Environment – Land Use and Rural Stewardship

PROGRAMME3

KNOWLEDGE TRANSFER/EXCHANGE (KT/E) STRATEGY 2006 – 2011

Enhancing Water Quality | **Protecting the Nation's Soils** | **Conserving Natural Heritage** | **Developing Rural Scotland**

Delivering Sustainable Outcomes for Rural Scotland

Purpose

This document provides the overall Knowledge Transfer/Exchange (KT/E) Strategy for the Scottish Government Rural Environment Research and Analysis Directorate's (RERAD) commissioned research programme on "Environment – Land Use and Rural Stewardship".

The Strategy provides the overall context for the individual KT/E plans developed for each of the four programme objectives, and it supports the delivery of these.

This document is intended for those individuals and teams involved in commissioning, managing and delivering the RERAD commissioned research programme.

Terminology

There has been a fundamental change in thinking about "knowledge transfer" over the past decade. The original concept of "knowledge transfer" ('getting innovations out of the laboratory and into the work place') has largely been overtaken by the concept of "knowledge exchange". This reflects new thinking about effective science communication. With "knowledge transfer", the communication between scientists and their audience groups is seen as a predominantly one-way process, involving a simple transfer of knowledge from one party to the another (knowledge deficit model). With "knowledge exchange", the communication between scientists and their stakeholder groups is seen as an interactive two-way process, with stakeholder involvement throughout the research cycle (co-construction or social learning model). The main argument for the latter approach is that it is more likely to satisfy stakeholder needs and it is therefore more relevant in an applied science context.

In reality, there is no single best approach to effective science communication. These changes in thinking are more a reflection of our increased awareness of the need to adopt different approaches depending on the audience and the purpose of the communication. By adopting an audience-focused philosophy, it is possible to develop a strategy which embraces this spectrum of science communication approaches, with one-way "knowledge transfer" (KT) activities at one end and highly interactive two-way "knowledge exchange" (KE) activities at the other. Hence, this present strategy, based on just such an audience-focused approach, is described as a "knowledge transfer/exchange" (KT/E) strategy. Our challenge is to tailor our approaches to the requirements of the different audiences for our science.

Environment – Land Use and Rural Stewardship
PROGRAMME 3

Strategic Objectives for the Research Programme

RERAD have commissioned 4 major programmes of research under the umbrella of their Strategy for Research (2005–2010). This document relates to the third research programme which is centred on the theme of **"Environment – Land Use and Rural Stewardship"** (also frequently referred to as RERAD Programme 3 or P3).

The overall aim of this research programme is to support the development of sustainable multi-functional landscapes. This includes agriculture, forestry, game management, etc. (provisioning services) but also embraces a wide range of other ecosystem services, including regulating services (e.g.: carbon sequestration, water purification, etc.) and cultural services (aesthetic, education, recreation and tourism, etc.). A particular concern is to identify the key factors linked with ecosystem function and resilience which will ultimately enable more sustainable use of environmental resources.

Programme 3 addresses four key strategic objectives covered by the RERAD Strategy for Research (2005–2010) namely:

- **Protecting the Nation's Soils:** seeks to enhance the sustainable use of Scotland's soils and conservation of their natural heritage.
- **Enhancing Water Quality:** works to underpin the improvement and maintenance of water quality in Scotland.
- **Conserving Natural Heritage:** provides advice and information to conserve and enhance Scotland's natural heritage at all scales, and to consider the social and economic value of this natural heritage.
- **Sustainable Land Use and Rural Stewardship:** takes an holistic, integrated approach to enhancing farm systems, rural landscapes and communities, so that they are socially, economically and environmentally sustainable.

Strategic Objective for Knowledge Transfer/ Exchange

The RERAD Strategy for Research (2005-2010) also includes an overall objective for Knowledge Transfer/Exchange (KT/E) which is to:

- **Improve knowledge transfer from, and public awareness of, the research and its outputs**

The Strategy requires that each of the commissioned research programmes has an identified and costed knowledge transfer plan, and that this plan should take account of different audiences, likely delivery mechanisms, timescales and means for assessing uptake. This document addresses this requirement and provides the strategic planning framework for all knowledge transfer/exchange activities associated with the programme of research on *"Environment-Land Use and Rural Stewardship"*.

