

Countryside Recreation Research Advisory Group

COUNTRYSIDE RECREATION RESEARCH 1990/91: THE PROGRAMMES OF THE CRRAG AGENCIES

**Edited by Hilary Talbot
Secretary to the Group**

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PREFACE

The Countryside Recreation Research Advisory Group (CRRAG)

CRRAG was formed in 1968 by the government agencies concerned with countryside recreation to help them co-ordinate their research and monitoring efforts.

CRRAG takes a broad rather than narrow definition of countryside recreation research, and has an interest in the interface between leisure and the conservation and social and economic well-being of the countryside. The emphasis is on research leading to the development of policy and practice, rather than on research for its own sake.

CRRAG aims:

To identify and help to meet the needs for advice, information and research of policymakers in the agencies concerned with countryside recreation.

To promote co-operation between member agencies in formulating and executing research on countryside recreation.

To encourage and assist in disseminating the results of countryside recreation research.

The **Sponsors** of CRRAG are Countryside Commission, Nature Conservancy Council, Sports Council, Countryside Commission for Scotland, Forestry Commission. They are responsible for the financing and direction of CRRAG. They are also member agencies.

Member Agencies are statutory agencies and central government departments with responsibility for countryside recreation research broadly defined, and the local authority associations. Each member agency sends a representative to the CRRAG agency meetings.

Associates are individuals or organisations who are interested in the activities of CRRAG, from the public, private or voluntary sectors. They are entitled to take part in all CRRAG activities, except the agency meetings. Membership is free, and associates are kept informed on a regular basis of the events organised by CRRAG.

CRRAG activities include:

Agency Meetings, where representatives of the member agencies meet three or four times a year to discuss common themes relating to countryside recreation research. Once a year each agency presents its research programme for the following year. Issues of collaboration or the sharing of information are then discussed between individual agencies. Subgroups are created to plan particular activities or to discuss specific issues.

Workshops, which generally take the form of one day events, concentrating on detailed current issues, relevant to a limited audience. The focus is upon the interface between research, experiment and practice. Recent workshops have included: A Countryside for Everyone?; Wild Connections: the Recreational Value of Wildlife; and Measure for Pleasure: The Value of Countryside Recreation.

An annual countryside recreation **Conference** held in September, organised by CRRAG. This is normally a two day conference for about 180 delegates, on a topical theme. Delegates come from a range of backgrounds. The proceedings of each conference are published. Recent conferences have been: Recreation and Wildlife: Working in Partnership; Changing Land Use and Recreation; People, Trees and Woods; and Young People, Adventure and the Countryside.

For a number of years CRRAG has published **Countryside Recreation Research: The Programmes of the CRRAG Agencies**. This provides information in tabular form on each agency's research programme for current and future years. In 1991 the format will be altered, so that the publication will concentrate on published and completed work.

Countryside Recreation Research 1990/91: The Programmes of the CRRAG Agencies

Since 1982, the Countryside Recreation Research Advisory Group (CRRAG) has annually published the research programmes of its member agencies, so that information about this work could be disseminated more widely. For each agency, the research included is a list of those projects relevant to countryside recreation research rather than the full research programme. Agencies are encouraged to include details of future proposed work, relevant publications and databases. As much of this information is subject to change, a contact point is identified and listed at the end of each agency section.

There were no submissions for this edition from the Association of County Councils, the Association of District Councils, the Association of Metropolitan Authorities, or English Heritage. Details of local authority research are normally included biennially.

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GLOSSARY

ACC	Association of County Councils	IDS	Industry Department for Scotland
ADC	Association of District Councils	ITE	Institute of Terrestrial Ecology
AMA	Association of Metropolitan Authorities	IFE	Institute of Freshwater Ecology
AONB	Area of Outstanding Natural Beauty	IH	Institute of Hydrology
AFRC	Agriculture and Food Research Council	MAFF	Ministry of Agriculture, Fisheries and Food
		MSC	Manpower Services Commission
BTA	British Tourist Authority	NCC	Nature Conservancy Council
BW	British Waterways	NERC	Natural Environment Research Council
		NNR	National Nature Reserve
CAP	Common Agricultural Policy	NPA	National Parks Authorities
CC	Countryside Commission	NRA	National Rivers Authority
CCS	Countryside Commission for Scotland	NITB	Northern Ireland Tourist Board
CEGB	Central Electricity Generating Board		
COSLA	Convention of Scottish Local Authorities	OS	Ordnance Survey
CRRAG	Countryside Recreation Research Advisory Group	RDC	Rural Development Commission
		RSPB	Royal Society for the Protection of Birds
DAFS	Department of Agriculture and Fisheries for Scotland	SC	Sports Council
DE	Department of Employment	SCW	Sports Council for Wales
DEn	Department of Energy	SDA	Scottish Development Agency
DOE	Department of the Environment	SDD	Scottish Development Department
DOE(NI)	Department of the Environment for Northern Ireland	SSC	Scottish Sports Council
DTP	Department of Transport	SSSI	Site of Special Scientific Interest
		STB	Scottish Tourist Board
EH	English Heritage	TB	Tourist Board
ESRC	Economic and Social Research Council	TA	Training Agency
ETB	English Tourist Board		
ESA	Environmentally Sensitive Area	WA	Water Authority
		WAA	Water Authorities Association
FBA	Freshwater Biological Association (now IFE)	WTB	Wales Tourist Board
FC	Forestry Commission	WWF	World Wildlife Fund
		WDA	Wales Development Agency
HIDB	Highlands and Islands Development Board	YHA	Youth Hostels Association

BRITISH TOURIST AUTHORITY/ENGLISH TOURIST BOARD

Introduction

The British Tourist Authority (BTA) and English Tourist Board (ETB) are statutory bodies created by the Development of Tourism Act in 1969, together with Boards for Scotland and Wales. The BTA is primarily responsible for encouraging overseas visitors to Britain, and maintains an extensive network of offices abroad. The ETB encourages British tourism within England by the provision of facilities and services for all tourists in England. A government review of BTA and ETB, announced in November 1989, will lead to greater devolution of activities and funding to the twelve Regional Tourist Boards in England.

Research is the foundation of the Boards' marketing strategy. The BTA/ETB carries out a continuous and extensive programme of research in overseas countries, amongst tourists visiting Britain, about tourism in England for the twelve main regions, for smaller areas, and for particular tourist markets. Where and whenever possible, the Boards' researches are done jointly, with others.

Research Programme 1990/91

	<i>Project Title</i>	<i>Summary of Objectives</i>	<i>Timescale</i>	<i>Comments</i>
Continuous/Annual Research				
BTA/ETB1	United Kingdom Tourism Survey	Comprehensive monthly survey of all overnight trips taken by UK residents, plus an annual survey of Britons' holiday taking at home and abroad.	Continuous/annual	Jointly sponsored by BTA and the National Tourist Boards for England, Northern Ireland, Scotland and Wales. Commissioned from NOP Market Research Ltd.
BTA/ETB2	Holiday Intentions Survey	To survey Britain's residents' intentions to take a holiday of 4 nights or more during the forthcoming season.	Annual	Commissioned from NOP Market Research Ltd.
BTA/ETB3	English Heritage Monitor	To analyse England's historic attractions in terms of their number, type, presentation, and visitor trends.	Annual	In-house.
BTA/ETB4	Sightseeing in (Year)	To analyse the use and capacity of all kinds of visitor attractions in the UK.	Annual	Compiled in-house on basis of survey of visits to attractions throughout England, Northern Ireland, Scotland and Wales.
BTA/ETB5	International Passenger Survey (Secondary Analysis)	To examine the volume, value, and characteristics of overseas visitors to Britain.	Annual	The survey is sponsored by DE. BTA and the Tourist Boards pay for extra data collection and analysis on specified topics, for instance the regional distribution of overseas tourism throughout Britain.
BTA/ETB6	British National Travel Survey	To measure the volume, value and characteristics of British residents' holidays of 4 or more nights in Britain and abroad.	Annual	The survey is funded by sponsors. Summary findings are published in the 'Digest of Tourist Statistics'.
BTA/ETB7	Overseas Visitor Survey	To investigate the profile and opinions of overseas visitors to Britain.	Continuous	Some regular and some occasional topics are included in this survey whose findings supplement data from the International Passenger Survey.
BTA/ETB8	Overseas Visitors to London	To examine the characteristics, behaviour, and opinions of overseas visitors in London during the Summer.	Annual	Sponsored in collaboration with London Tourist Board and London Regional Transport.

BTA/ETB9	Regional 'How's Business?' Surveys	To measure opinions on current tourism business and prospects among members of regional tourist boards (up to six regions participate).	Three times yearly	Regional tourist boards administer their own surveys. BTA/ETB arranges data processing and analysis.
Current Research				
BTA/ETB10	Market/Product Profiles	To design and prepare a series of monographs on particular tourism markets or products, presenting key facts, and marketing implications.	1990	Published in ETB's marketing advisory service 'Insights' – available to subscribers.
BTA/ETB11	Leisure Day Trips	To measure the volume, value and characteristics of leisure day trips.	1989/90	BTA and the DE provide substantial funding for a trailer on the General Household Survey.
BTA/ETB12	East Midlands Market Research	To investigate British holidaymakers' awareness and opinions of the East Midlands and its component sub-areas, to guide the marketing activities of the East Midlands Tourist Board and its partners.	1989/90	Commissioned from MEW Research.

Committed New Research

BTA/ETB13	Training and Recruitment Study	To assist Regional Tourist Boards in their dealings with Training and Enterprise Councils by assembling national data on labour and skills requirements in the tourist industry; and developing techniques for researching skills requirements at a local level.	1990	
BTA/ETB14	Regional Market Research Study	To assist marketing by Regional Tourist Boards and their partners by investigating British holidaymakers' awareness and opinions of particular areas within England.	1990/91	

Research Publications 1989/90

ETB/Wales Tourist Board (1989), *The British Tourism Market 1988*.
 ETB (1989), *English Heritage Monitor 1989*.
 ETB (1989), *Sightseeing in 1988*.
 BTA (1989), *Visits to Tourist Attractions 1988*.
 ETB (1989), *British Holiday Intentions 1989*.
 BTA (1989), *Digest of Tourist Statistics No 14*.
 BTA (1989), *Overseas Visitor Survey 1988*.
 ETB (1989), *The British Tourism Market 1973-88 – An Overview*.
 BTA (quarterly), *Tourism Intelligence Quarterly*.
 ETB (1989), *Regional Tourism Fact Sheets* (12 regional editions).
 ETB (1989), *The Short Break Market*.
 BTA (1989), *Visitor Traffic to the UK: Market Summaries* (24 versions).
 ETB (1989), *Activities by the British on Holiday in Britain*.

Contact for Enquiries: I Rickson, BTA/ETB Research Services, Thames Tower, Black's Road, London W6 9EL
 (081-846-9000 ext 2464)

BRITISH WATERWAYS

Introduction

British Waterways is the statutory authority responsible for the maintenance and control of much of the inland waterway network of Great Britain. Within British Waterways, research is controlled, undertaken and co-ordinated by a central Planning and Research Unit. The remit of this Unit incorporates research into all aspects of British Waterways' revenue earning activities, including property management and freight transport, as well as leisure, recreation and tourism-related uses of the waterways. With increasing emphasis being placed upon revenue generation, market research and information provision is becoming an increasingly important element within the overall research programme. Also, a new regional structure has been introduced within British Waterways, leading to an increased devolvement of responsibilities to local management. This process has resulted in increased information needs at a local level and the current research programme reflects these requirements.

The objectives of the research programme, in relation to the recreational aspects of inland waterways use are:

1. To achieve an effective system for monitoring usage levels, using automatic pedestrian counters, calibration counts and national omnibus surveys.
2. To run a regular survey programme to monitor markets and customer service levels.
3. To measure the social benefits, environmental values and other non-quantified benefits provided by the waterway system.
4. To give guidance on congestion, capacity and critical multi-use levels.
5. To monitor external research, partners, competitors and trends, and to disseminate the information internally.
6. To provide an efficient internal information system and to meet ad hoc external enquiries.
7. To develop strategies for individual businesses and waterways.

The above objectives are closely inter-related in many cases, and there are a number of threads which may be common to other CRRAG Agencies. These include:

- The determination of visitor numbers, especially at remote sites.
- Conflicts between user groups and natural resources.
- The assessment of indirect and non-quantified benefits associated with waterways.

Research Programme 1990/91

	<i>Project Title</i>	<i>Summary of Objectives</i>	<i>Timescale</i>	<i>Comments</i>
Recently Completed Research				
BW1	Waterway Corridor Study	To identify the basic demographic characteristics of the population living close to the waterway system.	Completed	Carried out by consultants. Summary information available.
BW2	Angling in BW Managed Fisheries	To investigate usage of 3 canals by anglers, together with implications for future waterway management. The canals are the Ashton/Lower Peak Forest, the Leicester Arm of the Grand Union Canal, and the Gloucester and Sharpness Canal.	Completed	Carried out in-house. Report available.
BW3	Third Party Insurance for Pleasure Boats	To ascertain customer reaction to the possible introduction of compulsory third party insurance, and to determine possible ways of carrying this out.	Completed	Carried out in-house.
BW4	BW Waterways -- Usage and Perception	To provide information by means of an omnibus survey of the overall usage and perception of BW waterways.	Completed	Carried out by consultants. Report available.
BW5	Grand Union/Regent's Canal Private Moorings	To establish the demand for private boat moorings on the lower Grand Union and Regent's Canals, together with facilities required and usage patterns.	Completed	Carried out in-house. Report available.
BW6	Caledonian Canal Survey of Boaters	To establish market characteristics and user preferences, in order to guide the provision of facilities and information on the Caledonian Canal.	Completed	Carried out in-house. Report available.

BW7	Trent Navigation Survey of Boaters	To establish market characteristics and user preferences, in order to guide the provision of facilities and information on the Trent Navigation.	Completed	Carried out in-house. Report available.
BW8	Newark Town Lock Survey	To obtain preferences of informal canal users at Newark Town Lock.	Completed	Carried out in-house. Report available.
BW9	Gloucester and Sharpness Canal -- Survey of Informal Users	To obtain preferences of informal users at 3 sites on the Gloucester and Sharpness Canal, and to ascertain the use made of the canal by visitors to the Wilfowl Trust at Slimbridge.	Completed	Carried out in-house. Report available.
BW10	Site Surveys, Midlands Waterways	To obtain preferences of informal users at 5 sites with development potential on the Midlands waterways, ie Fradley Junction, Hatton Locks, Hawkesbury Junction, Tardebigge and Gas Street Basin, Birmingham.	Completed	Carried out in-house. Report available.
BW11	West Midlands Moorings Survey	To establish the demand for private boat moorings on the Staffs and Worcestershire Canal and adjacent waterways, together with facilities required and usage patterns.	Completed	Carried out in-house. Report available.
BW12	Weaver Navigation -- Survey of Informal Users	To obtain preferences of informal users at 5 sites on the Weaver Navigation and at Anderton on the adjacent Trent and Mersey Canal.	Completed	Carried out in-house. Report available.
BW13	National Waterways Museum, Gloucester -- 1989 Survey	To investigate changes in customers' attitudes to the museum, following on from the 1988 survey.	Completed	Carried out in-house.
BW14	Cycleway/Shared Use Study -- Birmingham Main Line Canal	To assess the potential for, and user requirements and impact of the establishment of, a cycleway along the canal towing path between Birmingham and Wolverhampton.	Completed	Carried out in-house. Report available.

Continuous/Annual Research

BW15	Waterway Levels of Use	To establish the levels of use of individual waterways and waterway lengths by boaters, anglers and informal users by means of a series of one day counts and by mechanical boat and people counters.	Annual/ every 3 years, depending on information collected.	Carried out in-house. Reports available for 1988 and 1989.
BW16	Waterway and Reservoir Plans	To develop and update waterway plans to help the allocation of resources, clarify user requirements and potential, and produce a framework for the involvement of outside organisations.	On-going	Carried out in-house. Current work relates to the Leeds waterways, Pocklington Canal, Ashby Canal, and Gloucester and Sharpness Canal/ River Severn.

Current Research

BW17	Reservoir Visitors -- Rudyard Lake and Tring	To develop an on-going system for counting user numbers at reservoir sites, using 'people' counters, vehicle counters and calibration surveys.	1989/90	Carried out in-house.
BW18	Boating and Angling Relationships	To investigate ecosystem management in navigated waters.	1988/91	Carried out through 3 year postgraduate studentship (University of Liverpool).
BW19	'People' Counter	To develop a reliable mechanical pedestrian counter suitable for use at remote sites.	1989/90	Development of prototype carried out in-house.

BW20	Valuation of Benefits Provided by Waterways	To quantify the social and land drainage benefits derived from inland waterways.	1989/90	Carried out by consultants (University of Newcastle upon Tyne).
BW21	Employment Generation by Inland Waterways	To estimate the number of jobs generated at a local level, both directly and indirectly, by inland waterways.	1989/90	Carried out in-house.
BW22	Boat Movement Computer Model	To develop a computer model of the waterway system in order to predict the effect of additional boats on water supply and traffic levels.	1989/90	Carried out by consultants (University of Liverpool).
BW23	Gloucester and Sharpness Canal/ R Severn Survey of Boaters	To establish market characteristics and user preferences, for the preparation of a waterway strategy.	1990	Carried out in-house.
BW24	Educational Usage of Birmingham and Black Country Canals	To ascertain the use of canals in the West Midlands by schools, and their requirements.	1990	Carried out in-house.
BW25	Grand Union Canal - Long Distance Trail	To develop an action programme, including surveys of visitor preferences, related to the establishment of a long distance heritage trail on the Grand Union Canal between London and Birmingham.	1990	Carried out in-house.
BW26	South Stratford Canal Survey	To monitor the attitudes of boaters, anglers and informal users on the South Stratford Canal.	1990	Carried out in-house.

Committed New Research

BW27	North East Waterways -- Survey of Boaters	As a follow up to BW7, to establish market characteristics and user preferences in order to guide the provision of facilities and information on the waterways of North East Region.	1990	Carried out in-house.
BW28	Regent's Canal Information Boards	To evaluate the use of information boards on the Regent's Canal in London.	1990	Carried out in-house.
BW29	Bingley Locks Visitor Survey	To obtain preferences of informal users and visitor numbers at Bingley Locks on the Leeds and Liverpool Canal.	1990	Carried out in-house.
BW30	Boat Movement Study -- Kennet and Avon Canal	To provide data regarding future requirements for water on the Kennet and Avon Canal.	1990	Carried out in-house.
BW31	Kennet and Avon Canal Surveys	To undertake a series of boating and informal user surveys on the Kennet and Avon Canal to provide base data in advance of the canal's through opening to boats.	1990	Carried out in-house.
BW32	National Hire Boat Survey	To obtain details of customer preferences of hire boaters.	1990	Carried out jointly with the Association of Pleasure Craft Operators.
BW33	Trent and Mersey Canal Moorings Survey	To establish the demand for private boat moorings on the Trent and Mersey Canal, together with facilities required and usage patterns.	1990	Carried out in-house.

BW34	Research into Relaxation of Angling Close Season	To investigate the effect of the relaxation of the angling close season in 2 NRA regions on angling use.	1990	Carried out in-house.
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Tentative New Proposals

BW35	London Canals Waterbus Service	To investigate demand for a waterbus/business boat service on the Paddington Arm of the Grand Union Canal.	1990	Possibly to be carried out by consultants.
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Contact for Enquiries: Glenn Millar, British Waterways, Greycaine Road, Watford WD2 4LR (0923-226422).

CONVENTION OF SCOTTISH LOCAL AUTHORITIES

Research Programme 1990/91

	<i>Authority</i>	<i>Project Title and Summary of objectives</i>	<i>Timescale</i>	<i>Contact name</i>
COSLA1	Grampian RC	Natural Habitat Survey. To map and publish data on natural and semi-natural habitats in Grampian Region.	Continuous	A E Woodward
COSLA2	Grampian RC	Sites of Interest to Natural Science. To identify and continuously review sites of natural scientific interest of regional importance.	Continuous	A E Woodward
COSLA3	Grampian RC	Sites and Monuments Record. To identify and continuously review all archaeological sites in the region.	Continuing	I Shepherd
COSLA4	Grampian RC	Regional Interpretive Strategy Review. Review after 10 years of the progress, current state, and suggested future and interpretation of the region's cultural and natural heritage.	Continuing	I Shepherd
COSLA5	Grampian RC	Country Parks Visitors Survey. To monitor visitor numbers, use and opinions of the region's 3 country parks.	Completed	G R Tudor
COSLA6	Grampian RC	Forestry Grant Applications. To monitor amount, location and type of forestry grant applications.	Annual	A E Woodward
COSLA7	Grampian RC	Ski-ing in Grampian: Economic Development Opportunities. To see how local communities can get the greatest benefit from ski-ing. (Joint with Gordon, Moray, and Kincardine and Deeside DCs.)	Current	R White
COSLA8	Grampian RC	Grampian Sports Studies. Assessment of the adequacy of existing 'Urban Based' sports provision – accessibility of facilities. How these may be improved by new build or by upgrading.	1986 start	C Robertson
COSLA9	Highland RC	Development Opportunities in the Natural Environment. A study of employment and business development arising from the enhanced conservation and interpretation of the natural environment of Highland region. (In conjunction with SDD, HIDB, CCS, and NCC.)	March 1990/ Sept 1990	N Black
COSLA10	Shetland Islands Council	The provision of low cost visitor accommodation of 'Camping Barn' type in Shetland. (With Shetland Amenity Trust.)	1990 start	A Hamilton
COSLA11	Shetland Islands Council	The review of the Shetland structure plan.	1985/91	A Hamilton

COSLA12	Shetland Islands Council	Preparation of the West, Central and South Mainland local plan.	1985/90	B Hendry
COSLA13	Shetland Islands Council	Preparation of the Bressay local plan.	1989/90	A Sierakowski
COSLA14	Shetland Islands Council	Review of the Lerwick local plan.	1990/91	B Hendry
COSLA15	Shetland Islands Council	Review of the interpretive plan, 'Interpreting Shetland'.	1990/91	A Hamilton
COSLA16	Argyll and Bute DC	Kintyre Tourism Initiative. 3 year project based exercise to establish a methodology/framework for the development of visitor facilities. (with HADB.)	Jan 90/ Dec 92	W L Geddes
COSLA17	Argyll and Bute DC	Museums Development Study. An assessory exercise leading to a development strategy for indoor/outdoor interpretive facilities throughout the largest district authority in Britain. (With Scottish Museum Council.)	April 1990/June 1991	W L Geddes
COSLA18	Bearsden and Milngavie DC	A survey of sites of nature conservation interest as part of the formulation of an overall strategy in association with the Kilpatrick's project. Current research. (With City of Glasgow DC, Clydebank DC, Strathclyde RC, CCS.)	1989/90	A D Sim
COSLA19	Bearsden and Milngavie DC	Farming on Urban Fringe. Completed research done under the auspices of the Kilpatrick's project with the CCS.		A D Sim
COSLA20	Dumbarton DC	Overtoun Estate - A Management Plan. To produce a working management plan for the estate.	Jan 1990	D Tollick/I Galloway
COSLA21	Dumbarton DC	Rights of Way - Dumbarton District. To assess, condition of District's rights of way and suggest management procedures.	Jan 1990/ Nov 1990	D Pollak
COSLA22	Dumbarton DC	Balloch Castle Country Park. A woodland management plan.	March 1990/ May 1990	G Duff
COSLA23	Dumbarton DC	Camp/Caravan Site Study. A survey and analysis of touring caravan/camping facilities within the District. Current Research.	March 1990	D Hill
COSLA24	Dumbarton DC	Dumbarton District Tourism Development Strategy. Consultants, Cousin/Stephens Associates have been appointed. Part of Leven Valley Initiative. Current research.	March 1990/ May 1990	G Todd
COSLA25	Dumbarton DC	Overtoun House Management Plan. To formulate a strategy for active woodland management and improved visitor facilities within an 80 acre Council owned country house estate. Current research.	Spring 1990	I Galloway
COSLA26	Dumbarton DC	Helensburgh Urban Fringe Study. To establish the existing quality and use of land around Helensburgh fringe within a designated green belt area. Recently completed research.	Feb 1990	T Lancaster/A Clark

COSLA27	Dumbarton DC	River Leven Strategy – Capital Projects 1990. A list of possible environmental improvement schemes in the Leven Valley. Part of Leven Valley Initiative. Recently completed research.	Feb 1990	G Todd
COSLA28	East Lothian DC	Monitoring Car Park Use. To monitor visitor numbers. Longniddry Bents, Gullane Bents, Yellowcraig, John Muir Country Park. Local significance.	Annual	I D Fullerton
COSLA29	East Lothian DC	East Lothian Assessment of Tourism Potential. To develop a strategy for tourism.	1989	I D Fullerton
COSLA30	East Lothian DC	Management Plan Preparation. Traprain Law, John Muir Country Park, Aberlady Bay Local Nature Reserve, Haddington/Longniddry Railway Walk, Pencaitland Railway Walk.	1990/94 1990/94 1987/91 1986/90 1990/94	I D Fullerton
COSLA31	City of Edinburgh DC	South East Edinburgh Local Plan. Local plan to be subject of public local inquiry and then modification with view to adoption end 1990.		D Willcocks
COSLA32	City of Edinburgh DC	North West Edinburgh Local Plan. Similar stage to South East Edinburgh local plan.		D Willcocks
COSLA33	City of Edinburgh DC	South West Edinburgh Local Plan. To be finalised mid 1990.		D Campbell
COSLA34	City of Edinburgh DC	Rural Sector Local Plan. To be drafted by end of 1990, effectively reviewing 3 existing adopted local plans.		A Grant
COSLA35	City of Edinburgh DC	Urban Forestry Initiative. Arises out of completed research by consultants for District Council. A management initiative aimed at informing the care of the District's tree/woodland resource including the acquisition of new land for woodland planting/recreation in countryside areas as well as urban areas.	On-going	G Bauld
COSLA36	City of Edinburgh DC	Green Belt Initiative. Edinburgh DC is one of 5 partners in this initiative which has multiple objectives with regard to countryside (Green Belt) use and enhancement. Other partners are: CCS, Lothian RC, Midlothian DC, East Lothian DC. Current research.	1988/90 (at which time initiative will be superseded by an independent Trust).	D Oldham/G Bauld
COSLA37	City of Edinburgh DC	Countryside Around Towns Forum. Edinburgh DC is only one participant of many involved in this initiative. Principal player is CCS who should be contacted for detailed information. Current research.	On-going	CCS/G Bauld
COSLA38	Gordon DC	Bennachie Visitor Survey. To study patterns of recreational use at the car parks around the hill. Recently completed.	Oct 1989	C White

COSLA39	Renfrew DC	Environmental Impact Assessment. A study of Environmental Impact Assessment applications in Renfrew and Dortmund (West Germany) and an attempt to identify areas for improvement.	1989/90	S Taylor
COSLA40	Renfrew DC	Urban Fringe Study. To assess and prepare a policy statement for future of urban fringe.	On-going	J Gough
COSLA41	Renfrew DC	Interpretive Strategy for Gleniffer Braes Country Park. Highlighting areas to be interpreted and methods of interpretation.	On-going	J Gough
COSLA42	Renfrew DC	Renfrew District Tourism Review. Strategy prepared to promote tourism in the district. (Joint with SDA and Renfrew Development Company.)	On-going	J Dunbar
COSLA43	Skye and Lochalsh DC	Skye Visitor Survey. To improve information on profile of visitor and local attitudes to tourism.	March 1990/ Nov 1990	D H Noble
COSLA44	Glasgow City Council	Global Climatic Shift. Resume of issues; and wasteful consumption action plans.	Nov 1988 March 1990	P J Downing
COSLA45	Glasgow City Council	East End Landscape Strategy.	March 1990	S Hanlon, F Wilson
COSLA46	Dumfries and Galloway RC	Southern Upland Way - Visitor Survey. To establish the changes in visitor numbers using the Southern Upland Way.	Summer 1990	Ms Bennet
COSLA47	Dumfries and Galloway RC	Southern Upland Way - New Path Construction Survey. New footpath construction techniques have been developed and the survey will monitor the re-establishment of the vegetation.	On-going	Ms Bennet
COSLA48	Clackmannann DC	Gartmorn Dam Country Park Management and Business Plan.	April 1990/ Sept 1990	K Patterson
COSLA49	Cunninghame DC	Isle of Arran - Indicative Forest Strategy. To prepare an indicative strategy for the accommodation and development of the island's forestry industry.	1988/90	R Henry
COSLA50	Aberdeen DC	Perwinnes Moss. Provision of picnic areas, car parking, access paths, tree planting. Recently completed.	Oct 1989/ Mar 1990	T Robertson
COSLA51	Aberdeen DC	Lochinch Farm. Fencing of stock fields, provision of water and drinking troughs, tree planting. Recently completed.	Oct 1989/ Mar 1990	T Robertson
COSLA52	Aberdeen DC	5 year Strategy Plan. For the provision of Visitors Centre, Picnic Areas, Children's Play Facilities. Tentative new proposal.	1990/1995	T Robertson
COSLA53	Aberdeen DC	Doonies Farm. Installing new play facilities at Doonies Farm. Recently completed.	Oct 1989/ March 1990	T Robertson
COSLA54	Aberdeen DC	Tullos Hill Former Cleansing Tip. Investigating study of land reinstatement. Land reinstatement provision of paths and experimental tree planting. Provisionally committed research.	1990 start	T Robertson

COSLA55	Fife RC	Town Loch, Dunfermline--National Water Ski Facility Feasibility Study. A study into the feasibility of using Town Loch, Dunfermline as a site for a National Water Ski Centre. (With SSC.)	1987/89	R Terwey
COSLA56	Fife RC	Chalmers Church, Anstruther--Feasibility Study. A study into the feasibility of using Chalmers Church as an East Neuk Heritage Centre.	1988/89	R Terwey
COSLA57	Fife RC	Anstruther Harbour Feasibility Study. A hydraulic study of Anstruther Harbour to determine its suitability for use as a wet dock for historic boats. (With SDA.)	1988/89	B Neild
COSLA58	Fife RC	Isle of May Visitor Feasibility Study. A study into the feasibility of increasing visitor numbers to the Isle of May. (With NCC.)	1989	R Terwey
COSLA59	Fife RC	Bats in Fife. To identify the location of bat roosts and feeding habitats in Fife. (With Fife Bat Group.)	Continuing	G Moy
COSLA60	Fife RC	Fife Sites and Monuments Record. To identify and continuously review archaeological sites of regional importance.	Continuing	P Yeoman
COSLA61	Fife RC	Forestry Grant Applications. To monitor amount, location and type of forestry grant applications.	Continuing	G Moy
COSLA62	Fife RC	Lomond Hills Habitat Survey. A natural habitat survey of the Lomond Hills. (With NCC.)	1990	G Moy
COSLA63	Fife RC	Wemyss Coast Tourism Feasibility Study. A study of the potential for tourism in the Wemyss Area.	1989/90	A Kelly
COSLA64	Fife RC	Landscape Areas of Regional Importance. A study to identify regionally important landscapes in Fife.	Continuing	C Walker
COSLA65	Fife RC	Harran Hill Wood. Development of a community woodland in an urban fringe setting.	Continuing	S Sankey
COSLA66	Fife RC	Footpath management in the Lomond Hills.	Continuing	S Sankey
COSLA67	Fife RC	Plantation management on reclaimed colliery spoil.	Continuing	S Sankey
COSLA68	Fife RC	Interpretation Plan for Fife Regional Park.	1990	S Sankey
COSLA69	Clydebank DC	Auchwacraig: A Country Park. Feasibility study concerning proposals for a country park at Auchwacraig near Clydebank. Under the auspices of the Kilpatrick project.	1990	I Hudson

COUNTRYSIDE COMMISSION

Introduction

The Countryside Commission cares for the countryside of England and Wales and helps people enjoy it. They undertake a wide range of activities to conserve the natural beauty of the countryside and to make it more accessible for the public enjoyment.

