26 FEB 1999/13

ROYAL COMMISSION ON ENVIRONMENTAL POLLUTION

Steel House 11 Tothill Street London SW1H 9RE

[redacted]

Direct Line: 0171-273 6647
Enquiries: 0171-273 6646
Fax: 0171-273 6640
E-mail: rcep@dial.pipex.com

23 February 1999

Professor Sir John Krebs FRS
Natural Environment Research Council
Polaris House
North Star Avenue
Swindon SN2 1EU

Dear John

Many thanks for your letters and for sending me your proposal on the Climate Change Agenda. It maps very well onto the emerging conclusions of the Royal Commission's current study on the impacts of the production and use of energy on the environment.

We are clear that one of the most effective ways of reducing carbon emissions is to increase efficiency of energy use in the home and at work. We are concerned that there has been neglect of energy-related research over the past two decades. There is now an urgent need for research on technological, economic and social science aspects of increasing efficiency of energy use. In particular research needs to be carried out in the UK context with respect to housing stock and the liberalisation of the energy market.

We will be making recommendations about energy research in our report due at the end of the year. I will copy your letter and paper to colleagues in the Royal Commission and will discuss the possibility of interacting further on your proposals.

Yours ever

[redacted]

[redacted]

cc: [redacted]

JK 28-2-99

3/3/99

Dr Tucker

Mike Here is further backing for our bid [redacted]

19 January 1999

[redacted]
Department of Biochemistry
University of Cambridge
Tennis Court Road
Cambridge
CB2 1QW

[redacted]

Here is my concept note on a climate centre bringing energy technology and the socio-economic dimension. Your views and comments at this early stage would be very welcome.

JOHN R KREBS

cc Dr M Tricker
Mr I Dwyer
file/db

21 December 1998

FIELD(address)

CLIMATE CENTRE : CONCEPT NOTE

Thank you very much for your helpful comments.

JOHN R KREBS

cc file/db

[redacted]
British Geological Survey
Keyworth
Nottingham
NG12 5GG

[redacted]
Plymouth Marine Laboratory
Prospect Place
West Hoe
Plymouth
PL1 3DH

[redacted]
British Antarctic Survey
High Cross
Madingley Road
Cambridge
CB3 0ET

[redacted]
Southampton Oceanography Centre
Empress Dock
Southampton
SO14 3ZH

[redacted]
Institute of Hydrology
Maclean Building
Crowmarsh Gifford
Wallingford
OX10 8BB

22 DEC 1998 /A

E·S·R·C
ECONOMIC & SOCIAL RESEARCH COUNCIL

17 December 1998

cc M Teaw 22/12/98

Professor John Krebs
Chief Executive
NERC

CHIEF EXECUTIVE
Professor Ronald Amann
MSoc Sc PhD

Dear John

One final footnote on our recent exchange of correspondence concerning the "climate centre". We have now referred to the centre specifically and positively in our draft operating plan. I thought you would like to be aware of that.

With best wishes

[redacted] 4/1/99

Ron

Please ensure that our reference is compatible with that of ESRC (and also EPSRC)

Thank you

John

POLARIS HOUSE
NORTH STAR AVENUE
SWINDON SN2 1UJ
TELEPHONE 01793 413000
DIRECT 01793 413004
FACSIMILE 01793 413002
http://www.esrc.ac.uk

Ref: RA\194paw

File: CSB Issues | Beyond Kyoto | Concept Notes

CLIMATE CHANGE CENTRE

Comments

[redacted]

RECEIVED 16 DEC 1998

cc [redacted] Dr Thicker ✓ [redacted] Mr Dwyer

(1) Scenario formulation: needs to driven by DETR

"Policy Centre" would need to be based in DETR - calling for specific regional scenarios to be worked up (similar arrangements need to be made with Scottish Office & Dept. of the Environment N.I.)

The research underpinning the scenarios would be funded through the R.C.'s. DETR would act as the one-stop shop for industry + govt. and would lie in the policy heartland and hence [illegible] sets mitigation strategies

(2) Separation of natural vs anthropogenic causes of climate change: needs to be led by NERC, with EPSRC and ESRC + MRC in partnership.

As the major natural forcing comes from the oceans, and then by deviation the atmosphere, the research focus should be one of trying to improve predictability + reduce sensitivity in the regional models for Northern Europe. In this sense NERC Centre/Surveys should take the lead, and support data-warehousing, dissemination of information (Article 10 of Kyoto), to underpin a moveable feast of academic research looking at different aspects of climate change [e.g. incidence of cancer; impacts of storm surges on coastal defences etc.]

(3) Rather than create a new building (Isaac Newton Centre which has a very strong focus on inspiring mathematics for mathematics sake as well as working on applications) why not add to the existing data centres, get them to provide infrastructure + support for the socio-economic analyses of risk and mitigation.

