



CSERGE Evaluation

Policy and practice impact case study of the Centre
for Social and Economic Research on the Global
Environment

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CSERGE Evaluation - Policy and practice impact case study of
the Centre for Social and Economic Research on the Global
Environment

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Executive Summary

The Centre for Social and Economic Research on the Global Environment (CSERGE) received ESRC funding for 16 years, from 1991-2007. It was directed initially by the late Professor David Pearce, then, from 1995, by Professor Kerry Turner. During this period the Centre carried out original research on the causes, consequences and policy implications of global environmental change. The research focused on policy issues, including global warming, global biological diversity and institutional adaptation to global environmental change, using interdisciplinary research which bridged the natural and social sciences.

The Centre was strongly committed to exploring policy relevant issues and to disseminating its findings to a wide range of audiences. This remit can be said to have strengthened over the course of the grant periods, as dissemination routes and ways of working became better targeted at influencing end users of the research findings. A research centre having such a strong policy focus has created some tensions internally in terms of the balance between academic motives and policy expectation. However, CSERGE has managed these admirably. The quality of its staff and academic output, and its reputation among end users, all pay testament to the legitimacy of its original vision.

It can take many years for research to impact on policy. This may be measured in decades rather than months or years. In fact, CSERGE has demonstrated both short and long term impacts. Its work inputting into the calibration of the UK Landfill Tax appeared to be relatively swift. Yet David Pearce's work on environmental economics began in the early 1970s and has been a 'slow burner' in many respects, particularly in relation to the later introduction and acceptance of eco taxation and fiscal instruments. Whilst attributing policy impact is not easy, the end users approached in this evaluation were able to corroborate the key role of the Centre in various policy and practice development.

Down the years, CSERGE has had considerable demonstrable impact on a number of important environmental change issues. A fuller description of key impacts is contained in the main report and appendices, but to provide a flavour we would highlight the following:

- **Calibration of the UK Landfill Tax regime.** CSERGE were commissioned by the Department of the Environment (DoE) to identify an economically efficient rate of tax at which a landfill tax should be set (1993). The tax was subsequently introduced, albeit at a higher rate than CSERGE had proposed;
- **Department for Transport (DfT) use of noise values.** CSERGE researched the use of noise as a proxy for the environmental 'disamenity' of roads, (originally funded by Scottish Office in 2000, then DfT). This enabled the noise impacts to be valued in the cost-benefit analyses which DfT used to advise Ministers on the pros and cons of policy proposals;

- DfT commissioned CSERGE to write their official manual 'Economic Valuation with stated Preference Techniques' (March 2002) which is now the recognised **guide for undertaking valuation research** in Whitehall. It underpins ongoing benefit assessment work by the EA, which, along with other CSERGE studies, is being used to guide OFWAT's investment decisions;
- CSERGE research influenced the UK Government's position in the revision of the **EU Bathing Water Directive**. Their multidisciplinary piece of research undertook the first comprehensive assessment of the EU Bathing Water Directive and its proposed Revision and fed into the drafting of the revised Directive. The work was made use of by the UK Environment Minister and British Government in their negotiations over the revised Directive with the European Commission;
- CSERGE's work has resulted in the UK adopting a more cost-benefit analysis orientated form of implementation of the **Water Framework Directive** (WFD) as compared to most of the rest of the EU. CSERGE have also had a direct influence on **Water Company investment plans** as researchers were involved in the cost-benefit methodology developed by the Environment Agency for the 2004 Periodic Review of the Water Companies, and with developing the Willingness to Pay methodologies for Draft Business Plans of Water Companies in the ongoing 2009 Periodic Review. CSERGE developed a methodology for the Environment Agency to assess integrated catchment management issues, with the result being applied to the management of catchments (as required under WFD);
- CSERGE have been influential in developing and taking forward the '**ecosystems services approach**'. The ESRC funded Programme on Environmental Decision Making (PEDM) had a big focus on the ecosystem services concept. This has had a number of policy and practice ramifications, for example:
 - CSERGE were lead authors for the Millennium Ecosystem Assessment (MEA 2005), reshaping discussions to focus on ecosystems services and translate much of this thinking into the policy domain;
 - Influencing biodiversity policy at Natural England (and its predecessor English Nature);
 - Research straddling PEDM Themes B and C has clarified the ecosystem functions and services approach to environmental management and was the basis of a Department for the Environment, Farming and Rural Affairs (Defra) Guidance Report on Flooding and Wetland Management; and
 - In relation to managed realignment and coastal zone policy, methodology has been developed by CSERGE for the Environment Agency to assess integrated catchment management issues and the environmental costs and benefits of pollution abatement schemes in the marine environment.
- The Government's 2005 Green Paper on **adult social care** 'Independence, Well-being and Choice' draws on CSERGE (PEDM) research to highlight good practice in delivering public services. PEDM work on Time Banks has been cited as an example of a new type of community volunteering initiative using time as way to enable

participants in a neighbourhood to exchange valuable services such as care for older people, family support or gardening; and

- The development of investment rules for the **Global Environment Facility** (GEF). As a direct result of CSERGE work the GEF altered its internal interpretations, which influenced the allocation of many million dollars of environmental funding to developing countries.

Whilst CSERGE's dissemination strategy contained many elements typical of academia, the evaluation identified a number of more unexpected aspects. It appears that CSERGE's end user audience has become more 'learned' – and receptive - over time to the extent of actively using research articles and Journal papers in policy deliberations. The importance of networks and connections between key CSERGE staff (especially Directors) and policy makers appeared crucial in terms of influencing policy and practice. In this respect, CSERGE 'hit the ground running' when it was set up in 1991 and its later impact benefitted hugely from the networks, links and connections of David Pearce, Kerry Turner and Tim O'Riordan. The importance of policy networks continued throughout its lifetime, with the PEDM Theme Leaders all being active in influential networks.

One particular revealing aspect of CSERGE influence concerned its legacy of ex staff and students, who went on to populate the economy departments of many prestigious and influential organisations, not least the World Bank, the UK Department of the Environment (now Defra), the Environment Agency and various Non Governmental Organisations (NGOs). Instrumental in this evangelising was David Pearce's UCL economic programme, whose alumni similarly appear to pepper the staff rooms of Whitehall and Washington.

ESRC funding set up CSERGE and has been crucial to its success and its policy influence. This is evident in many ways, not least in providing the job security required to create a centre of excellence and allowing high scholarship to be combined with the development of young researchers. The fact that CSERGE became a centre of excellence on issues relating to environmental change is fairly evident. The evaluation indicates that CSERGE in fact became a hub, not only of academic quality, but also of policy information and support. This hub effect meant that policy makers increasingly came to CSERGE for information and advice, saving CSERGE the job of seeking them out.

CSERGE's interdisciplinary nature was seen as beneficial on a number of levels. It was seen by staff and end users to have allowed CSERGE to look at issues more holistically and consider wider interactions and policy implications. This enabled policy makers to act on CSERGE research with greater confidence. It also added to the 'one stop shop' effect, allowing CSERGE to offer a more complete (and possibly unique) service to policy makers. The interdisciplinary approach was also identified by staff members as having benefits for the culture of the organisation and the outlook of its staff, and as one member of staff suggested, 'preventing CSERGE from becoming too academic'.

It is interesting to note that we found no evidence of CSERGE's Norwich location (since 2001) being a hindrance to its policy impact, despite the London focus of policy makers and the media. In fact, it appears to have been beneficial, in terms of enabling

synergies with other research centres like Tyndall and Leverhulme. The fact that many of CSERGE's senior staff had affiliations across various UEA centres has made it more difficult to tease out CSERGE impacts to some extent - or led to a perception amongst a minority of stakeholders that CSERGE has perhaps been less effective in its second phase. However, this may be more to do with its change of focus post-2001 away from the high profile area of climate change (in line with ESRC funding requirements).

Acknowledgements

CAG are grateful to staff at CSERGE who have been extremely helpful in assisting with this evaluation, particularly Professor Kerry Turner (Director) and Dawn Turnbull (Research Centre Administrator).

1. CSERGE Context

In 1991, the Economic and Social Research Council (ESRC), the University of East Anglia (UEA), and University College London (UCL) established the Centre for Social and Economic Research on the Global Environment (CSERGE) as part of the ESRC's Global Environmental Change Programme. During the first period of ESRC support (1991-99), the Centre was directed by the late Professor David Pearce (UCL, from 1991-1995). From 1995-99 it was directed by Professor Kerry Turner (UEA) with Professor David Pearce (UCL) and Professor Tim O'Riordan (UEA) as Associate Directors. In the second phase of ESRC support, from 2000-07, Professor Kerry Turner retained his position as Director and devolved some operational tasks to research PEDM theme leaders.

During the first 10 years the Centre was run jointly by the two universities, but from 2001 it has been based solely at the University of East Anglia. In 2003 the Centre moved to the new Zuckerman Institute for Connective Environmental Research (ZICER), based within the UEA's School of Environmental Sciences.

1.1 First phase: 1991-99

During the first phase of ESRC funding, the Centre's principal research objective was to undertake policy-relevant research on global environmental problems, concentrating, *inter-alia*, on climate change, biodiversity loss and management, and institutional adaptation to environmental change.

The Centre's work had a particular focus on research tools such as economic analysis, environmental valuation, political and institutional analysis, integrated environmental-economic modelling, risk analysis, multi-stakeholder mediation techniques, life cycle assessment and geographical information systems.

The revised 1996 contract with ESRC required CSERGE to 'undertake policy-relevant research on global environmental problems [concentrating on] climate change, equity and burden sharing, valuation, ecological economics and systems behaviour, biodiversity, sustainability indicators, institutional adaptation and coastal zone management'.

1.2 Second phase: 2001-07

In 2001 the Centre was granted a further five years' funding for an interdisciplinary research Programme on Environmental Decision Making (PEDM). A further one year extension grant was awarded to PEDM in 2006. The PEDM 'rests on a vision of the main challenges confronting environmental decision makers in the new millennium'¹. PEDM was charged with making a significant contribution to the understanding and fostering of the process by which society meets the challenges of the policy goal of sustainable development and the societal transition required.

¹ CSERGE Annual Report 2001-02

The CSERGE chosen research method was to contribute to the sustainability debate by way of a 'learning by doing' approach i.e. to assist in the promotion of a wide societal dialogue informed by careful data gathering, analysis and options assessment.

The PEDM primary research themes and linked objectives are set out below. In terms of this evaluation, it is interesting to note that the themes are heavily focused on governance, decision making and policy making:

- **Theme A Multi-level Environmental Governance and Environmental policy** explored challenges raised by the transition towards a more complicated, multi-level system of environmental governance and the difficulties of integrating environmental requirements into all sectors of policy in pursuit of sustainable development (Theme Leader Prof. Andy Jordan);
- **Theme B Social Capital, Equity and Justice in Environmental-Decision making** explored new theories of social and ecological resilience and the connection to institutions, social capital and decision-making, especially in developing more empowering and participatory decision-making processes (Theme Leaders Prof. Neil Adger, Kate Brown);
- **Theme C Innovation in Decision Support (tools and methods)** sought to develop innovative theory and best-practice in decision making methods and tools to enable multi-level, partnered and empowering governance to take place - especially the synthesis of newer forms of participation/deliberation and information provision within more traditional assessment methods (Theme Leader Prof. Ian Bateman).