They act as the government's adviser on countryside matters. In addition they have special responsibility for designating National Parks and Areas of Outstanding Natural Beauty, defining Heritage Coasts and establishing National Trails.

The purpose of the Research and Experimental programme is to inform and support the development of the Commission's national policies and regional practice. There are three main types of research and experimental work:

1. Monitoring of social and environmental changes in the countryside as they affect the Commission's work, the main areas being in relation to public attitudes to the countryside, patterns of countryside recreation and changes in the rural landscape.
2. Evaluation of specific proposals or projects, both the projects of other agencies as they impact on the Commission's interests, and the effectiveness of the Commission's own programmes.
3. Developing and promoting new ideas and spreading good practice by means of experiment and demonstrations.

Research Programme 1990/91

	<i>Project Title</i>	<i>Summary of Objectives</i>	<i>Timescale</i>	<i>Comments</i>
Recently Completed Research				
CC1	Wind Turbines	Literature review by consultant on the economic prospects and environmental implications of electricity generation through wind turbines, drawing on UK and overseas experience.	1988/89	Mark Hancock.
CC2	Community Action Monitoring	An assessment of the CC's national community action projects to assist decisions on a new national policy initiative.	1988/89	Bishop, Davison, O'Rourke.
CC3	Action for Communities in Rural England/Rural Communities Councils Study	To undertake a study of the work of Rural Community Councils, which relates to the CC's remit.	1988/89	Action for Communities in Rural England.
CC4	Feasibility Study into a Major New Lowland Forest	A feasibility study to establish how and where a new forest might be created in the East Midlands.	1988/89	Consortium of consultants including Landscape Design Associates and Roger Tym and Partners.
CC5	Evaluation of Broad's Grazing Marsh Experiment	To assess the effectiveness of livestock compensatory allowances as a means of retaining livestock farming in traditional areas in the face of pressure for change in arable cropping.	1986/89	University of Manchester. Jointly funding with MAFF.
CC6	Countryside Implications of Changes in the CAP	To build an economic model which takes account of land use changes or adjustments to the CAP.	1988/90	Carried out by the Centre for Agricultural Strategies. Jointly funded by DOE and MAFF.
CC7	Small Woodlands Project Inventory	The identification of small woods projects and collection of information about each project.	1988/89	Gloucestershire College of Art and Technology.
CC8	Review of Countryside Advisers Policy	To assess the effectiveness of the CC's countryside advisers' policy in achieving practical conservation action on farms.	1988/89	Centre for Rural Studies.
CC9	Coed Cymru Woodland Training	An experimental training course to train individuals in the management of small woodlands. The aim is to function as contractors and undertake management work for woodland owners.	1988/89	Fieldwork Woodland Training, MSC.

CC10	Rural Database	To gather information and data relevant to rural change.	1986/89	Information includes human population, agriculture, natural environment. Co-sponsors, DOE, ESRC and others.
CC11	Wales Terrestrial Database	To gather information and data relevant to rural change in Wales. Information includes human population, agriculture and natural environment.	1986/89	Welsh Office/NCC/FC/ADAS/NRA/ESRC.
CC12	New Forest Pony Premium Scheme	To help improve the overall management of the New Forest through encouraging good quality breeding stock. This scheme has been extended to using cattle for grazing the New Forest lawns.	1982/90	New Forest Verderers. Co-sponsored by RDC and NCC.
CC13	Rights of Way Survey	A sample survey of the condition of the rights of way network.	1986/89	Travers Morgan Landscape. Co-sponsored by DOE.
CC14	Overseas Visitors	Identifying the potential market for walking holidays in Britain.	1988/89	BTA.
CC15	Hannibal's Information Service	A countryside information project testing ways of improving awareness of the countryside. Monitoring and evaluation undertaken independently.	1987/89	Hereford and Worcester County Council.
CC16	Broads Promotion Campaign	To ensure that the impact of the campaign is properly monitored and reported to the CC.	1988/90	Broads Authority. Co-sponsored by East Anglia Tourist Board and boat hire industry.
CC17	Community Action Evaluation (Wales)	To measure the achievement to project objectives for two projects in Powys and Narberth.	1988/90	Graham Day. University College Wales (Aberystwyth).
CC18	Community Action in the Rural Environment (CARE) (Barnsley)	To develop and promote a wider base of support for local environmental action with background local authority assistance.	1986/90	Barnsley Metropolitan District Council.
CC19	Landscape Change Data Compatibility	A study of the compatibility of various computer systems involved in monitoring landscape change in the National Parks.	1989	MVA Systematica.
CC20	Woodland Preferences of the General Public	A study, to be based on group discussions, of the environments which the public most enjoys for recreation in woods and forest.	1989/90	Terry Lee. Joint project with FC and CCS.
CC21	AONB Directory	To assemble, and present in a directory, information in standard format for each AONB.	1989/90	
CC22	Cotswold AONB Landscape Appraisal	A landscape appraisal is required to the Cotswolds AONB in support of the submission documents to the DOE for the boundary review variation order.	1989/90	Cobham Resource Consultants.
CC23	Forestry Strategy	To produce forestry strategies for mid Wales which interpret the CC's forestry policy.	1988/90	Land Use Consultants.
CC24	People, Nature and Landscape: A State of the Art Review	To review current research and practice to establish inter-disciplinary relationships and future research needs.	1988/90	Landscape Research Group. Joint funded by ESRC.

CC25	New National Forest Landscape Assessment	Evaluation of the physical resources of the 5 locations and a broad estimate of the impact the forest would have.	1989/90	Landscape Design Associates.
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Continuous Annual Research

CC26	Demonstration Farm Programme Phase V	To promote advice and technical knowledge on all aspects of practical landscape conservation to farming interests via a demonstration farms programme on 9 farms, and to produce research findings of wildlife monitoring exercises.	On-going	Cobham Resource Consultants.
CC27	Public Transport Advice	To provide a public transport marketing advisory service.	On-going	Transport for Leisure Ltd.
CC28	Interpretation Advice	To provide a countryside interpretive advisory service.	On-going	Centre for Environmental Interpretation.
CC29	National Survey of Countryside Recreation	Annual survey on the volume of, and expenditure incurred on, countryside recreation trips.	On-going	MAS Research Ltd.
CC30	Monitoring Part III of the 1981 Wildlife and Countryside Act	To measure changes in rights of way and definitive maps under new provisions of the Act.	On-going	Ramblers Association.

Current Research

CC31	Lake District Commons Management	Establish and report on effective management arrangements for grazing commons owned by Lake District National Park, along the lines recommended by the Common Land Forum.	1988/91	Lake District Special Planning Board.
CC32	Coed Cymru Campaign/Welsh Woods Campaign	A project to promote the management of small woodlands for a range of purposes including landscape and nature conservation and timber production.	1986/91	British Trust for Conservation Volunteers.
CC33	Project Silvanus: Small Woods in the South West	A project to combine environmental conservation with development of wood industries, forestry, employment and alternative sources of income to farmers.	1986/91	Dartington Institute.
CC34	Northern Grouse Moors Experiment	To monitor the recovery of heather under different stocking rates and management practices of the northern grouse moors. In particular the effect of moor gripping on the scenery and hydrology.	1987/92	The Game Conservancy.
CC35	Protected Landscapes -- a Guide	To prepare an international guide on the background to selection, management and administration of protected landscapes with case examples.	1988/91	Guide to be published by International Union for Conservation of Nature.
CC36	Northamptonshire's Pocket Parks	To encourage and enable the establishment of Pocket Parks in Northamptonshire and to prepare a publication to provide guidance and advice on their development and management.	1987/90	Northamptonshire County Council

CC37	Shropshire Countryside Marketing Project	To raise the awareness of Shropshire's countryside amongst the residents of the West Midlands. The project will promote recreation activities and a 'green' brand of tourism, and will be used as a demonstration to other local authorities.	1988/91	Chris Martins, Influential Concepts and Communications. Co-sponsored with ETB.
CC38	Bunkhouse/ Camping Barns Marketing and Advice Project	To provide farmers, landowners and agencies with advice on the development and marketing of low cost accommodation for countryside users.	1987/91	YHA.
CC39	Rights of Way Maintenance Manual	To research, write and produce a 'codes of practice' manual on rights of way maintenance for local authority staff and others.	1988/91	Northamptonshire County Council.
CC40	Narberth Initiative	To use the mechanism of a new Development Trust to encourage local countryside initiatives.	1988/92	Taf and Cleddau Development Trust.
CC41	Birmingham National Park Awareness Project	To promote awareness of National Parks amongst young people in a major conurbation, and disadvantaged people in particular.	1987/90	Birmingham City Council.
CC42	Gloucestershire Parish Maps and Village Appraisals	To test the capabilities of a Rural Community Council in promoting the Local Jigsaw and assisting and enabling local communities to undertake Parish Maps and Village Appraisals.	1987/91	Gloucestershire Rural Community Council.
CC43	Monitoring Landscape Change in National Parks	To obtain and present in a refined and accessible form, statistical and mapped information on the extent of change in the 1970s and 1980s, and to establish a baseline for future monitoring.	1988/91	Silsoe College. Co-sponsored with National Parks.
CC44	Greater Manchester Information Project	To test ways of improving awareness of the countryside on a city-wide scale. Plus monitoring.	1988/91	Greater Manchester Countryside Unit.
CC45	Rural Community Tourism Development	A research and action project to help local groups co-ordinate and develop rural tourism.	1987/90	University of Bristol.
CC46	Wiltshire 'Country Pump'	To test the capability of a Rural Community Council to aid countryside community action.	1987/90	Wiltshire Rural Community Council.
CC47	North Pennines AONB	To help community groups and individuals to identify and develop ideas for creating projects to provide for conservation, recreation, tourism and employment creation which are in keeping with the AONB.	1988/92	Durham Rural Community Council.
CC48	High Street Countryside Information Terminals	This project will develop the role of new technology in improving people's awareness of the countryside. A countryside databank of recreation will be created for use by the public in high street locations in London.	1989/91	On-line Leisure Information Company.
CC49	Pennine Way Usage Survey and Economic Impact Study	A survey of the use of the Pennine Way and its economic impact on the local community.	1989/91	ASH Environmental Design Partnership.

CC50	Appraisal of Limestone Pavements in the Yorkshire Dales National Park	A study designed to identify the full extent of the limestone pavement resource and those which are of most importance for conservation.	1989/90	Jointly sponsored by NCC.
CC51	Case Scholarship: Public Land Purchase	Analysis of public sector landscape conservation mechanisms.	1990/92	
CC52	New National Forest: Socio-Economic Effect	Study to find out the social and economic effects the Forest would have on each of the proposed 5 East Midland Sites.	1989/90	ECOTEC.
CC53	Countryside Content of District Development Plans	To prepare an advisory publication on the countryside content of district development plans/local plans.	1990/91	Land Use Consultants.
CC54	Planning Gain	Review application of the principles of planning gain in the countryside.	1990/92	Co-sponsored by ESRC and NCC.
CC55	National Parks: Woodland Management	Collate and analyse information on woodland management activities in each park as background to study workshop and subsequent publication.	1989/90	Graham Mayhead.
CC56	Experimental Access Project: Stockport Rights of Way Project	Test ways, including paying farmers, of maintaining and promoting the rights of way network in an area of Stockport.	1989/92	
CC57	Hannibal's Information Service	Market research to assess the impact of the completed project.	1989/91	Hereford and Worcester County Council.
CC58	Farm Tourism Research in the West Country	Gain better understanding of the mechanism of farm tourism.	1989/91	Co-sponsored by West Country Tourist Board.
CC59	Powys Countryside Initiative	To add local countryside work to the agenda of local communities and development agencies in rural mid Wales.	1987/90	Prince of Wales Committee.
CC60	National Trails Sponsorship and Marketing Advice	To provide sponsorship and marketing advice for National Trail development groups during 1989/91.	1989/91	BWP Consultants.
Committed New Research				
CC61	Attitudes to Countryside Conservation	This information will be added to the long term British Social Attitudes Survey.	1990/93	Joint sponsorship with the ESRC.
CC62	Stock Control on Conservation Land Experiment: Cranham	Explore new ways of controlling sheep grazing on lowland commons.	1990/92	Royal Agricultural College. Co-sponsored by NCC.
CC63	National Parks: Marketing and Conservation Audit	Evaluate style and extent of tourist promotion in the parks, feasibility of new income from tourism and approach to conservation by tourism industry.	1990/91	Fielder Green Associates.
Tentative New Proposals				
CC64	Monitoring Landscape Change in National Parks	Interpreting the data from the last 15 years.	1990/91	

CC65	The Economic Cost of Conservation	Assessing the financial cost of conservation and improving practice where possible.	1990/91	
CC66	The Effect of the EC on UK Conservation	Improving the CC's knowledge of European conservation and the effect of trade harmonisation.	1990/91	
CC67	Organic Farming	Potential environmental impact of organic farming methods.	1990/91	
CC68	Landscape Assessment	To extend the CC's expertise in landscape assessment.	1990/91	
CC69	Transport and its Effect on the Landscape	To support the development of CC policy on transport issues.	1990/91	
CC70	Advisory Handbook for Developers	Advice for developers on the treatment of landscape issues in environmental assessment.	1990/91	
CC71	Advisory Material for Mineral Planning Authorities	Research to help the CC formulate policy and advise the industry.	1990/91	
CC72	Training on Rights of Way	To develop provision of training material and programmes for managing the rights of way network.	1990/92	
CC73	New Ways of Providing Training for Countryside Staff	Developing training methods, resources and materials. This will include research into a new publication to promote better training for countryside staff.	1990/92	
CC74	National Countryside Training Information Service	A feasibility study.	1990/91	
CC75	Council for Occupational Standards and Qualifications in Environmental Conservation	Council for Occupational Standards and Qualifications in Environmental Conservation will be supported in its task of researching and establishing vocational qualifications in the countryside sector.	1990/92	
CC76	Experimental Land Management Schemes		1990/91	In collaboration with other sponsors.
CC77	Conservation Advice for Farmers	To improve landscape content of advice.	1990/91	
CC78	Supporting Woodland Advisers	Preparation of general guidance for woodland advisers in dealing with clients.	1990/92	
CC79	Monitoring the Community Forests Initiative	To ensure that original objectives are achieved and to assess the methods used in different areas.	1990/91	
CC80	Forestry Strategies	General guidance for local authorities.	1990/91	
CC81	European Forestry and Woodlands Policy	The CC needs to be kept informed of content and significance for its own initiatives and policies emerging from the EC.	1990/91	

CC82	Change of Land-ownership under the Water Act	Collaboration with other agencies in drawing up management prescriptions for sensitive areas that change ownership under the Water Act, or are designated Nitrate Sensitive Areas.	1990/91	
CC83	National Parks: Good Practice	A series of studies of good practice.	1990/91	In conjunction with National Park Authorities.
CC84	AONB Management Plans	Prepare advisory publication on AONB in preparation for designation.	1990/91	
CC85	Tamar/Tavy Valleys AONB	Landscape appraisal of proposed AONB in preparation for designation.	1990/91	
CC86	Economic Impact of Countryside Recreation	Analysis of expenditure by visitors to the countryside.	1990/91	
CC87	Leisure Survey Feasibility Study	Examination, with CRRAG agencies, of feasibility of a joint sport, leisure and tourism day trip survey.	1990/91	ASH Environmental Design Partnership.
CC88	National Trails Promotion	A demonstration project on how National Trails can be promoted.	1990/91	In conjunction with the ETB.
CC89	Rights of Way Usage	Research into walkers' requirements for enjoyable trips. Also how best to promote the network.	1990/92	
CC90	Managing Upland and Lowland Commons	Research in the run up to legislation.	1990/91	
CC91	Local Authorities Rights of Way Procedures	To explore improvements to existing procedures, including a code of practice on diverting rights of way.	1990/92	
CC92	Providing for People with Special Needs	A publication for recreation managers on providing for people with special needs--the disabled, the old.	1990/91	
CC93	Sponsorship Study	A study to assess opportunities for obtaining local sponsorship for CC community action policy objectives.	1990/92	
CC94	Environmental Task Forces	Proposals for up to 3 environmental task forces including an appraisal of their effectiveness.	1990/92	
CC95	Local Authority Rights of Way Procedures Study	A study on improvements that could be made to existing procedures and to test their effectiveness in selected highway authorities.	1989/92	DOE County Surveyors' Society.
CC96	Advisory Service for Countryside Marketing	An advisory service to provide partners with specific and practical recommendations for improving the development. Presentation and delivery of information on local countryside recreation opportunities.	1990/93	
CC97	Experimental Access Projects	Test new techniques for developing and managing rights of way with local authorities and others, including their evaluation in Nottinghamshire and Brecon.	1990/93	
CC98	National Database of Recreation Facilities	Explore feasibility of database accessible from public terminals or by telephone, and if it has commercial sponsorship potential.	1990/91	Co-sponsored by ETB and SC.

CC99	National Parks Review	A programme of small research studies/data collection in support of the review.	1990/91
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Databases 1990/91

<i>Title/Description</i>	<i>Timescale/Access</i>	<i>Geographical Features</i>	<i>Recreational Features</i>
Catalogues of Common Land. To establish a national database of common land based on county registers and other sources. Includes information on location and characteristics, ownership, public and common rights and designations applying.	1985/90. Probably on sale.	Location of all commons in England and Wales.	
Heritage Coast Directory, Part I	Revised 1988. Open access. Hard copy. Free of charge.	Name of heritage coasts.	Lists heritage coast officer, county or national park or district contacts with addresses and phone numbers.
National Parks Database	Will be annual. Currently in preparation. Will be open access. Hard copy. Free of charge.	Parishes will be listed and county councils within park boundary.	Various visitor attractions in each park. Separate National Parks action guide lists activities and local contacts in each park.
Training Database	Currently in preparation. Not yet known.	Location of conservation education courses in UK.	

Research Publications 1989/90

National Rights of Way Condition Survey 1988 (1989), CCP 284.
National Rights of Way Condition Survey 1988 - Technical report, (CCD 58).
Ridgeway Users Study: Summary Report (1989), CCD 52.
The Environmental Impact of Wind Turbines (1989), CCD 46.
The Filly Premium Scheme 1983 - 88, (1989), CCD 45.
The Distribution of Commoners and Commoning Rights, CCD45.
A Countryside for Everyone (1989), (CCP265).
AONB Register.
Common Knowledge? (1990), CCP 251.
Recreational Cycling in the Countryside (1989), CCP 259.
Cotswold Landscape Assessment (1989), CCP 259.
Directory of Areas of Outstanding Natural Beauty (1989), CCD 54.
Welcoming Visitors to Country Parks (1989), CCD 40.
'Come out of Town' (1989), CCD 39.
Register of Small Woodland Schemes (1989), CCD 47.

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COUNTRYSIDE COMMISSION FOR SCOTLAND

Introduction

The Countryside Commission for Scotland is a statutory agency with responsibilities in Scotland for enjoyment of the countryside and the conservation of natural beauty. The Commission takes its remit from the Countryside (Scotland) Act 1967 (as amended in 1981) and amongst its powers and duties are the ability to undertake or commission research, and also to run development projects, which aim to demonstrate or test new concepts or techniques.

The general direction of the Commission's research and development programme derives from its corporate strategy, although a proportion of expenditure is for projects to serve short term operational needs. Research is closely linked to policy in providing support to major policy reviews such as that for popular mountain areas (recently completed) and access, which will be a major theme in the coming year. Forward planning for research will be much influenced by proposals for merger of the CCS and a yet to be established Nature Conservancy Council for Scotland.

Research Programme 1990/91

	<i>Project Title</i>	<i>Summary of Objectives</i>	<i>Timescale</i>	<i>Comments</i>
Current and Recently Completed Research				
CCS1	National Scenic Areas Landscape Strategies	To prepare planning and management strategies for further National Scenic Areas.	1990/92	In-house work approved. Start delayed.
CCS2	Popular Mountain Areas Review: General Consultancy Support	To provide support to the final stages of the Popular Mountain Area review, and to follow on some subsequent lines of enquiry.	1990	
CCS3	Birchwood Management	To identify demonstration sites for multi-use management of birchwoods, and review related issues.		
CCS4	Cairn Gorm Treeline Project	To create an upper forest edge of natural appearance at Glen More on HIBD's Cairn Gorm Estate.	1989/94	Joint project with HIBD and with advice from FC.
CCS5	Visitor Monitoring at Countryside Recreation Sites	To develop systems for collection of more reliable data about visitation to key countryside sites, especially country parks.	1987/89	Training manual completed. Further work proposed on counting equipment.
CCS6	Edinburgh Green Belt Initiative	To co-ordinate action and promote improved amenity and access in the Edinburgh Green Belt.	1988/90	Co-sponsored with Lothian Regional Council in collaboration with City of Edinburgh, East and Mid Lothian District Councils. Business Plan in preparation for launch of the Initiative as a Trust, later in 1990.
CCS7	Kilpatrick's Project	A project to tackle urban fringe problems on the north western fringe of the Glasgow conurbation.	1988/91	Co-sponsored with Clydebank, City of Glasgow, Bearsden and Milngavie District Councils and Strathclyde Regional Council.
CCS8	Countryside Around Towns Forum	Forum to provide for communication and mutual support between the various countryside around towns initiatives in Scotland.	On-going	

CCS9	Footpath Management Project	To develop experience in and advice for the management of upland footpaths.	1984/91	R Aitken contracted to mount a programme of trials and associated studies. Initiative with Scottish Conservation Projects to launch a specialist contract service on path management (Pathcraft Ltd) now launched. Advice on project experience being written up.
CCS10	Vegetation in the Uplands	To review and conduct trials of methods of revegetation of bare ground in harsh upland environments.	1988/91	Contracted to ITE, Banchory. First sets of screening trials on transplanting and fertilising now complete. Also initial high altitude mineral soil and wet peat field trials. Work programme to be extended.
CCS11	Landscape Setting of Buildings	To develop design advice for the siting of buildings in the landscape.	1986/90	Contracted to Gillespies. Book in final stages of preparation.
CCS12	Battleby Display Centre Information Sheets	To collate and publish advice in information sheet format for recreation management techniques and products and planting methods for the Scottish countryside.	On-going	Continuing in-house with contributions from external advisers.
CCS13	Monitoring Change in the Countryside	Survey of recent change to land cover and other attributes contributing to the appearance of the countryside.	1986/90	The CCS is jointly sponsoring with NCC the implementation in Scotland of NCC's National Countryside Monitoring Scheme. Project extended, including survey of one region using the 1987/89 air photography of all Scotland.
CCS14	Land Use/Cover Census	To interpret the 1987/89 air photograph cover of all Scotland and to prepare land use/cover data sets in electronic format.	1989/91	SDD led project with CCS and NCC co-sponsorship. Contracted to the Macaulay Land Use Research Institute.
CCS15	Review of Access Policies	A broad policy review aimed to examine aspects of access to the countryside for recreation. Including - Participation in walking; - Review of local authority involvement in rights of way survey.	1989/91 1990 1990	In-house but with contracted supporting studies. System Three Omnibus. Jointly with COSLA.
CCS16	Grantown upon Spey Footpath Study	To examine the footpath network around this tourist village and to report on its potential for development.	1990	Jointly sponsored with Highland Regional Council.
CCS17	Day Trip Survey	To survey day trips by Scottish residents.	1989	Contracted to System Three (Scotland). Led by STB and SDA. Continued annually from 1987.
CCS18	CRRAG Review of Members' Recreation Surveys	To assess the potential for increased collaboration in the survey of participation in countryside recreation.	1990	Co-sponsored with CC, SC, BW and TBs. Contracted to ASH Environmental Design Partnership.

CCS19	Skye Visitor Survey	To survey visitors to Skye, their numbers, activities, opinions and expenditure.	1990	Co-sponsored with Skye and Lochalsh District Council, Highland Regional Council, and HIBD. Contracted to System Three and Mackay Consultants.
CCS20	Great Glen Way	To survey options for a Fort William to Inverness long distance route.	1989/91	Survey report in final stages of completion.
CCS21	Development Opportunities in the Natural Environment	To assess the wildlife and natural environment of the Highlands for its business and employment creation potential.	1990/91	Co-sponsored with Highland Regional Council, NCC, HIBD and SDD. Contracted to ASH Environmental Design Partnership.
CCS22	Farming and Forestry Wildlife Advisory Group Review	To review the organisation and working of Farming and Forestry Wildlife Advisory Group in Scotland.	1990	With Farming and Wildlife Trust. Contracted to Cobham Resource Consultants.
CCS23	Road Crossing to Skye	Assessment of engineering options.	1990	Contracted to Blyth and Blyth.
CCS24	CRRAG Support	To support the costs of CRRAG.	On-going	Co-funded with CC (lead agency), SC, NCC and FC.

New Proposals

CCS25	Landscape Assessments	To provide specialist advice on casework and strategy preparation in Nationally Scenic Areas.	1990/92	Glen Coe and Rannoch Moor study proposed.
CCS26	Landscape Classification	To explore methodology for classification of Scotland's landscape resource.	1990 start	Follow on from review of approaches to landscape assessment undertaken by Land Use Consultants.
CCS27	ESA Monitoring	To examine the initial landscape benefits arising from the ESA procedures as a contribution to a midterm review of the first round of ESA designations in Scotland.	1990	In association with DAFS.
CCS28	Glas Maol Monitoring Study	To assess the impacts on wildlife of a ski tow that impinges on an upland NNR.	1990/92	With SDD and others. Contractor: ITE.
CCS29	Country Park Review	To assess present provision of country parks in Scotland.	1990	May be delayed.
CCS30	Kelvin Valley Countryside Project	To improve landscape and opportunities for recreation on the north and north eastern edge of the Glasgow conurbation.	1990 start	With Strathclyde Regional Council, and City of Glasgow and Strathkelvin District Councils.
CCS31	Gardens and Designed Landscapes	To extend the existing inventory.	1990 start	
CCS32	Land Ownership	To monitor issues arising from current trends in changing land ownership.	1990	
CCS33	Countryside Staff Training	To survey and assess training needs for countryside staff.		

Research and Policy Publications 1989/90

★ *Landscape Renewal in the Countryside Around Towns* (1989), A Review for the Commission and the Scottish Development Agency by Ian White Associates.

Day Trips to Scotland's Countryside 1987-89 (1990), The Commission, Perth.

★ *Landscape Assessment: Principles and Practice* (1990), Report by Land Use Consultants to the Commission.

★ *Clyde-Calders: Sixth Annual Report 1989*.

Skilng at Cairngorm: A Policy Paper (1989), The Commission.

The Mountain Areas of Scotland: Conservation and Enjoyment (1990).

★ Available in limited numbers only.

Contact for Enquiries: J W Mackay, Countryside Commission for Scotland, Battleby, Redgorton, Perth PH1 3EW (0738 27921).

DEPARTMENT OF THE ENVIRONMENT

Introduction

The Department's Countryside Research Programme is designed to provide information on the state of the countryside and likely future trends; to investigate means of reconciling agriculture and forestry with conservation; to find ways of encouraging enterprise in rural areas; and to inform DOE's regulatory activities.

The research programmes (£4.6 m) focusing on the Department's inner cities, planning and minerals responsibilities (DPS) include projects on land use change, environmental aspects of the planning system, the restoration and after-care of land worked for minerals and derelict land.

The DOE also has water responsibilities:

- (a) The Department's £4.9 m water research programme is designed to meet UK Government water development and monitoring of policy needs and is complemented by water industry research.
- (b) It is envisaged that a Standing Committee to monitor the Code of Practice on Conservation, Access and Recreation will be set up. Section 10 of the Water Act 1989 (published jointly by the DOE, MAFF and the Welsh Office) provides that the Secretary of State may by order approve any Code of Practice giving practical guidance to the National Rivers Authority or to water and sewerage undertakers with regard to the environmental and recreational duties imposed on these bodies under Sections 8 and 9 of the Act. In summary these duties require the relevant authorities:
 - (i) To further the conservation and enhancement of natural beauty and the conservation of flora, fauna and geological and physiographical features of special interest.
 - (ii) To have regard to the desirability of protecting and conserving buildings, and other objects of archaeological, architectural or historic interest.
 - (iii) To have regard to the desirability of preserving for the public freedom of access to places of natural beauty, and to buildings, sites and other objects of archaeological, architectural or historic interest.
 - (iv) To ensure that land and water associated with water is made available for recreational purposes and in the best manner and that the needs of the chronically sick and disabled are taken into account.
- (c) Clause 143 of the Water Act 1989 requires the National Rivers Authority to carry out research in support of its functions, these relate to the protection and management of rivers, estuaries, coastal waters and other controlled waters. Therefore from 1 April 1990 the Department is transferring the responsibility for formulating, commissioning and managing the principal water environment research programmes in England and Wales on the following to the NRA: water conservation research, freshwater, estuarine and marine quality research; groundwater quality research.

Research Programme 1990/91

	<i>Project Title</i>	<i>Summary of Objectives</i>	<i>Timescale</i>	<i>Comments</i>
Recently Completed Research				
DPS1	Integrated Rural Development in the Peak District National Park	To evaluate by experimental trials the application of an integrated programme of rural development in the Peak District National Park.	1981/88	Carried out by the Peak Park Joint Planning Board. Co-sponsored with CC, MAFF, NCC and RDC.
WT2	Upland Management and Water Quality Phases 1 and 2	To assess the impact of upland management practices on river biota, recreational fisheries, quality of raw water abstracted or stored for supply, chemical budgets.	1981/88	Carried out and co-sponsored by IFE, IH and ITE.
DRA3	Monitoring Landscape Change Data	To provide information on the stock rates of change of countryside features in England and Wales.	1984/86	Carried out by Hunting Technical Services Ltd. Co-sponsored with CC.
DPS4	Trees on Colliery Spoil		1985	Carried out by FC.
DRA5	Countryside Implications of Changes in CAP: Pilot Study	To assess the main options for reform of the CAP and the effects on land use, employment and wildlife.	1985/86	Carried out by the Centre for Agricultural Strategy, University of Reading. Co-sponsored with RDC.
DRA6	Environmental Options and Agricultural Land Use Issues	To build on existing modelling techniques to explore the interface between environmental factors and the economics of marginal agriculture or forestry.	1986/89	Carried out by Aberdeen University. Co-sponsored with MAFF, NCC and NERC.

