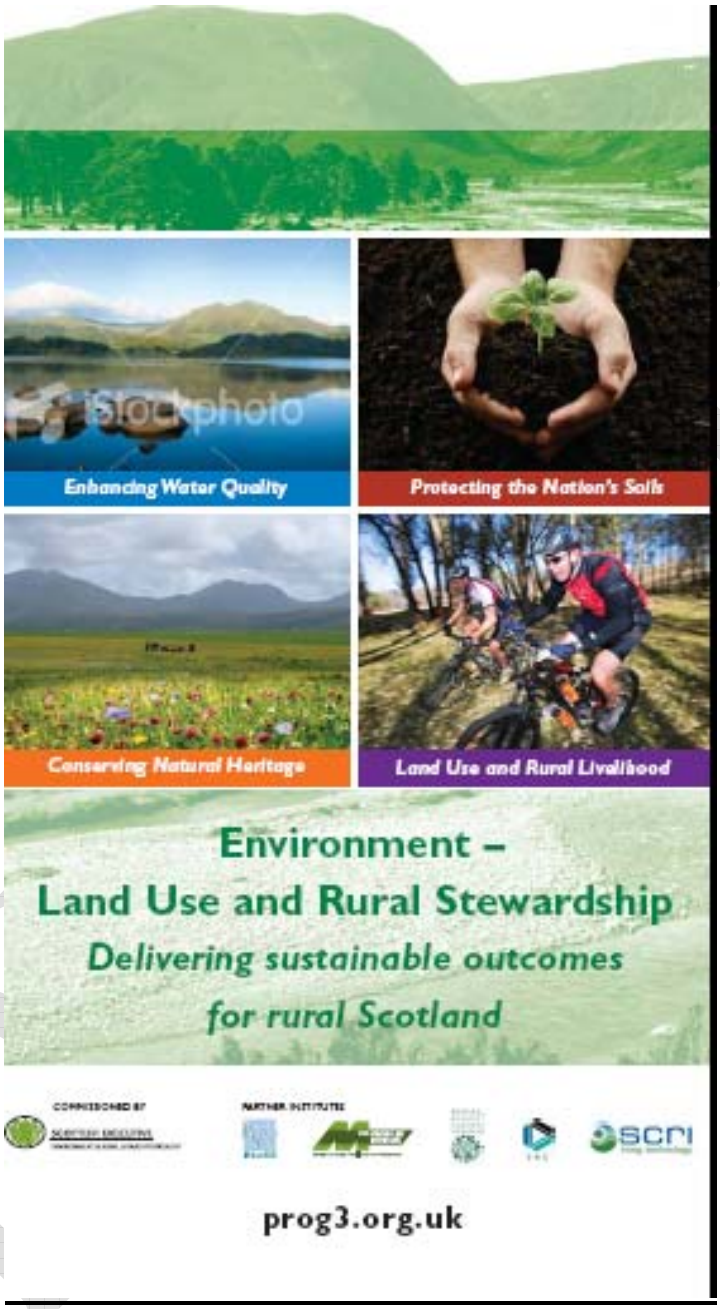

Draft Report from Interactive Workshop

25th June 2007

Jill Dunglinson, Kirsty Blackstock & Wendy Kenyon

Executive Summary

The aim of the workshop was to explore ways in which the Environment: Land Use and Rural Stewardship research programme (Programme 3) could best support the delivery of a more sustainable Scotland. The participants, from a wide range of stakeholders engaged in a fast paced, carefully structured process to answer three specific questions (summarised in the paragraphs below). These questions were posed to ten groups of participants across four thematic groups (water, soil, natural heritage and rural development). Although the questions generated a great variety of statements, there were also a number of common themes both between and within the thematic groupings.

What needs to be done differently, in research, to help make rural Scotland more sustainable?
There was considerable emphasis on the need for more interdisciplinary and joined up approaches. The increased involvement of stakeholders from the earliest stages of the research, and an increase in communication more generally, were stressed. In addition, there was appreciation of the need to continue practical, experimental work and the use of scenarios and sites to demonstrate results. The availability of funding and access to data were mentioned as important priorities. Finally, participants wanted long-term but flexible and policy-relevant research that took a holistic approach. *(See pages 6 – 12)*

What can Programme 3 research provide to help make rural Scotland more sustainable?
The participants noted what they like about the research and identified what they wanted to see prioritised. Again there was a diversity of views with certain issues included in both the 'likes' and 'wants'! Nonetheless, there were a number of common themes including liking the interdisciplinarity and closer integration, the involvement of stakeholders and policy relevance. At the same time, the 'wants' included strengthening the long-term practical/experimental evidence base. Improvements in the availability of data were stressed repeatedly. Greater awareness of the context of some issues, particularly addressing problems at the relevant scale, and with the appropriate attention to multi-functionality was requested. Finally, improved communication and increased stakeholder engagement was seen as essential for more effective progress. (*See pages 13 – 16)*

What needs to be done to improve the contribution of Programme 3 research?
The two previous question led participants to identify actions that they believe are the most important to improve the contribution of the Programme in helping make rural Scotland more sustainable. The suggested actions reflect the key 'wants' and can be brigaded under the following themes *(see pages 17 – 19)*:

