Such a network would be similar to the UK's interdepartmental liaison group on risk assessment (ILGRA). The ILGRA may then extend its role to create a Futures Group to anticipate issues involving scientific uncertainty well in advance.

4.3.2 Sound science

Traditional scientific discourse, and particularly the concept of 'objective' science, is being challenged. The position of science in the decision-making process was once the guide of what is possible and where technological developments could take us. It has now shifted in the face of uncertainty. Science is beginning to be seen as just part of the evidence upon which decisions can be based. Jonathon Porritt has attacked the concept

of 'value-free science' in a world where technical research programmes are often funded by, and shaped by, corporate institutions.

The science journal *Nature* took a further step towards recognising the potential external factors to influence science. In August 2001, it made disclosure of funding a condition for accepting papers. An earlier *Nature* editorial (October 2000) had already said that:

'...scientists have come to be seen by the public as part of the problem. It will take much work to regain public trust' (quoted in Meek 2000).

Twelve of the world's most prominent medical journals followed the *Nature* line on disclosing funding. They issued a joint editorial stating that they would reject any scientific study that did not come with a complete assurance that the sponsor gave researchers total access to the data and freedom to report the findings. The reason, the editors said, was because drug companies had excessive control over how the results of the studies they sponsored were analysed, interpreted and reported¹⁴.

The ESRC Global Environmental Change Programme (GECP 2000) makes a similar argument for testing the systems within which science itself is assessed:

'...by focusing on the detailed scientific and technical issues, much of the debate over GM food is missing the real point. The deep-seated causes of this and previous controversies are the political and ethical difficulties of handling the uncertain effects of the new technologies ... [and] the way scientific advice is used is heavily influenced by the way the official advisory system is put together'.

The GECP argues for the:

'...existing system for gathering specialist scientific opinion to be complemented by a process of analysis of the subjective framing that underpins risk assessments...The need is rather for the systematic provision of auditable information concerning the full diversity of interests and values which characterise the different interests and affected parties'.

In other words, the decision-making process dealing with uncertain situations will need to take into account the process by which those decisions are made, the context within which they are made, and the legitimacy of the organisation making them, as much as in the technical arguments. As the Royal Commission on Environmental Pollution (RCEP) has pointed out:

'There is good evidence that the credibility of communicators is critically dependent on the trust placed in them. Professional networks and informal networks of family and friends are far more trusted as sources of information than scientists, the media or government. Where trust has to be built up, that can only be done through open and honest communication over a continuous period' (RCEP 1998, para 4.39).

Such criticisms have led to growing interest in concepts of 'civic science'. This recognises that science must become an increasingly interactive process between lay and expert people, reconnecting science and its social and cultural context. It argues that science must increasingly be linked to empowerment and involve transfers of respect and power

¹⁴ Reported in *The Washington Post*, and quoted in *The Communitarian Update*, 18th September 2001.
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(O'Riordan 1999). In addition, conventional professional approaches are increasingly challenged by arguments for more participatory approaches that devolve power to the poor and explicitly encourage professionals to change to their personal, professional and institutional values and practices (Chambers 1999). These new approaches to science and professionalism are attempts to rebuild trust between the public (and other stakeholders) and the institutions that make decisions on their behalf.

Even the concept of 'sound science' has been contested. The Royal Commission on Environmental Pollution (1998) summarised the position as follows (p29):

'...the requirement for sound science as the basis for environmental policy is not a requirement for absolute knowledge or certainty and should not be interpreted as such ... its limitations should be made explicit'.

Similarly, the ESRC Global Environmental Change Programme suggested that:

'...this is the larger political context ... how to make decisions in the face of uncertainties while at the same time implementing precautionary approaches under fierce commercial and trade pressures. We will suggest that science cannot provide definitive answers in these cases, so the policy of relying on 'sound science' may, ironically, be unsound. Ethical issues are central' (GECP 1999).

The importance of ethics and values in scientific assessments are beginning to be much more widely discussed (RCEP 1998). Turner summarised it as follows:

'...value judgements are inevitable and should be made transparent, not shrouded in technical and analytical complexity' (Turner 1997) (see section 5 for more on values).

The challenge to science from uncertainty is that: 'all science is, to differing degrees, uncertain' (Green Alliance 2002). Certain principles (e.g. the precautionary principle, see section 5.5) have emerged as a response.

The various challenges to conventional 'sound science', based on traditional scientific principles such as objectivity, neutrality and rigour include:

- **The subjectivity of framing assumptions.** 'Scientific judgements on risks and uncertainties are underpinned and framed by unavoidably subjective assumptions about the nature, magnitude and relative importance of these uncertainties. These 'framing assumptions' can have an overwhelming effect on the results obtained in risk assessments. This partly explains why different risk assessments on the same issue can have widely varying results, even though each has apparently been conducted in accordance with the tenets of 'sound science' (GECP 1999). As a result, it becomes essential not only to do a rigorous risk assessment, but also to justify the framing assumptions in terms of factors such as 'the legitimacy of the institution making the justification, the degree of democratic accountability to which the institution is subjected, and the ethical acceptability of the assumptions adopted' (ibid).

Subjective assumptions may be based on values, ethics and morality, all of which may be unexamined to varying degrees in different scientific methods. The role of values both in scientific process, and among the audiences for scientific findings, is becoming much more widely accepted and understood (see section 5).

- **Public scepticism.** A report for the Royal Society by Sir John Krebs, then Chief Executive of the Natural Environment Research Council, states that:

‘Disagreeing with a scientific estimate of risk is not necessarily irrational: the evidence on the analysis may be incomplete, the scientist may have a vested interest in selecting particular bits of evidence, or there may be more than one particular interpretation of the facts. Interestingly, surveys show that within the European Union, people in those countries with the best understanding of how science works, also tend to be the most sceptical about the ability of science to resolve everyday problems’ (in GECP 1999).

Since the data can therefore no longer be trusted simply because it is labelled 'scientific', the audience for that data has to find ways to assess it – generally, who said it and whether people trust them. Both Beck and, more concretely, Macnaghten et al (1995) in their study in Lancashire, have shown how Government, public and civic institutions (including many voluntary organisations) are now widely distrusted. Specifically, the Lancashire study found that people would not even *listen* to environmental information. This is because, firstly, they did not trust the institutions that provided the information, and secondly, they felt that they themselves could do nothing about it. Though they felt at risk from environmental hazards, they also felt powerless to change anything, so there was no point listening to the information (Macnaghten 1995, 3 and 17).

- **Scientific research hierarchies.** There are issues about what counts as evidence for policy-making. Part of this evidence will be information from expert knowledge, existing research and statistics, stakeholder consultation, evaluation of previous policies, new research and secondary sources. In addition:

‘...there is a great deal of critical evidence held in the minds of both front-line staff in departments, agencies and local authorities and those to whom policy is directed’ (Davies et al 2000, p23).

Techno-scientific research hierarchies favour controlled experimental approaches. The highest level in conventional research hierarchies is the:

‘...systematic review and meta-analysis of two or more double-blind randomised control trials’ (Davies et al 2000, p23) .

Personal experience (and case studies) at the lowest level (see below). The hierarchies of scientific evidence are usually understood as follows:

- I-1 Systematic review and meta-analysis of two or more double-blind randomised control trials;
- I-2 One or more large double-blind randomised control trials;
- II-1 One or more well-conducted cohort studies;
- II-2 one or more well-conducted case-control studies;

- II-3 A dramatic uncontrolled experiment;
- III Expert committee sitting in review: peer leader opinion;
- IV Personal experience.

Similarly, quantitative approaches are judged more 'scientific' than qualitative. Quantitative data (collecting numbers) is about measurement and judgement, whereas qualitative data provides for description and interpretation (Oakley 1991). This can be further analysed. Quantitative research methods and data such as high quality secondary research (analysis of primary research studies) are preferable to single studies, true randomised experiments preferable to quasi-experiments, and experiments to pure observation (Davies et al, 2000, 7).

In terms of qualitative methods and data:

'...although ranked low in the currently circulated hierarchy of evidence, case studies and qualitative descriptions undoubtedly carry persuasive power" (Davies et al, 2000, p73).

Such qualitative methods would include data from focus groups, in-depth interviews, ethnographic descriptions, discourse analysis and action research:

'...views of professional action and tacit knowledge ... also fall in the last category of evidence' (case studies and personal experience).

Pluralistic studies, using both qualitative and quantitative methods, are sometimes seen as overcoming the problems with each, though not always.

Davies et al define qualitative methods as:

'...a collection of methodological approaches to studying the social world, in which activities are studied in naturalistic settings rather than under experimental conditions, and where the subjective experiences of ordinary people are of greater interest than the objective categories and measurements of researchers' (Davies et al, 2000, p292).

These approaches are not only used for social research, but also:

'...good epidemiology and medical statistics take these qualitative factors into consideration when using measures of outcome or process' (Davies et al, 2000, p292).

- **Failure to deal with social contexts and the social world.** Davies et al (2000) suggest that outcome measures need to be developed that are "contextually valid and relevant ... The 'natural science' model [e.g. randomised control trials] has serious shortcomings when dealing with interventions aimed at people in social contexts". That is, the context in the natural sciences is usually controlled, isolated and closed; for social programmes, contexts are likely to be complex, fragile, dynamic and often unpredictable. In these cases, qualitative research has particular strengths, as it deals with "meaning in context" (Davies *et al.* 2000).

- **Failure to deal with complexity.** 'Complexity' is different from 'complicated': 'In a complicated system, it is possible to work out solutions and plan to implement them. This is not possible in complex systems; here policies and interventions have unpredictable and unintended consequences' (Chapman 2002). Such approaches are based around a natural science focused on controlled experimentation – natural science experimentation focuses on single interventions operating through well-understood mechanisms. For social programmes, there are likely to be diverse impacts affected through multiple pathways and poorly understood mechanisms (Davies *et al.* 2000, p269).
- **Reliance on taken-for-granted background theory.** "Natural sciences have a large body of taken-for-granted background theory about what matters and what is inconsequential, which gives a solid platform for empiricism". Social sciences do not have this 'luxury': "Here, understanding, such as it exists, tends to be rougher, more uncertain and contingent" (Davies *et al.* 2000).

Kuhn's view of scientific paradigms gradually crumbling until they are replaced by bright new paradigms destined to crumble in their turn (Kuhn 1962) is itself being challenged. The new paradigm of paradigms is flexible, changing, organic, responsive and constantly evolving (Chambers 1997). In Chambers' paradigm, the debate is continuous, and the approach reflects the postmodern fragmentation, chaos, and suspicion of overarching meta-narratives, but provides a strong centre where at least there is a paradigm, albeit a permanently provisional one.

This new paradigm requires what Rahman calls 'breaking the monopoly of knowledge' (Rahman 1993, 195):

'People's self-development implies changing the relations of knowledge, to restore popular knowledge to a status of equality with professional knowledge and advancing 'organic knowledge' as a part of the very evolution of life and not distanced from it. This offers a new role for intellectuals, in initiating 'animation' work with people to promote their collective self-inquiry and action' (Rahman 1993, 179).

It requires intellectuals to provide a new kind of leadership that invites, stimulates and assists people to find new solutions.

- **Failure to achieve the desired policy goals.** Traditional scientific method would normally be distanced from the use to which the scientific data is put. But clear correlations are being shown between the 'techno-scientific paradigm' (especially positivist scientific methods) and negative social impacts. The separation of the science from its social context is seen to contribute to these problems:
 - 'While the application of a reductionist/positivist techno-scientific paradigm to the domain [agriculture] has resulted in extraordinary gains in production and productivity, it has also been associated with a litany of very significant destructive impacts on the bio-physical / socio-cultural complex in which agriculture is embedded ... the prevailing paradigm is unable to either critique itself or adjust to the emergent needs of contemporary society and to the environments in which it must operate' (Bawden 2000, p18).

- 'The dominant positivist and modernist frameworks have singularly failed to help poor people and reduce inequity. Reductionist science and transfer of technology remain strong in controlled, predictable and simplified conditions, and at the microscopic level; but their limitations are now clearer. They have missed local complexity; determinist causality has failed to account for uncertainties, variability, and the adaptive performances of farmers; technologies successful in one context have been applied irrespective of context, with widespread failure; and professionals and institutions have engaged in self-deception as a defence against having to learn the lessons of failure ... the core challenge is how best to proceed in a context of uncertainty, indeterminacy, diversity, mutual causality, increasing complexity and often accelerating change' (Pretty and Chambers 2001).
- **Exclusion of social science from 'scientific' debates.** Donaldson, Lowe and Ward (2001) argue that the exclusion of social scientists from the scientific debate has led to major problems with risk communication. This leads to a range of other social and cultural implications. They conclude that:

'...in cross-cutting research of complex, controversial situations such as those which moves towards a sustainable rural economy generate, it has to be realised that no discipline has pre-eminence'.

These authors argue that social science needs to find a clear place in what are often seen as 'technical' debates (between epidemiologists and vets, for example).

- **Failure to consider better ways to ensure findings are understood and used by others.** Traditional scientific methods would include a commitment to disseminating findings within the peer group and academy. But they would see the wider understanding and use of scientific findings as being beyond the responsibility of the scientists producing the data.

