



# ROYAL COMMISSION ON ENVIRONMENTAL POLLUTION

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*review of activities  
1998/99 and 1999/2000*

## ABOUT THE ROYAL COMMISSION ON ENVIRONMENTAL POLLUTION

The Royal Commission on Environmental Pollution is an independent standing body established in 1970 to advise the Queen, government, Parliament and the public on environmental issues. The Commission's terms of reference are:

*To advise on matters, both national and international, concerning the pollution of the environment; on the adequacy of research in this field; and the future possibilities of danger to the environment.*

Within this remit the Commission is free to consider and advise on any matter it chooses; the government may also ask it to consider particular topics. The Commission has interpreted 'pollution' broadly as covering any human interventions that introduce substances or energy into the environment in such a way as to cause a hazard to human health, harm to living resources and ecological systems, damage to structures or amenity, or interference with legitimate uses of the environment. It approaches issues within the framework of sustainable development.

The Commission has published 22 reports, and many of their recommendations have been accepted and implemented by successive governments. The primary function of the Commission is to contribute to policy development in the longer term by providing an authoritative and factual basis for policy-making and debate, and setting new agendas and priorities. It considers the economic, ethical and social aspects of issues alongside the scientific and technological aspects. It sees its role as reviewing and anticipating trends and developments, identifying fields where insufficient attention is being given to environmental problems, and recommending actions that should be taken.

The Members of the Commission are drawn from a variety of backgrounds in academia, industry and public life. Contributing a wide range of expertise and experience in natural and social sciences, medicine, engineering, law, economics and business, they serve part-time and as individuals, not as representatives of organisations or professions.

A full-time Secretariat supports the Chairman and Members by arranging and recording meetings; gathering and analysing information; handling finances and administration; and drafting and publishing the Commission's reports.

The Commission has taken steps to make its work more transparent and open. Up-to-date information on its activities, including minutes of meetings, background papers by consultants and summaries of evidence submitted, is available on <http://www.rcep.org.uk>

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## MEMBERS OF THE COMMISSION

*as at March 2000*

### **SIR TOM BLUNDELL (CHAIRMAN)**

Sir William Dunn Professor and Head of Department of Biochemistry, and Professorial Fellow of Sidney Sussex College, University of Cambridge

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### **SIR GEOFFREY ALLEN**

Executive Adviser to Kobe Steel Ltd

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### **THE REVD PROFESSOR MICHAEL BANNER**

F D Maurice Professor of Moral and Social Theology, King's College London

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### **PROFESSOR GEOFFREY S BOULTON**

Regius Professor of Geology, and Vice Principal, University of Edinburgh

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### **PROFESSOR ROLAND CLIFT**

Professor of Environmental Technology and Director of the Centre for Environmental Strategy, University of Surrey

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### **JOHN FLEMMING**

Warden, Wadham College, Oxford Chairman of Council of Management, National Institute of Economic and Social Research

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### **SIR MARTIN HOLDGATE**

President, Zoological Society of London

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### **PROFESSOR BRIAN HOSKINS**

*(from October 1998)*  
Professor of Meteorology, University of Reading

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### **PROFESSOR RICHARD MACRORY**

Professor of Environmental Law, University College London  
Board Member, Environment Agency

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### **SIR MICHAEL MARMOT**

Professor of Epidemiology and Public Health, University College London, and Director, International Centre for Health and Society

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### **PROFESSOR J GARETH MORRIS**

Professor of Microbiology, University of Wales, Aberystwyth

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### **DR SUSAN OWENS**

*(from October 1998)*  
Lecturer in Geography, and Fellow and Director of Studies, Newnham College, University of Cambridge

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### **JOHN ROBERTS**

*(from October 1998)*  
Chief Executive, United Utilities plc

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### **DR PENELOPE A ROWLATT**

Director, Europe Economics Research Ltd

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*The following Members left the Commission in 1998 on completion of the Twenty-first Report:*

### **SIR JOHN HOUGHTON**

*(Chairman until July 1998)*

### **PROFESSOR CLAIR CHILVERS**

### **DR PETER DOYLE**

### **THE EARL OF SELBORNE**

## SECRETARIAT

### **SECRETARY**

David Lewis

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### **ASSISTANT SECRETARIES**

John Rea

Howard Morrison

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### **POLICY ANALYSTS**

Keith Allott

Nick Schoon

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### **INFORMATION SYSTEMS MANAGER**

Cathy Garretty

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### **OFFICE MANAGER**

Rosemary Ferguson

*Assisted by*

Janice Downes

Patrizia Bergonzi

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### **PERSONAL SECRETARY TO SIR TOM BLUNDELL AND DR LEWIS**

Dot Watson

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## INTRODUCTION

Thirty years ago, when the Royal Commission on Environmental Pollution was established, the environment was a considerably simpler issue than it is today – and was only beginning to develop a high public profile. Nevertheless, the decision to set up a Commission to focus on strategic issues, longer-term policy development and future threats to the environment now looks extremely prescient.

In keeping with the times, many of the Commission's early reports focused on relatively narrow issues, frequently concerning 'end-of-pipe' controls. Even so, the Commission soon exerted a profound influence. Its reports spurred successive governments to introduce legislative controls on discharges to rivers, estuaries and coastal waters; new arrangements for dealing with oil spills at sea; unleaded petrol; a 'duty of care' on producers of waste; and new systems for advising on the management of radioactive waste. Moreover, many key recommendations have continued to resonate through the policy-making process. In 1976, the Commission developed the concept of using the 'best practicable environmental option' in situations where controlling pollution in one environmental medium can lead to increased pollution in another. In doing so, it laid the foundations for the system of integrated pollution control, the flagship of the Environmental Protection Act 1990, and for the 1996 EU Directive on integrated pollution prevention and control, which is currently being implemented in the UK.

In recent years, environmental challenges have become more global in nature, and have raised fundamental questions about many aspects of modern society's development. The Commission has sought to rise to this challenge. Its two reports on transport, published in 1994 and 1997, reshaped the policy agenda in this area – although coherent policies to deliver a more sustainable transport system have yet to be implemented on the ground.

I believe that our latest report on energy and the environment lays down a still more daunting challenge. This study, which dominated the Commission's workload in the period covered by this review, offers a clear perspective of what the UK must do to play a full and credible role in dealing with the threat of global climate change – not merely over the next decade, but over the next fifty years. Climate change – and many other emerging environmental concerns – cannot be tackled without action at an international level. However, the Commission's report makes clear that this is no excuse for inaction at national or regional level, and offers strong recommendations for what should be done now by the UK.

Another strong current in the environmental debate in the 1990s has been the ability of policy-makers to reflect scientific uncertainties and to regain the trust of an increasingly sceptical public. Such issues lay at the heart of the Commission's 1998 report on setting environmental standards. This called for a new and more robust approach to deciding environmental policies, in which people's values and local knowledge would be taken into account from the outset.