DRA7	Rural Areas Database	To gather information and data relevant to rural areas and change. Information includes population, agriculture and natural environment.	1986/89	Let to ESRC. Co-sponsored with CC, FC, MAFF, NERC and RDC.
DRA8	Alternative Support Systems for Rural Areas	To utilise the lessons learned in the Integrated Rural Development Programme, building on alternative systems.	1987	Carried by Wye College. Co-sponsored with MAFF.
DRA9	Investigating Causes and Changes in Hedgerow Lengths	To establish why hedgerows have been removed and new hedgerows planted.	1987/88	Carried out by Environmental Resources Ltd. Co-sponsored with CC.
DPS10	Land Use Change Statistics	To examine the quality and usefulness of DOE's land use change statistics and to suggest ways in which their usefulness might be further improved bearing in mind value for money.	1987/88	Carried out by Laurence Gould and Associates in association with Clyde Surveys Ltd.
DPS11	Low Level Restoration of Sand and Gravel Workings	To review and assess existing data and experience on the sand and gravel workings where low level restoration is being or might be used.	1987/88	Carried out by M J Carter Associates.
DPS12	Monitoring the After Use of Land Reclaimed with the Aid of the Derelict Land Grant	To collect and collate information on the use being made of land reclaimed through Derelict Land Grants and on the benefits achieved.	1987/88	Carried out by Land Resources Ltd.
DRA13	An examination of Monitoring Landscape Change Data	Planning for a National Landscape Survey in 1990/91 to update the Monitoring Landscape Change exercise.	1987/89	Carried out by Bristol University.
DPS14	Case Studies of Good Practice in Urban Regeneration III: Sport and Leisure in the Inner City	A review of sport and leisure projects which contribute to urban regeneration.	1987/89	Carried out by Loughborough University.
DPS15	Cost Effective Management of Reclaimed Derelict Sites	To identify cost effective strategies for managing reclaimed derelict sites and to assess the extent to which such strategies are affected by the methods and costs of initial reclamation.	1987/89	Carried out by Land Capability Consultants Ltd.
DPS16	Evaluation of Garden Festivals	To assess the cost effectiveness of garden festivals in achieving their economic and environmental objectives.	1987/89	Carried out by PA Cambridge Economic Consultants.
DRA17	Interactive Videodisc on Rural Issues	To provide data and analysis of rural Britain.	1987/89	Carried out by BBC Enterprises. Co-sponsored with CC, RDC and others.
DPS18	Mersey South Bank Feasibility Studies	To make an appraisal of the technical feasibility, economic viability and ecological impact of reclaiming land for large scale industrial development.	1987/89	Carried out by Ward Ashcroft and Parkman with Cheshire County Council.
DPS19	Tourism and Leisure in the Inner City	To evaluate the contribution made to inner city policy objectives by tourism projects that receive Urban Programme/Urban Development Grants.	1987/89	Carried out by the Polytechnic of Central London.

DRA20	Bracken: The Extent of Spread and Methods of Control	To examine the extent of bracken spread and cost effective management methods.	1988/89	Carried out by the National Remote Sensing Centre.
DRA21	Remote Sensing Techniques for Rural Land Classification	To examine patterns of landscape and how these might be used to collect information on habitat and landscape features.	1988/90	Programme administered by the British National Space Agency.
DRA22	Release of Captive Bred Species into the Wild	To identify plant and animal species which may be affected by the release of captive bred individuals.	1989	Carried out by NERC (ITE).
DRA23	The Extraction of Linear Features from SPOT Multispectral Data	To investigate the potential of extracting linear feature information from SPOT multispectral data to improve the confidence levels of sample based landscape surveys.	1989/90	Let to Bristol University.
Current Research				
DRA24	Rural Analysis of Census of Population Data	To analyse 1981 Census of Population data for rural areas.	1983/89	Let to Management Centre, Aston University.
DPS25	Joint Agricultural Restoration Study I: Bush Farm and Papercourt Farm Sites	To investigate the feasibility of restoring land back to a high standard of agricultural quality after gravel extraction under commercial conditions.	1984/90	Let to RMC (UK) Ltd.
DPS26	Joint Agricultural Restorations Study II: Wasperton Site	As above.	1984/91	Let to Pioneer Agregates.
DRA27	Effects of Nitrogen Fertiliser on Natural Grassland on the Somerset Levels	To examine the effects of nitrogen fertilisers on natural grassland on the Somerset Levels.	1986/91	Let to Animal and Grassland Research Institute. Co-sponsored with MAFF and NCC.
DRA28	Project Silvanus: Co-ordinated Management Techniques for Small Woodlands	To monitor a project combining conservation aims with management of small woods and development of associated industries.	1986/92	Let to Dartington Institute. Co-sponsored with CC, FC, MAFF, NCC and RDC.
DRA29	Countryside Implications of Changes in CAP	A study of the effects of the CAP on land use, employment and wildlife.	1987/89	Let to Centre for Agricultural Strategy, University of Reading. Co-sponsored with CC, MAFF and NCC.
DRA30	Ecological Consequences of Land Use Change	To develop guidelines for land management to build on previous work highlighting the relationship of size and fragmentation of wildlife habitats to the preservation of diverse species population.	1987/90	Let to NERC (ITE).
DRA31	Impacts of Pesticides Regimes	To study the implications for nature conservation of changes in pesticide regimes.	1987/90	Let to NERC (ITE).
DRA32	Southampton Soil Mapping Study	To evaluate methods and outputs for applied soil mapping in terms of their relevance to land use planning and applied geological mapping.	1987/90	Let to Soil Survey and Land Resource Centre.
DRA33	Thatching Reed Habitat	An investigation into factors contributing to the decay of thatching reed.	1987/90	Let to University of East Anglia. Co-sponsored with Broads Authority and RDC.

DRA34	Deer Mortality in Royal Parks	To investigate factors influencing the performance of deer herds in royal parks.	1988/90	Let to Southampton University.
DRA35	Identification of CITES Plant Species	To identify whether a manual to identify protected plant species can be produced for use by non-experts in the enforcement of import/export regulations.	1988/90	Let to J A Burton.
DRA36	Survey of the Conditions of the Rights of Way Network	A sample survey of the conditions of the rights of way network with particular reference to 1987 storm damage.	1988/90	Let to Travers Morgan. Co-sponsored with CC.
DRA37	The Impact of Land Use Change on Aquatic Communities	To add a freshwater dimension to the Ecological Consequences of Land Use Change Study.	1988/90	Let to NERC (IFE).
WT38	Hydrological Impacts of Hardwood Plantations in Lowland Britain	To assess the hydrological and hydrochemical effects of small scale hardwood plantations.	1988/91	Let to IH.
DRA39	Statistical Indicators for Nature Conservation	To develop a set of indicators to monitor trends in nature conservation through a review of recent key work on UK wildlife habitats, etc.	1988/91	Let to York University.
WT40	Forestry Impact on Water Quality II	To develop further studies on the movement of elements through forest catchments at Plymlimon.	1988/92	Let to and co-sponsored by IH.
DPS41	Landform Replication as a Technique for the Reclamation of Limestone Quarries	To evaluate restoration blasting and associated revegetation as an acceptable and economic technique for reclamation and long term stability of large scale limestone quarries.	1988/93	Let to Manchester Polytechnic with North West Groundwork Trust and Rock Environmental.
DRA42	1 km Land Classification	By refining existing procedures, use the ITE land classification to assign land classes to all 1 km squares.	1989/90	Let to NERC (ITE).
DRA43	Assessment of the Benefits of Amenity Trees	To assess the benefits in monetary terms of the provision and maintenance of amenity trees.	1989/90	Let to Cobham Research Consultants.
DRA44	De-icing Salt and Tree Damage	A study into the damage to roadside trees caused by de-icing salt.	1989/90	Let to FC.
DRA45	Environmental Consequences of Set Aside	To examine the environmental consequences for wildlife and landscape of the set aside and country premium scheme.	1989/90	Let to NERC (ITE).
WT46	Factors Affecting the Recruitment of Fish	A study of fry distribution and survival in rivers. To describe the distribution of some coarse fish fry in rivers and determine factors determining high growth rate and survival.	1989/90	Let to NERC (ITE).
DRA47	Genetic Variations among Birds of Prey	To develop a series of single locus probes and to test them against known pedigree birds to confirm and establish protocols for their use in forensic analysis.	1989/90	Let to Nottingham University.
DRA48	Moorland Wilderness	To study the effects of the reduction of sheep grazing in upland areas on vegetation and wildlife.	1989/90	Let to NERC (ITE).

DPS49	Provision and Protection of Open Space in the Inner City	To provide guidance on ways to improve the provision, protection and accessibility of open space.	1989/90	Let to Birmingham Polytechnic, Faculty of the Built Environment.
DRA50	Recreation and Nature Conservation in Richmond Park	To examine the relationship between recreation and nature conservation in Richmond Park.	1989/90	Let to Land Use Consultants.
DRA51	Remote Sensing Update	Investigating applications of the remote sensing study on techniques for rural land classification.	1989/90	Let to National Remote Sensing Centre.
DPS52	The Contribution of Urban Forestry to the Regeneration of Derelict Areas	To establish a database of derelict sites reclaimed as urban forestry, building upon the German experience.	1989/90	Carried out by TEST – DOE making a contribution to part of a larger project.
DRA53	The Dynamics of the Rural Economy I	To investigate and provide information on the rural economy and its relation to the wider regional economy. This project will investigate the dynamics of the rural economy in England (within the wider context of the UK as a whole).	1989/90	Let to ECOTEC Research and Consulting Ltd.
DRA54	The Dynamics of the Rural Economy II.	To provide a basis for the systematic analysis of national economic forces at the local level, by selecting representative areas for a detailed study.	1989/90	Let to Cambridge University.
DRA55	The Use of Geographic Information Systems in the Analysis of Countryside Data	To explore the potential of geographic information systems to analyse countryside data and for setting environmental assessments in national and regional perspectives.	1989/90	Let to Bristol University.
DRA56	Wildlife Disease Investigation Review	To investigate whether the current status of research into wildlife disease is adequate.	1989/90	Let to NERC (ITE)
DPS57	Amenity Reclamation of Mineral Workings	To provide appropriate guidance on requirements for initial restoration and subsequent aftercare where mineral workings are reclaimed for amenity use.	1989/91	Let to Land Use Consultants.
DRA58	Classification of Special Protection Areas under the EC Birds Directive	To classify each Special Protection Area according to the part it plays in the survival and reproduction of species listed on Annex 1 of the EC birds directive.	1989/91	Let to Liverpool University.
DRA59	Environmental Value of Farm Regimes	To examine management techniques and environmental benefits of alternative farm regimes.	1989/91	Let to CES Consultants, Wye College.
DPS60	Information Management in Planning	To assess how recent developments in information technology might enhance the usefulness of data used to monitor and develop the DOE's planning policies, eg, information on land use change.	1989/91	Let to Pinpoint Analysis Ltd.
DRA61	The Management of Hedgerows	To investigate the economics of hedgerow management for nature conservation.	1989/91	Let to NERC.

DRA62	Birds in Estuaries	To improve the Wash Model that relates birds numbers, shore width and sediment type and to test the accuracy of it to predict bird numbers on other shores and estuaries.	1989/92	Let to NERC (ITE).
DPS63	Reclamation of Mineral Workings to Agriculture	To collect, collate and analyse existing published materials and other available information, including site surveys, to provide a review of criteria for successful agricultural restoration and aftercare of mineral workings.	1989/92	Let to Rural Planning Services with Wye College.
DRA64	Bracken Distribution and Management	To prepare an environmental balance sheet of bracken habitat and to extend and improve current methodologies for mapping and assessing bracken distribution.	1989/93	Let to NERC (ITE).
DRA65	Farm Forestry Programme	To provide reports on the environmental and socio-economic aspects of farm forestry.	1989/93	NERC special topic programme. Co-sponsored with NERC and FC.
DPS66	Environmental Assessment: A framework for Monitoring the Implementation of the EC Directive: Stage I	To establish a framework for monitoring the implementation of the EC Directive on Environmental Assessment.	1990	Let to Manchester University.
DPS67	Land Use Change in England 1985/1989	To investigate the quality and robustness of using land use change statistics at more disaggregated levels, to produce further detailed analysis for a number of policy applications, and to make recommendations for future analysis needs.	1990	Let to South East Regional Research Laboratory.
DPS68	National Sample Survey of the Stock of Vacant Land in Urban Areas	To carry out a national sample survey of vacant land in urban areas to obtain statistically sound regional and national estimates of vacant land.	1990	Let to Ordnance Survey.
DPS69	Landscaping and Revegetation of China Clay Waste Tips	To evaluate, and where possible improve, existing information and practices on landscaping and reclamation of major waste tips from the extraction of china clay.	1990/91	Let to Wardell Armstrong.
DRA70	Countryside Survey 1990	The provision of monitoring data to update the Monitoring Landscape Change Project.	1990/93	Let to NERC (ITE).
DRA71	Arboriculture V	Support for the Arboriculture Advisory and Information Service and support for DOE Tree Preservation Order appeals work.	On-going	FC Research Station, Alice, Holt.

Committed New Research

DPS72	1991 Census Definition of Urban and Rural Areas	To generate the 1991 Census urban boundaries (1981 definition) in order to provide urban/rural statistics from the 1991 census as well as the 1981/1991 change statistics.	To be let.
DRA73	1991 Census of Population: a Rural Definition	To provide a rural definition for the extraction of associated data.	To be let.

DPS74	A Methodology for Scoring the Priority for Reclamation Schemes	This will examine whether a practical methodology for scoring the priority of reclamation schemes can be developed.	To be let.
DPS75	Appraisal of the Current Derelict Land Survey Arrangements	This will examine the current arrangements for conducting derelict land surveys and make recommendations for their improvement.	To be let.
DRA76	Effects of Climate Change	To provide information on the effects of climate change on nature conservation.	To be let.
DPS77	Environmental Assessment: A Framework for Monitoring the Implication of the EC directive: Stage II	To monitor the longer term effects of environmental assessment on major projects and on the planning system.	To be let.
DPS78	Environmental Costs and Benefits of New Settlements	This will establish the environmental costs and benefits of new settlements in terms of sustainable development.	To be let.
DPS79	Evaluating Low Cost Housing in Rural Areas	This will monitor the implementation of the new low cost housing initiative.	To be let.
DPS80	Feasibility Study for Deriving Information on Land Use Stock	To establish cost effective methods of using, augmenting or developing existing land use stock information.	To be let.
DPS81	Improving the DOE's Planning Information Base and Assessing Future Requirements	To provide an effective strategy to ensure that future research topics are cost effective and targeted at areas of policy.	To be let.
DPS82	Linking Land Use Change to MAFF Data	To research the extent to which the DOE Land Use Change Statistics might extend the existing MAFF series (derived from the agricultural census) on transfers of agricultural land.	To be let.
DPS83	Monitoring the Operation of Permitted Development Rights for Agriculture	This will examine the extent and detail of the use made of the permitted development rights for agricultural buildings in Part 6 of the General Development Order.	To be let.
DPS84	Review of Practice and Research into Methods of Treatment of Selected Types of Dereliction	This will review research into the treatment of selected types of dereliction, examine alternative methods and establish best practices.	To be let.
DPS85	Examination of Derelict Land and Methods of Prevention	This will identify the mechanisms which lead to different types of dereliction and review existing preventative measures and recommend new ones and improvements.	To be let.

DPS86	The Potential for Woodland Establishment on Land Fill Sites	This will provide basic information to prepare advice for the restoration of land filled mineral workings to forestry.		To be let.
DPS87	Income from Nature Conservation	To assess the opportunity for income generation from nature conservation both directly and from knock on benefits of species/habitat diversity to improve incorporation of environmental goods into economic assessment.	1990	To be let.
DRA88	Sustainability as Applied to Land Use Decisions	A methodological study to identify the valuation of countryside features (eg landscape, wildlife) in the context of sustainable development (viz the 'Peace Report').	1990	To be let.
DRA89	Tree Health Studies	To identify factors causing die-back and crown thinning of non-woodland trees to differentiate role of pollution from other effects. (To link FC Tree Health Surveys and incorporate species of amenity value of importance to the wider countryside.)	1990	To be let.
DRA90	Rural Areas Database	Follow up study.	1990 start	To be let.
DRA91	Analysis of Trade in Tillandia Species in UK	To examine present species in trade in the UK with a view to collecting accurate data on species in trade and level of trade, origin and sources of material, levels of artificial propagation and status of plants in the wild.	1990/91	To be let.
DRA92	Care of Established Trees	To study the effect of development on the health, vigour and stability of a range of tree species and sites. To provide data for guidance for successful tree retention.	1990/91	To be let.
DRA93	Conservation Importance of National Parks	To follow up NCC/CC/NPA report on nature conservation problems in National Parks.	1990/91	To be let.
DRA94	Dynamics of the Rural Economy -- Follow up	To follow up the analysis of the dynamics of the rural economy by a sample of firms in rural areas in order to explore their relative performance and their linkages with urban areas.	1990/91	To be let.
DRA95	ECOLUC -- Follow Up Development of More Systems Modules	To develop a tool for policy assessment, eg, expert system for woodland management.	1990/91	To be let.
DRA96	Economic Modelling	To supplement the Centre for Agricultural Strategies/CAP report linking to land assessment, eg, nitrogen, soil fertility and other geographic information systems work.	1990/91	To be let.
DRA97	Genetic Engineering and DNA Fingerprinting	To extend such work to a greater variety of animals, eg, release of captive bred individuals, indicator species for nature conservation.	1990/91	To be let.
DRA98	Importance of Landscape Features for Birds	To build on research results from ICCBT and ECOLUC.	1990/91	To be let.

DRA99	Marine Conservation -- Failures of Seabirds and Other Marine Animals	To partake in extensive research funded by DAFS and NERC in order to support international obligations in bird protection.	1990/91	To be let.
DRA100	Recreation/Development Threats to National Parks	To examine the significance of rates of change of development in National Parks and AONBs.	1990/91	To be let.
DRA101	Survey of European Community Orchid and Cacti Nurseries	To examine species available from European nurseries. To ascertain levels of artificial propagation and availability of wild collected stocks and identify trade routes in wild material and those specialising in artificial propagation of CITES specimens.	1990/91	To be let.
DRA102	The Use of Geographic Information Systems to Indicate Land Suitability	To identify the conceptual models for feeding into geographic information systems in order to indicate suitability of land for different purposes including pressure on countryside for renewable energy.	1990/91	To be let.
DRA103	Pesticides in the Countryside	To utilise opportunities in the set aside programme to study wildlife aspects of pesticide application.	1990/92	To be let.
DRA104	Soil Protection Principals -- Phase II	To define roles of soils in long term monitoring and surveillance of benchmark soils, environmental quality, climate change, changing land use and industrial and urban soil trends.	1990/92	To be let.
DRA105	Somerset Levels -- Reversion of Swards	To utilise experimental areas of previous 5 year programme of fertiliser application in assembling the rate of habitat re-establishment.	1990/93	To be let.
DRA106	Upland Management	To extend practical projects on effects of wilderness, heather, soils and the need for grant structures. (Moorland management, Exmoor, Dartmoor, North York Moors.)	1990/93	To be let.

Databases 1990/91

The DOE holds a large number of databases, many of which are geographically referenced and provide information on a wide variety of policy areas. Those which are publicly available are deposited at the Rural Areas Database.

Research Publications 1987/90

Environmental Education and Training Industry (1988), available from the Council for Environmental Education, School of Education, University of Reading, London Road, Reading RG1 5AQ.

An Assessment of Environmental Education Techniques (1987), available from the Council for Environmental Education as above.

Dual Use of Sports Facilities (1987) by Coopers and Lybrand, contact SARD, Department of the Environment, Room P3/177, 2 Marsham Street, London SW1P 3PY.

'Reclamation: Colliery Spoil' Jobling J in *Advances in Practical Arboriculture* ed Patch D, HMSO (1987), (Forestry Commission Bulletin 65).

Evaluation of Derelict Land Grant Scheme (1987), DOE, HMSO.

Stoke-on-Trent National Garden Festival Visitor Survey Field Report (1987), NOP Market Research Ltd.

Bush Farm, Upminster, Essex Final Report (Main Report) 1982-1987 (1987), Ready Mix Concrete (UK) Ltd.

Developing the Rural Economy (1988), available from ECOTEC Research and Consulting Ltd, Priory House, 18 Steelhouse Lane, Birmingham B4 6BJ.

Control of Football Crowd Behaviour (1988), by Leicester University, contact SARD, Dept of the Environment, Room P9/177, 2 Marsham Street, London SW1P 3PY.

Causes of Increased Deer Mortality in Royal Parks (1988), contact Mr Baxter-Brown, Richmond Park, Richmond-upon-Thames, Surrey, TW10 5HS.

Sediment Pollutant Interactions in Estuaries: a Literature Review (1988), available from Plymouth Marine Laboratories, Prospect Place, West Hoe, Plymouth PL1 2PB.

Effects of the Great Storm — Report of a Technical Co-ordination Committee and the Government's Response (1988), DOE, MAFF, FC (HMSO).

Monitoring Landscape Change: October 1987 Storm Damage Assessment (1988), available from Hunting Technical Services Ltd.

Developing Sport and Leisure. Good Practice in Urban Regeneration (1989), DOE, HMSO, contact SARD, Department of the Environment, Room P9/177, 2 Marsham Street, London SW1P 3PY.

Land Use Change Statistics Research Project (1989), published by Laurence Gould Associates Ltd in association with Clyde Surveys Ltd, available from Laurence Gould Associates Ltd (C Mathias) £16.25.

Developing Sport and Leisure—Good Practice in Urban Regeneration Series (1989), DOE HMSO Price £12.95.

Low Level Restoration of Sand and Gravel Workings to Agriculture (1989), DOE HMSO.

Mersey South Bank Studies (1989), Ward Ashcroft and Parkman and Cass Associates.

Tourism in the Inner City: an Evaluation of the Impact of Grant Assisted Tourism Projects (1990), DOE HMSO, price £15.50.

Mapping Bracken in England and Wales from Satellite Imagery: A Feasibility Study (1989), available from National Remote Sensing Centre, Royal Aircraft Establishment, Farnborough, Hants GU14 6TD.

The Use of Satellite for Mapping and Monitoring Heather (1989), available from National Remote Sensing Centre, Royal Aircraft Establishment, Farnborough, Hants GU14 6TD.

Study and Monitoring of Surface Mineral Workings (1989), available from National Remote Sensing Centre, Royal Aircraft Establishment, Farnborough, Hants GU14 6TD.

A Statistical and Graphical Examination of Monitoring Landscape Change Data (1989), available from University of Bristol, Department of Geography, University Road, Bristol BS8 1SS.

Wash Birds and Invertebrates (1989), available from Institute of Terrestrial Ecology, Monks Wood Research Station, Abbots Ripton, Huntingdon PE17 2LS.

An Assessment of the Principles of Soil Protection in the UK (1989), available from Institute of Terrestrial Ecology, Merlwood Research Station, Grange-over-Sands, Cumbria, LA11 6JU.

Protected Trees—A Guide to Tree Preservation Orders (1989), leaflet, available from Publication Unit, Department of the Environment, Victoria Road, South Ruislip.

A number of Forestry Commission Arboricultural leaflets and research notes have been produced with financial support from DOE. Annual catalogue of publications available from Publications, Forestry Research Station, Alice Holt Lodge, Farnham, Surrey, GU10 4LH.

Contact for Enquiries:

DRA—F Blakeway, Department of the Environment, Room 925, Tollgate House, Houlton Street, Bristol BS2 9DJ (0272-218871).

DPS—A Konrath, Department of the Environment, Room C16/14, 2 Marsham Street, London SW1P 3EB (071-276-3953).

WT—S Lewis, Department of the Environment, Room A437, Romney House, 42 Marsham Street, London SW1P 3PY (071-276-8694).

DEPARTMENT OF THE ENVIRONMENT FOR NORTHERN IRELAND

Introduction

The objective of the Countryside and Wildlife Branch of DOE (NI) is to protect and enhance the quality of the countryside, to conserve wildlife and to promote their enjoyment. The Department has a continuing requirement for research to underpin its statutory obligations for nature and countryside conservation. No major changes are likely to impact on research undertaken during the period of the register.

Countryside and Wildlife Branch is the Government body responsible for both nature and countryside conservation in Northern Ireland. The research programme is primarily designed to provide information required for the statutory duties detailed in the Nature Conservation and Amenity Lands (NI) Order 1985, the Wildlife (NI) Order 1985, the Access to the Countryside (NI) Order 1983. These include site protection through the declaration of Areas of Special Scientific Interest (ASSIs) and Nature Reserves and the designation of Areas of Outstanding Natural Beauty (AONBs). In addition the Branch provides advice to other Government Departments including local authorities and is responsible for local implementation of international directives and conventions designed to protect the natural environment. The research programme is largely one of assessing landscape features, wildlife habitats and use of the countryside together with reviews of existing information. Some more detailed studies involving monitoring and prediction are currently undertaken and these are likely to increase in the near future.

Research Programme 1990/91

	<i>Project Title</i>	<i>Summary of Objectives</i>	<i>Timescale</i>	<i>Comments</i>
Recently Completed Research				
DOE(NI)1	Industrial Archaeology in Antrim Coast and Glens and Causeway Coast AONBs	To survey industrial archaeological sites to provide information which can be used to develop AONB management policies and promote interest in the sites.	1989/90	F Hammond.
Continuous/Annual Research				
DOE(NI)2	Benthic Fauna Monitoring of Inner Belfast Lough ASSI	To monitor the inter-tidal benthic fauna with particular reference to its use by wintering waders.	1989 start	Queen's University, Belfast, are currently establishing a monitoring programme.
DOE(NI)3	Habitat Surveys for ASSI Declaration	To survey habitats by region to identify sites meriting Area of Special Scientific Interest declaration status or other forms to protection.	Continuous	In-house. Peatlands and woodlands are currently being undertaken.
Current Research				
DOE(NI)4	Northern Ireland Lake Survey	To survey the botanical interest and physical and chemical characteristics of lakes between 1 and 100 ha in size, to produce a classification of lake types and identify sites of nature conservation interest.	1988/91	Queen's University, Belfast.
DOE(NI)5	Management Study of Strangford Lough	To collate existing information to develop a management strategy for Strangford Lough with particular reference to the proposed Marine Nature Reserve.	1989/90	Queen's University, Belfast.
DOE(NI)6	Landscape Ecology Survey of Fermanagh	To survey the ecological and landscape characteristics of Fermanagh District to produce a database and summaries to aid the DOE (NI)'s countryside conservation policies.	1989/91	University of Ulster. Follows on from similar surveys undertaken in AONBs.

DOE(NI)7	Woodland Survey of Fermanagh	To survey all woodlands outside state ownership.	1989/91	Environmental Advisory Unit, Liverpool University. Follows on from similar surveys undertaken in AONBs.
DOE(NI)8	Monitoring Sand Removal in Antrim Coast and Glens and Causeway Coast AONBs	To provide quantitative information on sand removal, monitor its impact and investigate local attitudes to sand removal.	1989/91	University of Ulster. Follows on from a coastal erosion survey undertaken in 1987/88.
DOE(NI)9	Effects of dredging on the Benthos of Strangford Lough	To assess the extent and effects of dredging within Strangford Lough.	1990	In-house.

Committed New Research

DOE(NI)10	Vertebrate Red Data Book for Ireland	To collate information on rare, vulnerable or endangered Irish vertebrate species.	1990/91	A Wilde.
DOE(NI)11	Environmental Effects of Blanket Peat Exploitation	To survey and quantify the rate of extraction, review the likely environmental effects and identify the socio-economic factors affecting blanket peat extraction in Northern Ireland.	1990/91	Queen's University, Belfast, with the review being undertaken by the Terrestrial and Freshwater Sciences Directorate (NERC).
DOE(NI)12	Conservation of Diatomite	To provide information on the extent and nature of diatomite deposits around the Lower Bann and produce conservation recommendations.	1990	University of Ulster.
DOE(NI)13	Habitat and Invertebrate Survey of Brackagh Moss NNR	To undertake a detailed survey of the habitats and their associated invertebrate fauna and analyse the results with particular reference to site management.	1990/91	I Rippey.
DOE(NI)14	Buildings in the Fermanagh Countryside	To assess the impact of buildings on the landscape in Fermanagh District.	1990	Cobham Resources Consultants.

Tentative New Proposals

DOE(NI)15	Countryside Recreation Household Survey	A survey of the recreation use made by the public of the Northern Ireland countryside.	1990/91	Work jointly sponsored by Northern Ireland Tourist Board and Sports Council for Northern Ireland.
DOE(NI)16	Earth Science Conservation in Northern Ireland	To select and describe those sites and localities of earth science significance in Northern Ireland which should be considered by the DOE(NI) for some form of conservation designations.	1990 start	

Databases 1990/91

<i>Title/Description</i>	<i>Timescale/Access</i>	<i>Geographical Features</i>	<i>Recreational Features</i>
Landscape Ecology Surveys containing information on land use and landscape features for 25 ha samples within representative 1 km squares.	1986/1990. By arrangement.	All sites grid referenced. Mourne, Antrim Coast and Glens and Causeway Coast AONBs, Sperrins/N Derry. To include Fermanagh in 1990.	Not included.

Woodland surveys containing a complete inventory of non-state woodlands in the areas defined.

1986/1990. By arrangement.

All sites grid referenced. Mourne, Antrim Coast and Glens and Causeway Coast AONBs, South Armagh, Sperrins/N Derry. To include Fermanagh in 1990.

Not included.

Research Publications 1989/90

None published in 1989/90. Unpublished reports on previous research projects are held by the Branch.

Contact for Enquiries: A Stott, DOE for Northern Ireland, Countryside and Wildlife Branch, Calvert House, 23 Castle Place, Belfast BT1 1FU (0232-230560).

ECONOMIC AND SOCIAL RESEARCH COUNCIL

Introduction

The Economic and Social Research Council's primary objective is to fund research that is scientifically excellent by international standards.

The Council was established in 1965 by Royal Charter and this year is celebrating its twenty fifth anniversary. It supports training in the social sciences in British Universities, Polytechnics and Research Institutes. The Council's activities cover a range of studies concerned with economic life and social behaviour. ESRC is particularly concerned that the research it supports should produce published accounts of findings, accessible to those concerned with policy and decision making, as well as to the academic community.

Two modes of funding operate within the Council: directive, through the Research Development Groups, and responsive, through the Research Grants Board. Research projects relevant to the CRRAG are supported by the Industry, Economy and Environment Research Development Group and the Research Grants Board; these are listed below.

Research Programme 1990/91

Industry, Economy and Environment Research Development Group

Joint Agriculture and Environment Programme

The JAEP is a collaborative venture between the ESRC, NERC and AFRC. The ESRC's element aims to assess the nature and extent of multiple job-holding, or pluriactivity, amongst the current farming population and to predict the rate and nature of growth or pluriactivity in different farming areas based on a 'constraints' and 'options' model. The following projects form part of this programme.