Six meanings of 'research utilisation' have been identified (Davies et al 2000, 30):

- **Knowledge-driven model:** derives from the natural sciences – the fact that knowledge exists sets up pressures for its development and use.
- **Problem-solving model:** involves the direct application of the results of a specific study to a pending decision.
- **Interactive model:** researchers are just one set of participants among many. The use of research is only one part of a complicated process that also uses experience, political insight, pressure, social technologies and judgement.
- **Political model:** research as political ammunition; using research to support a predetermined position.
- **Tactical model:** research as a delaying tactic in order to avoid responsibility for unpopular policy outcomes.
- **Enlightenment model:** the indirect influence of research rather than the direct impact of particular findings in the policy process. Thus the concepts and theoretical perspectives that social science research engenders pervade the policy process.

In the traditional mode of evidence-based practice, there is a linear progression between knowledge creation and knowledge adoption (in the sphere of the research

experts / evidence generators), through to knowledge dissemination and diffusion and knowledge adoption (in the sphere of practitioners / research users) (Davies *et al.* 2000, p325). In Davies *et al.*'s Mode 2, an alternative mode of evidence-based practice, there is a highly decentralised diffusion system. Power and control are shared widely among members of the diffusion system; innovations diffuse through horizontal networks; and there is a high degree of local adaptation as innovations diffuse among adopters. In Mode 2, there is a much more cyclical process. There is constant feedback, between the creation, validation, dissemination, diffusion and adoption of knowledge. Researchers and users are together in the middle of the process.

One particular approach to tackling the gap between research producers and users, developed through the ESRC Global Environmental Change Programme, is interactive research (Scott *et al.* 1998). In interactive research, researchers, funding agencies and 'user groups' interact throughout the entire research process, including defining the research agenda. Interactive research is not a single model but an umbrella term that encompasses approaches in different countries "to build wider social relevance into the research process" (*ibid.*).

There are differences of opinion on the value of interactive research. But there is general agreement that the independence of the research and the freedom to generate and distribute unpopular findings remain critical. Interactive research allows those involved to work through 'policy relevance', process and structures to facilitate interaction in the design of research programmes. It allows funders to involve users in setting research goals, the identification of representatives to be involved, 'domain' seminars to identify research gaps, project steering groups with users and beneficiaries, internships that place researchers in Government, and government analysts in research centres.

As public scepticism undermines public trust in scientific data (see above), three further issues affect the way scientific findings are seen:

- Policy-makers fail to understand the real nature and limitations of scientific evidence: 'lack of analytical capacity ... has also been identified as a problem among those who are the policy customers for research'. And there is a need to better enable policy-makers 'to act as 'intelligent customers' for complex policy evidence' (Cabinet Office, 1999 and 2000).
- There are certain conditions in which research findings can most easily be used (Davies *et al.* 2000, p31):
 - if the implications of the findings are relatively non-controversial, neither provoking rifts nor running into conflicting interests;
 - if the changes that are implied are within a programme's existing repertoire and are relatively small-scale;
 - if the environment of a programme is relatively stable, without big changes in leadership;
 - when a programme is in crisis and nobody knows what to do.
- The roles and responsibilities of scientists are beginning to be seen in different ways:

‘Scientists are also citizens. And ... if science is conducted for the public good – whether for economic benefit, improvements to quality of life or for the cultural value of creating new knowledge, clearly, then, the public has a right to be heard in decisions made in its name’ (Gibson 2000).

The House of Lords Select Committee on Science and Society makes a similar point. It has argued that public participation and dialogue must become embedded in the way in which science is carried out and used:

‘A new Compact between parliamentarians, scientists and the general public is needed which will involve new institutional arrangements’ (House of Lords 2000).

- **Failure to understand actual scientific practice.** Greenwood and Levin (1998) argue that, far from being an isolated, abstract activity:

‘Good science is an eminently social activity ... [and is] a highly iterative and dynamic activity involving repeated action-reflection-action cycles ... thought and action cycle around each other repeatedly’ (Greenwood and Levin 1998 p65).

4.3.3 Social science

As already noted, technical policy and programme decisions tend to exclude social science. Its contribution to understanding the social contexts for decisions and impacts, social processes, values and perspectives has been undervalued. The main disciplines in social science are usually understood to include sociology, social anthropology, social psychology, social policy and political science.

Social science differs from the physical sciences in numerous ways:

- It focuses on different fields of inquiry such as individual human and shared social attitudes, behaviours, institutions, cultures, beliefs and values;
- It uses different methodologies, often bringing together qualitative and quantitative methods;
- It has different ethical frameworks as a result of its subjects being human beings (individuals or groups, or wide social trends), which challenge the conventional split between subjective and objective stances. Human beings are the *subjects* of research, but also the agents; they are not passive, but may be engaged, often explicitly, in the research task, which creates different *demands* and *responsibilities* on social researchers.

In addition, the social science perspective explicitly recognises the particularity of context (including constantly shifting policy and political contexts and resource constraints) and the complex dynamics of the social world (including human motivations as well as social institutions).

Some distinctive approaches to social science have been characterised, as follows (Hart and Bond 1995, citing Robottom and Colquhoun 1993):

- traditional positivist research (on other people);
- interpretive and enlightening research (for other people);

- collaborative (action) research (with other people).

Though Hart and Bond do not present these approaches as a hierarchy, traditional positivist research tends to be valued more highly by decision-makers than action research (see 4.3.5). This apparent hierarchy also reflects the length of time each method has been used and understood, with action research only now gaining widespread acceptance (see below).

The value of social science throughout the policy-making process is, though, beginning to be more widely understood and accepted:

‘Social science should be at the heart of policy-making. We need a revolution in relations between Government and the social research community – we need social scientists to help determine what works and why, and what types of policy initiatives are likely to be the most effective’ (David Blunkett MP, when Secretary of State for Education, cited in Davies et al 2000).

These links between social research and social policy are seen to be essential because of:

‘...the importance of collecting accurate facts about the social world as a basis for formulating government policy’ (ibid, 16).

In practice, conventional social science places a similar higher value on quantitative methods and data than on qualitative approaches, and a similar value on disengagement (objectivity, impartiality and distance) (Greenwood and Levin 1998). These approaches date from the beginnings of the development of the social sciences as relatively new academic disciplines in the nineteenth century, when similarities were sought with the established natural science disciplines in order to validate the new areas of study and necessary new methods. These debates continue. They include battles for academic research funding that tend to continue to favour quantitative methods (e.g. surveys) over qualitative methods.

The particular value of qualitative research is beginning to be understood in social science, and the challenges it poses to conventional policy and practice recognised. It has two particular advantages. First, the degree of close personal contact that qualitative researchers have with research subjects, means the research subjects have an interest in implementing the ideas that emerge about improving practice. Second, the rich descriptions of everyday practice provided by qualitative research enables practitioners imaginatively to juxtapose their own everyday practices with the research description (Bloor 1997).

As a result, qualitative research can ‘go beyond, behind and below the surface level of experimental and statistical evidence’ (Davies *et al.* 2000, p295) and:

- question the assumptions on which existing policy and practice are based;
- question the ways policy and practice issues are framed;
- provide insights into the views, activities and priorities of people who are affected by policy and practice;
- ensure the evidence used to develop policy and practice is ‘ecologically valid’, that is, works in real contexts.

In sustainable development research, a social science perspective offers all the above qualities, and also allows for the acknowledgement of the heterogeneity of settings for sustainable development decision-making. Social science methodologies have helped transform the way sustainable development is understood, by introducing issues that were barely recognised 10 years ago (GEC 2000). These include:

- uncertainty and complexity;
- recognition of a diversity of 'publics' with diverse values, knowledges, cultural identities;
- creating different ways of framing environmental risks and potential strategies to resolve problems;
- recognition that different sectors have different abilities to tackle problems;
- recognition that trust is a vital element in public perceptions of science and institutions, and that the development of inclusionary processes can help revitalise trust in science and policy.

In 2001, Clare Twigger-Ross, then Social Issues Officer for the NCRAOA at the Environment Agency, summarised the reasons why the Environment Agency needed to integrate social science into its work, and the likely benefits for the Environment Agency. In her view, the arguments for greater integration were:

1. Sustainable development has a social dimension, and social issues require an understanding of concepts and frameworks (and methods) from social science.
2. Sustainable development requires the development of a new paradigm of knowledge and learning, which social science can help identify and describe.
3. The Environment Agency's activities have social impacts, and a social science approach is needed to help recognise and analyse these and suggest improvements to practice to minimise negative impacts and enhance positive benefits.
4. The Environment Agency's activities impact on a whole range of different stakeholders and constituencies, and social science can help by analysing the characteristics of different groups and proposing ways of building new relationships.
5. Social science can help develop understanding about the role of values and ethics in policy and decision-making.
6. Certain aspects of social science can provide frameworks for analysing the different cultural backgrounds of different constituencies and can suggest methods for working more effectively with these groups.
7. Reflexivity and learning are a central element in social science methods, and these methods can be extended to support the Environment Agency in becoming a learning organisation.
8. Social science methods can help analyse and contribute to changing the organisational culture of the Environment Agency to enable it to more effectively fulfil its five new roles.
9. Social science methods include rigorous frameworks, which can support analysis, and improve decision-making, within complex issues and involving many disparate interests.

Twigger-Ross summarised the benefits for the Environment Agency if social science were integrated more effectively in wider Environment Agency practice:

- Social science approaches can provide a rigorous and independent scientific approach to human phenomena borrowed from the natural sciences, and can also critique that conventional approach in the light of risk and uncertainty.
- It can provide systematic research approaches to aid understanding of complex, dynamic human processes.
- It can draw on earlier analyses of human behaviour in given circumstances to enable improvements to be made to social interactions for all parties.

4.3.4 Systems theory and practice

Systems theory began in physics, chemistry, biology and engineering in the 1920s (Greenwood and Levin 1998) and, more specifically, in cybernetics and the development of new technologies. Instead of seeing a 'particulate' world (atoms, molecules for example), systems theory sees the world in terms of interacting systems, and the kind and sequence of processes that take place within them. Thus, to understand a phenomenon, it needs to be placed in the appropriate context, and within the processes in which it acts (Greenwood and Levin 1998, p70). Greenwood and Levin suggest that general systems theory is at odds with conventional social science, which continues to hold a world view which is particulate (that is, reductionist).

Systems theory tends to cover activities around critical systems, applied systems studies, systems agriculture, social systems, management science, information systems, systems analysis, systems dynamics and management cybernetics.

'Systemic' thinking is different from 'systematic' thinking. Systemic thinking is essentially contextual, whereas systematic thinking is linear, step-by-step (EPSRC 2002). The differences are outlined in the table below (EPSRC 2002):

Table 6 Differences between systemic and systematic thinking (EPSRC 2002)

Systemic thinking	Systematic thinking
Properties of the whole differ from their parts (e.g. cannot understand wetness of water in terms of hydrogen and oxygen).	The whole can be understood by considering just the parts through linear cause-effect mechanisms.
Boundaries of systems are determined by the perspectives of those who formulate them. The result is a 'system of interest'.	Systems exist as concrete entities; there is a correspondence between the description and the described phenomenon.
Systems are characterised by feedback which may be positive (reinforcing) or negative (compensatory / balancing).	Analysis is linear (a causes b).

Some of the key concepts of systems thinking are (EPSRC 2003):

- **Boundaries.** Borders of the system, which define where the action can be taken.
- **Closed systems.** Closed to inputs from its environment: in practice these systems rarely exist, but many systems are treated as if this were the case.

- **Communication.**
 - First order communication – feedback
 - Second order communication – encompassing language, emotion, perception and behaviour.
- **Connectivity.** A logical dependence between components or elements within a system.

There are close connections in systems thinking between theory and practice though, because the focus is always on action and change, this tends to be expressed as theorising and practising. Checkland and Winter (2003) stress that:

‘...all practical action is theory-laden, in the sense that all action in the world takes as given some ideas, irrespective of whether the practitioner is conscious of it or not’.

In their analysis, theory leads to practice and practice generates theory.

Checkland (1993) suggests five steps in a systemic inquiry:

- set up a structured exploration of a situation considered problematic;
- make sense of the situation by exploring context and culture (politics) using systems models as devices;
- tease out possible accommodations between different interests;
- define possible actions to change that are systematically desirable and culturally feasible;
- take action to change, creating a new situation.

Certain authors (e.g. Checkland and Winter 2003) differentiate between 'soft systems' methodologies and 'hard systems'. Table 7 overleaf illustrates Checkland and Winter's view of these contrasts in relation to project management.

This distinction between hard and soft systems is one of the core characteristics of systems thinking. 'Hard' systems represent the conventional wisdom, which practice itself has generated; they focus on product, and use linear and reductionist approaches. Soft systems are non-linear and holistic, and focus on processes. Such:

‘...systems thinking can be thought of as thinking holistically or 'seeing the big picture' – a mode of thinking which is complementary to the more reductionist thinking of natural science in which the emphasis is on 'breaking things down' and looking at things in detail’ (Checkland and Winter 2003).

