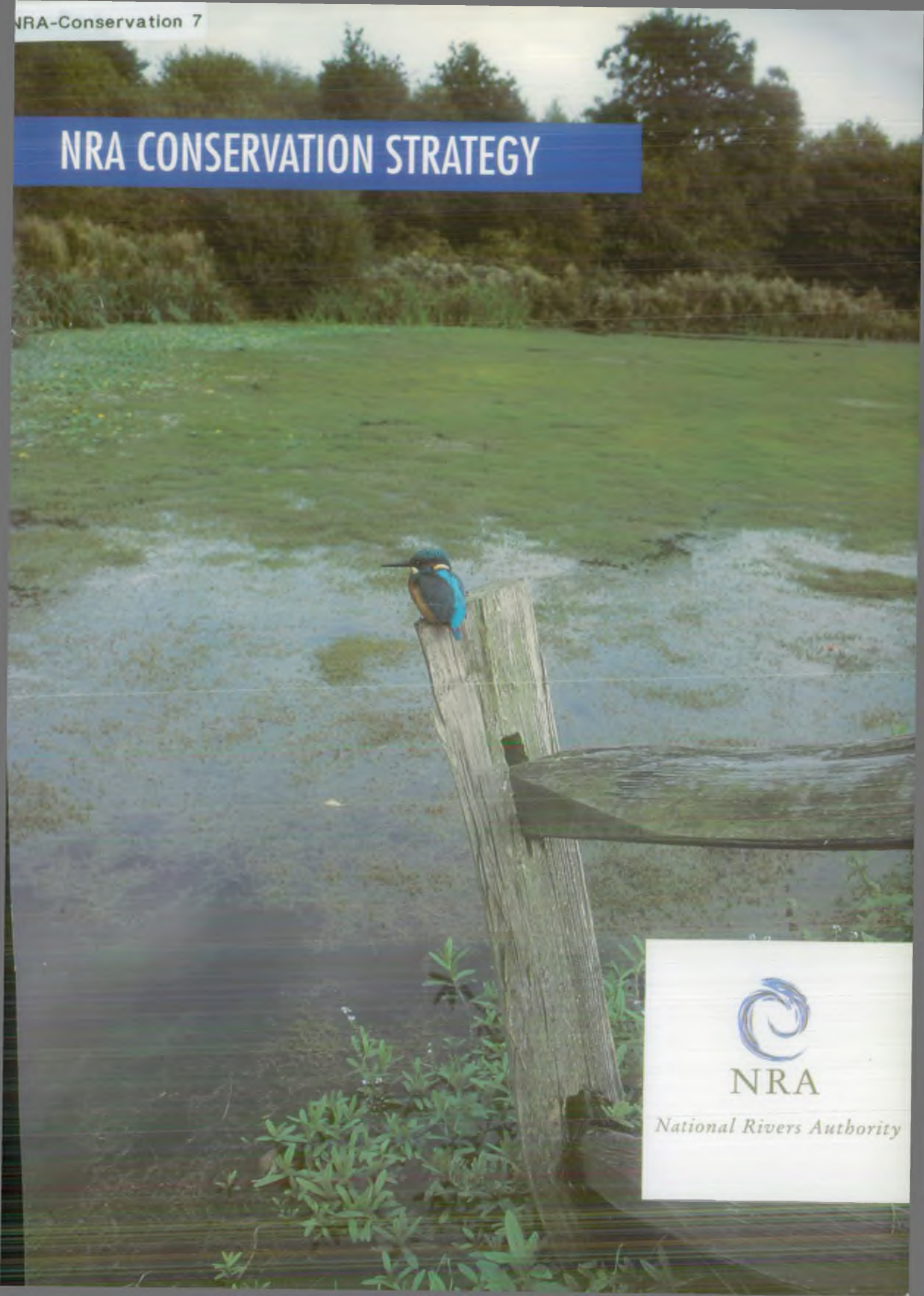


NRA CONSERVATION STRATEGY



NRA

National Rivers Authority

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This document is one of a series, the others in the series are:

NRA Water Quality Strategy
NRA Water Resources Strategy
NRA Flood Defence Strategy
NRA Fisheries Strategy
NRA Navigation Strategy
NRA Recreation Strategy
NRA R&D Strategy

Other publications are available from the NRA. These include the following:

NRA Annual Report and Accounts
Policy and Practice for the Protection of Groundwater
Water Quality Series
Low Flows and Water Resources
Annual R&D Review
Conservation & Fisheries Technical Handbooks

Publication catalogues are available from all the NRA Offices.

The addresses and telephone numbers for all NRA offices are listed on the inside back cover of this document.

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MISSION AND AIMS

The NRA's mission is:

- “We will protect and improve the water environment by the effective management of water resources and by substantial reductions in pollution. We will aim to provide effective defence for people and property against flooding from rivers and the sea. In discharging our duties we will operate openly and balance the interests of all who benefit from and use rivers, groundwaters, estuaries, and coastal waters. We will be businesslike, efficient and caring towards our employees”.
- Provide adequate arrangements for flood forecasting and warning.
- Maintain, improve and develop fisheries.
- Develop the amenity and recreational potential of inland and coastal waters and associated lands.
- *Conserve and enhance wildlife, landscape and archaeological features associated with inland and coastal waters of England and Wales.*

Our aims are to:

- Achieve a continuing overall improvement in the quality of rivers, estuaries, and coastal waters, through the control of pollution.
- Manage water resources to achieve the right balance between the needs of the environment and those of the abstractors.
- Provide effective defence for people and property against flooding from rivers and the sea.
- Improve and maintain inland waters and their facilities for use by the public where the NRA is the navigation authority.
- Ensure that dischargers pay the costs of the consequences of their discharges, and, as far as possible, to recover the costs of water environment improvements from those who benefit.
- Improve public understanding of the water environment and the NRA's work.
- Improve efficiency in the exercise of the NRA's functions and to provide challenge and opportunity for employees and show concern for their welfare.