(4) In the list in Annex A the Environment Agency needs to be added

15 December 1998

[redacted]
Policy Studies Institute
100 Park Village East
London
NW1 3SR

CLIMATE CHANGE

Many thanks for your most thoughtful and constructive letter. Your comments resonate with some others that have been made. In particular I agree with your points about defining a niche. I am now constructing an organogram of related activity to identify the niche of the proposed new centre.

On the research style, I agree with you that a mix of the elements you mention will be needed.

I will keep you in touch with future developments.

JOHN R KREBS

cc Dr M Tricker
Mr I Dwyer
[redacted]
file/db

S:\CEOFFICE\CECLA\TYPING98\DEC98[redacted].LET

14 DEC 1998

10 December 1998

POLICY STUDIES INSTITUTE

Professor John R Krebs
Natural Environment Research Council
Polaris House
North Star Avenue
Swindon SN2 EU

cc Dr Tricker 15/12
MW Swyer

[redacted]

Dec 15.12

Avery valuable
input!

Dear John

CLIMATE CHANGE: VIRTUAL CENTRE

Thanks for sending me your concept note and sorry it's taken me a week to respond. It is an extremely exciting idea and I have a number of observations.

Finding a Niche

There is much current and prospective activity in the climate research field which maps on to the work of the 'virtual centre'. A key challenge would be to relate its work to these other activities. Would such a centre would attempt to find its own niche or would it play an umbrella role by networking and synthesising parallel activities? For example, the centre would need to position itself in relation to:

a) the UK Climate Impacts Programme (UKCIP), funded by the DETR's Global Atmosphere Division and located at the Environmental Change Unit Oxford. This already provides the framework for a number of separately funded, regionally-based, multidisciplinary impacts studies (NW, East Anglia, Scotland).

b) any follow-up on ACBE's recommendation for a business-led Climate Technology Centre.

c) Chatham House and its influential Energy and Environment Programme.

c) parallel research council activity - ESRC/NERC/EPSRC.

d) other specific work funded under DETR/DTI programmes.

A general observation is that climate impacts research is now approaching a degree of coherence through UKCIP. However, from personal experience, the organisational superstructure is quite burdensome. Climate mitigation activity is more fragmented, with a larger gap between the academic community and business/practitioners. This partly reflects the contentious nature of many of the issues at stake. Here, a virtual centre might well have a role to play.

Registered Charity No. 313819
PSI is a company limited by guarantee
Registered in England No. 779698
VAT Reg. No. GB 239 1031 87

Registered Office:
100 Park Village East, London NW1 3SR
Tel: 0171 468 0468
Fax: 0171 388 0914

[redacted]

Research Style

A second related issue is the style of activity in which the centre would engage. Would it be a 'think thank', a home/focus for longer-term, more 'visionary' research or a place to carry out more immediately relevant applied research? My guess is that a mix would be needed. In the early stages, thinking/networking could have an important role to play since we have barely scratched the surface in terms of linking together the relevant disciplines. A key issue that needs to be addressed is the take-up or 'diffusion' of climate friendly technology. A persistent theme in energy policy since the 1970s has been the failure of markets to take up technologies that apparently offer both economic and environmental benefits. This is a priority area for interdisciplinary research so that policies which will encourage cleaner technologies can be put in place, and so that technology can be designed with the social context in mind.

Notwithstanding my comments about networking, I might mention one prejudice that I have developed through participation in IPCC. This relates to the balance of actual research being conducted, in the climate impacts area for example in, relation to synthesis activity (UK Climate Impacts Review Group, IPCC, EU ACACIA project). In some areas, it is hard to identify whether any original research has actually been conducted or whether 'expert judgements' are simply being propagated through long chains of literature reviews and synthesis reports.

I hope these comments are helpful. I look forward to hearing how the idea progresses. I do think that keeping ears to the ground on parallel activities will be rather important.

Best wishes

[redacted]

[redacted]

Centre for Ecology & Hydrology

Maclean Building
Crowmarsh Gifford
Wallingford
Oxfordshire OX10 8BB
United Kingdom

Telephone +44 (0) 1491 838800
Facsimile +44 (0) 1491 692314
Direct line +44 (0) 1491 692219
Email W.Wilkinson@nerc.ac.uk
WWW http://www.nmw.ac.uk/ceh

WBW/SGA

RECEIVED 15 DEC 1998/8

14 December 1998

cc [redacted]
Dr M Tricker
Mr I Dwyer 16/12/98

Professor John R Krebs
Chief Executive
N E R C
Polaris House
North Star Avenue
Swindon
SN2 1EU

Dear John

INTERDISCIPLINARY CLIMATE CENTRE

Thank you for your letter of 8 December and note on the "Climate Research Agenda Beyond Kyoto/Buenos Aires".

I am in full agreement with the need for interdisciplinary research on climate issues and particularly the need to form closer links between

1 climate science leading to greater confidence in prediction,

2 impact studies,

3 mitigation technologies.