1.3 Dissemination strategy

There has been an explicit communication and dissemination strategy, the objective of which was to cater for a wide range of needs and audiences in a flexible way and which included:

- publications of the highest academic standard for peer-reviewed journals and as books/book chapters;
- publications which are specifically targeted at broader non-academic audiences;
- dissemination of research findings through public lectures, seminars, conference presentations, training courses and advice to government, NGOs, business and other users;
- networking with others (locally, nationally and internationally) notably in government, NGOs and the active civil society on environmental problems;
- organising and teaching undergraduate and postgraduate courses and supervision (advising on possibilities to promote and disseminate research analysis and findings across a wide range of students); and

- promoting the wider dissemination of findings through appearances in the broadcast and print media, the world wide web and by direct mailing.

PEDM staff within CSERGE were responsible for the editorship of three international journals:

- Global Environmental Change (Ed Neil Adger, Kate Brown, Mike Hulme);
- Environment and Planning C (Ed Andrew Jordan and others); and
- Environmental and Resources Economics - the official journal of the European Association of Environmental and Resource Economists (Ed Kerry Turner and Ian Bateman).

The Centre's dissemination strategy has evolved over the years, in particular, by more effectively targeting end users, e.g. through the introduction of focus packs on particular themes to target user group requirements.

2. Policy and Practice Context

CSERGE had a particular focus on policy relevant research². Even by the time of its second annual report in 1992, it already claimed to enjoy a high reputation in both international and national policy making and academic circles, based on its objectives of:

- undertaking policy relevant research whilst not neglecting pure theoretical research;
- informing policy makers about the scale, causes and consequences of global environmental problems; and
- directing policy makers towards policy options, including changes in administrative, regulatory and pricing agreements.

Its audience was primarily international policy power centres such as the World Bank, International Union for the Conservation of Nature (IUCN), Organisation for Economic Co-operation and Development (OECD) and the Intergovernmental Panel on Climate Change (IPCC) and national government departments and agencies including DoE, National Rivers Authority (NRA), Ministry for Agriculture, Fisheries and Food (MAFF), and Department of Transport (DoT). Its links with business were restricted e.g. to waste management and pollution control.

By the following year (1993-94), CSERGE had devoted 'a considerable amount of time and effort ... to the identification and targeting of a range of user group and beneficiary group requirements for policy relevant information and analysis'³.

By the mid 90s its international and national audience was strengthening, but there was also more connections emerging with regional and local policy makers such as the Broads Authority and local authorities. Business and environment links continued to grow. The 1995-96 Annual Report positions CSERGE research:

'at the intersection of the concerns and insights of a range of users (international agencies, government departments and other national agencies and groups, local authorities and the wider business community'.

From 1998 until 2001-02 CSERGE Annual Reports began to specifically list and categorise its 'users' or 'audience', which remained fairly constant:

Table 1. CSERGE audience

1998 users	2001-02 users

² 'The Centre's focus is policy, and its approach is interdisciplinary, bridging natural and social sciences', CSERGE 1995-96.

³ CSERGE 1993-94

<ul style="list-style-type: none"> • The wider national and international academic community, concerned with Global Environmental Change; • National government departments and agencies; • International agencies like the Commission of European Communities (CEC), United Nations (UN) and the World Bank; • NGOs and the voluntary sector; • Local and regional government; • The private and business sector. 	<ul style="list-style-type: none"> • The wider national and international academic community, concerned with environmental change and policy; • National government departments and agencies; • International agencies like the Commission of European Communities (CEC), United Nations (UN) and The Food & Agriculture Organisation (FAO); • NGOs and the voluntary sector; • Local and regional government; • The private/business sector.
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In 2005, CSERGE continued 'to draw on and deepen its links to policy agencies that are directly involved in the sustainability transition, such as the Sustainable Development Commission (SDC) and local sustainable development round tables, Natural England, the Environment Agency, the Association of National Park Authorities, Defra and a range of international agencies and organisations' like the World Bank, FAO, the International Geosphere Biosphere Programme (IGBP), the International Humans Dimensions Programme on Global Environmental Change (IHDP) and OECD'⁴.

The evolving professionalisation and receptivity of CSERGE's end users is discussed in Section 5.

⁴ CSERGE 2005

3. Evaluation Methodology

3.1 Introduction to the evaluation

This evaluation was funded by ESRC and conducted by CAG Consultants during the period June 2008 to January 2009.

The ESRC's Research Evaluation Committee (REC) undertakes policy and practice impact assessments to complement its reviews of academic quality. Impact case studies are central to this work and are aimed at looking beyond dissemination and outreach activities undertaken by research investments, to identify ways in which results have been used by policy makers and practitioners. Case studies enable the ESRC to:

- highlight the ways in which investments have achieved impact through their dissemination, networking, research and related activities;
- identify specific impacts resulting from research;
- develop the support and advice it provides to investments in order to increase impact; and
- continue to develop assessment techniques for assessing policy and practice impacts.

CAG Consultants is one of the UK's leading sustainability, stakeholder engagement and regeneration consultancies. Our clients include national and regional government, local authorities, regeneration partnerships, policy forums, and other agencies. We specialise in designing and running high level policy and programme evaluations, researching and analysing key sustainability and regeneration activities, designing and implementing sustainability decision-making tools, and designing and running consultation and engagement processes.

3.2 Conceptual approach

The policy and practice case study of the CSERGE aimed to measure the impact of the Centre, through applying the following evaluation goal:

“To identify ways in which the results have been used by policy makers and practitioners.”

The processes used to measure the impact of programmes sought to determine what changes in outcomes or activity can be attributed to the processes being assessed, and our methodology was geared to seeking out these changes in outcome or activity.

Beyond this evaluation goal the case study brief also set out clear evaluation objectives. Table 2 below lists the evaluation objectives, as outlined in the brief.

Table 2: Evaluation objectives

	Evaluation Objective
1	Identify examples of policy and practice impacts achieved, in the UK and beyond.
2	Identify the ways in which the Centre's research has achieved impact.
3a	Provide a critical reflection on methods used by the Centre to achieve impact.
3b	Provide a critical reflection on methods used by the evaluator to identify and assess impacts.

These objectives informed the development of the methodology which comprised five key stages.

Stage one Defining the potential impact. In order to test or measure the impact we needed to be clear about what the impact might be. Through a literature review we listed the potential impacts of the work of the Centre;

Stage two Collecting and collating internal information. This informed the defining of the impacts and also started to draw together the evidence of impact;

Stage three Collecting and collating external information. Drawing together the evidence of impacts, focusing on external policy makers and practitioners;

Stage four Analysis. A period of analysis and reflection to draw the key lessons and conclusions from the information gathered; and

Stage five Reporting. Reporting process, which included reflection on the evaluation processes as well as reporting on the Centre's impact.

Additionally, our methods included a level of triangulation of evidence streams, to ensure that evaluation inputs had some corroboration from other parts of the programme. Hence, the different evidence streams - the documentation review, key informant interviews, end user survey and to some extent the case studies – provide this corroboration. This is especially useful in attempting to attribute policy impact over the course of a sixteen year work programme. This was captured by the use of a 'key question matrix' which mapped out responses to key evaluation questions as they emerged from the various evidence streams.

3.3 Methods used to collate and analyse data

3.3.1 Documentation review: defining potential impact

We reviewed a number of documents supplied to us by ESRC and others, including those supplied by CSERGE. The principal documents reviewed are set out below. We have also reviewed CSERGE information on their website and on the ESRC website.

- CSERGE Summary Report on Activities: 2001 – 2007;
- Report of the Evaluation Panel for the ESRC, June 1999, Research Evaluation Committee (in confidence), Evaluation of the ESRC Centre for Social and Economic Research on the Global Environment (1991 - 1999);
- Report on the Mid Term Review Panel for the Research Centres Board November 1995, Economic and Social Research Council. Centre for Socio-Economic Research on the Global Environment;
- Centre's Report to a 'Light Touch' evaluation (1999 – 2004);
- Total of 12 CSERGE Annual Reports: from 1992/93 to 2006; and
- Total of 4 ESRC Funding letters/contracts: 1991; 1996; 2001; and 2006.

The documentation review collated information under a number of categories, including:

- Key learning points about the policy and practice context for, and background of, the programme;
- Key learning points about the programme delivery and outputs including research objectives and activities, dissemination objectives and activities;
- Key learning about routes of dissemination and processes for impact;
- Learning about types of impact;
- Key learning points about impact including key audiences such as policy makers; professional practitioners and others; as well as evidence, types of impact;
- Possible case study leads such as policy; practitioners and others; and
- Emerging interviewees/groups of interviewees, and emerging interview lines of enquiry covering internal and external stakeholders;

The documentation review provided us with the basis for identifying and applying an evaluation framework which was used to map CSERGE research areas and their policy impact at a local, national and international scale.

An existing analytical framework⁵ was used to distinguish the different types of impact. This categorised research utilisation into four types:

- **Instrumental use.** Research feeds directly into decision-making for policy and practice;

⁵ Nutley et al 2003, adapted from Weiss (1998).

- **Conceptual use.** Even if policy makers or practitioners are blocked from using findings, research can change their understanding of a situation, provide new ways of thinking and offer insights into the strengths and weaknesses of particular courses of action. New conceptual understandings can then sometimes be used in instrumental ways;
- **Mobilisation of support.** Here, research becomes an instrument of persuasion. Findings – or simply the act of research – can be used as a political tool and legitimate particular courses of action or inaction;
- **Wider influence.** Research can have an influence beyond the institutions and events being studied. Evidence may be synthesised. It might come into currency through networks of practitioners and researchers, and alter policy paradigms or belief communities. This kind of influence is considered both rare and hard to achieve, but research adds to the accumulation of knowledge that ultimately contributes to large-scale shifts in thinking, and sometimes action.

3.3.2 Key informant interviews: collecting and collating internal information

A series of ten Key Informant Interviews were undertaken in September 2008. Key informants were chosen on the basis of suggestions made in the original ESRC brief, the CAG documentation review, and discussions with the CSERGE Director. Ten names were agreed with ESRC: CSERGE subsequently added a further two suggestions. Appendix 1 sets out the questions used for these structured interviews. Advance briefings were provided for both the interviewees (including proposed questions) and the interviewers.

The ten key informants were drawn from the CSERGE Advisory Board, Theme Leaders and Senior Research Fellows.

The key informant interviews were analysed in terms of the following:

- Informing lines of investigation for the end user survey questionnaire;
- Providing contacts for the end user survey;
- Helping to frame ideas for case studies;
- Further development of the evaluation framework of impact types, impact processes and key impact beneficiaries.