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FOREWORD

This document sets out the National Rivers Authority's strategy for Conservation. It forms part of a series of published documents, covering all the NRA's main functions.

The documents are intended to make the NRA's approach to the integrated management of the water environment plain to all interested parties, whether their interest is private or professional. This is in recognition of the stake that individuals have in the environment, both as taxpayers and water users.

The strategies have been developed as internal drafts over a period of time with much constructive input from a wide range of interest groups, including those represented on our Regional Committees. This consultation demonstrates our commitment to working in response to and influencing public opinion.

The strategies have already served to direct the NRA's policy development over the last two years. Their publication at this point reinforces the essential inter-relationships between the NRA's individual functions, as

preparations for the Environment Agency continue. When considered together, they present a strong case for the continuing integration of all NRA functions. This argument becomes still more convincing when applied to the management of water, land and air proposed for the new Agency.

The overriding aim directing the NRA's work is the protection and improvement of the water environment. We are determined to make a real and positive difference to the rivers, estuaries and underground and coastal waters of England and Wales. This resolve will be strengthened by the inclusion of the NRA's integrated approach into what promises to be among the most effective forces for environmental good in Europe.



Ed Gallagher
Chief Executive

AN INTEGRATED APPROACH TO THE ENVIRONMENT

Vision and Reality

When we think of the water environment, most of us would conjure up a vision of an unspoilt river in its natural state, meandering across open countryside, its banks rich with flora and fauna, its waters teeming with aquatic life.

In fact, very little of our water environment remains unaffected by human activity. Alterations to rivers probably started with forest clearances about 3000 BC. The subsequent development of water-milling, navigation, drainage and irrigation systems caused major and lasting changes to the shape of rivers and associated habitats and vegetation. Channelization, water pollution, drainage of wetlands and overabstraction of water have all significantly reduced the conservation interest of many rivers.

Sustainability - a Balancing Act

There is a substantial opportunity for the NRA, in fulfilling its duty to further conservation, to rehabilitate degraded sites and to promote the re-creation of habitats previously damaged by environmentally-insensitive practices. The challenge for the NRA as "Guardian of the Water Environment" is to continue to make progress into the next century, protecting and improving our rivers, estuaries and coastal waters in a sustainable and cost-effective way.

We make increasing - and sometimes conflicting - demands of our natural environment. These demands, working in concert with natural phenomena, can result in serious environmental problems. Water quantity, already reduced by abstraction, is further reduced by drought. Water quality, affected by low river flows, is at greater risk from pollution by industry and agriculture. Polluted water puts aquatic life and abstraction for public supply at risk.

Similarly complex interactions exist between river flow and flooding, channel morphology and navigation and water quality and watersports. These demands and their

interactions make the protection and improvement of the water environment, the NRA's core business, an increasingly delicate balancing act. The use of economic cost-benefit analysis, amongst others, offers a rational approach to the balancing process.

The Answer - an Integrated Approach

The NRA believes that the best way of arriving at sustainable solutions is to take an integrated approach to river management. This treats a river, together with the land, tributaries and underground water connected with it, as a discrete unit or catchment.

This approach is not new - the NRA and its predecessors have lain the foundations for it over a period of time - but the means of achieving it *is* new.

The NRA's approach is called *catchment management planning*. Under this system, the major uses within a catchment - such as abstraction and discharge needs, recreation and navigation use, areas of special conservation interest or the need for flood protection - are investigated and a *catchment management plan* is devised in consultation with interested bodies and the public. These plans present catchment issues, address conflicting uses and identify actions needed by the NRA and others to ensure that use-related environmental objectives are met.

In this way, management decisions take individual catchment needs into account, balancing these with the national objectives to protect sites of high conservation interest and rehabilitate those which have been degraded. This allows us to operate as a flexible national organisation, making real improvements at local level that meet the community's needs. This is a clear demonstration of our commitment to the principles of the Citizen's Charter.

Targeting the Resource

Increased awareness of these local needs puts the emphasis on the real world outcome of our

work - the NRA has to be seen to be using money from taxpayers and industry in a cost-effective way, to make a tangible difference to the quality of our water environment. The NRA's system of integrated catchment management will achieve this by targeting resources to areas where they are most needed.

The NRA's drive for efficiency and increased value for money will bring added benefits. Our review of activities to see whether there is further scope for market testing - the process of exposing in-house functions to competition from the private sector - forms an integral part of this efficiency drive.

Towards an Integrated Agency

This move towards closer integration of all our functions will be a cornerstone in our preparations for the Environment Agency. The new Agency's responsibilities will embrace air, land and water and will incorporate functions currently performed by NRA, Her Majesty's Inspectorate of Pollution and Local Waste Regulatory Authorities.

The Agency promises to be one of the most effective powers for environmental improvement in Europe and as strong a regulator as any in the world. These preparations will ensure a firm foundation for safeguarding the environment of England and Wales for future generations.

THE CHALLENGE FOR THE NRA IS TO
CONTINUE TO PROTECT AND IMPROVE
THE WATER ENVIRONMENT IN A
SUSTAINABLE AND COST-EFFECTIVE WAY.

THE ENVIRONMENT - A FINITE RESOURCE UNDER PRESSURE

Use of our Environment

The demands we make on our environment include:

- water abstraction for public and private water supply, industry, agriculture and navigation;
- effluent discharge from sewage treatment works, industrial processes and farms;
- development needs for housing, industrial parks and new infrastructure;
- waste disposal ranging from land-fill of domestic waste to the disposal of sewage/agricultural sludge;
- emissions to air from industrial processes and vehicle exhausts;
- mineral extraction from coal and other mineral and quarry workings;
- recreation in the form of walking, bathing, boating, fishing and a whole range of other outdoor activities;
- commercial harvesting of fish and shellfish.

These uses are legitimate and necessary for the continuance of our way of life. Sometimes they are of positive benefit as in the case of a properly-treated discharge helping to supplement low river flows.

