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PROGRAMME DIRECTOR'S ANNUAL REPORT FORM

(Edition 7: October 2004)

PROGRAMME DIRECTOR'S ANNUAL REPORT 2004

Programme Name : **RURAL ECONOMY AND LAND USE PROGRAME**

Director's name : **Professor Philip Lowe**

Reporting period : **From 1 January 2004 to 31 December 2004**

Number of Projects funded under the Programme: **42 projects**
(include all Phases where applicable)

Total Research Council budget for Programme: **£22,000,000**

Co-funding amount: **£1,750,000**

The Annual report was prepared by Philip Lowe, Jeremy Phillipson and Joanna Daymond

(1) Introduction

Aims and objectives of the Programme: The Rural Economy and Land Use Programme (RELU) aims to advance a holistic understanding of the major social, economic, environmental and technological challenges facing rural areas. The Programme is informed by two main premises. Firstly, that the challenges cut across disciplinary boundaries and require collaboration between the social and natural sciences. Secondly, that inclusive stakeholder engagement is important throughout the Programme. Interdisciplinary research is being funded between 2004 and 2009 in order to inform future policy and practice for the countryside, to achieve more sustainable outcomes. The specific objectives of the Programme are:

- to deliver integrative, interdisciplinary research of high quality that will advance understanding of the social, economic, environmental and technological challenges faced by rural areas and the relationship between them;
- to enhance capabilities for interdisciplinary research on rural issues, between social, environmental and biological sciences;
- to enhance the impact of research on rural policy and practice by involving stakeholders in all stages, including programme development, research and communication of outcomes.

Summary of Key Performance Indicators: A set of KPIs has been agreed for the Director's Office to reflect the Programme's distinctive character and the critical, value-added contribution to be made by programme-wide activities. The broad categories are: intellectual leadership; user engagement; interdisciplinarity; data management; and policy and programme management (see Section 5).

Start and end dates of phases within the Programme: The reporting period covers the launch of the Programme, the establishment of the Director's Office and the commissioning of the first of three waves of research.

Number of researcher and related posts: The first wave of funded projects involves 175 investigators and over 40 researchers. The Director's Office, which commenced work December 2003, is an interdisciplinary team:

- *Director*: Professor Philip Lowe OBE, MA, MSc, MPhil, Duke of Northumberland Professor of Rural Economy at the University of Newcastle upon Tyne - A leading figure in the development of interdisciplinary rural studies in the UK (70% FTE [80% from June 2004]).
- *Assistant Director:* Jeremy Phillipson, BSc, MPhil - A social scientist with expertise in rural economy and natural resource management and experience of managing European and interdisciplinary research programmes (60% FTE).
- *Communications Manager:* Dr Jo Daymond, BSc, PhD - An environmental scientist and experienced writer and communicator who has run her own science communication business (100% FTE from August 2004).

Number of projects started before, during and after the reporting period: In all, 35 projects[1] were commissioned under RELU's First Call, with 27 of them beginning their research during the reporting period (and 8 after).

Year of the Programme: Year 1

Co-funding and collaboration during the year: The programme is a collaboration between the ESRC, BBSRC and the NERC. It has a budget of £24 million, including co-funding of £750,000 from the Scottish Executive Environment and Rural Affairs Department (SEERAD) and £1 million from the Department for Environment, Food and Rural Affairs (Defra).

Highlights: Highlights for the year are presented in Section 2 and Annexe A.

[1] In addition 7 small networking grants were commissioned during the reporting period. 5 studentships were also commissioned with start dates in the next reporting year

(2) Overview of year

During 2004, proposals for funding under the First Call were fully assessed, the specification for the Second (and largest) Call for funding was finalised, and the assessment process for Second Call proposals began. Projects funded under the First Call started work, and a system of project monitoring and reporting was put in place. Programme networking and liaison got under way. Engagement with stakeholders was broadened and intensified.

Formulating RELU's research themes
The sort of major public challenges that RELU research is intended to address include: restoring trust in food chains; tackling animal disease in a socially acceptable manner; sustaining agriculture in a liberalised economy; promoting robust rural economies; mitigating threats to nature from climate change and invasive species; and reducing stress on water catchments. In formulating the research challenges for the Programme, this agenda has been worked up into four principal themes: *'Sustainable food chains'*; *'The integration of land and water use'*; *'The environmental basis of rural development'*; and *'Economic and social interactions with the rural environment'*. The calls for funding have been structured around these four themes.

Innovation in funding mechanisms
35 projects[2] were commissioned under the First Call. The bulk of the £6.2 million funding was invested in 8 large projects (of up to £1 million) around the *'Sustainable food chains'* theme. In addition, some 19 grants of up to £50k were awarded for Capacity Building Awards and Scoping Studies on the other three themes, as well as 7 small networking grants. These novel funding mechanisms were pioneered by RELU to initiate and strengthen linkages between researchers from different disciplinary backgrounds and to support the development of interdisciplinary capacity across the social and natural sciences. The suite of research activities is supported by 8 cross-cutting Development Activity projects which aim to demonstrate the wider value and potential of the Programme as a whole.

Buy-in of key stakeholders to the Programme: novel Stakeholder Engagement Plans
During Year 1 a major priority was to achieve the active involvement of key stakeholders in the Programme. The Director's Office is now in regular contact with over 35 stakeholders, and with 4 of these it has concluded or drafted Stakeholder Engagement Plans. This widening and deepening of involvement is starting to deliver tangible benefits. For example, UK Water Industry Research (UKWIR) has agreed to host and sponsor the meetings of the Programme's stakeholder forums. Defra has proposed to take on work shadowing placements of RELU researchers – an idea which is now being worked up for other stakeholders. A number of organisations have shown an active interest in several of the First Call projects.

Making tangible the Programme's interdisciplinary ambitions: understanding the Tower of Babel
RELU is undoubtedly the most ambitious interdisciplinary programme conducted by the Research Councils, with its commitment to pursue interdisciplinary working across the social and natural sciences in all projects funded, not only to solve complex contemporary problems but also to build interdisciplinary research capacity for the long-term. First Call research projects represent over 30 scientific disciplines. During the year the Programme

[2] Excluding 7 small networking awards and 5 studentships

has made significant progress in elaborating the aspiration, rationale and the modalities of interdisciplinarity. This built on a survey of the literature on interdisciplinary methods and a consultation with leaders of previous interdisciplinary programmes. Analysis of applications to the First Call revealed the variations and limitations in the approaches they had adopted to interdisciplinarity. In drawing up the specification for the Second Call, a discussion was included of different types and forms of interdisciplinarity. The application form and assessment procedures were changed to clarify applicants' thinking and intentions in this regard. For the first time in a Research Council programme, applicants were asked to specify and justify their approach to interdisciplinarity, their choice of disciplines, the level and form of integration envisaged, and how integration would be embodied in project design and training. To aid analysis of the impact of the Programme we drew up and negotiated the first ever cross-council list of disciplines. This revealed a staggering 40 disciplines amongst the applicants to the Second Call.

Assessing First Call projects and establishing a sound foundation for programme management and project oversight

134 applications made under the First Call were assessed at 5 different assessment panels. The resulting 35 projects, 7 networking awards and 5 studentships already constitute a large, complex and diverse programme, from this – the first and smallest – funding call. It was vital therefore to have in place an efficient system of programme management, quality assurance and project liaison as these projects got underway in the period July-October. During the year, the Director's Office drew up a Communication Plan and a Data Management Plan. At the outset of their projects grant holders were required to prepare their own simplified versions of these, which have provided the basis for the Director's Office to set up a system to monitor progress against planned activities.

A well designed Second Call clearly articulated and presented to the scientific community

Following extensive consultation with stakeholders and the scientific community, a Second Call for proposals was implemented during the year, focusing on the themes of *'The integration of land and water use'*, *'The environmental basis of rural development'* and '*Economic and social interactions with the rural environment'*. The call elicited a major response from the science community. Over 700 co-investigators from 120 UK research institutions were involved in preparing applications, indicating the burgeoning interest in RELU.

Highlights for the year are presented in Annexe A:

- Research highlight: RELU and interdisciplinarity
- Dissemination highlight: Cabinet Minister and Defra back RELU Programme

(3) Progress of Programme

3.1 Scientific quality

Judging the scientific quality of a programme like RELU and its component projects is not going to be a straightforward task. This is because there is nothing quite like RELU, with which to make comparisons. Standard within-council measures (such as the proportion of alpha-rated projects) do not necessarily work. The majority of the referees (who are drawn from all three research council communities) are unfamiliar with the ESRC's alpha-rating system (the other councils employ a different system), and most referees only feel comfortable judging those aspects of proposals with which they are familiar (say, the biology or the ecology or the sociology). Nevertheless, with a mix of natural and social scientists as referees for each project, the process does ensure that the disciplinary components of research projects are rigorously assessed. Judging the quality of a project's interdisciplinarity in the round is a more demanding but critical requirement.

Referees are asked to recognise:

- the need to maintain rigour to ensure the identification and selection of the best proposals for funding;
- that interdisciplinary research should be viewed positively rather than as a threat, as it can provide a more holistic capability to address research or policy questions. Outcomes might include the development of new paradigms and methodologies. However, it is also acknowledged that such research may be riskier in many respects. This demands that the peer review process is open to new ideas and approaches.
- that the natural and/or social science elements of a proposal might not be innovative within a specific disciplinary context, but when taken collectively they could result in innovative research (i.e. the sum could be greater than the parts).

In judging the quality of proposals from an interdisciplinary perspective, the attention of referees is drawn in particular to:

- the conceptual and theoretical foundations and hypotheses
- the integration of natural and social science perspectives (and project streams and disciplines)
- the methodology to facilitate working across disciplinary boundaries
- the specification and justification of the interdisciplinary approach
- the reasoning for the choice of disciplines

A number of means are being pursued to ensure the highest possible scientific quality in project applications. This has involved procedural innovations that together require successful bids to have gone through a demanding, multi-stage process of development and assessment. Thus, most of the allocation of funding under the Programme for big projects was reserved for the Second and Third Calls. Most of the projects funded under the First Call were essentially for preparatory activities for these subsequent calls (however with no presumption that they will gain the big prizes). Of the few big projects selected under the First Call, most were initially given only conditional acceptance and were required to re-submit and, in doing so, to respond to more or less stringent conditions set by the assessment panel. The Second Call assessment is taking this to its logical conclusion and is operating a two stage process, of outline and full applications. Thus most of the big projects funded will have had to jump a number of exacting hurdles.

Fortunately, applicants do not seem to have found this a daunting prospect and have risen to the challenge. Indeed, a proxy measure of quality (in advance of any scientific output)

might be the competitiveness of the funding calls. Strong competition should be expected to drive up quality. While the First Call was oversubscribed a little less than 4 times, the Second Call was 5 times oversubscribed.

3.2 Interdisciplinarity

Over 30 disciplines are involved in First Call RELU projects which represents an unprecedented spread of research expertise. Every project embraces natural and social scientists. The most prominent disciplines within RELU to date include economics, ecology, human geography, physical geography, environmental chemistry and hydrology. RELU is also pioneering less well established disciplinary collaborations. Examples include projects that embrace philosophy and soil science, and crop science and development studies.