- More accessible communication
- Closer integration/joined up working
- Greater policy relevant focus
- Better contextualised science
- Wider participation of stakeholders
- Improved data availability
- Stronger evidence based research
- Enhanced funding

Each group developed one prioritised action from their long list, outlining why this action is important, how it could be done and who should do it. Thus, the outcome of the workshop was ten actions, one from each group, targeted within the four thematic areas (water, soil, natural heritage and rural development), which were collectively viewed as most important priorities for the Programme to consider taking forward *(see pages 20 – 22).*

The actions are:

- **Engage with end users throughout research cycle**
- **Deliver a joined up approach to deliver (water) benefits to Scotland across stakeholders, enablers, policy makers and funders.**
- **Fund a soils information system**
- **Establish uncertainty at all levels**
- **Better science – policy communication (decision makers)**
- **Ensure research does lead to evidence-based policies/laws/incentives etc through proper engagement with and knowledge transfer to and from all associated with the issue (not just scientists and policy makers)**
- **National spatial data centre**
- **Presentation of findings as coherent scenarios/visions of a sustainable Scotland relevant to local communities, individuals and governments including interpretation of specific rural production and other use opportunities.**
- **Identify range of values and analyse trade-offs between them**
- **More "joined up" research across:**
  - **Disciplines/analytical specialisms**
  - **Nations**
  - **Policy/research divide**

Individual Learning Points

The comments from individuals about the workshop (and the day as a whole) were generally positive. Many found it to be an informative day through learning more about the Programme and about other peoples' work, and how this could aid their own roles in striving to make Scotland's environment more sustainable. However, there were as number of suggestions for improvements that could be made, including greater end user participation in future events. In conclusion, the event highlighted what individuals believe are the issues to concentrate on in the future both in terms of what to research and how to do research in a more interactive and participatory manner **(see pages 23 – 24)**

The amended report will be considered by the P3 (Advisory) Group at their next meeting in the autumn. Please return comments to s.albon@macaulay.ac.uk by 31st August 2007.

Acronyms

CCTs	Cross Cutting Themes
COE	Centre of Excellence
CRCG	Catchment Research Consultative Group
DW	Drinking Water
EU	European Union
GM	Genetically Modified
MRPs	Main Research Providers
NDPB	Non Departmental Public Bodies
NGO	Non Governmental Organisations
NSIS	National Soils Inventory Scotland
P3	Programme 3: Environment: Land Use and Rural Stewardship
RSPB	Royal Society of the Protection of Birds
SEERAD	Scottish Executive Environment and Rural Affairs Department
SEPA	Scottish Environment Protection Agency
SNH	Scottish Natural Heritage
NBN	National Biodiversity Network
WP	Work Package
WQ	Water Quality

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INTRODUCTION

The workshop was designed to encourage interactive discussions between different stakeholders regarding the process of research to date and to gain feedback to guide the remaining years of the Programme. It was also designed to identify how everyone present can contribute to, and learn, from the research. The workshop process was focussed around the following question: *'How can Programme 3 research best support the delivery of a Sustainable Rural Scotland?'*

The workshop built upon the morning's presentations and posters relating to:

- Enhancing water quality
- Protecting the nation's soils
- Conserving natural heritage
- Developing rural Scotland

The process design was influenced by the following principle that attendees would have valuable opinions but have limited time to participate in any evaluation of the programme. Therefore, any process must ensure that they have the opportunity to comment whilst achieving a tangible outcome within a short time period. Working in small groups but within one room creates a sense of energy and purpose, and using a worksheet provides a structure to the process. These principles build on methodological innovations developed under previous EU/SEERAD funded research programmes.

The workshop required participants to work through a number of tasks in small groups, which would lead to the delivery of an overall action plan for the future of Programme (P3). Ten groups were divided into the four themes (water, soil, natural heritage and rural) and they worked through the tasks, which included

- Each group member introducing themselves and explaining how their roles could aid in making Scotland more sustainable.
- Answering the following 3 questions as a group[1]:
    - What needs to be done differently, in research, to help make rural Scotland more sustainable?
    - What can P3 research provide to help make rural Scotland more sustainable?
    - What needs to be done to improve the contribution of P3 research?
- Each group identifying one action that they believe needs to be taken to aid in creating a more sustainable rural Scotland.
- Individually identifying their most important learning point from the day.

The outcomes of the questions are presented first before detailing the actions chosen and the individual learning points. Finally a summary of the overall findings of the workshop is provided.

[1] The groups were not restricted to discuss issues relating specifically to their themes.

OUTCOMES OF THE WORKSHOP

QUESTION 1 - What needs to be done differently, in research, to help make rural Scotland more sustainable?

This question asked for individual responses that were discussed by the group.

Summary: The issues raised were related to methodology; topics and knowledge exchange. In terms of methodology, participants commented on the need to reframe research projects in ways that recognise systems thinking, integrated topics and interdisciplinary research. There were a number of comments on the type of research required to support policy and result in positive outcomes. The topics were varied, but common themes were the links between Scotland and global themes, urban-rural connections, integration between the different WP topics and linking human and environmental sciences. Finally every group discussed the need to improve communication within the research community and between researchers, policy makers, organised stakeholders and the public.