However, the pressures on our water environment are:

- overabstraction of water which can produce low river and groundwater levels, exacerbated during drought conditions. In extreme cases, wetlands and parts of rivers may dry out;
- water pollution, in particular the impact of nutrient enrichment (eutrophication) and noxious chemical substances. Water acidification also has serious consequences for aquatic plant and animal life in some upland streams and rivers;
- habitat impoverishment, which can be caused by environmentally insensitive flood and sea defence works;
- recreational disturbance, which may adversely affect sensitive plant and animal species;

- subtle effects of climate change that may have a direct or indirect impact on the conservation interest of rivers and coastal areas;
- intensive agricultural and urban use of land adjacent to rivers, which impoverishes wildlife value and fragments the river corridor.

Table 1 illustrates the use of our environment in general terms and highlights some uses of particular importance to conservation.

The need to balance uses against environmental pressures will require the quantification and evaluation of a range of policies, projects and courses of action. Economic analysis will help reveal the most efficient use of the increasingly scarce resources within an overall strategy for sustainable use.

Present Status of the Water Environment

There is a rich variety of landscapes, habitats, wildlife and historical/archaeological features associated with the streams, rivers, ponds, lakes, wetlands, estuaries and coastal waters of England and Wales. This reflects a network of inland watercourses which totals more than 250,000 km in length and a coastline exceeding 4000 km.

Areas of special conservation interest are currently protected by a variety of different designations (Table 2). Many of these include rivers, lakes and coastal areas. Rare plants and animals associated with the water environment are also specifically protected under the Wildlife and Countryside Act 1981, as amended.

The NRA is not responsible for site or species protection *per se*, which is a function of English Nature and the Countryside Council for Wales. However, through management of rivers, the Authority plays a fundamental role in maintaining or creating habitat and water quality conditions suitable for aquatic and wetland plants and animals.

Table 1 - Uses of our Environment

| GENERAL | |
|---|---------------------------|
| ● Total Abstraction Licences in Force | 48,000 |
| ● Total Water Abstracted* | 59,200 Megalitres/day* |
| ● Water put into Public Supply | 18,000 Megalitres/day |
| ● Approximate Number of Angling Licences Sold | 1,000,000/year |
| ● Estimated Number of Recreational Walkers | 20,000,000/year |
| ● Total Discharge Consents in Force | 110,000 |
| ● Total Polluting Load Treated at Sewage Treatment Works (STWs) | 1,500,000 tonnes BOD/year |
| ● Total Organic Load from Farm Livestock Waste | 2,500,000 tonnes BOD/year |
| ● Length of River maintained for Flood Defence | 36,000 km |
| ● Length of Sea Defences | 805 km |
| KEY CONSERVATION STATISTICS | |
| ● Areas of Outstanding Natural Beauty (AONBs) | 2,043,900 ha |
| ● Sites of Special Scientific Interest (SSSIs) | 1,044,600 ha |
| ● Environmentally Sensitive Areas (ESAs) | 832,000 ha |
| ● Length of river SSSI (including proposed SSSIs) | 450 km (1293km) |

Notes:

* This figure, when compared with recent publications, is higher due to re-definition of the calculation

* Megalitre = 1 million litres

* BOD: Biochemical Oxygen Demand - an indicator of polluting load

Historical Legacy

A substantial proportion of the aquatic environment and associated land has been subjected to a long history of modification associated with agricultural, industrial and residential development. For example, Figure 1 indicates the extent of river realignment/reprofiling (channelization) in England and Wales in the early 1980s.

Reason for Optimism

The opportunities for promoting conservation are considerable and many external organisations are actively collaborating with the NRA to protect and enhance the water environment and associated lands. Indeed, partnership, notably the use of pooled resources and expertise, is often the key to success when addressing a major challenge such as the rehabilitation of degraded rivers and wetlands.

Initiatives such as long-term set-aside, the Agri-environment Habitat Improvement Scheme, Environmentally Sensitive Areas and Countryside Stewardship can potentially provide better habitat structure for impoverished river corridors, particularly

through the provision of “buffer zones” to increase the wildlife interest of river banks. Careful planning and management can redress the balance and restore some, if not all, of the previous conservation interest to many reaches of river.

Environmentally-sensitive techniques to maintain or restore the conservation interest of rivers are now well established and widely used during construction and maintenance of inland flood defences. Indeed, a wetland SSSI in Wales was recently specifically designated as a result of NRA management through its flood defence works.

In coastal areas, “soft engineering” techniques now feature high on the list of options for NRA sea defence works, particularly in the context of the need to consider large scale coastal processes, such as sediment movement.

No Room for Complacency

By their very nature, many rivers of high conservation interest are easily damaged, so it requires continued vigilance to help protect the best existing sites (e.g. SSSIs), as well as forward planning to improve degraded areas.

Table 2 - Some Examples of Conservation Designations

- Biosphere Reserves (series of sites of international importance)
- Ramsar Sites (wetlands of international importance)
- Special Protection Areas (SPAs)
- Sites of Special Scientific Interest (SSSIs)
- Environmentally Sensitive Areas (ESAs)
- Special Areas of Conservation (SACs) - to be designated under EC Habitats Directive 43/92/EEC
- National, Local and Marine Nature Reserves (NNRs, LNRs, MNRs)
- Ancient Monuments
- Listed Buildings
- National Parks
- Areas of Outstanding Natural Beauty (AONBs)
- Heritage Coasts
- Other sites of environmental/archaeological interest identified by local authorities and those owned or managed by the National Trust or voluntary conservation organisations