3.3.3 Case studies

We researched six in-depth case studies to examine pathways to impact in more detail and provide more detailed illustrative examples of the impacts of the programme, including ‘sound bites’ that could be used to tell the story. We gathered a wealth of information for the case studies both from the documentation review and from the key informant interviews. These case studies enabled us to explore how the policy and practice impacts had occurred and also examine if our approach to evaluation had proved a suitable structure for tracing such impact.

Case studies were identified from a long list of potential options, drawn from the documentation review and the key informant interviews. In identifying suitable case studies, we sought to reflect the range of CSERGE's work and to select examples which had a high degree of impact. We identified three categories of case study, as follows.

- **Category 1. Case studies exploring the influencing and networking role of CSERGE:**
 - Case Study 1. Impact of former CSERGE researchers and students;
 - Case Study 2. The networking role of the Directors;
- **Category 2. Case studies which explore the development of specific policy areas:**
 - Case Study 3. The Intergovernmental Panel on Climate Change (IPCC) Process;
 - Case Study 4. UK Landfill Tax;
- **Category 3. Case studies which explore the journey of a piece of research through the research, communication and influence process:**
 - Case Study 5. Ecosystem services;
 - Case Study 6. Deliberative and participative decision making processes.

The categories and the individual case studies themselves were agreed with ESRC.

3.3.4 End user survey

A key element of the evaluation was to survey the policy makers, practitioners and other end user groups to seek out evidence to justify conclusions about the impact of the Centre's research. This was undertaken by means of an email questionnaire sent to identified end users, followed up by a phone call. CSERGE key informants were the main source of information on end user names and contact details. Other sources included the documentation review, the CSERGE website and CSERGE articles and reports.

The survey was sent to 90 end users, the majority of whom were fairly high level (e.g. Chief Executives; UK Chief Scientist; 3 MPs; the Chair of the IPCC; senior civil servants). A small number of the most senior people were targeted with structured phone interviews. The end users reflected CSERGE's diverse range of activity in terms of geography, issues and end user type (policy makers, practitioners and academics).

The email questionnaire method was chosen to provide us with the opportunity to target large numbers of users who are representative of the end user population. At the same time it allowed us draw out evaluation evidence while remaining within a structured process.

The vast majority of end user names were suggested by CSERGE. As the Centre had been active for 16 years, many key users had moved on and were difficult or

impossible to track down. In some cases, some of these 'pre-2000' users felt that their knowledge was no longer relevant. In particular, many of the pre-2000 international contacts had moved on and their successors were unable to assist (e.g. OECD and IPCC). As a result of this combination of factors, we found that the response to this questionnaire was disappointingly low (17 %).

In other cases, identified contacts simply felt that they didn't know enough about CSERGE to comment. In terms of addressing the poor response rate we:

- Followed up questionnaires with telephone calls to 'chase up' responses;
- Sought to identify other colleagues who could respond; and
- Targeted selected high level end users by offering individual, structured telephone interviews (including MPs, senior government scientists and policy advisers)(The questionnaire was analysed and the results are shown in Appendix 3.

3.3.5 Analysis workshop

We had planned to run an analysis workshop with key informants and a selection of end users as a way of analysing our emerging findings. However, this was not possible due to diary engagements of key informants. As an alternative, we created a web forum to post our emerging findings and solicit comment. In addition, we undertook a conference call discussion with CSERGE Director, Professor Kerry Turner, and the ESRC Head of Evaluation.

4. Evaluation Results

This section presents the impact results drawn from the evidence streams of the documentation review, key informant interviews, case studies and end user survey.

4.1 Key findings from the documentation review

The documentation review demonstrated that CSERGE had been set up with a clear policy focus. Both phases of ESRC funding sought to promote policy-relevant research and strong links to policy makers and practitioners. The PEDM work stream had better decision-making at its heart. CSERGE Annual Reports contain a wide range of examples of where the Centre considered it had a policy and practice impact and independent evaluation evidence supports this.

One of CSERGE's key objectives is to undertake research that is relevant to current circumstances and users, as acknowledged in its 2007 Review⁶:

"Through our policy and business contacts CSERGE tries to anticipate new problems and issues and then tailor research to meet the future need of decision makers. However CSERGE has never tried to change or make policy itself, only to supply information and, where asked, to provide scientific and technical advice to those involved in decision-making process. We have noted before that this makes it very difficult to gauge CSERGE's success in terms of a direct impact on policy".

The 2000 Annual Report provides a flavour of CSERGE's approach:

Our UK policy contacts regularly receive CSERGE reports, some of which are prompted by immediate policy concerns, and some of this work is commissioned directly by government departments and international agencies for problem solving purposes'.

'CSERGE staff also regularly work for policy-makers and other stakeholders'.

'CSERGE researchers [are]... well placed to participate directly in policy debates and to feed their ideas into policy processes through their membership of various committees, advisory boards and working parties, including government or agency initiatives. Specific research networks are also important in policy terms and produce research briefs and policy guidance, which can be widely circulated to policy-makers throughout Europe'.

Previous evaluations (Mid Term Review 1995; and 1999) had concluded that the Centre was impacting upon policy and practice:

'[the Evaluation Panel] noted the significant input that the Centre was making to the international policy debate upon the environment (IPCC Working Groups, World Bank, OECD)' (1995);

⁶ CSERGE 2007

'the policy relevant work of the Centre was highly valued by Government departments, who regarded it as an important source of independent advice' (it highlights CSERGE's contribution to the landfill tax, the DTI/DoE National Household Waste Analysis Programme, DoE's greenhouse gas emission and sea level rise work) (1995);

'CSERGE research has influenced policy-making both through the conduct and dissemination of specific research projects, and through the involvement of its researchers on a wide range of influential policy-making bodies'. (1999).

The 1995 Evaluation also recommended that CSERGE's engagement in the policy arena should be more interactive rather than linear 'as this would be more effective than confrontation in the long term'. CSERGE appears to have successfully responded to this challenge by the end of the decade, with the evaluation commenting that 'in recent years the Centre has placed increasing emphasis on engagement with the policy process, and this has helped to augment the influence which its work has had'.

The 1999 Evaluation particularly highlighted the increased networking role of the Directors and Associate Directors in the policy engagement process through their membership of policy relevant bodies and committees. However, it stressed that other CSERGE researchers had also taken an increasingly high profile role. An example was Neil Adger's membership of the EU Concerted Action on Agriculture and Environment in Europe.

The Centre's own review of its activity in the Second Phase of ESRC funding⁷ highlights the increasing 'trend prediction' element to their policy engagement work, stating:

'Through our policy and business contacts CSERGE tries to anticipate new problems and issues and then tailor research to meet the future need of decision makers'.

4.1.1 Dissemination methods

CSERGE developed its dissemination and engagement strategy over the years. As its 'Summary Report on Activities: 2001 – 2007' states:

'Central to CSERGE's activities has always been a commitment to communicate and share the outputs of the academic research programme as widely as possible. CSERGE researchers have therefore devoted much time and effort to creating and maintaining effective communication and dissemination links. The communication strategy throughout the programme intended to cater to the wide variety of information needs of the Centre's user groups; to communicate effectively the findings of our research and to present this in different formats and through a range of channels; to be flexible enough to adapt to the changing requirements of established users; and to identify and service new research users'.

Its dissemination strategy comprised a number of expected elements:

⁷ CSERGE 2007

- publications of the highest academic standard in peer-reviewed journals and books/book chapters;
- publications which are specifically targeted at broader non-academic audiences;
- research findings disseminated through public lectures, seminars, conference presentations, training courses and advice to government, NGOs, business and other users;
- use of networks (local, national and international) notably connecting to government, NGOs and the active civil society on environmental problems;
- advising its students and researchers on the possibilities to promote and disseminate research analysis and findings across a wide range of academia; and
- the wider dissemination of findings through appearances in the broadcast and print media, the world wide web and by direct mailing.

In addition, PEDM staff within CSERGE were also responsible for the editorship of three prestigious international journals: *Global Environmental Change* – edited by Neil Adger, Kate Brown and Mike Hulme; *Environment & Planning C* – edited by Andrew Jordan (and others); and *Environmental & Resource Economics* which is the official journal of the European Association of Environmental and Resource Economists – edited by Kerry Turner and Ian Bateman.

CSERGE's academic record is measured to some extent by entries in peer-reviewed journals and citations. Between 2001 and 2007 CSERGE research had generated 41 books, 205 book chapters and 173 journal articles⁸. Their research is well cited. In 2004 the journal "Ecological Economics" published a table of the most cited papers and books in the field. CSERGE had 2 papers in the top 20 most cited articles (including the top one), and had 4 books in the top 100 volumes. The highest cited CSERGE book had over 1,100 citations. In 2007, CSERGE had three papers in the top ten most cited papers in the journal 'Ecological Economics' over the period 2000 - 2006.

4.2 Key informant interviews

The key informant interviews included six current, prominent CSERGE researchers (including the Director and the PEDM Theme Leaders), one former Associate Director, one former key UCL-based CSERGE researcher and two members of the Advisory Board. All were unanimous in the view that CSERGE had made a considerable impact on policy and practice. Their identified impacts form the basis for A4E in Appendix 4. Some were selected for our case studies and many were corroborated by end users (see section 4.3 below). These impact areas formed the basis of our evaluation framework.

In terms of CSERGE impact strengths, the following were considered as being particularly relevant:

⁸ CSERGE 2007.

- a) High quality academic output or profile/ reputation (60% referred to this as a strength);
- b) Interdisciplinary nature of its work (40%);
- c) Impact of ex staff and students (40%);
- d) Networking (30%); and
- e) Working directly with, and positive attitude to, policy makers (20%)

These issues are discussed more fully in Section 5. In addition, 'c' and 'd' are explored more fully in Case Studies 1 and 2 respectively.

Other factors thought to be important to the impact success of CSERGE, and mentioned by at least one of the key informants, were: long term funding; a focus on key environmental issues (like vulnerability to climate change and ecosystem services); an effective web site; its Working Paper series; dynamic personalities; its theoretical research; collaboration with other academics; its location at UEA with other scientists; applying academic thinking to practical problems; and staff being friendly and good to work with.

A strong theme in the interview discourse was the notion of CSERGE acting as a hub of environmental excellence, with policy makers in particular coming to them for advice and guidance. Its interdisciplinary nature has been a crucial factor in this 'hub' effect, with one of the PEDM Theme Leaders commenting:

'CSERGE can be viewed as a one-stop-shop for research. Whether internally or through its long established collaborations with other research organisations, CSERGE is capable of addressing complex and multifaceted projects involving both social and natural sciences. The ongoing Water Framework Directive and land use work is a good example of this. There are very few other places that can offer this kind of service'.