The UK already has a very high and well deserved international reputation in climate science. In the impacts sector you will be aware of the UK Climate Impacts Programme (UKCIP) that was set up by DETR. UKCIP is building a coordinated programme of research at present (you will have seen the recent Report of October 1998 on "Climate Change Scenarios for the UK" which was prepared as a UKCIP initiative). I am unfamiliar with the mitigation sector but presume that there are major programmes on alternative energy sources - carbon sequestration, etc.

In view of the major research programmes already in place I believe that what is needed by the Research Councils is a comprehensive review of such activities and to set these within a framework of what needs to be done so as to identify any gaps and areas for closer collaboration. At that stage a decision could be made as to whether an integrated programme could be moved forward best through the formation of a new Centre or using some other mechanism.

Yours sincerely

[redacted]

[redacted]

Received 18 DEC
AS FAX 15 DEC 12

British Antarctic Survey

High Cross, Madingley Road
Cambridge CB3 0ET
United Kingdom

Telephone (01223) 221400
Direct Line (01223) 221524
Facsimile (01223) 350456

14 December 1998

Professor J R Krebs, FRS
Chief Executive
Natural Environment Research Council
Polaris House
North Star Avenue
Swindon SN2 1EU

Dear John,

Interdisciplinary Climate Centre

Thank you for your letter of 8th December and the Draft Note on the above. I am very enthusiastic about the initiative, but have some comments as follows:

(i) I am concerned at the emphasis on Climate. I appreciate that "Global Change" may be felt to be too imprecise, and that "Earth System Change" is not common currency, but to focus too strongly on climate, when other driving forces such as land cover change and the introduction of alien species will also have major impacts, would have the potential to fundamentally undermine the objective of providing useful advice to commerce and to policy makers. My preference would be to adopt a broader title such as "Interdisciplinary Research Centre for Earth System Change", and to alter the text accordingly.

(ii) Background, para #6: Impacts on human health and, potentially, human migration and the global economic system could also be included.

(iii) Background, para #8: Might be worth pointing out that in spite of international best efforts, Mitigation is unlikely to prevent substantial change, and that Adaptation will be critical, both as a business opportunity, and, in some cases, for survival.

(iv) The Way Forward, para #9: Incorrect to say that the communities have not worked together. They have done so, and increasingly so. However, it is true to say that progress so far has been ad hoc, with no overarching strategy or coordination.

(v) On what basis is the "Newton Centre" the preferred option?

(vi) Outputs, (c): Care here, as "working with business" (and other "customers") has proved to be one of the most challenging aspects of GC information transfer. Who are the customers? Who can take on the role of an authoritative group or forum for a particular user sector? Without the latter, the number of contacts quickly becomes unmanageable, especially since at the level of individual business units the requirements tend to be very specialised.

With best regards,

[redacted]

Southampton Oceanography Centre

[redacted]

University of Southampton
Empress Dock
Southampton SO14 3ZH
United Kingdom

Telephone +44 (0)1703 595105
Fax +44 (0)1703 595107

cc Dr M Trichas
[redacted]
Mr I Dwyer 16/12/98

Via FAX

14 December 1998

Professor John Krebs
Chief Executive
Natural Environment Research Council
Polaris House
North Star Avenue
Swindon
Wiltshire
SN2 1EU

Dear John

Interdisciplinary Climate Centre

Thank you for the opportunity to comment on this concept note. I think this is an interesting idea, but it is clearly at an early stage and needs considerable development.

Many of the issues mentioned are already being considered, by various groups collaborating with the Hadley Centre, which is clearly the leader of the field in the UK. Our impression also is that DETR, who have the principal policy responsibility in this area, wish (as a matter of policy) to channel their science requirements through the Hadley Centre, which is funded by them for the purpose.

The crucial questions which occur to me are, therefore

1. What could and should a Research Council sponsored Centre add to the present efforts, and how would their additional effort best be structured and delivered?

2. How would this be related to and co-ordinated with DETR efforts delivered via the Hadley Centre?

3. Is it possible for a "Centre" with so many participants to be more than a network, and if so, how?

My own feeling is that there certainly are things that need to be done in response to question (1), especially achieving a better understanding of natural variability (c.f. the CLIVAR programme) and long-term aspects. There are clearly also major socio-economic aspects, especially on a global scale, but I am not the right person to advise on what would be the priorities there.

SOC.ADM.98/12.531

On the second issue, it might be worth considering whether such a Centre might be a joint venture with the Hadley Centre? It would certainly need to be closely co-ordinated, and that might be one way to avoid a turf war.

These comments are rather off the cuff, in order to comply with your deadline. I gather this will be discussed at the RSG/Climate Focus meeting tomorrow, and I may be able to contribute to a more considered discussion after that.

Yours sincerely

[redacted]

[redacted]

cc: Centre/Survey Directors
[redacted]
T Johnston

14 December 1998

Professor R Amann
Chief Executive
ESRC
Polaris House

Many thanks for your comments on the "climate centre" concept note. I have taken on board your amendments.