Table 7 Differences between 'soft' and 'hard' system methodologies (Checkland and Winter 2003)

A 'hard' systems perspective		A 'soft' systems perspective
A need exists for a new (or improved) produce, system or facility, e.g. a commercial need for a new building.	CONTEXT	There is an ever-changing flux of messy situations and complex issues e.g. the flux of events in a building programme.
A clear objective or goal has been specified, to be delivered on time, within budget and to specification.	CONTENT	'Messy' situations are the norm, in which ends and means are assumed to be unclear, particularly at the front-end of projects.
A management process, usually defined as a sequence of life-cycle stages involving techniques such as PERT and CPM/	PROCESS	The process of managing, defined as a cyclic process of dealing with 'messy' situations guided mainly by experience and intuition.

Systems thinking has only relatively recently become a recognised field, and it is yet to gain a widely accepted philosophical base. There are many varieties and strands of work, but soft systems methodologies:

‘...offer a set of guidelines for tackling 'messy' situations in which the aims and objectives are generally the main problem rather than how to achieve them" (Checkland and Winter 2003).

Soft systems methodologies are also appropriate in other situations (which are not seen to be 'messy'), because 'how' to approach problems is rarely clear in any circumstances.

Soft systems methodologies place emphasis on 'learning' what needs to be done rather than solving a particular problem. In summary, soft systems can be used for improving messy problems, problems with lots of human involvement, problems of organisational structure and process, and capturing potential opportunities (Armson 2003).

Soft systems thinking suggests that situations are rarely straightforward: are 'messy', with unclear objectives, different constituencies / stakeholders with conflicting aims, and need leadership and vision as well as hard analysis and design. Table 7 above is:

‘...not based on the project management life cycle but a broad concept of 'managing' and it is this notion of managing that leads us to focus not on the engineering process or construction process etc, but on the social process of managing in complex situations...with no 'right' answers’ (Checkland and Winter 2003).

Schon (1983) says practitioners deal with this through sophisticated processes of 'reflection-in-action' (for example, thinking on one's feet) and 'reflection-on-action' (such as thinking back on events and planning next moves). Soft systems practitioners do not use ready-made prescriptions and information from education and training programmes.

Armson (2003) suggests that soft systems methodology is best used as a framework into which to place purposeful activity during a systems study, rather as a cookery book recipe. Her framework has seven elements:

- 1 The problem situation – unstructured (not just the problem);
- 2 The problem situation – expressed / captured (in the richest possible pictures);
- 3 Root definitions (essential nature) of relevant systems for each theme;
- 4 Use a formal system concept and other systems thinking as conceptual models: finding the minimum logical set of activities for the defined system to work;
- 5 Compare the conceptual model (point 4) with the real world (point 2);
- 6 Feasible, desirable changes (take back to stakeholders for discussion, discuss discrepancies and how the situation could change, negotiate acceptable changes);
- 7 Action to improve the problem situation as agreed in the debate (and monitor effect).

Armson also suggests that a CATWOE analysis can support systems thinking:

- C Customers (beneficiaries / victims);
- A Actors (those who do the constituent activities of the system);
- T Transformation (what is the transformation process);
- W Weltanschauung (the world view that gives meaning to the system);
- O Owners (those who own the system);
- E Environmental constraints (i.e. context).

The importance of systems thinking to current policy debates is growing. Interest seems particularly related to analyses that:

‘...the current model of public policy making, based on the reduction of complex problems into separate, rationally managed components, is no longer appropriate to the challenges faced by governments and changes to the wider environments in which they operate’ (Chapman 2002).

Chapman's view is that:

‘...systems thinking, which treats public services as a complex adaptive systems, offers an alternative route to developing solutions and increasing system performance”.

He argues that the ‘best approach to improving performance is to take a range of actions, evaluate the results and subsequently learn what works best ... [which] requires both innovation (variety of actions) and effective feedback on the results of previous actions ... different individuals and organisations within a problem domain will have significantly different perspectives ... these different perspectives need to be integrated and accommodated if effective action is to be taken’ (Chapman 2002).

Explicit links have also been made between human and ecological systems in some systems thinking. Gunderson and Pritchard (2002) argue that it is:

‘...time to rethink the paradigms or foundations of resource management institutions and to place more emphasis on the development of sustaining foundations for dealing with complex resources issues ... This framework involves both the human components of the system (operations, rules, policies and laws) and the biophysical

components of the landscape and its ecosystems. The shift of focus to a learning basis is likely to require flexible linkages with a broader set of actors or a network'.

Whole system development (WSD) is a particular development of systems thinking designed to apply to five contextual policy dilemmas:

- top down and bottom up
- consumer and citizen
- treatment and prevention
- consultation and involvement
- long and short term.

WSD is based on a critical analysis of current policy and practice management:

'Top down targets and inspection regimes can feed pessimistic assumptions of human nature, while whole systems development takes a more optimistic, high trust view of human potential and capacity to implement the changes people really want to happen' (Wilkinson 2002).

Wilkinson further explains that WSD works 'in the uncomfortable space where top-down collides with the horizontal and networked world of implementation' (Wilkinson 2002).

Whole systems approaches also work by identifying all elements of the system (in public services these would include citizens, communities, services, structures and governance), and focus on learning that is "organic, at times experiential, and above all action-oriented. It will also take time" (Wilkinson and Appelbee 1999). These authors identify a critical path for leading and promoting whole system changes:

- Create a readiness for change through an appropriate mix of disturbance, challenge and support;
- Work towards the redefinition of roles, responsibilities and relationships around the key tasks and priorities to be achieved;
- Support and encourage team members to learn new skills and knowledge that they find they need to develop the new competencies required (including the skills of working together);
- Promote the bottom-up improvement of systems to support the new flexible teamwork focused on task achievement;
- Modify organisational structures and information, monitoring and compensation systems to consolidate the new configurations of working: 'structure follows function'.

In essence, whole systems approaches require starting by rethinking (re-conceptualising) organisational change issues, action in relation to those issues, and the involvement both of ourselves and of others in diagnosis and treatment. There are close connections with experiential learning (see 4.4.6 and 4.4.7), but whole systems working goes further. It recognises that, though the policy rhetoric focuses on leading change through identifying 'what works', 'improvements for products and services of all kinds, across all sectors, are 'constructed' and delivered through organisational and institutional frameworks that themselves interact with users' (Wilkinson 2001). So they are not isolated, abstract frameworks, but institutions that exist in a complex existing context with complex existing relationships. The whole systems approach aims to clarify these connections and reconcile dilemmas through focusing work on *implementation*, based on "people's

capacity to be enthusiastic, committed, collaborative and putting users and communities at the centre of their attention' (ibid).

There are five keys to WSD that Attwood et al (2003) see as an antidote to the 'action hero' model of leadership, and 10 core values. The five keys are:

- leadership
- public learning (with action)
- diversity
- meeting differently
- follow through.

The 10 core values are:

- optimism
- empathy and humility
- tenacity and courage
- learning
- whole system perspective
- local knowledge
- local solutions
- building social capital
- celebrating small steps
- long term focus.

Overall, whole system development involves (Attwood *et al.* 2003):

- Widening circles of inclusivity – focussing on the people with the problem first, then moving outwards;
- Middle ground frameworks – connecting overall strategic direction with local knowledge and learning on the ground;
- 'The new organising' to use the knowledge, learning and action that takes place outside, between and across formal organisations in communities of practice, learning networks and action learning, with social capital as the key to successful implementation and development through dense nets of relationships.

4.3.5 Action research

Action research brings together systems thinking and action. It is:

‘...a way of generating knowledge about a social system while, at the same time, attempting to change it’ (Kurt Lewin, cited in Hart and Bond 1995).

It was developed as:

‘...a form of research which could marry the experimental approach of social science with social action in response to major social problems of the day’ (Hart and Bond 1995, p15).

Action research has been a distinctive form of research since the 1940s, when it was developed by Kurt Lewin in the US. It started in industry where it was used to tackle issues such as productivity, flexibility, morale, change and innovation etc. The US used it in education in the 1940s. The Tavistock Institute in the UK and the Norway Industrial

Democracy Project took it up in the 1950s (again with an industrial focus). It was used in Swedish, US and Japanese companies in the 1960s, and in the UK Community Development Projects in the 1970s (starting in 1969). The health services in the UK have used action research from the early 1980s (ibid, and Greenwood and Levin 1998).

Like soft systems and systems thinking, action research was based around the need to find better ways of linking the lessons and insights from empirical research into practice, based on social psychology and the study of groups. It was "designed specifically for bridging the gap between theory, research and practice" (Holter and Schwarz-Barcott 1993, cited in Hart and Bond 1995). One of the best known slogans in action research is from Kurt Lewin on this subject: "Nothing is as practical as a good theory" (Greenwood and Levin 1998, 19).

The focus in action research is always on enhancing practitioner knowledge, rather than influencing policy on a national scale (Davies et al 2000, 73). It works by increasing the ability of stakeholders to control their own destinies, and keeps improving their capacity to do so (Greenwood and Levin 1998). The level of participation by stakeholders was always an important characteristic of the action research approach, but the level of participation has now grown and become more important, to the extent that action research is now often seen as essentially a collaborative approach between researchers and subjects. Greenwood and Levin identify three key elements of action research:

- **research**, and generation of new knowledge;
- **participation**, with researchers as facilitators and teachers and responsibility being shared with co-researchers / participants;
- **action** – aiming for change.

Reason and Bradbury (2001, amended) expanded these three elements of action research into four categories, all for the general good:

- developmental form; emerges during the lifetime of a project;
- the focus is on practical issues;
- knowledge is created in and through action;
- the process is democratic and participative.

Action research works, as Lewin originally proposed, through four basic activities: planning, acting, observing and reflecting (Hart and Bond 1995). These activities are not, though, linear. They should instead be seen as:

‘...a spiral of steps each of which is composed of a circle of planning, action and fact-finding about the result of the action’ (Lewin 1946, cited in Hart and Bond 1995).

Constant evaluation of the action is central, to decide what to do next, based on whether the action taken has led to an improvement.

The methods used in action research can include quantitative and qualitative social research methods (surveys, statistical analyses, interviews, focus groups, ethnographies and life histories). Action researchers (in common with other social science researchers) recognise all the epistemological issues that underpin valid social knowledge (Greenwood and Levin 1998, 4). The difference in action research is that the focus, the methods, the outcomes and the outputs are all decided jointly by researchers and subjects.

Recently, the resurgence of action research has been seen as a response to the perceived failure of the positivist approaches to social science. The latter draw on the natural sciences and suggest that social science can also produce general laws about human behaviour (with predictive power) on a par with those of the rest of the natural world, i.e. that phenomena can exist independently of the observer, can be comprehended through the senses and can be measured and quantified (Hart and Bond 1995).

Hart and Bond (1995), following Lewin, identify four types of action research (these are 'ideal types' and the categories overlap extensively):

- **Experimental** – used to test different interventions (scientific approach to social problems and closest to positivist social science);
- **Organisational** – organisational problem-solving (data from research with different groups, leading to principles of group behaviour);
- **Diagnostic / professionalising** – to recommend remedial measures and propose a plan of action (often strengthening new professions e.g. nursing, teaching, community work);
- **Participative / empowering** – involving stakeholders in the remedial action, including making decisions (community development type approaches influenced by Freire, and furthest from positivist social science).

Carley and Christie (2000) usefully contrast action research with traditional social science in the management of sustainable development, especially environmental management. For them, traditional social science requires that:

- the primary objective of research remains unaltered during the research process;
- there is precise and measurable control over dependent variables;
- intervening variables be controlled or excluded from the research framework;
- the researcher remains neutral and dispassionate throughout the process.

The problem with this approach is that there is never precise and measurable control in any dynamic situation. All other requirements of conventional research remove the potential for feedback and prohibit the researcher from contributing the benefits of experience and intuition to the process. All of these criteria ensure that the qualitative aspects of problems are ignored or undervalued.

In contrast, for Carley and Christie (2000) the action research approach:

- makes use of the social context of a specific environmental problem or development challenge to increase its own effects;
- redefines the research process towards a rapid, interactive cycle of problem-discovery-reflection-response-problem redefinition;
- replaces the neutral social scientist / observer with a multidisciplinary team of practitioners and researchers, all working together in a process of mutual education;
- proposes that pluralistic evaluation replaces static models of social processes. This is characterised by concern for: institutional functioning, continual monitoring of project implementation, the subjective views of major constituent groups and methodological triangulation, by which a variety of data sources are brought to bear for evaluation;
- generates replicable learning from the above elements, which is constantly tested against both past experience and the results of current action.

In summary, Carley and Christie (2000) conclude that action research differs substantially from research or action alone:

'It differs from research, in its avoidance of the static, controlled and contrived model and its emphasis on a fluid, on-going approach which generates conclusions at the most appropriate time in the process rather than waiting until the bitter end. It differs from action alone in feeding back on evaluation, resulting in crucial shifts in the direction of action. It is fundamentally about collaboration and dialogue ... There are personal and professional, as well as organisational, benefits. Participants in action research strategies and/or in action networks tend to become sensitised to the diversity of motivations for human action, and the constructive and sustainable means for altering them. The result is what Schon calls the 'reflective practitioner'.'