Enhancing Water Quality

Group 1

- Acknowledgement of uncertainty in scientific understanding
- Better appreciation of uncertainty
- Optimise the impact of regulation
- Better framed questions
- Focus research on WQ parameters failing or tending to fail
- More research better targeted on policy goals
- Better understanding and data/knowledge flow between science and stakeholders
- Communication systems (knowledge transfer)
- Understand the drivers of change
- Identify the real links between social, economic and environmental benefits of rural Scotland
- Consider externality globally
- Understand urban-rural social interaction
- Tackling complex issues: think broad, context, big picture. Pulling information together
- Integration across scientific disciplines, across policy areas
- More joined up research – develop the ecosystems 'systems' approach
- Break down barriers of understanding between different disciplines

Group 2

- What does sustainability mean?
- Research to identify the key to changing behaviour by land users
- Linking public attitudes and values to behaviours – e.g. changing behaviour
- Scenario modelling and balancing outcomes (plus and minus)
- Understanding of natural flood management – understanding/demonstrating how storing water can mitigate flooding
- Scenario analysis – what if? in relation to changing land management
- Development of models of water management with different kinds values (economics, social, physical, biological)

- Research results need to be passed on to land managers better
- Results need to be made more real
- Practical interpretation (jargon busting and practical demonstration)
- Tangible real life examples e.g. economic/social results for buy-in
- Better understanding of connected environments – soil-water / river-sea etc.
- Delivery mechanisms have to deliver best environmental gain
- Integrate social and natural science research
- Stakeholder engagement/participation - use of non-verbal methods
- Better communications and publicity of sustainability issues in Scotland
- More sustainable funding for key areas of research
- More joined up working between research stakeholder groups
- Better links between MRPs and university researchers
- Strong partnerships with/for implementation
- Better links between research programmes
- Integrate public money and better prioritisation
- Research to improve cooperation amongst different players in supply chains/networks
- Stop the dumbing down of TV – intelligent debate/increasing understanding/availability of knowledge for public
- Research into the consequences at the large scale for smaller scale events
- Long-term ethos to monitoring and experimentation (beyond the life of research programmes/topical science)
- Sustainable funding for long term monitoring
- Feedback from practitioners
- Outputs need to be more interactive – 2 way communication
- High level forum to co-ordinate all relevant attitudes in Scotland

Protecting the Nations Soils

Group 1

- Linking rural and urban issues
- Better methods of communication particularly to people outside soils
- Communication between researchers, MRPs, stakeholders
- Communicate research outputs in a more accessible manner for use by policy and other stakeholders
- Revisiting the issues
- Evidence-driven policy not policy-driven evidence
- Provide evidence for policy
- Better joined up – cross agency research provider fora and information sharing
- Better access to data/geog research outputs to all – (SH) NBN
- Sharing of ideas across different interests – move away from the concept of intellectual property
- Better integration of soil/water/air /biodiversity/geodiversity research objectives
- More time to review information and synthesise across disciplines
- More research on finding solutions to sustainable land use problems which cut across areas and disciplines. No use finding a solution to one problem which makes another worse.
- More ability to think about how ecological/social/economic systems are likely to change in the medium term i.e. 10,20, 30-100 years
- Better use of limited funds between Scottish research institutes
- Research area prioritisation based on theory rather than [unreadable]

- Participatory – from pre-question stage - increase buy-in
- More participatory approaches to research
- Participation through local networks of people (non-science)
- More linkage between research and educators
- More, smarter, stakeholder involvement
- More interdisciplinary research
- More support staff to do routine analysis
- More technical support at SCRI
- Shift research infrastructure from the central belt
- Less travel to research meetings, more use of video/tele conferences
- More scope to follow curiosity lead research ideas
- More long term funding for research
- Longer term vision of research
- Research sites and facilities to cover Scottish conditions (economic/environment)
- Need for long-term sites to follow changes with practice and climate

Group 2

- Development of a robust extensification service linked to research providers
- Public involvement
- Much better and clearer routes/mechanisms of interaction between researchers and end users
- Good links between research at all levels (fundamental, strategic, applied) to the issue needing resolution
- Development of a "common language" that facilitates between different interest groups (scientists, stakeholders, policy makers, public).
- More communication across 'topics' and disciplines and actors
- Financial planning logistics between MRPs does not always facilitate inter-disciplinary research needed for SD
- Secure, long-term funding for research
- More money for longer-term 5-10 years
- Match the skills to the problem i.e. start from what needs to be solved and work backwards at the outset
- Derive the research priorities from policy needs rather then from researcher interests and capability
- Radical thinking
- Movement from accepting status quo
- Time to get realistic on true benefits of agricultural subsidies
- Integration of research on soils and water
- More research into harnessing sea wave power and less on bio fuels from food such as wheat
- Evidence based policy

Conserving Natural Heritage

Group 1

- Researchers need to be politically aware
- Wider/clearer communication of research outputs with policy makers
- Develop knowledge and information exchange. Make the science simple for policy folk to understand
- Better understand and communicate the uncertainties involved in making projections of future change