A third element in the changing environmental debate has been the weight attached to environmental protection within the context of wider sustainable development. This issue runs through all of the Commission's work, but is likely to be a particularly strong theme in our present study of environmental planning.

In the light of these trends the need for dispassionate and multi-disciplinary analysis of environmental problems and a long-term strategic overview is more powerful than ever. A review carried out in 1999 in conjunction with the Department of the Environment, Transport and the Regions concluded that the Commission is well placed to fulfil such a role. The government has, in recent years, appointed a growing number of bodies to advise it on environmental issues. Most focus on one aspect of the environment or on detailed mechanisms aimed at delivering relatively short-term goals. The Commission believes it offers an important complement to such bodies – and looks forward to being a key and distinctive player in the environmental debate over the next thirty years.



SIR TOM BLUNDELL

Chairman

## ACTIVITIES IN 1998/99 AND 1999/2000

### TRANSPORT AND THE ENVIRONMENT: GOVERNMENT RESPONSE TO TWENTIETH REPORT

The Commission's Twentieth Report,<sup>1</sup> published in September 1997, reviewed developments in transport policy since publication in 1994 of the Eighteenth Report<sup>2</sup> on the same topic. It warned that time was running out to reverse the damaging trends associated with the continuing growth in traffic and create an efficient integrated transport system for the UK. It foresaw a danger that, unless swift action was taken, 'the pendulum could swing back to demands for a large road building programme'.

*The Commission warned that continuing as previously would have consequences that were environmentally, economically and socially unacceptable.*

*We agree.*

– 1998 Transport White Paper

The government's response,<sup>3</sup> issued in October 1998, was based on the policies set out a few months earlier in its White Paper on transport.<sup>4</sup> The government acknowledged that the work of the Commission had been central in setting a new agenda for transport policy, and had been an important influence on its thinking. Many of the recommendations in the Eighteenth and Twentieth Reports have been, or are now being, put into effect, including powers for urban road pricing, graduated vehicle excise duty, reform of company car taxation, tougher European Union standards on vehicle emissions and fuel quality, local transport plans and mechanisms for regional transport planning.

The Commission has nevertheless been disappointed at the slow progress in implementing the policies set out in the White Paper. It regrets that successive governments have not devoted more of the revenues from road fuel duty to improving alternatives to car use. There are some hopeful signs, including a slowing in road traffic growth, a rapid increase in the number of rail passengers and publication of the government's 10-year plan for transport<sup>5</sup>. The Commission will be examining carefully this and other policy developments in order to determine whether the fundamental change in direction it concluded was essential has really taken place.

### TWENTY-FIRST REPORT: SETTING ENVIRONMENTAL STANDARDS

The Commission's report on the basis for environmental standards was published in October 1998.<sup>6</sup> It called for a new approach to deciding environmental policies which, while continuing to draw on rigorous and dispassionate analysis, would be more sensitive, right from the outset, to people's values. The report identified various mechanisms to articulate those values better, including citizens' juries and consensus conferences, and suggested that such mechanisms should be incorporated into the procedures for setting environmental standards.

*The phrase 'articulation of people's values' is a striking contrast to the snapshot paradigm of opinion polling ... The Royal Commission offers a much richer view of the social contract between citizen and state*

– Baruch Fischhoff, *Journal of Risk Research*

The report also concluded that bodies setting environmental standards should operate in an open and transparent way, and leave an audit trail recording what factors had been taken into account in their decisions. Decision-making procedures should recognise the limitations and uncertainties associated with scientific data. Assessments of technological options should be carried out on a life cycle basis in order to ensure that the full range of options and repercussions are considered.

<sup>1</sup> Twentieth Report: Transport and the Environment – Developments since 1994. Cm 3752. TSO, 1997.

<sup>2</sup> Eighteenth Report: Transport and the Environment. Cm 2674. TSO, 1994.

<sup>3</sup> Government Response to the Twentieth Report. Cm 4066. TSO, 1998.

<sup>4</sup> A new deal for transport: The government's White Paper on integrated transport. TSO, 1998.

<sup>5</sup> Transport 2010 – The 10 year plan. TSO, 2000.

<sup>6</sup> Twenty-first Report: Setting Environmental Standards. Cm 4053. TSO, 1998.

*Setting Environmental Standards* attracted serious attention in specialist journals<sup>7</sup> and its findings were expounded to professional audiences at various conferences. There is evidence that it has influenced policy-makers both in the UK and elsewhere. An example of one of the mechanisms suggested in the report was the well received consensus conference on radioactive wastes held in May 1999 and organised by the UK Centre for Economic and Environmental Development. Sir Tom Blundell, Professor Clift and Professor Macrory gave evidence to the House of Lords Science and Technology Committee's inquiry into science and society; and the committee's report, published in March 2000,<sup>8</sup> echoes many of the points made by the Commission.

Rather than specific recommendations to the UK government, the report put forward 85 conclusions, which have a much more general relevance. The government's response did not appear until July 2000.<sup>9</sup> It supported the broad approach the Commission had advocated but, in failing to respond individually to its conclusions, ignored a number of very important points. These included the need to base environmental decisions on a consideration of options, the call for public funding of independent investigation and inquiry, the distinction between stakeholder interests and people's values, the reservations the Commission expressed about appointing token lay members to committees, and some of the key differences between the analytical stage of standard-setting and the final stages of deliberation and decision-making.

Meanwhile, as described below, the Commission showed how the report's general conclusions could be applied in practice in its responses to government consultations on the oversight of biotechnology and the sustainable production and use of chemicals.

## **TWENTY-SECOND REPORT: ENERGY – THE CHANGING CLIMATE**

The study of energy and the environment dominated the period covered by this review.

The threat of major global climate change is, in the Commission's view, the key environmental challenge facing the energy sector, and substantial reductions in emissions of carbon dioxide and other greenhouse gases will be required. In September 1998 it was announced that the main focus of this study would be to explore the implications of considerably reducing, or phasing out completely, by 2050 the use of fossil fuels as an energy source in the UK.

Evidence was invited on 23 questions covering alternative sources of energy, improvements in energy efficiency, the implications of climate change, social issues and international considerations. Over 170 written responses were received. The study was also informed by a seminar held in July 1998 and presentations or oral evidence from more than 40 individuals and organisations. Nine reports were commissioned from consultants, and are available on the Commission's website. The Secretariat modelled various scenarios for an energy balance for the UK in 2050 to explore the feasibility of a large reduction in carbon dioxide emissions.

*The threat of major global change is the key environmental challenge facing the energy sector*

Commission Members visited Brussels, Japan, the USA and Denmark to investigate technological and policy developments. They also visited electricity generating plants in the UK, including the Dinorwig pumped storage scheme, the coal-fired Longannet power station, the Trawsfynydd nuclear station (which is being decommissioned), and renewable energy projects such as wind farms and plants fuelled by agricultural wastes or biomass.