RELU research under the First Call is making a substantive contribution to integrated research methodologies. Various approaches to integration are being adopted at project level, including:

- the integrated assessment of technologies and systems
- the design of diagnostic measures of system performance
- synoptic perspectives on geographical areas
- holistic analysis of problems
- the combination of research techniques and methods
- integrated modelling and monitoring of systems
- the combination of data sets
- the development of tools, techniques and methodologies to support decision making
- interdisciplinary dialogue and scrutiny of key concepts

RELU is committed to 'Root-and-Branch' interdisciplinarity, from research policy to individual scientists:

Programme level
- Strategic co-operation between three Research Councils (ESRC, BBSRC, NERC)
- Pooled funding resources and Research Council staff
- Combined communication, data and assessment policies drawing on best practice

Programme management level
- Novel funding mechanisms to initiate and build collaboration across disciplines
- Director's Office integrated across the social and natural sciences
- Workshops to promote shared perspectives on topics and problems

Project level
- Requirement for all projects to involve collaboration between social and natural scientists
- Innovation in interdisciplinary methods and approaches
- Projects encompass over 30 different disciplines

Individual researcher level
Training activities and professional development to support interdisciplinary capacity building (see Section 3.4)

3.3 User engagement, knowledge transfer and impact

Expenditure on programme-wide activities
Key items of expenditure include: £11,091 on Rural Futures Workshop (see section 3.6), £10,158 on programme publicity and £3,490 on UK networking/liaison meetings.

Significant publications
The RELU website was developed and launched (www.relu.ac.uk), and a brochure describing the Programme's aims and research was produced.

Significant engagement conferences, workshops etc. sponsored by the Programme
Many stakeholders were engaged in RELU's first major workshop, on rural futures (see section 3.6).

Programme-level meetings with potential users in the private and public sectors
There has been widespread consultation among stakeholders in the formulation of the Programme. RELU is advised by a Strategic Advisory Committee, chaired by Sir Howard Newby, which includes representation from Defra, Environment Agency, Countryside Council for Wales, Countryside Agency, Scottish Environment Protection Agency and the Joint Nature Conservation Committee. Other stakeholder forums will help disseminate and evaluate the implications of RELU research. During the year, the first of these - a Food Chain Forum - was inaugurated which includes representatives from Unilever, Food from Britain, Marks and Spencer, Food Ethics Council, Advantage West Midlands Regional Development Agency, Soil Association, Countryside Agency, Countryside Council for Wales, Defra and the BBC.

A list of primary stakeholders has been assembled to receive Programme documentation and consultations. The list currently includes over 70 leading figures in 37 organisations. Stakeholders on the list have been consulted on the Second Call and received a briefing document on the First Call projects. Direct meetings were held at programme level with 18 stakeholder organisations, including presentations to the UK Biodiversity Research Advisory Group, English Nature, the Local Government Association, the Local Authorities Research and Intelligence Association, the Royal Show, the Sustainable Development Research Network and Food Ethics Council. To secure close and sustained involvement in the Programme with a selection of key stakeholders RELU has pioneered Stakeholder Engagement Plans (SEPs) which specify clear, simple and bespoke terms of engagement between the Programme and the stakeholder. During the reporting period SEPs have been agreed with Defra, SEERAD and UKWIR, and drafted for the Environment Agency.

Assessment of relevance of the research to user priorities and potential impact on policy and practice
Analysis of the First Call projects shows that the Programme is providing insights of relevance to key policy domains, notably water management, sustainable farming and food, rural development policy, biodiversity and landscape protection policy. Projects themselves are collaborating with a wide range of organisations and publics, some in an advisory capacity, others as consultees, informants or research partners (see Table). At their most radical, projects are sidestepping the conventional researcher/research subject divide to pursue an approach best described as the co-production of knowledge between researchers and practitioners.

Stakeholders in RELU Projects

- 8 Government Departments, such as and SEERAD
- 8 Public Agencies, such as the Countryside Agency and English Nature
- 14 Regional and Local Authorities, such as the Association of National Park Authorities and Advantage West Midlands
- 9 Public Interest Groups, such as the Food Ethics Council and the Countryside Alliance
- 23 Sectoral Bodies, such as the Red Meat Industry Forum and British Retail Consortium
- Scores of individual small firms and farms through to large businesses and multinationals, such as Tesco, Marks and Spencer and Unilever
- International Organisations, including UNESCO and WWF
- Community and Voluntary Groups such as Leader + and Yorkshire Rural Community Council
- Regulatory Bodies like the Food Standards Agency and Scottish Environment Protection Agency
- Professional Associations, such as the National Farmers Union and Independent Crop Consultants Association
- Charities and Trusts, like RSPB and the National Trust
- Independent Committees and Advisory Groups such as the Joint Nature Conservation Committee and Land Use Policy Group
- Think Tanks including the Future Foundation and Henley Centre
- Partnership Projects such as Moors for the Future and Upper Wharfe Best Practice Project
- Media Organisations such as the BBC

To quote from the progress report of one of the projects:

> *Although the initial research proposal was developed in close collaboration with a stakeholder representative organisation, subsequent stakeholder analysis and scoping interviews have identified a need for greater focus on certain issues. This emphasises a need to actively engage a wide range of stakeholders during the earliest stages of research development. Such engagement is rare in UK research, but by funding participatory Scoping Studies, RELU has facilitated active involvement of stakeholders as partners with academics in the research development process* (Hubacek RES224-25-0088).

3.4 Research capacity and training

One of RELU's primary objectives is to enhance and expand capabilities for integrative, interdisciplinary research on rural issues. In bringing together researchers from different disciplines within the natural and social sciences to address contemporary issues and problems, RELU will require increased cooperation, respect and understanding between disciplines, in order to improve the ability of the research community to:

- apply learning from one field to another
- combine different methodological approaches and sources of information
- cross-fertilise ideas and concepts
- understand scientific, technological and environmental problems in their social and economic contexts

Research experience and training through RELU will seek to create a new generation of research staff who are able to think beyond the frontiers of their immediate discipline, to operate in interdisciplinary contexts and to be more effective at following ideas through to application. In seeking to enlarge interdisciplinary capabilities, attention will be given as much to promoting novel cross-disciplinary couplings across the natural and social sciences as to further refinement of established interdisciplinary methods and techniques. The following are the mechanisms being pursued to achieve these objectives:

Interdisciplinary studentships

RELU has its own studentship scheme which is open to applications competitively from the big projects. The rationale is that research students will benefit from being associated with these major interdisciplinary endeavours and the diversity of scientific expertise and research experience they have to offer. The scheme has been modelled on the successful

NERC/ESRC postgraduate scheme. In assessing the proposals particular attention is given to the quality and integration of the research training and supervision to be provided. 5 studentships have been allocated in Year 1.

Assessment and monitoring of in-project training
RELU projects are likewise seen to offer fertile ground for on-the-job training and work experience for research staff, familiarising them with different methods and techniques as well as with interdisciplinary project management. The training and research career development experience provided by projects are a specific element of project assessment and monitoring.

Programme-level training activity
Planning is underway for training workshops on 'Interdisciplinarity' and 'Integrated Data Management' at the Programme Conference in January 2005. Projects have also been encouraged to take part in generic Research Council Training Events, such as ESRC's 'Getting Research into Practice' sessions. Some of the natural science PIs especially have benefited from the opportunity for cross-over training (see, e.g. Matthews, RES-224-25-0087), just as the Programme Director has benefited from similar sessions organised by NERC.

Work shadowing placements
The programme is developing a work shadowing scheme with key stakeholders. The scheme will involve researchers in short term placements with stakeholder organisations, raising their awareness of the policy and practice context for their research.

Building science capacity
Analysis of the collaborations established for the First and Second Calls reveals that the Programme is already building new interdisciplinary capacity. Thus, on the one hand, between the bio-science and social science communities RELU is strengthening or forging links that were weak or non-existent. This is enabling cooperation on cross-cutting issues of critical importance concerning plant/animal and human interactions. On the other hand, RELU is also fundamentally drawing together the environmental and social science communities. Projects are exploring methods for combining data and analysis at different spatial scales. This is paving the way for integrated data management systems, as well as developing powerful tools for research and decision making on human-environment interactions. Thus, through casting research in a broad social and economic framework, RELU is demonstrating a strategic potential to prioritise biological and environmental processes that underpin larger scale processes of sustainable development.

3.5 Data collection and management

During the year data management arrangements have been negotiated and put in place for the Programme. This has involved a collaboration being forged, between specialist ESRC and NERC data staff, to provide a bespoke Data Support Service (which will begin 1 Jan 2005). In this respect the Programme is setting valuable precedents for integrated management of environmental and socio-economic data sets.

The data management policy draws on current best practice within the funding research councils and is based on the following principles:

- Publicly funded research data are a valuable, long term resource
- Data must be well managed
- Data must be made available by researchers for archiving

- RELU funds will support data management through the life of the project
- Post-programme data management will be the responsibility of the research councils.

RELU data management is advised by a sub-group of the Strategic Advisory Committee.

Each RELU project is required to prepare a data management plan at the outset of the research. The process of preparing and implementing the plans is supported by the Data Support Service (DSS) through a telephone and email help desk, a web portal and a series of training events (http://www.esds.ac.uk/aandp/create/reludss.asp).

3.6 Programme management

Expenditure on networking communication activities among investigators
Key items of expenditure include: £11,091 on the Rural Futures Workshop and Principal Investigator meeting, £3,490 on UK networking/liaison meetings and £5,140 on Research Council meetings.

Programme management and project oversight
During the year the Programme finalised a Communication Plan and a Data Management Policy. These informed the design of a simple proforma which First Call award holders had to complete at the outset of their projects, thereby generating for each a Project Communication and Data Management Plan (PCDMP). The PCDMPs are intended to help research teams to think about their project's organisation, activities and responsibilities. Taken together the plans provide a basis for the overall planning and development of the Programme. Monitoring of the PCDMPs is being operationalised through a project data base system set up in the Director's Office which tracks project progress against planned activities. This innovative system will provide a basis for quality assurance within the Programme.

Programme meetings
Two programme-wide meetings took place during the year:

RELU Principal Investigators Meeting, 12th October 2004, London
RELU 'First Call' Principal Investigators (PIs) were brought together to discuss programme-level issues and synergies and to help plan future initiatives. PIs were introduced to RELU's data management and communication plans, stakeholder engagement intentions, requirements of award holders and the responsibilities of projects to the wider programme. During the meeting PIs helped to plan future RELU Programme activities, including prioritisation of stakeholder engagement plans and planning of the January 2005 conference. In all 7 Research Projects and 17 Capacity Building Awards and Scoping Studies were present.

RELU Rural Futures Workshop, 13th October 2004, London
The workshop introduced RELU researchers to current futures work in the rural field. The aim was to inform researchers of the significance of this work, review its use in public and commercial organisations, and consider the relevance of its methodologies and results for RELU research. Some 50 people attended. Seven papers were given by prominent futures experts, stakeholders and academics. A briefing paper is being produced from the workshop.

Advisory committee meetings
The reporting period represented an intensive stage in the development of the Programme. As well as six assessment panel meetings, four meetings of the RELU Strategic Advisory

Committee were held during the year in order to help shape the Programme. A sub-group of the Strategic Advisory Committee was also inaugurated and met to advise on RELU's data management needs.