	<i>University/Institute</i>	<i>Project Title and Summary of objectives</i>	<i>Timescale</i>	<i>Contact Name</i>
ESRC1	Edinburgh	Pluriactivity in the Agricultural Sector. To clarify the extent and types of pluriactivity currently existing in Scotland.	1990/93	J Dent
ESRC2	University College London	Changing Farm Economies: Technical Change and Environmental Regulation. To improve understanding of the ecological and regulatory problems arising from the strategies adopted by farm businesses in a period of rapid technical change.	1989/92	R Munton
ESRC3	Newcastle upon Tyne	Micro-level Land Use/Environmental Relationships. To examine ecological change and the environmental effects of developments in farm and other land use practice and structure at the field and field boundary level.	1990/96	D Harvey
ESRC4	Policy Research Institute Belfast	Changing Farm Economics and their Environmental Relationships in Northern Ireland. To examine changes in rural land use and labour and the constraints on rural land use/labour decision makers.	1989/92	P Stringer
ESRC5	Arkelta Trust Ltd	Farm Structures and Household Pluriactivity in Europe. To describe and understand 'survival strategies' adopted by farm household facing declining incomes throughout Europe.	1989/92	J Bryden

ESRC6	University College Wales, Aberystwyth	Pluriactivity in Less Favoured Farming Regions in Wales. To collate new information on the dynamic character of pluriactive households.	1989/92	J Aitchison
ESRC7	Aberdeen	Land Allocation to Forestry on Lowland Farms. To develop a model to stimulate the decision making process leading to afforestation on the farm.	1990/92	H Miller
ESRC8	East Anglia	Farm Household Response to Extensification Proposals. To assess what factor will influence farmers response to EC extensification proposals, and the implications for habitat and wildlife.	1989/91	J R Tarrant

ESRC/NCC Collaborative Programme

This programme is jointly funded by the ESRC and Nature Conservancy Council and is examining how nature conservation programmes can contribute to the economic and social well being of rural areas; how such programmes can be designed to meet society's needs; how activities that directly affect the nature conservation resource in rural areas can be influenced in ways that take account of the needs of the resource; and how perceptions and attitudes towards the resource are changing. The research focuses on three linked themes: the interactions between nature conservation and local economies; the influence of land managers' practice towards nature conservation; and the influences on perceptions and attitudes to nature conservation.

ESRC9	Aberdeen	The Economic Contribution and Potential of Nature Conservation. To examine the current and potential economic contribution of nature conservation at site and area levels by surveys.	1989/92	J R Crabtree
ESRC10	Cambridge	Nature Conservation Policies in the Wider Countryside in South East England. To identify means of enhancing nature conservation by improving methods of control and extending nature conservation in the wider countryside.	1989/91	W M Adams
ESRC11	Wye College	Conservation Impact of Ageing in Farm Populations. To ascertain the conservation impact and policy implications of ageing within the farming community in England and Wales.	1989/91	C A Potter
ESRC12	Bristol	Planning Gain: a Strategy for Conservation. To produce a coherent conceptual framework through which to examine the specifics of the rural development process.	1990/92	S Whatmore
ESRC13	University College London	An Evaluation of the Impact and Effectiveness of News about Nature Conservation. To improve understanding of how the public interpret and act upon information relating to nature conservation.	1990/91	J Burgess
ESRC14	Lancaster	Nature Conservation: a New Cultural and Philosophical Approach. To deepen the understanding of factors underlying current public concern for nature conservation, in order to improve the effectiveness of NCC communication.	1989/90	J R Wakeford

Countryside Change

Funding has been concentrated at the two centres listed below. The programme examines the social and economic implications of changes in land use, paying particular attention to changes to the farm and farm household; the case for increased forestry investment; and the greater emphasis placed on nature conservation at a time when there is pressure to take significant proportions of agricultural land out of production. Also examined is the role of the farming advice sector, the broader influences of the planning system and rural development policy.

ESRC15	University College London	Countryside Change Centre. To provide a detailed empirical analysis of three lowland areas experiencing divergent pressures, focusing specifically on the agencies controlling land use and development.	1988/93	R Munton
ESRC16	Newcastle upon Tyne	Countryside Change Centre, Northern Region. To establish a conceptual framework of countryside change, forestry, conservation, recreation and amenity.	1988/93	D Harvey
ESRC17	University College London	Countryside Change: Dissemination Programme. To co-ordinate a dissemination programme for the two countryside change centres.	1989/93	P Lowe

Research Grants Board

Current Research

ESRC18	Edinburgh	Outdoor Recreation and Conservation Conflicts and their Resolution. To examine models of conflict/ co-operation in Britain, the USA and Netherlands.	1990/92	R Sidaway
ESRC19	East Anglia	Innovative Countryside Interpretation. To produce an interpretive programme for ESAs of the Yorkshire Dales National Park.	1987/90	T O'Riordan
ESRC20	University College Wales, St Davids	Local Economic Impacts of the Middle Class in Rural Areas. To identify middle class factions and economic impacts through interlinked case studies.	1987/90	P Cloke

New Research

ESRC21	University College Wales, St Davids	Rural Lifestyle in England. To survey socio-economic changes on the lifestyle of households in rural England. Contract currently under negotiation. Co-funding anticipated from RDC.	1990/92	P Cloke
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Databases 1990/91

For information relating to rural data sets contact the ESRC Data Archive, University of Essex.

Contact for Enquiries:

ESRC central office contact: Michael Williams, Industry, Economy and Environment, ESRC, Cherry Orchard East, Kembrey Park, Swindon, SN2 6UQ (0793-513838).

For details of individual projects contact the University or Institute directly.

FORESTRY COMMISSION

Introduction

The Forestry Commission promotes good forestry — to produce timber, to provide for recreation and to conserve the natural and cultural heritage of the forest — through managing the national forest, through research and by grant aiding a substantial private sector.

The Research Division of the Forestry Commission has its main base at Alice Holt in Surrey. The Research Programme managed by that Division is extensive and covers biological research across the whole range of forestry matters. The Division includes a Wildlife and Conservation Research Branch, a selection of whose projects have been included in the following list. The Forestry Commission's programme is reviewed by the Forestry Research Co-ordinating Committee which includes representatives from the Commission, the relevant research councils, universities and other government departments. Socio-economic research is undertaken by HQ Divisions. The following projects have been selected because of their relevance to the main stream aims of CRRAG.

Research Programme 1990/91

	<i>Project Title</i>	<i>Summary of Objectives</i>	<i>Timescale</i>	<i>Comments</i>
Recently Completed Research				
Recreation				
FC1	Scottish Leisure Day Trip Survey	To survey day trips (of 3 hours or more).	1987/89	Co-sponsored with STB, CCS, Scottish Museums Council. Contracted to System Three (Scotland).
FC2	Forest Day Trip Survey	To survey day trips to woodland and forest in England and Wales.	1987/89	Contracted to MaS Research Associates.
FC3	Toilets in the Forests	To develop a range of designs compatible with the range of forest and woodland settings.	1990	Consultants' report received and under consideration.
FC4	Public Preferences for and Attitudes to the Appearance of Forests and Woodlands in the Landscape	To study preferences in relation to the amenity and recreation values of woodland and forest.	1989/90	Co-sponsored with CC and CCS. Contract let to St Andrews University. Fieldwork complete and final report being considered.
Nature Conservation				
FC5	Roe Deer Ecology	Analysis of roe deer populations, ecology and management.	On-going	In-house with contract. Management guidelines to be published as FC Bulletin by HMSO in 1990.
FC6	Black Grouse Management in Welsh Forests	To identify reasons for decline in black grouse population in Wales. Further research using radio tracking and practical application to forest management, eg, respacing, maintenance of heather and bog vegetation.	1985/89	Final report received 1990. Management guidelines in preparation as FC Bulletin.
FC7	Habitat Protection of Upland Wading Birds	Research on prediction of wader distribution in uplands from satellite vegetation photos.	On-going	Contract with RSPB. Report due.
FC8	Red Squirrel Habitat Requirements	To review existing research to identify further work required to clarify habitat issues.	1986/89	Contract with University College London. Report received in 1990 and being considered.
FC9	The Ecology of an Upland Forest	To study the ecology of an upland forest, its value and wildlife habitat requirements.	1987/90	FC/NCC funded, contractor ITE. Report under consideration.

FC10	The Botany of Breckland Forest	A study of the floral development under pine stands in Thetford.	1987/90	University of East Anglia PhD research, FC funded.
FC11	Ecology of Seed Banks	To study the extent to which flora associated with semi-natural woodland can survive as seed throughout a rotation of a plantation crop.	1988/89	Contract with Wye College, London.
FC12	Pheasants in Broadleaved Forests	To show importance of small woods to pheasants, importance of under storey shrubs and shrubby edges where pheasants spend much of their time. Management for pheasants also benefits plants and insects, especially butterflies.	1988/89	Joint project with Game Conservancy. Report received, scientific papers in preparation.

Continuous/Annual Research

Recreation

FC13	Forest Visitor Survey	To develop a modular forest recreation survey package to enable individual forests to conduct visitor surveys without tears.		In-house.
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Landscape

FC14	Use of Computer Techniques in Forest Design	To develop computer techniques for forest design in Great Britain.	On-going	In-house with advice from Turnbull and Jeffries Partnership.
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Nature Conservation

FC15	Enhancement of Lowland Forest Ridesides and Roadsides	To study the enhancement of ridesides and roadsides to benefit wild plants and butterflies and derive recommendations for shaping and designing these areas to best effect.	On-going	In-house insect monitoring continuing.
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Current Research

Recreation

FC16	Collaborative Largescale Leisure Survey	To consider the feasibility of devising a collaborative largescale leisure survey for countryside recreation in Great Britain. Co-sponsored with CRRAG agencies.	1989/90	Let. Consultant's report due 1990.
FC17	Great Britain ... Great Forest	The programme includes surveys for forest visitors and communities to find out what people want and how by working together such needs can be met.		In-house.

Nature Conservation

FC18	Nightjars	To study the habitat requirements of a declining heathland species in a lowland pine forest.	1988/91	Joint with RSPB. Interim reports received in 1989.
FC19	The Effect of Conifer/Broadleaved Mixtures	To study the ecological effects of conifer/broadleaved mixtures grown on broadleaved sites.	1988/90	Contract with Wye College, London.
FC20	Ecology of Tawny Owls in Upland Forests	To investigate distribution and productivity of tawny owls in spruce forests in relation to food supply, habitat quality and climate.	1982/91	In-house.
FC21	Goshawk Ecology and Management	To investigate the productivity, habitat requirements and management of goshawks in conifer forests.	On-going	Management guidelines published as FC Bulletin by HMSO.

FC22	Ecology of Capercaillie	To study the extent to which these birds are able to use plantation forests and how the quality of these can be improved for capercaillie.	1989/92	Contract with ITE, Brathens. Interim report received 1990.
FC23	Sika Deer Ecology	Study to produce management recommendations.	On-going	In-house.
FC24	Fallow Deer Ecology	To study ecology and management.	1990/93	PhD project.
FC25	Extended Rotation of Forest Crops	To study the bird/habitat relationships in spruce forests in the northern uplands of Britain with the aim of enhancing them as a habitat for birds.	1990/92	Contract to be let.
FC26	Grazing Effects	To look at domestic grazing as a habitat management tool.		In-house, FC Strathroy.
FC27	Broadleaves in Upland Forests	To study the likely effects of broadleaves on fauna and flora in upland forests.		Contract with Lancaster University.
FC28	Forest Nesting Merlins	To study the population status of merlins in relation to the distribution of forest in Wales.	1990/92	Contract with RSPB.
FC29	Vegetation Management in Upland Forests	To study vegetation structure and species distribution in conifer retentions in order to develop systems with greater proportion of native flora.	On-going	In-house, Northern Research Station.
FC30	Conservation of Red Squirrels	To further develop monitoring systems in areas of low red squirrel population.	On-going	In-house, Research Division, Alice Holt.
Land Use				
FC31	Afforestation Consultation in Scotland	To determine the effectiveness of the Woodland Grant Scheme consultation procedures in Scotland with particular reference to local planning authorities.	1989/90	Contracted to Aberdeen University, Department of Geography, published by FC.
FC32	Land Owners Attitudes to the Woodland Grant Scheme	To provide an informed view of interest in the Woodland Grant Scheme.	1990	Let.

Databases 1990/91

<i>Title/Description</i>	<i>Timescale/Access</i>	<i>Geographical Features</i>	<i>Recreational Features</i>
Forestry Commission Subcompartment Database. Contains crop and site details as land (eg SSSIs, Ancient Monuments, AONBs).	Annually updated. Generally limited to FC staff as mainly related to timber production.	Each compartment has a reference number but grid reference centroids are also included.	FC picnic areas; designated car parks.

Research Publications 1989/90

Report on forest research, for the year ended March 1989 by Forestry Commission, published by HMSO, London ISBN0 11 710295 X.

Contact for Research Enquiries: Richard Broadhurst, Forestry Commission, 231 Corstorphine Road, Edinburgh EH12 7AT (031-334-0303).

Contact for Database Enquiries: Database Manager, Forest Service Branch, Alice Holt Lodge, Near Farnham, Surrey GU10 4LH.

MINISTRY OF AGRICULTURE, FISHERIES AND FOOD

Introduction

One of the aims of MAFF is to seek to achieve a reasonable balance between the interests of agriculture, the economic and social interests of rural areas, the conservation of the countryside and the promotion of its enjoyment by the public.

Projects were chosen for inclusion in the CRRAG Research Register if the research objectives clearly met any of the following criteria, which identify projects with a bearing on leisure and recreation activities.

1. Monitoring socio-economic and environmental impacts of MAFF policy and grant-schemes.
2. Predicting the possible impact of new policies on the environment and land use change.
3. Assessing the effects of agricultural inputs and techniques on flora and fauna.
4. Establishing the most suitable management techniques to enhance and conserve the countryside and natural resources.

In addition to those projects listed, research work is undertaken in areas such as climatic change, impact of pollution and pesticides on agriculture and land management techniques. Although many of these projects have a bearing upon the environment they are principally agronomic in their objectives and were, therefore, not included.

Research Programme 1990/91

	<i>Project Title</i>	<i>Summary of Objectives</i>	<i>Timescale</i>	<i>Comments</i>
Recently Completed Research				
MAFF1	Development of Economic Pastoral/ Agroforestry Systems	To investigate the potential for developing pastoral/forestry systems under upland conditions which are visually attractive, economically viable and which lead to an increase in flora/fauna diversity.	To 1990	Undertaken by Welsh Plant Breeding Station. Project to be extended with new objectives.
MAFF2	Countryside Implications of Possible Changes in CAP	To model and assess the impact on the countryside and agriculture of changes in both CAP and land use policy.		Undertaken by Centre for Agricultural Strategy, University of Reading. Jointly funded by DOE, NCC and CC.
MAFF3	Analysis of Common Bird Census Farmland Habitat Data	To investigate the usefulness of habitat data collected during the Common Bird Census, for analysing changes in bird populations.	Completed April 1990	Undertaken by British Trust for Ornithology. This project has been extended but the objectives are now principally agronomic.
Current Research				
MAFF4	Management in Relation to Species Diversity in Herb Rich Permanent Grassland	To study the effect of long term application of low levels of nitrogen fertiliser on species diversity and the reversion of swards following high nitrogen applications; and to devise techniques for accelerating increases in botanical diversity in species poor swards.	To 1993	Co-sponsored with DOE and NCC. Extension of 'Extent of Nitrogen Fertiliser on Natural Grassland on West Sedgemoor'.
MAFF5	Impact of Alternative Agricultural Policies on Scenic Areas in Scotland	To provide data on two scenic areas, including Breadalbane ESA, to evaluate the likely impact of alternative agricultural policies on farms, rural economics and the environment.	1987/90	Undertaken by Edinburgh School of Agriculture.
MAFF6	Low Level Socio-economic Appraisal of ESAs in England	To undertake a socio-economic evaluation of ESAs in England.	1989/90	Undertaken by Lawrence Gould Associates.
MAFF7	Socio-economic Impact of ESAs	To monitor and evaluate the socio-economic impact of the designation of North Peak and Suffolk River Valleys ESAs.	1988/91	Undertaken by Manchester University.

MAFF8	Socio-economic Impact of ESA	To monitor and evaluate the socio-economic impact of the designation of the Pennine Dales ESA.	1988/91	Undertaken by Newcastle University.
MAFF9	Appraisal of the Farm Woodland Scheme	To undertake a socio-economic appraisal of the Farm Woodland Scheme.	1988/90	Undertaken by Wye College.
MAFF10	Evaluation of Set Aside in England and Wales	To undertake a socio-economic appraisal of the Set Aside Scheme.	1988/90	Undertaken by Reading University.
MAFF11	Economic Evaluation of Salmon Fisheries in Great Britain	To establish a methodology and provide estimates of the direct and indirect effects of salmon fisheries to the nation, covering both production and recreational aspects.	To Autumn 1990	Undertaken by Portsmouth Polytechnic.
MAFF12	Land Restoration and Aftercare	To investigate the feasibility of restoring land to a high quality under various conditions and develop guidelines on good restoration and aftercare.	To 1992	Undertaken by ADAS.
MAFF13	Erosion Monitoring and Control	To determine the extent of soil erosion problems and develop cultivation techniques aimed at minimising erosion.	To 1992	Undertaken by ADAS.
MAFF14	Project Silvanus	To establish management practices in neglected farm woodlands in Devon and Cornwall.	On-going	Co-sponsored with CC, DOE, RDC, FC and NCC.
MAFF15	The Establishment and Maintenance of Farm Woodlands	A number of experiments have been set up to gain physical and financial information on the establishment and maintenance of small farm woodlands—concentrating on broadleaved species.	On-going	Work collaborative between ADAS and FC.
MAFF16	The Effect of Farm Woodlands on Local Hydrology and Water Quality	A number of experiments are underway to assess the effects of farm woodlands on local hydrology and water quality.		Undertaken by ADAS.
MAFF17	Management of Grassland Field Boundaries	To monitor the effects of agricultural practices on hedgerow structure, composition and wildlife diversity so as to formulate strategies for the management of grassland field boundaries.	To 1992	Undertaken by Welsh Plant Breeding Station.
MAFF18	Grassland in the Hills and Uplands and in ESAs	Includes the development of environmentally benign methods of managing grassland in the hills and uplands consistent with healthy agriculture. To develop establishment and management systems for grasslands in the ESAs.	To 1992	Undertaken by ADAS.
MAFF19	Upland Resource Use: Grassland Management, Animal Production and Land Use Options for Less Favoured Areas	Objectives include an investigation of alternative land use options such as agroforestry and the effects of agricultural practices on the environment.	On-going	Undertaken by ADAS.
MAFF20	The Effect of Stocking Rate and Grazing Pressure on Heather, other Flora and Fauna in the Uplands	A number of experiments have been set up to define management practices which will ensure healthy regeneration of heather and other useful flora, and enhance fauna diversity of upland habitats under a range of sheep grazing conditions.	On-going	Undertaken by ADAS.

MAFF21	Environmental Assessment of ESAs	An in-house examination of the environmental implications for botanical and land use change resulting from the designation of 10 ESAs in England and Wales.	To 1991	Undertaken by ADAS.
MAFF22	The Effects of Agricultural Practices on Wild Animals and Plants	A number of experiments are underway to examine the effects of agriculture on flora and fauna, develop techniques to reduce these effects and to predict the possible effects of future changes in agricultural practices.	On-going	Undertaken by ADAS.
MAFF23	National Census of Small Mammals in Hedgerows	To investigate the effects of hedge structure and composition and adjacent land use on small mammal populations in hedgerows. To quantify species cycles of abundance and study the ecology of small mammals in hedgerows.	On-going	Experiment undertaken as part of 'The Effects of Agricultural Practices on Wild Animals and Plants'.
MAFF24	Integrated Moorland Management Programme, North Yorkshire Moors	To study the effects of larger scale bracken control on hill sheep production, grouse production, conservation and landscape.	To 1991	Experiment undertaken as part of 'The Effects of Agricultural Practices on Wild Animals and Plants'.
MAFF25	Management of Ditches in Arable Fenland for Drainage and Wildlife	To investigate ways of maintaining ditches in order to maximise the benefits to wildlife without impeding the drainage function.	To 1994	Experiment undertaken as part of 'The Effects of Agricultural Practices on Wild Animals and Plants'.
MAFF26	Effects of Different Field Boundary Strips on Environmental and Agronomic Aspects of the Field Margin of a Cereal Crop	To examine the effect of barrier strips around the edge of cereal fields on floral and faunal diversity in the hedge and field edge.	To 1990	Experiment undertaken as part of 'The Effects of Agricultural Practices on Wild Animals and Plants'.
MAFF27	New Farm Wood Rides – Wildflowers and Small Mammals	To investigate techniques of establishing species rich floras within rides and investigate management techniques, including cutting regimes, that create and maintain habitats suitable for wildlife, especially small mammals and butterflies.	On-going	Experiment undertaken as part of 'The Effects of Agricultural Practices on Wild Animals and Plants'.
MAFF28	Conservation Benefits from Constructing Berm on Improved Drainage Channels in Peat	To assess the value of a berm constructed on a deepened pumped ditch as a wildlife habitat.	Completion expected mid 1990	Experiment undertaken as part of 'The Effects of Agricultural Practices on Wild Animals and Plants'.
MAFF29	Straw Disposal	A number of experiments are being undertaken to develop viable long term alternatives to the environmentally undesirable practice of straw burning. These assess agronomic and economic impacts of new methods and changes in cultivation techniques.	On-going	Experiments are being undertaken by both ADAS and the Agricultural and Food Research Council.
MAFF30	SCARAB and TALISMAN	These trials at 4 experimental husbandry farms will contribute to our knowledge of the ecological and economic impact of lower inputs of agrochemicals in arable crop husbandry.	On-going	Undertaken by ADAS.

Committed New Research

MAFF31	Modelling Agriculture and other Rural Land Uses	To develop a model to analyse the effects of policy changes that are significant for agriculture, and to provide results at a national and regional level for 4 policy scenarios.	1990/91	Undertaken by Centre for Agricultural Strategy, University of Reading.
MAFF32	Establishment and Management of Herb Rich Grassland Habitats on De-intensified Areas	To create conditions for the successful establishment of desired grassland species either by sowing or plant introductions with the eventual aim of producing management guidelines and a prediction of agricultural output.	To 1992	Undertaken by AFRC.
MAFF33	Ecology of Reversion of Sown Swards	To forecast the speed and direction of responses to season and management of sown and indigenous species as a consequence of lowering inputs to grassland.	To 1992	Undertaken by AFRC.
MAFF34	Impact and Control of Undesirable Species, Including Bracken	Includes a strategic approach to preventing the coalescing of bracken patches, coupled with appropriate post-control regimes based on overseeding and the regulation of grazing pressure.	To 1992	Undertaken by AFRC.
MAFF35	Species Diversity of Native Acid Grassland	To determine how defoliation affects the balance of dominant and minor species; encouragement of new species germination and the introduction of alien acid tolerant species.	To 1992	Undertaken by AFRC.
MAFF36	Field Margin and Amenity Grassland	To measure the effect of agricultural practices on the flora of hedgerow bottoms; to determine suitable measures for creating and managing herb rich field margins and to investigate the potential of shrubs as wildlife corridors.	To 1993	Undertaken by AFRC.
MAFF37	Identification/ Interpretation of SCARAB Invertebrate Data	To confirm the results obtained in the Boxworth project on long term invertebrate population trends and pest/natural enemy interactions in other arable rotations and at sites differing with respect to climate and soil type.	To 1993	Undertaken by Southampton University.

Tentative New Proposals

MAFF38	The Management of Farmland for Lapwings and other Grassland Birds	To assess the practicability of managing lowland agricultural grassland (including set aside land) for lapwings and other meadow birds, during their non-breeding seasons (July to March).	1990	Experiment undertaken as part of 'The Effects of Agricultural Practices on Wild Animals and Plants'.
MAFF39	Habitat Fragmentation Effects on Wildlife in Relation to Set Aside and Farm Woodlands Policy	To assess the implications of current research on habitat fragmentation effects on wildlife in relation to set aside and farm woodlands policy, and to describe any future lines of research needed in this area, particularly in relation to pest species.	May 1990	Experiment undertaken as part of 'The Effects of Agricultural Practices on Wild Animals and Plants'.
MAFF40	Management of Field Boundaries for Agriculture, Wildlife and Landscape	To investigate means of maximising the benefits of field boundaries for different end points, especially in terms of wildlife and landscape while retaining the agricultural function.		Experiment undertaken as part of 'The Effects of Agricultural Practices on Wild Animals and Plants'.

MAFF41	Appraisal of Nitrate Sensitive Areas	To undertake a socio-economic appraisal of the Nitrate Sensitive Areas.	1990/91 start
MAFF42	Appraisal of Extensification Scheme	To undertake a socio-economic appraisal of all options of the Extensification Scheme.	1990/91 start
MAFF43	Appraisal of the Farm and Conservation Grant Scheme	To undertake a socio-economic appraisal of some elements of the Farm and Conservation Grant Scheme.	1990/91 start
MAFF44	Appraisal of Farm Diversification Grant Scheme	To undertake a socio-economic appraisal of the Farm Diversification Grant Scheme.	Late 1990/91 or early 1991/92 start

Databases 1990/91

<i>Title/Description</i>	<i>Timescale/Access</i>	<i>Geographical Features</i>	<i>Recreational Features</i>
Land Information System (LandIS). A data retrieval system which enables user to access information from the soil survey national map, the national soil inventory, agroclimatic databases and derived information about land potential.	Held at Soil Survey and Land Research Centre, Silsoe College.	All data locationally referenced.	
Register of Government-funded agriculture/environment R & D in the UK 1984/88 (2nd edition).	1984/88.		Some research related to recreation.

Contact for Enquiries: J Slater, MAFF, Room 209, Nobel House, 17 Smith Street, London SW1P 3HX (071-238-5696).

NATIONAL PARK AUTHORITIES

Research Programme 1990/91

	<i>Authority</i>	<i>Project Title and Summary of Objectives</i>	<i>Timescale</i>	<i>Contact name</i>
Recently Completed Research				
NPA1	Dartmoor National Park	Survey of Local Housing Need. To quantify local housing need, explore ways of catering for imminent need and to refine priorities.	1988	P Markham
NPA2	Dartmoor National Park	Archaeological Surveys. To identify and locate sites on land owned by the National Park Authority.	1988	D Griffiths
NPA3	Lake District Special Planning Board	Lake District Visitor Surveys. To provide information on the origin, interests and attitudes of visitors to the Lake District.	1987/88	J Nash
NPA4	North York Moors National Park	Cleveland Way Survey. Usage; seasonality; economic impact of walkers on Cleveland Way.	1989	I Kierle
NPA5	North York Moors National Park	Base Line Survey of Cleveland Way. Physical condition of path and furniture; accommodation availability and demand.	1989	I Kierle
NPA6	North York Moors National Park	Public Transport to the Cleveland Way. Assessment of existing transport provision.	1989	I Kierle
NPA7	Peak Park Joint Planning Board	Bar Brook II Conservation. Excavation, pollen and radio carbon analysis of Bronze Age ceremonial monument.	1989/90	K Smith
NPA8	Peak Park Joint Planning Board	Blackwell Hall Farm Survey. Whole farm landscape survey for historical interpretation.	1989	K Smith
NPA9	Peak Park Joint Planning Board	East View Farm Survey. Whole farm landscape survey for historical interpretation.	1989	K Smith
NPA10	Peak Park Joint Planning Board	Peak District Barrow Survey. To review the condition of all barrows in the Peak District for heritage management purposes.	1988/89	K Smith
NPA11	Peak Park Joint Planning Board	Review of Impact of Recreation on Moorland Wildlife. To review the information available on moorland bird populations and levels of recreational activity on Peak District moors and to develop a methodology for recording levels of recreational activity on moorland.	1987/90	P Phillipson
NPA12	Peak Park Joint Planning Board	Botanical Survey of Ancient Semi-Natural Woodlands. Phase 2 botanical survey of 85% of woodlands on the NCC Ancient Woodland Inventory in the Peak National Park.	1986/88	P Phillipson

NPA13	Peak Park Joint Planning Board	Public Attitude Survey. To gauge views of residents and wider public on future development and priorities within the Peak National Park.	1989	A Dobson
NPA14	Peak Park Joint Planning Board	Survey of People and Dogs on Moors. To provide an extensive count of visitors and dogs to access moorland in the Peak National Park and to provide information on attitudes to keeping dogs on/off leads.	1989	A Dobson
NPA15	Peak Park Joint Planning Board	Pennine Way Management Project. Investigations of techniques for restoring paths on deep peat.	1987/90	W McDermott

Current Research

NPA16	Dartmoor National Park	Survey of Historic Buildings. Collection and collation of data to inform development control and grant aid decisions.	1987 start	D Griffiths
NPA17	Dartmoor National Park	Vegetation Change and Erosion. To monitor vegetation change on land owned by the National Park Authority or land covered by management agreements.	On-going	S Goodfellow
NPA18	Lake District Special Planning Board	Gill Monitoring. To monitor the changes in gill vegetation as a result of recreational pressure.	1990 start	J Harris
NPA19	Lake District Special Planning Board	Lakeshore Monitoring. To monitor changes in an eroded lakeshore at Brockholes during programme of attempted regeneration.	On-going	J Harris
NPA20	Lake District Special Planning Board	Traffic and Parking Surveys. To monitor traffic and parking levels on selected sites to determine characteristics and trends.	1989 start	J Nash
NPA21	North York Moors National Park	Participation in Active Sports. Survey of active sports including membership numbers; trends; catchment areas; seasonality; employment and income generation.	1990	B Breakall
NPA22	North York Moors National Park	Visitor Survey. Visitor numbers; seasonality; patterns of visiting; marketing; economic impact of tourism; visitor attitudes and interests.	1990 start	B Breakall
NPA23	North York Moors National Park	Parked Car Survey. Distribution of vehicles in the National Park.	1990 start	B Breakall
NPA24	North York Moors National Park	Recreational Use of Public Transport. Seasonality; daily/weekly patterns; marketing; visitors motivations and interests.	1990/91	B Breakall
NPA25	North York Moors National Park	Accommodation Demand By Visitors. Occupancy rates; registration; economic viability of accommodation visitor patterns; trends.	1990/91	B Breakall

NPA26	Peak Park Joint Planning Board	Gardoun's Edge Survey. Survey of Bronze Age site for analysis, estate management and interpretation.	1990/91	K Smith
NPA27	Peak Park Joint Planning Board	Roystone Grange I. Excavation of Romano-British building to compare with earlier work and to improve on-site interpretation.	1988/93	K Smith
NPA28	Peak Park Joint Planning Board	Roystone Grange II. Excavation of field boundaries dating from Roman to Post-Medieval periods to improve understanding of landscape developments.	1988/93	K Smith
NPA29	Peak Park Joint Planning Board	Neolithic Flint Characterisation. To investigate characterising flints to a source, to provide data on socio-economic framework of the period.	1990/91	K Smith
NPA30	Peak Park Joint Planning Board	Eaglestone Flat Excavation of a Bronze Age Cremation Cemetery. To increase understanding of Bronze Age activity in uplands.	1989/91	K Smith
NPA31	Peak Park Joint Planning Board	Geojute Trial. To investigate the value of biodegradable jute netting in helping to stabilise and revegetate deep eroded peat.	1989/94	P Phillipson
NPA32	Peak Park Joint Planning Board	Restoration of Vegetation on Eroded Peat. Monitoring vegetation changes and red grouse populations resulting from removal of grazing pressures from sheep.	1983 start	P Phillipson
NPA33	Peak Park Joint Planning Board	Heather Grazing Index. Development of a simple measure/index of levels of grazing on heather (<i>Calluna vulgaris</i>).	1988/90	P Phillipson
NPA34	Peak Park Joint Planning Board	Ecological Monitoring by Indicator Species. To develop a new system of detailed botanical monitoring in grassland plant communities based on indicator species.	1989/90	P Phillipson
NPA35	Peak Park Joint Planning Board	Provision of Biological Database. To develop further Phase 1 habitat maps and species records for the Peak National Park.	On-going	P Phillipson
NPA36	Peak Park Joint Planning Board	Vegetation Hardening. To examine growth responses and vegetation changes to fertilizer application on footpaths on deep peat.	1989 start	W McDermott
NPA37	Peak Park Joint Planning Board	Limestone Dales Management Project. To examine grazing management in limestone dales with a view to reducing scrub and coarse grass invasion.	1989 start	G Challenger
NPA38	Peak Park Joint Planning Board	Survey of Outdoor Recreations. To monitor levels of visitor use through car park counts, footpath counters and active recreation levels at specific sites.	On-going	A Dobson

Provisionally Committed New Research

NPA39	Dartmoor National Park	Recreation Surveys. To re-establish numbers, distribution and activities of visitors with particular reference to the newer and more active kinds of recreation.	1991	A Kohler
NPA40	Dartmoor National Park	Archaeological Surveys. To identify and locate archaeological sites as pockets of enclosed, unimproved land on moorland fringe and in woodland either owned by the National Park Authority or under commercial management.	1990 start	D Griffiths
NPA41	Dartmoor National Park	Review of Decision Making Processes As They Affect National Park Heritage. To improve understanding of the processes at work in the National Park and of the likely effectiveness of alternative courses of action: different methods of controlling bracken; practical methods of restoring/regenerating heather moorland; the impact of low level applications of lime and fertiliser on moorland heather/grass swards; practical methods of restoring eroded moorland.	1990 start	J Weir/S Goodfellow

Tentative New Proposals

NPA42	Peak Park Joint Planning Board	Trampling Studies on a Range of Hill Vegetation Types Over Deep Peat. To investigate the potential for making vegetation more resistant to trampling by physical and chemical means.	? 1991 start	W McDermott
NPA43	Peak Park Joint Planning Board	Impact of Mountain Bikes. To examine the dynamics of erosion on footpaths and vegetated slopes caused by mountain bikes.	? 1991	W McDermott
NPA44	Peak Park Joint Planning Board	Private Landownership in National Parks. To investigate public attitudes to private landownership of land in a National Park.	? 1991	W McDermott

Contact for Enquiries: W McDermott, Peak Park Joint Planning Board, Aldern House, Baslow Road, Bakewell, Derbyshire DE4 1AE (062-981-4321), or contact the relevant National Park Authority direct.