Preparing the report involved keeping in touch with a rapidly changing picture, in terms of policy and legislation (for example on liberalisation of markets and regulation of utilities), in terms of analyses available, and in the ongoing international negotiations about implementation of the Kyoto Protocol. Other evolving areas were emissions trading and the promotion of renewable sources of energy. Members decided that the

<sup>7</sup> For example ENDS Report 286 (November 1998), Journal of Risk Research (September 1999), Journal of Environmental Law.

<sup>8</sup> Select Committee on Science and Technology, Session 1999-2000, Third Report: Science and society.

<sup>9</sup> Government Response to the Twenty-First Report. Cm 4794. TSO, 2000.

Commission's report would make the most constructive contribution to policy development if it could take into account the government's draft climate change strategy and new projections of UK energy demand and supply. These projections and the draft strategy were delayed, and were published in March 2000.<sup>10</sup>

In advance of completing its report, the Commission was involved in taking forward some of the issues raised:

- in June 1999 the Chairman wrote to the Chancellor of the Exchequer expressing concern that, because the climate change levy proposed by the government was a downstream energy tax, it would not be effective in reducing carbon dioxide emissions. He contended that the practical difficulty of introducing a tax on the carbon content of fuels had been much overstated. In reply, Treasury Minister Patricia Hewitt said the form of the levy had been determined by the government's wish not to impose new taxes on domestic energy users. She drew attention to plans to exempt renewable energy and combined heat and power plants from the levy, and suggested the modified proposals might 'begin to resemble a carbon tax'
- in November 1999 the Chairman wrote to Housing Minister Nick Raynsford urging that the proposed sellers' information packs should include a SAP energy efficiency rating for a house or flat. The Minister confirmed that the sellers' packs in the pilot study would include a SAP rating, together with generic advice about measures to improve energy efficiency
- in February 2000 the Chairman attended a seminar held by the Prime Minister on the prospects for emissions trading and carbon trusts.

*Energy – the Changing Climate* was published in June 2000<sup>11</sup> and is attracting much attention.

## **ENVIRONMENTAL PLANNING**

In July 1999 the Commission announced that it was going to investigate whether present arrangements for environmental planning are capable of achieving environmental sustainability. A summary of the main issues raised in the written responses to this announcement is on the Commission's website. The UK Round Table on Sustainable Development published a report<sup>12</sup> which was designed as a contribution to the Commission's study.

Five reports were commissioned from consultants covering: values and sustainable development; operation of the land use planning system; use of the land use planning system to achieve wider environmental objectives; the interface with pollution control; and international comparison of environmental planning systems. These reports are available on the Commission's website, together with the report of a seminar in February 2000 designed to canvass views from key stakeholders.

In March 2000 the Commission started the main phase of the study by inviting evidence on detailed questions under five themes: environmental sustainability; boundaries; integration or co-ordination; subsidiarity and democracy; and assessment approaches. The study's scope goes much wider than land use planning (although that aspect is central) and encompasses other dimensions of environmental policy and regulation such as pollution control, air quality, waste, water, agri-environment and biodiversity.

It is hoped to complete the Environmental Planning Study in mid-2001.

## **THE NEW SUSTAINABLE DEVELOPMENT COMMISSION**

Views were submitted to the Department of the Environment, Transport and the Regions on the purpose and remit of the new Sustainable Development Commission (SDC). The intention to create this body, as the replacement for the Government Panel and Round Table on Sustainable Development, was announced in May 1999 in the UK sustainable development strategy.<sup>13</sup> There is a clear need for an influential body

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<sup>10</sup> Climate change: Draft UK programme, March 2000. DETR.

<sup>11</sup> Twenty-Second Report: Energy – The Changing Climate. Cm 4749. TSO, 2000.

<sup>12</sup> Planning for Sustainable Development in the 21<sup>st</sup> Century. Obtainable from the Secretariat of the Sustainable Development Commission.

<sup>13</sup> A better quality of life: a strategy for sustainable development for the UK. Cm 4345. TSO, 1999.

operating at a strategic level to promote simultaneously the social, environmental and economic strands of sustainable development. This will involve the SDC in overseeing and monitoring the pursuit of sustainable development across all sectors of society and at all levels of government in the UK.

## **REGULATION OF GENETICALLY MODIFIED ORGANISMS**

In February 1999 the Commission responded to the government's consultation paper on the future oversight of developments in biotechnology (see annex A), and sought to apply the general conclusions about environmental policies reached in its Twenty-first Report, *Setting Environmental Standards* (see above).

The Commission highlighted the decline in public confidence in expert judgements, the need to improve understanding of the uncertainties inherent in scientific assessment, and the importance of bringing people's

*If the whole process of standards setting and review of standards could, in future, be handled on the lines the Royal Commission recommends, they would have a much firmer base*

– Derek Osborn  
*Journal of Environmental Law*

values to bear on environmental issues. It called for a new emphasis on taking into account the values and evolving views of ordinary citizens, as distinct from seeking to broker compromises between the settled positions of existing interest groups. New machinery to help articulate such values should be wider in scope than the 'environmental stakeholder forum' suggested by the government. It should operate in parallel with existing technical and scientific sources of advice and feed into key stages of the regulatory procedures, notably the framing of questions about the way proposals for releases of genetically modified organisms are handled and the way policy aims are formulated. Because transparency is vital,

every official decision about genetically modified organisms ought to be accompanied by an explanation of the reasons for it.

The government accepted the need for a new approach towards setting a strategic framework for the development of biotechnology.<sup>14</sup> It has set up two advisory bodies, which will be required to consult stakeholders and the public: the Human Genetics Commission and the Agriculture and Environment Biotechnology Commission. One of the Members of this Commission, Professor Michael Banner, has been appointed to the latter body.

The commitment by the government to make public the facts and analysis underlying regulatory decisions, and the advice given by its advisory bodies, is most welcome. So also is the use made of focus groups and the People's Panel in order to inform the review of the framework. The Commission is disappointed however that the government has not taken the opportunity to embed similar mechanisms within the new strategic framework.

## **SUSTAINABLE PRODUCTION AND USE OF CHEMICALS**

In December 1998 the Commission responded to the government's consultation paper on the sustainable production and use of chemicals (see annex B), and here too sought to apply the general conclusions reached in its Twenty-first Report.

The Commission argued that, for public trust to be maintained, decisions about the marketing and use of particular chemicals must take into account the concerns ordinary citizens have. Whatever the scope for significant improvement in the management of risks from new substances, the Commission's main concern was about the very large numbers of substances brought into use prior to 1981.

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<sup>14</sup> The Advisory and Regulatory Framework for Biotechnology: Report from the Government's Review. Office of Science and Technology, May 1999.