JOHN R KREBS

cc file/db

[redacted]

British Geological Survey

Kingsley Dunham Centre
Keyworth
Nottingham
United Kingdom
NG12 5GG

Telephone +44(0)115 936 3100
Direct line +44(0)115 936 3226
Facsimile +44(0)115 936 3277
E-mail dfalvey@bgs.ac.uk

15 DEC 1998 /7

11 December 1998

cc [redacted]
Dr Tricker 16/12
Mr Dwyer

Professor J R Krebs FRS
Chief Executive
Natural Environment Research Council
Polaris House
North Star Avenue
Swindon
Wiltshire
SN2 1EU

Dear John

INTERDISCIPLINARY CLIMATE CENTRE

As you are aware, [redacted] is away until late January.

When I was going through his mail yesterday, I came across an item on the IACGEC's ranked list of research topics on climate change from Ian Dwyer, which you have probably seen. My response to that was to point out the complete absence of any research on the natural progression of climatic change through recent geological time.

The mitigation and adaptation strategies you mention in paragraph 5 fall into two classes: those that will have to be followed anyway because climate change is happening and cannot be stopped; those that will minimise the input of mankind into the process. To develop this second class of strategies requires an understanding of the nature and magnitude of the anthropogenic inputs, which can only be acquired when the natural variation is understood. There is evidence in the last two million years, even during the interglacials, of climatic swings that are bigger than the one we are currently experiencing, so it is not necessary to invoke human activity as a major contributor to currently observed warming.

Climate change research has been dominated by atmospheric scientists, with rather too little input from Earth Science and oceanography. I would hope that an interdisciplinary research centre, such as you propose, could be used to rectify this omission.

As for your suggestions for a way forward, I like the idea of a cross between the Isaac Newton Centre model and a virtual centre, which stresses the networking. The centre would have to be a funding source, but there is so much research going on in this field, funded by diverse sources, that a major function of the centre should be to act as a co-ordinator.

Yours sincerely

[redacted]

[redacted]

[redacted]

INVESTOR IN PEOPLE

DAF/SAM

8 December 1998

[redacted]
Institute of Hydrology
Maclean Building
Crowmarsh Gifford
Wallingford
OX10 8BB

INTERDISCIPLINARY CLIMATE CENTRE

1. In my presentations leading up to the CSR I proposed that NERC would work with EPSRC and ESRC to develop the concept of an interdisciplinary climate research agenda.

2. In order to take forward these discussions I have drafted a short concept note. I would be very grateful for your comments and suggestions on the draft at this early stage. The note has been sent to STB Chairs, and to Colin Hicks and David Fisk. I have also sent it to EPSRC and ESRC.

3. The note is a working draft and not, at this stage, for wider dissemination.

Please let me have your reply by 15 December 1998.

JOHN R KREBS

cc file/db

8 December 1998

[redacted]
Plymouth Marine Laboratory
Prospect Place
West Hoe
Plymouth
PL1 3DH

INTERDISCIPLINARY CLIMATE CENTRE

1. In my presentations leading up to the CSR I proposed that NERC would work with EPSRC and ESRC to develop the concept of an interdisciplinary climate research agenda.

2. In order to take forward these discussions I have drafted a short concept note. I would be very grateful for your comments and suggestions on the draft at this early stage. The note has been sent to STB Chairs, and to Colin Hicks and David Fisk. I have also sent it to EPSRC and ESRC.

3. The note is a working draft and not, at this stage, for wider dissemination.

Please let me have your reply by 15 December 1998.

JOHN R KREBS

cc file/db

8 December 1998

[redacted]
British Antarctic Survey
High Cross
Madingley Road
Cambridge
CB3 0ET

INTERDISCIPLINARY CLIMATE CENTRE

1. In my presentations leading up to the CSR I proposed that NERC would work with EPSRC and ESRC to develop the concept of an interdisciplinary climate research agenda.

2. In order to take forward these discussions I have drafted a short concept note. I would be very grateful for your comments and suggestions on the draft at this early stage. The note has been sent to STB Chairs, and to Colin Hicks and David Fisk. I have also sent it to EPSRC and ESRC.

3. The note is a working draft and not, at this stage, for wider dissemination.

Please let me have your reply by 15 December 1998.

JOHN R KREBS

cc file/db

8 December 1998

[redacted]
British Geological Survey
Keyworth
Nottingham
NG12 5GG

INTERDISCIPLINARY CLIMATE CENTRE

1. In my presentations leading up to the CSR I proposed that NERC would work with EPSRC and ESRC to develop the concept of an interdisciplinary climate research agenda.

2. In order to take forward these discussions I have drafted a short concept note. I would be very grateful for your comments and suggestions on the draft at this early stage. The note has been sent to STB Chairs, and to Colin Hicks and David Fisk. I have also sent it to EPSRC and ESRC.

3. The note is a working draft and not, at this stage, for wider dissemination.

Please let me have your reply by 15 December 1998.