4.3 End user survey analysis

The full analysis of the end user survey is set out in Appendix 3, while a shorter analysis section is provided here. The questionnaire was sent to 90 individuals in about 60 organisations. The response rate was 17% (comprising 12 completed forms, 2 other responses and 1 phone interview). Twelve completed response forms were received from the following organisations:

- **International bodies:** Ecologic: Institute for International and European Environmental Policy
- **UK government departments:** Defra and DfT;
- **UK agencies:** Environment Agency – four responses;
- **NGOs:** RSPB; Prince's Rainforest Trust; Living with Environmental Change;

- **Academics:** University of Birmingham; Grantham Research Institute, LSE.

In addition, we received views on CSERGE rather than completed forms from:

- DfT;
- OECD.

Finally, a telephone interview was obtained with an MP.

Some key findings based on the 12 completed forms were:

- Of the twelve responses, four described themselves as policy makers, four as practitioners, four as academic and two as 'other' (NGO and research director);
- Eight respondents had contact with CSERGE both before and after 2000, with four respondents only having contact post 2000. However, most who gave examples of impacts cited post-2000 work (75%);
- Three respondents had worked at CSERGE at some stage or been a CSERGE research student (1991-2000; 1991-1994; 1998-2002);
- Respondents were asked to rate, on a ten point scale, how influential CSERGE's research had been in their field in regard to influencing policy decisions, policy debate, policy practice and academic knowledge and process. In terms of policy decisions, policy debate and practice, the overall rating was between seven and eight. The opinion of respondents in regard to influencing academic knowledge and process was slightly higher at 8.7;
- In terms of routes to impact, ten of the twelve respondents mentioned CSERGE research articles, editorials, authorship or citation. Other significant ways of achieving impacts were through networking with CSERGE researchers or with Directors, by way of CSERGE reports produced as a result of a contract between the respondent and CSERGE, and CSERGE provision of advice through a contract, request or secondment;
- Respondents were asked to rate the relevance (on a ten point scale) of CSERGE's research to their field and this was rated extremely highly, with an overall mean score of 9.3;
- When asked to describe CSERGE's reputation, respondents were generally very complimentary, saying it was the best academic institution they worked with. End users comments are paraphrased below:
 - The reputation of CSERGE UCL was very high. The reputation of CSERGE UEA was high especially with regard to Economic Valuation;
 - CSERGE is the most important academic body we deal with;

- Extremely high in the first phase, perhaps faded somewhat, but still strong, in phase two when key members had secondary affiliations;
 - In my field CSERGE has a good reputation for empirical, 'down to earth' academic research;
 - CSERGE remains one of the most important academic research bodies we deal with;
 - CSERGE had and still has a very high reputation;
 - Good;
 - CSERGE is simply the most important academic research body we deal with;
 - My work experience mainly relates to 1998-2002 period, during which CSERGE's reputation was quite high in both academic and policy circles;
 - Sound and sensible. Continues to be regarded as a leading authority on environmental economics in the UK, with members featuring on any number of review committees and steering groups, UK and internationally - such as in the G8s Economics of Ecosystems and Biodiversity project.
- When asked how they rated CSERGE's impact, when compared with other research groups, again the rating was very high, with a mean score 8.0 (the range being 5 to 10).

End users were asked for specific examples of where CSERGE had influenced policy change or development, policy debate, practice or academic knowledge or practice. A summary of responses is set out in Table 4 below. Appendix 4 sets these out in more detail.

Table 4: Summary of CSERGE impact from end user survey

Issue/foci	Policy impact	Influence debate	Practice impact	Academic impact	Beneficiary or source
Ecosystem services – valuing environmental benefits.	Flood risk management. Water Framework Directive benefits. Defra's Ecosystem Approach Action Plan 2007. EU Bathing Water Directive (health benefits). Coastal zone	Water industry periodic reviews. Defra best practice. Coastal zone management and managed realignment. EU Bathing Water Directive. Wetland management.	Flood risk management, realignment of coasts and valuations regarding environmental benefits of water quality. Water industry periodic reviews. Forest valuation.	Flood risk management, realignment of coasts and valuations regarding environmental benefits of water quality. Ecosystem services, governance, social justice in relation to climate change adaptation and mitigation.	EA, Defra, Water Companies, RSPB, NGOs, academia.

	management. Water industry periodic reviews.			Ecosystem based habitat valuation approach. Ecosystem Service theory.	
Environmental valuation and cost benefit analysis (general).	Various e.g. carbon credits. Landfill Tax.	Environmental valuation. Deforestation and carbon credits (RED).	Life cycle assessment and waste management decisions.	Environmental economics and valuation.	DoE, Defra, Academia.
Transport valuation.	DfT modelling re new car purchase behaviour. Noise: DfT cost-benefit analyses advice to Ministers on policy proposals.				DfT.
Governance.		Coastal zone management and managed realignment. Foresight Future Flooding programme.		Environmental governance and the EU.	NGOs, MPs
Sustainable development.		General SD debate.			RSPB
Climate change.			Adaptation and vulnerability.		NGO
Influence of former staff and students.	General.			General.	Various policy bodies and academia.

4.4 Case study summaries

Full Case Studies are set out in appendix 2.

Case study 1 Impact of former CSERGE researchers and students.

This case study looked at the role that former CSERGE researchers and students have in terms of CSERGE's policy, practice and research impact, through the organisations they end up working for. CSERGE is seen as a leading Centre in its field(s) and is highly regarded, including by policy makers and practitioners. Long-term funding from ESRC has enabled it to combine high scholarship with being able to develop young researchers. Many ex-CSERGE staff and researchers have moved on to organisations that are influential in terms of policy making and practice, e.g. the World Bank, the Global Environment Facility; European Bank for Reconstruction and Development; UK Committee on Climate Change; IDEACarbon ; Defra; UK Health and Safety Executive; Socio Economic Analysis Committee of the European Chemicals Agency; plus academic positions.

CSERGE's policy of encouraging their researchers and faculty members to work with policy institutions and other stakeholders, has led, in some cases to them ending up working for such bodies. Moreover, such people have taken the CSERGE interdisciplinary approach in to their new organisations. This may make them distinct from other economists and be a factor in their subsequent success. This process of seeding researchers into positions of influence is one way in which CSERGE has been able to have an impact on policy and practice. This is likely to be self-reinforcing to a degree as ex colleagues maintain links with CSERGE through new contracts and collaborations.

Case Study 2 The Networking Role of the Directors

This case study looked at the role of the CSERGE Directors in terms of their experience and interest profile, their networks and their personal style. It reflects on the influence that flows from such individual activity. It focuses primarily on David Pearce, Kerry Turner and Tim O'Riordan. The use of networks has been a key route to long term policy and practice impact for CSERGE. In particular, the networks maintained and developed by its Directors have been fundamental to its success in this respect. When CSERGE started it was fortunate that David Pearce, Tim O'Riordan and Kerry Turner were already well established and linked into key policy organisations like the OECD and UK government departments. These networks were crucial in establishing the Centre's policy focus.

Such networks are fertile routes for CSERGE to influence thinking and debate, with network members well aware of the Centre's expertise, leading to frequent approaches for information and advice about general issues and specific problems they may be facing. It takes a long time for such networks to develop and a sign of the maturity of the investment in networks occurs when their members approach CSERGE for advice and guidance. Networking is one of CSERGE's strengths in terms of its increased focus on ways of working more directly with policy makers and practitioners. Coupled with its high quality academic output and reputation, it is an enticing prospect for end users. Network connectivity contributed strongly to the notion of CSERGE as a hub for policy makers and practitioners.

Case Study 3 The Intergovernmental Panel on Climate Change (IPCC) Process

The case study examines CSERGE's contribution to the work of the IPCC and how this may have shaped both the climate change agenda and climate change research. The IPCC was set up in 1988 by the World Meteorological Organization and the United Nations Environment Programme. CSERGE has worked in this area because the IPCC's role is fundamental to understanding the impacts of climate change by providing a scientific basis for specific projects based on climate science. CSERGE has contributed to the IPCC's work in a number of ways since the early 1990s, and through these activities has shaped both the climate change agenda and climate change research.

The key learning from this case study in terms of achieving policy and practice impact are that CSERGE has combined a range of strengths to good effect. It has worked strategically to develop a long-term focus on a particularly critical research area: climate change. It has made very important linkages to key policymakers nationally and internationally through the IPCC and has not just responded to research requirements but rather set the agenda in a range of climate change research areas.

Its focus on academic rigour and excellence has meant it produces very high quality research that can be trusted by policymakers. In the process it has supported highly skilled and experienced researchers while nurturing newer researchers. A deliberate, sustained effort to disseminate findings broadly and engage increasing numbers of stakeholders has meant that its influence in this key policy area can be sustained and potentially grow in future.

Case Study 4 UK Landfill Tax

This case study examines CSERGE's contribution to the UK Landfill Tax legislation, particularly its work on the valuation of the externalities from land-filling and incineration which has provided the basis for the tax. CSERGE has had a significant effect on public policy in a key sustainability area in which the UK has traditionally performed very poorly. Research work by CSERGE from the early 1990s onwards has had far reaching public policy consequences. Early work on the externalities of landfill influenced the landfill tax regime that was then developed.

CSERGE's focus on developing ideas about new environmental policy instruments (NEPIs) acknowledged the decline of certain traditional forms of regulation and the usefulness of economic instruments that acknowledged the changing governance context in the UK and Europe. Its work was very influential at supranational level in forums such as the OECD and on the UK government on environmental policy integration within which environmental instruments including taxes could play an increasing part. The landfill tax specifically has had a very significant policy impact in the UK and wider outcomes are a substantial shift in the way waste is now being dealt with, away from unsustainable 'business as usual' approaches, driven by landfill tax implications on public spending.

Case Study 5 Ecosystem Services

CSERGE has had a significant impact on the appreciation of the concept of ecosystems services and its evolving application into policy and practice. This is an example of CSERGE playing a major role in a considerable policy paradigm shift. Ecosystem services can be explained as follows:

'Our health and wellbeing depends upon the services provided by ecosystems and their components: water, soil, nutrients and organisms. Therefore, ecosystem services are the processes by which the environment produces resources utilised by humans such as clean air, water, food and materials'⁹.

Work on this concept flowed naturally from earlier work on environmental valuation. Although CSERGE was active in this area prior to 2000, the ESRC funded Programme on Environmental Decision Making (PEDM) had a big focus on the Ecosystems Services Approach. Ecosystem services operates at the interface between ecology and economics and as such links PEDM research themes B and C. CSERGE research has shown how economic valuation methods can be combined with ecosystem services thinking to provide cost-benefit evidence in favour of conservation.

⁹ See Defra project website <http://www.ecosystemservices.org.uk/ecoserv.htm>

CSERGE work around the economic case of conserving wild nature has had an impact on biodiversity policy nationally and internationally in a variety of different ways. The 2007 Defra action plan on ecosystem services and the current widespread use of the concept by the Environment Agency and Natural England demonstrates that this idea has now come of age. CSERGE's work has won approval at a recent EU biodiversity expert meeting in Brussels and will form part of the new 'Stern' review of Biodiversity Loss and Costs produced by the EU.