- Enhance inclusion of research end users in communication channels
- Connections made between differences of policy
- We need to develop a robust verifiable evidence base to enable prioritisation – consistent with policy objectives
- Improved understanding of links between environmental systems and human health
- Research to identify synergies trade offs and conflicts in ecosystem service delivery
- Document and understand the importance of social and cultural change
- Better funding access for all
- Break down institutional funding barriers
- Research what leads to delivery on the ground i.e. not research for its own sake
- Research needs to be more joined up between – policy makers, scientists, end users, stakeholders. There needs to be far more interactions
- Develop a rolling approach to programme a work package development
- Broader measurement of research quality – "Does it change the world?" – rather than "which journal is it in?"
- Incorporate horizon scanning into programmes
- Develop interdisciplinary research tools and skills
- More joint (cross-institute) initiatives.
- Interdisciplinary approach to address specific issues
- Value interdisciplinarity for career development
- Wider collaborations between institutes, academia and others (e.g. NGOs and NDPBs)

Group 2

- New policy and legislation to deliver healthy and resilient ecosystems
- Tackling threats to biodiversity/water/soils at the appropriate scale = system scale
- Research prioritised to deliver better planning and implementation at the ecosystem/landscape scale
- Better understanding of adaptation potential of species
- Get the sectors out of their silos – outcome focused research and policy
- Identify the questions to be addressed more clearly
- Researchers could be more involved in policies e.g. target setting and location/biodiversity selection
- Target outputted at particular relevant policies
- Implementation of research needs given greater consideration
    - Regulation permissible e.g. SEPA, planning regs
    - What the supermarket wants
- Greater appreciation of the needs, context and constraints of the arable industry and vice versa better understanding my industry of what research can deliver as part of a wider suite of developments
- Researchers could engage more with Government advisors (e.g. SNH for biodiversity) to develop policies/strategies for rural Scotland
- Ensure that outputs are clear and the application to policy highlighted
- Stop trying to integrate for the sake of it. Do it when necessary to address a clear question
- Urban communities
- Inform public debate – evidence based
- Public perception of research results need to be considered when it is communicated initially e.g. GM food

Group 3

- Better links/integration between geodiversity/biodiversity in understanding and responding to landscape/terrain sensitivity to environmental and other changes
- Improved public understanding of natural processes - knowledge transfer
- Paradigm shift – explicit focus on trade-offs between
    - Biodiversity conservation
    - Provision of ecosystem services
    - Sustainable rural communities
- Focus on assessing impacts of existing policies on outcomes and land-owner decision-making
- More synthesis of existing spatial data and integration across
- Re-sampling of spatial data sets to ensure variation in change
- Conflict resolution – better understanding of factors influencing stakeholder willingness to undertake management activities
- Focus more widely than Scotland – Scottish only focus reduces potential understanding of processes at play more widely that may be easier to study elsewhere
- Need to think ahead more (thinking space): 5 year programmes planned now and focussed on today's policies will always be retrospective and reactive, not pointing over the horizon
- Ecological processes – underpinning research on fundamental processes – e.g. trophic cascades
- Undertake more strategic research on ecosystem processed for Scotland's ecosystems
- Set up long-term studies/sites of agricultural biodiversity, linked to e.g. NSIS or sewage sludge sites etc.
- More emphasis on different approaches to community involvement
- Undertake more monitoring of change in relation to land use and climate change
- Better understanding of the relationship between research results and policy decisions
- Methods facilitating making decisions under uncertainty.

Land Use and Rural Livelihood

Group 1

- More outputs in popular articles
- More integrated interdisciplinary work
- Increase in interdisciplinary research
- Scotland's soils are a major European carbon sink – we need to know how best to conserve this urgently
- Economic impacts of future scenarios need to be widely understood
- Blue sky thinking can't be forgotten
- Flexibility to adapt research to change
- To anticipate areas of research instead of reacting to a situation
- Engage effectively with rural communities
- Explain that "rural" matters to urban Scotland (as vice versa)
- Avoid 'blame' for impacts and encourage ownership
- For 20 years bio energy seems to have been unprofitable
- We need research to make it profitable for farmers to grow energy & food
- More integrated involvement of policy – and other "stakeholders" in the formulation, and execution of research (consultative groups are not enough – involvement as full team-members is needed)
-

Group 2

- Integrated rural policy
- More emphasis on knowledge exchange
- Link basic research to management practices
- There has been a tendency to centralise thinking and design of schemes to enhance rural Scotland to often these cut across local themes e.g. the planting of hardwoods on upland grassland to the detriment of upland birds
- All our peatlands that valuable?
- Research on how either to maintain the present herbivore population in face of likely reduction to sheep that will have a dramatic effect on the Scottish landscape
- Links to other relevant research and policy strands e.g. historic environment landscape policy and European Landscape convention
- More integration
- Integrated approach
- Greater links - not reinventing the wheel but standing on the shoulders of previous research(ers)
- Research on animal husbandry management to maximise biodiversity/outdoor recreational potential rather than food production
- Clarification of aim of rural development – e.g. sustain a particular social structure or service urban areas?
- Closer and more regular contact between research and policy
- Clarity and communication (i.e. improving …)
- Analysis of conflicts between different policies
- Recognition that solutions are not “one size fits all” and may lead to conflict if not integrated e.g. between natural heritage and historic environment
- Flexibility awareness of changing circumstances
- Persuasion. Importance of research – don’t lose sight of
- Clearer idea of what is actually meant by sustainability
- Look more holistically at sense of place concept
- Align research strategies of different government organisations
- Ways of analysing trade offs – how to equate different ecosystem services with each other