3.7 Added-value

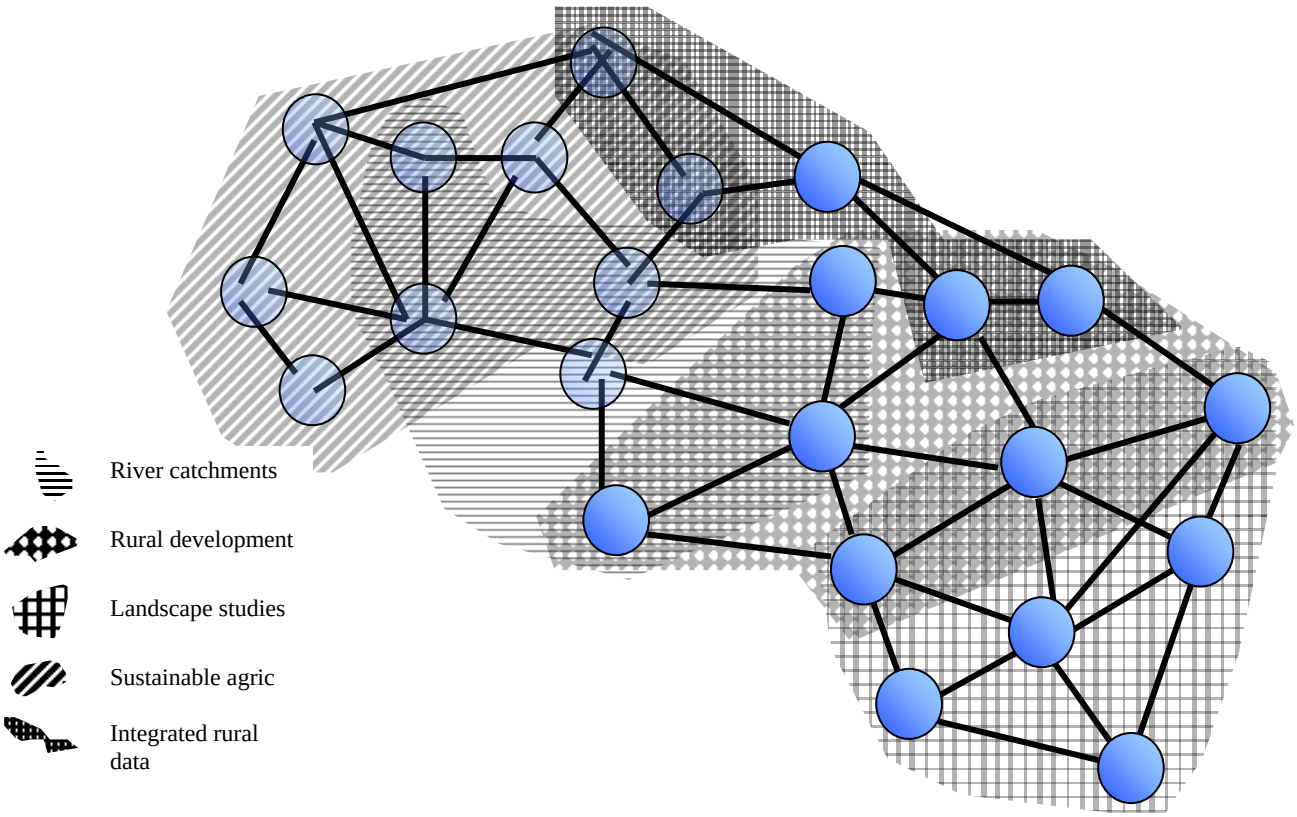
Synergy between research projects

The Director's Office has undertaken various initiatives to add value and develop synergies. Programme-level events have played an important role in encouraging synergy between projects (see Section 3.6).

The Director met with a number of projects specifically to encourage inter-project synergies. At the RELU PIs event in October, an extended meeting was held with the PIs of the big Food Chain projects to get them working together as a group. It was then arranged that they meet on their own, to think of the scope for possible joint activities, exchanges, dissemination, etc. The first fruits of this cooperation will be two sessions at the January 2005 conference planned jointly with the Food Chain projects.

A parallel set of group-building and planning meetings was held with the PIs from the Scoping Studies, Capacity Building Awards and Development Activities, with similar intentions and outcomes. A mental map of these smaller First Call projects was drawn up and circulated, to stimulate inter-project linkages and collaborations. This helped identify nodes of activity and potential connections between projects. Again this was used in planning sessions for the January conference. Those chosen to speak were asked to draw upon contributions from related projects.

The First Call Projects



Finally, the Director's Office has orchestrated an effective working relationship between three RELU projects which, from different perspectives, are focusing on issues of the availability, management, and integration of statistical data on rural economy and land use. Not only are the projects working closely together, they are also collaborating with RELU's Data Support Service (see Section 3.5) in planning a programme workshop in 2005 on the theme of Data Integration.

Research coherence and enhanced academic impact

The Director's Office played a central role in developing a coherent research specification for the Second Call, following consultations with stakeholders and the scientific community. The Call cogently integrated RELU's main themes, and was clearly articulated in terms of its scientific objectives, research challenges and aspirations for stakeholder engagement.

A cross-council data management policy and support framework for the programme has also been negotiated. It is particularly novel for an ESRC-led programme to have a pro-active data management policy to guide applicants and Principal Investigators at the earliest stages.

Enhanced capacity to interact with and influence practitioners and policy makers

RELU has an innovative Communication Plan. Its key emphases are on: continuous and extensive engagement of stakeholders to ensure their active involvement and interest in shaping the Programme through all its stages; and intensive, internal communication with RELU researchers and postgraduates, as well as the Research Councils and their wider scientific communities, to foster interdisciplinary collaboration and capacity building. At the core of the Plan is a model of communication as an iterative process, in which stakeholders are engaged as active partners in establishing the priorities and foci of the Programme, and not treated merely as the passive recipients of the research when completed. To ensure this two-way communication process, the main activities include: stakeholder fora; stakeholder engagement plans; consultations on the Programme; the ambassadorial role of the Director; workshops and events; publication and electronic dissemination; Research Councils communication; and liaison between projects and the Director.

(4) Progress of projects

27 of the 35 projects commissioned under the First Call started their research in 2004, most in the autumn. Bilateral meetings, aimed at discussing early project progress and encouraging inter-project collaborations and synergies, were held with 12 RELU projects. £1,200 was spent on project visits, once projects got underway, at the end of 2004 (total budget for this activity is £15,480). A meeting was convened with all RELU project award holders (including projects which had not started) in October 2004 (see section 3.6).

Big Research Projects

RES-224-25-0041, Prof H Buller, University of Exeter
Project starts 2005
Eating Biodiversity: An Investigation of the Links between Quality Food Production and Biodiversity Protection

This research seeks to develop opportunities for a 'win-win' situation where higher food quality and value is directly linked to maintaining and improving the biodiversity within production systems, and where this will have positive effects for rural economies. The interdisciplinary research will provide evidence and analysis of the relationship between food quality (defined according to both scientific criteria and consumer perception), animal diet (analysed in terms of feed inputs) and natural biodiversity (considered in terms of species diversity) and relate this to implications for land use management, farm practice and processes of rural socio-economic development. *Project starts January 2005.*

RES-224-25-0044, Prof G Edwards-Jones, University of Wales, Bangor
01 Dec 04 – 30 Nov 07
Comparative Assessment of Environmental, Community and Nutritional Impacts of Consuming Fruit and Vegetables Produced Locally and Overseas

The project will consider the advantages and disadvantages of consuming locally produced fruit and vegetables as opposed to fruit and vegetables produced overseas. A range of relevant factors will be considered: greenhouse emissions, local employment, consumer perception of relevant attributes, nutritional quality of produce and community characteristics relating to local food cultures. Environmental work will consider total contribution of greenhouse gases from production and transport of vegetables from farms in UK, Greece and Kenya. This will be measured both with standard flux boxes and a novel remote sensing technique. Life Cycle Analysis will be used to collate all relevant information from this work. Nutritional quality of fresh produce will be compared with those stored in chilled and modified atmospheres. Consumer perceptions of fruit and vegetables and the relative importance of attributes such as health benefits and place of origin will be assessed by Discrete Choice Modelling. Community and social issues will be explored in case study areas, with particular attention being paid to the sociological importance of local food cultures. A case study of the Isle of Anglesey will seek to bring all these data together in a Geographical Information System in order to assess the overall impacts of switching from existing land uses to a landscape aimed at maximising vegetable production. *Project started December 2004 and at early stage of development.*

RES-224-25-0048, Prof WP Grant, University of Warwick
01 Oct 04 – 30 Sep 07
Biological Alternatives to Chemical Pesticide Inputs in the Food Chain: An Assessment of Environmental and Regulatory Sustainability

UK farmers and growers are challenged with adopting environmentally acceptable methods of pest control while maintaining quality, productivity and profitability. This project will provide new understanding of the environmental and regulatory sustainability of deploying inundatively applied biological control agents (aka biopesticides) as alternatives to chemical pesticides. This will be addressed using entomopathogenic fungi to control aphids in leafy salad crops, a system of which the consortium has considerable expertise. *By December 2004, Entomopathogenic fungi had been collected from a variety of woodland and field sampling points. Fungi have been isolated on agar in the laboratory. A team meeting reviewed the wide range of natural and social science variables being reviewed in the study and developed a heuristic model centred on three main sets of variables and the interrelationships between them. The project website has been developed and has a substantial amount of material on it presented in a way that is intended to be accessible to a variety of audiences. It is linked to the RELU site.*

RES-224-25-0066, Dr DC Little, Stirling University
Project starts 2005
Warmwater Fish Production as a Niche Production and Market Diversification Strategy for Organic Arable Farmers with Implications for Sustainability and Public Health

This research will develop technical guidelines for tilapia production, appropriate to integration within farms as a diversification strategy. The current knowledge/perceptions of industry and consumers will be examined, especially regarding sustainability including health benefits and food safety, costs and risks. Social and economic factors that may facilitate or obstruct consumers' propensity to access new products will be identified. The comparative advantage of domestic production compared with the potential threat of imports will be explored and sustainability concerns on SME fish farming enterprise decision-making examined. *Project starts 2005*.

RES-224-25-0073, Prof B Traill, University of Reading
Project starts 2005
Implications of a Nutrition Driven Food Policy of Land Use and the Rural Environment

Common Agricultural Policy reform is shifting farm policy away from traditional production support; meanwhile concern with diet-health relationships will move nutritional goals to the policy front-line, with major implications for food demand and land use. This work examines the potential for development of sustainable food chains capable of delivering healthy foods at prices consumers are willing to pay, and assesses the impact on land use and the rural environment and economy. The research studies extensive livestock production systems and their effects on the fat composition of ruminant meat and dairy products. Likewise, it studies fruit and vegetable production systems, transport and storage and their effects on nutrient levels. Consumers are being surveyed to assess their attitudes, behaviour and willingness to pay for healthier and locally produced foods. The information is fed into models of demand, land use and employment and the implications of alternative policy scenarios for landscapes and

biodiversity are assessed as well as the value countryside users place on those changes. *Project starts 2005*.

RES-224-25-0086, Dr D Chadwick, IGER, North Wyke
Project starts 2005
Sustainable and Holistic Food Chains for Recycling Livestock Waste to Land

Today, farming systems need to be both multifunctional and sustainable: the lack of integrated analysis of food chains means this is not easy. Sustainability 'audits' need to cover both 'upstreaming' (farm to fork) and 'downstreaming' (farm to field) aspects. Audits of this type are not possible without an integrated and holistic approach that brings together both social and economic drivers and the environmental consequences of farmer and policy decisions. In particular, more rigorous research linking microbiological research to public perceptions of risk; actual levels of risk, and public perceptions of 'traceability' in the food chain is needed. The project brings together expertise to determine current perceptions of farmers, retailers, consumers and local 'downstream' industries (tourism and shell fisheries) to the issue of pathogen transfers to the food chain and assesses the impacts of changes in management practices at the farm level (to reduce the risk of pathogen transfers) on farm costs and costs to other stakeholder groups and the region as a whole. It also develops a risk assessment tool to quantify the efficiency and costs of adopting management practices to reduce pathogen transfers. Additional process based research will improve understanding of the factors controlling pathogen survival in soils and manure stores as well as mechanisms of pathogen transport. This information will be used to improve management of manures/wastes on farms to reduce the risk of transfers to the food chain. *Project starts 2005.*

RES-224-25-0090, Prof R Shepherd, University of Surrey
Project starts 2005
Integration of Social and Natural Sciences to Develop Improved Tools for Assessing and Managing Food Chain Risks Affecting the Rural Economy

This project which brings together natural science modelling of risks and uncertainties in the food chain with social science approaches to understanding consumer behaviours, risk communication and participatory processes. The project will design, develop and evaluate participatory processes and tools for involving stakeholders, particularly those in rural communities, throughout the management and mitigation of a food safety issue or risk event, ensuring that full account is taken of a wide range of potential social, economic and political impacts as well as the more immediate public health related and safety issues. *Project starts 2005*.