Case Study 6 Deliberative and participative decision making processes

This case study looks at CSERGE's impact on stakeholder processes, in particular their research on deliberative and inclusionary processes and its impact on significant dialogues such as coastal management (e.g. coastal zone management and managed retreat in North Norfolk), the GM crops civic dialogue, and the government's re-consultation on the future of nuclear power. CSERGE has undertaken a substantial amount of work in the research area of deliberative and inclusionary decision making processes, both during the 1990s, within a participation and consultation rubric, and more latterly under PEDM Research Theme B. Over the long term, CSERGE has contributed strongly to developing the area conceptually, and working through its implications in the context of sustainable development in practice. As its conceptual framing of the research area developed so did the scope and methodological reach of projects within which it was further explored and applied.

By the time of writing its 2003 Annual Report, CSERGE was able to report that under Research Theme B, "new theories of social and ecological resilience and the connections to institutions, social capital and decision-making" were being explored and that these also apply "theories of justice and equity in order to develop more empowering and inclusionary decision-making processes". CSERGE produced a range of published material on this topic including highly regarded books, journal articles and conference papers, some of which are found on its website, and analysed a number of consultative processes. Public policy impacts included in relation to the decision-making processes in the light of the EC Water Framework Directive, coastal zone management, the civic dialogue around GM crops, and the re-formulation of the government's consultation on the future of nuclear power.

4.5 Concluding comments

The four elements of the evaluation reviewed above provide a high degree of corroboration in terms of CSERGE's policy and practice impact. In general, we found consistent messages coming from both internal and external stakeholders. The list below summarises the impact results from the evidence streams. Impacts are categorised according to the impact types set out in paragraph 3.3.1. Table A4e in appendix 4 sets out these impacts in more detail.

- **Instrumental use impacts** (where research has fed directly into policy process):
 - Calibration of the UK Landfill tax (DoE);
 - DfT use of noise values;

- DfT official manual 'Economic Valuation with stated Preference Techniques' (March 2002) which is now the recognised guide for undertaking valuation research in Whitehall;
- EU Bathing Water Directive revision;
- UK implementation of Water Framework Directive;
- Millennium Ecosystem Assessment (2005);
- Ecosystem services in relation to managed realignment and coastal zone policy (Environment Agency);
- English Nature/ Natural England thinking on ecosystem services;
- Deforestation and carbon credits (RED);
- Contributing authors to IPCC reviews;
- **Conceptual use impacts** (where research has changed understanding or offered new insights):
 - Defra ecosystems services approach, e.g. 'Securing a healthy natural environment. An action plan for embedding an ecosystem approach' Defra 2007;
 - Shaping the climate change agenda;
 - UNEP Global Biodiversity Review and the new EU Biodiversity Review: CSERGE research shows how economic valuation methods can be combined with ecosystem services thinking to provide cost-benefit evidence in favour of conservation;
 - Living with Environmental Change current flagship research programme funded by Defra, DfID and others;
 - Government's 2005 Green Paper on adult social care 'Independence, Well-being and Choice' (citing CSERGE PEDM work on time banks);
- **Mobilisation of support type impacts** (research used as an instrument of persuasion, e.g. used as a political tool):
 - UK government's position on UE Bathing Water Directive revision;
 - The development of investment rules for the Global Environment Facility (GEF);
- **Wider influence impacts** (research having an influence beyond the events being studied e.g. altering policy paradigms or belief communities):

- Ecosystem services thinking;
- Government thinking in terms of valuation, eco taxation and cost benefit analysis in general.

In general, the end users cited examples of impact related to the second phase of CSERGE's work (i.e. post 2000). This may be symptomatic of the end user survey finding more success with more recent end users, e.g. either because they are still in post (and therefore accessible) and/or because more recent work and connections with CSERGE resonates more, or they find it easier to recall the details or links.

The ways in which CSERGE influenced policy and practice was a key aspect of this evaluation and the following section looks at this in more detail to draw out key lessons.

5. Discussion

5.1 Introduction

The literature suggests that there are many barriers to academics having impacts on policy and practice, for example, lack of time, the policy making process being rapid and chaotic, and ministerial views (and staff) changing. In view of such challenges, demonstrable impacts could normally be expected to take decades rather than years. However, our analysis demonstrates that CSERGE has had a demonstrable and significant impact on policy and practice. It is often difficult to trace direct links between research and policy. However, as section 4 above demonstrates, there are a number of examples of CSERGE work clearly influencing policy or practice. In addition, there are many examples of CSERGE work feeding into the policy process.

CSERGE spanned 16 years of research, in two identifiable phases. Evaluating the impact of work over such a long time period is challenging, particularly in terms of sourcing key policy end users, many of whom are no longer around to tell the story from their perspective. In addition, ESRC funding requirements evolved over the period, which has had an impact on the focus of CSERGE research. For example, when CSERGE moved in to the PEDM phase of funding post 2000, climate change was not one of the funded areas for CSERGE whereas the Tyndall Centre and others were focusing on this area. Whilst the ESRC funding may have excluded CSERGE itself from climate change and energy work, this didn't prevent CSERGE people continuing to work in this area, under different guises. In terms of contemporary climate change debate, Tyndall would appear to be the main ESRC player.

This issue of where CSERGE stops and Tyndall starts was referred to by two end users. One felt that the Centre's influence may have faded somewhat in its second phase 'due to key members having secondary affiliations'. Another commented:

"I would regard CSERGE's direct contribution to the climate change debate to be relatively slight. The influence of its former members and especially Neil Adger through his work in Tyndall on the IPCC evaluation has been considerable. There is clearly a matter of debate here as to where CSERGE stops and Tyndall starts".

Our analysis contradicts the first line of this quote. Case Study 3 shows that CSERGE has had a demonstrable impact on the IPCC. Prior to PEDM, CSERGE were extensively involved in climate change work, through, for example, their input into the 2nd and 3rd Assessment Reports of the IPCC reports as lead authors. Significant authors were given certificates (Nobel Prize references) and at least 5 or 6 CSERGE staff received these.

In terms of CSERGE staff affiliations, there are no contractual obligations in terms of the split of work between the research centres, except for the Director. It is research interest-led and staff such as Prof Neil Adger and Prof Andy Jordan both have research interests in CSERGE.

The fact that CSERGE no longer works on the high profile issue of climate change may give the impression to some that their influence is on the wane. However, our evidence

from elsewhere in the evaluation does not suggest any weakening contribution. In its second phase, the policy and practice impact of CSERGE remains strong, although their policy areas may be less publically prominent.

The fact that CSERGE staff continue to have a respected contribution to key environmental issues – but under the guise of other academic or research establishments – is a positive legacy of the ESRC core funding. As our Key Informant Interviews and Case Study 1 demonstrate, long term funding has been acknowledged as an important factor in attracting, developing and keeping CSERGE researchers, many of whom are now highly regarded in the field. Many ex CSERGE staff and students now occupy influential positions in other policy organisations, which is regarded as a significant contributing factor in CSERGE's policy and practice impact.

Feedback from our end user survey shows that CSERGE's work is seen to be of the highest academic quality and this academic excellence is viewed by its staff as the bedrock of its policy and practice impact.

There is substantial evidence from internal and external stakeholders that CSERGE has become a UK hub for environmental/social science with policy makers coming to it for evidence. As one CSERGE staff member put it:

"CSERGE has the reputation now. Policymakers and journalists know where to come".

5.2 How effective were the Centre's dissemination activities in achieving specific policy and practice impacts?

Our evaluation highlighted the following dissemination activities as being important in relation to achieving policy and practice impact.

5.2.1 Networking

Networking has proved critical to CSERGE's impact success, as Prof. Kerry Turner notes:

"We have evolved a tactic based largely on networking".

"A good example of this is in relation to coastal zone policy, where we're looking at the policy of managed realignment. We're linking our physical science skills with our cost benefit analysis skills to evaluate schemes. EA, Natural England and Defra are all very aware of what we're doing and they come to CSERGE for information and advice about general issues, specific problems they're facing etc. It takes a long time for a network like this to build up".

A CSERGE Advisory Board Member likewise commented:

"They never went for producing 'glossies' or seminars with drinks. Their strength has been the use of networks by their key players – through which they have had a major impact, and the younger researchers are following this example".

Prof. Kerry Turner stressed the importance of working on their networks over long periods of time, surmising that these really pay dividends once they reach a certain level of 'maturity', at which point the members of the network begin approaching CSERGE rather than CSERGE relying on outreach. Networks also need to be actively maintained, particularly because of the turnover of Ministers and civil service staff.

The policy experience of the founding CSERGE Directors David Pearce, Kerry Turner and Tim O'Riordan appears to be an important factor in achieving networking outcomes. Each brought established and relevant networks and linked them into CSERGE. Case Study 2, set out in Appendix 2, looks at this in more detail.

There is no doubt that the work of the late David Pearce was extremely influential. He had a significant impact on British policy in terms of the development and application of cost-benefit analysis techniques and on the use in policy development of what has now become regulatory impact assessment. Professor Pearce was active on these issues prior to joining CSERGE, based on his concern that environmental assets needed to be valued correctly, which had not been the case previously. In what became known as 'the Pearce Report' (published as *Blueprint for a Green Economy*, 1989), Professor Pearce and colleagues stated that:

"The approach to project appraisal needs to be modified. Projects must be appraised in the light of the fact that the environment clearly matters more than the weight placed on it in the past"¹⁰.

This thinking on policy analysis and impact assessment found expression in the 1991 DoE report 'Policy Appraisal and the Environment', and is now embedded in Treasury and government procedure. The use of sustainability appraisal/strategic environmental assessment is seen as a direct outcome of the work which he carried out. This is now a routine process for all public projects, plans and programmes as a means of driving better, and more sustainable policy making.

Professor Pearce also played a key role in establishing CSERGE as an influential organisation in policymaking domains. During the 1990s, CSERGE was the main source of information and ideas about environmental economics for policymakers and practitioners. Both of the combined centres were at the forefront of thinking on this subject. There was a general sense of CSERGE 'leading the way' in this field.

The end user survey returns suggest that networks were an important route for policy impact, with around half of respondents citing CSERGE Directors and staff networks as being significant ways of achieving impact.

5.2.2 Working directly with policy makers: balancing academic performance with policy impact

CSERGE had developed a very positive attitude to working with policymakers. Indeed, as noted earlier, previous evaluations recognised an increasing emphasis on engagement with the policy process¹¹.

¹⁰ Pearce et al. 1989.

¹¹ ESRC June 1999

However, there are differing views amongst senior CSERGE staff on the importance of academic rigour versus policy influence, as one highlighted:

“The reason that I have remained an academic and stayed with CSERGE is not to have a policy impact. I think this is true of most of the academics here. My motivation is more to do with academic performance and the generation of ideas. Peer esteem is more important than policy impact. The fact that we have generated ideas and that some of these are now in the public domain simply adds to the satisfaction”.