JOHN R KREBS

cc file/db

8 December 1998

[redacted]
Southampton Oceanography Centre
Empress Dock
Southampton
SO14 3ZH

INTERDISCIPLINARY CLIMATE CENTRE

1. In my presentations leading up to the CSR I proposed that NERC would work with EPSRC and ESRC to develop the concept of an interdisciplinary climate research agenda.

2. In order to take forward these discussions I have drafted a short concept note. I would be very grateful for your comments and suggestions on the draft at this early stage. The note has been sent to STB Chairs, and to Colin Hicks and David Fisk. I have also sent it to EPSRC and ESRC.

3. The note is a working draft and not, at this stage, for wider dissemination.

Please let me have your reply by 15 December 1998.

JOHN R KREBS

cc file/db

NATURAL ENVIRONMENT RESEARCH COUNCIL

THE CLIMATE RESEARCH AGENDA BEYOND KYOTO/BUENOS AIRES

Introduction

1. This concept note outlines a proposal for a new **interdisciplinary research centre for climate change.**

2. The purpose of the Centre will be to draw together existing expertise (Annex A) in order to create a novel interdisciplinary research programme involving climate scientists, technologists, engineers, economists and social scientists.

3. The Centre will, in addition to developing a new research agenda, aim to meet the requirements (through knowledge transfer) of business and government in relation to climate change.

Background

4. Whilst there are still major uncertainties in climate prediction, there is now consensus that global warming is a reality and that human activity is a significant cause. This has been accepted in the UK by government and industry and by the other signatories to the Kyoto protocol.

5. Research to improve understanding of the climate system and reduce uncertainty in regional predictions will continue to be a high priority, but a new additional, research agenda has emerged. The thrust of this new agenda is to link understanding of the climate system to prediction of impacts of climate change and of the consequences of mitigation and adaptation strategies.

6. The effects of climate change may include sea level rise, enhanced storminess, enhanced variability and changes in mean temperature and rainfall. These will have impacts on all aspects of business including agriculture, construction, transport, insurance and energy.

7. Mitigation strategies for climate change in the medium term will be driven by the need to meet greenhouse gas emissions. Significant uncertainties exist in the economics, technical feasibility and effectiveness of strategies for reduction of individual greenhouse gasses. Equally there is uncertainty about the interaction between gasses. For example, reduction of NOX emissions will reduce the capacity of terrestrial vegetation to absorb carbon.

8. Adaptation to global warming by business will require new technologies (eg. carbon-free energy) as well as new economic, social and fiscal policies. There is a

major research agenda to explore these issues and their inter-relations. The adoption of technological solutions will depend on their feasibility, economic viability, social acceptability and impact on climate change itself.

The Way Forward

9. The UK has very significant strengths in the relevant disciplines of climate science, social and economic sciences and engineering/technology. However these communities have not worked together. The new research agenda requires more interface between these disciplines.

10. It is proposed that the research councils (EPSRC, ESRC and NERC) work jointly to set up and sponsor an interdisciplinary centre for climate change research, building on existing strengths, and utilising the expertise of existing groups.

11. A variety of models for implementing a research centre are possible including a single interdisciplinary institute (analogous to the German Potsdam Institute) to a virtual centre, networking groups together.

12. However the preferred option will be to develop the "Isaac Newton Centre" model: a research centre with a small number of core staff, including an inspirational leader, that can act as a research hotel for visiting groups and individuals.

13. The Director of the Centre could, through the core budget, initiate specific programmes of work ranging from workshops and visiting fellowships to research projects in the Centre or elsewhere. The aim would be to give the Director flexibility to deploy resources as he/she sees fit.

14. The core funding of the Centre will be from the Research Councils. it is envisaged that the contract for the Centre will be awarded following an announcement of opportunity and open competition. The aim will be to establish the Centre by early 2000.

Outputs

15. The timescale for delivery of results will range from 1-2 years for synthesis of existing knowledge, to 5-10 years for major new areas of research.

The centre would work towards the following objectives:

(a) To advance basic and strategic knowledge of the climate system, its impacts and mitigation adaptation strategies.

(b) To link disciplines to achieve these aims.

(c) To work with business to ensure effective knowledge transfer.

(d) to act as a one-stop-shop for industry and government seeking knowledge and advice.

(e) To work with international partners to optimise the UK contribution in a broader context.

ANNEX A

Existing groups that will be linked to the new Centre. It is not envisaged that the work of these groups will be duplicated.