RES-224-25-0093, Dr AS Bailey, Imperial College London
01 Dec 04 – 30 Nov 08
Re-Bugging the System: Promoting Adoption of Alternative Pest Management Strategies in Field Crop Systems

Despite the widespread concerns regarding the use of pesticides in food production and considerable research into potentially viable biological alternatives, pest control in UK field crops relies almost singly on chemical pesticides inputs. Reasons for this lack of adoption of alternative technologies, such as bio-control, may be technical, economic or a complex interplay of both. Economists highlight the potential 'path dependency' of an industry in continuing to employ a suboptimal technology, caused by past dynamics of adoption resulting in differential private cost structures of each technique. Further, risk

aversion on the part of farmers regarding the perceived efficacy of a new technology and 'jointness' in the chemical control of a range of pests may limit up-take. The project will involve innovative natural science research to evaluate an existing (i.e. habitat manipulation) and novel (i.e. semiochemical 'push-pull') biocontrol technology considering ecological mechanisms and impacts from lab to farm scales. It combines this technical knowledge with outputs from novel social and economic analyses of path dependency, considering factors such as private costs of adoption, consumer preference and retailer led supply chain governance. By choosing an 'established' and a new technology, the aim is to use this programme of technical and economic research to look backward and forward in developing effective tools to evaluate and promote the adoption of biochemical control technology into the UK agricultural systems. *Project started December 2004 and at early stage of development. In its first month the project has been recognised in the national press with an article in The Times, 4 December 2004.*

Scoping Studies

RES-224-25-0002, Prof N Hanley, University of Glasgow
01 Oct 04 – 30 Sep 05
Climate Change, Non-Point Pollution and Land Use: Modelling Interactions

The main aim of this project is to investigate present difficulties and potential problems in integrating economic, climatic, hydrological and water quality models of catchment processes. The project is exploring the potential of developing a modelling framework to understand the interactions between water quality and water quantity in the context of climate change; and to enable the simulation of alternative policy instruments to achieve the goal of "good ecological status" under the Water Framework Directive. *The research team have produced site-specific estimates of changes in climate variables to 2080 for their two case study catchments. Climate change scenarios for the project were generated using a new version of the LARS-WG 4.0 stochastic weather generator, which has been specifically developed and validated for climate change studies in the UK. Scenarios were based on UKCIP02 and HadRM3 projections. Changes in climatic variability of parameters, such as duration of dry and wet spells, were derived from daily output from HadRM3 and incorporated into scenarios. Scenarios were generated for UKHI and UKLO projections for 2020s, 2050s and 2080s time intervals and for the baseline. 100 years of daily weather were generated including minimum and maximum temperature, rainfall and radiation. These are available at http://www.rothamsted.bbsrc.ac.uk/aen/mas-projects/relu.html. One problem the team have found so far concerns the linking of their crop simulation model (CROPSYST) to the farm economic model, since (i) generating sufficient data for the farm model to cover even a modest range of future scenarios requires a very large number of runs of CROPSYST; (ii) both CROPSYST and the farm model overlap in some areas, meaning they have an endogeneity / simultaneity problem.*

RES-224-25-0009, Dr J R Franks , University of Newcastle
08 Nov 04 – 07 Nov 05
Co-operative Management of the Agricultural Environment (Co-ManAge)

This scoping study is investigating the combination of contractual and environmental circumstances under which environmental goods could be produced by a club of land managers. The research has three stages. (1) A review of the literature on the theory of impure public goods; the impact of eliminating the economics of configuration problem on the design of AE schemes; the organisation of AE co-operatives; and the potential for

spin-off business to develop from the collaborative organisation. (2) Visits to AE co-operatives in Europe to develop case studies using interviews with key representatives, with a view to identifying the structure and rules of these clubs. (3) Consideration of the attitudes of UK Environmental Agencies towards the "club" provision of AE goods. *In December the team visited Holland to establish contacts, in particular, Natasja Oerlemans, Centre for Agriculture and Environment Foundation (CLM), Jan Douwe van der Ploeg of Wageningen University and Marian Stuiver (consultant employed on the research) to finalise research plans. Working with European partners in Holland has highlighted that translation of documents from Dutch may be an issue in the future.*

RES-224-25-0018, Dr M Thomas, Imperial College, London
01 Oct 04 – 30 Sep 05
Designing and Implementing Large Scale Experiments in Land Use

Perturbations in climate, technology, and the variation in subsidy systems brought about by CAP and WTO reform, have the potential to cause landscape-scale changes in farming systems. In particular the total area and spatial distribution of land in different food and non-food crops, or assigned to different land management schemes, may change markedly. A key issue that emerges from this is to define the most appropriate way to distribute these different land use categories to achieve biodiversity, environmental, production and socio-economic benefits. To address this issue requires large scale, experimental approaches. This scoping study is considering what is the most appropriate protocol of such experimental studies. It will consider the design, treatments, benefits, limitations and constraints on large-scale experiments that manipulate the spatial distribution of land use. It will compare and contrast the manipulative experiment approach with information that can be obtained from observational studies of non-experimental existing changes in land use and from modelling approaches. The end product will be a set of guidelines defining appropriate protocols for the analysis of the effects of changes in the spatial distribution of alternative land uses on environmental and socio-economic factors. *The project (along with projects 0093 and 0048) was presented at a workshop run under the auspices of the Centre for European Agricultural Studies at Imperial College, Wye, November 17 2004.*

RES-224-25-0036, Dr R Baines, Royal Agricultural College
01 Oct 04 – 01 Oct 05
Private Sector Environment Standards: Impact on Ecological Performance and International Competitiveness of UK Agriculture

Private environmental standards for agriculture driven by food system 'gatekeepers' such as supermarkets are becoming more important drivers of farm practice than national standards. They are seen as key to (1) driving improvements in the environmental performance of agriculture, and (2) reassuring consumers about the connection between shopping decisions and the way food is produced. However, the evolving situation implies that producers may be being disadvantaged economically. This study will address these issues through the development of an enquiry with: evaluation and benchmarking of existing schemes; verification of standards along discrete chains; interviews with stakeholders; calculation of impacts of standards on producers; and development of policies to address issues and dissemination to stakeholders. *Project at early stage of development.*

RES-224-25-0037, Dr N Boatman, CEH Lancaster
01 Sep 04 – 31 May 05
Data Resources for Rural Sustainability Research: Realising their Combined Potential

This project explores generic and interdisciplinary issues of data management and integration relevant to the aims of the RELU programme, and will provide a wider perspective on the policy and organisation of rural economy and land use data in the UK. *Meetings have been held with consortium partners (CEH and CCRU, University of Gloucestershire) to develop the project plan. Meetings were also held with the co-investigators of two data management projects at York University to discuss project synergies. The project website was designed as a vehicle for an on-line questionnaire, which was circulated to RELU e-mail list subscribers in December. The bulk of the eventual 114 replies were received by 31.12.03. Some problems in the development of the website delayed questionnaire distribution. On receipt of replies, unforeseen problems in the SQL database necessitated a certain amount of data cleansing and delayed analysis.*

RES-224-25-0039, Dr S Maberly, Lancaster University
01 Jul 04 – 31 Dec 04
Understanding Loweswater: A Study to Generate New Understandings of Ecological, Economic and Social Interactions in a Lake District Environment

This scoping study is looking critically at the nature of different kinds of knowledge (social, ecological, economic, cultural) that may be brought to bear on the ecological problems in Loweswater. It will create the possibility of dialogue between those with a stake in Loweswater (notably the 13 farming families that live and work there), environmental agencies and natural and social scientists. The aim is to try to understand the workings of the catchment and the linkages between social and environmental factors impacting on its 'health'. The study arose from the discovery that farmers within the catchment had organised themselves into a group to address the perceived issue of declining water quality and associated algal blooms on Loweswater resulting from agricultural practices. CEH are currently negotiating with Defra and the farmers to provide them with the data they need in order to verify and appropriately address this issue. However, the present project looks beyond the reductionist approach of cause and effect to explore techniques that include different forms of knowledge and frames of reference. It is addressing issues of problem-ownership, problem definition, problem characterisation and ways of working through the solutions to these problems. *A number of key issues have emerged. The first of these is the fundamental importance of effective communication between researchers, researchers and stakeholders, and stakeholder and stakeholder. A workshop hosted by the researchers has illustrated the possibility of more open dialogue and communication between actors than had historically been the case. The research has revealed the importance of in-depth exploration of the range of 'knowledge' within the catchment. Finally, studies have also indicated the significance of 'time' and 'timing'. Even during the relatively short time scale between project proposal and the present, time has affected many social changes in the catchment, which have impacts on its environment. Learning how to work with temporal change is likely to be a significant issue for other RELU projects. Overall, highlights from the research include (1) The development of a mutual understanding of approaches between social and ecological scientists (2) The research brought about recognition that the strong initial focus of the research (pollution of the lake in the catchment) needed to be broadened. The research came to be more about past, present and future policy changes affecting the catchment, how those living in the catchment do, or might in future, interact with such policy*

changes, and the consequent implications of this for policy. (3) A drawing together of the community within Loweswater towards achieving common objectives.

RES-224-25-0058, Dr E A Oughton, University of Newcastle
01 Oct 04 – 31 Mar 05
Developing Tools for Interdisciplinary Research: Physical and Social Science Perspectives on the Use of Rural Catchments

The aim of this research is to develop a practical framework for interdisciplinary discourse between science and non-science based stakeholders. This will provide a conceptual and methodological basis for further research on the multiple interactions of rural populations and landscape resources. The research is based upon a case study of the upland, rural River Esk catchment. *The research has been focussed on discussion with stakeholder groups throughout. Four discussion meetings have been carried out with stakeholders in the River Esk catchment to investigate differing aspects of the relationship between social and physical science understandings, claims and practices within the catchment. A detailed perspective has been gained on the differing motives, of different stakeholder groups, their attitudes towards the environment and policy change and the institutions and mechanisms for implementing policy. Preliminary results will be presented on March 27th 2005 to the stakeholders who will be invited to discuss the implications for current practices of biodiversity management and rural development in the catchment. An analytical framework is emerging that demonstrates the importance of communication and the interaction between different scales of analysis.*

RES-224-25-0062, Dr M Huby, University of York
01 Oct 04 – 30 Sep 05
Developing Spatial Data for the Classification of Rural Areas

This study aims to work towards the production of a spatial typology of rural areas that takes account of both the natural and the socio-economic environment. The rationale is that rural areas are highly diverse in terms of their ecology and in their socio-economic characteristics and it is the interaction of social, economic and environmental conditions that governs land use patterns and the potential for sustainable development. *The scoping study website is now on-line at: www.sei.se/relu. Among the technical challenges faced by the study is the need to produce indicators of the ability of rural residents to reach services. The study's spatial analyses are now capable of producing measures of the time needed to reach specified services by car, walking or cycling. Data on the location of services and on public transport nodes, routes and timetables are needed to enable development of indicators further. The study's Advisory Panel represents a range of academic and policy stakeholder interests in interdisciplinary research. Its meeting on 17 December 2004 provided some extremely interesting and useful ideas (see website). The main difficulty being confronted is in gaining access to key data. In some cases this is because release of the data is being delayed, pending the resolution of disclosure and licensing arrangements (eg CEH data; certain indicators used in the construction of the English Indices of Deprivation). Alternatively the data are simply not released at the spatial level required (eg PCT data). In other cases, the costs of acquiring data are proving prohibitive (eg Point X data from the Ordnance Survey; meteorological data).*

RES-224-25-0068, Prof D MacDonald, University of Oxford
01 Jul 04 – 20 May 05
Development of a Landscape Intervention Decision Support System (LIDDS) to Maximise Net Social Benefit