Group 3

- More, longer-term forward thinking – horizon scanning
- Development of local solutions to global problems
- More emphasis on segmentation methods to understand what approaches resonate with different population groups
- What is the potential of IT to improve sustainability?
- Start at the beginning: decide in what ways it is not sustainable and whether you really want to change these factors
- Better understanding of the barriers to sustainability of different kinds
- Evidence of true cost and benefits associated with lifestyle choices
- Focus on rural urban interactions and linkages - flows between the two
- Sustainable tourism does it exist
- Farming without subsidies
- Researchers need to better understand policy people and vice versa. Understand needs & manage expectations
- Morally can we support policies that attempt to keep young people in the highlands?
- In population terms should our policies attempt to reach a planetary trend rural to urban?
- Integration and interdisciplinarity

- Ecology of lowland systems - linkage with land management
- More opportunities for interdisciplinary research
- Defining the trade-offs between multiple non-commensurable objectives
- Access to all publicly funded data sets supported
- Population issues need to be advanced
- Adjoining areas of sympathetic land use need to be developed and evaluated.
    - What is sympathetic?
- In looking ahead on 50 years time frame we need to be aware that our projects of today will not have adverse implications on species survival in the long term
- A need to ensure that there is a joined up policy for research over what is a wide range of disciplines

QUESTION 2 - What can P3 research provide to help make rural Scotland more sustainable?

This question was a small group discussion to identify what they liked about the existing research and what was missing.

Summary: Participants liked the interdisciplinary and integrated approaches being developed, particularly the human-environment linkages. They liked the problem and policy focus, the mix of short, medium and long term research horizons and the mix of empirical and experimental approaches. They were pleased to see increased cooperation between the MRPs and complimented the presentations for being accessible and informative. Participants wanted ongoing delivery of these issues, many additional topics to be explored, an increase in data sharing and rapid dissemination of results. There were also many comments on the need to do science differently, with more cooperation, communication and reflection on how results make a difference in the 'real world'.

Enhancing Water Quality

Group 1

We Like:

- Long-term historical data
- Style (accessible) of presentation
- Link to socio-economics
- Interdisciplinarity – wider circle

We Want:

- Relevant WQ parameters for DW
- Mapping what to do … win-win (reconciling directives)
- Wider circle of communication – with policy makers
- Experimental policy
- Data accessibility
- Understanding policy making process
- How to manage uplands with less sheep

Group 2

We Like:

- Joined up nature
- Human element
- Complex issues communicated clearly
- Multi/inter – disciplinary
- Linkage between scales

We Want:

- Long term commitment to capacity/research
- Not enough soil scientists! – Accessibility/skills shortages
- Demonstration of practical solutions e.g. focus farms and monitoring to back up
- Show viability of research to produce outcomes
- Success/failure – better evaluation
- Sharing information/data
- Better delivery – liaison, need to build trust
- Time to do the science properly – not rushed legislation
- Not assuming the problem will be all addressed by 2012 etc.
- Identification of structure to aid delivery – incentives
- Policy conflicts

(How does the work fit UK context?)

Protecting the Nations Soils

Group 1

We Like:

- Integration
- Knowledge Transfer
- GHG emission work
- Stakeholder involvement
- Early delivery of research results
- Policy interaction (soils and agri-environment etc.)
- Soils focus

We Want:

- More geo-diversity
- More links vegetation – soils
- Web based soil information system (free!)
- Farm scale/ecosystem scale GHG (better links within programme 3)
- Better links Programme 1 and 3
- Better integration between funders
- Early delivery of research results
- Integrated scenario analysis

Group 2

We Like:

- Links between monitoring and experiment (- causal relationships)
- Major research providers being better linked
- Research organisations (including universities) working more closely together

We Want:

- Better balance for climate change research
- Putting research in relation to the bigger issue (context)
- More collaboration

Conserving Natural Heritage

Group 1

We Like:

- Research is relevant to policy
- Presentations were effective for a diverse public
- Problem orientated research and genuine interest in addressing real world problems
- Put MPRs together and use collective resources
- Focus on cross cutting themes
- Brings in social science in a new way and help prioritise the choices we need to make
- Integrates themes in a way useful for policy making and reflect new thinking in SE
- Bring attention to climate change

We Want:

- More of the same
- Science to deliver multifunctional environmental management in the context of CC
- Scenario planning – understand the effects of driving change
- Prioritising resolution (conflict res.)
- Understand cultural context (fragile rural hinterland)
- Understand social impact and needs in relation to policy
- Connect better with pieces of science and improve communication
- More education – young people and role of science, university (interdisciplinarity)

Group 2

We Like:

- Intention to integrate across soil/water/biodiversity at the catchment scale (1)
- Some issues (e.g. diffuse pollution) are clear cut and 'easier' to address and has clear policy driver