A CLIMATE SCIENCE

Hadley Centre/Met Office

Universities Global Atmospheric Modelling Programme (UGAMP)

NERC Centres/Surveys

NERC Thematic Programmes

B IMPACTS / SOCIAL / ECONOMIC DIMENSIONS

Environmental Change Unit (Oxford)

UCL

CSERGE

ESRC Thematic programmes

C TECHNOLOGIES

EPSRC managed programmes

Imperial College Energy Technology Centre

D GOVERNMENT PANELS ETC

IACGEC

RCEP

Round Table on Sustainable Development

Panel on Sustainable Development

RECEIVED - 7 DEC 1998 18

PLANNING AND COMMUNICATIONS DIRECTORATE

To: Professor J R Krebs

File: PCD/CCC new Db

cc: Management Team

[redacted]

From: [redacted]

Subject: **THE CLIMATE CHANGE RESEARCH AGENDA BEYOND KYOTO/BUENOS AIRES**

Date: 7 December 1998

1. Two comments on your revised concept note, discussed at CEB today:

   i. Para 15 (a): clarify who will benefit from the results. Suggest re-drafting to "The timescale for delivery of results to industry and government will range from....."

   ii. Annex A: mention ACBE, possibly under sections C & D.

2. We will need to consider (early in the New Year?) press/launch opportunities, particularly if this is to involve a joint NERC/ESRC/EPSRC press notice (and cleared with DETR, DTI and ACBE).

[redacted]

[redacted]

JK out tom Pm 7/12

S:\PCD\PLANOP\OPENDESK\SSZ\MEMOS\KREBS23.DWL

NATURAL ENVIRONMENT RESEARCH COUNCIL

THE CLIMATE RESEARCH AGENDA BEYOND KYOTO/BUENOS AIRES

Introduction

1. This concept note outlines a proposal for a new **interdisciplinary research centre for climate change.**

2. *The purpose of the Centre will be to draw together existing expertise (Annex A) in order to create a novel interdisciplinary research programme involving climate scientists, technologists, engineers, economists and social scientists.*

3. *The Centre will, in addition to developing a new research agenda, aim to meet the requirements (through knowledge transfer) of business and government in relation to climate change.*

Background

4. Whilst there are still major uncertainties in climate prediction, there is now consensus that global warming is a reality and that human activity is a significant cause. This has been accepted in the UK by government and industry and by the other signatories to the Kyoto protocol.

5. Research to improve understanding of the climate system and reduce uncertainty in regional predictions will continue to be a high priority, but a new additional, research agenda has emerged. The thrust of this new agenda is to link understanding of the climate system to prediction of impacts of climate change and of the consequences of mitigation and adaptation strategies.

6. The effects of climate change may include sea level rise, enhanced storminess, enhanced variability and changes in mean temperature and rainfall. These will have impacts on all aspects of business including agriculture, construction, transport, insurance and energy.

7. Mitigation strategies for climate change in the medium term will be driven by the need to meet greenhouse gas emissions. Significant uncertainties exist in the economics, technical feasibility and effectiveness of strategies for reduction of individual greenhouse gasses. Equally there is uncertainty about the interaction between gasses. For example, reduction of NOX emissions will reduce the capacity of terrestrial vegetation to absorb carbon.

8. Adaptation to global warming by business will require new technologies (eg. carbon-free energy) as well as new economic, social and fiscal policies. There is a major research agenda to explore these issues and their inter-relations. *The*

adoption of technological solutions will depend on their feasibility, economic viability, social acceptability and impact on climate change itself.

The Way Forward

9. The UK has very significant strengths in the relevant disciplines of climate science, social and economic sciences and engineering/technology. However these communities have not worked together. The new research agenda requires more interface between these disciplines.

10. It is proposed that the research councils (EPSRC, ESRC and NERC) work jointly to set up and sponsor an interdisciplinary centre for climate change research, building on existing strengths, and utilising the expertise of existing groups.

11. A variety of models for implementing a research centre are possible including a single interdisciplinary institute (analogous to the German Potsdam Institute) to a virtual centre, networking groups together.

12. However the preferred option will be to develop the "Isaac Newton Centre" model: a research centre with a small number of core staff, including an inspirational leader, that can act as a research hotel for visiting groups and individuals.

13. The Director of the Centre could, through the core budget, initiate specific programmes of work ranging from workshops and visiting fellowships to research projects in the Centre or elsewhere. The aim would be to give the Director flexibility to deploy resources as he/she sees fit.

14. The core funding of the Centre will be from the Research Councils. it is envisaged that the contract for the Centre will be awarded following an announcement of opportunity and open competition. The aim will be to establish the Centre by early 2000.

Outputs

TG VSCVS

15. The timescale for delivery of results will range from 1-2 years for synthesis of existing knowledge, to 5-10 years for major new areas of research.

The centre would work towards the following objectives:

(a) To advance basic and strategic knowledge of the climate system, its impacts and mitigation adaptation strategies.

(b) To link disciplines to achieve these aims.

(c) To work with business to ensure effective knowledge transfer.

(d) to act as a one-stop-shop for industry and government seeking knowledge and advice.

(e) To work with international partners to optimise the UK contribution in a broader context.

ANNEX A

Existing groups that will be linked to the new Centre. It is not envisaged that the work of these groups will be duplicated.