Payments to farmers are shifting from production-based subsidies towards grants for conservation work, such as habitat enhancements. The benefits and costs of this work vary greatly from farm to farm, and understanding the benefits is further complicated by the fact that they depend partly on the conservation work conducted on surrounding farms. This project aims to unravel these complications in order to calculate the net benefits of a project at the landscape level, and so derive the most efficient way to employ resources for conservation. *By the end of 2004, two versions of a questionnaire had been sent out to 600 households in two Oxfordshire villages. Both fully described the work to be done and the expected outcome of a large scale conservation scheme in the area. They also described the precarious situation of a number of species which the scheme would work with. One version however also explained the ecological basis for the work. This version of the questionnaire enjoyed a significantly higher response rate from both villages, although it had no significant effect on the values or responses given. The main difficulties have been gaining contact details of stakeholders in the area. The wet summer meant delays in farm work until later in the year. This meant that in the months chosen to contact them they had less spare time than was hoped for and this pushed the project back a little.*

RES-224-25-0076, Dr M Phillips, University of Leicester
13 Dec 04 – 12 Dec 05
Gentrifying Rural Natures: An Investigation of the Enrolment and Modification of Nature within a Gentrifying Village

The main focus of this nature-society study is the impact of rural gentrification on the enrolment and modification of nature within village space. Previous studies have demonstrated the social, economic, political and cultural dimensions, but have failed to consider the 'natural' dimensions of rural gentrification. These environmental aspects of rural gentrification provide the innovative focus for this study. A key component will be to document the range of 'agencies of nature' drawn upon in creating a desire for rural residency in one gentrifying village, and to consider their significance against a range of social agencies identified in earlier studies. The project will explore the degree to which differing conceptions of and relations to nature are held by rural social groups, including those identified as gentrifiers, and will assess these in the light of data obtained from ecological field surveys of land within and around the village envelope. The process of rural gentrification involves transformation of both the built and 'natural' environments (with impacts ranging from domestication, through simplification to obliteration). Thus this study will also explore the degree to which gentrifiers are actively involved in transforming rural biological diversity. The study outcomes will lead to an improved understanding of rural population change and its impact on rural environmental change; they will also inform social and economic debates on public and consumer perceptions and expectations associated with rural lifestyles. *Project started 13 December 2004 and at early stage of development.*

RES-224-25-0081, Prof CL Spash, Macaulay Institute
01 Jul 04 – 30 Jun 05
Achieving Sustainable Catchment Management: Developing Integrated Approaches and Tools to Inform Future Policies

The project brings together researchers from a variety of disciplines relating to the natural environment and the impact of land use, with those who seek to understand and explain human beliefs, needs and actions. The aim is to provide scientists with opportunities to learn across disciplines and to explore ways of integrating the management of water and land resources across the UK in a sustainable manner. *The project has held two workshops which successfully facilitated exchange of knowledge and concepts and learning between natural and social sciences researchers to critically review methodological and practical aspects in scoping a framework for integrated catchment management (ICM).*

- *The first workshop (21-23 July) focused on 'integration and innovation' using various interactive working modes such as 'café methodology' and 'open space technology' in addition to more conventional brief presentations and discussion of background papers on ICM characterisation processes and methodologies. Eighteen consortium members attended, plus Dr Ramon Laplana, an applied researcher from CEMAGREF, France who provided feedback and advice on the project objectives and process.*
- *The second workshop (11-12 November) considered how to handle scale issues within an integrated approach to ICM. Thirteen consortium members and two external researchers attended, including Mario Giampietro, an expert on scale issues based at INRAN, Italy.*

The drafting of scoping reports under the eight work packages is in progress. There have been some changes in the membership of the consortium, which haven't affected project progress overall. While researchers are enthusiastic and making great effort to engage with interdisciplinary learning, at times the lack of financial support under the RELU scoping study to cover staff time means that committing time to the project has been difficult for some researchers.

RES-224-25-0084, Dr F Lyon, Middlesex University
01 Sep 04 – 31 Jul 05
Learning and Research for Sustainable Agro-Ecosystems by both Farmers and Scientists

This project draws on previous research from a range of disciplines including applied biology, agriculture, geography, management studies and sociology of science. The aim is to understand the process of innovation and learning by farming enterprises and research on whole farm systems, by scientists examining examples of successful interaction in order to identify those factors that encourage collaboration between farmers and scientists. The project will contribute to theoretical and conceptual discussions in each of the disciplines outlined above, while at the same time examining how different disciplines can work together to understand how sustainable farming systems can operate. With regard to sociology and management studies, the project will contribute to an understanding of the processes of learning and knowledge creation in agricultural and food businesses. It will also explore the processes by which collaboration, alliances and trust are built up between different stakeholders. With regard to biological, natural and agricultural sciences, the project will explore how rigorous scientific method can be adapted to the complexity of whole farm systems. A key aspect will be examining the challenge of experimental design on field or farm scale plots, and the ability to use statistical analysis to draw conclusions. *Project at early stage of development.*

RES-224-25-0087, Dr K Matthews, Macaulay Institute
01 Aug 04 – 31 Jul 05
Integrated Modelling and Assessment of Agricultural Sustainability - Scoping How to Support Policy Relevant Assessments

The objective of the project is to assess the feasibility of implementing an integrated information system to support policy and end user relevant assessments of agricultural sustainability. The project is developing a conceptual framework for sustainability assessment that tries to overcome the "What definition of sustainability are you using?" question. The framework recognises that sustainability is essentially a normative view of the functioning of a system (in this case rural land use and management) and as such there is no one definition of sustainability that is inherently more valid than any other. The selection of methods of sustainability assessment, the content of the assessments and crucially the interpretation of the outcomes depend fundamentally on the underpinning values of the individual. An information system to support sustainability assessment should, therefore, be flexible enough to support a wide range of indicators and simulate a wide range of processes that can be changed by management, environmental or policy interventions. This allows for explicit contrasting of individual sustainability perspectives as part of deliberative processes. The specification and prioritization of information system components is a complex process since while end-user target groups can be clear on their priorities they can be uncertain on how best the assessments might be operationalised. This means that there needs to be a social learning process where domain experts (often researchers but potentially others) can offer guidance while at the same time being informed of the priorities and values of end-user target-groups. *Participation in RELU has added value to ongoing research at Macaulay. In particular the project has been able to access the NERC and ESRC data archives and participate in the Getting Research into Practice (GRIP) initiative. The latter has been invaluable in informing the development of a knowledge transfer strategy. One difficulty has been the departure of Dr. Gary Hill to take up employment with the Sustainable Development Research Centre (SDRC) in Forres, Morayshire. This has disrupted the progress of the project in February and March since it has been necessary to negotiate a sub-contracting arrangement with SDRC.*

RES-224-25-0088, Dr K Hubacek, University of Durham
01 Aug 04 – 31 Jul 05
Sustainable Upland Management for Multiple Benefits

The purpose of this research is to develop a framework that can help people find new ways to detect and harness rural change to enhance environmental, economic and social sustainability. There are a wide range of (sometimes conflicting) visions for a sustainable future held by those who visit or live and work in the Peak District National Park (PDNP), ranging from re-wilding (or land abandonment) and silvopastoralism to maintaining the status-quo. There are also multiple (mainly policy and socio-economic) drivers that may change the current land-use and livelihoods in the PDNP over the next 20 years. For example, the uncertain implications of CAP reform and the Water Framework Directive are a significant cause for concern for the majority of stakeholders, and possible tightening of burning regulations may constrain game-keepers and farmers who use burning as a land management tool. *Although the initial research proposal was developed in close collaboration with a stakeholder representative organisation, stakeholder analysis and scoping interviews have identified a need for greater focus on certain issues. The relevance and significance of the research to local stakeholders is partly demonstrated through positive local media coverage of the research (Radio Derby and local*

newspapers). Support ranges from statutory bodies like DEFRA (who are using the Scoping Study as an in-depth case study for their review of the Heather and Grass Burning Code) and the PDNP Authority (who have provided data and an ecologist for our Advisory Panel), to stakeholders such as farmers and game keepers who feel they have been unable to use their knowledge and experience to inform or influence the regulatory changes that affect their livelihoods and environment. Options for enhancing interaction and learning between stakeholders are being explored through a combination of stakeholder analysis and social network analysis, leading to a multi-stakeholder focus group(s), and to the proposal of a series of site visits and workshops led by stakeholders and professional facilitators for future research. Given the large team of co-investigators from very different disciplines involved in this Scoping Study, considerable time and effort has been spent developing capacity for successful interdisciplinary interaction amongst this group. To this end, five workshops have been held. Although the results of initial scoping interviews could be viewed as a problem (it certainly delayed the onset of semi-structured interviews), this result was particularly useful in the context of the adaptive learning process being developed in this Scoping Study. Another potential problem is the size of the research group and the wide variety of different backgrounds, approaches and ways of thinking. However, by properly structuring communication flows, meetings and other learning opportunities, this can be turned into one of the group's greatest assets.

Capacity Building Awards

RES-224-25-0003, Prof L Heathwaite, University of Sheffield
01 Aug 04 – 31 May 05
A Cross-Disciplinary Methodology to Promote an Holistic understanding of Diffuse Pollution Issues in Rural Environments

This project is seeking to enhance and expand capabilities for integrative, interdisciplinary research on rural issues, under the specific theme of diffuse pollution. The aim is to build capacity towards developing a cross-disciplinary approach to broaden our understanding of the causes and consequences of diffuse agricultural pollution. The aim is broadly defined, so as to include all land management activities that impact upon the quantity and quality of water in our rivers and groundwater, as well as the organisms that live within them. *The team have held four workshops between September and November on: Groundwater Pollution (Co-sponsor: Environment Agency); Upland Diffuse Pollution (Co-sponsor: Defra); Lowland Diffuse Pollution (Co-sponsor: RSPB); Synthesis and Overview (Co-sponsor: UNESCO). The team have also secured new partners in the project: English Nature and UKWIR. Unfortunately, the late award date delayed the proposed start of the project, and the early submission date for second call RELU proposals altered the nature of the capacity-building activity within the project from what was intended in our Capacity-Building project proposal. It was no longer possible to use the workshops to assemble a larger team to develop a second-round RELU project. The project team have realised that the difficulties of language encountered in engagement between social and natural scientists and stakeholders are not reducible to simple and often dismissive claims about 'jargon'. Interdisciplinary science and public engagement on complex environmental issues require a key skill of being open to alternative perspectives and rationales in knowledge-production, and not prejudging outcomes.*

RES-224-25-0031, Dr H F Cook, Imperial College, London
01 Jul 04 – 30 Jun 05
Building Networks: Exploiting Options for the Eastern US and Nearby European Continent

The overall objective is to provide an initial assessment of the potential of catchment, river basin or watershed management measures for water quality improvement and integrated land and water resource use and management in the UK, and to capacity build via a network of relevant professionals capable of advanced research in this area. The particular focus will be on the potential of watershed agricultural programmes, implemented primarily through change in land and water management practices by farmers and other land users. *The project has made good progress during the first six months of the award. The objective, to build capacity for further research, has involved capitalising on existing links, notably between Imperial and Cornell Universities in the US and between the project's UK collaborator at UEA and water professionals in Denmark, Germany and the Netherlands. A first workshop was held in London in November 2004. The team have provisionally identified a total of 20 issues that will need addressing in future research. Major themes are governance of river basins, monitoring and social learning, contingent valuation, costs and benefits of land-based versus water treatment options, risk based management, habitat restoration and management, pathogens and disinfection by-products in UK water supply and diffuse pollution from nutrients. The team have met and continue to have discussions with stakeholder groups, including community and watershed groups in the US and UK, and with water / environment professionals. The project is presently weaker on farmer involvement, but plans to overcome this are in hand as part of a future workshop. Overall the team stress the importance of governance in river basin management, and particularly the need to overcome the lack of participation of catchment stakeholders in water matters.*