Whilst policy relevance has clearly been a positive experience and motivating force for some, this view is not shared across the board as these contrasting Key Informant quotes demonstrate:

“We have achieved what we have by not being distracted by changes in policy directions. We have remained focused on the academic side. This is critical”.

“[CSERGE has a] very positive attitude to working with policymakers. Over time we have developed more skills for working with policy. We are now much more interested in how our research is used. Seeing my work being used and having an impact has given me a new lease of life”.

“CSERGE attracts a certain type of person too. More theoretical people are less interested”.

This appeared to represent a genuine difference of opinion amongst key CSERGE staff rather than any perceived split between senior staff and others.

Our view is that without academic excellence, the impact would not have happened to the same degree. Without the impact occurring, there would not have been the same levels of commitment and enthusiasm from the staff and they may not have attracted so much funding to do their research.

5.2.3 Good research and academic publication record

Yet there was a unanimous view that good research is the basis for CSERGE’s influence on policy makers. This was a strong message from both Key Informants and end users. Key Informants commented:

“The lesson of CSERGE has been that good research is the foundation – building academic stature and authority – being at the leading edge is the basis of their influence. It is also the basis of getting the ear of policy makers and civil servants”.

“Key institutions (e.g. Defra, World Bank and the EU) are aware of its work because it has a high profile. It is taken seriously because of the high standard of its research outputs”.

The 1991-99 evaluation¹² stated:

“the Panel concluded that the Centre’s academic output has been prolific. It has made major contributions to the research field and enjoys a strong international reputation for high quality applied research”.

The impact of research articles and papers is confirmed by the returns of our end user survey (see Appendix 3), which suggested that for the vast majority of end users CSERGE research, articles, authorship or citation was the main route by which impact was achieved.

Our evaluation suggested that CSERGE’s target policy audience (i.e. its end users) were becoming more receptive to their research and to academic research in general. As public policy becomes more and more evidence-based, we appear to be witnessing a greater professionalisation of policy staff. Our end user survey returns suggest that most users consider that impact had been achieved by way of CSERGE research articles, editorials, authorship or citation. Indeed, Prof. Turner reports that government department end users contact him and seek elaboration on aspects of CSERGE research reports they are reading.

5.2.4 Working papers

Working papers on research findings, used to disseminate ideas in advance of the publication of the full technical papers in journals, are CSERGE’s routine ‘tools of the trade’. They are directed at different types of audiences, including a policy analysis series which was explicitly directed at policy makers. The series was viewed by an Advisory Board member as being ‘very influential’ and a key strength.

5.2.5 Impact of former staff and students

A key aspect of dissemination was seen as the impact of former CSERGE staff and students moving to bodies such as the World Bank, Defra and the Environment Agency (amongst many others), with many internal and external stakeholders commenting on this phenomenon. For example:

“CSERGE has spawned an amazing group of people who are now very influential. Researchers, who started out doing their doctorates within CSERGE ... have gone on to be leading lights in their fields”.

This is covered in more detail in Case Study 1 (see Appendix 2).

5.2.6 Conclusion

CSERGE’s academic quality and prolific research output, its established and effective networks and connections, and its imperative of engaging policy makers all served to establish the Centre as a UK hub for environmental/social science, with policy makers routinely approaching CSERGE for evidence and information. As one CSERGE staff member put it:

¹² ESRC June 1999.

“CSERGE has the reputation now. Policymakers and journalists know where to come”.

5.3 How far is it possible to attribute specific cases of impact to the investment's research and dissemination activities?

5.3.1 Benefits of core funding

ESRC core funding has clearly had a range of important benefits to CSERGE, beyond funding individual seminal research strands. These benefits are documented in various Centre reports¹³, annual reports and previous evaluations. In particular, core funding has provided:

- the financial support to enable CSERGE's long term development into an international centre of excellence;
- the resources needed to work across and integrate disciplines;
- time and resources to enable long term staff development, e.g. it has enabled it to combine high scholarship with bringing on younger researchers such as Ian Bateman, Andy Jordan, Kate Brown and Neil Adger;
- the long term job security to enable staff to undertake internationally recognised work and to participate fully in international research and policy networks over long periods of time;
- a permanently evolving research base which staff can draw upon to inform fast moving debates in the media and in the policy world, as well as in the ESRC itself;
- the resources needed to fund an adequate suite of dissemination and outreach activities such as working papers, a website and many other policy relevant activities which are seen as a key success factor in achieving policy impact; and
- an opportunity to develop new, long term capacity in the social sciences, through the development of new theories and methods, new researchers, new learning tools such as textbooks, and new research infrastructure.

The value of such core funding was emphasised by senior CSERGE staff during the Key Informant interviews, who commented:

“Another benefit of having ESRC funding is that it has allowed research to be curiosity-driven to some extent. It motivates us to do new things and keeps us interested and engaged”.

ESRC funding has been crucial to the creation of CSERGE's reputation, its ability to attract, nurture and retain expertise and its success in fostering key connections, to the extent that CSERGE latterly functioned as a hub to which policy makers came for advice and guidance. Whilst influential individual pieces of research may have been funded by others, the fact that these were mainly commissioned by policy makers like

¹³ Centre's Report to a 'Light Touch' Evaluation (1999-2004)

government departments such as DoE/Defra and DoT/DfT tends to confirm its hub function.

5.3.2 Attribution of impact

The attribution of policy impact is often difficult to measure and there has been considerable work which has analysed the current approach of evidence-based policy development. Nutley et al (2007)¹⁴ state:

“Although the influence of research ... may be sometimes inferred, it can be far from easy to see how such influence occurs. It is also often unclear how any influence is mediated, blocked or amplified, or more instrumentally, how any research influence may be enhanced”.

Evidence from our analysis suggests that CSERGE’s research has had a policy and practice impact. On this basis, it is the profitable interactions between research and policy and practice which are worthy of investigation to see how they may become more frequent, deeper and more constructive.

In many cases it is not clear where the line should be drawn regarding ownership of impact. In some cases the evidence we have collected and analysed points strongly to CSERGE having a particular and identifiable impact on policy and practice. For many others, it has clearly had more of a contributory role. We have attempted to categorise research impact types based on the work of Nutley (2003) and Weiss (1998) as: instrumental; conceptual; mobilisation of support; and wider influence (see section 4.5 above).

This analysis appears to show that CSERGE has achieved impact across all these types. Whilst there is clearly a number of instrumental use type impacts, for example specifically commissioned pieces of research which have fed directly into the policy decision-making process (e.g. the landfill tax work); the Centre has equally had a high number of conceptual use impacts. In these cases CSERGE has been influencing ways of thinking and new approaches, for instance in some of its ecosystem services, climate change and social care work. There are instances of ‘mobilisation of support’ type impact, where CSERGE work has been used as a political tool to champion particular points of view or courses of action, such as the UK government’s position on the EU Bathing Water Directive revision.

However, perhaps CSERGE’s ultimate legacy will be its ‘wider influence’ examples of impact. Considered by Nutley et al¹⁵ to be ‘both rare and hard to achieve’, CSERGE’s work on environmental valuation and ecosystem services fall into this category.

Similarly, the extent to which ESRC investment vis-à-vis other sources of funding has contributed to impact is often difficult to assess. However, the general benefits of core funding, referred to above, have been very important in terms of developing CSERGE’s reputation, enabling it to develop an effective dissemination strategy and allowing staff to foster key connections and networks. These are all critical factors in achieving impact in terms of policy, practice and academia.

¹⁴ Nutley et al 2007

¹⁵ Nutley et al 2003.

In addition, there is considerable evidence that ESRC funded research has been fundamental to key CSERGE impacts. Table A4e (Appendix 4) highlights specific cases where CSERGE's research evidence has had a concrete and visible impact on the actions and choices of policy makers and practitioners. We have also provided an indication of the degree to which ESRC funding assisted in this process.

5.3.3 Academic output and policy impact

CSERGE appears to have had significant impact in a number of areas linked to its theoretical and main research areas, indicating that the two objectives are not mutually exclusive. For example, the 1996 Annual Report identifies that 'although policy relevance is a key feature of CSERGE's research, a number of projects have led to important theoretical insights'. An example is their work in the resource valuation field, testing the extent to which statistical multi-level modelling techniques, GIS systems and relevant findings from psychology and sociology connected to focus group analysis can be utilised to improve existing economic methods and techniques.

5.4 What can we learn from the Centre's approach to achieving impact?

Some key learning points set out below:

5.4.1 Time and timing

It is important to recognise that policy impact takes time and that many impacts are 'slow burn'. For example, CSERGE's environmental valuation work using GIS started in the late 1990s but it is only now in 2008-9 that impacts are beginning to be seen. This makes it difficult to be certain about having impact. The difference between quick and slow impact might be explained by the fit with political priorities. As one staff member put it:

"Timing is key. You can spend ten years producing excellent research but a confluence of factors will determine the level of impact. You can do excellent work and be completely ignored".

Impact is not a linear process or a direct one and windows of opportunity are key. For example, the 1990s Conservative government was interested in environmental economics and this created an opportunity for CSERGE.

In this respect, some Key Informants commented:

"As a researcher, it is very difficult to judge if people on the outside will be interested in your work – there is a degree of serendipity in what is successful at influencing policy".

"Their timing is good with hot policy issues – because they have come up with the right domains for research".

5.4.2 Academic quality and profile

One of the key lessons from the experience of CSERGE has been that good research is the foundation to building authority and stature, both within academic and policy-

making circles. It is also the basis of getting the ear of policy makers and civil servants. This was emphasised by a senior DfT stakeholder who commented (emboldened text is our emphasis):

*“the work on the valuation of noise was a major piece of analysis of very considerable importance to DfT. It has enabled the noise impacts to be valued in the cost-benefit analyses which we use to advise Ministers on the pros and cons of policy proposals. This enables noise impacts to be factored into decision-making in a consistent and comparable way. **To be used in this way – that is to bear the weight of public policy decision making – research analysis needs to be of a very high technical quality, it needs to command the full support of peers and the authors need a good appreciation of the empirical robustness and potential limitations of their analysis. The CSERGE work for us fulfilled all of these criteria.** The capabilities developed through the Centre provided the foundations of expertise which enabled this project to be carried forward successfully”.*

Key institutions such as Defra, the World Bank and the EU were aware of the work of CSERGE because it had a high profile. It was taken seriously because of the high standard of its research outputs.

The profile of the Centre was important in attracting talented individuals; leading to high quality work which commanded the respect of policy makers. However, not everyone considered that CSERGE had as high a profile amongst policy makers as some other institutes. An example cited by an external stakeholder was the Institute of Fiscal Studies *“where most policy makers would be able to name the director and know what it does”*. This respondent suggested that CSERGE needed to organise more conferences in London designed for a policy audience.