A CLIMATE SCIENCE

Hadley Centre/Met Office

Universities Global Atmospheric Modelling Programme (UGAMP)

NERC Centres/Surveys

NERC Thematic Programmes

B IMPACTS / SOCIAL / ECONOMIC DIMENSIONS

Environmental Change Unit (Oxford)

UCL

CSERGE

ESRC Thematic programmes

C TECHNOLOGIES

EPSRC managed programmes

Imperial College Energy Technology Centre

D GOVERNMENT PANELS ETC

IACGEC ← ACBE

RCEP

Round Table on Sustainable Development

Panel on Sustainable Development

CLIMATE CHANGE CENTRE

SUMMARY OF RESPONSES TO DATE

1. **Colin Hicks:**
   Supportive. Could link to ACBE - #10 Seminar.

2. **David Fisk:**
   Need to show how it joins up with other things such as Hadley Centre, ECW.

3. **Ian Johnston:**
   Favours physical centre. Should link with existing groups such as SOC, Hadley Centre.

4. **Simon Conway Morris:**
   Supportive. Quality of individuals key. Asks if ESTB could comment.

5. **Mike Pilling:**
   Supportive. Asks how it relates to Hadley Centre.

6. **John Lawton:**
   Says it is "spot on".

7. **ACBE ([redacted]):**
   See separate note.

8. **EPSRC & ESRC:**
   "Considering it further". EPSRC favourably disposed, ESRC may wish to consider it in relation to its own thoughts on "delivering sustainability".

RECEIVED - 7 DEC 1998 | 9

PID Memo

To: J Krebs

From: M J Tricker

Date: 4th December 1998

Subject: Climate Change Centre/ACBE

cc. [redacted]
I Dwyer

I spoke with [redacted] on above and proposed that I meet him asap. [redacted] tells me that ACBE are to organise a technology seminar before Christmas and I (and Ian Dwyer) will attend to explore the interface between the RC and ACBE proposal for a Climate Change Centre.

[redacted] wants to work quickly and agreed that a joint announcement by the RCs and ACBE of their intent at the time of the Downing Street Climate change Seminar (February) would be appropriate.

[redacted]

JK out
PM 7/12

S:\PID\OPENDESK\KEC\DAYBOOK\CLIMCHGM.WPD

Climate centre: next steps

[redacted]

1. Further consultation: LC/S Directors STBs (in February). ACCE, ESRC/EPSRC
2. Launch in 1995/6 Operating Plan
3. If possible aim for announcement at time of (or) #10 seminar in late January/early February.

-8 DEC 1998 /9

E·S·R·C
ECONOMIC & SOCIAL RESEARCH COUNCIL

3 December, 1998

cc Man. Team
9/12/98

Professor John Krebs
NERC

CHIEF EXECUTIVE
Professor Ronald Amann
MSoc Sc PhD

Dear John,

I have read your concept note on the idea of interdisciplinary initiative on climate change with great interest.

Your thinking coincides with the intentions of our Research Priorities Board, since the Board has requested development of a new programme on environmental research, which will include collaboration with NERC and other research councils. A programme on "Delivering Sustainability" is currently under discussion and will be presented to the Board for a funding decision in March 1999. The programme could include a strand of research to be developed in a pioneering inter-disciplinary way in a research centre, as you suggest. If the plans attain the support of the Board in a strong competition for funds, then we shall be able to become partners in this enterprise.

Although a firm decision will not be reached until March at the earliest, reference in our operating plans to our aspirations for a cross-Council initiative would be appropriate.

Following discussions within ESRC, we have made some tentative additions to your draft * to give you a flavour of the thinking on these issues from our point of view. When EPSRC has added its expectations then we should like to have a further chance to take the discussion forward with key social scientists before submitting the plans to our Board. Perhaps the Cross-Council Group on Climate Change could be asked to take the details of the bid forward?

* JK 9/12/98

JK 13.12.98
Dear Ron
Many thanks for your comments on the "climate centre" concept note. I have taken on board your comments/amendments.

With best wishes

[redacted]

Where are these additions? Now attached →

POLARIS HOUSE
NORTH STAR AVENUE
SWINDON SN2 1UJ
TELEPHONE 01793 413000
DIRECT 01793 413004
FACSIMILE 01793 413002
http://www.esrc.ac.uk

1. Edit in the two
underlined sentences
in Ron Arnam's
version

2. Make small
changes to my last
version on p 2 - 4

3. print revised version
for me & MT. Done
1/9/12

NATURAL ENVIRONMENT RESEARCH COUNCIL

THE CLIMATE RESEARCH AGENDA BEYOND KYOTO/BUENOS AIRES

Background

1. This concept note outlines a proposal for a new interdisciplinary research centre for climate change.

2. Whilst there are still major uncertainties in climate prediction, there is now a growing consensus that global warming is a reality and that human activity is a significant cause. This has been accepted in the UK by government and industry and by the other signatories to the Kyoto protocol.