We Want:

- Cross cutting themes need to be 'integrated' more into full spread of work programme 3 and MRPs thoughts/approach to delivery
- To ensure that (1) above actually happens during lifetime of programme
- That use if 'same sites' across programme ensure that max value of data collection and analyses can be achieved
- Economic and social constraints/needs of land managers to be taken into account appropriately (and not tokenism) when conducting the research and its interpretation
- Full extent of supply chain needs to engage with and respond to the research development

Group 3

We Like:

- Long-term studies
- Inter-disciplinary

We Want:

- Resources for monitoring
- Time to distil long-term
- More experimental/manipulative
- Characterising all rural communities – economic/social
- More on potential benefits of tourism

Concerns:

- Ephemeral

Land Use and Rural Livelihood

Group 1

We Like:

- Emphasis on interdisciplinarity
- Integrated: people, environment, technical policy, …
- Countryside as food production place
- Systems – view
- Science-policy links
- Place based – looks at variability
  - (relevant to local/regional communities and to policy)

We Want: research into:

- Integration of greater range of uses e.g. food production and recreation
- Increase range of economic productive uses
- Inclusion of transport as use/component
- Look towards opportunities and needs for future e.g. varieties
- Exploitation of water resource

Group 2

We Like:

- Potential to understand change
- Presentation

We Want:

- Synthesis of what people want
- Full range of opinions/options
- Get beyond lobby groups (recreation, tourism)
- Multifunctional landscapes (e.g., vegetation change)
- What do people want and value? (x-section) – community level
- Understand dynamic landscape change and management consequences.

Group 3

We Like:

- Overall favourable – no topics not desired
- Ongoing Scottish capacity - institutional memory

We Want:

- Integration – beyond usual sectors – linkage/language - communications
- Solutions – how to achieve X (%)
- Advocacy
- Rapid research
- Rapid evidence assessments
- Micro fauna in biodiversity strategies
- Longitudinal research – broad brush/monitoring
- Knowledge retention/transfer
- Research infrastructure – data management

QUESTION 3 - What needs to be done to improve the contribution of P3 research?

This took the form of individuals each identifying one action they felt would be useful and then a group vote on which to turn into an action plan. Groups evolved a variety of strategies to decide on which action to take forward, demonstrating deliberation and prioritisation in action.

Summary: Participants identified a variety of potential actions, all of which should be considered by the Programme's advisory group. They range from suggestions for additional topics for research, methodological issues (long term data sets, dealing with uncertainty); engaging with policy; improving dissemination and implementation of research outcomes. There were also some actions relating to the institutional and funding arrangements for the MRPs.

Enhancing Water Quality

Group 1

- Mapping what to do …
- Set out clearly what is needed to improve water quality
- Focus research on relevant parameters for drinking water (e.g. pesticides)
- Engage with end users throughout research cycle
- More coordinated contact and communication with research end users
- Data accessibility
- Developing policy by experimentation

Group 2

- Research results delivered
- Implementation – funding at the coalface
- Joined up working
- More joined up policies and strategies
- Dissemination – better sharing of information
- Join up research bodies/funding to provide clear direction/priority/action
- Long-term commitment to follow up the actions with scientific monitoring/analysis
- Evolve a joint (SAC/Macaulay) resource to assess future policy and delivery options

Protecting the Nations Soils

Group 1

- KT
- Translation of research into accessible language and reward for doing so
- Identify 'mitigation' or 'improvement' actions which will achieve the best outcome in terms of ecological, economic and social sustainability
- More integration of research scientists with funders, stakeholders and the public
- Improved integration between social and natural sciences
- Integrate with other programmes
- Formalise integration through modelling/scenario analysis
- Better communication of issues from stakeholders/policy to researchers
- Fund a soils information system.

Group 2

- Mechanisms for end users to access information now and post the programme
- The research "ship" approach – One (or more) landscape-scale manipulation experiments to link biodiversity, soils, water with people in their context over a longer time period than 3 years
- More informal communication between 'topics' (water, soil, biodiversity) of P3
- MLURI move to Edinburgh
- Cut areas of research that are only peripherally related to policy and stakeholder needs
- Better links with stakeholders
- One research body in Scotland for land-based research
- Uncertainty established – define the uncertainty of the outcome

Conserving Natural Heritage

Group 1

- Science policy communication
- Increase interdisciplinarity in my research
- Longer-term funding security
- Ensure continuity with key strategic themes of next strategy iteration

Group 2

- Develop robust methodologies for stakeholder – led catchment management plans and associated delivery – linked to enhancement of ecosystem services.
- Connect fundamental science to applied problems - general principles
- Ensure that all research in P3 is clear as to its direct policy relevance
- Ensure that research does lead to evidence based policies/laws/grant-aid through proper engagement/workshops for knowledge transfer of results
- Balanced presentation workshop led by the stakeholders
- Engage with economic supply issues and businesses when planning research
- Underpin policy recommendations with knowledge of economic benefits of ecosystem sciences