Whether action research is better than positivist research or vice versa depends on what the researcher wants to study, and under what conditions. The usefulness of positivist science may be limited when research is about problem-solving or when it concerns individuals whose relationships with others are influenced by the way they define the situation (Hart and Bond 1995).

Hart and Bond (ibid) usefully summarise their own seven criteria, which they suggest distinguish action research from other methodologies, asserting that action research:

- is educative (i.e. about learning);
- deals with individuals as members of social groups;
- is problem-focused, context-specific and future-orientated;
- involves a change intervention;
- aims at improvement and involvement;
- involves a cyclic process in which research, action and evaluation are interlinked;
- is founded on a research relationship in which those involved are participants in the change process.

Action research has an essentially experimental approach (testing, reflecting on and changing action). Greenwood and Levin (1998, 54) argue that it is:

'...much closer to the practices of physical and biological sciences than any of the mainstream varieties of academic social research ... [because] action research is far more likely than conventional forms of social research to produce reliable and useful information and interpretations of social phenomena'.

They suggest that, in the physical sciences, 'thought and action cycle around as they necessarily do in any kind of action research' (ibid, p65). Unlike conventional scientific processes in any discipline, action research requires "that research processes, research outcomes and the application of results to problem-solving are inextricably linked" (ibid, p93). Conventional researchers separate the research process and the results of the research, which are analysed and reported after the research actions are completed.

Forms of action research include:

- pragmatic action research (including constructing arenas for dialogue and search conferences),
- participatory action research,

- contemporary feminist analyses,
- participatory research,
- action science,
- organisational learning,
- human inquiry,
- co-operative inquiry and action inquiry,
- educational strategies,
- participatory evaluation
- participatory rural appraisal (PRA).

The Joining Up project has focused particularly on the model of co-operative (or collaborative) inquiry, also known as new paradigm research, developed by Peter Reason in the 1980s. This approach is designed so that

‘...all those involved contribute to the creative thinking that goes into the enterprise – deciding on what needs to be looked at, at the methods of inquiry, and making sense of what is found out – and also contribute to the action which is the subject of the research... All who participate are co-researchers and co-subjects’ (Reason 1988).

Collaborative inquiry of this type may use first, second or third person inquiry methods:

- First person inquiry is about individual professional practice (for example, examining one's own practice in framing and communicating ideas and experience).
- Second person inquiry involves a group of co-researchers researching together for a benefit to their community (of interest or geography).
- Third person inquiry describes a large group process inquiry involving a wider group than just the co-research group (for example, other stakeholders who may be interested in the outcome, could provide data or are involved in implementing change as a result of the research).

4.4 Education and learning

Formal learning in established institutions, aimed primarily at young people, is only one of the types of learning needed for sustainable development. Other initiatives bridge the formal and informal. They include the 'doing by learning' approach to citizenship and active community engagement (Scott et al 1989). Formal adult education initiatives exist on both the content and processes of sustainable development and engagement. Other relevant approaches include community education, action learning, capacity building and professional development, learning networks and communities of practice. These are all outlined below, after a summary of the Environment Agency's own pathfinder work on education.

4.4.1 Environment Agency work on education

The Environment Agency recognises the importance of learning in achieving long-term sustainable development:

‘The environmental agenda is well-established, but people recognise that consideration of the environment alone is not sufficient to achieve sustainability.

Long-term investment in building the infrastructure for lifelong learning will enable society to learn and apply the skills it needs to deliver a sustainable future' (Sir John Harman, Chairman of the Environment Agency. Foreword to *The Business of Learning*, Environment Agency, 2001).

The Environment Agency developed its thinking in this area through its Education Pathfinder project, which published its findings in the form of a consultation paper: *The Business of Learning* (Environment Agency 2001). The Pathfinder made strong links between the Environment Agency's technical regulation and enforcement role and the need for it to engage in wider educational and learning activities:

'...effective regulation involves more than just licensing and enforcing. We are placing increasing emphasis on trying to prevent environmental problems from occurring and so, in the longer term, reduce the need for enforcement action' (Environment Agency 2001).

The role of education and learning in moving towards sustainable development has become well-established. It ranges from formal learning initiatives in established institutions (schools and universities, for example) to learning from experience.

The Environment Agency's *The Business of Learning* identified a number of policy areas for the Environment Agency's future links to education and training:

- business, especially the financial sector;
- higher education and further education, to help integrate sustainable development principles into existing courses, with work with the Higher Education Funding Councils nationally and through Learning and Skills Councils regionally. Planning, engineering, agricultural and business schools and courses were identified as key areas for the Agency;
- Continuing Professional Development (CPD), especially through the Professional Practice for Sustainable Development programme (PP4SD) and the Engineer of the 21st Century inquiry, and through sustainable development National Vocational Qualifications (NVQs);
- new partnerships, such as the North West Environmental Partnership, the Yorkshire and Humber Region's Sustainable Development Educational strategy 2000-2001, and with NGOs.

4.4.2 Education for sustainable development

The Government Panel for Sustainable Development Education (1999) articulated the purpose of education and learning for sustainable development:

'Education for sustainable development is about the learning needed to maintain and improve our quality of life for the generations to come. It is about equipping individuals, communities, groups, businesses and government to live and act sustainably; as well as giving them an understanding of the environmental, social and economic issues involved. It is about preparing for the world in which we will live in the next [21st] century, and making sure that we are not found wanting.'

The Sustainable Development Education Panel set a series of priority actions for education for sustainable development (ESD), (Sustainable Development Education

Panel 2002). The Panel took a strategic approach, acting to catalyse effective action by others. In its first four years, it focused on work with:

- Central Government, regional and local government;
- schools, through input on curriculum development and professional development for teachers (with OFSTED and the Teacher Training Agency), and online support for teachers;
- further and higher education, including:
 - the Further Education Funding Council funded 11 small-scale sustainable development educational standards projects, managed by the Learning and Skills Development Agency, and with the Learning and Skills Council, including sharing good practice, illustrative studies and identifying priority areas for improvement;
 - work with the University for Industry, including new course materials available online;
- professions and the workplace, including work with the Advisory Council on Business and the Environment (ACBE), the Trades Union Sustainable Development Advisory Committee (TUSDAC) and the Council for Excellence in Management Leadership;
- youth services, including links to the Council for Environmental Education, Development Education Association and the National Youth Agency debates about incorporating sustainable development into the training of Connexions personal advisers.

Other major national formal sustainable development education initiatives include:

- Work by the Higher Education Funding Council to develop a new sustainable development partnership scheme with Forum for the Future. The Higher Education Funding Council for England had already developed energy efficiency guidance for its sector (1996/7), published a workbook for environmental reviews (1997/8) and supported an Environmental Management working party.
- Incorporation of ESD into citizenship education, which is due to become a National Curriculum subject for all pupils in all year groups at key stage 3 and 4 from August 2002. Other school curriculum subjects with ESD elements include science and geography.

4.4.3 Citizenship and environmental education

Citizenship education in schools offers substantial opportunities for learning for sustainable development. Given the importance for citizens to understand and actively engage with sustainable development (WCED 1987), the early development of this knowledge and skills at schools has clear benefits. The Final Report of the Advisory Group on Citizenship (1998) summarised three strands that should run through all education for citizenship. All can be seen as central to sustainable development:

1. **Social and moral responsibility.** From the beginning, children learn self-confidence and socially and morally responsible behaviour in the classroom and beyond, towards those in authority and towards each other.
2. **Community involvement.** They learn about and become helpfully involved in the life and concerns of their neighbourhood and communities, including learning through community involvement and service to the community.

3. **Political literacy.** Pupils learn about the institutions, problems and practices of our democracy. They learn how to make themselves effective in the life of the nation, locally, regionally and nationally through skills and values as well as knowledge. This can be termed 'political literacy', a term wider than 'political knowledge'.

Environmental education has a much longer history in schools and a well-established infrastructure of support in formal education networks and in NGOs than citizenship education. Such support has come both from those bodies primarily concerned with environmental education (such as the Council for Environmental Education) and from environmental NGOs that undertake extensive education work with schools. WWF UK, for example, has provided in-service training for teachers, teaching materials, online debates for school pupils on environmental issues and so on. Initiatives to improve school grounds in ways that involve the pupils, staff and local communities in practical environmental action are linked to these formal educational activities. Often, they include elements that promote biodiversity (projects by Learning through Landscape, for example).

4.4.4 Capacity building and professional development

Institutions tend to use the term 'capacity building' when talking about forms of training that may use less formal methods or in relation to less traditional skills. It is defined in various ways, including 'Training and other methods to help people develop the skills necessary for them to achieve their purpose' (Wilcox 1994). Chambers prefers the term 'capability'. By this he means 'the quality of being capable; the ability to do something' (Chambers 1997). It is clear that capacity building is about the practical skills and knowledge necessary to achieve specific tasks.

The term 'capacity building' is most often used to describe work with communities (e.g. Skinner 1997). Sometimes it is almost a simple alternative to community development. But it is certainly used in relation to the ways in which local communities have their capacity built to enable them to participate in processes led by public institutions. Increasingly, though, capacity building is used to describe the learning processes and skills needed by professionals to work in various unfamiliar ways, especially with local communities, the public and other stakeholders, and to deal with sustainable development.

Agenda 21 laid great emphasis on capacity building for sustainable development, and this emphasis has been followed through in various UK sustainable development strategies following Agenda 21. For example, para 3.12 of Agenda 21 reads:

'National capacity-building for the implementation of the above activities is crucial and should be given high priority. It is particularly important to focus capacity building at the local level in order to support a community-driven approach to sustainability and to establish and strengthen mechanisms to allow sharing of experience and knowledge between community groups at national and international levels' (United Nations 1992).

The learning techniques used in capacity building tend to include the use of workshops, study tours and visits, small grants, distance and action learning, secondments and internships and so on, and community service and volunteering (adapted from Deri 2001). Similar approaches have helped integrate sustainable development principles into

continuing professional development (CPD), and there are now close links between capacity building and professional development.

Robert Chambers has shown how conventional professional attitudes ('we know best') have led to errors, omissions and delusions with spectacularly damaging results, including in environmental management (Chambers 1997). He proposes new approaches that require everyone to question and change what we are and what we do. This places new responsibilities on environmental professionals promoting participatory approaches. It requires a new humility, sensitivity, nimbleness and willingness to change: the changes needed are personal as well as institutional (Chambers 1997).

These analyses have led to a newly emergent learning paradigm. This implies '...a new professionalism and new institutional settings' (Pretty and Chambers 2001), based on experience in two domains: new learning environments and participatory approaches and methods. The new paradigm focuses on the need to tackle three essential areas, leading to a new professionalism with new concepts, values, methods, and behaviour:

- new methodologies for partnerships, dialogue, participatory analysis and sharing;
- new learning environments for professionals and local people to develop capacities;
- new institutional environments, including improved linkages within and between institutions.

The extent to which various professional bodies are committed to sustainable development principles, and the integration of these principles in CPD, varies enormously (Environment Agency 2001). Some institutions are well-advanced in this. The Royal Town Planning Institute and the Chartered Institute of Environmental Health, for example, incorporate sustainable development principles into CPD. Others, such as the Town and Country Planning Association and the Royal Institute of British Architects, have committed to working more closely with the Environment Agency to take sustainable development further into CPD.

The Environment Agency has been involved in two specific partnership projects to promote the inclusion of sustainable development in CPD:

1. **Professional Practice for Sustainable Development (PP4SD)**. This project has been supported by the Defra's Environmental Action Fund and involved the Institution of Environmental Sciences, the Council for Environmental Education, The Natural Step and WWF UK. The aim has been to integrate environmental, social and economic thinking into professional practice, enabling professionals to work more sustainably. Working with 14 professional institutions, PP4SD planned to facilitate workshops to help the professional institutions develop a sustainable development framework for their own and others' use. PP4SD also planned to produce guidance notes for CPD practitioners on how to incorporate sustainable development learning, and develop a Foundation Course on sustainable development relevant to all professional institutions.
2. **The Engineer of the 21st Century**. This inquiry, led by Forum for the Future, aimed to build a critical mass of engineers for sustainability who could be a positive force for change within the profession. It was sponsored by 16 leading UK companies and/or organisations and by two Government departments. Thirty-two engineers from the sponsoring bodies were invited to develop a vision of the engineer of the 21st century

and to explore his/her role in sustainable development. The engineers worked in five consortia, focusing on ethics and values, learning and participation, practice and partnership, innovation and technology, and incentives and costs.

4.4.5 Community education

Community education may be run formally by local authorities as part of their continuing education programmes, or it may be associated with community associations that run learning programmes of various sorts. Regardless of who runs community education, a specific ethos informs it:

‘Community education is a process by which education workers engage with local people in a learning programme ... a process whereby small groups of people are gathered together around a clear set of objectives to engage in a learning process which has tangible outcomes for them as clients’ (Fagan 1993).

Community education tends to refer to 'education facilitators' rather than to teachers. The European Conservation and Development in Sparsely Populated Areas (CADISPA) project, for example, was requested by the European Union following the 1992 Earth Summit specifically to develop the thinking and practice behind Education for Sustainability. CADISPA showed:

‘...how local people could be brought to the centre of a community development process which gathered together opposing positions and which led to an outcome which would prove sustainable for their communities’ (Fagan 1998).