The government published its chemicals strategy in December 1999.<sup>15</sup> The main focus is an enhanced programme of chemical risk assessments based on voluntary co-operation by industry. The Commission was disappointed that the government did not accept several of its key recommendations, including: statutory backing for the chemical industry's 'product stewardship' programme; a duty on chemical manufacturers to obtain information and carry out life cycle environmental risk assessments of their products; and a duty on manufacturers to take into account the relative risks posed by their products and available substitutes. The new Stakeholder Forum could prove valuable, but is unlikely to be as effective as other possible mechanisms in addressing the concerns ordinary citizens have about protection of the environment and the role of science in the decision-making process.

## A UK-WIDE ROLE

Responsibility for environmental matters in Scotland, Wales and Northern Ireland has now been transferred to the devolved administrations. The Commission's role in investigating and providing advice on environmental issues throughout the UK, as well as European and global issues, was reflected in its designation (under section 88 of the Scotland Act 1998) as a cross-border public authority. Under an Order in Council the function under the Royal Warrant of referring matters to the Commission for investigation will be exercisable, as regards matters relating to Scotland, by the Secretary of State for the Environment, Transport and the Regions and Scottish Ministers concurrently, and the Commission will be authorised to inquire into any matter referred to it by a Scottish Minister. Corresponding provision will be made administratively in relation to Wales and Northern Ireland.

Good relations have been established with the devolved administrations, at both ministerial and official levels, through meetings held in Scotland in February 1999 and April 2000 and in Wales in June 1999 and July 2000, and the first full meeting of the Commission held in Northern Ireland, in September 1999.

Mutually beneficial links are maintained with the three environmental protection agencies: the Environment Agency in England and Wales, the Scottish Environment Protection Agency and the Northern Ireland Environment and Heritage Service.

## THE EUROPEAN LEVEL

A high proportion of the environmental legislation applying in the UK now stems from the European Union. Moreover the European Union's policies in other fields, such as transport, energy and agriculture, have major implications for the environment. As part of the study of energy and the environment Members visited Brussels in January 1999 for discussions with Commissioner Kinnock, the Energy and Environment Directors-General and their staffs, Members of the European Parliament, and some relevant Brussels-based organisations. In May 1999 the Commission held a joint session in London with its German counterpart, the Council of Environmental Advisors, on the pursuit of environmental objectives in liberalised energy markets.

The Commission forms part of a network of European Environmental Advisory Councils. The objectives are to exchange information and ideas, provide earlier information about policy developments at European level,

and exert influence on such developments. The network's 1998 conference explored the integration of environmental considerations into other policies, and the 1999 conference the implications of enlarging the European Union. A volume of papers from previous conferences was edited by the Commission Secretariat and published in 1998.<sup>16</sup> Professor Richard Macrory will chair the steering committee of the network for two years from January 2001.

*The Prime Minister expressed support for the continuing integration of environmental considerations into other EU policies*

<sup>15</sup> Sustainable production and use of chemicals: A strategic approach, DETR, December 1999.

<sup>16</sup> Enid M Barron and Ilga Nielson (ed). *Agriculture and sustainable land use in Europe*. Kluwer Law, 1998.

The European Environmental Advisory Councils participated in a conference held in December 1999, under the title ‘Sustainability 21 – transforming markets’, with the aim of making recommendations to the Helsinki European Council. The Chairman of the Commission wrote to the Prime Minister to alert him to those recommendations. In reply the Prime Minister expressed support for continuing efforts to integrate environmental considerations into other policies and confirmed that the Council of Ministers had invited the European Commission to prepare a draft Sixth Environmental Action Programme by the end of 2000 and a draft long-term strategy for sustainable development by June 2001.

## IMPROVING PERFORMANCE

Funding for the Commission is provided through the Department of the Environment, Transport and the Regions (DETR). The Commission’s budgeted and actual expenditure for 1998/99 and 1999/2000 and its budget for 2000/01 are shown in the table below:

	<b>budget 1998/99</b>	<b>outturn 1998/99</b>	<b>budget 1999/2000</b>	<b>outturn 1999/2000</b>	<b>budget 2000/01</b>
<b>Members’ fees</b>	53	53	59	55	59
<b>staff costs</b>	434	441	425	356	426
<b>travel and subsistence</b>	45	58	51	57	48
<b>consultancies</b>	50	24	50	76	40
<b>rent</b>	65	65	84	110	88
<b>rates</b>	18	17	33	31	36
<b>other office costs</b>	104	114	61	132	88
<b>capital</b>	0	6	25	18	0
<b>£k</b>	<b>769</b>	<b>778</b>	<b>778</b>	<b>835</b>	<b>785</b>

It became necessary to replace the Commission’s IT system in 1999/2000 and additional funding of £31,000 was obtained from DETR to help meet the cost. Key vacancies in the Secretariat caused by career moves in 1999 and early 2000 have now been filled.

In 1999 DETR and the Commission carried out a Financial, Management and Policy Review to evaluate the Commission’s role and performance and make recommendations on its future development. The report prepared by DETR’s In House Policy Consultancy welcomed the Commission’s move towards broad-ranging studies, and found that the need for high-quality advice and strategic thinking had been heightened by the maturity and complexity of today’s environmental agenda. It endorsed the steps already taken, following an internal review in 1997/98, to rationalise and improve the way studies are carried out and increase transparency and openness. Minutes of Commission meetings and key background papers are now available on the Commission’s website. This present publication is another manifestation of this policy of increased openness.

The Financial, Management and Policy Review recommended action to increase awareness of the Commission’s work, to assess the effectiveness of its reports, to improve linkages with other environmental advisory bodies and to improve strategic planning. The conclusions of the Review were published in May 2000.<sup>17</sup> Environment Minister Michael Meacher said: ‘The overall conclusion of the Review is very positive

<sup>17</sup> Financial, Management and Policy Review of the Royal Commission on Environmental Pollution. Available from DETR or on [www.environment.detr.gov.uk/rcep/index.htm](http://www.environment.detr.gov.uk/rcep/index.htm).

*The overall conclusion of the review is very positive*

– *Environment Minister  
Michael Meacher*

of the Energy Report (for reasons explained above) had repercussions on other elements of the work programme.

The Commission will shortly initiate formal evaluations of the impact and effectiveness of its major reports. The first to be evaluated will be the Nineteenth Report, *Sustainable Use of Soil*, published in 1996.<sup>18</sup> In 1997 the government accepted its central recommendation for a soil protection strategy.<sup>19</sup> The Commission is concerned that this strategy has yet to emerge. The conclusions from this and other evaluations of previous studies will be drawn upon to make further improvements in working methods.

## LOOKING AHEAD

*The Commission's major activity is taking forward the study of environmental planning*

In 2000/01 the Commission's major activity will be taking forward its study of environmental planning, with the target of publishing a report later in 2001.