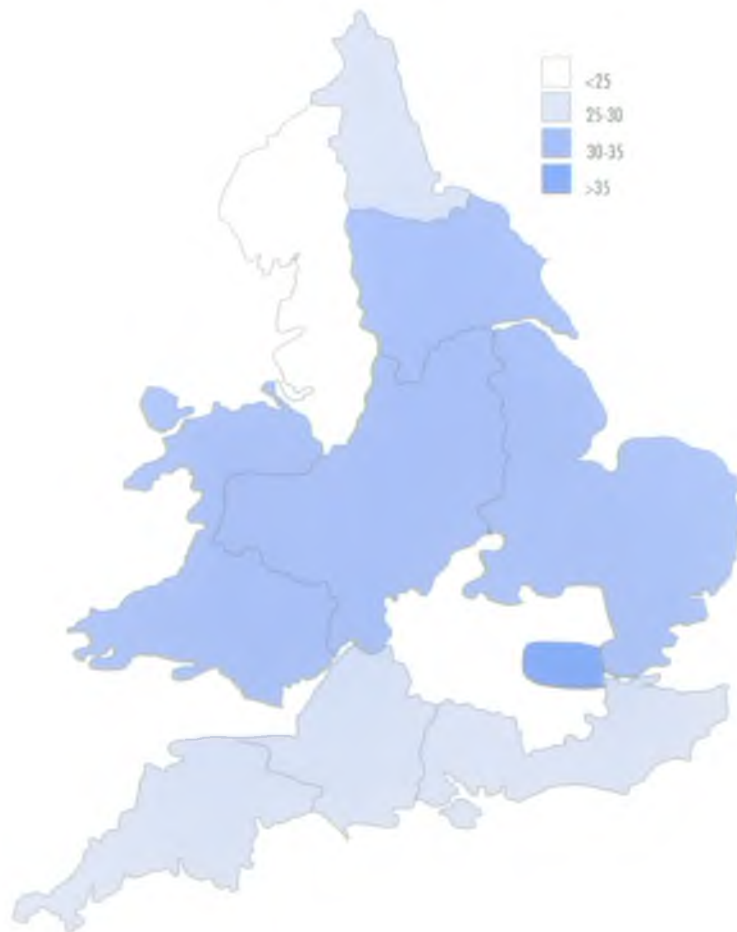


Figure 1 - Extent of River Realignment/Reprofiling in England and Wales in the early 1980s. Proportion (%) of main river.

LEGISLATIVE, FINANCIAL AND INSTITUTIONAL FRAMEWORK

Legislative Framework

The NRA's ability to act to maintain and, where necessary, improve the water environment is dictated by European Community (EC) and UK legislation.

At National Level

The NRA was formed as a result of the Water Act 1989. Those aspects of the 1989 Water Act which concerned the NRA were later consolidated into the Water Resources Act 1991.

Section 16 of the Act imposes upon the Authority a number of duties which include:

- to exercise any power so as to further the conservation and enhancement of natural beauty, in respect of proposals relating to the NRA's functions. The expression 'to further' implies a positive obligation toward conservation;
- to take into account the effect any proposals relating to the Authority's functions would have on the beauty and amenity of any rural or urban area so affected;
- to exercise the rights which the Authority has to use water or land associated with water in such a way that such water or land is made available for recreational purposes.

Section 2 of the Act imposes a general duty to promote:

- the conservation and enhancement of the natural beauty and amenity of inland and coastal waters and of land associated with such waters;
- the use of such waters and land for recreational purposes.

Practical guidance in respect of the NRA's environmental duties is given in a Code of Practice on Conservation, Access and Recreation approved under Section 18 of the Act. The NRA

is also expected to follow the Conservation Guidelines for Drainage Authorities.

Other legislation gives the NRA an important role as a consultee in relation to applications for planning permission and various waste and industrial processes. This means that the NRA's views and advice on these applications are taken into account by the appropriate authority.

At European Level

The NRA also acts on behalf of Government as the competent authority for certain EC Directives in England and Wales.

Legislation in Practice

The legislation imposes duties on the NRA that it must carry out. Other provisions take the form of powers that the NRA uses to fulfil its duties and meet its aims. This combination of duties and powers determines the broad allocation of effort and resource.

Table 3 shows that the conservation duty is a fundamental requirement for the NRA in carrying out all its regulatory, operational and advisory activities.

Financial Framework

The NRA is funded largely by a combination of Government grant-in-aid (GIA) and self-generated income from NRA charging schemes.

Currently there is little by way of conservation income and consequently the direct programme of conservation work is dependent upon GIA. At first glance, conservation expenditure as measured by GIA (£3.2m in 1993/94) appears small. However, a significant proportion of expenditure associated with conservation is related to operational work. Although extremely difficult to estimate, the functional components of conservation expenditure are illustrated in Figure 2. This indicates that flood defence is the main contributor, largely through its operational enhancement works to fluvial and sea defences.

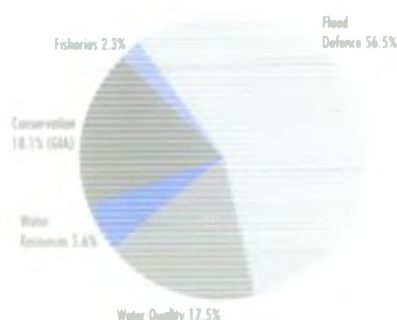


Figure 2 - The NRA's 1993/94 Conservation spend.

Table 3 - Duties and Powers

Duty to further Conservation

Under Section 16 of the Water Resources Act 1991, and Section 12 of the Land Drainage Act 1991, the NRA is obliged, in formulating or considering any proposals relating to any of its functions, to:

- further the conservation and enhancement of natural beauty and the conservation of flora, fauna and geological and physiographical (landform) features of special interest;
- have regard to the desirability of protecting and conserving buildings, sites and objects of archaeological, architectural and historic interest;
- take into account the effect which the proposals would have on the beauty or amenity of any rural or urban area or on any such flora, fauna, features, buildings, sites or objects.

Duty to promote Conservation

In addition to the above, Section 2(2) of the Water Resources Act 1991 makes it a duty of the NRA, to such extent as it considers desirable, generally to promote:

- the conservation and enhancement of the natural beauty and amenity of inland and coastal waters and of land associated with such waters;
- the conservation of flora and fauna which are dependent on an aquatic environment.