Community education varies enormously in its own practice. It ranges from relatively conventional courses, to applied youth work, to much more radical approaches. The formal approaches may include initiatives such as the project to develop, pilot and accredit a certificate in sustainable development (Level 1-NVQ equivalent). This initiative involves the Environment Agency with Groundwork UK, Black Environment Network, Royal Society for the Protection of Birds (RSPB), the Wildlife Trusts, BTCV and the National Training Organisation for land-based industries (LANTRA). The aim is to provide employees and citizens with a basic understanding of the core principles of sustainable development. It will achieve this with a set of practical tools and ideas that will be made widely available after they have been piloted with employees in small and medium sized enterprises (SMEs) and the voluntary sector, and with community leaders.

A more radical approach is characterised by Paulo Freire's concept of 'conscientisation'. Through this process, people ‘...learn to perceive the social, political and economic contradictions, and to take action’ (Freire 1996). His analysis of the learning process has been highly influential, particularly in community development and community education in the UK and Latin America. It is based on the principles of dialogue between teachers and lay people for their *mutual* learning. The mutuality of the learning process is crucial. This is not learning at the feet of a master, but a process of joint learning in which the knowledge of all parties is respected, recognising that ‘the educator himself needs educating’.

4.4.6 Action learning

Action learning is a method of learning and development pioneered by Reg Revans in the 1950s. It shares some of the aims mentioned above. Essentially, people work together in small groups and help each other to tackle the important problems they face. It is based on Revans' theory that organisations, even societies, cannot flourish unless their rate of learning is greater than the pace of change they experience ($L > C$). Effective learning (L), Revans says, comprises two elements: Programmed knowledge (P) is teaching about information or knowledge already in the world (traditional teaching, for example). Questioning insight (Q) is the application of reflection, inquiry and insight. The approach can thus be summarised as $L = P + Q$.

Revans also differentiated between 'problems' and 'puzzles'. Puzzles have 'best' solutions. They can be solved by the application of programmed knowledge (P), perhaps with the help of an appropriate expert. Problems, by contrast, have no 'right' answers. They are often called the 'wicked' issues (Stewart 1997), which can be tackled only through the thoughtful application of inquiry and insight, supported by researching programmed knowledge.

Typically, action learning 'sets' of five or six people meet once or twice a month to work on problems in which they have a real stake or for which they are responsible. They are often, but not necessarily, supported by a set adviser who understands group processes and also helps the group develop the skills they need to work effectively. Set members focus on three learning levels:

- on the problem which is being tackled;
- on what is being learned about themselves and their relationship to the problem;
- on the process of learning itself and how this can be transferred and applied in other settings and circumstances.

Carley and Christie (2000) summarise action learning as making '...the primary task of managers to create the capacity for learning', with action learning strategies having three objectives:

- informed and effective decision-making through the changing of organisational culture;
- the unification of theory (or systematic reflection) and practice through action research, which leads to replicable learning across a range of similar problem areas;
- professional development.

For Carley and Christie, action learning is:

'...the means by which organisations can deal with rapid and complex change which causes process outcomes and organisational objectives to be mismatched' (Carley and Christie 2000).

'Action learning strategies enable us to deal with systems of problems without having to solve them, and to do so in a continuous, adaptive and non-synoptic manner which meets the rapidity, complexity and uncertainty of turbulence' (Ramirez 1983).

Carley and Christie summarise the differences between bureaucratic approaches to innovation and change, and action learning strategies as presented in Table 8:

Table 8 Differences between bureaucratic approaches to innovation and change, and action learning strategies

Traditional bureaucratic approaches, characterised by:	Action learning strategies, characterised by:
Atomistic logic	Contextual logic
Hierarchical connections	Lateral connections
Centralised procedures	Decentralised authority
Formalised procedures	Low formalisation
Rigid structures	Flexible / adaptive structure
Division of labour	Teamwork
Compartmentalised knowledge	Integrated knowledge

Carley and Christie suggest that:

‘Action learning is specifically concerned with integration: theory with practice, and research with action. Its underlying assumption is that there is an emergent quality to this process. It is not, therefore, either theoretical or anti-theoretical, but theory grounded in practical experience and experience directed by theoretical reflection’.

They argue that action learning:

‘...addresses head-on social inquiry's fundamental problems – the relation between theory and practice, between the general and the particular, between common-sense and academic expertise, between mundane action and critical reflection, and hence – ultimately – between ideology and understanding’ (Godet 1989).

4.4.7 Learning networks and communities of practice

Learning networks, learning organisations and communities of practice are all innovative approaches to sharing learning within a context of change. They are based on social theories of learning, that is that we learn not just as individuals, but also by doing things with other people. There are clearly close associations with action learning. Although action learning has been criticised as being isolated from its institutional context and wider practice, it is generally considered to be concerned with organisational, community and social change, as well as with individual learning and action.

In all these processes, all members of a 'community' (network or organisation) learn together through the process of making tacit knowledge explicit (Polanyi 1966). For example, as members of learning networks interact and reflect on their practice, their 'knowing in action' is transformed into knowledge in action through reflection with others (Schon 1983). Kolb's learning cycle drew on earlier work in experiential learning to construct a simple diagrammatic model (Kolb 1984):

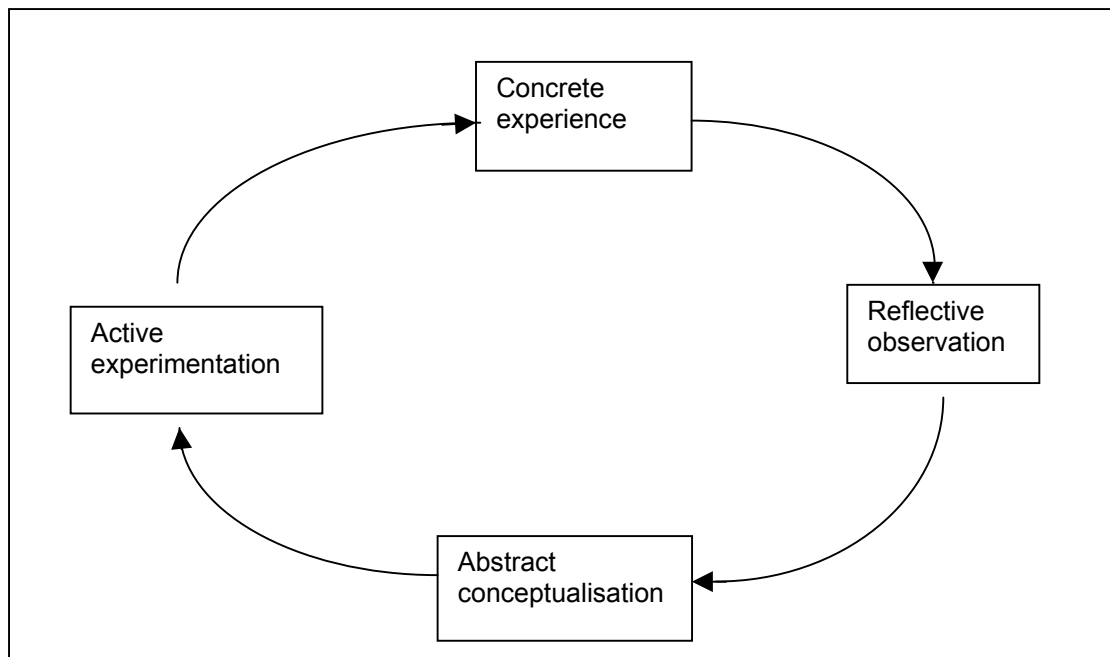


Figure 1 A simple diagrammatic model of Kolb's learning cycle

Interest in networks has been growing as networks are seen as alternative organisations that can promote innovation. Innovation research suggests that:

'...innovation is a social rather than a solely individual process ... occurring among a variety of stakeholders rather than as a matter of transfer or dissemination of technology or ideas ... network building and maintaining relationships with other actors is crucial in this' (Moseley 1999, quoting Engel 1997).

The idea of networks is not new, with the literature on network organisation dating back to the 1930s (Pedler 2001). But networks have recently gained prominence, mostly because of the development of information communications technologies, but also because of concepts such as the 'turbulence' of social and economic contexts (Pedler 2001).

There are many definitions of networks. One of the simplest is the WHO's:

'A network is a grouping of individuals, organisations or agencies organised on a non-hierarchical basis around common issues or concerns, which are pursued proactively and systematically, based on commitment and trust' (WHO 1998, cited in Pedler 2001).

The key benefits of networks are about collaboration and joint effort. An ethos of collective responsibility and action is based on interdependence and trust. Such attributes raise issues of accountability. The flexibility and adaptability associated with networks can also mean lack of dynamic and authority (Gillies 2000).

Pedler (2001) summarises the key characteristics of networks as follows:

- groups of people linked by common goals;
- held together primarily by personal relationships;

- ties of mutual interest, sharing, reciprocity and trust;
- links via various connecting and co-ordinating means such as meetings, conferences, newsletters, joint projects, working partnerships;
- network nodes can be individuals, groups, teams or organisations;
- spaces and interstices spanned by these nodes and links are the potential for learning and innovation;
- networks include and exclude people;
- status and authority are based less on formal position or qualifications and more on knowledge, usefulness, sharing and innovativeness;
- they can be in whole or in part virtual associations where the technology of computer networking underpins and enhances face-to-face interaction.

The learning dimension underpins several other claimed benefits of networks including 'knowledge generation and sharing, flexible and innovative service delivery, and not least the ability to re-organise and re-configure to fit changing conditions' (Pedler 2001).

Pedler suggests that there are some 'core learning competencies' for networks if they are fully to realise this aspect of their potential:

- **Improving practice through sharing what we know:** for example, encouraging new practice through connecting people, disseminating knowledge, new ideas and resources through directories, learning events, improvement fairs;
- **Learning network:** developing our practice of learning from reflecting on what we do and improving our joint working;
- **Network learning:** understanding and knowledge of how networks work and the capacity to help people set up their own learning networks around their interests;
- **Informing, influencing and enthusing 'the hierarchy':** helping senior managers make sense of, and understand how to manage, new forms of organising and ways of working.

One objective of learning networks is that they allow people to share the practical knowledge gained through their own experience. Another objective is for people to value that shared practical knowledge as highly as theoretical knowledge taken from others' research.

One example of a proposed learning network can illustrate the potential qualities of this approach. In considering how to transfer good and leading sustainable development practice around the EU, a Europe-wide learning network of Sustainable Futures Centres has been proposed. It would build on education for sustainability in schools etc. It would work with existing leaders and the rising generation in decision-makers (Christie 1999).

The challenge of these networks is to

'...recognise the need for learning across sectors and between levels of governance and practice, given the uncharted territory that sustainable development takes us into. The key task is to bring together people from different sectors and levels, and to transmit messages about what works in what context in pursuing environmental integration with economic and social policy ... a more systematic approach is needed to make learning for sustainable development stick in the minds - and hearts - of Europe's current and future leaders' (Christie 1999).

Sharing good practice in itself is not a simple task. Not everyone responds to detailed case histories from a relatively unknown context that may not resonate with their own experience. The components of the activities used to share good practice are relatively well understood (Planning Exchange 1998):

- case studies (inspirational)
- reference guides (supportive)
- how to do it manuals (prescriptive)
- awards schemes (rewards).

However, what is considered to be 'good' practice is less easy to define, as listed below:

- good practice is a relative concept and criteria for assessment are often vague and contested;
- who defines 'good' is often as much a result of who holds power and resources rather than expert knowledge;
- the term 'good practice' can be used in a comparative way (e.g. 'better'), which is not always helpful to new work;
- timing is crucial (the point at which it is judged – after one year or 10);
- it may be better to focus on sharing 'good ideas' at the early stages of development and 'interesting practice' at various stages later on (Planning Exchange 1998, adapted).

There are also major problems in methods for sharing good or interesting practice. Good practice should perhaps be seen as an art rather than a new way of presenting information to people who may or may not be ready, willing and able to see its relevance to their situation.

These challenges for defining and sharing good practice do not undermine the importance of learning from experience and of experiential learning. The complexities are, though, becoming more widely understood:

'We need to develop not only good practice but a better and more mature debate. How we use science, how we spread understanding of complex issues, how decisions which need to be made through the political process can contribute to the public good – all of these also are key to our mutual success or to our mutual failure' (Beckett 2001).

Communities of practice share many qualities with learning networks. They are characterised by the following three facets, which suggest a closer, more personal set of relationships than other types of learning network (Wenger 1998):

- A shared domain of knowledge, which gives the members a sense of **joint enterprise**;
- A sense of community, through relationships of **mutual engagement and trust** that create a social entity – the members interact and learn together;
- A **shared repertoire** of communal resources that members have produced through mutual engagement (such as tools or documents, routines, standards, lessons learned); this is the community's accumulated knowledge.

Knowledge management is key to modern organisations. Several major commercial companies and other bodies (such as Hewlett Packard, IBM, Shell Oil, and the World Bank) have developed communities of practice as a way to achieving knowledge management (Wenger 1999). However there is still a lot to be learned:

'...we still have little understanding of how to create and leverage knowledge in practice. Traditional knowledge management approaches attempt to capture existing knowledge within formal systems, such as databases or websites ... [the other, first half of the task] is to foster the communities that can take responsibility for stewarding knowledge" (Wenger 1999).