Unfortunately, the offices at Steel House to which the Commission moved from Church House in September 1998 have proved not to be available on a long-term basis. It will therefore be necessary to make a further move during 2001.

The Commission's next study will begin during 2001. In autumn 1999 views were sought from government Departments, regulatory agencies, non-governmental organisations, European bodies and industry on a shortlist of four possible subjects:

*Air transport and the environment*

*Environmental aspects of producing food for the UK*

*Long-term effects of chemicals and biological agents*

*Marine pollution*

It has been decided to undertake a study of the unintended long-term effects of chemicals, and an announcement will be made shortly about its scope. The target is to publish a report in 2002.

The Commission's plans over the next five years are to:

- continue with a programme of major studies on subjects which fulfil its selection criteria (listed below);
- disseminate, and where appropriate apply to particular fields, the conclusions about establishing a sustainable basis for environmental protection contained in its report *Setting Environmental Standards*;
- disseminate, and where appropriate apply to specific policy issues, the conclusions of its report *Energy – the Changing Climate*;
- continue to investigate, and make recommendations about the potential for integrating environmental objectives into particular areas of policy;

<sup>18</sup> Nineteenth Report: *Sustainable Use of Soil*. Cm 3165.TSO, 1996.

<sup>19</sup> Government Response to the Nineteenth Report. DETR, January 1997.

- evaluate each major report approximately three years after publication in the light of subsequent developments in policy, practice and scientific understanding;
- as a necessary condition for its continuing effectiveness, maintain contacts with DETR Ministers and officials, and those of other Whitehall Departments; with the devolved administrations in Scotland, Wales and Northern Ireland; with Parliamentary committees and other key people in the environmental field; and with European institutions;
- contribute to maximising the value of the network of European Environmental Advisory Councils.

The Commission also stands ready to provide advice on any subjects that may be referred to it by Ministers.

*Views are invited  
on the Commission's  
next choice  
of subject*

Views are invited on the choice of subject for the study which the Commission is scheduled to announce during 2001, with the target of publishing a report in 2003.

Suggestions put forward should have regard to the Commission's criteria for selecting subjects. These are as follows (although any one study will not necessarily satisfy all of them):

- the topics chosen should be what the Commission's First Report called 'priorities for enquiry': issues which require detailed and rigorous analysis before satisfactory policies can be adopted;
- they should raise wide issues, both intellectually (in the sense of spanning several disciplines) and organisationally (in the sense of not falling within the terms of reference of any other single body);
- they are likely to involve general issues of principle;
- they should reflect trends in environmental policy at European and global levels that will have significant implications for the UK;
- they should not normally duplicate other studies already in progress or planned in the near future;
- there should be a reasonable prospect that worthwhile conclusions can be produced within two years with the resources likely to be available to the Commission.

Suggestions for subjects, and any views on other aspects of the planned programme of work, should be sent to the Secretary of the Commission at the address given on the back cover of this review. In the light of suggestions received, the Commission will draw up a shortlist of subjects for the next study early in 2001, and consult about that before reaching a decision.

## ANNEX A

### REVIEW OF THE FRAMEWORK FOR OVERSEEING DEVELOPMENTS IN BIOTECHNOLOGY RESPONSE BY THE ROYAL COMMISSION ON ENVIRONMENTAL POLLUTION TO A CONSULTATION PAPER PUBLISHED IN DECEMBER 1998 BY THE OFFICE OF SCIENCE AND TECHNOLOGY

1. The Commission studied the release of GMOs in its Thirteenth Report, published in 1989. In order to provide safeguards in the face of the uncertainties attaching to the release of GMOs it recommended that a detailed scheme of statutory regulation should be established. The government accepted almost all of these recommendations and they form the basis of the legal provisions which now regulate GMO releases. In 1993, the Commission reaffirmed its confidence in the arrangements for regulating the deliberate release of GMOs to the environment.
2. The Commission's Fourteenth Report, GENHAZ, published in 1991, described a methodology for identifying the hazards associated with GMOs. This methodology was designed to make those responsible for appraising proposed releases approach them in an interdisciplinary way and employ lateral thinking to identify unfamiliar interactions. The government commissioned two trials of the procedure but considered it too detailed for general application. It also considered it likely to restrict flexibility in dealing with applications presenting different degrees of risk.
3. Since then, the decline in public confidence in expert judgement and changes in the understanding of environmental problems have led the Commission to look at the issues involved in a broader and more fundamental way. The climate of public opinion in which releases of GMOs are regulated is now even more mistrustful and critical than was previously assumed. The view that better explanation of the science is enough to secure public acceptance of experts' judgements is largely discredited. The Commission's Twenty-first Report pointed to signs of an erosion of trust in regulation, reinforced by a lack of confidence in government scientists, by pressures for deregulation, by a belief that uncertainties are played down in official statements, by criticisms of a perceived lack of openness, by an alleged lack of independence among some regulators, and by a failure to take sufficient account of people's values. The BSE crisis has led people to be wary of the claimed advantages of more efficient production and of official reassurances which equate 'no evidence' with 'no risk'. Many now question the validity of the traditional paradigm of government regulation informed by small groups of experts as an appropriate way of making policy in conditions of uncertainty.
4. Alongside these changes in the climate of environmental protection, some specific weaknesses have been identified in the system for regulating releases of GMOs. Biological systems are unpredictable in their response to stresses, especially in the ecological context. The type of risk assessment required under the current system attempts to cope with this by identifying hazards associated with particular GMOs, considering how each hazard could be realised, and then estimating the magnitude and likelihood of harm's being realised. The next stage is to estimate the risk of harm in respect of each hazard, modify the proposal until the lowest level of risk is obtained and then estimate the overall risk of harm to the environment. The assessment is carried out by the applicant who seeks the consent to release.
5. There is an attraction in reducing complex issues into a series of steps of this kind but in doing so certain issues become obscured and others can be overlooked.
6. First, the assumptions built into the estimates of hazard and risk are necessarily those of the experts employed by the applicant. They may well not be shared by others in society but the regulator, working in a regime tightly controlled by legislation, is not necessarily in a position to query them or to substitute other assumptions. There is also concern that the advisory committees are dominated by people whose views of the uncertainties surrounding the release of GMOs may not be shared by people from different backgrounds and with different values.
7. Second, for the public to find the decisions of the regulators acceptable requires a degree of trust in those regulators. As indicated above and as subsequent studies (such as the recent MAFF R & D Surveillance Report 361) have amply shown, it is precisely this trust which is now being eroded.