Strategic Plan

At the time the RERAD Strategy was written, there were a number of concerns about the extent and overall effectiveness of communication between the scientific community and other stakeholder groups, including policy teams in Scottish Government and related agencies. The RERAD Strategy therefore specifies that the research teams should transfer and exchange knowledge with a much wider set of stakeholder and audience groups than had previously been the norm. This wider KT/E remit provides a number of challenges in terms of building capacities both within the research teams themselves, and between the research teams and the various stakeholder and audience groups.

This KT/E strategy is therefore founded upon the answers to five key questions:
- Who are the key audiences for the research?
- What are the principal purposes of communicating with them (e.g. raise awareness, change attitudes, influence behaviours etc.)?
- What are the most appropriate routes (communication channels) for achieving these (e.g. media campaigns, popular articles, stakeholder consultative groups etc.)?
- Who has prime responsibility for facilitating these activities?
- How can the effectiveness of these activities or outputs be measured?

Environment – Land Use and Rural Stewardship Research Programme KT/

Audiences	Principal Purposes of Communication	Routes and Responsibilities
Policy	Increased use of research evidence in the policy development and evaluation cycle.	Delivery through commissioned research programme outputs including direct briefings. (Programme 3 Co-ordinator)
Public	Improved awareness of research findings and use in educational materials and programmes.	Engage through media, themed public events programme, schools programme, and with partnerships with Learning and Teaching Scotland and British Association for the Advancement of Science. Creation of Public Participation Centres especially the John Hope Gateway at Royal Botanic Garden Edinburgh. (Communications Officers)
Commercial	Consolidation of existing commercial client base and increased new business in terms of both numbers of clients and new areas of activity.	Delivery through SAC extension network and MRP commercial consultancies. (Business Development staff)
Scientific	Increased impact of scientific publications.	Delivery and engagement embedded within Work Packages. (Work Package Co-ordinators)
Programme Specific Stakeholders	Increased awareness of, direct engagement with, and use of the results from the research programme.	Delivery though involvement in stakeholder consultative groups and through SAC extension network Articles in related popular press and relevant trade/in-house magazines. (Work Package Co-ordinators)

This strategic plan identifies the main audience and stakeholder groups in relation to this programme of research. These are: policy, public, commercial, scientists and programme specific stakeholders. The Table below provides the overall strategic planning framework for KT/E activities relative to these key groups. The table addresses the five key questions set out earlier and identifies: the principal purposes of the KT/E activities; the main communication routes and the people with prime responsibilities for facilitating these; the main types of activities and outputs, and the measures used to measure and assess the effectiveness of these activities.

Goals

The KT/E strategy has five overall goals:

1. To develop more effective engagement with all the key stakeholder and audience groups for this research programme.
2. To improve the quality of scientific communications and related outputs provided to these groups.
3. To increase the overall level of impact of the research findings in relation to these groups.
4. To achieve increases in both the use and impacts of research findings in policy support.
5. To improve the capacity of the research teams to evaluate and learn from KT/E activities.

E Strategy 2006 – 11 : Audiences, Outputs and Measures of Effectiveness

Types of Activity/Output	Measures of Outcomes/ Effectiveness
Numbers of staff involved in stakeholder groups and attending programme events; policy briefings; articles in relevant in-house magazines and web resources.	Direct feedback from RERAD and SEARS organisations policy staff showing increased interaction and value (surveys and face to face interviews) and evidence of use of research evidence in policy development and evaluation cycle.
Increased numbers of media cuttings and appearances (radio, TV etc.). Increased numbers of educational resource material.	Increased profile for research programme in general media (press cutting log); numbers of events held and exit surveys; number of resources and the take up in schools/university settings.
Feedback showing increased interaction and value (log of contacts and contracts/money won).	Return business and new business attracted.
Numbers of peer-reviewed papers in international scientific journals.	Citation indices.
Numbers of staff involved in stakeholder groups and attending programme events; policy briefings; articles in relevant in-house magazines and web resources.	Feedback showing increased interaction and value (via questionnaire survey and log of media profile).

Strategic Tasks

A KT/E implementation plan has been developed around each of the four Programme Objectives (as set out on page 2). These plans are supported by a stakeholder consultative group. The Terms of Reference for these groups is provided in Appendix 1. To ensure consistency between these implementation plans, each has been developed using the same structure as this overall KT/E Strategy.