Duty to consult with respect to sites of special interest

Under Section 17 of the Water Resources Act 1991, English Nature and the Countryside Council for Wales are obliged to inform the NRA of any land which, in their opinion, is both:

- of special interest by reason of its flora, fauna or geographical or physiological features, and;
- may be affected by activities carried out or authorised by the NRA.

There is a similar obligation on National Parks Authorities and the Broads Authority in respect of land which they consider to be of special interest.

In turn, the NRA must consult the above bodies before carrying out or authorising any activities which appear likely to damage the special interest of the land in question.

Code of Practice

Section 18 of the Water Resources Act 1991 refers to a Code of Practice giving practical guidance on conservation to the NRA and water and sewage undertakers.

The Code of Practice on Conservation, Access and Recreation was issued under the provisions of the Water Act 1989.

Establishing Nature Reserves

The NRA is able to establish nature reserves on suitable land that it owns.

Recovering Costs

The NRA is able to charge visitors to nature reserves it has established.

Institutional Framework

The NRA and Government

The NRA is a non-departmental public body, sponsored by the Department of the Environment (DoE). It also has important policy links with the Ministry of Agriculture, Fisheries and Food (MAFF) and the Welsh Office (WO).

The Other Players

In addition to the NRA, there are many other bodies and organisations which have a role to play in improving the water environment. The NRA can influence their activities by its actions and *vice versa*. Effective liaison with the following organisations is crucial to the success of the NRA's conservation strategy.

- **Commission for the European Communities (CEC):** the CEC sees environmental legislation as being of primary importance. Much recent UK environmental law has been determined by EC Directives.
- **Department of the Environment and Welsh Office:** as sponsors, the Secretary of State for the Environment and the Secretary of State for Wales have ultimate responsibility for national conservation policies of the NRA.
- **Ministry of Agriculture, Fisheries and Food:** also a sponsoring Department, with an important role in relation to flood defence, fisheries, agricultural pollution and marine sludge disposal and dredging.
- **English Nature:** the statutory body responsible for nature conservation and the designation of SSSIs in England.
- **Countryside Commission:** the conservation of landscape and promoting access to the countryside in England is the main responsibility for this statutory organisation.
- **Countryside Council for Wales (CCW):** the remit of CCW in Wales encompasses nature conservation, landscape conservation and promoting access to the countryside.

With many common objectives, liaison and partnership with English Nature, the Countryside Commission and CCW are integral to the NRA's conservation strategy.

- **English Heritage:** expert advice on archaeological matters will continue to be sought from this statutory organisation.
- **Non-Governmental Conservation Organisations:** the voluntary sector - for example, the Royal Society for Nature

Conservation (The Wildlife Trust Partnership), the Royal Society for the Protection of Birds and the National Trust - is extremely important and influential. Effective liaison is therefore, crucial.

- **The NRA's Statutory Regional Committees:** these have many representatives from relevant interest groups among their members and act as sounding boards for the NRA's policies with the public.
- **Local Authorities:** liaison with planning authorities is an essential proactive activity to ensure that conservation interests are taken into full account and expressed in regional and local plans.
- **The Media:** can readily influence public opinion. Their interest in news - good and bad - must be focused to ensure that the NRA's point of view and policies are placed before the general public in an objective and clearly understood manner.
- **Pressure Groups:** many national groups - Friends of the Earth, Tidy Britain Group, Marine Conservation Society - as well as local ones, influence public opinion on environmental matters and help produce the climate in which the NRA operates.
- **The Public:** millions of people enjoy using, and have a great interest in, the water environment.

All of the above interested parties have a stake in the water environment. The NRA's strategy for conservation is set out in the following pages. Its successful implementation will require co-operative action from some, support from others, but - most importantly - the commitment of all if we are to maintain and improve standards.

NRA STRATEGY FOR CONSERVATION

Background

Conservation can be defined as the protection and management of natural and man-made features of special interest to ensure that the resource will be valued and made available for the benefit of future as well as present generations.

The NRA is entrusted with conservation responsibilities in respect of wildlife, landscape and natural beauty, geological and physiographical features, buildings and other objects of archaeological, architectural or historic interest. These responsibilities relate to all inland and coastal waters, and to land associated with them in England and Wales.

The NRA conservation strategy reflects the high profile and public expectations of conservation-related issues, and also the trend toward greater protection of the environment, particularly through European and associated domestic legislation.

The Broad Strategy

The NRA's principal aim in relation to conservation is:

- to conserve and enhance wildlife, landscape and archaeological features associated with inland and coastal waters of England and Wales.

This will be achieved either directly, through the Authority's own operational and regulatory activities, or by influencing the activities of others.

To this end, the NRA will continue to work closely with others, to help protect sites of the highest conservation interest. More importantly, in the longer-term, the NRA will, in partnership with others, promote and be instrumental in the rehabilitation of degraded rivers and wetlands. This means focusing on sites impoverished by past practices which are no longer environmentally acceptable and have resulted in poor water quality, insufficient water quantity and reduced habitat diversity.

The NRA's conservation strategy will continue to be underpinned by three strategic objectives:

- assess and monitor the conservation interest of inland and coastal waters and associated lands;
- ensure that the NRA's regulatory, operational and advisory activities take full account of the need to sustain and further conservation;
- promote conservation to enhance the quality of the aquatic and related environment for the benefit of wildlife and people.

This requires the effective balancing of costs and benefits within an integrated system of catchment management, taking the needs of all users and all NRA functions into account. NRA conservation activity on a catchment level falls into three main areas and these are described below.

Monitoring

Assessing the Resource

Since the NRA has a statutory duty to further conservation, an essential pre-requisite is to develop and implement effective standard methods to describe, classify and monitor the resource. The remit extends to habitats and associated flora and fauna of inland and coastal waters and associated lands, together with landscape and archaeological features.

A system to assess conservation interest and enhancement potential is needed so that scarce resources can be effectively targeted to protect the best sites and wherever possible rehabilitate degraded areas.

To date, there has been no systematic attempt to assess the value to wildlife of habitat features of the waterways in England and Wales or introduce a classification scheme for assessing their conservation interest.