8. Third, the case by case approach to authorising releases does not consider the possible cumulative effects of several releases in the same area or of the indirect effects of releases, for example as products pass through the food web. The lessons to be drawn from pesticide use seem not to have been fully learned and there have been calls for changes to the regulatory structure to take account of such broader concerns.
9. Finally, there is an implicit assumption that the advantage to the applicant of the release can be weighed against the possible disadvantages to mankind and the environment, now and in the future. Making trade-offs of this kind is far from straightforward. It is difficult if not impossible for a reductionist risk assessment procedure to weigh, for example, moral objections to the use of certain GMOs against the prospect of financial reward to the user, or to judge the benefits to be gained from GMOs against the possibly small risk of a catastrophic but unspecific outcome.
10. There is, then, a considerable gap in the existing regulatory structure in relation to ethical and other wider issues. It is symptomatic of a deeper failure, the lack of a satisfactory and systematic means of taking public values into account.
11. The Royal Commission's Twenty-first Report characterised values in the following way.  
 '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.'(Paragraph 7.3)
12. Individuals are likely to have other values alongside values about the environment, and these will have implications for the way environmental values are pursued, and vice versa. There are many situations in which different values are competing with each other and there may therefore be difficulty in choosing the right course of action. This is bound to be the case in societies made up of individuals with contrasting backgrounds and sets of commitments. In such circumstances, finding the best way forward involves considering a range of policy options and identifying the one which comes closest to satisfying the values relevant to a particular decision. As well as facilitating the emergence of values, processes of debate and discussion may also help to resolve situations of competing values and thereby help to create or identify policy choices which will command wide support.
13. Parliamentary committees can perform an important function in weighing up opposing opinions but, whilst they can express public attitudes and values to some extent, there is a need for more direct methods of ensuring that people's values are articulated and taken into account alongside technical and scientific considerations when questions are framed and policies developed. None of the bodies in the existing regulatory system appears to have either the right kind of membership or a sufficiently wide remit (covering all aspects of genetic modification and all relevant government departments) to carry out this function. Fresh machinery will be needed.
14. An environmental stakeholder forum has been proposed as an addition to the current framework. As described last October in government evidence to the House of Lords Select Committee on the European Communities, this would include everyone with an interest, such as farmers, plant breeders, conservation bodies and public interest groups. It would act in parallel with the Advisory Committee on Releases to the Environment which would remain a scientifically based committee, considering applications on a case by case basis. Whilst stakeholders certainly should be consulted when decisions on GMOs are taken, the interests of stakeholders do not cover the whole spectrum of moral and social concern. Stakeholders have a clear, settled interest in an issue. The model of a stakeholder forum places the emphasis on negotiation and compromise instead of teasing out the implications of issues and thereby enabling mutual learning to take place, views to evolve, and a more robust conclusion to be reached. It is the values of people in their capacity as citizens which need to be included in the debate.

15. To enable people's values to be articulated, the Twenty-first Report envisaged machinery operating in parallel with existing technical and scientific sources of advice and feeding into key stages of the regulatory procedure. In the case of GMOs, this might consist of a body sufficiently well-resourced to commission work to elicit people's values using innovative approaches, including consensus conferences (regional and local as well as national), citizens' panels, focus groups and other kinds of workshop. It might also explore interactive use of the Internet. Public opinion surveys alone will not be adequate. The Office of Science and Technology has already initiated some activities of this kind, linked to use of the People's Panel. To reduce the dominance of centralised, metropolitan views, it would be desirable to use a range of organisations such as libraries, local authorities, universities and cultural organisations across the country as agents of the commissioning body. It would be important for this body to be independent of existing regulators and the biotechnology industry. But there should be contact and co-ordination between the component bodies in the regulatory system because they rely on each other for data and assumptions.
16. The output from the debate must be used effectively in the decision-making process. Talking shops with no real influence would have neither credibility nor value. In particular the output needs to inform the framing of questions about the way proposals for releases should be handled and the way policy aims are formulated.
17. In terms of the regulation of GMOs, the implication is for a formal reporting line from the body responsible for eliciting public values to the bodies which set the regulatory framework (civil servants and Ministers) and decide on specific applications. The Twenty-first Report did not envisage a hierarchical structure: each advisory body (scientific, ethical etc) has its own function but the bodies need to be able to interact, so that issues considered by, for example, a scientific advisory body are informed by people's values, just as those values can be adequately developed only with the help of reliable information from scientists. In order to achieve transparency, each body's output (which should be in the public domain) should be considered together with the outputs from the other bodies involved.
18. The attempt to map the contours of people's values is a necessary preliminary to informed and robust debate, but is not a panacea. The debate may be imperfect, information may be inadequate, and presentation selective. Some of the most difficult issues which are raised by the release of GMOs relate to the ways in which development can be made sustainable and here assumptions must be made about the values of future generations. In any case, there is a wide range of diverse values to be found between societies across the world as well as within them. It seems, for example, that the release of GMOs may cause less concern in the USA than in Europe. These differences can come into sharp conflict when they are between different communities linked by trade. Global dialogue in the WTO and in other international fora will be needed as well as what is done domestically and in the European Union. Moreover, whilst policies must reflect people's values, so too must they be informed by the best scientific, technological, economic and other analysis. The information available to experts and non-experts alike should be continually improved to raise the standard of the debate. The debate itself should be structured so that the underlying assumptions and values are made explicit.
19. Concern for transparency goes deeper than this. People need to be able to satisfy themselves that all the factors have been given due weight when decisions are taken. At present there seems to be no means of achieving that. One solution would be to place an obligation on decision-makers to issue reasoned decisions, as there is, for example, when Town and Country Planning appeals are decided. The scale of such reasoned decisions should be commensurate with the weight of the issues in each case. When a new policy is being decided, a full explanation of the weight attached to all the issues would be entirely proper (as sometimes happens after consultation exercises have been evaluated). For routine releases a short letter, widely publicised, might be appropriate.
20. Together with strong, open scientific assessments, these proposals could help considerably to improve the quality of the debate on GMOs and ensure that the policy issues which arise are settled in ways which command the widest assent.

## ANNEX B

### SUSTAINABLE PRODUCTION AND USE OF CHEMICALS

#### RESPONSE BY THE ROYAL COMMISSION ON ENVIRONMENTAL POLLUTION TO THE CONSULTATION PAPER PUBLISHED IN JULY 1998 BY THE DEPARTMENT OF THE ENVIRONMENT, TRANSPORT AND THE REGIONS

1. Regulation of the marketing and use of chemicals is a crucial aspect of environmental protection. The Royal Commission on Environmental Pollution welcomes the government's review of policy in this field. It believes that control of the risks from new chemical substances through the present notification scheme is generally effective, within the inherent limitations of scientific assessments, although vigilance is necessary to ensure that all new substances are duly notified. The main concern is reducing the risks posed by chemical substances which were in use prior to 1981.
2. The Royal Commission endorses the policy aims which the government has proposed, which are to protect the environment as a whole from harmful effects of chemical use while ensuring that the benefits of chemicals are still available to society. In pursuing those aims, important issues arise about:
  - public involvement
  - the European and international framework
  - consistency as between different types of chemical
  - the case for industry to take greater responsibility for ensuring that the chemicals it produces and markets will not damage human health or the natural environment
3. The consultation paper Sustainable production and use of chemicals invited views on some of these issues. Others are more general issues highlighted by the Royal Commission's recent report, *Setting Environmental Standards* (Cm 4053).