Group 3

- "Centre of Excellence" funding 3C experiment – carbon, conservation, communities
- Clear dissemination of results to stakeholders (other than rest of scientific community)
- Linking local studies to landscape-scale policies
- Set up a clearing house for P3 research results
- Reduce number of outcomes and reprioritise remainder – Do Less! Better
- Create a national 1-stop shop for spatial data of all types at all scales without usage restrictions (make contribution of it a prerequisite of funding and publication)

Land Use and Rural Livelihood

Group 1

- Broaden base of participation: - urban/rural stake in countryside
- Enhanced effort into research into integration of rural production opportunities (both agriculture and others) and recreational use of the countryside
- How do we police/regulate/control the various land uses best?
- Research into exploitation of the water resource that Scotland has
- Consistent funding for long-term research to support evidence-base

Group 2

- Survey of local and visitors' values (recreation, scientific, historic, cultural, local distinctive)
- Reflect range of landscape value decisions on future management policies and actions
- Research to ensure the holistic sustainability of rural Scotland in anticipation of a 2 degree increase in temperature
- Research into land management systems to optimise recreation and tourism potential of Scotland's diverse countryside and landscapes
- Analysis of trade offs between ecosystem services

Group 3

- More joined up research
    - Across analytical specialties
    - Across nations
    - Across the policy/analyst divide
- Enhance policy connectedness of natural sciences further
- Free exchange of data between publicly funded bodies – supported by a Scottish spatial data infrastructure
- I would like to see the administration look at the issue with some urgency and make policy decisions to enable action to be taken – lack of this on wind farms for inshore has been expensive
- Give rural communities a responsibility (with guidance of resources) to achieve sustainability, e.g. make crofters 'soil guardians'. Inshore fishermen marine guardians

ACTIONS

Each group then had to fill in an action card using the action they had prioritised from the earlier exercise.

Enhancing Water Quality

Group 1

What: Engage with end users throughout research cycle
Why: To develop targeted research and improve choices of policy uptake.
Better links to industry
Who: In partnership
How:
- CRCG – put money upfront
- Link up before meetings
- Find the time
- A seminar on how policy making works
- Secondment

Group 2

What: Deliver a joined up approach to deliver (water) benefits to Scotland across stakeholders, enablers, policy makers and funders.
Joined up approaches -: strategies, organisations, agencies, research topics, operations.
Why: More efficient, more effective (sustainable …)
Who: D.G. Wakeford
How: Finance/sponsorship and demonstration projects

Protecting the Nations Soils

Group 1

What: Fund a soils information system
Why: A soils information system for Scotland would facilitate information flow across sectors and contribute to joined up government
Who: All major stakeholders: - public, regulators, education, advisors, land managers, farmers
How: Co-ordinated by SE with input from stakeholders, in an easily accessible format including a web based format that is updated regularly (at least annually).

Group 2

What: Establish uncertainty at all levels
Why: Putting the results in context enhance long term credibility of science
Who: Everybody
How: e.g.
- Assessing variability in soils
- Establish standard operating procedures.

Conserving Natural Heritage

Group 1

What: Better science –policy communication (decision makers)

Why:
- Make sure policy and science is pragmatic and realistic
- Making the programme 'fit for purpose'
- Informed decision making by government
- Reducing 'translation error' from scientists - implementation

Who: Executive and MRPs together – need for help? (external) – New coordination group? Or change remit of an existing group?

How: "Communications" group to drive this:
- ensure policy and science involvement
- Strategy for information exchange
- Do the existing consultative groups come close to this?
- The process needs to involve all the actors
- Use the knowledge base in organisations already accustomed to science-policy communication (SNH/RSPB …)?

Group 2

What: Ensure research does lead to evidence-based policies/laws/incentives etc through proper engagement with and knowledge transfer to and from all associated with the issue (not just scientists and policy makers)

Why: To ensure policies etc are not only based on sound science (and hence are understood and are defendable) but can also be implemented by those managers on the ground (and hence are applicable and more chance to be effective

Who: Ideally would be stakeholders leading a workshop with what they consider issues are realistically (given breadth of subject) then need a science advocate to drive the process of bringing these groups together i.e. someone from within Programme 3.

How: Programme so broad, so need to target different issues/subjects. Advocate to drive the process for that subject with relevant timetable of KT actions including case studies of how practically results would be implemented on the ground.

Group 3

What: National spatial data centre

Why: Maximise value from existing data

Who: Database manage in "MRP". Funded by SEERAD

How: All funded research obliged to submit geo-reference data.

Land Use and Rural Livelihood

Group 1

What: Presentation of findings as coherent scenarios/visions of a sustainable Scotland relevant to local communities, individuals and governments including interpretation of specific rural production and other use opportunities.

Why:
- aspirational regarding sustainable Scotland and directions/choices
- Communicates science
- Builds engagement
- Forward looking
- Adapting to change

Who:
- P.3
- Maggie Gill
- Politicians
- People being consulted/stakeholders
- Industry
- Business

How: A massive marketing exercise

Group 2

What: Identify range of values and analyse trade-offs between them

Why: To identify and resolve conflict in a multifunctional context – e.g. vegetation management to enhance biodiversity, allow for recreational access and for historic environment needs. And to anticipate impact as a result of climate change

Who: Researchers, policy-makers and stakeholders

How: Analysis of values, scenario setting and stakeholder participation e.g. focus groups.