RES-224-25-0042, Prof E Tipping, Lancaster University
01 Sep 04 – 31 Aug 05
Developing an Interdisciplinary Approach to Address Environmental and Social Issues Resulting from Changes in Land Use

Social and natural scientists must come together to address the environmental and social issues that drive the management of land-use change. To do this effectively, researchers within each field need to appreciate the issues, skills and language of the other disciplines, and how these relate and correspond to their own approach. The project aims to build research capacity by establishing a team of young scientists from different disciplines capable of developing interdisciplinary approaches. To provide focus, the project is addressing land use issues in the Lake District National Park, where conflicting interests need to be balanced to meet the needs of a range of different land managers and users. The research team will educate one another in their different disciplines, interact with senior scientists, and communicate with stakeholders, and prioritise issues requiring research. The exercise will create a community of researchers, linked to stakeholders, who are able to conduct interdisciplinary high-level research into the effects of land use charge. *The team has run a successful stakeholder workshop focusing on 'Lake District Futures', bringing together a range of parties (Environment Agency, English Nature, Defra, Lake District National Park Authority, National Trust, Forestry Commission, LEADER +, Cumbria Commoners etc.) to generate both an understanding of those issues important to stakeholders, and the beginnings of a relevant research agenda. The team have conducted numerous interviews with stakeholders and scientists. The foundations of an interdisciplinary reading group have been laid, in order to facilitate sharing of*

knowledge, methodologies and perspectives. The project website is online (http://www.ceh.ac.uk/relu_cb/). *A poster presentation was given for the inaugural conference of the International Centre for the Uplands, Cumbria. The team has found a common recognition of the importance of increased collaboration between researchers and stakeholders addressing rural issues; a recognition of the essential need for good interdisciplinary research to address issues in the Lake District; and that interdisciplinary capacity can develop by taking the time to understand each others' approaches. The most fruitful discussions and understandings are those which arise from focusing on a specific topic or issue.*

RES-224-25-0091, Prof D Miller, Macaulay Institute
Project starts 2005
Analysing Visual Quality in Relation to Landscape Change Scenarios: An Assessment of the Requirements

The focus of the research is on issues of landscape quality and value, and in particular how changes in landscape impact upon visual quality. The study is designed to develop the capacity of partners to tackle understand public reactions to changes in land use, and the implications for the aesthetics of the landscape. The research programme draws on knowledge from different disciplines, and different countries, with a partner from the Department of Landscape Architecture at the Swedish University of Agricultural Sciences collaborating with the Landscape Change Science Group of the Macaulay Institute in Aberdeen. Through combining different scientific backgrounds (e.g. spatial modelling, environmental psychology, landscape use planning) and professional practioners, the study seeks to address the pressures for change, and the implications of changes in land use on the landscape, and in particular its visual qualities. This interdisciplinary approach is essential in order to develop a common understanding of the key issues associated with landscape value and visual quality. *Project starts 2005*.

RES-224-25-0095, Dr N Russell, University of Manchester
01 Oct 04 – 31 Jul 05
Building Capacity to Investigate the Potential Role of Sustainable Agricultural Intensification in Agro-Ecological System

Given an ever-growing population, the global agro-ecosystem is required to deliver increasing levels of food production from a non-expanding stock of land, water and other natural resources. While this clearly implies increasing the productivity of finite resources, there are widely differing views as to how this may be achieved without degrading or destroying the bio-ecological foundations on which agricultural productivity depends. In the absence of exogenous growth in productivity arising from technical change, this implies a need to develop strategies for sustainable intensification. Such sustainability represents one possible future option for land use in a UK and European context. This investigation is a preliminary empirical study of three areas representing three major agro-ecosystems (upland agriculture, lowland grassland and intensive arable farming). The study sets out to delineate the habitat types in each area and to determine how dynamic intensification processes might (or might not) be sustainably supported. It is establishing what data are available to describe these economic and ecological processes and exploring how they might be used to construct and test alternative models of the agro-ecological systems. In the process, the extent to which additional data collection is warranted will be clarified. *Research is on schedule for timely completion but has not yet generated reportable results.*

Development Activities

RES-224-25-0099, Dr P White, University of York
11 Nov 04 – 14 Apr 05
Integrating Spatial Data on the Rural Economy, Land Use and Biodiversity

The emphasis of government policy on sustainable development has highlighted the importance of maintaining and enhancing biodiversity on local, regional and national scales. But this objective must be set against significant policy changes that are altering the shape of the rural economy. Understanding the links between biodiversity and economy is therefore important. However, this has been hindered in the past because ecological and socio-economic data are collated in different ways. The aim of this project is to use a new technique within a Geographical Information System to bring these different data sources together, to allow us to investigate the relationships between biodiversity (birds and mammals) and agricultural production at different scales. This integrative approach has the potential to be of considerable value in informing policy in rural areas over the next 10-20 years. It will be of benefit to government departments at both national and regional levels, and nature conservation organisations. The indirect benefits will also extend to local communities and volunteers who collect data on the distribution and abundance of species in the countryside. *Land cover/agricultural land use relationships have been determined for 2003 at both national and regional scales by applying genetic algorithms to dominant land cover at the 1km scale and ward level agricultural land use statistics. The team have been in contact with the British Trust for Ornithology to discuss the best way to use BTO datasets to analyse the relationship between agricultural land use and the bird biodiversity. They have also been in contact with the University of Bristol concerning the mammal data. The team have been working closely with two other teams involved with RELU data-type projects, one other at the University of York (PI: Meg Huby) and at CSL (PI: Nigel Boatman). As the project did not start until mid-November, the work had only just begun within the reporting period.*

RES-224-25-0100, Prof D Raffaelli, University of York
15 Nov 04 – 14 Apr 05
RELU: The International Context

Research agendas similar to those of RELU have been initiated by many international bodies, as well as many non-UK national and regional (e.g. European) funding agencies and international foundations. This project will review these initiatives to identify progress and best practice with regard to mechanisms for establishing interdisciplinary research, for capacity building in interdisciplinary science and in transferring knowledge to stakeholders and policy makers. The review will be communicated to all levels of the RELU community and enable RELU to be located within an international context. *At the end of December the project was still in its early stages. Progress includes: clarification of the aims and objectives of RELU from the Director of RELU and from key members of the RELU Strategic Advisory Committee; identification of 23 programmes as well as 27 institutes and networks, pursuing initiatives with similar aims and objectives to those of RELU; and piloting of draft questionnaire to identify best practice, with 10 colleagues from initiatives with which RELU already has formal contact.*

RES-224-25-0102, Dr R Matthew, Macaulay Institute
01 Sep 04 – 31 Mar 05
Development of a Rural Economy and Land Use Simulation Modelling Strategy

Simulation modelling, including spatial and time dimensions, is a way in which the diverse data from a number of different disciplines can be brought together under a common framework, to allow testing different hypothesis of how the system can be changed, without the time, expense and moral implications of altering a real system. Although integrated simulation models have been in existence for some time, most of these are based on economics approaches which attempt to optimise use of resources such as capital or labour to maximise a particular output. However, there is a growing realisation that many human decisions are not made on this basis, which has given rise to a new modelling approach called agent-based modelling (ABM). Still in their infancy, such models attempt to capture the actual processes of decision-making at the level of an individual or institution, and are able to take into account many of the constraints faced in real life such as limited information, communication between individuals, and interactions with the environment. The project involves a review of agent-based land-use modelling approaches, in recognition of their considerable potential to simulate human decision-making processes and the interactions between these and the natural environment. *While significant progress has been made, there is still much work to be done. There is a need to resolve the tension between, on one hand, further development of such approaches as research tools and the inevitable level of complexity required, and on the other, the requirements by end-users for relatively simple, transparent, easy-to-understand decision aids. Stakeholder involvement has taken three forms. The first was the involvement of the Principal Investigator in a RELU Network Activity ('Modelling and Social Learning in Rural Landscape Analysis and Management') with other academics and Environment Agency representatives, during which the idea of modelling different processes of social learning and their effect on system resilience were discussed, ideas which were received enthusiastically. The second was input from the Defra-funded SURPLUS project scoping study, in which a number of in depth interviews and a workshop were conducted to gain an idea of end-user requirements in relation to policy analysis tools in general. Thirdly, interviews with a number of potential end-users in Scotland were conducted (SEERAD, SEPA, SNH, SNIFFER), specifically to explore possible applications of agent-based modelling, from which emerged the need to better inform end-users of the potential of different modelling approaches. No difficulties have been encountered on the project per se, although the move of the Principal Investigator to a senior management position at another institute, and the resulting management and development duties, has impacted on the time that can be devoted to the project.*

RES-224-25-0105, Prof H Buller, Exeter
Project starts 2005
A Review of Recent and Current French Initiatives in Rural Economy and Land Use Research

The proposed research will explore French initiatives in setting up, developing and running research programmes into the rural economy and land use, will assess the aims and objectives of these programmes and will investigate the nature of the research undertaken within these programmes and the construction of interdisciplinarity in response to research objectives and demands. It will thereby provide a comparative context for the better understanding of UK research in this domain and will provide opportunities for cross-national research development. *Project starts 2005.*

RES-224-25-0107, Dr C Watson, Scottish Agricultural College
01 Sep 04 – 31 Dec 05
Soils – The Foundation of the Rural Economy?

The soil beneath our feet is something most of us take for granted. However, it is a precious resource that governs agricultural sustainability and environmental quality both locally and globally. It is the foundation for all rural land use and, through the industries and businesses directly and indirectly dependent on it, affects the viability of the rural economy. This project aims to broaden awareness of the importance of land management, and its economic consequences, amongst rural and urban communities. Furthermore, it seeks to identify practical ways of immediately improving the sustainable management of soils in the UK. This will inform the development of regional and national soil protection policies, taking account of the variation in both soils and land use priorities across the UK. *The project team is currently setting up regional workshops engaging stakeholders in discussion on soils. These will take place between May and July 2005. The Project Officer was appointed in December 2004 and progress since has been good. The end date of the project has been put back to 31 December 2005 to allow for a final project event in November 2005. The team have had a very enthusiastic response from stakeholders asked to speak at the workshops. Both Defra and SEERAD soils staff have been extremely helpful in providing material and/or speakers for meetings. The British Society of Soil Science have also been helpful in providing publicity material.*

RES-224-25-0110, Dr S Bell, University of Durham
01 Sep 04 – 28 Feb 05
Calming Troubled Waters: Making Interdisciplinarity Work

Clearer understanding of the processes of interdisciplinarity is needed to make it work effectively. The people (natural/social scientists, local people, policy-makers), data/information (including access), and experiences (e.g. communication) from two pan-European projects form the foundation for this in-depth investigation into the processes of interdisciplinarity. Insights gained from this Development Activity are fundamental to RELU's advocacy of innovative, interdisciplinary approaches for the sustainable development of rural economies, conservation of biodiversity and management of natural habitats. It is also particularly relevant to RELU's aim of maximising added value and exploiting opportunities for greater synergy between stakeholders.
A report will be available in May 2005 from research to date and will highlight:

- *A more in-depth understanding of the tools people use to create interdisciplinarity and overcome potential obstacles.*
- *Insights into how academic cultures and social processes influence collaborative research.*
- *Better awareness of the problems faced by journal editors dealing with interdisciplinary papers).*
- *Clearer understanding of the range of dissemination activities needed by the end users of interdisciplinary research e.g. policy reports, academic publications, popular articles, interactive CDs etc.*

The team has found difficulties in receiving sufficient feedback from email questionnaires in relation to Publishing. However, face-to-face interviews have been very successful. The project planned to interview some members of First Call projects in relation to interdisciplinary interaction and stakeholder engagement. This was not possible as many First Call projects started a little later than expected. Instead (with the agreement of the Director's Office) the team plan to use discussions from Interdisciplinary Workshops organised at the RELU conference (19-21 January 2005) to examine relevant issues.