Wenger identifies two problems with technology-based approaches:

- they only capture explicit knowledge – much remains tacit;
- they assume knowledge exists in a social vacuum, and can be separated from the communities that own it.

Large databases that no-one looks at or uses may therefore be created:

'Knowledge is not some substance that can be managed at a distance like an inventory. It is part of the shared practice of the communities that need it, create it, use it, debate it, distribute it, adapt it and transform it. These communities give it life. As the property of the community, knowledge is not static: it involves interactions, conversations – a process of communal involvement' (Wenger 1999).

In this analysis, knowledge management requires a community development process. This means involving those who create and use the knowledge. What matters is how documenting can support people's activities – 'knowing remains primarily a human act of meaning making. Communities of practice are the living repositories of their knowledge' (Wenger 1999). Communities of practice emerged in industrial contexts around the model of traditional apprenticeships, but they focus less on master and student and more on interactions with experienced practitioners and more advanced apprentices in a living curriculum for the apprentice.

Communities of practice differ from the cross-functional teams that became common organisational practice in the 1990s. Teams are very effective at producing products and services. But problems emerged as teams started to become new 'silos' (as old departments had been). They could become isolated and inward looking, and they could neglect long-term capacity building as their focus was entirely on the task to be completed (McDermott 1999).

Wenger suggests that communities of practice can exist in many forms - within organisations, across teams, across institutional boundaries and across organisations - which may or may not relate to official organisational structures (Wenger 1999). She argues that communities of practice are different from other organisational links because they are:

- based not on reporting relationships (like a department) but on collegiality;
- based not on a task (like a team) but on the shared learning and interest of the members;
- based not purely on relationships (like a network) because they are about something, and have their own identity and shared practice which develops over time.

Communities of practice and teams are not mutually exclusive. McDermott (1999) refers to the 'double-knit' organisation. In this, cross-functional teams are woven together through communities of practice. Each community of practice focuses on a topic or discipline that is important to the organisation. Each is responsible for sharing knowledge and standardising practices. Such an approach plays to the strengths of both forms. Teams focus on outputs, communities of practice focus on learning, and neither becomes diluted by losing its focus.

Some communities of practice are short-lived; others last for many years. They do go through stages and will end when they have outlived their usefulness. Wenger (1999) suggests that all stages involve different levels of participation from a core group, full members, peripheral members, transitional participation (for a specific reason, without joining as a member) and passive access (have access to resources e.g. tools, publications and websites). People stay engaged because they value the learning they find together. This learning is both instrumental (working on something) and personal (knowing each other, sharing perspectives). All of this builds to a shared practice that reflects the members' collective learning, and to a community that reflects the relationships and identities it has developed around that practice.

The Environment Agency initiated a 'communities of practice' science project in 2001. Drawing on Wenger, a community of practice was defined as 'a group of people who share a common set of professional or work issues or problems, and deepen their knowledge and expertise in this area by interacting on a regular basis'. They are 'established in support of a recognised business goal; non-hierarchical; facilitated' (Eastwell 2001).

The intended goals include: improving process and individual performance; sharing good / best practice; creating tools, standards etc; supporting process and organisational learning; supporting individual learning. This science project found that, though some informal links and networks exist in the Agency, they were not seen as strategic assets and were not supported or resourced. Many fail. The project concluded:

'We need to be more systematic and intentional about tapping some of this energy and developing communities in support of business goals' (Eastwell 2001).

Networked learning communities come somewhere between learning networks and communities of practice. They have been developed in the formal educational field (by the National College of School Leadership¹⁵). The principles of networked learning communities are explicit about the organisational and structural changes needed to support, embed and deliver on the knowledge developed through experiential learning.

These networked learning communities are defined as purposeful social entities characterised by a commitment to quality, rigour and a focus on outcomes. Their aim is to support innovation in times of change. In education, networked learning communities promote the dissemination of good practice, enhance the development of teachers and support capacity building in schools. They also mediate between centralised and decentralised structures and assist in the process of restructuring and re-culturing educational organisations and systems.

¹⁵ For information, see www.ncsl.org.uk

The learning organisation takes all these ideas into the specific organisational context, by aiming to continue to develop and change over time as contexts change and experience grows. The learning organisation may operate many of the knowledge management and learning elements outlined above.

Learning organisations also require effective and appropriate information flows and learning at two levels (Argyris and Schon 1996):

- **Single loop learning**, through which a process of detection and correction of flaws can be managed;
- **Double loop learning**, which incorporates single loop learning but also questions the course plotted and the existing feedback loops designed to maintain that course; double loop learning can change fundamental assumptions about the organisation.

Single loop learning can limit organisations' ability to change to address more significant problems as new knowledge emerges over time. It has been suggested that:

'...new knowledge relies on local invention and experimentation, but this may be stifled by centralised models of knowledge generation and adherence to centrally produced guidelines' (attributed to Hargreaves in Davies *et al.* 2000).

Senge (quoted in Davies *et al.* 2000) has argued that the learning organisation needs to operate through five disciplines:

- **Open systems thinking**, which encapsulates the idea of teaching people to integrate activities and understand the connections within and beyond the organisational boundaries;
- **Improving individual capabilities** within the organisation;
- **Updating mental models** and the deeply held assumptions people use to make sense of the world;
- **A cohering vision** to provide a clear strategic direction and to articulate a set of values to guide individual actions;
- **Team learning**, to expand capability beyond individual virtuosity.

There is no blueprint for a learning organisation, nor any well-defined package of practices, on the principle that 'the learning organisation has to be realised from within' (Pedler and Aspinwall 1998). One key aspect of a learning organisation is, though, that it connects individual and group activities, avoiding the problem of individual managers and staff becoming disconnected from organisational aims and activities. As a result, what the organisation 'knows' and works with is at least as great as the sum total of what is known by individuals in an organisation.

4.4.8 Evaluation

Formal evaluation may be part of the learning processes developed by organisations. It captures 'what works' and 'what impacts' activities have, so that lessons can be shared more widely. In practice, though, evaluation and assessment may currently be associated more closely with monitoring progress on targets set by Government for the services they oversee, and which may be delivered through a wide range of different mechanisms.

The Modernising Government agenda sees evaluation and assessment through auditing as a key way of raising and maintaining higher standards of public service. As a result, the Audit Commission and the National Audit Office have taken a higher profile in defining standards of performance than in the past. While some have agreed that these processes have been useful, there are growing criticisms of the audit approach, particularly the amount of resources (particularly time and personnel) it requires. At the same time, the trend towards the setting of targets and indicators has also continued to rise, with hundreds of indicators being set throughout Government.

Indicators for sustainable development have proved particularly controversial, not least because of the difficulties of defining exactly what sustainable development is. Andrew Stirling (1988) outlined some of the problems in using traditional measurement approaches in the appraisal of sustainability. In particular, he points to "divergent social interests and value judgements which govern the prioritisation of the different dimensions of 'sustainability'".

Assessing any programme that has any social implications will need to take into account the views of the people involved or affected. 'Participatory appraisal is therefore "not just an issue of political efficacy and legitimacy, but [is] also a fundamental matter of analytical rigour" (Stirling 1998). This affects both planning and prioritising activities using appraisal and evaluation.

Four main drivers for evaluation have been identified (Lingayah 2001), to:

- assess the impact on the problems being addressed (that is, how well as a project met its objectives);
- suggest ways of managing the scheme effectively (that is, to learn from experience for future planning);
- identify good practice for wider dissemination (that is, to help others learn from your experiences);
- report back accurately on the scheme's achievements (that is, to provide accountability on the impact of the project).

Evaluation and assessment activities raise a number of issues, including:

1. **Who evaluates?** The approach to evaluation advocated by InterAct, as participatory process practitioners, is one where people involved in the project (stakeholders) are more involved and assume more control (InterAct 2001). This paper differentiates between traditional external (or 'top-down') evaluation, participatory (or 'co-operative') evaluation, and user-led (or 'bottom-up') evaluation. There can be hybrids of these models. The social audit, for example, involves stakeholders in 'evaluating' the social impact of an organisation, but it also includes external 'verification'. This provides an independent view of the process of evaluation and the veracity of the final report in relation to the actual stated views of stakeholders and of the gaps within the report.
2. **The role of measurement.** Government pressures for measurable outcomes, indicators and targets have led to a growing emphasis on quantitative methods of evaluation. These pressures are appropriate in some circumstances, but in many programmes with social impacts or social processes, quantitative indicators fail adequately to reflect what has been achieved and where there have been failures.

As a result, there is growing interest in other types of indicators. Lawrence differentiates between directional indicators (which show whether things are moving in the right direction, or not) and absolute indicators (essentially, whether targets have been met) (Lawrence 1998). Lawrence also stresses the importance of indicators that mean something to those they are directed at. If indicators are intended to make the public change what they do, they need to mean something to the public. He draws the distinction between the MEGO indicators (My Eyes Glaze Over), which he applies to indicators such as parts per million type measurements, and OS indicators (Oh Shit), which highlight something immediate and important.

These more qualitative approaches have been taken up in the UK by organisations such as the New Economics Foundation (NEF). They have been developing much more sensitive indicators for working with people, including indicators of trust. Rather than accurate measures of performance, they see indicators as "signals. They are simplifying, measuring and communicating important information. We use indicators everyday in our personal lives, for example 'running a temperature' is an indicator of poor health" (NEF 2000).

NEF is also drawing on Lawrence's work in ensuring that indicators are developed in ways that involve local people in deciding both what is important enough to measure, and how to measure it. Participative processes for sustainable development, such as some Local Agenda 21 processes, have involved local people in identifying key issues and developing indicators. There are particular issues which arise from participatory evaluation, and the evaluation of participation / stakeholder involvement. See section 4.1.6 for more details.

The three aspects of measurement that appear throughout the literature on evaluation are:

- **Inputs:** resources spent by a project on different activities intended to achieve a particular goal; (for example, money, staff time, fees);
- **Outputs:** refer to the activities or deliverables (for example, reports, workshops, meetings); process evaluation can thus be covered under outputs, or separately;
- **Outcomes:** refer to the impacts / effects / results of the project activities.

While good evaluation includes measures (both qualitative and quantitative) of all these aspects, evaluation processes are pushing more towards understanding outcomes, and drawing the links between the three aspects, and their dependence on the *context* in which activities take place and the *process* followed, neither of which lend themselves so readily to quantitative assessment (measurement).

3. **Cause and effect.** The social impacts of projects are often hard to attribute to a particular approach or action, making evaluation more complex. NEF says

'...it is hard to attribute changes in the quality of life of a local area to a single project. Suppose that the setting up of a community garden project is followed by more people becoming actively involved in taking action on local issues. This increase in involvement might be the result of the community project, but it might also be due to the media, other projects and programmes, or the arrival in the area

of several families with commitment and enthusiasm' (New Economics Foundation 2000).

Local authorities, evaluating the performance and efficacy of their services through Best Value, have approached this problem by forming 'benchmarking clubs'. These bring together authorities working in similar contexts, dealing with similar issues and working in similar ways. The authorities learn from each other and compare their own performance against others'. The InterAct evaluation paper highlights a similar approach: this is the 'cluster approach' used, for example, in the Groundwork Barclay's SiteSavers programme which brought together the evaluation for a series of projects in a geographical or programme area:

'This has the advantage of spreading the costs of evaluation, and the accompanying capacity building, over several projects' (InterAct 2001).

4. **The challenges of learning.** The NEF work shows that one of the main challenges for evaluation is the attitudes of those involved in the projects being evaluated, and others to whom the lessons are directed / communicated (who may not be participants). Evaluation, and subsequent learning, challenges organisations, projects, local communities and individuals to examine how they have worked. It encourages them to be open to exploring alternative approaches, which can be difficult for groups and organisations committed to certain ways of working.

Experiential learning methods may offer some ways of tackling this. But difficulties will remain where evaluation is done as a separate activity from mainstream work. The lessons identified are offered to those responsible for the work following an autonomous process that did not involve them.

It has been argued that the ideal approach is to undertake only formative evaluations (carried out during the process being evaluated), as it can include methods such as observation, direct experience and discussions with participants while they are part of the process. But summative evaluations (done after the process is complete) can also be useful both to participants and more widely as participants have had time to reflect on their experience, and different results may begin to appear over time. Long term evaluation research (that begins during the process being evaluated and continues after it is completed), may provide particularly valuable results and lessons.

Some organisations are considering much closer links between evaluation and mainstream project and programme management, including through links to learning networks, for example. Such an integrated approach may have lower costs than full-scale but one-off evaluation studies. With careful design, the process can retain the required rigour and independence required of evaluation, while improving the learning from the process.

5. Values and Perspectives

This final, short section summarises some of the literature concerning different values and perspectives related to environmental regulation and protection, and their relevance to the Environment Agency's work. The importance of human values to environmental policy and decision-making is now more widely recognised (e.g. RCEP 1998). Issues related to values and to ensuring the inclusion of different values and perspectives in the Agency's work have been covered throughout this report. The Environment Agency's own work on *Risks and Values* (Palmer 2000) suggests that it is beginning to accept the principle. It recognises that the Environment Agency needs to work in ways that mean:

"accepting the diversity of the population and the diversity of value systems and seeking to integrate them into our work" (Palmer 2000).