The NRA needs to evaluate the conservation interest of inland and coastal waters and

associated lands, and assess the effects of its own operational and regulatory activities. To achieve this, the NRA will:

- identify, and where necessary develop, standard methodologies and implement a programme for classifying, evaluating and monitoring the conservation interest of rivers, inland waters, estuaries, coasts and wetlands;
- develop and implement a system that classifies the environmental condition of rivers with respect to habitat features of wildlife value, which will complement the NRA water quality classification scheme;
- develop appropriate environmental audit and post-project appraisal techniques and undertake a monitoring programme to assess the effectiveness of conservation measures incorporated into the NRA's regulatory and operational activities;
- establish a national database system suitable for the storage, analysis and retrieval of conservation data and ensure that the information is regularly reviewed and updated;
- establish a procedure for the provision of data to external bodies which complies with the EC Directive on the freedom of access to information on the environment.

Day-to-Day Operations: sustaining and furthering conservation

Conservation Criteria

There are many pressures which may directly or indirectly affect the conservation status of inland and coastal waters (Table 1). The NRA needs to evaluate these impacts and identify appropriate procedures and criteria in order to sustain and further conservation.

This applies to the Authority's:

- regulatory activities, when appraising applications for abstraction licences, and discharge, land drainage and fisheries consents;

- operational works, by applying best environmental practice for constructing and maintaining flood and sea defences;
- advisory role, through its comments as a consultee to local authorities on planning applications.

Internal Liaison

Conservation input to all operational and regulatory functions will continue to improve through effective internal and external liaison. To this end:

- all NRA staff will be made aware of the conservation strategy. Appropriate training and information will be provided to ensure that best available practices are widely known and implemented by all NRA functions in their regulatory, operational and advisory activities;
- the potential impact of all NRA operational and regulatory activities will be assessed by conservation staff through early and effective consultation with other functions. Conservation staff will provide advice and make recommendations for minimising any adverse impacts and ways to incorporate and implement enhancement measures;
- conservation objectives will underpin the catchment management planning process;
- conservation will provide a focus for the NRA approach to major development schemes and to environmental assessment of internal and external proposals;
- the effectiveness of the conservation function within the NRA will be internally reviewed at regular intervals.

External Liaison

Effective liaison with other organisations which have environmental and archaeological responsibilities is essential (Table 4).

The NRA will:

- continue to develop and maintain effective liaison with statutory and voluntary conservation organisations at both national

and regional level. Conservation staff will continue to liaise on a day-to-day basis, ensuring that a two-way flow of information and knowledge is maintained;

- provide relevant advice and expertise on conservation techniques and issues to external organisations as necessary;
- ensure proper consideration of conservation issues through the statutory regional advisory committees.

Environmental Assessment

In the planning and implementation of its operational and regulatory activities the NRA will sustain and further conservation. The statutory conservation requirement will be taken into full account when the NRA considers applications for any consents or licences associated with the Authority's regulatory functions.

The NRA will:

- develop and implement a standard procedure for undertaking and appraising Environmental Assessments so that both internal and external proposals are subject to the same consistently high quality control;

- carry out an environmental appraisal on all its own capital works and undertake any detailed assessment which is required under Environmental Assessment or Planning Legislation;

- at the earliest opportunity, formally consult with English Nature, the Countryside Council for Wales and the National Parks authorities before carrying out or authorising any activity within an SSSI or a National Park.

Furthermore, in the context of all operational and regulatory activities, the NRA will produce, in association with other organisations where appropriate, best practice guidelines on conservation issues for use by all NRA functions. These will ensure that:

- all NRA activities are planned and executed to take full account of the conservation interest of the site and thereby minimise any potential disturbance of special features;
- the design of works and the use of materials is appropriate to the environmental requirements of the site;
- opportunities for enhancing the aquatic and associated environment are identified and promoted where possible.

Table 4 - Examples of External Organisations Consulted by the NRA

| | |
|---|--|
| ● English Nature | ● Local Authorities |
| ● Countryside Council for Wales (CCW) | ● County Sites and Monuments Records Office |
| ● Broads Authority | ● National Trust |
| ● National Parks Authorities | ● Council for the Protection of Rural England |
| ● Countryside Commission | ● Campaign for the Protection of Rural Wales |
| ● English Heritage | ● Royal Society for the Protection of Birds (RSPB) |
| ● Cadw | ● Council for British Archaeology |
| ● Department of the Environment (DoE) | ● Other local amenity conservation organisations |
| ● Ministry of Agriculture, Fisheries and Food (MAFF) | |
| ● Royal Society for Nature Conservation (The Wildlife Trusts Partnership) | |

Screening proposals

The NRA will ensure that all its own operational activities, and applications for abstraction and impoundment licences, as well as discharge, land drainage and fisheries consents are screened to assess the potential impact on conservation interest. In so doing, appropriate environmental enhancement opportunities will be identified and wherever possible incorporated. Recommendations regarding the refusal of applications or the imposition of conditions on consents or licences will be made in order to protect the conservation interest of sites.

Input to Planning

Through its role as consultee on planning applications, and in general liaison, the NRA will seek to influence other parties to further conservation and support those proposals which provide such opportunities.

An effective input to the planning system is paramount, particularly with respect to development plans. The NRA will also work directly with planners and developers to ensure that conservation is fully taken into account. During consultation by or with other authorities, the NRA will endeavour to ensure that standards of development are consistent with its own conservation objectives and, where possible, will recommend action to deter those which fail to comply with these requirements.

The NRA will:

- develop standard procedures and criteria for screening, assessing and commenting on planning proposals;
- comment on the conservation significance of all Structure, District and Local plans as they relate to the water environment and associated lands;
- screen all development proposals subject to Local Authority planning permission or licence for their influence on the water environment and associated lands. Recommendations will be made to refuse, approve or apply conditions in accordance with the need to enhance conservation;

- ensure that all proposals to consent activities occurring within, or affecting, sites of importance for conservation identified in Annex B of the Code of Practice require written consultation where the NRA considers the environmental effects to be significant;
- minimise potential conflict by providing relevant guidance to planning authorities and developers concerning the conservation requirements of the NRA.