RES-224-25-0113, Dr C Twyman, University of Sheffield
25 Oct 04 – 24 Apr 05
Learning from the South: Livestock Farming in Stressed Environments (LIFE)

Assumptions of one-way flows of information, aid and learning from developed to less developed areas are now acknowledged as outmoded deterministic concepts. People living in less developed regions or sectors of societies are not simply passive victims of global forces. New and useful insights to process-based issues affecting agriculture and rural development can be gained from these regions. *Learning from the South: mixed farming in stressed environments aims to address these assumptions in a two-day workshop designed to stimulate a dialogue between researchers and practitioners in the UK, Europe and developing areas. The workshop is scheduled for February 2005*.

RES-224-25-0119, Prof P Selman, University of Sheffield
Project starts 2005
Landscape as an Integrating Framework for Rural Policy and Planning

Many future decisions about the British countryside will be made in a landscape context. Several landscape based characterisation/ assessment methods are gaining currency as means of identifying areas in which to analyse environmental processes, valorise local assets, devise policy, target expenditure, forge partnerships and engage stakeholders. Whilst 'landscape' has often been treated as an afterthought in land use decisions, it can more positively be viewed as an over-arching framework for comprehending and interpreting patterns and processes of countryside change. This project aims to prepare a rapid-but-rigorous literature review, culminating in a seminar, of the cultural landscape as an integrative device. It will develop a model for integrating social, economic, built and natural capitals within the context of landscape units, and will propose how this model might be elaborated through future research. The literature review and seminar will contribute to our understanding of how local expressions of the UK's rural economy and land use can be analysed and framed. *Project starts 2005*.

(5) Key Performance Indicators

The Table presents the Key Performance Indicators for Year 1 of the Programme. All indicators and measures were satisfactorily achieved or exceeded, with the exception of 'Stakeholder Forums' and 'Reports or Briefings produced for stakeholders'.

Intellectual leadership	
Number of Events and Workshops (1 planned Sept/Oct 04)	Workshop held in October 2004.
Finalisation of second call	Call specification prepared.
User engagement	
Meetings	18 meetings held with stakeholders.
Consultations	Stakeholder consultation undertaken for second call specification.
Events	Workshop held in October 2004 involving key stakeholders (including Defra, SEPA, the Countryside Agency etc.). The Director's Office also played prominent part in 14 other events and 19 events and meetings with representatives of the Research Councils.
Presentations	9 presentations to stakeholder events.
Stakeholder Forums (planned inauguration of Food Forum in Nov 04)	Membership of Food Chain Forum established. First meeting to be held February 2005.
Stakeholder Engagement Plans (4 planned)	3 completed (Defra, UKWIR, SEERAD), 1 drafted (Environment Agency
Reports or Briefings produced for stakeholders (Planned: 1 Programme pamphlet; 1 newsletter, 1 briefing paper)	Pamphlet completed. Newsletter and Briefing delayed until early 2005 due to late appointment of Communication Manager.
Project Communication and Data Management Plans	Proforma developed June 04, and distributed to all Research Projects, Scoping Studies and Capacity Building Awards.
RELU website (planned Oct 2004)	Website live Oct 2004.
Communication Plan (planned drafting Feb 04)	Plan drafted Feb 04.
Interdisciplinarity	
Analysis of disciplines	Analysis of First and Second Call disciplines prepared for SAC.
Action taken to involve less engaged disciplines	Discipline gap analysis formed part of the overall analysis of disciplines. Identified absence of, and lack of linkages between, certain biological and social science disciplines. It is proposed to address this gap, in part, with a scoping workshop on the management of animal diseases.
Data Management	
Data Management Policy and Plan (planned May 04)	Drafted May 04.
Policy and Programme Management	
Commissioning (review and provide advice at all RELU assessment panel meetings)	Advice provided on 223 applications at 6 assessment panel meetings.

The first meeting of the Food Chain Forum had been intended for November 2004 but was postponed to February 2005. The publication of the first Newsletter and first Briefing Paper from the programme had also been intended for November 2004 but were postponed to February/March 2005. These delays followed on from protracted negotiations over the Programme's Communication Plan. The Communication Manager was not appointed until late September 2004, with inevitable knock-on consequences for planned communication activities.

(6) Forward Look

2005 will be a key period for the RELU Programme. During the reporting period:

- 29 Scoping Study, Capacity Building Award and Development Activity projects will conclude and report
- 8 major Research Projects, addressing sustainable food chain themes, will embark on their investigations
- RELU will assess and commission its second and largest round of research
- The Programme will design and implement a third call for research proposals

In addition, a number of programme-level communication and stakeholder engagement activities are planned:

Planning is well underway for the first major RELU Programme Conference *on 'Rural Economy and Land Use: The Challenge for Research',* in January 2005. The conference will be opened by Defra's Minister for Farming, Food and Sustainable Energy, Lord Whitty. It will conclude with a panel discussion, chaired by Sir Howard Newby, involving the Chief Executives of ESRC, BBSRC and NERC on the theme: 'Why Interdisciplinary Research: The Challenges and the Obstacles'. In between there will be working sessions for researchers and PIs on the Programme, including workshops addressing: data management; interdisciplinary training; key policy briefings; and RELU research themes.

A second major RELU Workshop is planned for May 2005. The purpose of the workshop is to give an overview of the achievements of the Scoping Studies, Capacity Building Awards and Development Activities funded under RELU's First Call. The meeting is to be convened jointly with the Land Use Policy Group – which coordinates the research and analysis on land use and the rural environment for all of the UK's conservation, environmental and countryside agencies (English Nature, CCW, SNH, Countryside Agency, Environment Agency, SEPA, JNCC, etc). Negotiations are in-hand to publish selected papers from the workshop in a special issue of a journal.

Planned and potential activities and outputs for the year include:

January 2005	Annual Award Holders Conference
February 2005	First meeting of RELU Food Chain Forum
March 2005	RELU Newsletter 1
April 2005	Briefing Paper on 'Rural Futures' Research
	Briefing Paper on First Call Research
May 2005	End of Awards Workshop
June 2005	Final assessment panel for Second Call proposals
	RELU Newsletter 2
	Studentship assessment panel
July 2005	Third Call for proposals (date provisional)
September 2005	Second meeting of RELU Food Chain Forum
	RELU Newsletter 3
December 2005	RELU Newsletter 4

(7) Budget matters

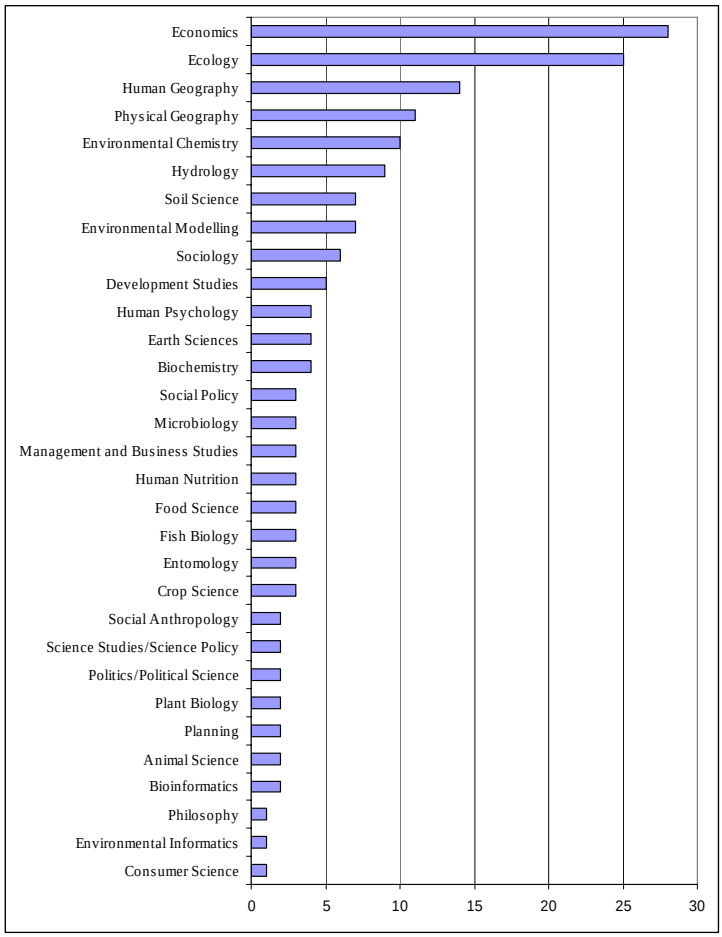
No matters of concern to report.

Annex A: NOMINATED HIGHLIGHTS

RESEARCH HIGHLIGHT: RELU AND INTERDISCIPLINARITY

RELU is the most ambitious interdisciplinary programme conducted by the Research Councils to date, with its commitment to pursue interdisciplinary working across the social and natural sciences in all projects funded, not only to solve complex contemporary problems in achieving sustainable rural development, but also to build interdisciplinary research capacity for the long-term. The 35 First Call projects bring together over 30 scientific disciplines, which is an unprecedented spread of expertise for a single research programme. RELU is forging novel disciplinary collaborations and pioneering integrated research methods and styles of inter-disciplinarity. RELU is committed to 'Root-and-Branch' interdisciplinarity, from research policy to individual scientists, which is involving unprecedented levels of inter-Research Council co-operation and institutional innovation at both Council and programme level.

Number of First Call Co-investigators by Discipline



RELU and 'Root to Branch' Interdisciplinarity

Programme level	• Strategic co-operation between the Research Councils (ESRC, BBSRC, NERC) • Pooled funding resources and Research Council staff • Combined communication, data and assessment policies drawing on best practice
Programme management level	• Novel funding mechanisms to initiate and build collaboration across disciplines • Director's Office integrated across the social and natural sciences • Workshops to promote shared perspectives on topics and problems
Project level	• Requirement for all projects to involve social and natural scientists • Innovation in interdisciplinary methods and approaches • Projects encompass over 30 different disciplines
Individual researcher level	Training activities intending to create a new generation of research staff able: • To think outside the frontiers of their immediate discipline • To operate in interdisciplinary contexts • To be more effective at following ideas through to application

DISSEMINATION HIGHLIGHT: CABINET MINISTER AND DEFRA BACK RELU PROGRAMME

The Rt Hon. Margaret Beckett MP, Secretary of State for Environment, Food and Rural Affairs made a point of visiting the RELU stand at the Royal Show in July 2004, where the programme was sponsoring a meeting with researchers, business leaders, members of conservation groups and rural affairs think tanks.

(Photo. Courtesy SAC Marketing)

Her department, Defra, has agreed to invest £1 million in RELU in support of its Rural Strategy and efforts to shape a prosperous future for rural England.

A Defra press release, commenting on the importance of the RELU Programme, (http://www.defra.gov.uk/news/2005/050119a.htm) welcomed the fact that "a mix of social and natural science which dealt with real-life rural issues could support efforts to improve the quality of life for countryside communities".

Professor Lowe, RELU's Director, has been advising government on its strategy for Modernising Rural Delivery. He was also asked to give evidence to the Environment, Food and Rural Affairs Parliamentary Select Committee when it held hearings on the Government's Strategy. Ministers have appointed him to the new Commission for Rural Communities which will implement the Strategy. Professor Lowe comments: "The RELU research programme is particularly timely, with Government implementing a major rationalisation of its rural delivery programmes. Our research projects are pursuing the joined-up and strategic analysis on the future of the countryside that decision makers need".