This section, therefore, covers only a few issues that have not already been addressed elsewhere in this report. It does not attempt to summarise current public concerns and priorities for the environment, as these change significantly over time. The focus is therefore on basic concepts relating to values, and on processes for articulating and developing those values.

5.1 What are values?

There is a long philosophical literature about the nature of values and the connections between values, ethics and morality. For many authors, the distinctions are as important as the connections. Values are usually taken to refer to deeply held beliefs that may guide people's attitudes and behaviours. Morals and ethics are closely related; they are to do with goodness and badness, with right and wrong. Values tend to be more broadly defined around issues of worth, desirability and utility. However, these distinctions may be misleading. For example, Bawden argues that '...the foundation for our ethics lie in the values we hold' (Bawden 2000), rather than concepts of right and wrong informing values.

Environmental values are often closely connected to beliefs underpinning other choices, and have clear associations with 'worth' in terms of 'how much' value is ascribed to an action or a resource, as well as associations with 'caring' about the impacts of certain behaviours (in terms of attitudes rather than necessarily action).

Values may be strongly felt but are rarely fixed. The Royal Commission on Environmental Pollution defined values as follows:

'We understand values to be beliefs, either individual or social, about what is important in life, and thus about the ends or objectives which should govern and shape public policies. Once formed, such beliefs may be durable. It is also characteristic that they may be both formed and modified as a result of information and reflection. Environmental and social values, in particular, are not necessarily preformed or fixed but, for many people, emerge out of debate, discussion and challenge, as they encounter new facts, insights and judgements contributed by others' (RCEP 1998, p101).

Debates about values are also associated with ideology, which is not popular in current political discourse. Politicians seem to prefer to be seen to be offering 'managerial' solutions to problems, rather than 'ideological' solutions based on values. At the same time, politicians are also apparently more interested in public values than ever before – using mechanisms such as focus groups to enable individuals to articulate their basic values in relation to policy options.

5.2 Values in environmental policy and programmes

Values greatly influence the priority that people place on certain actions and the worth they accord to particular environmental 'goods' (for example, beautiful landscape) or 'bads' (for example, pollution) (RCEP 1998). Bawden (2000) suggests a particular role for values in decision-making in natural resource management (such as agriculture, forestry, water management). He argues that complex global problems, with high risk to the planet, have moral as well as technoscientific dimensions:

‘Technoscientific development in all these areas, while conducted within the defensible ethic of improving the human condition, has regrettably been associated with a host of undesirable bio-physical and socio-cultural consequences’.

This has happened to the extent that:

‘...the risks associated with these impacts have now reached such a scale of global involvement that we are no longer concerned only with making nature useful, or with making life easier for ourselves, but also with problems resulting from technoscientific development itself’ (Bawden 2000) (See also section 4.3.1 on risk).

In environmental policy and decision-making, values can be linked to giving environmental 'goods' and 'bads' an economic value. Values can also be discussed in terms of evidence contrasting public values with scientific evidence and method, including principles of 'sound science' such as objectivity and neutrality (see sections 4.3.1 and 4.3.2).

The Royal Commission on Environmental Pollution (RCEP) suggests that methods need to be found to include values in environmental decision-making (especially setting environmental standards). They argue that this is because other methods alone are inadequate:

‘Other things being equal, experimental data score highly in terms of pedigree, but in the environmental field they are unlikely to be available to illuminate the issues that are of most concern’ (RCEP 1998, p30).

The public has access to more information about environmental risk than ever before. But this increase in information has been developing in parallel with decreasing public trust in the institutions that provide the information. This has led to greater demands for a say in environmental decision-making, but public input takes a number of forms. Many groups have grown used to the need to provide good quality technical information (for example in planning inquiries and other formal procedures). But there is also growing dissatisfaction with the focus on technical debates and the exclusion of any discussion of values.

The RCEP draws attention to an example of this shift: the enormous outcry at the plans by the Shell oil company to sink the Brent Spar platform in the North Sea. That was seen as a turning point in environmental debates. The public reaction was less about the technical details (what chemicals were on the platform, what materials it was made of etc) than about the principle of a company using the shared 'commons' (that is, the sea) to dump its rubbish. This was a debate about values, rather than about the technical options for disposal. That debate came later. The RCEP identified this shift and stated that 'Values are an essential element in decisions about environmental policies and standards' (RCEP 1998, p101).

The public reaction to the Brent Spar episode was relatively sophisticated. It transcended the boundaries usually set for debates on environmental issues and certainly the boundaries expected by the oil company. Such was the public reaction that Shell invested heavily in stakeholder dialogue following Brent Spar, both to identify a solution all stakeholders could support, and to avoid future similar crises. But Shell's experience also made many other major companies realise that they needed actually to engage in dialogue with interested parties, rather than second-guess their concerns and priorities and the values on which those concerns and priorities were based.

The shifts in attitudes are summarised by the RCEP as follows:

'Environmental regulation has become more and more dependent on the advice of scientists. Governments justify their action or inaction by appealing to the authority of science. Yet the changed character of environmental concerns has highlighted the extent to which there are uncertainties in scientific assessments, and the scope for different perceptions of the issues involved. In some cases, the interpretations and reassurances originally offered by governments have been shown to be mistaken when the findings from later studies are received or unexpected consequences emerge. This has eroded trust in environmental regulation, which has also been undermined by the scope for evidence to be interpreted in different ways' (RCEP 1998, p9).

The RCEP is not suggesting that scientific appraisal is not valuable. Indeed, it confirms that this remains essential. But it suggests that it is not enough. Additional input from other sources, particularly from the public, is needed to provide different forms of knowledge, particularly about their own values. Sound science is thus seen as necessary – but not sufficient – for environmental decision-making. If this balance is accepted, it changes the nature of the decision-making process from a technical to a social process:

'Traditional, scientific analyses of the environment's conditions can only contribute to, and occasionally be decisive in, such environmental decision-making ... while one could argue that traditional scientific analysis forms a necessary contribution to sustainable development decision-making, on its own it is by no means sufficient. Achieving integration of the economy, society and the environment is a social process that is guided by social values and not just by scientific judgements about environmental limits' (ESRU 1999, original emphasis).

These issues relate to the importance of widening the types of evidence (including values) used for environmental decision-making. There is, though, a separate element to

considering the role of attitudes and behaviours in environmental policy design and implementation that arises particularly within the context of sustainable development. The Environment and Society Research Unit (ESRU) at University College London, suggests that:

'Fundamentally ... sustainable development is about a change in values, and in particular the promotion of a set of values that raises the status of the environment when seeking to balance social, economic and environmental aspects of decision-making' (ESRU 1999).

The clear implication here is that the environmental element of the three legs of sustainable development (the other two being social and economic) should have more of a priority than it currently has in existing value systems. The RCEP (1998) sees the issue rather differently. It sees environmental standards and regulation as entirely focused on changing the actions of companies and individuals – actions that are based on attitudes based, in turn, on values. Their explanation is as follows:

'The effectiveness of environmental standards in modifying the actions of companies or individuals derives from the methods used to implement them ... The purpose of environmental policies is to influence human behaviour in order to avoid or limit damage to the environment ... Human behaviour is determined by complex sets of individual and social factors. These include the perceptions individuals have, the judgements they make, the rights and liabilities enshrined in the legal system, and civic and organisational cultures. Sociology, anthropology, social psychology, economics, political science and socio-legal studies have developed extensive understanding of patterns of social behaviour and the forces that give rise to them. In some cases those forces tend to protect the environment; for example, some structures of property rights have that effect. In other cases such forces may make it more likely that the environment will be damaged, or constrain the effectiveness with which environmental objectives can be pursued ... the values people hold are an important determinant of human behaviour, and ultimately shape the policies that are followed towards the environment. The adoption and implementation of policies based on particular values have a powerful effect in reinforcing those values, as well as bringing about their practical realisation' (RCEP 1998).

5.3 Articulating and developing values

Values are not fixed and immutable. Processes designed to work with values are as much about developing people's values as they are about simply identifying existing values. The Environment Agency understands this as part of its role:

'Values are not given and unchangeable, and we have a role to play in the process of developing them' (Palmer 2000).

People's values change through interaction with others: 'New values are the result of social debate' (WWF UK 1994); and 'People's environmental and social values are the outcome of informed reflection and debate' (RCEP 1998). Holland and Rawles (1993) also see values as the end of debate, rather than the start: 'Values are not things we always argue from, but what we reason towards'. Bawden suggests that 'Ethics, just like the rest of the aspects of our worldviews, are informed as much by our social experience

as they are by any innate intuitions or personal reason' (Bawden 2000). Also, that 'It is through moral discourse as communities that that we learn together to bring forth the world that we believe that we should bring forth' (ibid, original emphasis). For Bawden, the appropriate way to ensure the inclusion of values in decision-making is to adopt soft system methodologies and critical learning systems between practitioners, the public and others (and see section 4.3.4).

The RCEP also points out that:

'To ensure that such values are articulated and taken into account, less familiar approaches need to be used to extend and complement present procedures for consultation and participation' (RCEP 1998, p101).

The RCEP suggests that conventional consultation techniques fail to enable the articulation of values, in terms of understanding different roles in consultation processes (for example between stakeholders and ordinary citizens), methods used and timing (the following points are all direct quotes from RCEP 1998):

- 'People's values are not the same as the interests of stakeholders. Rather than seeking to articulate and challenge values, the stakeholder model places the emphasis on negotiation between interested parties with the aim of reaching an expedient compromise. Stakeholders, for example employees or affected residents, certainly have to be considered in decisions about environmental policies or standards, but so must the values of people in their capacity as citizens. Valuable as the concept of a 'stakeholder' is in other contexts, we do not believe it is useful or appropriate to stretch it to cover the concerns ordinary citizens have about the environment' (RCEP 1998, p102).
- 'The failure to provide an opportunity for interaction, and for clarifying the values underlying the responses made, is a major shortcoming of traditional forms of consultation ... It is unrealistic to suppose that values are fixed, and waiting to be uncovered by questionnaires or other types of analysis. For most people it is more accurate to think of their values emerging or taking shape as they are brought to face important choices between competing options. When environmental standards are set or other judgements made about environmental issues, decisions must be informed by an understanding of people's values. Traditional forms of consultation, while they have provided useful insights, are not an adequate method of articulating values' (RCEP 1998, p105).
- 'Values should be articulated at the earliest stage possible in setting [environmental] standards and developing policies. The public should be involved in the formulation of strategies rather than merely being consulted on already drafted proposals. Openness at this framing stage allows people to question assumptions about the character of environmental issues and the scientific understanding upon which analysis is based. Framing of the issues to be subjected to scientific and technical assessment needs to be more socially intelligent' (RCEP 1998, p105).

The RCEP also suggests that complex and contentious situations, in particular, need innovative approaches:

'In complex and controversial cases, existing procedures should be supplemented by new procedures. A more rigorous and wide-ranging exploration of people's values requires discussion and debate to allow a range of viewpoints and perspectives to be considered, and individual values to be developed' (RCEP 1998, p105).

Methods for articulating values, recommended by RCEP (1998, 107) include:

- **Focus groups**, in which small groups (up to 12 usually) discuss a subject with the help of moderators;
- **Citizens' jury**, in which a small group of people is asked to consider an important question through facilitated discussions, takes evidence (written and from witnesses in person) and finally makes agreed recommendations;
- **Consensus conference**, a panel of about 12 lay people which is provided with initial information, conducts its own investigation and then hears witnesses at a public conference lasting several days. The panel then writes a report and presents it in public;
- **Deliberative polls**, which aim to reach a wider group of people, up to 300-400, recruited by quota sampling. A core group of participants may come together for several days and initially decide the questions to be discussed in public debate by the whole group. Questionnaires completed by the participants at the beginning and end of the process measure shifts of opinion.

Less formal approaches have been used elsewhere to enable participants to express values. Harrison et al (1986) used small free-discussion groups. These drew on free association, manifest and latent meaning analysis and identification of transference (emotional responses to the natural world) to articulate local people's values in relation to local open space and the countryside.

Such approaches are based on an assessment of the specific context in which environmental decision-making takes place, which must affect the choice of appropriate methods. The RCEP (1998) summarises this issue as follows:

'The emphasis in environmental policy during the 1970s and 1980s was on scientific issues, on which the expertise lay with a small group of people mainly in the national or regional control agencies, or in government bodies. Pollution control was primarily exercised by direct regulation through statutory control over emissions. Only two parties were normally involved: the control agency, and the firm making the emissions. Expertise about the technology of the processes giving rise to emissions was confined to the regulators and, predominantly, to specialists in the larger and more technically competent firms in an industry.

The changes which have occurred in the understanding and perception of environmental problems have been accompanied by increased public awareness of, and concern about, environmental issues. Improved legal rights to environmental information, greater attempts by scientists to promote interest in and understanding of their work, and the extensive coverage of environmental and scientific issues in the news media, have placed in the public domain much more information about pollution issues.