#### Public involvement

4. It is essential that the arrangements for controlling the environmental hazards associated with chemical substances merit and retain public confidence. The key requirements are transparency, openness and accountability. The government has invited the UK Round Table on Sustainable Development to provide advice on the mechanisms that might be used to improve transparency and the information available to the public about chemical substances.
5. In turn, decisions about environmental policies must be informed by an understanding of people's values. A rigorous exploration of such values requires discussion and debate to allow a range of perspectives and viewpoints to be considered. Values should be articulated and developed at the earliest stages in formulating policies. That applies in particular to such strategic issues in chemicals policy as the selection of the criteria on which prioritisation of chemical substances for assessment is based, the form of assessment used, and the extent to which substitutes should be sought for hazardous substances. These issues must be approached in the light of the precautionary principle and a recognition of the nature and scale of the uncertainties inherent in scientific assessments.
6. Environmental non-governmental organisations (NGOs) have proposed that the criteria for prioritisation should be the intrinsic properties of persistence, potential for bioaccumulation and toxicity; and that targets should be set for reducing, and eventually eliminating the use of chemical substances with those properties. In other words, prioritisation, and in some cases action, would be based on a hazard assessment alone.
7. The chemical industry has voiced objections to prioritisation on the basis of intrinsic properties, and advocated the use of simplified risk assessment procedures which would consider the extent of potential exposure to a given substance as well as the intrinsic hazard it represents. This approach presupposes accurate knowledge, not only of production volumes, but of the uses to which a substance will be put.

8. The consultation paper suggests that the government should obtain advice on (among other things) criteria for selecting chemicals for assessment from a 'stakeholder forum' involving 'industry, environmental NGOs, Government officials, and experts from academia'. Stakeholder fora, and other traditional forms of consultation, have a valuable part to play in appropriate contexts. However the Royal Commission does not believe the concept of a 'stakeholder' can usefully be stretched to cover either the concerns ordinary citizens have about protection of the environment or the contributions to the decision process made by science and other disciplines. Nor does it believe that negotiations between stakeholders are likely to be successful in meeting the considerable challenges posed by the agreed policy aims (paragraph 2 above).
9. More appropriate and effective procedures for arriving at decisions about environmental policies are described in the Royal Commission's report *Setting Environmental Standards*. For the present purpose consideration should be given to the use of one or more of the approaches described and explained in box 7A on page 107 of that report, for example a consensus conference. Use of such procedures may enable a consensus to be achieved about strategic issues. Even if different viewpoints persist, articulation of public values is likely to play an important role in creating or identifying policy choices which will command wide support.

### **The European and international framework**

10. The effects of chemical use are seen across the globe, in some cases regardless of the original point of use. Moreover chemicals are produced and traded internationally by companies which are themselves often multinational. Comprehensive co-ordination of the assessment of chemical substances is desirable in order to prevent unnecessary duplication of work and consequential delays, both to companies in introducing technological innovations and to regulators in devising and applying appropriate control measures.
11. Regulation of the marketing and use of chemical substances in the UK is carried out under European Community (EC) legislation on the basis of an integrated programme of assessments by Member States. The European Commission is carrying out its own review of policy in this field. The EC Existing Substances Regulations, which cover substances recorded as having been marketed in the EC between 1971 and 1981, and which came into effect in 1993, have thus far failed to deliver decisions on risk management for a single chemical substance. The European Commission and many Member States acknowledge that the present situation is unsatisfactory.
12. There is less agreement about the reasons for this situation. Lack of resources at European level appears to be an important factor. For its part, the European Commission has stated that one of the reasons for the lack of progress in reviewing existing substances is an absence of commitment and resources on the part of Member States. The Royal Commission concluded in *Setting Environmental Standards* (paragraph 3.44) that this slow rate of progress 'demonstrated the need for an entirely fresh approach' to assessment of existing chemical substances. The form that fresh approach should take is discussed below.
13. Adopting a fresh approach will entail amendments in due course to EC legislation. The objective for the UK government should be to try to bring about appropriate changes. Several other Member States are advocating substantive changes. Meanwhile, progress can be made in the right direction either through negotiations with the chemical industry (at UK or European level) or through UK legislation that complements the existing EC legislation.
14. The European Union's programme of assessments of existing chemical substances is co-ordinated with those of other developed countries through the Chemicals Programme of the Organisation for Economic Co-operation and Development (OECD). Co-ordination at that level will continue to be essential. Global co-ordination, with full involvement by developing countries, is a desirable long-term objective. The UK government should give strong support to making the Intergovernmental Forum on Chemical Safety (IFCS) effective in building up the capability of the governments of non-OECD countries, in establishing wider co-operative work programmes, and in harmonising (ultimately through the creation of international legal instruments) the classification and labelling of chemicals.

15. An important part of the information that a procedure of the kind proposed in paragraph 9 above will have to consider is the existence and content of internationally co-ordinated assessment programmes. Another important part is policy developments in other contexts which have major implications for the use of chemical substances, such as the Persistent Organic Pollutants Protocol of the United Nations Economic Commission for Europe and the Esbjerg Declaration by the parties to the OSPAR Convention. Consideration should be given to holding a consensus conference, or a similarly effective forum, at European level, as well as, or instead of, holding one at national level.

### **Consistency as between different types of chemical**

16. It is desirable that there should be consistency between the policies adopted towards different types of chemical, so that risk reduction measures taken in one field are not out of proportion to measures taken in other fields. Certain types of chemical which have the potential to cause damage to human health and the natural environment (plant protection products, biocides and veterinary medicines) are regulated under separate EC legislation and excluded from the legislation on new and existing chemical substances.
17. A significant difference between the different codes of EC legislation is that, whereas it is permissible to market and use new and existing chemical substances unless the regulator intervenes to require additional risk reduction measures, prior approval is required from regulators for each active ingredient in plant protection products, biocides and veterinary medicines, and then for each product in which that active ingredient is used. A point of similarity is that criticisms have been made of the lack of progress in implementing the EC Plant Protection Products Directive of 1981, which has affected both approval of new active ingredients and the review of existing active ingredients.
18. Environmental NGOs have proposed that all chemicals should be subject to positive approvals procedures, and authorised for specific applications and use in specific products. Requiring approval and listing of uses for all types of chemical would work against the objective of speeding up the assessment and regulation of existing chemical substances. It would also be likely to inhibit innovation. However, the Royal Commission does not consider that the present distinction between types of chemical for which there is and is not positive listing is a satisfactory and logical one.
19. Another significant difference between legislative codes is that the most recent EC legislation, the 1998 Biocides Directive, incorporates the principle of comparative assessment; a biocide can be refused approval if there is another active ingredient for the same product type which presents a significantly lower risk to humans, animals and the environment. The Royal Commission concluded in *Setting Environmental Standards* (paragraph 3.45) that 'the criterion of comparison with the risk presented by other available substances should be introduced into all regulatory procedures for the marketing and use of chemicals'. The way in which the availability of substitutes is taken into account in regulatory decisions will properly depend on the circumstances of each case.