Besides the tasks that relate to the individual implementation plans, there are a number of strategic tasks that require co-ordinated effort across the programme. These partly relate to the strategy development process, establishing and running the stakeholder consultative groups, but also includes wider activities which are primarily aimed at embedding a wider communication culture within the research teams (e.g. running an internal KT/E competition to attract competitive bids for new KT/E projects), between the MRPs (e.g. new public science centre in the John Hope Gateway Centre at RBGE) and learning both from international experience and through formal communications and KE training programmes. It is also recognised that the KT/E effort benefits from a well co-ordinated and themed programme of activities which ensures value for money in terms of both the multiple use of resources and their enduring impact. The development of a specific Web site is also a centrally managed activity. These strategic tasks, their timetabling and relative priorities are set out in the Table opposite.

Management, Co-ordination and Review

The overall co-ordination of the KT/E Strategy is the responsibility of Dr R.V. Birnie, Head of Communication Services at the Macaulay Land Use Research Institute, supported by a specialist communication team (4) and members of the science teams with KE lead responsibilities. This effort is overseen by Professor S. Albon (Programme Co-ordinator) and the Programme 3 Group (chaired by Professor Michael Usher) which meets every six months. The wider co-ordination of the KT/E activities is achieved through the RERAD Knowledge Exchange Committee (KEC) (Chaired by a senior member of staff from RERAD) which meets every 3/4 months. The KEC comprises the KT/E leads from all the Main Research Providers and the RBGE, and all the RERAD Programme Co-ordinaters.

The outputs from the KT/E activities are reported to RERAD annually and are assessed alongside the scientific outputs as part of the independent review process commissioned by RERAD at intervals through the 5 year life of the research programme.

Environment – Land Use and Rural Stewardship Research Programme KT/E Strategy 2006 –11: Strategic Tasks and Priorities

Tasks	2006/07	2007/08	2008/09	2009/10	2010/11
P3 KT/E Strategy Development	H	L	L	L	H
RERAD Work Package/ Programme Objective KT/E Implementation Plans (PO 7 – 10)	H	L	L	L	H
Establishment and running of Stakeholder Consultative Groups	H	M	M	M	M
Internal KE Project Competition	H	H	H	H	H
Cross MRP KE Initiatives including Public Participation Centres	M	H	H (John Hope Gateway Centre at RBGE)	M	M
International KE Initiatives	L	M	M	H	M
Communications and KE Training	M	H	M	M	M
Events Programme and Related Themes	H Biodiversity	H Soils	H Climate Change	H Sustainable Development	H Evidence Based Policy
Web site development & maintenance	H	M	M	M	H

PRIORITY

H = High

M = Medium

L = Low

Appendix 1
Terms of Reference for Stakeholder Consultative Groups

Purpose

The purpose of the Stakeholder Consultative Groups is to provide advice and guidance to the research teams to ensure that their strategic research is tailored to end-user needs, and the opportunities for co-operative working, knowledge exchange and dissemination are maximised.

Core Functions

1 To raise awareness of the research programme and its outputs with the relevant stakeholders

2 To enable dialogue/knowledge exchange and identify tactical opportunities for "synergies" (e.g. ensuring that field sites are chosen which complement other interests; awareness and integration with other initiatives) in other words to advise on the planning and delivery of the required research outputs.

3 To provide a forum to discuss end user needs and facilitate technology transfer and wider stakeholder engagement and dissemination.

4 To provide information on the effectiveness of the communications from/to the research teams and evidence of where and how this has influenced stakeholder behaviour (e.g. in policy development terms; management practice).

Limitations

The overall strategic direction of the RERAD research programmes has been set by RERAD. An overall advisory stakeholder Group (P3G) has been established to provide independent advice and help to the Programme Co-ordinator (Prof. Steve Albon) and the Director/CEO of the Main Research Providers involved in delivering the required outputs specified by RERAD for the Programme. The P3G is chaired by Prof Michael Usher. The P3 Consultative Groups nest within this overall structure and are intended to provide more tactical inputs to ensure the effective delivery of the required outputs, and to maximise their potential benefits to the relevant end-user communities. Neither the P3G nor the individual Consultative Groups have responsibility for steering the research programme. This responsibility resides with the commissioning body, RERAD.