Group 3

What: More "joined up" research - Across:
- Disciplines/analytical specialisms
- Nations
- Policy/research divide

Why: Better outcomes, bigger questions, better value

Who: Partnerships – MRP – Analysts - policy

How: Interchange
- Secondments
- Task/project groups
- Joint appointments
- Shadowing
- ING policy to res

INDIVIDUAL LEARNING POINTS

Individuals were also encouraged to complete a personal 'take home' message for the Programme's advisory group. This was in recognition that the action plans reflect the view of each small group, which may not adequately reflect the views of any one individual. We have divided them into related points.

Specific Research Issues:

- Loss of carbon from organic soils – importance of issues
- Rural Scotland cannot be 'sustainable' if all Scotland is not sustainable
- The use of wetlands to dissipate water pollutants
- That Scotland has resources of European significance in fresh water and carbon sequestration in soils and that we need to make best possible use of such resources
- The value of long term research effort to inform the future.

Integrated Research:

- Mechanisms to integrate soils, waters, biodiversity into landscape-scale integrated management options.
- Looking forward to the next research strategy iteration. There is a big opportunity to develop P3 into a research programme which provides the scientific underpinning to help Scotland decide how to manage terrestrial and marine environments for multiple ecosystem services. Where are the synergies, trade offs and conflicts and how do we resolve the latter?
- Focus on: improved integration but in a formalised manner such as integrative modelling of e.g. CCTs views across the WPS etc.
- Changing public behaviours – future research?

Approaches to Research:

- Researchers ought to lead the policy debate at least as much as follow stakeholders' suggestions
- It's a long way from how researchers think to the fuzzy world of politics. Be more courageous to step into the unknown
- The value of long term research effort to inform the future.
- Long-term studies are very well liked!

Advice for Future:

- The research bodies should move towards common goals and from today I know they can if given the correct directive incentive etc.
- Better communication and integration between W Programme and other funders (e.g. SNIFFER, SE family and UK programme)
- Need a clearer view of what the Scottish Executive want research to develop into?
- You can never talk to enough people
- Good to talk – there's will on 'both sides' to make Programme 3 work. Needs some hard support (monetary) to improve communications etc for the future
- Clear and simple communication between sharp end and broad base, properly (financially) supported
    - Research
    - Policy
    - Delivery
- Have an away day on the train to discuss progress and develop interaction between policy makers and researchers

- Vitally important that communication includes practitioners in the field i.e. land managers
    - Policy
    - Research
    - Practitioners

Evaluation of Process

- Useful process for understanding various actors' priorities and how they are mediated in a group's context
- Learnt about research going on that I didn't know was happening and that is relevant to my work.
- Repeat this event with smaller focus
- The interaction with a group of people who would not always naturally meet
- A useful day with the opportunity to learn more about the breadth of Programme 3. Also very useful to interact with researchers.
- Found today very informative. A more balanced group of delegates would have been beneficial for workshop session i.e. move from the implementation end.
- The importance of integrated interdisciplinary research in supporting the information base for sustainable future in Scotland
- Like that posters tie into take-home leaflets. Like workshop manner – snappy, facilitators kept it moving, didn't get bogged down and – actions. Presentations interesting, pitched about right, not too technical and authorative.
- Thought provoking day. More information on how end-users will use research would have been useful
- Good to hear about the whole programme, but time too short to learn about all the work going on.
- Needed more end users! And policy makers and ministers.
- It is crucial to have more such events to ensure more ownership of the Programme 3. Need to have more buy-in.
- A very useful series of presentations. Awareness raising and discussion.
- As a junior scientist, it was interesting (if rather nerve-racking) to meet people from the policy and user community.
- The value of joining up thinking in the workshop session and to evolve the research programme so that it delivers the required goods.
- Good day and generally good presentations. However, I think this was a bit too early in the life of Programme 3. We really need to have been presenting results to SEERAD and other end users. Today could have had a major impact had we been organized in this regard. I suggest next time (if there is a next time) we plan the best nuggets to broadcast. We really need to impress end users and funders.
- Importance of communicating our science like this: face-to-face and interactive!
- Rich set of views on how to integrate disciplines and relative balance of priorities.
- From the researcher point of view interesting to hear the 'higher-level' points of view, Will not affect the day-to-day running of the scientific programme.
- Greater stakeholder : researcher ratio next time
- Useful and refreshing to think and discuss with both known and "new" people.
- Difficult to assess today's process until we see the outcome
- Useful overview of Programme 3 and helpful opportunity to hear other views and offer own. This needs to be done early in research design process!

NEXT STEPS:

The report is being circulated to all those who were invited to the workshop for their comments. **Please return any comments to s.albon@macaulay.ac.uk by 31st August 2007.** These comments will be woven into the text and the report amended accordingly. A final draft will be taken to the next meeting of the Programme 3 (Advisory) Group on 2nd November and circulated to the coordinators of each Work Package to assist with their strategic and operational planning. The findings will also be used to design future stakeholder engagement events. Thus, the workshop should be seen as one step in an ongoing dialogue about our research and its uses, rather than a stand alone event.

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