Finance

There is little capacity or potential for external charging for NRA conservation work, nor is there a valid reason for doing so since such work relates largely and directly to the activities of all other NRA functions (Figure 2). In order to fulfil the NRA's statutory duties, the conservation function needs to perform an advisory and regulatory role on behalf of all other functions insofar as environmental and archaeological/cultural heritage requirements are concerned.

Clearly, a charging policy which is similar to other functions is neither appropriate nor possible, but a sound and equitable basis for recharging other functions for conservation advice has to be established to reduce the reliance on grant-in-aid.

A basis for funding the conservation function will be established to ensure that (i) the NRA is able to fulfil its statutory conservation duties, and (ii) expenditure on conservation work is scrutinised by conservation staff.

In addition, the NRA will:

- identify and use other potential sources of income relevant to the conservation function;
- develop a policy whereby the costs of NRA conservation advice provided with respect to external applications are identified and borne by the promoter/developer.

Towards an Improved Environment

Much of the NRA's work is directed at maintaining the status quo in the face of increasing demands on the water environment. The importance of this activity should not be underestimated, nor should its resource needs. There are however certain key areas needed to secure longer-term improvements.

River Rehabilitation

The rehabilitation of degraded aquatic environments requires action on two fronts: improvement in water quality and/or quantity; and enhancement of habitat features. Achievement of the former is described in the NRA's Water Quality and Water Resources Strategies. Habitat enhancement will primarily take place in conjunction with improved operational practice and opportunities identified in catchment management plans.

The NRA will:

- identify a rationale and broad framework for the long-term rehabilitation of degraded riverine habitats;
- seek to collaborate with others to implement river enhancement works wherever the opportunity arises;
- continue to exploit opportunities for promoting river rehabilitation in collaboration with others and, in so doing, (i) aid the recovery of species which have declined as a result of past environmentally insensitive practices, and (ii) generally enhance the amenity of the urban and rural water environments. Emphasis will be on action which makes a real improvement on the ground.

This approach is consistent with the UN Convention on Biodiversity which includes, as part of a comprehensive suite of conservation measures, the need for signatory countries to rehabilitate and restore degraded ecosystems and promote the recovery of threatened species through the development

and implementation of plans or other management strategies.

Promoting Conservation

Promoting conservation in its own right can be achieved either in conjunction with other NRA functions or in collaboration with external agencies such as conservation bodies or local authorities.

The NRA will:

- promote conservation issues internally and through external publications. Whenever possible, collaboration with other organisations will be sought;
- provide information to the general public and schools on conservation matters relating to the water environment;
- support appropriate educational and environmental projects in collaboration with outside organisations.

In addition the NRA, in collaboration with others, will:

- assist with measures to protect rare native species associated with the water and related environments;
- assess the potential impact of "nuisance" plant and animal species associated with the water environment and identify the most effective methods for minimising any adverse effects, which they may cause.

Management of land owned by the NRA can make an effective contribution towards meeting the Authority's statutory conservation duties. To this end, the NRA will:

- review the current and potential conservation interest of NRA land-holdings and implement site management plans to sustain and further this interest. Establishing nature reserves on suitable land will be fully considered as part of this process.

RESOURCES AND TIMETABLE FOR ACHIEVEMENT

A Flexible Resource

The achievement of our strategy is dependent on a highly flexible yet specialised resource. The NRA's conservation staff provide expert advice to all NRA functions, particularly with respect to:

- scientific expertise on conservation issues;
- survey techniques and requirements, including landscape assessment;
- assessing the conservation interest of river corridors, wetlands and coastal areas;
- environmental impact and its assessment;
- best practice management techniques for the design and implementation of operational works;
- links with external conservation organisations.

With the advent of a more multifunctional catchment approach, other NRA staff such as biologists will, with appropriate training, be able to contribute to the pool of conservation expertise in the future.

Efficient Use - Better Value for Money

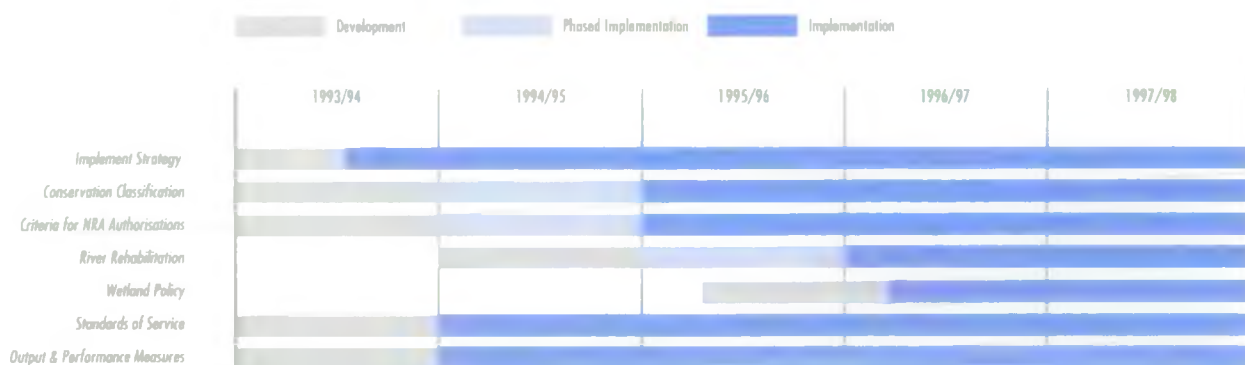
The current level of the Conservation GIA is £3.2m. This is equivalent to about 18% of the conservation spend by the Authority as a whole (Figure 2). More than 50% of the total conservation spend is derived from the flood defence budget, which originates from flood defence levies. It is important that, in fulfilling its conservation duty, the NRA spends wisely and that the general public (the customer) gets good value for money. To this end, the conservation function will continue to improve its efficiency and cost-effectiveness by:

- developing a strategic, high-level approach to classifying and monitoring the conservation interest of the water environment;
- ensuring that the need for surveys is properly evaluated and that relevant information is obtained at an appropriate level of detail;
- making best use of alternative data sources, including aerial photographs;
- standardising procedures and criteria to expedite the screening of proposals which require NRA authorisation;
- making best use of computerised data storage and retrieval systems.