NATIONAL RIVERS AUTHORITY

Research Programme 1990/91

	<i>Title</i>	<i>Summary of Objectives</i>	<i>Timescale</i>	<i>Comments</i>
Recreation and Navigation				
New Proposals				
NRA1	Socio-economic Study to Prioritise Recreational Activities	To investigate current national trends of participation in river-based recreational activities, including the factors affecting participation, and to extrapolate future needs from this.	April 1990/ March 1991	R Johnson.
NRA2	Protection against Bank Erosion	To produce preliminary guidelines on bank protection techniques to combat erosion due to recreation and navigation and to carry out experimental studies using these.	1990/93	A Brookes.
NRA3	Boat Hull Design for Minimal Wash	To recommend the best option for minimal wash based on existing research and to consider other theoretical options, followed by the testing of design options.	1990/91	J Waters.
NRA4	Identification/ Creation of Off- Navigation Boating Areas	To identify off-navigation boating areas and their effectiveness in reducing bank erosion on the main navigation followed by a feasibility study to undertake the creation of off-navigation areas.	1990/92	
NRA5	Study of Existing Design for Locks, Laybys, Slipways and Overnight Moorings	To study existing design and assess the problems of user requirements and make recommendations for best design.	1990/93	
Conservation				
On-going				
NRA6	Aquatic Flora Database	To develop and update a computerised database on the distribution of aquatic vascular plant taxa and publish summaries of this information in an atlas of aquatic flora.	1989/91	Water Research Council.
NRA7	Strategic Ecosystem Studies of Large Slow Flowing Rivers—East England	To determine suitable methods for quantitatively sampling invertebrates, to determine seasonal and spatial patterns of abundance and to relate this to factors such as channel morphology, flow regime and management practices.	To 1991	IFE, R Linfield.
NRA8	Turbidity and Plant Growth—Large Slow Flowing Rivers—East England	To examine the effects of changes in light due to turbidity on the growth and development of the marginal macrophyte/periphyton complex and to assess the relative importance of suspended material (dead, live or inorganic).	To 1991	IFE, R Linfield.
NRA9	Hydrology/ Hydrogeology of Wetlands in East Anglia	To investigate the hydrological aspects of wetlands with a view to their protection.	1986/91	Birmingham University, D Burgess.

NRA10	Coastal Wildlife Database	To produce a vegetation map according to National Vegetation methodology, plot usage of east coast areas by breeding birds, study usage of intertidal mudflats by waders/wildfowl and to produce software.	1989/92	Eco-service, T Coles.
NRA11	River Corridor Methodology	To develop a method for assessing Anglian region rivers that are sluggish and slow flowing when compared to other rivers where river corridor assessments have been previously developed.	1985/90	Ecosurvey, C Spray.
NRA12	Restoration of Riverine Habitats	To investigate the problem of flash flood lowland streams where past heavy drainage improvements have altered and severely damaged fisheries and wildlife interests and to undertake conservation improvements.	1989/91	In-house, C Spray.
NRA13	Reedbed Erosion Control	To undertake trials to investigate the problems of encouraging underwater growth of reeds at the river front by the use of low level front piling, use of large clumps of root rhizome and to examine use of other plants.	1989/91	In-house, C Spray.
NRA14	Effects of Eutrophication and Boating in Broadlands	To identify the necessary measures for preserving the unique Broadlands environment and prevent further deterioration.	1989/91	In-house/external contractor, G Phillips.
NRA15	River Corridor Wetland Enhancement		To 1992	In-house/Oxford Polytechnic, A Driver.
New Proposals				
NRA16	Storage and Analysis of Data	To develop efficient, user friendly, and flexible systems for storage, retrieval and analysis of conservation data.	April 1990	K Bryan.
NRA17	Riparian Species/Habitat Relationships	To investigate species and habitat relationships in a range of wetland and riparian habitats, homing in on critical or indicator species and habitats.	1990/93	R Howell.
NRA18	Environmental Assessments	To develop a methodology encompassing all aspects that need to be considered and ensuring consistency of approach and standards.	1990/91	A Brookes.
NRA19	Impact of Flow Regimes on Wildlife	To assess the requirements of plants, invertebrates and fish in relation to low flows and reduction in high flows.	1990/93	A Ferguson.
NRA20	Post-project Appraisal of Conservation Enhancement of Flood Defence Works	To assess objectively the values of habitat enhancement in relation to natural recovery from flood defence works.	1990/93	A Driver.
NRA21	Restoration and Protection of Grazing Marsh	To investigate and model the recovery of the soil, water and nutrient factors when arable land is returned to pasture and to produce a conservation strategy for the dykes.	1990/93	Wye College, J Wharfe.

NRA22	Control of Invasive Riparian and Aquatic Weeds	To develop techniques for controlling Himalayan Balsam, Giant Hogweed and Japanese Knotweed.	1990/91	AWRU, E Roblin.
NRA23	Landscape Appraisal Methodology	To develop consistent standard survey methodology, analysis techniques and production of standard plan formats which are compatible with ecological aspects of river corridor surveys.	1990/91	D Hickie.
NRA24	Conservation Input to River Classification Scheme	To develop methods for assessment and prediction of the conservation value of rivers, estuaries and coastal waters.	1990/92	M Diamond.
NRA25	River Corridors—Phase II	To establish the best level of detail and frequency of survey for the standard methodology.	1990/91	J Hogger.

Contact for Enquiries: K O'Grady, National Rivers Authority, Rivers House, 30/34 Albert Embankment, London SE1 7JL (071-820-0101).

NATURAL ENVIRONMENT RESEARCH COUNCIL

Introduction

The Natural Environment Research Council, established by Royal Charter in 1965, has responsibility for planning, encouraging and carrying out research in the physical and biological sciences which explain the natural processes of the environment. Only through such studies can an understanding of Man's impact on his surroundings and their influence on his activities be achieved and sensible policies for the exploitation of natural resources be formed.

The Council carries out this research and training through its own institutes and grant-aided associations, and by grants, fellowships, and other postgraduate awards to universities and other higher education establishments.

The research that is relevant to CRRAG is carried out within the Terrestrial and Freshwater Sciences Directorate, at the following Institutions:

Institute of Terrestrial Ecology
Institute of Hydrology
Institute of Freshwater Ecology

The work at each of these Institutes is now listed in turn.

Research Programme 1990/91

Institute of Terrestrial Ecology

The Institute of Terrestrial Ecology, as a component Institute of NERC, continues to develop research to improve our basic understanding of the ecology of organisms and systems, and to apply this understanding to assess the actual and potential impact of human activity on our natural resources. Collaboration between the northern and southern stations of ITE remains an important principle in developing a concerted approach to ecological research. The publication of the NERC Strategy for Terrestrial and Freshwater Sciences ('The Green Light' — March 1989) has clearly identified the main research thrusts and the continuing emphasis on both commissioned and Science Vote financing for research.

Although there is no specific programme of research directly focused on recreation, many of ITE projects are concerned with recreation management, eg, effects of ski lifts, footpath rehabilitation, or with land use change, and with species of wildlife which are the focus of recreation. With the increasing change in land use, including recreation, an important priority area is in assessing actual and potential change in land use and in its ecological consequences. A developing aspect is on the potential effects of predicted climate change on land use and ecology.

	<i>Project Title</i>	<i>Summary</i>	<i>Timescale</i>	<i>Comments</i>
ITE North Recently Completed Research				
NERC1	Human Impact in the Cairngorms	To assess human impact by measuring numbers and breeding of hill birds around ski lifts, counting people on these areas and measuring change in vegetation damage.	1986/90	Banchory. Funded by NCC.
NERC2	Ecological Impact of Downhill Skiing Developments in NE Scotland	To review the ecological consequences of the construction and operation of downhill ski-ing facilities at and near sites of value to nature conservation.	1986/88	Banchory.
NERC3	Survey of Soil Erosion and Vegetation Damage at Cairn Gorm in 1988	To repeat the 1981 survey of soil erosion and vegetation damage at Cairn Gorm.	1988/89	Banchory. Funded by HIDE and NCC.
NERC4	An Ecological Survey of Britain	To reclassify Britain on the basis of one km grid squares on a 15x15 grid using map attribute and variable data, and to extend the basic system to further detail at a local level.	1984/88	Merlewood.
NERC5	Countryside Implications of Changes in CAP	To assess the implications for the countryside of changes in the CAP.	1988/89	Merlewood. Funded by DOE and MAFF, with the Centre for Agricultural Strategy.

NERC6	Environmental Constraints on the UK Wind Energy Resources	To examine the wind energy resources in Britain, taking account of technical, eg, forestry, and institutional, eg, NNRs, constraints.	1988/89	Merlewood. Funded by UK Atomic Energy Authority.
NERC7	Mapping Heather in England and Wales	To produce a map of the distribution of the principal areas of heather in England and Wales.	1988/89	Merlewood. Funded by DOE.
NERC8	Field Survey of Land Cover and Landscape Features and their Recent Changes	To resurvey the national and regional occurrence of a defined set of land cover and landscape feature classes.	1984/89	Merlewood.
NERC9	Development of Monitoring of Seabird Populations and Performance	To develop and test schemes for monitoring changes in numbers, survival and breeding biology of cliff nesting seabirds in Britain.	1986/89	Banchory. Partially funded by NCC.
ITE North Continuous/Annual Research				
NERC10	Red Grouse Rearing and Release	To maintain captive grouse for use as decoys for catching wild birds and for studies of the inheritance of aggressive behaviour disease and photoperiodism.	1988/91	Banchory. Partly funded by Rowland Hill Trust.
ITE North Current Research				
NERC11	The Effects of Management in Lowland Coppices	To review existing information on the effects of management and to survey the vegetation associated with existing examples of differently managed coppices.	1985/90	Merlewood.
NERC12	The Effects of Different Silvicultural Systems on Flora, Fauna, Soil, Timber Production and Visual Amenity	To examine the effects of different species, mixtures and silvicultural systems on the soils, flora, etc, on marginal land in Britain.	1976/90	Merlewood.
NERC13	Effects of Afforestation on Flora and Fauna	To estimate the rate of direction of changes in the ecosystem resulting from drainage, planting, game management and woodland management.	1972/91	Merlewood.
NERC14	Long Term Dynamics of Semi-Natural Forest Ecosystems	To maintain existing sampling grids in semi-natural woodlands, and to resample plots according to a schedule.	1980/85	Merlewood.
NERC15	Agroforestry: Experimental Assessment of Novel Biomass Systems	To investigate the productivity and environmental implications of mixed cropping systems producing bioenergy, timber and agricultural outputs.	1985/90	Edinburgh. Partially funded from EC.
NERC16	Aonach Moor Development Plan	To write the ecological component of a development plan for Aonach Moor, and a monitoring scheme for associated fieldwork.	1986/90	Banchory. Funded by Lochaber District Council.
NERC17	Footpath Rehabilitation Studies for the Yorkshire Dales National Park Committee	To survey the extent of damage to footpaths in the Yorkshire Dales National Park, to devise and test vegetation rehabilitation techniques, and advise on implementation and monitoring.	1986/91	Banchory. Funded by Yorkshire Dales National Park.

NERC18	Restoration of Upland Vegetation	To suggest methods and areas for the restoration of natural vegetation in the uplands of Scotland.	1988/91	Banchory. Funded by CCS.
NERC19	Path Revegetation Trials on the Pennine Way	To set up trials for re-establishment of natural vegetation on the worn paths along the Pennine Way.	1987/91	Banchory. Funded by the Peak Park Authority.
NERC20	Ecological Consequences of Land Use Change	To define ecological effects of land use change on vegetation and fauna, and to convey the relevant ecological information to planners through an expert system.	1987/89	Merlewood. Funded by DOE.
NERC21	Shetland Saltmarsh Survey	To provide baseline maps of the saltmarsh sites in the Sullom Voe area of Shetland as a basis for future comparison.	1989/91	Banchory. Funded by Shetland Oil Terminal Environmental Advisory Group.
NERC22	Acidification of Waters in Wales	To determine the chemistry of stemflow throughfall and soil water chemistry of the main vegetation communities occurring in the study catchments.	1984/89	Merlewood. Funded by DOE.
NERC23	Long Term Climatic Change	To determine the ecological effects of changes in climate on the terrestrial environment.	1988/90	Edinburgh, Banchory, Merlewood. Partially funded by DOE, NCC.
NERC24	Population Dynamics of Red Grouse	To gain a better understanding of the mechanisms underlying cyclic population changes in red grouse.	1977/91	Banchory.
NERC25	Demographic Effects of Nest Predation on Golden Plovers and other Moorland Waders	To test experimentally whether nest robbing by crows and gulls is a major limitation in breeding success and population density of golden plovers and other moorland waders.	1973/90	Banchory. Partially funded by NCC.
NERC26	Population Ecology of Capercaillie	To improve understanding of factors determining capercaillie numbers.	1974/89	Banchory. Partially funded by RSPB.
NERC27	Effects of Afforestation on Moorland Birds and Predators	To investigate the effects of moorland afforestation on numbers, breeding success, species composition and habitat of moorland birds and their predators, both within afforested areas and on surrounding moorland.	1987/90	Banchory. Funded by NCC.
NERC28	Adaptation of Capercaillie to Novel Environments	To determine the ability of capercaillie to adapt to changes in its environment.	1989/92	Banchory.
NERC29	Effects of Environmental Factors on Populations of Otters and Fish in the North of Scotland	To describe the spatial organisation of otters and to test hypotheses on the underlying causal factors, especially the availability of fish.	1986/92	Banchory.
NERC30	Piscivorous Birds in Scottish Salmon Rivers	To survey the numbers of fish eating birds in Scottish salmon rivers, and assess their effects.	1988/91	Banchory. Funded by DAFS.
NERC31	Ecology of the Pine Marten	Studies on the ecology of the pine marten.	1988/90	Banchory. Partially funded by Vincent Wildlife Trust.

NERC32	Quantity and Quality of Seeds Produced by Montane Plants	To assess the effectiveness of seeds as a means of renewing natural vegetation at high altitude.	1982/90	Banchory.
NERC33	Effects of Grazing on Nardus and Calluna Moorland	To relate changes in cover of important moorland plants to the grazing treatments received.	1982/90	Banchory.
NERC34	Development of Subalpine Scrub at Northern Corries, Cairngorms SSSI	To determine the density and age structure of the population of pine saplings colonizing ground at Northern Corries, Cairngorms SSSI.	1985/90	Banchory. Funded by NCC.
NERC35	Response of Gentiana Nivalis Population to Withdrawal of Sheep Grazing	To determine the effects of withdrawal of grazing by large herbivores on the population size and reproductive output of the alpine gentian.	1987/90	Banchory. Funded by NCC.
NERC36	Modelling the Agricultural and Environmental Consequences of Sheep and Red Deer Grazing on Heather Moorland	To improve and test a model for predicting the consequences of grazing by red deer and sheep on the vegetation dynamics of heather moorland and on the productivity of sheep.	1988/92	Banchory. Funded by Macaulay Land Use Research Institute.
NERC37	Effects of Sheep Withdrawal on Upland Vegetation, Wildlife (Flora and Fauna) and Landscape	To analyse existing data on habitat selection by red deer and roe deer, and to maintain the monitoring programme on tree performance and damage.	1978/91	Banchory.
NERC38	Deer in Production Forests	To analyse existing data on habitat selection by red deer and roe deer, and to maintain the monitoring programme on tree performance and damage.	1978/91	Banchory.
NERC39	Competition and Niche Segregation in Red and Roe Deer	To investigate the apparent inverse relationship between red and roe deer densities, and to relate this to habitat, site quality and food availability.	1989/92	Banchory.
ITE North Committed New Research				
NERC40	Rehabilitation of Riparian Zones in Coniferous Forests		1990 start	Merlewood.
NERC41	Ecology and Land Use in Great Britain: 1990 Survey	To establish the stock of landscape features and habitats of the countryside of GB in 1990. By reference to earlier data, to identify the change in these resources over the past 10 years and in the previous two decades of 1970 and pre-1960.	1990/93	Merlewood. Partly funded by DOE.
NERC42	Feeding Ecology and Energetics of High and Low Latitude Shags	To study the feeding ecology of the common shag in the UK (Isle of May) and the blue eyed shag in the Antarctic, and to assess the interactions between the birds and their prey, linking annual differences in foraging patterns and breeding parameters with environmental factors.	1989/92	Banchory.
NERC43	The Influence of Vegetation Pattern on the Distribution and Foraging Strategies of Hill Sheep and Red Deer	To measure how the foraging pattern and impact of hill sheep and red deer is affected by vegetation pattern, and to identify where, within tracts of moorland, they have impacts on heather.	1989/92	Banchory. Part of the Joint Agriculture and Environment Programme, a NERC/ESRC/AFRC initiative.

ITE North Tentative New Proposals

NERC44	Long Term Environmental Reference Sites	To establish a national network of reference sites.	1988/90	Edinburgh.
NERC45	Monitoring on Biosphere Reserves		1990 start	Merlewood. Partly funded by UNESCO.
NERC46	Ecological Change Network		1990	Merlewood.

ITE South Recently Completed Research

NERC47	Knocking Hoe NNR, Analysis of Cutting Experiment	To assess the effects of cutting on the Knocking Hoe NNR.	1987/89	Monks Wood. Funded by NCC.
NERC48	Historical Aspects of Environmental Perception	To determine the way in which the natural environment was perceived and exploited in the past.	1984/89	Monks Wood. Partially funded by CEEGB.
NERC49	Nature Conservation in Upland Conifer Forests	To determine if and how plantation design and patterns of felling and restocking can be modified to improve plantations for selected groups of species.	1986/89	Bangor. Funded by NCC and FC.
NERC50	Ecological Survey of Capel Cynon	To prepare a survey report to be used in the Environmental Impact Assessment process as part of the application phase for a wind generation park at Capel Cynon.	1988/89	Bangor. Funded by CEEGB.
NERC51	Furzey Island: Saltmarsh and Mudflat Monitoring	To survey the salt marshes and mudflats surrounding Furzey Island, Poole Harbour, and to monitor changes in relation to oil development works.	1985/88	Furzebrook. Funded by British Petroleum Ltd.
NERC52	Effects of Growth Retardants on the Ecology of Roadside Vegetation in West Sussex	To assess the effects of some herbicides and grass growth retardants on the vegetation of road verges in West Sussex.	1987/89	Monks Wood. Funded by West Sussex County Council and ICI.
NERC53	Predicting Post-Barrage Densities of Invertebrates and Shorebirds	To analyse the effects of reduced feeding area and other changes following barrage construction on the populations of overwintering waders (Charadriidae).	1986/91	Furzebrook.
NERC54	A Survey of Sand Dunes in Relation to Grazing	Writing up of the results of a survey to ascertain levels of grazing in selected British dune systems and to determine their effects on the structure and composition of dune vegetation.	1985/89	Monks Wood. Partially funded by NCC.
NERC55	Sand Dune Management in Wales	To assess the effects of sand dune vegetation from known grazing and mowing regimes.	1984/89	Bangor.
NERC56	Restoration of Heathland	To monitor the vegetational, faunal and chemical changes in heathland on disused clay workings.	1983/90	Furzebrook. Funded by English China Clays Ltd.
NERC57	Dorset Heathland Survey	To survey the vegetation, extent and land use of the Dorset heathlands, and to establish a computerized databank.	1986/88	Furzebrook. Funded by BP International and BP Development Ltd.

NERC58	Invertebrate Assessment of Intensively Studied NNRs	Assessment of influence of current management systems on species and communities. Preparation of annotated species lists for two NNRs.	1989/90	Furzebrook. Partly funded by NCC.
NERC59	Root Dynamics of <i>Calluna Vulgaris</i> on Lowland Heathland in Southern Britain	To further develop nutrient and organic matter models of the <i>Calluna</i> ecosystem, producing an integrated account of the soil/plant management interaction.	1985/88	Furzebrook.
ITE South Current Research				
NERC60	Butterfly Monitoring Scheme	Recording of national butterfly occurrence and distribution. Results published at 5 year intervals; annual report.	1975/91	Monks Wood. Partially funded by NCC.
NERC61	Monitoring Floristic Changes	To record changes in the structure and botanical composition of grass/forb mixtures sown at 2 sites in 1978.	1984/91	Monks Wood and Royston, Herts.
NERC62	Effects on Site Properties of Clearfelling in Upland Forests	To determine effects of clearfelling and whole tree harvesting of Sitka spruce on ground vegetation and soil conditions, with special reference to nutrient dynamics.	1981/90	Bangor.
NERC63	Revegetation of Land Disturbed by Hydroelectric Pipeline Replacement at Cwm Dyli, Snowdon	To investigate the effectiveness of restoration techniques developed elsewhere by ITE for use at Cwm Dyli, assessed by rate of revegetation and 'naturalness'.	1990/92	Bangor.
NERC64	Invertebrate Geographical Ranges and Climate	To investigate the geographical range, phenology, population size, and life history characteristics of a series of invertebrates, in order to predict any future changes in relation to climatic factors.	1989/91	Furzebrook.
NERC65	Climate and High Altitude Invertebrates	To define the downward and upward limits of the distribution of selected species and the mechanisms involved.	1989/92	Bangor.
NERC66	Grey Squirrel Damage and Management	To improve the efficacy of present squirrel control methods and produce a model which foresters can use to predict the risk of bark stripping in each vulnerable plantation each year. To design future plantations in which there will be little damage from squirrels.	1978/90	Furzebrook.
NERC67	Poole Bridge Environmental Enhancement	To assess the environmental consequences of the Poole Bridge development.	1988/89	Furzebrook. Funded by Dorset County Council.
NERC68	Conservation of the Large Blue Butterfly	To study whether <i>Maculinea arion</i> can be re-established in Britain: to make a re-establishment, if this is thought possible, and to monitor results.	1983/90	Furzebrook. Funded by World Wildlife Fund.
NERC69	Woodland Fritillary Butterflies	To study the mobility of two violet feeding species of fritillary.	1985/90	Furzebrook.
NERC70	Black Hairstreak Habitat Creation - M40	To advise on the landscape of the M40 to help create black hairstreak habitat.	1989/94	Furzebrook. Funded by Travers Morgan.

NERC71	Sand Dune Studies in East Anglia	Studies on the vegetation changes in selected sand dune plant communities on the north Norfolk coast.	1985/91	Monks Wood.
NERC72	Studies of Saltmarsh Erosion in Essex	Production of maps showing changes in the area of saltmarsh vegetation, and tables showing the tidal regimes that salt marsh plant species can withstand.	1987/92	Monks Wood. Funded by Anglian Water Authority.
NERC73	Heathland Management Research	To develop methods for managing succession on lowland heaths, and for controlling birch scrub and bracken.	1978/90	Monks Wood.
NERC74	Long Term Studies of Vegetation Change at Moor House NNR	Modelling the long term change in vegetation at Moor House, with particular reference to the effects of grazing and burning.	1982/92	Monks Wood.
NERC75	Effects of Grazing in Snowdonia	To determine effects of long term exclusion of sheep from upland pasture.	1981/90	Monks Wood.
NERC76	Bracken Distribution and Management	To investigate the status and spread of bracken and our ability to control it.	1989/93	Monks Wood.
NERC77	Autecology of Selected Species on Farm Woodlands	To summarise autecology of selected species in relation to new woodland development, concentrating on dispersal, colonizing ability and fertility effects.	1989/90	Monks Wood.
NERC78	Primary and Secondary Effects of Tree Planting on Soil	To review the literature relating to the effect of soil and soil changes which may result from growing wood on agricultural soils, on woodland herbs.	1989/91	Monks Wood/Merlewood.
NERC79	Modelling Succession in Farm Woodland	To formalize ideas about successional trends, and to test hypotheses about size, shape and structure of woodland in relation to ground flora and soil. To predict ecological changes likely to occur in farm woods.	1989/90	Monks Wood.
NERC80	Invertebrate Fauna of Native and Introduced Broadleaved Trees in Britain	To assess insect faunas colonizing deciduous trees introduced into Britain, and compare these with the native fauna in their country of origin, and that found on closely related species in Britain.	1985/91	Monks Wood.
NERC81	Management Guidelines for the Conservation of Invertebrates, Especially Butterflies in Plantation Woods	To continue monitoring, and expand the experimental approach to selected problems.	1986/90	Monks Wood.
NERC82	Plant Establishment in Woodland	To record the natural spread of woodland herbs at Milton Keynes	1980/93	Monks Wood.
NERC83	Investigating the Environmental Consequences of Set Aside Land	To predict the environmental impact of the set aside and countryside premium schemes, concentrating on their effects on wildlife and landscape.	1989/90	Monks Wood. Funded by DOE.

NERC84	Ecology of Arctic Alpine Species in Snowdonia	To investigate the population dynamics of three arctic alpine species, and the effect of changing environment on their ecology and productivity.	1982/90	Bangor.
NERC85	Wyth Farm Development: Biological Monitoring	To repeat observations made in pre-construction phase and to assess any changes attributable to effects of that construction.	1989/90	Furzebrook. Funded by BP.
NERC86	Purbeck-Southampton Pipeline: Biological Monitoring	To repeat observations made before pipeline construction, assess changes and advise on restoration.	1989/91	Furzebrook. Funded by BP.
NERC87	Grassland Management and Invertebrates	To assess the effects of management systems on the ecology of invertebrate populations, with emphasis on rotational grazing and continuous light grazing systems.	1965/90	Furzebrook.
NERC88	Study on Scrub Succession on Chalk at Aston Rowant NNR	To assess the effects of a single treatment of rotavation and burning; of continuous treatment; and of no treatment on the colonization of chalk grassland by woody plants.	1969/90	Furzebrook.
NERC89	Scrub Management at Castor Hanglands NNR	To create structural and floristic diversity by the presence of different age classes of shrubs and trees, and hence to maintain the diversity of seral shrub communities and the associated faunas, with special reference to birds and insects.	1973/90	Furzebrook.
NERC90	The Numbers of Atlantic Salmon in some Scottish Rivers	To assess annual and seasonal fluctuations in numbers of salmon in River Awe, Scotland, and to explore possible relationships between salmon numbers and other environmental variables.	1987/90	Monks Wood.
ITE South Committed New Research				
NERC91	Comparative Studies of Saltmarsh Processes	To assess changing patterns in the production and exchange of organic matter and exchange of mineral nutrients across the zones from mudflat to reclaimed marsh.	1990/92	Monks Wood. Partly funded by EC.
NERC92	Climate Change, Sea Level Rise and the English Coast	To study and predict the effects of sea level rise on coastal habitats in England and Wales.	1989/93	Monks Wood.
NERC93	Modelling the Effects of Climatic Change in Species Distribution	To predict species distribution at equilibrium with a changed climate, and the dynamics of dispersal and population change for selected species.	1990/93	Monks Wood. Partly funded by DOE.
NERC94	Effect of Climate on Population Dynamics of Heathlands	To examine existing population model of Calluna and predict the effects of climate on the population.	1990/93	Monks Wood.
NERC95	Monitoring Ecological Change and Plant Species	To make use of current monitoring activities and extend them to observe future changes in species diversity of range, which may be related to climate.	1990/92	Monks Wood.
NERC96	Butterfly Monitoring Scheme and Climate Change	To construct predictive models of how temperate invertebrates may respond to climate change.	1990/95	Monks Wood/Furzebrook.

NERC97	Moorland Wilderness	To predict the vegetation that will result from a reduction in grazing pressure in the uplands, and the likely interactions with other macro-herbivores.	1990/91	Monks Wood. Funded by DOE.
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Institute of Hydrology

The Institute of Hydrology — a component institute of the Natural Environment Research Council — undertakes a broad range of both pure and applied research ranging from the physical processes of hydrology, including climate change and environmental studies, to water resource studies for engineering purposes. The Institute's long record of work on environmental and climate change projects is particularly relevant to present-day issues. Several of the Institute's research sites are being used to develop approaches to Environmental Impact Assessment (EIA).