5.4.3 Approach to working with policy makers

CSERGE has a very positive attitude to working with policy makers, as referred to in section 5.2.2, above. A number of factors were thought to be important by Key Informants in their relationship with policy makers, namely:

- involve policy makers from the outset to ensure they are intimately connected with the research design process;
- ensure that research answers policy-relevant questions within a time frame that is appropriate to the policy process; and
- ensure that research yields outputs in a form which is readily compatible with policy decision systems. For example CSERGE has done this for the Water Companies in terms of undertaking surveys to feed into their business plans and the Price Review. For Thames Water they contributed to surveys related to new desalination plant and the Thames Tideway.

In terms of the first bullet point, returns from our end user survey failed to unearth any specific examples of policy makers citing their involvement in research *design* as such. Yet, clearly, research commissioned by policy makers such as DoE, DfT and Defra

comprised some of the most influential work that CSERGE has undertaken in terms of policy impact (e.g. landfill tax work, research for DfT on noise etc). This implies a high degree of input into research parameters. Future evaluations may wish to examine this aspect in more detail, as it appears to be an important aspect of impact generation.

With practitioners, internal stakeholders felt there was a need to be pragmatic and provide specific methodologies to answer specific questions.

However, some Key Informants expressed a view that ESRC was moving CSERGE towards a more formulaic approach to policy relevant research and engagement:

"A more prescriptive approach to engaging and impacting policy makers is setting people up to fail";

"It should never ever be only about policy impact. Academic impact has always been very important to us. You have to put the two together. There is a fear among academics that ESRC is moving too much to a focus on policy impact".

Other Key Informants had a more pragmatic approach to their policy role:

"This is all part of my responsibility to be publicly engaged as a scientist. ESRC funding is a big part of that in the sense that it's the taxpayer who is paying my way".

One staff member suggested there was room for improvement in their engagement with policy makers:

"Although now there is much more emphasis upon working directly with policy makers - this is an ongoing development which has some room for further growth. In particular we need to begin to focus upon non-academic practitioners (e.g. officers in public agencies, NGOs, businesses) as well as just policy makers. We are keen to organise a series of conferences and workshops throughout 2009-10 to address this issue and are seeking funding to support this strategy".

5.4.4 Interdisciplinary approach

CSERGE and the PEDM have continuously sought to provide a fruitful environment for developing research capacity in the social scientific study of environmental policy and management. Because of the type and characteristics of environmental decision making contexts, close collaboration between the social sciences and the natural sciences is an increasingly important requirement for contemporary environmental research. The researchers in CSERGE/PEDM came from a range of social science disciplines and were all committed to collaboration with natural scientists as the need arose. This interdisciplinary research team philosophy and practice has been a particular feature of the Centre's work programme.

This approach was seen by staff and end users to have allowed CSERGE to look at issues more holistically and consider wider interactions and policy implications. This was felt by staff and end users to have enabled policy makers to act on CSERGE research with greater confidence.

It has also enabled CSERGE to offer a more complete service to policy makers with one staff member describing it as a:

“One-stop-shop for research – very few other centres have such diversity”.

The interdisciplinary approach was also identified by staff members as having benefits for the culture of the organisation and the outlook of its staff:

“The interdisciplinary nature of the research... prevents CSERGE from becoming too academic”.

“It enables people to explore their own interests; it keeps people fresh and allows intellectual and career development. This, in turn, helps CSERGE to keep people”.

However, two internal stakeholders sounded a note of caution:

“There could be more cross fertilisation and CSERGE is not so team orientated as some institutes. There is a level of friction with some dogmatic behaviour about different approaches. But this diversity of views means individuals are challenged to justify their positions and the contrasts make you think about new ideas”.

“There are now seven different research institutes (including CSERGE) on the UEA site and there has been some attempt to make them work more coherently together on the interlocking agendas. This has not been entirely successful as there is a natural desire for each to pursue their own agendas. Larger organisational change at UEA has also worked against this objective”.

5.4.5 Personalities

In terms of influencing policy, one former CSERGE researcher highlighted the importance of personalities:

“Having a ‘David Pearce’ to tell the policy makers what they need to know”.

CSERGE was fortunate in having three particularly strong personalities, in David Pearce, Kerry Turner and Tim O’Riordan, who not only arrived well connected with policy makers and networks, but who were leading players in their fields and all particularly passionate and committed to making change happen.

Frank Convery’s paper highlights the character of David Pearce which aided his ability to influence policy makers¹⁶. Equally, it is clear from our interviews that the PEDM Theme leaders are strong personalities in many ways. The benefits of having such people are not only felt directly in terms of raising the CSERGE profile in policy circles. It can also be expected to help to attract other staff and students of a high calibre (and even funding). There is a certain amount of evidence that Professor Pearce had such an impact.

¹⁶ Convery 2007.

5.4.6 Trend prediction work

CSERGE was adept at spotting the important issues ahead of time, and getting the right expertise in place. For example, CSERGE managed to do this with work related to the Bathing Water Directive and their work on Coastal Zone Management. As Prof Turner explained:

“When we started looking at this [integrated coastal zone management including catchment issues], it was the first time it had been done but it’s now becoming part of the policy of managed realignment. It started out as really academic but it’s now highly contested and relevant. We always thought it would impact on cost benefit analysis and it now is”.

However, one staff member suggested that efforts have been made to avoid being too focused on ‘hot’ issues:

“We have achieved what we have by not being distracted by changes in policy directions. We have remained focused on the academic side. This is critical”.

5.4.7 Location

CSERGE’s setting in the School of Environmental Sciences at UEA has been important. There have been high demands on researchers but this appears to have been matched by lower than normal teaching loads. The exposure to environmental scientists working on ‘real stuff in the real world’ has had real benefits and on occasions has resulted in productive collaborations.

One ex CSERGE staff member commented:

“Multi-site research centres are now coming back into favour and ICT developments are facilitating this. Big questions often need to be addressed by more than one institution. The Tyndall Centre is a good example of a very successful multi-site research centre”.

We found no real evidence that CSERGE’s Norwich location had been a hindrance in any way in terms of achieving policy impact, so long as it maintained a strong presence in London at policy related events/ networks. As stated elsewhere in this report, the evidence seems to indicate that CSERGE became a hub that attracted policy makers. Its location at UEA, within the Zuckerman Institute and alongside the Tyndall Centre appears to have helped in this respect.

5.4.8 Training the next generation of researchers.

CSERGE nurtured a whole group of young researchers who have now gone off into influential posts, forming a wide network of expertise. It continues to support research by PhD and Masters students which is actively engaged in the work of policy making organisations, so this is a continuing role.

Many people have gone on from CSERGE to influential positions (see Case Study 1), for example Sam Fankhauser to the World Bank, European Development Bank, and UK Committee on Climate Change, and Kanta Kumari to the World Bank. Such people are said to have taken the interdisciplinary approach adapted by CSERGE into their new

organisations. This is seen to distinguish them from some of their colleagues and adds to the CSERGE 'legacy'.

5.5 Conclusions and recommendations

CSERGE has made an important contribution to the development of environmental policy, in the UK and further afield, in a number of key areas.

The Centre has achieved a range of 'impact types'¹⁷. Whilst there are clearly a number of 'instrumental use' type impacts, for example specifically commissioned pieces of research which have fed directly into the policy decision-making process (e.g. the landfill tax work); the Centre equally had a high number of 'conceptual use' impacts. In these cases CSERGE has been influencing ways of thinking and new approaches, for instance in some of its ecosystem services, climate change and social care work. There are also instances of 'mobilisation of support' type impact, where CSERGE work has been used as a political tool to champion particular points of view or courses of action (e.g. the UK government's position on the EU Bathing Water Directive revision). However, perhaps CSERGE's ultimate legacy will be its 'wider influence' examples of impact. Considered by Nutley et al¹⁸ to be 'both rare and hard to achieve', CSERGE's work on environmental valuation and ecosystem services fall into this category.

The body of expertise and the reputation of its founding Directors (Professors' Pearce, Turner and O'Riordan) established the Centre from the start as a source of policy relevant research on environmental economics and valuation. Two of its rich seams of impact – Professor Pearce's work on eco taxes and later the ecosystem services approach – both stemmed from this original base. In turn, this spawned many of the Centre's most influential studies, including its input into the UK landfill tax, its work on noise disamenity and a whole suite of work on water issues relating to the Water Framework Directive, the Bathing Water Directive, Coastal Zone Management and flooding.

The ecosystem services approach was a natural progression from the earlier work, by seeking to place a value on the environment. CSERGE championed this approach which has now found mainstream acceptance in government guidance including the Defra 2007 Action Plan 'Securing a healthy natural environment: An action plan for embedding an ecosystem approach'. Indeed, the Centre's influence on ecosystem services has extended internationally.

In addition, Professor O'Riordan's work on governance issues in relation to environmental issues has also been a strong feature of the Centre, having impact at both local and national levels.

The Centre's second phase, post 2000, saw a new cadre of highly motivated senior staff (such as Neil Adger, Ian Bateman, Andrew Jordan and Kate Brown) bringing their expertise and influence to bear on the policy and academic sectors. The PEDM programme helped to retain and enhance the Centre's high profile with policy and practice end users. 'Leading edge' influential PEDM influence work includes Ian

¹⁷ See Nutley et al 2003.

¹⁸ Nutley et al 2003.

Bateman's methodological work on environmental valuation which continues to influence Defra and DfT, Neil Adger's work on climate change vulnerability and adaptation, Andy Jordan's work on engagement with the EU, and the Centre's ecosystem services work feeding into the new Stern Biodiversity Review and Defra's flagship 'Living with Environmental Change' project.

Our evaluation suggests that the following factors contributed to the Centre's success in influencing policy and practice:

- Securing core funding has been a key factor in developing and retaining expertise;
- Hitting the ground running, in terms of the expertise and policy networks of its founding Directors;
- High academic quality, record and profile have been the bedrock of any subsequent influence; academic output and dissemination of reports, papers, articles etc remains a key route to policy impact;
- An emphasis on networking as a route to influence, and recognising the time and resources needed to maintain and nurture such links;
- A positive, proactive relationship with policy makers and other end users, and a desire to influence policy and practice;
- Seeking to ensure that research answers policy-relevant questions within a time frame that is appropriate to the policy process;
- Involving policy makers from the outset, ensuring they are intimately connected with the research design process;
- Seeking to ensure that research yields outputs in a form which is readily compatible with policy decision systems. For example, CSERGE has done this for the Water Companies in terms of undertaking surveys to feed into their business plans and the Price Review;
- Taking an interdisciplinary approach enables issues to be studied holistically, end users to act on research findings with greater confidence and has positive benefits for staff;
- Engendering widespread and powerful influence by former staff and students who prospered in new influential organisations, as CSERGE's ideas on environmental economics became mainstream thinking.

These factors should be taken into account in setting up and funding future research centres. Whilst there was no evidence that CSERGE's East Anglian location was a barrier to policy impact, it remains essential for any UK research centre seeking to influence policy and practice impact to have a strong presence in London in terms of running or attending seminars, working groups and networks, to ensure constant exposure to key end users.