Annex B: PROGRAMME CHRONOLOGY

Month	Programme Events	Projects start dates and Director's meetings with projects
Jan-04	Programme presentation to UK Biodiversity Research Advisory Group (BRAG) Socio-economic Sub-Group, London	
	Programme meeting with Dr Andrew Moxey and Dr John Hooker, Scottish Executive Environment and Rural Affairs Department, Edinburgh	
	Programme meeting with Professor Richard Shepherd, Director of LINK Eating, Food and Health Programme, University of Surrey	
	Programme meeting with Professor Joyce Tait, University of Edinburgh, Director of 'Innogen', ESRC Centre for Social and Economic Research on Innovation in Genomics, Edinburgh	
Feb-04	Programme meeting with Environment Agency (Professor Mike Depledge, Head of Science; Bob Harris, Head of Air, Land and Water Science; Toby Willison, Head of Land Quality), Bristol	
	Programme presentation to English Nature Socio-Economic Advisory Group, Peterborough	
	Programme meeting with Dr David Lynn, Director, Science and Innovation, NERC, Swindon	
	Programme meeting with Peter Costigan, Defra, London	
	Programme meeting with ESRC, NERC and BBSRC Communication Teams, Swindon	
	Programme meeting with Liz O'Brien, Steve Gregory, Marcus Sangster, Forestry Commission, London	
	Programme meeting with Professor David White, Head, Science and Technology Group, BBSRC, Swindon	
	Programme presentation to ESRC RELU Scenario Workshop, London	
	Programme meeting Ian Douglas, Co-ordinator, LOCAR Programme, NERC, London	
Mar-04	Meeting with Dr Mike Farrimond, UK Water Industry Research Ltd, London	
	Programme presentation to ESRC Research Priorities Board meeting, London	
	4th meeting of RELU Strategic Advisory Committee, London	
	Programme meeting with Jacob Tompkins, Water UK, London	
	Programme meeting with Ken Roy, Countryside Agency, Newcastle	
	Director gives an opening address at Age Concern Conference: "Ageing and the Countryside", London	
	First Call Assessment Panel for Capacity Building Awards and Scoping Studies, London	

Apr-04	RELU presentation to senior Defra civil servants, London	
	RELU Data Management Sub-Group Meeting, London	
	First Call Assessment Panel for Research Projects, London	
May-04	ESRC RELU Scenario Results, London	
	5th meeting of RELU Strategic Advisory Committee, London	
	First Call Assessment Panel for Networking and Development Activities, Swindon	
Jun-04	Programme presentation Local Government Association and Local Authorities Research and Intelligence Association (LARIA) Conference, Crewe	Meeting with RES-224-25-0084, Fergus Lyon, Middlesex University
	Programme meeting with Jacob Tompkins, Water UK, London	
	Programme meeting with Dr Mike Farrimond, UKWIR, London	
Jul-04	Keynote programme presentation given at Royal Show (also 3 presentations by RELU projects PIs Wyn Grant, Louise Heathwaite and David Macdonald), Birmingham	Meeting with RES-224-25-0110, Sandra Bell, University of Durham
		Start date RES-224-25-0039, Stephen Maberly, Lancaster University
		Start date RES-224-25-0068, David MacDonald, University of Oxford
		Start date RES-224-25-0081, Clive Spash, Macaulay Institute
		Start date RES-224-25-0031, Hadrian Cook, Imperial College, London
Aug-04	Programme presentation to Land Use Policy Rural Affairs Group with representation of Joint Nature Conservation Committee, English Nature, Countryside Agency and Environment Agency	Meeting with RES-224-25-0031, Hadrian Cook, Imperial College, London
		Start date RES-224-25-0087, Keith Matthews, Macaulay Institute
		Start date RES-224-25-0088, Klaus Hubacek, University of Durham
		Start date RES-224-25-0003, Louise Heathwaite, University of Sheffield
Sep-04	Programme presentation to English Nature Socio-economic Advisory Group, Peterborough	Start date RES-224-25-0037, Nigel Boatman, Central Sciences Laboratory
	Director gives opening address at Action for Market Towns Convention, Romsey, Hampshire	Start date RES-224-25-0084, Fergus Lyon, Middlesex University
	Keynote programme presentation given at Sustainable Development Research Network Annual Conference (plus presentation by RELU PI Bruce Traill)	Start date RES-224-25-0042, Edward Tipping, Lancaster University
	Director is key discussant at Defra's Agricultural Economics Academic Panel "The future of the CAP"	Start date RES-224-25-0102, Robin Matthews, Macaulay Institute
		Start date RES-224-25-0107, Christine Watson, Scottish Agricultural College
		Start date RES-224-25-0110, Sandra Bell, University of Durham
	First Call Assessment Panel for Studentships, Swindon	
Oct-04	**RELU Principal Investigators**	Meeting with RES-224-25-0037, Nigel

	Coordination Meeting, Ramada Plaza Hotel, Regent's Park, London	Boatman, Central Sciences Laboratory
	RELU Rural Futures Workshop, Royal Institution, London	Meeting with RES-224-25-0091, David Miller, Macaulay Institute
		Meeting with RES-224-25-0009, Jeremy Franks, University of Newcastle
		Meeting with RES-224-25-0048, Wyn Grant, University of Warwick
		Meeting with RES-224-25-0093, Alastair Bailey, Imperial College London
	Programme meeting with RCUK – meeting with Helen Thorne and Annabel Smith, Swindon	Meeting with RES-224-25-0087, Keith Matthews, Macaulay Institute
		Meeting with RES-224-25-0081, Clive Spash, The Macaulay Institute
		Meeting with RES-224-25-0073, Bruce Traill, University of Reading
		Start date RES-224-25-0048, Wyn Grant, University of Warwick
		Start date RES-224-25-0002, Nick Hanley, University of Stirling
		Start date RES-224-25-0018, Matt Thomas, Imperial College, London
		Start date RES-224-25-0036, Richard Baines, Royal Agricultural College
		Start date RES-224-25-0058, Elizabeth Oughton, University of Newcastle
		Start date RES-224-25-0062, Meg Huby, University of York
		Start date RES-224-25-0095, Noel Russell, University of Manchester
		Start date RES-224-25-00113, Chasca Twyman, University of Sheffield
Nov-04	Director gives evidence to Parliamentary Select Committee on Environment, Food and Rural Affairs Inquiry on Modernising Rural Delivery, London	Start date RES-224-25-0009, Jeremy Franks, University of Newcastle
	Programme presentation to NERC Science into Policy: Best Practice, Keyworth	Start date RES-224-25-0099, Piran White, University of York
	Director is Chair of the Countryside Agency Sustainable Land Management Conference, Birmingham	
	6th meeting of RELU Strategic Advisory Committee, London	
	Second Call Assessment Panel for Outline Research Projects, Swindon	
Dec-04	Programme presentation to Food Ethics Council conference "Just Knowledge? Governing Research on Food and Farming", London	Start date RES-224-25-0044, Gareth Edwards-Jones, University of Wales, Bangor
	Programme presentation to Welcome Trust/NERC/Research Councils Conference on interdisciplinary research on environment and health, Hixton, Cambs	Start date RES-224-25-0093, Alastair Bailey, Imperial College London
	Programme presentation to LARCI Conference on "Research for Local Government", London	End date RES-224-25-0039, Stephen Maberly, Lancaster University
		Start date RES-224-25-0076, Martin Phillips, University of Leicester

Annex C: PROJECT PUBLICATIONS

CONFERENCE PAPERS

Bell, S. (2004) *Calming Troubled Waters: Making Interdisciplinarity Work* Paper presented to Department of Anthropology Durham, Anthropology in Development Seminar 27th October.

Grant, W. (2004) *Potential for and limitations to technology switching - regulation* Paper presented to Workshop on Promoting Adoption of Alternative Pest Management Strategies in Field Crop Systems, Imperial College, Wye.

Heathwaite, L. (2004) *RELU and building capacity in water research.* Paper presented to Community-based Activity in the Uplands: Opportunities and Limits, International Centre for the Uplands, Cumbria, Penrith, 12-13 November.

Heathwaite, L. (2004) *Understanding diffuse pollution: capacity building under the RELU programme* Paper presented to BBSRC event, Royal Show, Stoneleigh, July 6.

Heathwaite, L. (2004) Paper presented to NERC Science for Sustainable Water Management Workshop.

Heathwaite, L. (2004) Paper presented to RSPB Diffuse Pollution from Agriculture Research Project Seminar, London, 15 November.

Hubacek, K. (2004) *Peak District Moorlands: drivers of change* Paper presented to Moors for the Future Partnership, Castleton, October.

Huby, M. (2004) *Integration in practice: challenges for research and policy* Paper presented to 2004 Berlin Conference on the Human Dimensions of Global Environmental Change – "Greening of Policies: Interlinkages and Policy Integration", Freie Universitaet Berlin, 3-4 December 2004.

Macleod, C., DeGroote, J., Hughes, M., Kernan, M., Urama, K., Blackstock, K. and Carter, C. (2004) *Achieving Sustainable Catchment Management: GIS - progress and scope in developing integrated approaches and tools to inform future policies (abstract submission)* Paper presented to British Society of Soil Science (BSSS) conference on Soil Modelling, Aberdeen, 10-13 April 2005.

Matthews, R. (2004) *Future landscapes: modelling concepts, approaches and tools* Paper presented to Rural Economy and Land Use Rural Futures Workshop, Royal Institution, London, 12-13 October.

Oughton, E. A. (2004) *Paper on problems of communication in interdisciplinarity* Paper presented to Insititute of British Geographers, Edinburgh, January.

Shepherd, R. (2004) *Integration of social and natural sciences to develop improved tools for assessing and managing food chain risks affecting the rural economy.* Paper presented to Food Standards Agency Consumer Exposure Team (CERT) meeting, London.

Annex D

CONFERENCES/WORKSHOPS ATTENDED BY MEMBERS OF DIRECTOR'S OFFICE

January 2004	*"Sustainable Farmland Management Conference"*, Nottingham
	Local Government Association seminar on "*Modernising Rural Delivery*"
February 2004	Northern Rural Network Seminar*: "The Role of Local Government in Rural Policy and Delivery: Opportunities and Challenges Post-Haskins"*, Scotch Corner, Yorkshire
March 2004	CoastNET Conference *"Water Framework Directive*", London
	AAB Conference: "*Increasing the effectiveness of World Public Sector Agricultural Research*", London
	Age Concern Conference: *"Ageing and the Countryside"*, London
	SURPLUS, Defra Horizon Scanning *"Project Future Tools for Rural Land Use Decisions"* London
April 2004	Mersey Basin Campaign/ CIWEM Conference "*Integrated River Basin Management*", Manchester
	Foundation for Science and Technology Debate "*What is the countryside for – food production or amenity value*?", London
May 2004	"*Rural Futures, Defra Horizon Scanning Consultation*", London
	ESRC "*RELU Scenario Results*", London
June 2004	Local Government Association and Local Authorities Research and Intelligence Association (LARIA) Conference, Crewe
	BBSRC Parliamentary Breakfast, London
July 2004	Defra Sustainable Farming and Food Research Priorities Group (RPG), Stakeholder Workshop, Birmingham
	Royal Show, Birmingham
August 2004	NERC "*Science for Sustainable Water Management"*, Henley-on-Thames
September 2004	Action for Market Towns, Convention, Romsey, Hampshire
	Defra's Agricultural Economics Academic Panel "*The Future of the CAP*"
	Sustainable Development Research Network Annual Conference
October 2004	ESRC Supporting Communications Conference, London
	RELU "*Rural Futures Workshop*", London
November 2004	Countryside Agency Sustainable Land Management Conference, Birmingham
	NERC "*Science into Policy: Best Practice"*, Keyworth
December 2004	LARCI Conference *"Research for Local Government"*, London
	Food Ethics Council, London *"Just Knowledge? Governing Research on Food and Farming"*, London
	Welcome Trust/Research Councils Conference on *"Interdisciplinary Research on Environment and Health*", Hinxton