The main programme area of relevance is Impact of Man on the Hydrological Cycle. Within this area, studies of water quality and pollution have become particularly important. The main theme covered is understanding the natural processes that control the movement of water in the environment, and how man's activities affect the quantity and quality of flowing waters.

Recently completed research

NERC98	West Sedgemoor, Water Resources	To assess the consumptive use of wet fencing within West Sedgemoor.	1986/90	Funded by NRA.
NERC99	The Effects of Artificial Drainage on Catchment Hydrology	To study the effects of artificial drainage on streamflow response and to investigate the implications on the frequency of flooding of areas downstream.	1982/89	Funded by MAFF.

Continuous/Annual Research

NERC100	Water Resource Implications of Upland Afforestation (Catchment Studies)	To determine the change in hydrological responses to two catchments of afforestation and forest felling.	1981/92	Partially funded by DOE, SDD, FC, DEN, Water Research Council.
NERC101	Llanbrynmair Hydrochemical Study	To investigate the role of mire areas acting as chemical sinks.	1988/90	Partially funded by Welsh Office.

Current Research

NERC102	Effect of Clearfelling on Upland Runoff	To assess the effects of forest clearfelling and subsequent regrowth on the quantity of stream flow, its chemistry (particularly nutrients N, P, K) and its sediment load, with a view to isolating the effects of various felling techniques undertaken on various types of soil and topography.		
NERC103	Conservation Management of Wetlands	To obtain a clear understanding of the hydrology of wetland sites and their interaction with surrounding 'reclaimed' land, and the provision of criteria for evaluating possible threats from peripheral drainage.	On-going	Partially funded by NCC and MAFF.
NERC104	Hydrology and Wetland Conservation	To provide independent evidence of wetland conservation in the face of agricultural reclamation by drainage.	On-going	Funded by MAFF.
NERC105	Hydrological Studies of West Sedgemoor, Somerset	To investigate the relationship between the volume of water pumped from the moor and the resulting levels of drain surface, groundwater and land.	1985/91	Funded by NCC.

NERC106	Modelling the Effects of Acid Deposition	To provide a comprehensive framework with which to assess the sensitivity of hydrological and chemical processes controlling catchment acidity.	1985/90	Partially funded by EC and the Royal Society.
NERC107	Hydrochemical Process Studies at Plynlimon	To develop an understanding of the importance of land use change in controlling streamwater quantity in upland areas.	1983/91	Partially funded by DOE.
NERC108	Impact of Hardwood Plantation, Lowland UK	To assess the hydrological effects of smallscale hardwood plantations in Britain by determining the evaporation processes.	1988/92	Partially funded by DOE/NRA.

Committed New Research

NERC109	Leaching of Agrochemicals through the Unsaturated Zone	To investigate the physical processes that influence the retention and movement of agrochemicals in the soil.	1990 start	
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Institute of Freshwater Ecology

The Institute of Freshwater Ecology was established on 1 April 1989; it has 5 research laboratories based at Ambleside (Windermere Laboratory), Wareham (River Laboratory), Abbots Ripton (Eastern Rivers Group - Monks Wood), Lartington (Teesdale Unit), and Penicuik (Edinburgh Laboratory). The headquarters of the Institute are at the Windermere Laboratory, Ambleside. Most of the staff were previously employed by the Freshwater Biological Association which was founded in 1929 to promote freshwater research into the biology and ecology of all kinds in fresh waters. There is therefore a wealth of expertise in the Institute.

The Institute is the only research organisation in the UK to study all aspects of the biology, chemistry and physics of freshwater ecosystems.

Recently Completed Research

NERC110	Physical Structure and Plankton Patchiness in Freshwater Lakes and Reservoirs	To examine some of the physical, chemical and biological factors responsible for spatial pattern in the lake environment, and to develop predictive models.	1980/90	Windermere.
NERC111	The Influence of Climate on the Dynamics of Freshwater Plankton	To explore the functional links between climate and plankton growth and develop predictive models of climate-induced change.	1989/90	Windermere.
NERC112	Impact of Climatic Change on Freshwater Ecosystems	To co-ordinate the IFE programme of research on climatic change.	1989/90	Windermere.
NERC113	Biological Environments of Larger Rivers	To describe the mechanisms of enhanced residence of water in river beaches, the hypothesized existence of which is essential to phytoplankton maintenance.	1986/89	Windermere. Partially funded by DOE.
NERC114	Analysis of Natural and Polluted River Communities in Great Britain	To develop and test a practical microcomputer-based system for classifying river sites from their macroinvertebrate fauna, and for predicting fauna from environmental data.	1984/90	Wareham.
NERC115	Impact of Land Use Change on Aquatic Communities	To determine the impact of land use change, within land classes, upon the biological communities of British running waters.	1988/90	Wareham. Partially funded by DOE.

NERC116	The Physiology of Stress Responses in Freshwater Fish	To understand the basic physiological changes that occur when teleost fish are subjected to acute and chronic environmental stress.	1985/90	Windermere. Partially funded by MAFF.
Current Research				
NERC117	Long Term Assessment of Physical, Chemical and Biological Components in Lake and River Waters	For selected waters, to assess temporal changes in environmental factors and (in lakes) phytoplankton.	1945 start	Windermere. Partially funded by North West WA.
NERC118	Upland Fresh Waters and Land Management	To develop and apply a system for obtaining continuous records of water temperature, and to determine relationships between temperature and algal growth rates.	1985/90	Windermere. Partially funded by North West WA.
NERC119	Strategic Ecosystem Studies of Large Slow Flowing Lowland Rivers	To determine the abundance and distribution of invertebrates in the Great Ouse river system.	1988/91	Monks Wood. Partially funded by DOE Water Directorate.
NERC120	Turbidity and Plant Growth in Large, Slow Flowing Rivers	To examine the effects of changes in the light climate on the growth of the macrophyte periphyton.	1988/91	Monks Wood. Partially funded by DOE Water Directorate.
NERC121	Invertebrate Survey and Classification of Rivers for Nature Conservation	To classify a series of river sites, with various environmental parameters, particularly flow, in order that minimum flows for salmon migration are maintained.	1986/92	Wareham. Partially funded by NCC.
NERC122	An Investigation of the Relationship Between the Aquatic Plant and Animal Communities of Rivers	To investigate whether there are specific invertebrate communities associated with particular plant communities in a range of lowland rivers.	1987/92	Wareham. Funded by NCC.
NERC123	Pesticide Particle Interaction in Rivers	To collect information concerning the use of pesticides in the UK and formulate a quantitative model of the behaviour of selected pesticides in aquatic systems.	1988/91	Wareham. Funded by DOE Water Directorate.
NERC124	Effects of Fish Farms on Water Quality and Natural Communities of Rivers	To determine the magnitude, frequency and variability of inputs of dissolved and particulate matter from a river-based fish farm, and evaluate changes in plant and invertebrate associations and in natural fish populations.	1988/91	Wareham.
NERC125	Identification, Population Dynamics and Diel Activity Patterns of Invertebrates in Stony Streams, Rivers, Tarns and Lakes	To provide new and updated keys to groups of freshwater invertebrates, and to obtain quantitative information on the numbers, biomass, growth rates, mortality rates, production rates and movements of invertebrates.	1965/92	Windermere.
NERC126	Population Dynamics, Feeding and Growth of Resident and Migratory Brown Trout, and Other Fish Species in Salmonid Streams	To study variations in numbers of trout in Lake District streams and to develop models for predicting quantitative changes.	1966/92	Windermere. Partially funded by MAFF.

NERC127	Reclamation of Acid Waters	To test whether organic material can act as a chemical filter in lakes and groundwater supply of acid, and assess the effect of adding nutrients and/or organic matter on the acid-balance of lakes.	1984/94	Windermere. Partially funded by British Industrial Sand.
NERC128	Factors Influencing Salmonid Stocks in Southern Chalk Streams	To investigate population dynamics of trout and juvenile Atlantic salmon in a tributary of the River Frome and to monitor upstream migration of adult salmon.	1971 start	Wareham.
NERC129	Control of Simulium Posticatum in the River Stour	To develop and test control of Simulium Posticatum with minimal impact on the environment and to acquire data on aspects of simuliid ecology related to feeding and assimilation in the larval stages.	1987 start	Wareham. Partially funded by North Dorset District Council.
NERC130	The Development of Methods for Assessing Minimum Ecological Flows in British Rivers (Biological Studies)	To assess the impact of low flow manipulation upon macroinvertebrate communities.	1988/91	Wareham. Funded by NCC.
NERC131	Irradiance as a Variable Controlling the Growth of Submerged Macrophytes in Rivers	To develop a model of aquatic plant photosynthesis from light/oxygen relationships.	1987/92	Wareham.
Committed New Research				
NERC132	Modelling Chemical and Biological Processes in Acid Upland Soils	To develop a model of acid upland soils, linking plant and microbial processes, physical chemistry of soil organic matter, distribution of ions between solid and nutrient phases, chemical speciation in the soil solution, and water flow pathways.	1990/95	Windermere.
NERC133	Flood Prevention Impacts, Bangladesh	To review literature on flood plain fisheries, with reference to engineering projects, to examine flood protection proposals, and identify locations for projects.	1990	Edinburgh. Funded by Overseas Development Administration.
NERC134	Restoration and Recovery of Eutrophic Systems	To rationalise and quantify the impact of restoration techniques on degraded water bodies.	1990 start	Edinburgh. Partially funded by small contracts.
NERC135	Assessment and Management of Water Supply Reservoirs (to Customers Requirements)	Market reactive evaluations of specific reservoir sites with a view to recommending optimal management strategies.	1990 start	Windermere. Funded by small contracts.
NERC136	The Effects of Afforestation Upon Water Temperature	To obtain quantitative information on the effects of afforestation/deforestation in the UK upon water temperatures, and to relate to land use changes and effects on salmonid fishes.	1990/92	Lartington. Funded by Welsh Office, Water Administration.
NERC137	Long Term Assessment of Physical, Chemical and Biological Components in Waters of the Loch Leven Catchment	To assess temporal changes in environmental factors and plankton.	1990 start	Edinburgh.

NERC138	Monitoring of Acid Waters – Burnmoor and Scoat Tarns	To provide data for the National Monitoring Network.	1990/95	Windermere. Funded by NRA.
NERC139	Manipulation of Upland Acid Waters	To test the efficiency of base generation by the addition of phosphate to an acid lake of low productivity, and to assess the impact of this on the food web, the general effect on water quality, and the potential of this technique in long term water management.	1990/93	Windermere. Funded by National Power and NRA.

Databases 1990/91

Institute of Terrestrial Ecology – North

<i>Title/Description</i>	<i>Timescale/Access</i>	<i>Geographical Features</i>	<i>Recreational Features</i>
Great Britain Land Use Statistics. Environmental variables (climate, geology, morphology and human geography) for GB, used to derive a classification of 32 groups of the 1 km squares in each land class. Model output predicting forestry and agriculture under different scenarios. Estimates of the potential number of wind turbines per one km square.	Surveys 1978, 1984, 1987, 1988, 1990. Access variable, some open (subject to handling charge), some restricted (depending upon data origins). A number of data formats including ORACLE DBMS, ARC/INFO, GIS and digital requiring user written software.	Great Britain (not NI), using OS National Grid. Can be presented as individual regions and countries.	Recreational land use was surveyed in 1978, 1984 and will be again this year (1990).
Chemical Databank. Nutrients and pollutants in natural water, soil and plant materials.	1980, on-going. Limited access. Plans for on-line system. Charging – price depends on request. No charge for small items.	Throughout Britain. Reference through scientific name/site name and grid reference.	
Swan Database. Population dynamics and genetics of the mute swan (<i>Cygnus olor</i>).	1960s to 1990s. Access restricted to research workers, normally those who have contributed data, but summaries and analyses available on request.	Areas where detailed population studies of the species are continually carried out. Mainly UK, but some data from Europe.	Population density and turn over (mortality, births) of a well-known water bird, of use as an indicator species.

Institute of Terrestrial Ecology – South

Vegetation Survey of Railway Verges. Floristic data from sampling stations along operational railway tracks in Britain. Vegetation types established from multivariate analysis.	Circa 1970. Limited access via user written software.	Great Britain, using National Grid.
Species Distribution Data. Records of the occurrence of over 15,000 species of plants and animals in the British Isles, at a resolution of 10×10 km or higher, including many detailed individual records.	Mostly 1950 to present. Mostly in digital form, and accessible via ORACLE DBMS. Access is open, although data are summarized and made generally available through the regular publication of atlases.	British Isles, using OS and Irish grids.
Scottish Coastal Survey. Habitat, vegetation and species data for over 90 soft coastal sites in Scotland, mainly in the north. Includes reference to threats from development, etc.	Circa 1980. Most data held in digital form; limited access via user written software.	Scotland, using National Grid.

National Land Characteristics Databank. A compilation of 130 attributes grouped under: physiography, climate, geology, soils, land use, topography, land class and conservation. Most attributes come from map sources, and are recorded in terms of percentage cover of a 10×10 km square.	Circa 1978. Limited access via user written software and ORACLE DBMS.	10×10 km cells of the National Grid.	Location and extent of National Parks and Areas of Outstanding Natural Beauty, and the location of Heritage Coasts and Scenic Areas.
River Communities Data. Environmental and biological data from over 80 sampling sites on unpolluted British rivers, used to establish a sampling programme to gauge water quality.	1980 onwards. In digital form, held within DATATRIEVE DBMS. Access limited, and requiring approval from the IFE.	Great Britain, using National Grid.	
Phytophagous Insect Data Bank. A compilation of the records of occurrence and the bibliography of phytophagous insects, their host plants and general ecology, taken from literature, collections and field observations.	1970/88. In digital form, accessible via the MUSCAT DBMS. Access open, subject to a handling charge.	Great Britain, many records localised or referenced using the National Grid.	
Geochemical Cycling Data. Chemical and physical attributes of ground and surface water, collected as part of catchment studies at Plynlimon, Llyn Brianne, Beddgelert and Kershope.	Circa 1975 onwards. Limited access via ORACLE DBMS.	Intensive sampling from within 4 study sites in Wales and England.	
Ecological Survey of the Shetlands. Multidisciplinary survey during the early stages of development for servicing offshore oil drilling. Sites of principal ecological interest are identified and described.	Circa 1975. Some data held in digital form; limited access.	Shetland Isles, using National Grid.	
Butterfly Monitoring Scheme. Butterfly species and numbers recorded systematically on over 80 sites in Britain, throughout the summer of each year. Recording done along a fixed route for each site.	Since circa 1975. In digital form, accessible via user written software.	National Grid.	
CORINE Biotopes Register. Documentation of the basic physical characteristics, major habitats and any species of special interest in the highest categories of conservation sites within the EC.	Circa 1983 onwards. Limited access via user written software. Latitude/Longitude co-ordinates for the EC countries.	Characteristics of conservation sites.	

Institute of Hydrology

Hydrological and water quality database to assess acidification in upland streams.	Continuous and spot samples. Limited access.		Relating to fisheries
Digitised river networks database for England, Wales and Northern Ireland at 50,000 scale. Digitised river network database for UK at 250,000 scale.	No on-line access. Hard copy at cost, sale of data negotiable.	Grid references. Scale (a) 1:50,000; (b) 1:250,000. Some mapping facilities available.	Database facilities supplied to Water Authorities and NRAs for the planning of public amenities and fisheries information.
Surface water archive--provision of hydrological data and statistics to enable assessments of water resources to be made.	Data available from 1981 to current year. Hydrological Data Yearbook--an account of rainfall, river flows, groundwater levels and water quality for the year. Cost £15. Several options available on data retrieval on computer--£5 per option.	Grid referenced for the whole of UK.	Archive used by Water Authorities and NRAs for water resource planning.

Hydrological and water quality
data base to assess acidification in
upland streams.

Continuous and spot samples.
Limited access.

Relating to fisheries.

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NATURE CONSERVANCY COUNCIL

Introduction

The Nature Conservancy Council is the body responsible for advising Government on nature conservation in Great Britain. Its work includes the selection, establishment and management of National Nature Reserves; the selection and management of Marine Nature Reserves; the identification and notification of Sites of Special Scientific Interest, the provision of advice and dissemination of knowledge about nature conservation; and the support and conduct of research relevant to these functions.

The Chief Scientist Directorate which is responsible for a large proportion of the research is based at Peterborough with the other parts of GBHQ including the Conservation Policy Division which commissions much of the socio-economic research. The England HQ is also based at Peterborough; the Scotland HQ is in Edinburgh and the Wales HQ in Bangor. In addition there are 8 Regional Offices in England, 4 in Scotland and 3 in Wales and many Regional staff including some County Officers and Wardens are outposted.

The Environmental Protection Bill currently before Parliament will, if passed, result in the division of the NCC into three separate organisations for England, Scotland and Wales from April 1991. The Welsh agency, the Countryside Council for Wales, will be formed by amalgamating parts of the NCC and the Countryside Commission. In Scotland a separate nature conservation agency will operate for one year and further legislation will then amalgamate it with the Countryside Commission for Scotland in April 1992. The Environmental Protection Bill also makes provision for the formation of a Joint Committee to deal with Great Britain and international matters and to establish common standards for monitoring, research and analysis of the resulting information.

The NCC's research programme provides the essential advice for its work in designating sites, managing land and providing advice. It has four main functions — through survey, to quantify the natural resources (wildlife habitats or biotopes, populations of wildlife species, and geological and physiographical features); through survey and monitoring, to identify losses and gains in this resource; through management and impact studies, to identify the causes of these losses and gains and to make predictions; and to establish means of maintaining and, where possible, extending the resource. Only a small part of the NCC's research relates directly to countryside recreation, but almost all of it supports the conservation of the natural resource on which many leisure activities depend. Increasingly, it is embracing socio-economic as well as ecological and earth science projects. The listing that follows omits the substantial survey and monitoring programmes managed by the NCC's Field Survey Units in England, Scotland and Wales and by staff in the Regions, as well as most projects with annual funding under £5,000. Fuller details of the programme may be found in the NCC's 'Blue Book', *The Nature Conservancy Council's research programme 1989/90* (Research & survey in nature conservation No. 23), and a supplement to be published in the summer of 1990.

Research Programme 1990/91

	<i>Project Title</i>	<i>Summary of Objectives</i>	<i>Timescale</i>	<i>Comments</i>
Recently Completed Research				
Survey				
NCC1	Peatland Survey in Northern Scotland	To survey the peatlands of northern Scotland and to produce conservation recommendations. (Superseded by NCC42.)	1985/89	Carried out in-house.
NCC2	Survey of Amphibian Communities	To collect and collate data on sites for British amphibians other than the rare natterjack toad. (See also NCC64.)	1986/89	Carried out by Leicester Polytechnic.
NCC3	Invertebrate Site Register	To collect and collate information on the distribution of rarer invertebrate species for site selection, evaluation, management and defence. (Superseded by NCC92 and 121.)	1980/90	Carried out in-house.
NCC4	Rare Vascular Plant Surveys	To bring together existing information on the past and present distribution and population status of rare vascular plant species in England and Wales.	1982/90	Carried out in-house and by consultants.
NCC5	Air Photo Survey of Scotland	To obtain 1:25,000 black and white panchromatic aerial photographs of Scotland.	1988/90	Carried out by Planning and Mapping Ltd. Funded jointly with SDD, CCS and FC.

NCC6	Bryophyte Atlas Project	To assemble data on the distribution of British mosses and liverworts for an atlas to be produced in association with the British Bryological Society.	1987/89	Carried out in-house.
NCC7	Survey of the Invertebrate Fauna of Dungeness	To survey the invertebrate fauna of part of Dungeness SSSI. (See also NCC23.)	1988/90	Carried out in-house. Funded jointly with CEEB.
NCC8	Identification of Sites Used for Earth Science Fieldwork	To identify the distribution of sites used by schools, colleges and universities for earth science fieldwork and to make recommendations for appropriate interpretative materials.	1988/90	Carried out by Kingston Polytechnic, School of Geological Sciences.
Monitoring				
NCC9	Development of Monitoring of Seabird Populations and Performance	To refine and test methods of monitoring breeding populations of seabirds that are appropriate for volunteers and nature reserve wardens. (See also NCC76.)	1986/89	Carried out by NERC(ITE) and others. Funded jointly with NERC.
NCC10	Monitoring of Vascular Plant Distribution, Increase and Decrease	To record vascular plants from a selected sample of 10 km squares of the National Grid, for comparison with records in <i>Atlas of the British Flora</i> (1962) and as a basis for monitoring future change.	1986/90	Carried out by Botanical Society of the British Isles (project officer assisted by members' voluntary survey).
Habitat/Site Management				
NCC11	Nature Conservation and Drainage	To draft a management manual, with guidelines for reducing the impact of land drainage on nature conservation (published 1989).	1988/89	Carried out by K Buckley.
NCC12	Studies of the Factors Influencing Thatching Reed Quality	To investigate the environmental conditions that influence the quality of reed, in view of an increase in the use of imported reed for thatching.	1988/89	Carried out by Universities of East Anglia and Bath. Funded jointly with DOE, MAFF and Broads Authority.
NCC13	Pond and Wetland Habitat Management on Scottish Farms	To investigate relevant experience as a basis for prescriptive advice for Scottish farmers.	1988/89	Carried out by Edinburgh School of Agriculture. Jointly funded.
NCC14	Effects of Grazing on Upland Woods	To provide information and advice on the impact of stock grazing on upland woods.	1985/90	Carried out by Macaulay Land Use Research Institute.
NCC15	Nature Conservation in New Conifer Forests	To describe the main habitats of upland conifer forests and to identify means of improving their design and management for wildlife.	1986/89	Carried out by NERC(ITE). Funded jointly with FC.
NCC16	Geomorphological Survey of and Management Strategy for Morrich More	To study this Scottish coastal site's Late Quaternary stratigraphy, landform evolution and current geomorphological processes as a basis for management of it and similar sites.	1987/89	Carried out by University of Sheffield.
NCC17	Design Criteria for Landfill Stability in Geological SSSIs	To determine design criteria for a safe angle of repose for landfill schemes, to enable NCC to propose soundly based modifications.	1987/89	Carried out by M J Carter Associates.
NCC18	Investigation of Alternative Methods of Coast Protection	To investigate coast protection methods that are effective but also safeguard geological features of interest.	1988/90	Carried out by Hydraulics Research Ltd.

NCC19	Geomorphology of Ingleborough	To document the karst and cave features of Ingleborough and develop a management strategy.	1988/89	Carried out by Trent Polytechnic.
NCC20	Developing Butterfly Conservation in Britain	To co-ordinate butterfly conservation initiatives in Britain, to improve consistency of habitat management, and to ensure the safeguarding of threatened species. (Superseded by NCC129.)	1989/90	Carried out by M S Warren.
NCC21	Nature Conservation and Golf Courses	To produce a good practice guide on the integration of nature conservation in the management of golf courses (published 1990, <i>On Course Conservation</i>).	1988/90	Carried out by CEAS Consultants (Wye) Ltd. Funded jointly with Royal & Ancient Golf Club of St Andrews.
NCC22	Sport, Recreation and Nature Conservation	To produce a good practice guide for managers of a range of sporting activities.	1988/89	Carried out by R Sidaway. Funded jointly with CC, SC and WWF.
Impact Studies				
NCC23	Vegetation Survey and Impact Assessment at Dungeness	To make a detailed appraisal of the surviving vegetation of the Dungeness shingle and an impact assessment of past changes and threats from potential developments (published 1990). (See also NCC7.)	1987/89	Carried out by Royal Holloway and Bedford New College, London, and NERC(ITE).
NCC24	Impact of Agricultural Operations on the Scientific Interest of Caves	To review the impact of agricultural operations on cave systems and the implications for the notification of SSSIs and of potentially damaging operations.	1987/89	Carried out by Manchester Polytechnic.
NCC25	Froglet Production, Water Chemistry and Tadpole Density	To unravel the effects of low pH, high aluminium levels and high tadpole density on the time to metamorphosis, size and numbers of froglets.	1988/89	Carried out by NERC(ITE). Funded jointly with CEBG.
NCC26	Agriculture and the Environment	To award grants and studentships for research into the present and likely future interactions between agriculture and populations and processes of the natural environment.	1986/90	Special topic programme. Funded jointly with NERC.
NCC27	Effects of Afforestation on Moorland Birds and their Predators	To investigate the effects of afforestation on numbers, breeding success, species composition and habitat of moorland birds and their predators, both in the afforested areas and on the adjacent moorland.	1987/90	Carried out by NERC(ITE).
NCC28	Invertebrates as Indicators of Freshwater Acidification	To develop and test invertebrate species lists for fresh waters vulnerable to acidification resulting from afforestation.	1988/89	Carried out by University of Wales Institute of Science and Technology.
NCC29	Impact of Water Abstraction on Fen Hydrological Processes	To identify and quantify the major lines of water flux in a range of East Anglian fens and the likely effects of groundwater abstraction schemes.	1986/89	Carried out by University of Birmingham. Funded jointly with Anglian Water and Broads Authority.
Autecological Studies				
NCC30	Food Supply and Breeding Performance of Arctic Terns	To quantify the influence of food stocks on the breeding distribution, numbers and success of arctic terns by a comparative study of two contrasting colonies.	1987/90	Carried out by University of Glasgow, Dept of Zoology. Funded jointly with RSPB.

NCC31	Effects of Grazing on Alpine Gentian (Gentiana Nivalis)	To carry out population counts and autecological studies of this rare alpine plant on Ben Lawers NNR in relation to grazing management.	1987/89	Carried out by NERC(ITE) and in-house.
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Socio-economic Studies

NCC32	Rural Areas Database	To enable the Rural Areas Database at the University of Essex to develop appropriate programmes and carry out data analysis for NCC.	1986/90	Carried out by ESRC. Funded jointly with DOE and others.
NCC33	Countryside Implications of Changes in the CAP	To develop a working model to assist in analysing the effects of agricultural policy changes, suggest appropriate policy settings and allow analysis at regional level. Further work funded by MAFF.	1987/90	Carried out by Centre for Agricultural Strategy, University of Reading. Funded jointly with DOE and others.
NCC34	Environmental Economics and Nature Conservation	To prepare an assessment of the effects of new trunk roads on nature conservation interests. (See also NCC140.)	1989/90	Carried out by University of Leeds, Institute of Transport Studies.

Miscellaneous

NCC35	World Checklists of Threatened Species	To prepare or revise checklists of animal species covered by the Convention on International Trade in Endangered Species, for use by NCC and other states' Scientific Authorities.	1985/90	Carried out by IUCN Conservation Monitoring Centre and Nature Conservation Bureau.
NCC36	Bat Site Database	To consolidate and computerise the available information in order to improve conservation strategy and responses to consultations about sites.	1988/89	Carried out by Leicester Polytechnic.

Current Research

Survey

NCC37	Phase 1 Survey of England	To map the location and distribution of wildlife habitats in selected counties as a basis for nature conservation strategies.	1986/91	Carried out jointly with local authorities and wildlife trusts (formerly also with MSC).
NCC38	Distribution of Seabirds at Sea	To determine the distribution and abundance of seabirds around Britain throughout the year.	1979/94	Carried out in-house, currently supported by BP, Shell, Esso, Hydrocarbons GB, Chevron, Occidental, DEn, DTp and DOE(NI).
NCC39	Survey and Classification of Rivers for Conservation	To carry out invertebrate and macrophyte surveys of rivers and river corridor studies as a basis for selection for conservation measures. (See also NCC53.)	1983/92	Carried out by NERC(IFE), J Southey and K Dale.
NCC40	Upland Vegetation Survey and Conservation Evaluation	To computerise and analyse the spatial patterns of vegetation data collected from over 200 upland areas (nearly 15% of Britain's mountains and moorlands).	1981/93	Carried out in-house.
NCC41	Inventories of Ancient and Semi-natural Woodlands	To identify ancient and semi-natural woodlands throughout Britain and to publish related books. (See also NCC56.)	1981/91	Carried out in-house. Publication supported by Esso.

NCC42	National Peatland Resource Inventory: Survey	To survey and map the British peatland resource and to evaluate the sites for conservation. (See also NCC1 and 122.)	1989/91	Carried out in-house.
NCC43	Survey of Freshwater Lochs in Northern Scotland	To survey the botanical interest of freshwater lochs in northern Scotland.	1985/91	Carried out in-house.
NCC44	Coastwatch	To collect, collate and analyse information on wildlife habitats and human impacts around the British coastline from cliff top to low tide mark, using voluntary survey groups.	1985/92	Carried out in-house. Supported by Earthwatch (USA) and WWF and previously by BP.
NCC45	Moorland Bird Study	To identify moorland sites of major importance to birds and to assess relevant management factors.	1986/92	Carried out in-house.
NCC46	Survey of Sand Dunes in Great Britain	To produce an inventory of sand dune habitats throughout Great Britain, according to the National Vegetation Classification (NCC118).	1986/92	Carried out in-house.
NCC47	Geological Conservation Review	To identify and describe a series of sites which adequately represent the range of geological and physiological features of Great Britain and should be conserved.	1979/93	Carried out in-house and by various consultants and contractors.
NCC48	Status and Conservation of British Freshwater Fish	To assess the current status of freshwater fish in existing NNRs and of rare and endangered fish in Britain generally.	1986/91	Carried out by NERC(ITE) and P S Maitland.
NCC49	Survey of Invertebrates of Welsh Lowland Peatland Sites	To survey the invertebrate fauna of a large sample of Welsh lowland peatland sites, in relation to plant communities and management, and to analyse the results.	1986/91	Carried out in-house.
NCC50	Marine Nature Conservation Review	To produce a descriptive account of British marine ecosystems for assessing the conservation value of individual sites and as a basis for NCC's advice on the wider marine environment.	1986/97	Carried out in-house and by various consultants and contractors.
NCC51	Conservation of Vulnerable and Dispersed Bird Species	To collate and review data on the identification and management of areas of importance for wide ranging bird species as a basis for advice to Government to fulfil international treaty obligations.	1987/92	Carried out in-house.
NCC52	Survey of Vegetated Shingle Structures	To map the vegetation of shingle structures on the coast of Britain according to the National Vegetation Classification (NCC118).	1988/91	Carried out by Girton College, Cambridge.
NCC53	Investigation of the Relationships between Aquatic Plant and Invertebrate Animal Communities of Rivers	To investigate these relationships and assess the effects on invertebrate communities of vegetation management in rivers. (See also NCC39.)	1987/92	Carried out by NERC(IFE).
NCC54	Biological Survey of Common Land	To make a biological appraisal of all common land by desk study and field survey, as a basis for advice on management.	1987/91	Carried out by University College of Wales, Aberystwyth.