A far wider circle of people is now recognised as having an interest in regulatory decisions. Expertise on environmental problems is much more widely spread

outside the pollution control agencies and the companies causing pollution. This is especially true of universities and environmental groups. It is no longer acceptable for decisions to be negotiated privately between regulator and polluter' (RCEP 1998).

5.4 Valuation methods

A specific area of articulating values relates to valuation. This is closer to the understandings of value as 'worth'. The RCEP (1998) suggests seven options for considering such valuations, using Treasury terminology: economic appraisal, cost-benefit analysis, cost-effectiveness analysis, present value, welfare cost or benefit, resource costs, existence value. It recognises that

'Many environmental policies have different implications for people of different incomes, ages, health states or location'.

The most common methods of ascribing non-monetary values used in environmental decision-making are as follows:

- **Cost benefit analysis that includes contingent valuation.** Contingent valuation (CV) measures existence or non-use value. It is calculated by surveys of public preferences. These question people about their willingness to pay for the goods or services, or about how much compensation they would need if they were to lose them. CV has been used by the Environment Agency in relation to low-flow rivers and fisheries management. Such approaches to environmental valuation been widely criticised, not least because people may not value something they do not understand. Also, the method does not provide any opportunity to find out more or to develop values in the way the RCEP suggests is necessary for considering environmental values.

More generally, cost benefit analysis has been criticised as converting 'genuine political and social issues into bogus technical ones' (Cowell 1994, citing Peter Self on the Roskill study). Parker (1994) supports an analysis that recognises the split between the technical and the political. He suggests that scientists and experts provide the means for achieving policy objectives, whereas politicians make decisions based on values. Cowell goes on to suggest that 'Despite the widespread belief that CBA [cost benefit analysis] produces 'objective' solutions to policy dilemmas, it is increasingly recognised that politics is right at the heart of the analysis' (ibid).

A simple CBA process can also lead to over-reliance on single number answers (Palmer 2000). And it cannot measure equity / distribution issues, and thus the different effects on different sectors or groups (Turner, 1997). More fundamental is:

'...the dilemma of generating prices for the priceless, of quantifying the unquantifiable, of creating commensurable units for the unequatable' (Kellert 1984).

- **Multi-criteria analysis** (MCA or MCDM – multi-criteria decision-making). MCA aims:

‘...to transform imprecise goals into a set of criteria which are relatively precise, although they may be in conflict with each other’ (RCEP 1998, 69).

MCA uses the attributes by which criteria are selected (usually by discussion with or between the parties to the decision), together with weights, to show relative importance. It then scores the relative performance of each option against the attributes.

The Environment Agency has experimented with MCA (Petts and Leach 2000), and further research is planned. MCA has the advantage of usually involving stakeholders in the setting of the criteria, and sometimes in the scoring. But it may still result in a single number answer, and this may over-simplify the complexity of what it is assessing.

- **Quality of Life Capital (QoL Capital).** CAG consultants and Land Use Consultants developed this specific approach over some years for a consortium of the Environment Agency, Countryside Agency, English Heritage and English Nature. It began as Environmental Capital, to assess the value of environmental goods and services. From 2001, it was expanded into Quality of Life Capital, to consider environmental, social and economic benefits. The approach aims to provide:

‘...a fair and comprehensive method for setting out and comparing all the different plusses and minuses of different options, taking account of both expert and lay views’ (CAG 2001).

The core idea of QoL Capital is that ‘the environment, the economy and society provide a range of benefits for human life, and it is these benefits or services which we need to protect and/or enhance’ (ibid) rather than the resources themselves. For example, it is less the amount of woodland that is valued in this way (hectares, or species of tree etc in themselves) but the capacity of the wood to provide tranquil recreation, habitats for rare species, stabilise the soil, retain water, for example.

QoL Capital works in the following way. It:

- stands back from things or places and considers the benefits or services that provide for human wellbeing (‘what matters and why?’);
- provides a consistent, systematic and transparent evaluation framework for all scales of decision-making;
- integrates environmental, social and economic issues;
- emphasises improvement of quality of life rather than acceptance of the status quo;
- values the commonplace as well as the unusual and rare;
- facilitates participation, putting professional/expert judgements alongside the concerns of local people;
- works with other tools and processes including environmental impact assessment, sustainability appraisal, community planning and Best Value.

When the QoL capital approach involves the public, it uses the question "What do you value about your area?". More generally, the key questions QoL Capital asks are:

- what is the benefit / service (e.g. informal walking)?

- who / why / scale (e.g. local children)?
- level of importance (high, middle, low)?
- enough (plenty, OK, just, under)?
- substitutable?
- management aim?

QoL Capital does provide a useful mechanism for enabling the public and stakeholders to debate options and come to conclusions (if used in a participatory process). It may, in the same circumstances, contribute to the types of debates necessary for the RCEP's developmental processes, which will articulate and develop values.

5.5 Values and principles

In environmental decision-making, broad environmental values have been articulated into a series of general and specific principles. Broad environmental principles include the 'precautionary principle' and the 'polluter pays' principle (see section 3.3). In sustainable development, there are principles of equity, futurity (future generations), integration (of social, economic and environmental issues), integrating global and local concerns, and democratisation of processes (for example, freedom of information, rights to participation). Government policy on sustainable development (DETR 1999) articulates ten guiding principles intended to underpin specific policy priorities. These are:

- putting people at the centre;
- taking a long term perspective;
- taking account of costs and benefits;
- creating an open and supportive economic system;
- combating poverty and social inclusion;
- respecting environmental limits;
- using the precautionary principle;
- using scientific knowledge;
- transparency, information, access to justice and participation;
- making the polluter pay.

As can be seen, these policy priorities include the two core environmental principles of precaution and polluter pays. They also include coverage of issues such as democratisation and futurity (long term). These take into account the values and moral judgements that underpin sustainable development.

The precautionary principle requires further analysis, as it is so clearly based on shifting values and levels of trust in 'sound science' (see section 4.3.2). The precautionary principle is based partly on the premise that prevention is better than cure. This requires, in turn, changes in public understanding, attitudes and behaviours, and getting involved with communities earlier than when a specific (especially contentious) issue arises.

The precautionary principle was defined in the Rio Declaration, at UNCED in 1992:

'Whether there are threats of serious or irreversible damage, lack of scientific certainty shall not be used as a reason for postponing cost-effective measures to prevent environmental degradation' (Green Alliance 2002).

In the Maastricht Treaty, the European Union acknowledges that the precautionary principle is closely linked to:

‘...the principles that preventive action should be taken, that environmental damage should, as a priority be rectified at source and that the polluter should pay’ (quoted in RCEP 1998).

The UK 1990 Environment White Paper then said:

‘Where there are significant risks of damage to the environment, the Government will be prepared to take precautionary action to limit the use of potentially dangerous materials or the spread of potentially dangerous pollutants, even where scientific knowledge is not conclusive, if the balance of likely costs and benefits justifies it’.

Tim O’Riordan (1999) has identified the following guidelines for identifying when precautionary action is likely to be required:

- Where unambiguous scientific proof of cause and effect is not available, it is necessary to act with a duty of care;
- Where the benefits of early action are judged to be greater than the likely costs of delay, it is appropriate to take a lead and to inform society why such action is being taken;
- Where there is the possibility of irreversible damage to natural life support functions, precautionary action should be taken irrespective of the forgone benefits;
- Always listen to calls for a change of course, incorporate representatives of such calls into deliberative forums, and maintain transparency throughout;
- Never shy away from publicity, and never try to suppress information, however unpalatable. In the age of the internet, someone is bound to find out if information is being distorted or hidden;
- Where there is public unease, act decisively to respond to that unease by introducing extensive discussions and deliberative techniques.

5.6 Values and trust

The issues around risk and trust have already been outlined (see section 4.3.1). But there are some additional issues specifically related to the impact of distrust on the expression of values. The RCEP (1998) suggests that:

‘Increased awareness of the complexity of many environmental problems makes public trust in environmental regulation critical: but there are signs that it is being eroded. There is a tension here. Trust is demanded particularly where there is ignorance, but ignorance always provides grounds for scepticism or at least caution. And trust may take a long time to build, but can quickly be destroyed ...

It has been suggested that there may be a general mistrust of technological changes and their consequences, and of those who purport to regulate them in the public interest, and a fear that the values held by many people are not being protected adequately. Surveys of public opinion about environmental issues show that the general public in Britain has no great trust in government scientists. The proportion expressing confidence in ‘scientists working for the government’ is well under half, a

smaller proportion than expresses confidence in scientists working for environmental groups’.

The RCEP suggests that one factor in the erosion of trust between citizens and public institutions:

‘...has been a failure to pay enough attention to people's values when taking decisions on environmental policies’ (RCEP 1998).

Experience in the US suggests that conventional scientific analysis and more quantification alone will not rebuild trust. Efforts to put more emphasis on formal procedures and quantitative techniques such as cost benefit analysis and risk assessment did not help, not least because the applications made of such techniques were contested by different groups and in the courts. Overall, the RCEP conclude that:

‘...this history provides no ground for thinking that greater use of quantification and formal procedures will in itself lead to a rebuilding of public trust’ (RCEP 1998, p116).

This matters to environmental regulators because:

‘In relation to any risk, but especially in relation to environmental risks subject to large uncertainties, the reception accorded to information depends on the credibility of the person or organisation providing it ... [and] ... Where trust has to be built up, that can only be done through open and honest communication over a continuous period’ (RCEP 1998, p58).

Better communication with citizens is therefore an essential step in building trust, but not all communications will be effective. It will require that ‘available techniques can and should be used to articulate people's values and integrate them into each critical stage of decision-making about environmental standards’ (RCEP 1998, p117). Indeed, the RCEP particularly identifies that

‘The Environment Agency should consider how procedures can be introduced which will be more effective in articulating the values of all sections of the relevant communities’ (RCEP 1998, p106).

5.7 The Environment Agency's values

The Environment Agency has already taken steps to articulate its own values, and it has recognised the importance of values in underpinning environmental regulation and protection.

In April 2002, an Environment Agency paper on *Risks and Values* was produced by Ronan Palmer. This stated that:

‘The Environment Agency is not a passive bystander, but has its own core values. In the context of this document, the values include:

- a commitment to protecting and improving the environment;
- a holistic overview of the environment, even though we are responsible for only a part of it;

- strong opinions on the environment, because of the close involvement we have with the issues;
- an integrated perspective from across the range of scientific disciplines that we have;
- open to others, because the Environment Agency is not the sole expert, nor does it think that only environmental issues matter’.

In December 2000, the chief executive Barbara Young published an Environment Agency *Values Statement*, which was designed to complement the Agency Vision Statement. The values statement outlined both the values themselves, and a quote from Barbara Young to explain why they were important:

‘We need to wear our hearts on our sleeves. Our values need to shine out like a beacon so that people know what the Environment Agency stands for. We need to demonstrate our values in our everyday work’.

The values were as follows (all directly quoted):

1. We will focus on environmental outcomes

- 1.1 Internally: We take pride in our individual roles within a broader allegiance to the Agency as a whole. Knowledge is shared, not hoarded as a source of power. People are trusted by colleagues to take responsibility for actions and outcomes, so there are fewer project and other groups. We concentrate on measuring outcomes, not activities.
- 1.2 Externally: We are committed to good environmental outcomes, and to being accountable for what we achieve. We will encourage statutory and financial frameworks that help us focus on outcomes. We are seen to practise what we preach.

2. By working in effective partnerships

- 2.1 Internally: Employees deal with each other with respect, take the initiative to offer help, respond quickly to requests for information or advice and complete agreed actions on time.
- 2.2 Externally: We work in partnerships and openly. We may lead or support, understanding always the perspectives of our partners. We seek opportunities to involve others with relevant skills, knowledge or influence. We will develop new forms of partnership between the regulator and the regulated.

3. By being robust

- 3.1 Internally: We have a culture of self-development and support each other with honest and straightforward feedback. Honest mistakes are learned from not penalised, but sloppy performance, indifference to customers and negative attitudes are not tolerated.
- 3.2 Externally: The Environment Agency is recognised as having practical, authoritative and professional knowledge. We manage and surpass expectations of us through efficient and responsive performance. We are fair but firm regulators, acknowledged for quality and consistency.

4. And by being flexible, embracing change, learning and improvement

- 4.1 Internally: We value flexibility, a willingness to embrace change, new ideas and challenge to traditional assumptions. We learn from each other and from outside benchmark organisations to promote continuous improvement.
- 4.2 Externally: We demonstrate to all with whom we interact helpful and flexible attitudes and a positive approach to new ideas. We recognise that ongoing change is essential to our effectiveness.

5. To deliver all this we must exert real influence

- 5.1 Internally: We recognise the wide variety of people and organisations who can make a difference to the environment. We nurture our many areas of expertise, but communicate in clear language with understanding of the needs of those whom we seek to influence. We target our communications to achieve maximum impact.
- 5.2 Externally: Environment Agency employees promote the Environment Agency's standing and reputation with customers and stakeholders. We achieve real influence because our knowledge and opinions are simply and helpfully communicated and well targeted.

Which means that:

Internally: To work here brings a great sense of achievement and enjoyment.

Externally: We are champions of the environment within the context of economic growth and social progress.

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