6. Reflections on the approach adopted to carry out the case study

6.1 Introduction

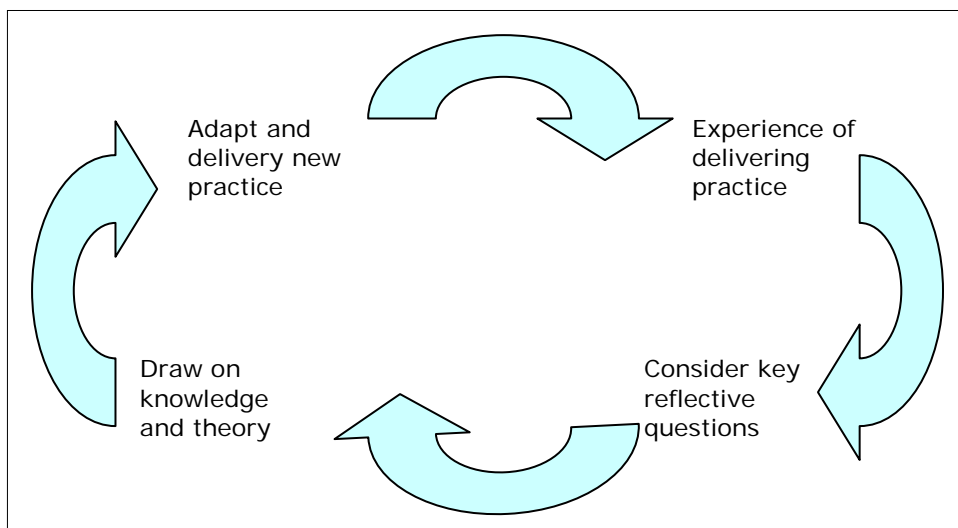
Reflection is an important aspect of evaluation and was one of the four objectives of this project.

6.2 Methods

For this evaluation we have used a 'light touch' reflective practice method. We view reflective practice as a process through which we can develop our learning by thinking through events and actions in terms of:

- What happened?
- How does this compare with what has happened in the past?
- How does this compare with what happens in other similar situations?
- What does other learning say about what has happened, and how can this knowledge be applied here?

The process is cyclical in nature, with each action leading to reflection and each reflection leading to a refinement of future action. The illustration below outlines this cycle of reflection and action.



In this light touch framework evaluation, team members have thought through the top level questions about the programme, in informal and ongoing ways. These reflections have been framed around, for example:

- What worked, why and what was the impact?
- What didn't work, why and what was the impact?
- What was my role in the effect and what was the impact of my role?
- What is the learning for future evaluation from this reflection?

In this context we have found these useful starting points and helpful within a programme of this scale. We have found this method to be fit for purpose rather than deploying a more complex approach.

6.3 Reflections and learning

The evaluation team's reflections suggest that some key issues have emerged. These are summarised in the table below.

Methodology area	Comments and Key emerging issues	Learning
Key informant interviews and Case Studies	There were no emerging issues from the interview cohort. We calculated that 10 would be required and the 10 were easy to set up. Similarly the case study strand worked well and each method produced evaluation data of good quality to inform the programme.	
Document Review	The task of reviewing 16 years of activity through documents was extremely useful in the programme. It produced qualitative data of impact and paper evidence that could be easily entered into matrices, by themes and evaluation question, to show both clear evaluation data and areas for further evaluation.	This task was very time consuming in terms of collation, emersion and analysis.
End user survey	Several difficulties emerged in this part of the programme. The main two difficulties were in obtaining contact names and the timing of the evaluation. The timing of the evaluation was the most significant issue as this impacted on other key issues that emerged from this method: <ol style="list-style-type: none"> 1. <i>Difficulty of getting contact names and details from key informants.</i> Whilst the CSERGE administrator was very helpful, a lot of contacts for older parts of the research had moved on or were not able to be contacted. 2. <i>Timing of the evaluation 1</i> - Some end users for older parts of the research responded to us by saying didn't think 	Increased time on the method area to secure contacts, tailor requests, chase contacts and seek out alternatives. This increased effort produced about a 17% return rate. Increased staffing to arrange bespoke phone interviews. An understanding of the need for

Methodology area	Comments and Key emerging issues	Learning
	<p>they had anything relevant to say or it was too out of date.</p> <p>3. <i>Timing of the evaluation 2</i> - It was difficult to trace people in some of the international organisations who were also in post at the time when CSERGE was influential in the 1990s.</p> <p>4. <i>High level contacts and email questionnaires</i> - Almost all of the 90 contacts identified were high level and difficult to persuade to complete the email questionnaire. We responded to this by using an experienced interviewer to contact selected individuals directly, and then offer 1:1 phone interviews. This too produced limited results. Most of these contacts also had very dated relationships with CSERGE.</p> <p>5. <i>Tracking down contacts</i> - We found that the email questionnaire method took a lot of detective work to track down the right people and contact details, especially given the 16 year time span.</p> <p>6. <i>Tailoring requests</i> - to get people to respond we had to tailor the request (e.g. had to set out in bespoke way how CSERGE may have worked with them, times, dates etc).</p>	<p>evaluations that involve stakeholders to be timely, in so far as stakeholders views need to be sought while the programme is still relevant to them.</p> <p>Better to target a smaller number of key contemporary end users with tailored information.</p>
Analysis workshop	<p>This workshop was aimed at key informants and some end users. However, we had a very poor response which seemed to be due to lack of availability rather than a lack of willingness to attend, so we replaced with:</p> <ul style="list-style-type: none"> • Conference call with CSERGE director and ESRC to go through our emerging findings; • Time bound web forum to post emerging findings so that key informants could comment. 	<p>The conference call worked well to develop some joint analysis of the findings. The forum generated useful comments.</p>
Attribution	<p>Attributing policy and practice impact through evaluation is a challenging area¹⁹. Within this evaluation programme to some extent we have had to extrapolate the role of ESRC (who gave the core funding) and the</p>	<p>The complexity of influence and relationships continue to make attribution of outcomes and impacts</p>

¹⁹ E.g. Nutley S, Walter I and Davies H, 'Using Evidence: How research can inform public services' (2007) which considers how research use and the impact of research can be assessed.

Methodology area	Comments and Key emerging issues	Learning
	role of other funders and the role of CSERGE as an entity while considering the issues of attribution.	complex, especially when being reviewed over a distance of substantial time since research areas completed.

6.4 Key informant views

We asked the Key Informants about their views on how to evaluate their policy and practice impact. Their views are summarised below. The three most popular suggestions were:

(i) Citations, publications statistics etc. This was the most popular suggestion. In particular Key Informants suggested that we:

- look at key DEFRA reports for citations of CSERGE’s work;
- Do a ‘citation analysis’ to judge the impact on the wider academic community;
- Consider contributions to (non technical) journals read by policy makers e.g. World Economics –commenting that

“You have to look at the quality of the science. This determines the impact at the end of the day. This is primarily assessed through entries in peer-reviewed publications. Policymakers do read things”.

(ii) CSERGE CVs - It was suggested that we explore CVs in terms of Board and Committee membership, programmes involved with, and meetings attended. It was also proposed that we explore process issues, such as the degree to which CSERGE staff were invited to sit on Advisory Boards, peer reviews and the like;

(iii) Ex staff and students – it was suggested we consider where CSERGE staff went on to work.

Other suggestions for the evaluation methods included:

- Undertaking case studies;
- Compiling lists of reports commissioned by policy makers (to act as proxy measure of impact);
- Gathering evidence of use of research outputs;
- Identifying the number of grants secured and value; and

- Speaking directly to civil servants, included those retired or moved on, to capture 'slow burn' impacts.

6.5 Issues with the end user survey approach

In reflecting on the evaluation approach we noted that the end user survey component raised some difficulties. A key challenge was to obtain sufficient 'end user' feedback. This was problematic on a number of counts:

- Many end users that would have been relevant for CSERGE's first phase had moved on or were not contactable (with new incumbents seemingly unaware of the Centre's previous role);
- Secondly, many end user contacts supplied by CSERGE were very high level and didn't respond to the questionnaire, nor attempts to organise structured phone interviews; and
- A small number of end users that were highlighted by CSERGE as important end users for their first phase of work (pre 2000) considered that their views and recollections were not worth conveying, seemingly no longer relevant due to the passage of time.

A considerable amount of detective work was needed to find the right people, their contact details – and even then requests needed tailored information to remind end users about CSERGE and mutual areas of interest.

Nevertheless, we did obtain detailed feedback from fifteen end users, covering a variety of policy, practice and academic fields.

In terms of **recommendations** for future evaluations of this type, we consider that it would be better to target a smaller number of contemporary end users (say ten to twenty) with bespoke information, in order to obtain detailed feedback from them.

7. Conclusions and recommendations

This evaluation has demonstrated that CSERGE has made an important contribution to the development of environmental policy, in the UK and further afield including a number of key policy and practice impacts. Many of these relate to specifically commissioned pieces of research, for example from UK government departments, others concern theoretical impacts and examples where research has been used to promote or justify a political position. In addition, some of its impacts can be described as making key contributions to paradigm shifts in the way policy makers and practitioners think about environmental issues, specifically in the fields of environmental economics and ecosystem services. Core ESRC funding has enabled CSERGE to undertake high quality academic research which is the bedrock of reputation and subsequent policy influence.

CSERGE's most influential work and legacy concerns its pioneering thinking on environmental economics, and emerging from this the concept of ecosystem services. Its work on valuing the environment earned it a key role in the development of eco taxation. This work progressed to form the basis for government valuation manuals. Its work on ecosystem services has had a number of regional, national and international policy and practice outlets and this concept is now forming mainstream government and agency policy. Other key impact areas concern the IPCC process and the climate change agenda in general, the revision of the EU Bathing Water Directive, the UK implementation of the Water Framework Directive, and the Government's 2005 Green Paper on adult social care 'Independence, Well-being and Choice'.

Our evaluation suggests that the following factors contributed to the Centre's success in influencing policy and practice: core funding to develop and retain expertise; policy savvy and well-networked Directors; high academic quality and reputation; a proactive relationship with policy makers and a desire to influence policy and practice; a commitment to policy-relevant research; involving policy makers in the research design process and ensuring policy compatible outputs; and maintaining an interdisciplinary approach. We would therefore **recommend** that these factors are taken into account when setting up and funding future research centres.

Former CSERGE staff and students (including graduates of the UCL M.Sc course in Environmental and Resource Economics) now hold influential posts in relevant policy organisations, which also contribute to the Centre's continued influence.

The study highlighted the challenges of assessing and attributing policy and practice impact of a research centre, in particular confirming impacts over long timescales. Tracing relevant end users and obtaining suitable feedback on CSERGE's role in policy and practice impact was difficult, particularly in relation to their international work and work pre-2000. Contemporary end users were more forthcoming and accessible and we would **recommend** that future such evaluations focus on a smaller number (around 10-20) contemporary end users, using more tailored information.

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