### **Main elements of a fresh approach**

20. The Royal Commission believes a fresh approach to chemicals policy must be based on chemical companies taking greater responsibility for ensuring that the substances which they produce and market will not damage human health or the natural environment. It is encouraging that statements and communications by the UK and European associations for the chemical industry have indicated willingness to take a greater role. Increased industry involvement has the potential to accelerate the assessment of existing chemical substances and measures to reduce risks taken in response to the assessments.
21. Self-assessment by industry also offers the prospect of early action to bring about other improvements in the present arrangements for controlling the risks associated with new and existing chemical substances. Lack of information about the uses to which chemical substances are put after production and marketing has handicapped the assessment of exposure. Although positive listing of all chemicals in relation to specific uses would be too inflexible, assessments should always be made in the light of the fullest possible

information about the conditions under which a substance will be used. The Royal Commission therefore welcomes voluntary action by industry which is intended to increase knowledge of what happens to chemicals once they pass out of the hands of the company which has produced or marketed them. The well established philosophy of 'responsible care' has been extended into the concept of 'product stewardship', defined by the UK Chemical Industries Association as 'the responsible and ethical management of the health, safety and environmental aspects of a product from its invention through its processes of production to its ultimate use and beyond'.

22. Another respect in which self-assessment is capable of bringing early progress is the scope for substitution. Whereas the legislative requirement under the EC Biocides Directive (paragraph 19 above) has the aim of discouraging the introduction of chemicals which pose greater risks than existing substances used for the same purpose, it is equally important that chemicals already in use which present particularly high risks should be replaced if a satisfactory alternative which presents lower risks can be identified or developed. Industry must necessarily play a large part in achieving that aim.
23. A third important aspect which ought to loom large in self-assessment is the pursuit of greater eco-efficiency, by reducing the energy and materials required for a given purpose and the wastes created. The UK Chemical Industries Association has already entered into an agreement on energy efficiency with the Department of the Environment, Transport and the Regions.
24. In a system based to a large extent on self-assessment, transparency, openness and accountability become even more necessary. The safeguards required in order to build public trust and maintain the quality of assessments include:
  - guidelines for assessment procedures, including the data requirements for assessments
  - consultation on, and peer review of, draft assessments
  - publication of assessments
25. Methods for toxicity and ecotoxicity testing have become increasingly standardised across the world. Again, OECD has contributed by producing guidelines for tests in order to avert an escalation of testing to meet different data requirements by individual governments for the same substance; tests are also required to be carried out in accordance with good laboratory practice as specified by OECD. Work within the OECD Chemicals Programme has resulted in guidance to governments and industry about gathering data, making initial assessments and reporting results. This guidance is periodically updated to reflect the state of the art and experience gained by OECD member countries.
26. One of the questions posed in the government's consultation paper was whether data requirements under the notification scheme for new chemicals are too onerous for industry. Procedures which require data to be generated to fill a series of boxes in a data set regardless of relevant considerations (such as the intrinsic nature of a chemical or its use pattern) can be very wasteful. There may well be a case for streamlining the data requirements and making them smarter, provided the level of protection is not thereby impaired. OECD can play an important role in such an exercise, and more generally in elaborating and keeping under review the safeguards required in a system based to a large extent on self-assessment.
27. While in the short term a greater reliance on self-assessment by industry must operate within existing legislation, early changes should be sought in EC legislation in order to give greater recognition to self-assessment. Present legislation on new and existing chemical substances gives companies an essentially passive role of submitting notifications and data to a regulatory body which then carries out an assessment as the basis for decisions. In reality it is both desirable and the usual practice for companies to carry out their own assessments of the risks posed by new substances and submit those assessments to the regulator. The same practice should be extended to assessment of existing chemicals, and should be reflected in the legislation in both contexts.

28. New legislation should follow the broad approach adopted in UK health and safety legislation and place a duty on companies to act responsibly in taking decisions about the production and marketing of chemicals and to make their own assessments of the risks that production and use would present for human health and the natural environment. Such assessments should be made in relation to a specific use or uses. There should also be a statutory duty on the company to indicate the purposes for which a substance is suitable and, where appropriate, the methods that should be adopted for disposal after use; to take reasonable steps to ensure that the substance will not be used for other purposes; and to keep itself informed about the purposes for which the substance is actually used and the circumstances in which it is used. Requirements on these lines would give legal form to the concept of product stewardship which is already accepted by the UK chemical industry. In taking decisions about the production and marketing of chemicals, companies should also be required to take into account the availability of substitutes, and the relative risks posed by the substance under consideration and the available substitutes.
29. Concerted enforcement projects have revealed some non-compliance with present EC legislation, and highlighted the significance for compliance of adequate internal systems within companies. Legislation on the lines envisaged above will stimulate companies to establish effective systems for controlling and monitoring all the relevant aspects of their operations.
30. The Royal Commission does not regard self-regulation by industry as a substitute for statutory regulation, but as complementing and reinforcing statutory regulation. There must continue to be provision for government regulators to take decisions on substances and they must have the ability to obtain all the information they need for that purpose. Statutory regulation would provide assurance that humans and the natural environment will be protected. The primary safeguard however will be the duties placed on companies themselves. The legislation will have to specify the circumstances in which the regulator will intervene, and make provision for circumstances in which self-regulation would not be appropriate, for example because a company did not have the capability to carry out assessments or had in some respect defaulted on its obligations. New legislation should also make statutory the necessary safeguards for self-assessment discussed above.
31. Given the very large number of existing chemical substances for which assessment will be necessary, there will have to be statutory provision for scheduling the assessments of such substances made by companies, based on a clear and logical definition of priorities.
32. The purpose of placing duties on companies will be to increase the effectiveness of the protective mechanisms by speeding up their operation, making them more proactive and raising the level of compliance. An approach on these lines will also provide a promising basis for consolidating into a single code the inconsistent approaches followed at present in relation to different types of chemical.

The Royal Commission on Environmental Pollution is an independent body, appointed by the Queen and funded by the government, which publishes in-depth reports on what it identifies as the crucial environmental issues facing the UK and the world.

Up-to-date information on the Commission's work can be found on [www.rcep.org.uk](http://www.rcep.org.uk)

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