NCC55	Habitat Inventory and Survey for Wales	To draw together existing information on the distribution and extent of semi-natural habitats in Wales and to undertake field survey in the lowlands.	1987/91	Carried out in-house.
NCC56	Development of Phase 2 Woodland Survey	To develop a national programme of survey based on the National Vegetation Classification (NCC118) both to verify the inventories of ancient woodlands (NCC41) and to improve the selection of SSSIs.	1987/91	Carried out in-house.
NCC57	Assessment of Change in the Saltmarshes of Essex and Kent	To examine stability and change in these saltmarshes as a basis for NCC's response to sea defence and saltmarsh rehabilitation proposals.	1988/90	Carried out in-house.
NCC58	Documentation to Fossil Reptile Sites in the Cambridge Greensand	To investigate and document past and present fossil source sites and assess their conservation worthiness.	1988/90	Carried out by University of Cambridge, Dept of Zoology.
NCC59	Seaweeds of the British Isles: Ceramiales	To fund the research for and drafting of the first volume of a 6-volume British Seaweed Flora.	1988/91	Carried out by British Phycological Society.
NCC60	Status and Conservation of Rarer Marine Fish	To evaluate the conservation requirements of rarer marine fish in British waters.	1988/91	Carried out by Marine Biological Association.
NCC61	Digital Atlas of Marine Resources and Environment	To prepare and produce a digital marine atlas, including both thematic and catalogue functions.	1989/91	In association with NERC. Funded jointly with others.
NCC62	Cumbria Mire Survey	To survey and evaluate the valley and basin mires of Cumbria.	1987/91	Carried out by H Adams.
NCC63	Land Use Change Model	To use the University's land class database to develop a model for evaluating countryside change.	1989/92	Carried out by University of Bristol.
NCC64	Survey and Monitoring of Amphibian and Reptile Sites	To build on the network of recorders established for NCC2, to assist NCC in amphibian and reptile conservation.	1989/92	Carried out by Leicester Polytechnic.
Monitoring				
NCC65	Monitoring and Conservation of Raptors	To monitor the status and distribution of rare birds of prey as a basis for conservation measures.	1977/94	Carried out in-house and by NERC(ITE).
NCC66	Lead poisoning in Mute Swans	To monitor the impact of lead poisoning in mute swans on the River Thames.	1983/91	Carried out by Edward Grey Institute of Field Ornithology, University of Oxford. Funded jointly with RSPB and NRA (Thames Region).
NCC67	Wildlife and Pollution	To monitor residues of toxic chemicals in predatory birds' tissues and eggs and to investigate major cases of pollution (other than by oil) involving birds or mammals.	1983/92	Carried out by NERC(ITE).
NCC68	Services in Wildfowl Research	To study the populations, distribution and migration of wildfowl (including the organisation and reporting of the National Wildfowl Counts).	1971/98	Carried out by Wildfowl Trust.

NCC69	Research in and Advice on Ornithology	To survey and monitor the provision of national bird ringing and nest recording schemes, analysis of data and the preparation of special reports.	1970/98	Carried out by British Trust for Ornithology.
NCC70	Butterfly Monitoring	To monitor the status and distribution of butterflies on NNRs and some other sites.	1981/92	Carried out by NERC(ITE) and E Pollard.
NCC71	British Red Data Books on Invertebrates	To edit and prepare for publication British Red Data Books on insects (published 1987) and other invertebrates.	1983/91	Carried out in-house.
NCC72	National Countryside Monitoring Scheme	To quantify habitat change in Scotland district by district by comparison of dated aerial photographs and to provide a framework for future monitoring.	1983/91	Carried out in-house. Funded jointly with CCS.
NCC73	Biological Records Centre	To collect detailed records of the occurrences of wild plants and animals covered by recording schemes operating throughout the British Isles.	1988/92	Carried out by NERC(ITE).
NCC74	Monitoring the Effects of Phosphate Stripping in the Bure Broads	To monitor phosphate storage, release and uptake patterns at the mud/water interface in the Bure Broads after the extension of phosphate stripping to 3 sewage works on the upper Bure.	1986/91	Carried out by NRA (Anglian Region) and formerly by an individual contractor.
NCC75	Monitoring of the Red Deer Population of Rhum	To monitor the red deer population of the Isle of Rhum NNR in the context of culling policy.	1987/92	Carried out by University of Cambridge, Dept of Zoology.
NCC76	Seabird Monitoring Programme	To monitor the status and productivity of Britain's breeding seabird populations in recognition of their importance internationally and as indicators of the health of the wider marine environment, using methods devised under NCC9.	1989/92	Carried out in-house with assistance from volunteers.
Habitat/Site Management				
NCC77	Effects of Fertiliser Applications - Somerset Levels	To examine the effects of nitrogen fertiliser on herb-rich grasslands on peat soils.	1986/94	Carried out by Animal and Grassland Research Institute. Funded jointly with MAFF and DOE.
NCC78	Hydrological Studies on the Somerset Levels	To evaluate the pumped water data from the Somerset Levels over the last 20 years and to monitor water levels.	1986/91	Carried out by NERC(IH). Funded jointly with NRA (Wessex Region).
NCC79	Conservation Management for Moths	To review existing knowledge of the habitat management requirements of rarer macro-moths, to draw up general management guidelines and to identify where further research is required.	1987/92	Carried out in-house.
NCC80	Management of Hill Vegetation	To establish the limits of acceptable upland management from the point of view of nature conservation, as a basis for SSSI management agreements.	1986/91	Carried out in-house.
NCC81	Quantification and Control of Fertiliser Run-off into Farm Ponds	To assess the effects of nitrogen fertilisers on pond water and vegetation and to develop means of reducing them.	1987/91	Carried out by Cheshire College of Agriculture.

NCC82	Conservation Management of Cereal Field Borders	To test methods of managing grassy borders of cereal fields which reconcile agricultural and conservation objectives.	1987/92	Carried out by University of Oxford, Dept of Zoology. Funded jointly with Co-op Bank.
NCC83	Nutrient Tolerances of Poor Fen Systems	To characterise poor fen plant communities in terms of their nutrient tolerances and vulnerability to environmental changes. (See also NCC132.)	1987/90	Carried out by University of Sheffield.
NCC84	Nature Conservation and Low Intensity Agricultural Land	To assess the nature of and threats to the support provided to birds by low intensity agricultural land, as a basis for future conservation strategy.	1988/91	Carried out in-house and by Paisley College of Technology.
NCC85	Assessment of Minimum Ecological Flows in British Rivers	To develop methods of assessing the effects of water abstraction and flow regulation on river fauna, as a basis for recommendations on river management.	1988/91	Carried out by NERC(IFE) and University of Loughborough.
NCC86	Experimental Re-creation of Species Rich Grassland	To investigate the opportunities for re-creating species rich grassland by natural recolonisation of arable land under various grazing regimes.	1988/90	Carried out by Imperial College.
NCC87	Review of Habitat Creation Techniques	To review the techniques available for creating terrestrial habitats, in order to improve project design, implementation and management.	1989/92	Carried out by University of Liverpool, Environmental Advisory Unit.
NCC88	Lowland Heathland Management Handbook	To provide a comprehensive guide to lowland heathland management illustrated by case studies.	1988/90	Carried out by C H Gimingham.
NCC89	Survey of Invertebrates of East Anglian Fens	To investigate the effects of different management regimes on selected groups of invertebrates at a few fenland sites, as a basis for management prescriptions.	1988/91	Carried out in-house.
NCC90	Conservation Requirements of Threatened Lower Plants	To formulate detailed recommendations for the conservation of rare and threatened lichens, mosses, liverworts and charophytes.	1988/90	Carried out by Conservation Association of Botanical Societies.
NCC91	Nutrient Depletion for Habitat Restoration	To review the potential of nutrient depletion techniques for restoring grassland and heathland flora.	1989/92	Carried out by NERC(ITE).
NCC92	Invertebrate Site Register - Habitat Reviews	To review the invertebrate fauna of lowland heathlands, lowland grasslands, woodlands and coasts and its habitat requirements as a basis for site management. (See also NCC3 and 121.)	1989/91	Carried out in-house and subsequently by a consultant.
NCC93	Conservation Management of Urban Grasslands	To conduct field trials of Knowsley, Merseyside, aimed at developing methods of urban grassland management for local authorities.	1987/90	Carried out by Groundwork Trust.
Impact Studies				
NCC94	Hydrology and Drainage of Mire Systems	To study the implications of hydrological changes in mire systems following the cutting of drainage channels and peat extraction, with particular reference to Duich Moss, Islay.	1985/92	Carried out by University of Dundee. Funded jointly with EC.

NCC95	Environmental Assessment of Afforestation Schemes	To produce advisory guidelines on assessing the impact of proposed afforestation schemes on the nature conservation resource.	1989/90	Carried out by Environmental Resources Ltd.
NCC96	Impact of Pesticide Drift	To study the effects of pesticide drift on a range of wild plants and invertebrate animals.	1986/92	Carried out by NERC(ITE), NERC(IFE), AFRC (Long Ashton Research Station). Funded jointly with DOE.
NCC97	Mountain Plateau Ecology	To evaluate actual and potential impacts of ski developments and other recreational use on soil, vegetation and fauna on 3 Scottish mountain plateaux, 2 with an existing development, the third where development has been proposed.	1986/92	Carried out in-house.
NCC98	Nitrate Pathways in Peat and Clay Soils and Effects on Ditch Water Quality	To investigate the effects of fertiliser applications on ditch water quality and the possible remedial effects of reedswamp margins.	1987/90	Carried out by University of Bristol, Dept of Geography.
NCC99	Ecological Effects of Liming Ombrogenous Peatland	To investigate the effects of various liming strategies (used as remedial treatments for acidification) on peatland plant and invertebrate communities.	1987/90	Carried out by University of Manchester, Dept of Environmental Biology. Previously funded jointly with CEEB.
NCC100	Effects of Land Use Changes on Scavenging and Predatory Birds in the Uplands	To examine empirically and experimentally the consequences for these birds of policies leading to reductions in numbers of sheep and deer.	1987/91	Carried out by University of Glasgow, Dept of Zoology.
NCC101	Interactions between Fish Farming and Otters	To study behaviour and population density of otters after the siting of new fish farms on Scottish sea lochs.	1989/90	Carried out by Vincent Wildlife Trust.
NCC102	Impact of Hydraulic Dredging for Cockles	To assess the environmental impact of this technique, especially on other benthic invertebrates, and to advise whether it should be controlled.	1989/91	Carried out by Field Studies Council.
NCC103	Changes in Species Composition Associated with Increased Atmospheric Inputs of Nitrogen	To investigate the effects of high deposition of ammonia and nitrogen oxides on native vegetation.	1988/90	Carried out by University of Edinburgh and NERC(ITE).
NCC104	Acidification of Freshwater SSSIs	To identify SSSIs in areas affected by acidification and to investigate its effects.	1988/92	Carried out in-house.
NCC105	Ecotoxicological Modelling of Oil Pollution in Urban Receiving Basins	To develop design guidelines and modelling procedures for management to minimise oil pollution in urban storm control basins and reservoirs.	1989/92	Carried out by Middlesex Polytechnic (Urban Pollution Research Centre).
NCC106	Effects of Acidification on Lichens	To determine trends in lichen health related to changes in pollution levels, in areas of greatest vulnerability.	1989/90	Carried out by Natural History Museum.
NCC107	Effects of Air Pollution on Beech Trees	To study trends in beech tree health, in relation to pollution climate and other factors, at sites of conservation interest in southern England.	1987/91	Carried out by Imperial College. Funded jointly with FC.

NCC108	Critical Loads of Nitrogen	To determine critical nitrogen loads for different semi-natural ecosystems in terms of community composition and plant physiology and to produce a predictive model to reveal which British Red Data Book plant species are most vulnerable to excess nitrogen.	1989/91	Carried out by NERC(ITE) and Universities of Manchester and Newcastle upon Tyne.
NCC109	Coastal Schedules for Oil Pollution Incidents	To produce coastal schedules and maps of ecologically sensitive areas for use in case of oil pollution incidents.	1988/90	Carried out in-house. Jointly funded by BP and DTp's Marine Pollution Control Unit.
Autecological Studies				
NCC110	Rare Vascular Plant Conservation	To propagate rare species for demonstration to the public, re-establishment trials and autecological studies.	1982/90	Carried out in-house (formerly by University Botanic Garden, Cambridge).
NCC111	Autecology of the Wart-biter Grasshopper (Decticus Verrucivorus)	To ascertain the habitat and management requirements of this rare and vulnerable insect, protected under the Wildlife and Countryside Act 1981.	1987/90	Carried out by Imperial College.
NCC112	Recovery Programme for Protected Animals and Plants	To prepare an action plan for assisting the recovery of each of the threatened species listed in Schedules 5 and 8 of the Wildlife and Countryside Act 1981.	1988/90	Carried out in-house.
NCC113	Ecology of the Chequered Skipper Butterfly	To study the ecology of this butterfly (now extinct in England) in the field in Scotland and in the laboratory.	1988/91	Carried out by University of Aberdeen.
NCC114	Terrestrial Ecology of the Natterjack Toad	To study the ranging, post-metamorphic survival and terrestrial habitat preferences of this rare and protected amphibian.	1988/91	Carried out by University of Sussex.
Socio-economic Studies				
NCC115	ESRC/NCC Joint Collaborative Programme—People, Economics and Nature Conservation	<p>To fund research aimed at improving understanding of the processes of rural change, as a basis for relevant and effective rural policies. Current projects are:</p> <p>The current and potential economic contribution of nature conservation in local economies in Scotland.</p> <p>Nature conservation policies and the wider countryside in south east England.</p> <p>Conservation impact of ageing in farm populations.</p> <p>'Planning gain': a strategy for nature conservation.</p> <p>An evaluation of the effectiveness of the media in promoting nature conservation.</p> <p>Nature conservation: a new cultural and philosophical approach.</p>	1989/92	<p>Special programme. Funded jointly with ESRC.</p> <p>Carried out by University of Aberdeen.</p> <p>Carried out by University of Cambridge.</p> <p>Carried out by Wye College.</p> <p>Carried out by Universities of Leeds and Bristol and Council for the Protection of Rural England.</p> <p>Carried out by University College London.</p> <p>Carried out by University of Lancaster.</p>
NCC116	Urban Wildlife Values	To assess the economic, social and ecological values of urban wildlife.	1987/91	Carried out by University of Newcastle upon Tyne (CASS studentship under ESRC auspices).

NCC117	Operational Strategies for Rural Land Use Integration in Scotland	To investigate opportunities and means of integrating nature conservation with other rural land uses in Scotland with the aid of Geographic Information Systems.	1987/90	Carried out by University of Edinburgh.
Miscellaneous				
NCC118	National Vegetation Classification	To provide a complete description and classification of British plant communities, edited by J Rodwell for publication by Cambridge University Press, and related computer programmes.	1976/91	Carried out by University of Lancaster and NERC(ITE).
NCC119	Reintroduction of Sea-eagles	To reintroduce the white-tailed sea-eagle to Scotland from Norway and monitor its re-establishment.	1975/93	Carried out by J Love, in co-operation with RSPB, NERC(ITE) and Scottish Wildlife Trust.
NCC120	Establishment of a Geological Records Centre	To establish a computerised databank of earth science site records as an information resource for conservation.	1988/91	Carried out by NERC (British Geological Survey).
NCC121	Preparation of Regional Overviews from the Invertebrate Site Register	To extract relevant data from the ISR (NCC3) and write a series of regional reports. (See also NCC92.)	1988/93	Carried out in-house.
NCC122	National Peatland Resource Inventory: Database	To collate existing data and collect new information from soil maps and satellite imagery to build up a database on lowland peatland sites. (See also NCC1 and 42.)	1988/92	Carried out by T A Rowell and in-house.
NCC123	Estuaries Review	To review the wildlife importance of, and human activities on, estuaries throughout Great Britain so as to develop an overall conservation strategy for this resource.	1988/91	Carried out in-house.
NCC124	Computerisation of Ornithological Databases	To provide a comprehensive integrated database of ornithological information.	1989/94	Carried out in-house.
NCC125	Wales Terrestrial Database (WALTER)	To develop a 'data dictionary' (to facilitate access to existing information relating to rural Wales) and to establish computerised data storage and maintenance.	1987/91	Carried out by University of Wales Institute of Science and Technology. Funded jointly with Welsh Office and other Welsh countryside agencies.

Committed New Research

Survey

NCC126	Great Britain Nature Conservation Resource Survey	To summarise the available information on the nature conservation resource in Great Britain as a basis for future environmental audits which can identify priorities and set targets for nature conservation.	1990/91	A major (£0.5 m) programmes of 24 projects designed to lay sound foundations for NCC's successor agencies; a synoptic publication is planned.
NCC127	Directory of the North Sea Coastal Margin	To review information held by NCC and others on the biological and earth science resources of the coastal, maritime and marine zones of the British coasts of the North Sea, as an input to the Fourth Ministerial Conference on the North Sea in 1992.	1989/90	Commissioned from NCC by DOE; mainly in-house but partly subcontracted to Marine Conservation Society.

Monitoring

NCC128	Quinquennial Review of Threatened Plant Species	To assess the current status of 93 species protected under the Wildlife & Countryside Act 1981 and other species that may be threatened, so as to make recommendations to Government on additions to and deletions from Schedule 8 of the Act.	1990/91	Carried out in-house.
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Habitat/Site Management

NCC129	Butterfly Conservation in Britain	To write up information derived from the Butterfly Site Registers, to provide advice on site management and to investigate specific requirements of two threatened species.	1990/92	Carried out by M S Warren (following up NCC20).
NCC130	Influence of Bankside Management in Plantation Forestry on Upland Stream Habitat Structure and Invertebrates	To assess relationships between habitat characteristics, invertebrate fauna, land use and management in a range of streams and to appraise the efficacy of 'softer' forestry techniques in preventing habitat damage.	1990/91	Carried out by Catchment Research Group, University of Wales College of Cardiff.
NCC131	Management Requirements of Upland Grazed Commons	To investigate and test alternative means of achieving site safeguard and conservation management of upland grazed commons within the present legal framework, as a basis for seeking safeguards within any new legislation for common land.	1990/93	Carried out in-house.
NCC132	Review of Rich and Poor Fens in Britain	To synthesise and amalgamate the results of two previous studies (NCC83 and an earlier study of rich fens) to elucidate ecological relationships between the two types and their vulnerability to change.	1990/91	Carried out by University of Sheffield.
NCC133	Fluvial Geomorphology of River Feshie Proposed SSSI	To document the scientific interest of four reaches of the river, to assess the actual and potential threats to it and to make recommendations for management.	1990/91	Carried out by University of St Andrews.
NCC134	Review of Wildlife Corridors	To review the value of 'wildlife corridors' for urban wildlife and to publish a guide for planners, land managers etc.	1990	Carried out by University of Southampton.

Impact Studies

NCC135	A Catchment-based Database of Freshwater Fish Communities in Scotland with Special Reference to the Atlantic Salmon	To produce a database of current freshwater fish communities for rivers in Scotland and provide information on fisheries stocking and fish introductions, identifying communities least affected by these practices and recommending measure for their conservation.	1990/91	Carried out by P S Maitland.
NCC136	Regional Forest Strategies	To develop and apply a methodology designed to assess the ornithological and other nature conservation interest of tracts of land, as a basis for advice to Scottish Regional Councils on their forest planting strategies.	1990/91	Carried out in-house.

NCC137	Molluscan Shellfish Farming	To review the nature conservation implications of this activity for marine ecosystems and to prepare guidelines for the selection and management of shellfish farming sites.	1990/91	Contractor not yet settled.
NCC138	Seabirds in Poole Bay	To determine the numbers and locations of birds using Poole Bay and to make recommendations for their protection in the context of oil development.	1989/90	Carried out in-house, on contract to BP.
Autecological Studies				
NCC139	Biology of Sandeels near Seabird Colonies in Orkney and Shetland	To investigate sandeel biology in relation to feeding performance of seabirds, in view of recent seabird breeding failures in Shetland.	1990/93	Carried out by DAFS/University of Aberdeen. Funded jointly with DOE, SDD, RSPB and Cadburys (WWF).
Socio-economic Studies				
NCC140	Environmental Economics and Sustainable Development: Implications for Nature Conservation Policy and Practice	To show how environmental valuations can be incorporated into the decision making process, to analyse how the current legal framework affects the capacity to follow a sustainable development path, and to show the resource implications and reallocations required to achieve such development. (See also NCC34.)	1990/91	Contractors not yet settled.
Miscellaneous				
NCC141	Conservation Plans for Migratory Waterfowl	To develop a series of conservation plans for migratory waterfowl species in the Western Palearctic, incorporating habitat and population objectives at 'flyway' level.	1990/93	Carried out by International Waterfowl & Wetlands Research Bureau.
NCC142	Conservation of European Lowland Dry Grassland Birds	To commission papers for and to organise an international seminar which will review the status and distribution of lowland dry grasslands in Europe and of their bird populations and discuss policies and opportunities for reversing current losses.	1990/91	Carried out by Nature Conservation Bureau.
NCC143	Classification of Urban Soils	To develop a classification of urban soils that will provide a relevant and understandable framework of terminology for practitioners in research into and management of urban greenspaces.	1990/91	Carried out by Soil Survey and Land Research Centre.
NCC144	Spontaneous Vegetation of Urban Open Spaces and Walls	To collate and publish information about the spontaneously occurring vegetation of urban 'commons' and walls.	1990/91	Carried out by University of Sheffield.

Contact for Enquiries: J Heap, Nature Conservancy Council, Northminster House, Peterborough PE1 1UA (0733-40345).

RURAL DEVELOPMENT COMMISSION

Introduction

The Rural Development Commission is the Government's rural development agency. It has a statutory duty to advise Government on all matters relating to the economic and social development of rural England.

Its task, in conjunction with the voluntary sector and others, is to highlight those problems specific to rural areas, to create a climate in which rural businesses and communities can prosper, and to initiate action which will improve the economic and social development of rural areas.

The research programme's main function is to respond to the Commission's first objective, namely to 'identify economic and social problems and issues affecting rural areas and to advise government and other bodies on appropriate action'. The programme is effectively a means of collecting information and this is achieved through the direct commissioning of research and through the development of the Commission's database. A substantial body of research has provided material on a wide range of issues such as telecommunications, basic utilities, tourism, training and village services where we previously had no hard facts. Many issues raised are taken forward into policy initiatives.

Research Programme 1990/91

	<i>Project Title</i>	<i>Summary of Objectives</i>	<i>Timescale</i>	<i>Comments</i>
Recently Completed Research				
RDC1	A Study of Rural Tourism	To assess the economic impact and viability of a wide range of tourism attractions and self catering accommodation projects in rural areas and discuss issues for policy and strategic choice for the development of rural tourism.	1986/87	Jointly sponsored with ETB, P A Cambridge.
RDC2	Telecommunications in Rural England	To review demand and supply factors up to the end of the century and highlight the critical issues that need to be addressed for rural areas to capitalise on telecommunications opportunities. Case studies illustrate the current position and local perceptions.	1987/88	Jointly sponsored with OFTEL, ETPG/Ove Arup.
RDC3	Employment and Training in Rural Areas	To provide a broad picture of industry, employment and occupations in 5 predominantly rural counties and, following comparison of employment structure and training provision, suggest how training services and information on rural training issues may be improved.	1988	Centre for Agricultural Strategy.
RDC4	An Evaluation of the Rural Development Commission's Craft Homes Experiment	To discuss the RDC's initiatives to provide combined living and working accommodation including funding arrangements, the potential demand and the influence on rural planners.	1987/88	ECOTEC.
RDC5	An Evaluation of the Rural Development Programme Process	To Evaluate how the Rural Development Programme process has performed so far.	1988/89	PSMRC, Aston University.
RDC6	An Evaluation of the Rural Transport Development Fund	To evaluate how the Fund has performed in ameliorating the possible lack of rural public transport subsequent to deregulation.	1988/89	T M Economics/Transport Design and Development.

RDC7	Provision of Basic Utilities in Rural England	To study the extent, location and consequences for rural areas of England of non-supply from the mains of the basic utility services of electricity, water and sewerage/drainage.	1988/89	Arup Economic Consultants.
RDC8	English Village Services in the Eighties	To present a picture of the state of a whole range of services in rural England at the end of the 1980s.	1988/89	Action with Communities in Rural England.
RDC9	The Impact of 'Community Post Office' Status on Rural Sub-Post Offices	To evaluate the implications of the 'Community Post Office' contract on the smaller rural sub-post offices and associated village shops.	1988/89	School of Environmental Sciences, University of East Anglia.
RDC10	The Premature Degradation of Thatching Reed: Socio-Economic Aspects	To assess the impact of changes in the quality of thatching reed on the future of reed growing and thatching industries and on the wider rural economy.	1989/90	School of Environmental Sciences, University of East Anglia.

Current Research

RDC11	An Evaluation of Rural Development Programme Project Officers	To evaluate the effects of funding project officer posts in the Rural Development Areas.	1989/90	PSMRC, Aston University,
RDC12	Women and Employment in Rural Areas	To assess the limited nature of employment opportunities for women in rural areas.	1989/90	Jointly funded with the Royal Agricultural Society of England, RASE/Bristol Polytechnic.
RDC13	A Study of Rural Childcare	To review the provision of childcare facilities in rural areas.	1990	M Stone.

Tentative New Proposals

RDC14	Rural Lifestyles	To obtain information on a wide range of economic and social variables relating to income, earnings, housing, transport, access to services, occupation, educational attainment etc, through 3,000 household interviews in 12 study areas.	1990/92	Proposed joint funding with ESRC and others. Lampeter College.
RDC15	Service Costs	To assess whether rural services are more costly to provide than their urban counterparts and the possible effects on reduced provision and take-up.	1990/91	
RDC16	Housing and Income Levels	To provide evidence of low rural incomes and inability to pay for private housing and the difficulties relating to Housing Association tenants.	1990/91	
RDC17	Economic Impact of Holiday Villages	To provide information in order to be able to judge applications for assistance from developers wishing to develop holiday villages.	1990/91	
RDC18	Homeworking in Rural Areas	To gain an understanding of the current position on homeworking/teleworking as it affects rural employment, and the scope for further fieldwork in this area.	1990/91	

Research Publications 1989/90

A Study of Rural Tourism (1987).
Telecommunications in Rural England (1989).
Employment and Training in Rural England (1989).
An Evaluation of the Rural Development Commission's Craft Homes Experiment (1990).
An Evaluation of the Rural Development Programme Process (1990).
The Provision of Basic Utilities in Rural England (1990).
English Village Services in the Eighties (1990).
The Impact of 'Community Post Office' Status on Rural Sub-Post Offices (1990).

These titles are available from the RDC's publication section in Salisbury (0722-336255).

Contact for Enquiries: Warwick Maynard, Rural Development Commission, 11 Cowley Street, London SW1P 3NA (071-276-6969).

SCOTTISH DEVELOPMENT DEPARTMENT

Introduction

The Scottish Development Department (SDD), is the Scottish Office Government Department responsible for all aspects of development, land use planning, and co-ordination of policies on rural and environmental issues in Scotland.

The Planning and Countryside Research Programme covers a wide range of research relating to urban and rural land use topics. The main purpose of the research is to provide information to the Department to assist in policy formulation and is designed to complement research sponsored by other Agencies in Scotland, and UK Departments. A number of projects are aimed at assessing current attitudes to the environment and changes in the Scottish countryside.

Research Programme 1990/91

	<i>Project Title</i>	<i>Summary of Objectives</i>	<i>Timescale</i>	<i>Comments</i>
Recently Completed Research				
SDD1	Monitoring Countryside Change in Scotland	A complete aerial survey of Scotland at 1:24,000 scale.	Completed 1989	Jointly funded with CCS and NCC. Photographs available from JAS Photographic.
SDD2	Attitudes to the Environment	An initial assessment of existing survey data relating to attitudes to environmental issues in Scotland.	Completed Nov 1989	Carried out by R Sidaway - SDD. Contact D Wilkinson.
SDD3	Acid Deposition	Summary report on recently completed and current SDD research on acid deposition.	Dec 1989	Published by SDD. Environmental Pollution Division.
Research in Progress				
SDD4	Scotland's Land Cover	Interpretation of the 1988/89 aerial photography to identify a wide range of land cover features, and to digitise the information to create a machine readable database.	1989/91	To be carried out by MLURI - jointly funded by NCC and CCS. SDD contact B Doig.
SDD5	Ecological Consequences of Land Use Change	To predict the magnitude and direction of changes in rural land use. The study is seeking to develop an expert system to advise on the probability of changes in wildlife and landscape.	1989/90	In conjunction with DOE, carried out by NERC(ITE). SDD contact B Doig.
SDD6	Acidification of Inland Waters	A study to assess water quality by routine sampling and effects of treatments to counter acidification.	Extended to 1992/93	Carried out by Solway Purification Board.
SDD7	Effects of Afforestation on Catchment Yields	To assess the affects of differing vegetation types on catchment yields.	Final Report 1990/91	Carried out by IH, in conjunction with Forth Purification Board.
SDD8	Environmental Effect of Fish Farms	To investigate the effect of fish cages on water quality and the aquatic environment.	1989/91	In conjunction with DAFS.
SDD9	Sewage Sludge in Forests	To assess the impact of the disposal of sewage sludge in forests.	1989/91	In conjunction with FC.
SDD10	Development Opportunities in the Natural Environment (previous title Wildlife as a Resource)	To assess the potential of wildlife and the natural environment and possible development opportunities. To produce a framework for a development/conservation strategy.	1990	Jointly with Highland RC, CCS, NCC, HDB. SDD contact D Wilkinson.

New Projects

SDD11	Attitudes to the Environment	A new survey of public attitudes to environmental issues in Scotland—a follow-up to previous study.	1990/91	See SDD2. SDD contact D Wilkinson.
SDD12	Land Cover Change Studies	A retrospective study of land cover change in specific areas, comparing current aerial photography with previous periods.	1990	SDD contact R Harrison.
SDD13	Rural Sustainable Development Initiatives	An inventory of community based development/conservation initiatives in Scotland.	1990	SDD contact R Harrison.
SDD14	Green Belts	A study to assess the use, function, access and management of green belts.	1990/91	SDD contact A Denham.
SDD15	Sandeels	A study to address the problem of the breeding seabird failure in Shetland and poor recruitment of sandeels.	1990/91	In conjunction with DOE and DAFS.
SDD16	Acidification Mapping	To identify and map areas of Scotland which are sensitive to acid rain and to assess the loads of pollutants which soils withstand.	1990/93	To be carried out by MLURI.
SDD17	Rural Database	To compile a comprehensive database on economic, demographic and social characteristics of rural Scotland.	1990	SDD contact R Harrison.
SDD18	Rural Issues	A literature review of current rural issues which may be followed-up on specific topics.	1990	SDD contact D Wilkinson.

Contact for Enquiries: R Brewer, Room 66, New St Andrew's House, Edinburgh EH1 2SZ (031-244-4073).

SCOTTISH SPORTS COUNCIL

Introduction

The Scottish Sports Council has four main aims:

1. to raise standards of performance;
2. to encourage wider participation;
3. to increase the provision of sports facilities;
and
4. to promote general understanding of the importance of sport and physical recreation in society.