The emphasis will therefore change from data collection to information management and post-project appraisal. This will allow conservation staff to provide better advice in response to the ever-increasing work load as the NRA undertakes its regulatory, operational and advisory activities.

The Timetable for Achievement

The broad timing of the NRA's major initiatives to sustain and further conservation is given in the chart below. Their implementation is supported by business plans. These management documents detail the components of each initiative, their relative priority, outputs, timing and resourcing. Short to medium-term targets in the achievement of the overall strategy are set out in the NRA's annual Corporate Plan, while examples of conservation work are reported in the NRA's Annual Report and Accounts. Achievement of these initiatives is in many cases dependent on action by others to the same timescale, as documented in catchment management plans at local level.



RESEARCH AND DEVELOPMENT

Research and Development (R&D) makes an essential contribution to the NRA's work. It provides new knowledge and techniques which allow us to better fulfil our duties.

Strategic R&D in support of the NRA's conservation responsibilities addresses a number of key issues within two main areas:

- Resource Appraisal and Impact Assessment, the objectives of which are to identify suitable survey and classification techniques; and to evaluate impacts upon and clarify

acceptable criteria for sustaining, enhancing and where appropriate, restoring conservation interest.

- Conservation Management, the objective of which is to identify effective strategies and techniques which enable the NRA to fulfil its conservation duties. Management of coastal areas and wetlands, and the identification of conditions to favour rare species and discourage "nuisance" species represent the main foci of research effort.

COLLABORATION AND PARTNERSHIP TO
ACHIEVE COMMON OBJECTIVES ARE
FUNDAMENTAL TO THE NRA'S
CONSERVATION STRATEGY.

Impact of the NRA Conservation Strategy

The one certain prediction that can be made is that the water environment will be subject to a great many changes in the future. Some are within the NRA's sphere of influence, many others are not.

Looking ahead, the NRA's conservation strategy is designed to underpin the Authority's main mission of maintaining and improving the water environment. Indeed, conservation will effectively provide a yardstick for the long-term performance measure of the NRA's activities. In the meantime, the continuing development and implementation of procedures and operational practices which help to sustain and further conservation, particularly in the context of more stringent environmental legislation, provides a promising outlook for better general quality of rivers, lakes and coastal water areas.

An Uncertain Future

The legacy of previous bad environmental management practice, particularly in terms of the impact on water quality and on habitat structure means that improvement will be a lengthy business. The techniques for improvement are now well-known but progress will depend upon legislation, opportunities for collaboration and sources of funding.

The European Influence

Much of the impetus for environmental legislation has come from EC Directives. Those regarding the quality of surface waters,

and in particular, habitat and species protection will have profound impacts on the NRA as an agency for protecting and improving the environment.

The Public

Public attitudes will continue to exert a large influence. Public aspirations about environmental quality are high. However, the debate on "who pays", requires robust techniques for assessing the economic and social benefits of environmental improvements. Inevitably the public's priorities will be influenced by the state of the economy.

The Environment Agency

The future of the environment in England and Wales will be influenced by the success of the proposed new Environment Agency. Areas of particular importance include:

- the nature of the Agency's conservation duties. To this end, environmental improvement will only be achieved effectively by applying conservation duties across all the Agency's regulatory, operational and advisory functions;
- the relationship between Government and the new Agency. Public confidence in independent enforcement of standards will only be retained by an "arm's length" relationship. The fair attribution of NRA costs to polluters and beneficiaries is also important here - to ensure that public funds are spent where they should be, namely on work carried out on behalf of the Government and the nation.

MEASURING OUR SUCCESS

The success of the work of the NRA and, in due course, of the Environment Agency, will be most clearly shown by real improvements in environmental quality. Our progress in sustaining and furthering conservation interest will be monitored using the following key indicators:

- length of rivers, coasts and associated lands classified according to conservation interest;
- percentage of applications requiring NRA authorisation (consents and licences) screened and appraised for the effectiveness of conservation advice;
- percentage of Environmental Statements, and Development Plans and planning applications screened and appraised;
- implementation of management plans for NRA sites;
- proportion of water-related SSSIs maintained through regulatory and operational activity;
- proportion of degraded habitats enhanced and rehabilitated;
- achievement of conservation objectives in catchment plans.

These and other measures will be monitored and published regularly, as an important part of our remit to report to Government and the public on the state of the environment.

The ultimate performance measure is the extent by which the conservation interest of inland and coastal waters has been enhanced. This emphasises the urgent need for a classification system to monitor progress. For a relatively small financial investment there is much environmental benefit to be gained.

THE SUCCESS OF THE NRA WILL BE
MEASURED BY IMPROVEMENTS IN
ENVIRONMENTAL QUALITY.

GLOSSARY OF ACRONYMS USED IN THIS DOCUMENT

| | | | |
|------|---|------|-------------------------------------|
| AONB | Area of Outstanding Natural Beauty | MNR | Marine Nature Reserve |
| BOD | Biochemical Oxygen Demand | NNR | National Nature Reserve |
| CCW | Countryside Council for Wales | NRA | National Rivers Authority |
| CEC | Commission for the European Communities | R&D | Research and Development |
| DoE | Department of the Environment | SAC | Special Area of Conservation |
| EC | European Community | SPA | Special Protection Area |
| ESA | Environmentally Sensitive Area | SSSI | Site of Special Scientific Interest |
| GIA | Grant-in-Aid | STW | Sewage Treatment Works |
| LNR | Local Nature Reserve | UN | United Nations |
| MAFF | Ministry of Agriculture, Fisheries and Food | WO | Welsh Office |

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NRA

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