The Council's research is carried out within the fields of its four aims. Resources are concentrated on projects with practical applicability in Scotland. The research projects and list of publications given below exclude a number of projects such as sports science studies which are not relevant to CRRAG.

Research Programme 1990/91

	<i>Project Title</i>	<i>Summary of Objectives</i>	<i>Timescale</i>	<i>Comments</i>
Recently Completed Research				
SSC1	The Impact of New Leisure Pools in an Urban Area	To assess the impact of new leisure pools on the existing traditional swimming pools in an urban area.	1986/90	System Three Scotland.
SSC2	Surveying for Orienteering	To investigate methods of accurately measuring position in the forest using electronic equipment.	1981/89	C Aust, Robert Gordon's Institute of Technology.
SSC3	Finish Timing Equipment for Orienteering	To devise a reliable, accurate, low cost, computerised system for the identification of competitors and recording of finishing times.	1987/89	J Eades, Robert Gordon's Institute of Technology.
Continuous/Annual Research				
SSC4	Sports Participation Data	To obtain data on participation in sport on a regular basis.	Continuing	System Three Scotland.
SSC5	Planning Data Management Service (PDMS)	To update computerised information for analysis of a range of planning problems.	Continuing	Circa 15,000 facility records.
SSC6	Charges for Sports Facilities: Scotland	To provide a review of local authority charges for all sports facilities.	Annual	In-house.
Current Research				
SSC7	Sport and the Economy of Scotland	To provide improved data on expenditure, income and employment from sport in Scotland.	1990/91	Pieda.
SSC8	Study of Golf in Scotland	The main sections of the study will deal with supply, demand, economic and financial aspects (provision and operation), management aspects, land use planning, policies of other agencies and trends in the availability of 25 famous golf courses.	1990/91	Cobham Resource Consultants.
SSC9	Differential Charges at Sports Centres	To assess the impact of deliberate and significant changes in charges to users on the economics of sports centre operations and participation by target groups.	1989/91	Centre for Leisure Research.

Committed New Research

SSC10	Avalanche Forecasting	To assess the awareness of and the value of the avalanche forecasting scheme.	
SSC11	Recognition and Understanding of the Scottish Sports Council	To establish the extent and nature of external perceptions and understanding of the SSC (what it is, what it does, how it does it, how well it does it). New markets for SSC activities will be identified. A base level will be established for future comparisons and assessments of SSC effectiveness.	1990/91 Follow up 1993/95

Tentative New Proposals

	<i>Proposed Project Title</i>	<i>Summary of Objectives</i>
SSC12	Community Use of Schools	To find out the extent and nature of school sports facilities.
SSC13	Sport 50+	To provide information on the demand for sport in this age group and identify constraints.
SSC14	Demand for Countryside Sports	To provide information on the demand for countryside sports.

Databases 1990/91

<i>Title/Description</i>	<i>Timescale/Access</i>	<i>Geographical Features</i>	<i>Recreational Features</i>
ATHLET. Facilities database containing information on athletics tracks in Scotland.	Continuous update. Open. Hard copy. No charge.	Postcode and grid reference.	Sports facilities available at the site.
ICEDATA. Composite database of facility information for ice rinks and artificial ski slopes in Scotland.	Continuous update. Open. Hard copy. No charge.	Postcode and grid reference.	Sports facilities available at the site.
SWIMD. Facilities database for swimming pools in Scotland.	Continuous update. Open. Hard copy. Probably will be charged.	Postcode and grid reference.	Sports facilities available at the site.
INDCENT and OUTCENT. Facilities database for indoor sports centres and outdoor activity centres in Scotland.	Continuous update. Open. Hard copy. No charge for OUTCENT. INDCENT probably will be charged.	Postcode.	Sports facilities/ outdoor activities available.
SSC MASTERFILE. Full information on all sports facilities in Scotland.	Currently being installed on new system, being updated in the process; thereafter, continuous update. Not yet decided. Probably will be hard copy. Probably will be charged.	Postcode and grid reference.	Sports facilities available on the site.

Research Publications 1989/90

Sports Participation in Scotland 1988 (1989), ISBN 1 85060 120 8, Available Free.
Sport 2000: A Strategic Approach to the Development of Sport in Scotland (1989), ISBN 1 85060 140 2, £5.00.
Hendry, L B, Shucksmith, J and Love, J G (1989), *Young People's Leisure and Lifestyles: Summary Report of Phase 1, 1985-1989*, SSC Research Digest No 14, ISBN 1 85060 148 8, Available Free.
Eades, J D, Aust, C (1989), *Finish Time and Results Processing for Orienteering and Other Events*, SSC Research Digest No 15, ISBN 1 85060 149 6, Available Free.

Contact for Research Enquiries: Kirsty Noble, Scottish Sports Council, Caledonia House, South Gyle, Edinburgh EH12 9DQ (031-317-7200).

Contact for Database Enquiries: Hugh Neilson, Data Processor, Scottish Sports Council, Caledonia House, South Gyle, Edinburgh EH12 9DQ (031-317-7200).

SCOTTISH TOURIST BOARD

Introduction

The Scottish Tourist Board (STB) was established by the 1969 Development of Tourism Act. The aim of the STB is to develop and promote tourism to and within Scotland. Further details are outlined in the Board's Business Plan (April 1987), and in the Board's 1990 Annual Report.

Research is a central function of the Board and provides a service for the Marketing, Investment and Planning, and Visitor Services Divisions. The STB's Research Department assists in developing Board policy and provides information on trends and activities. It is developing a number of projects which will attempt to investigate, through survey as well as non-survey techniques the future potential markets of the Board. Research findings are disseminated through the Board's Research and Planning Information Handbook, which is available on a subscription service.

Research Programme 1990/91

	<i>Project Title</i>	<i>Summary of Objectives</i>	<i>Timescale</i>	<i>Comments</i>
Annual Research				
STB1	Accommodation Occupancy Surveys	To determine occupancy rates in various types of accommodation.	Monthly	Hotel and Self Catering survey runs Jan-Dec. Caravan (Static and Touring) and Camping Parks survey runs April-Oct.
STB2	Survey of Visitor Attractions in Scotland	To obtain information on the number and type of visitors to a range of attractions in Scotland.	Annual	Retrospective postal survey of visitors to 700 tourist attractions in Scotland in 1989. In-house survey and analysis.
STB3	United Kingdom Tourism Study	To examine the volume, expenditure and characteristics of UK tourists to Scotland.	Monthly	Survey of 73,000 adults tourist trips. Joint STB/ETB/WFB/NITB project.
STB4	International Passenger Survey (Secondary Analysis)	To examine the volume, expenditure, and characteristics of overseas tourists to Scotland.	Annual	Managed by OPCS, with special analysis of visitors to Scotland.
STB5	The Supply of Tourist Accommodation in Scotland	To update STB's data on the supply of hotels, self catering, and camping and caravan parks.	Annual	Data obtained through STB's scheme for the registration of tourist accommodation.
STB6	Marketing Follow up Study	To evaluate the effectiveness of the STB's promotional campaigns.	Annual	Various surveys of consumers and the travel trade. Both in-house analysis and contract research.
STB7	Leisure Day Trips Study	To determine the size and extent of the leisure day trip activity market in Scotland.	March 1991	Joint project with SDA.
Current Research				
STB8	'Ski Holiday Scotland' - Survey of Advertisers	To investigate responses to advertisements in this brochure.	May 1990	Joint project of STB/HIDB.
STB9	Survey of Advertisers - in the Main Brochure	To investigate responses to advertisements in this brochure.	July 1990	In-house STB project.
STB10	Overseas Visitors Survey	To examine frequency participation rates of about 20 recreation activities undertaken by overseas visitors to Scotland.	Mid 1990	

STB11	Coach Operators Survey	To assess the extent to which the National Tourist Boards can improve services for coach operators.	Mid 1990	Joint STB/ETB/WTB survey.
STB12	Tourism Labour Market Study	To develop a research methodology for estimating tourism employment in small areas in Scotland.	Mid 1990	Joint HIDB/SDA/STB project.
STB13	German Market Study	A qualitative study of how Germans perceive Scotland as a tourism destination.	Mid 1990	Probes Germans environmental perceptions of Scotland.
STB14	American Market Study	To investigate the routes travelled by USA visitors within Scotland.	Mid 1990	
STB15	Cycling in Scotland	A study to identify the feasibility of establishing national cycling routes in Scotland.	Mid 1990	
STB16	Tourism Training in Scotland	To identify mechanisms for the delivery of tourism training in Scotland.	Mid 1990	Joint STB/IDS/TA/HIDB.

Committed New Research

STB17	Consumer Perceptions of the STB's Accommodation Classification and Grading Scheme	To assess the importance of classification and grading for holidaymakers in choosing accommodation.	Late 1990	
STB18	Overseas Market Analysis	A desk study to investigate which overseas markets would be susceptible to increased marketing activities.	Late 1990	
STB19	Scottish Domestic Home Holiday Study	A study on the reason why Scots are taking fewer holidays in Scotland.	Mid 1990	Joint STB/SDA study.
STB20	Incentive Travel Market	To understand what organisers and providers of incentive travel are looking for in Scotland.	Late 1990	
STB21	Tourist Route Signposting	To assess the effectiveness of tourist route signposting.	Late 1990	Joint STB/SDD study.
STB22	Effectiveness of 'Section 4' Funding	To assess the effectiveness of STB grants and loan schemes for tourism projects.		Joint STB/IDS study.

Tentative New Proposals

STB23	Public Transport in Scotland	To assess the problems and opportunities in co-ordinating public transport in Scotland, from a visitor perspective, including the feasibility of an all Scotland travel pass.	Late 1990	
STB24	Edinburgh Festivals Study	A study of the economic impact of the Edinburgh International Festival.	Early 1991	Various joint sponsors.

Databases 1990/91

<i>Title/Description</i>	<i>Timescale/Access</i>	<i>Geographical Features</i>	<i>Recreational Features</i>
Holiday Activity/Hobby	12 monthly surveys. Open access. Hard copy. Free summary.	By Region (Scotland).	23 recreation activities.
Leisure Day Trip Survey	Monthly surveys. Open access. Hard copy. Free summary.	By Region (Scotland).	Activities analysed by environment; location; type of facility.

Visitor Attraction Survey	Annual. Hard copy. £10.	By Region (Scotland).	Visitors to various attractions including country parks.
International Passenger Survey	Annual. Hard copy. Free summary.	By region (Scotland).	
Hotel Occupancy Study	Jan—Dec monthly survey. Hard copy. £30/year.	By region (Scotland).	By Area Tourist Board.
National Survey of Tourism in Scotland	12 monthly surveys. Free summary. Free access to data sets.	By region (Scotland).	

Research Publications 1989/90

Research and Planning Information Handbook, Loose leaf binder containing factsheets and research summaries, updated on a quarterly basis, 25% discount for educational establishments, £50 initial subscription.

Accommodation Occupancy Summary Reports, Available monthly, on a subscription of £30/year.

The Conference and Exhibition Market in Scotland, £60.

The Leisure Day Trip Market in Scotland, £80.

National Survey of Tourism in Scotland 1984—1988, cost on application.

Economic Impact of Salmon Fishing & Netting in Scotland, £30.

Study of Golf Facilities in Scotland, £20.

Visitor Attractions Survey, £10.

Dumfries & Galloway Visitor Survey, £10.

Tourism in the Economy of Scotland, £10.

Contact for Enquiries: Brian Hay, Research Manager, Scottish Tourist Board, 23 Ravelston Terrace, Edinburgh EH4 3EU (031-332-2433).

SPORTS COUNCIL

Introduction

The Sports Council is an independent body established in 1972 by Royal Charter. It has a remit for some British sport as a whole, but it is mainly concerned with English matters as there are separate Councils for Scotland, Wales and Northern Ireland. It has 14 members and around 600 permanent employees in its Headquarters, Regional Offices and 5 National Sports Centres. Its net 1990/91 budget will be £43.7 million, provided by grant in aid from the Department of the Environment.

The net 1990/91 research budget of The Sports Council will be in the region of £800,000. This excludes value for money monitoring studies which are managed within the research programme, but are financed by other Units in the Council. Research projects are closely aligned to Sports Council priorities and policy requirements as defined in its Strategy and Corporate Plan. The Research Unit serves its 'clients' in other HQ units, Regional Offices and National Centres by commissioning work, but it seeks co-sponsors from the public and private sectors wherever possible and appropriate. Research projects are divided between three teams - Facility Planning, Design and Management; Participation, Performance and Excellence (including countryside and water); and Demonstration Projects (based in the North West Regional Office).

Research Programme 1990/91

	<i>Project Title</i>	<i>Summary of Objectives</i>	<i>Timescale</i>	<i>Comments</i>
Continuous/Annual Research				
SC1	Scholarship Awards	Fostering PhD sports research.		Managed internally.
SC2	CRRAG	Fostering multi-agency leisure research.		Support to secretariat.
SC3	Loughborough Institute	Encouraging sports research, application and training.		
SC4	Editing and Analysis Panel	Disseminating research.		
Current Research				
Facilities				
SC5	Costs in Use of Artificial Surfaces	Identifying whole life costs of artificial and natural outdoor winter games pitches, and a standard methodology for assessing capital and running costs.	1986/90	P Dury, Notts County Council.
SC6	Planning Model (NW)	Improving the facilities planning model developed by SSC and PDMS for Regional and HQ use, and developing databases for commercial use.	1986/92	Managed in-house.
SC7	Air Circulation	Evaluating air quality, contamination, energy efficiency and user comfort in swimming pools.	1989/91	Electricity Council Research Centre.
SC8	Effects of Compulsory Competitive Tendering on Sports Participation	Assessing the impact of compulsory competitive tendering on the sporting needs of participants.	1989/91	Not yet decided.
Development				
SC9	Training of Young Athletes	Assessing psychological and physiological effects of training on young sports participants.	1986/93	Institute of Child Health.

SC10	National Fitness Survey	Applying a set of fitness tests and questionnaires to assess fitness, dietary habits, activity levels of representative sample of the population.	1988/91	Activity and Health Research Limited.
SC11	Sport and Ethnic Minorities	Establishing relationship of ethnic minority groups with wider community as it affects their participation in sport and recreation.	1988/90	Centre for Ethnic Studies, University of Manchester.
SC12	Sports Injuries	Studying the incidence of injuries and illness occurring from participation in sport and recreation.	1989/91	Medical Care Research Unit, University Sheffield.
Monitoring Studies				
SC13	National Participation Demonstration Projects	Monitoring and evaluation of 12 schemes.	3 years each	Managed internally by SC(NW).
SC14	Sports Hall Specification Project	Assessing cost effectiveness of various building types.	2 years	Davis, Langdon & Everest.
SC15	Updating of Provision for Swimming	Revising national strategy document through national working party.		Kit Campbell.
SC16	Indoor Tennis Initiative	Evaluating performance and cost effectiveness.		Sports Marketing Surveys.
SC17	Sports Information Points	Evaluating performance of the network.	6 months	Internally managed.
SC18	What's on for Women	Evaluating effectiveness of the national campaign.	6 months	Sports Marketing Surveys.
Regional Strategy Studies				
SC19	Urban Parks	Strategy for Northern Region.	1.5 years	Project Officer appointed.
SC20	Coastal Recreation	Strategy for South West Region.	1.5 years	Project Officer appointed.
SC21	Coastal Recreation	Strategy for Southern Region.	1.5 years	Geodata, University of Southampton.
SC22	Wet Mineral Workings	Strategy for West Midlands Region.	6 months	Universities of Birmingham and Warwick.
Committed New Research				
SC23	Tourism and Sport	To establish trends in tourists' sporting behaviour and aspirations, demand for and use of facilities, costs and benefits to local communities.	2 years	Possible partners?
SC24	Dry Ski Slopes	To update market assessment of 15 years ago, and examine incidence of injuries and their prevention.	2 years	
SC25	Golf Course Provision	To complete UK's first market assessment of golf participation and provision, and examine technical improvements to courses.	2 years	
SC26	Sand-based Pitches	To follow up Prototypes Monitoring Programme on maintenance and management costs.	3 years	

Development

SC27	Multi-sports Clubs	To compare efficiency of multi-sports clubs compared to single sports clubs and identify good practice from the Continent.	3 years	
SC28	Local Patterns of Supply and Demand	To apply new demographic analysis techniques to identify more effectively actual and potential sports participation at local levels.	2 years	
SC29	Outdoor Sites of National Sporting Importance	To examine feasibility of classification/notification system for sites of recreational value.	2 years	Possible partners?
SC30	Youth, Sport and Ethics	Collaborating with Council of Europe on national/international aspects of youth sports participation and relationship to ethical criteria.	3 years	Preliminary work by Bedford College of HE.
SC31	Effects of Local Management of Schools on Community Sports Participation	Monitoring the impact of new legislation.	2 years	
SC32	Collaborative Large Scale Recreation Survey	Assessing feasibility.	6 months	Multi-agency project.

Databases 1990/91

<i>Title/Description</i>	<i>Timescale/Access</i>	<i>Geographical Features</i>	<i>Recreational Features</i>
Sports Facilities (England)	Continuously updated. Currently via SC Information Centre only.	Post code/Grid reference.	Sports centres, swimming pools, squash courts, golf courses, ancillary facilities.
Artificial Surfaces	Continuously updated. Currently via SC Information Centre only.	Addresses.	Product supplier, manufacturers and specifications.
Sports Centre Equipment	Continuously updated. Currently via SC Information Centre only.	Addresses.	Product suppliers, manufacturers (not personal equipment).
Sports Events	Continuously updated. Currently via SC Information Centre only.	Post code/Grid reference.	Centres, courses, stadia, venues.
European Sports Research	Continuously updated. Currently via SC Information Centre only.	Name and institution (national and international).	Register of sports researchers and projects.
Addresses	Continuously updated. Currently via SC Information Centre only.	Post code--local to international.	Sports and related organisations.

Research Publications 1989/90

Elson, M and others (1989), *Providing for Air Sports*.
 Elson, M and others (1989), *Providing for Motorised Water Sports*.
 Roberts, K and others (1989), *Community Response to Leisure Centre Provision in Belfast*.
 Henley Centre for Forecasting (1989), *The Economic Impact of Sport in Two Local Areas: Bracknell and The Wirral*.
 Coalter, F and Potter, J (1990), *Recreation Management Training Needs*, Summary Report.
 National Turf Pitches Advisory Panel (1990), *Summary Information Sheet 3*.

Contact for Research Enquiries: Sian Phipps, Sports Council Research Unit, 2 Tavistock Place, London WC1H 9RA (071-837-2658).

Contact for Database Enquiries: Jacqui Innes, The Sports Council, 16 Upper Woburn Place, London WC1H 0QP (071-388-1277).

SPORTS COUNCIL FOR WALES

Introduction

Established in 1972, by Royal Charter, the Sports Council for Wales has responsibility to develop and improve the knowledge and practice of sport and physical recreation in the interests of social welfare amongst the public in Wales. Its aims are to increase participation, raise standards of performance, improve facilities and provide a research and information service.

The Council's Policy Planning Section has responsibility for research together with information services, strategic planning, statutory planning, facilities planning and countryside recreation. The central role of Policy Planning is to provide a reliable information base for the formulation of Council policies and the dissemination of advice to partners. The Section also has a responsibility to ensure that the Council is spending its money effectively to achieve the objectives set out in the Strategy, 'Changing Times: Changing Needs'.

Research Programme 1990/91

	<i>Project Title</i>	<i>Summary of Objectives</i>	<i>Timescale</i>	<i>Comments</i>
Current Research				
SCW1	Sport and the Welsh Economy	To provide data on expenditure and income derived from sport in Wales.	1989/90	Carried out by Henley Centre. Research complete, publication forthcoming.
SCW2	Governing Body Digest	To produce a digest on Welsh governing bodies and their characteristics.	1989/90	In-house. Collation of data complete, publication imminent.
SCW3	Evaluation of Governing Bodies in Wales	To monitor the impact of the direct grant scheme on governing bodies.	1989/90	In-house. Research complete, report being written.
SCW4	Natural Facilities Database	To establish a database on natural facilities in Wales used for sport and physical recreation.	1990	Carried out by Rural Surveys Research Unit, Aberystwyth University. Due to be completed in September 1990.
SCW5	Sports Participation in Wales	To analyse sports participation in Wales through the use of the Welsh omnibus survey.	1989/90	Carried out by Beaufort Research Ltd. Biennial survey. Publication summer 1990.
SCW6	Sports Club Membership in Wales	To analyse sports club membership in Wales through the use of the Welsh omnibus survey.	1989/90	Carried out by Beaufort Research Ltd. Biennial survey. Publication summer 1990.
SCW7	Compulsory Competitive Tendering	To study the effect of compulsory competitive tendering on local authority provision and sports participation.	1990/91	Carried out by Brighton Polytechnic. Co-sponsored by SCW and SC. Interim report May 1991.
Committed New Research				
SCW8	Local Authority Sports Provision	To analyse local authority provision for sport and recreation.	1989/90	In-house. Research complete, publication forthcoming.
SCW9	Sites of Sporting and Recreational Importance	To investigate the feasibility of establishing Sites of Sporting and Recreational Importance in the countryside.	1990/91	To collaborate with the SC. To be contracted out.
SCW10	Coaching and Coach Education in Wales	To investigate sports coaching and coach education structures in Wales.	1990/91	In-house. Project to commence in September.

SCW11	Motorised Recreation in the Countryside	To investigate the provision and usage of sites for motor sports and the conflicts arising.	1990	To be contracted out. Start date October.
SCW12	Sports Pitches in Wales	To establish a database of sports pitches in Wales in order to monitor loss of facilities and dual use possibilities.	1990/91	In-house.
SCW13	Village Halls/Community Centres	To establish a database of village halls/community centres used for sport and recreation.	1990/91	In-house.
SCW14	Children's Sport Participation	To undertake a survey of sports participation by secondary and tertiary age group children.	1990/91	Contracted out. Biennial survey.
SCW15	Water Privatisation	To monitor the effect of water privatisation on sport and recreation.	1990	In-house. Project to commence August, updated annually.
SCW16	Marketing of Optimum Use	To investigate the marketing of optimum use sites in Wales in order to improve their profile and usage.	1990	To be contracted out Autumn 1990.
SCW17	Sports Sponsorship in Wales	To analyse the amount of sponsorship generated by Welsh sport.	1990/91	In-house. Start date Autumn 1990.
SCW18	Sports Development Officers	To evaluate the effectiveness of funding staff posts with partners.	1990/93	To be contracted out.
SCW19	Physical Education in Schools	To undertake a survey of PE teachers in schools focusing on the time devoted to PE and its nature in the curriculum.	1990	Survey being undertaken June 1990. Publication August 1990.

Databases 1990/91

<i>Title/Description</i>	<i>Timescale/Access</i>	<i>Geographical Features</i>	<i>Recreational Features</i>
Facilities Database	Regularly updated via Information Centre and Welsh Office map.	Post code. Grid reference.	Currently covers sports centres, swimming pools, squash courts and golf courses.
Planned Facilities Database	Continuous updating via Information Centre.	County and district.	Currently covers stages of development of planned sports facilities.
Sports Participation	Biennial survey 1987/88, 1989/90. Information provided through publications and on enquiry basis.	County based information.	All main sports.
Sports Club Participation	Biennial survey 1989/90. Information provided through publications.	County based information.	18 individual sports.
Natural Facilities	Information available from September. Access yet to be decided.	Grid reference.	All major countryside activities.
Surfaces Currently Available for Sports	Regularly updated via Information Centre.		Sport specific.

Research Publications 1989/90

Sports Council for Wales (1989), *Partnerships in Progress: A Strategy Review Consultation Document*.
Rigg M (1989), *Operation Sport: Leadership in Wales*, Sports Study No 1, Pub: Sports Council for Wales.
Sports Council for Wales (1989), *Sports Participation in Wales 1987/88*, Sports Update No 1 (August).

Sports Council for Wales (1989), *Indoor Bowls*, Sports Update No 2 (August).
 Sports Council for Wales (1989), *Rate Relief*, Sports Update No 3 (November).
 Sidaway, R (1990), *Countryside Council for Wales?*, Sports Update No 4 (January).
 Sports Council for Wales (1990), *Rates Revaluation*, Sports Update No 5 (February).
 Sports Council for Wales (1989), *A Review and Interpretation of Recent Education Legislation*, Youth and Sport, Bulletin No 1.
 Sports Council for Wales (1990), *The Education Legislation: A Guide for the Governing Bodies of Sport, Sports Clubs and Other Sports Organisations*, Youth and Sport Bulletin No 2.
 Sports Council for Wales (1990), *A Framework for Sport in the Community*, Youth and Sport Bulletin, No 3.
 Welsh Office and Sports Council for Wales (1990), *Sport in Wales: Built Facilities Map*.

All the above publications are free of charge except Sport in Wales: Built Facilities Map which can be obtained from Map Library, Welsh Office, Cathays Park, Cardiff at a cost of £4.50 plus £1.50 postage and packing.

Contact for Research Enquiries: Huw Jones, Head of Policy Planning, Sports Council for Wales, National Sports Centre for Wales, Sophia Gardens, Cardiff CF1 9SW (0222-397571).

Contact for Database Enquiries: John Hinton, Information Officer, Sports Council for Wales, National Sports Centre for Wales, Sophia Gardens, Cardiff CF1 9SW (0222-397571).

WALES TOURIST BOARD

Introduction

The Wales Tourist Board is an independent statutory body; it was established in 1969 to promote tourism to and within Wales, to encourage and assist the provision of tourist facilities and amenities in Wales, and to provide policy advice on tourism matters. The Board's Framework Development Strategy 'Tourism in Wales - Developing the Potential', published in June 1988 following a programme of consultation, sets out a 5 year development programme for tourism in Wales and is complemented by an annual Marketing Plan. The policies of the Board are directed towards ensuring the economic and social well being of the people of Wales; they are underpinned by a concern to protect and to enhance the physical environment of Wales, and to sustain and promote Welsh culture, language and heritage.

The research activities of the Board are directed towards providing information for policy planning purposes and the programme covers development, marketing and more fundamental research. Most studies are commissioned from outside contractors, and are funded jointly with other bodies wherever possible in order to ensure an integrated and cost effective approach. Research findings are disseminated widely and it is the Board's policy to raise as much revenue as possible from the sale of data with a commercial value.

Research Programme 1990/91

	<i>Project Title</i>	<i>Summary of Objectives</i>	<i>Timescale</i>	<i>Comments</i>
Recently Completed Research				
WTB1	Newport Tourism Study	To consider the tourism potential of the Borough of Newport.	1988/89	Multi-agency study: report published spring 1989.
WTB2	Study of Hotel Development Potential	To identify hotel development opportunities in pursuit of WTB strategic policy priorities.	1988/89	Independent study: report published June 1989.
WTB3	Evaluation of Tourism Employment	To examine the scale and structure of tourism employment, by collating existing official and other statistical information.	1988/89	Desk study: published April 1989.
WTB4	Study of the Schools Visits Market	To examine the pattern and principal determinants of organised visits by primary and secondary schools.	1988/89	Postal survey among visit organisers: report published February 1989.
WTB5	Survey of Visitors to Tourist Information Centres	To provide information on Tourist Information Centre users and their perceptions of what goods and services are available at Tourist Information Centres.	1989/90	Report published March 1990.
WTB6	Budget Hotel and Inn Developments in the Valleys Initiative Area	To examine the potential for budget hotel and inn development in the Valleys Initiative Area.	1989/90	Joint study by WTB/WDA: report to be published spring 1990.
WTB7	Ogwr Tourism Study	To identify realistic new tourism opportunities in the Borough of Ogwr.	1989/90	Multi-agency study: research completed March 1990.
WTB8	Horseshoe Pass Environmental Study	To undertake an environmental improvement study.	1989/90	Multi-agency study: research completed March 1990.
Continuous/Annual Research				
WTB9	United Kingdom Tourism Survey	To provide comprehensive information on overnight tourism trips taken by UK residents.	Continuous/Annual	New survey commissioned jointly by ETB/STB/NITB/WTB.
WTB10	International Passenger Survey	To provide secondary analysis of the International Passenger Survey, which is the official source of information on overseas visitors to Great Britain.	Annual	Joint initiative by BTA/STB/WTB.

WTB11	Tourism Demand Monitor	To provide information on monthly demand trends among a representative sample of hotels, holiday parks, self catering agencies and attractions.	Monthly	Integrated programme combining postal/telephone surveys.
WTB12	Survey of Attendance at Visitor Attractions in Wales	To provide an annual measure of attendance at major tourist attractions.	Annual	Annual postal inquiry.

Current Research

WTB13	Joint Survey of Coach Operators	To identify factors influencing choice of destination within UK by coach tour operators, and to consider the product implications.	1989/90	Joint study by ETB/STB/WTB: to be completed spring 1990.
WTB14	Financial Management of Tourist Information Centres	To consider various options for financing and managing the Tourist Information Centre network.	1990	Joint study by WTB and local authority associations: to be completed July 1990.
WTB15	Denbigh Tourism Business Plan	To undertake detailed tourism study with the view to developing Denbigh's tourism potential.	1989/90	Study to be completed summer 1990.
WTB16	Merthyr Tourism Business Plan	To undertake a detailed tourism study with the view to developing Merthyr's tourism potential.	1990	Study to be completed summer 1990.
WTB17	Minera Open Air Museum Study	To assess the feasibility of an open air museum and prepare a development plan.	1990	Report to be produced on completion of study.

Committed New Research

WTB18	Marketing Campaign Tracking Study	To evaluate the WTB 1990 Marketing Campaign.	1990	Study to be completed end of 1990.
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Tentative New Proposals

WTB19	Review of Harbour and Marina Development	Proposed joint survey to review proposed marina development and to consider the economic and social impact of harbour/marina developments.	1989/90	Multi agency study: under consideration.
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Research Databases 1990/91

Title/Description	Timescale/Access	Geographical Features	Recreational Features
Accommodation Inventory	Database subject to regular updating. Limited access – listings available by negotiation.	Establishment addresses; postcodes.	Accommodation capacity and product details.
Tourist Resource Inventory	Data to be subject to regular updating. Limited access – listings available by negotiation.	Establishment addresses; postcodes.	Product details for a variety of tourist facilities, attractions, services.

Research Publications 1989/90

British Tourism Survey Monthly (1988), with ETB.
Hotel Occupancy in Wales 1989, (monthly and annual summaries).
Demand Monitoring Survey 1989, (monthly and annual summaries).
Research Factsheets, (various).
Marketing Planning Profiles, (various).
The Social, Cultural and Linguistic Impact of Tourism, report of an independent study.
Tourism Employment in Wales.
Hotel Development Potential in the A55, M4 and Heads of the Valleys Strategic Road Corridors, report of an independent study.
Survey of Visitors to Tourist Information Centres.

Contact for Enquiries: R Elwyn Owen, Research and Corporate Planning Unit, Wales Tourist Board, Brunel House, 2 Fitzalan Road, Cardiff CF2 1UY (0222-499909).