3. Research to improve understanding of the climate system and reduce uncertainty in regional predictions will continue to be a high priority, but a new additional, research agenda has emerged. The thrust of this new agenda is to understand interacting human-climate system driving change and to inform development of mitigation and adaptation strategies.

4. The effects of climate change may include sea level rise, enhanced storminess, enhanced variability and changes in mean temperature and rainfall. These will have impacts on all aspects of business including agriculture, construction, transport, insurance and energy. Studies of vulnerability and resilience of societies and ecosystems will be key. Innovation will be needed in new institutions of governance as well as in technology.

5. Mitigation strategies for climate change in the medium term will be driven by the need to limit greenhouse gas emissions. Significant uncertainties exist in the economics, political acceptability, technical feasibility and effectiveness of strategies for reduction of individual greenhouse gasses. Equally there is uncertainty about the interaction between gasses. For example, reduction of NOX emissions will reduce the capacity of terrestrial vegetation to absorb carbon. Emissions trading and stimulation of forestry to act as carbon sinks raise a range of interdisciplinary issues Research is needed on the links between greenhouse gas reduction in the developed world and sustainable development options in the South.

6. Adaptation to global warming will require new technologies as well as new economic, social and fiscal policies. There is a major research agenda to explore these issues.

The Way Forward

7. The UK has very significant strengths in the relevant disciplines of climate science, social and economic sciences and engineering/technology. However these communities have not worked closely together. The new research agenda requires more interface between these disciplines.

8. It is proposed that the research councils (EPSRC, ESRC and NERC) work jointly to set up and sponsor an interdisciplinary centre for climate change research to break new ground whilst building on existing strengths.

9. A variety of models for implementing a research centre are possible including a single interdisciplinary institute (analogous to the German Potsdam Institute) to a virtual centre, networking groups together.

10. An attractive possibility would be to develop the "Isaac Newton Centre" model: a research centre with an interdisciplinary nucleus of core staff, including an inspirational leader, that can act as a research hotel for visiting groups and individuals.

11. If a joint initiative can be agreed, there would be an AoO and competitive bidding process.

Outputs

12. The centre would work towards the following objectives:

    a) To advance basic and strategic knowledge of the human-climate system; the impacts of climate change, mitigation and adaptation strategies.

    b) To link disciplines to achieve these aims.

    c) To work with business, policy-makers, NGOs and others to ensure effective engagement with users of research.

    d) To act as a one-stop-shop for industry and government seeking knowledge and advice.

    e) To work with international partners to optimise the UK contribution in a broader context.

NERC CHIEF EXECUTIVE'S OFFICE

FROM: Professor J R Krebs

TO: Dr M Tricker
[redacted]

DATE: 2 December 1998

cc: file/db

NOTE OF INTERDISCIPLINARY CLIMATE CENTRE TELEPHONE CONVERSATION WITH IAN STEPHENSON : 1 DECEMBER 1998

1. ACBE would like to explore the interface between the RCs' centre and ACBE's concept of a technology centre (ACBE's interests include carbon taxes, "flexible mechanisms" and new technologies).

2. The interface can be explored by :

   i) Mike Tricker representing RCs on an ACBE working group

   ii) JK (possibly) meeting with ACBE Chairman in January.

3. Points that [redacted] would like to see addressed in the concept note

   - timescales to delivery
   - interface with business
   - exploitation
   - rôle of markets
   - implementation (funding, structure, etc).

JOHN R KREBS

2 December 1998

[redacted]
Policy Studies Institute
100 Park Village East
London
NW1 3SR

CLIMATE CHANGE : VIRTUAL CENTRE

Following our telephone conversation, here is the short concept note.

I stress that this is no more than an initial cockshy. I have sent it to Ron Amann and Richard Brook as well as to Colin Hicks and David Fisk.

JOHN R KREBS

cc file/db

DETR
ENVIRONMENT
TRANSPORT
REGIONS

TB go on with DF

4 DEC 1998 /7

DR DAVID FISK FENG
CHIEF SCIENTIST
ENVIRONMENT & INTERNATIONAL

DEPARTMENT OF THE ENVIRONMENT
TRANSPORT AND THE REGIONS

ZONE 4/F2
ASHDOWN HOUSE
123 VICTORIA STREET
LONDON
SW1E 6DE

DIRECT LINE: 0171-890 6210
FAX: 0171-890 6209
GTN CODE: 3533 6210

01 DECEMBER 1998

Professor John R Krebs FRS
Chief Executive
Natural Environment Research Council
Polaris House
North Star Avenue
Swindon
SN2 1EU

cc for CER on 7.12

Dear John

INTERDISCIPLINARY RESEARCH CENTRE

We spoke about the proposal that you showed me. DETR of course welcomes NERC's initiative to strengthen work in the climate change area. While I can see that the Burchell Centre will improve the internal work of the NERC community, we ought to consider how it fits into the wider feature.

One alternative is for it to be the Interdisciplinary Research Centre for every activity, including for example, the Hadley Centre. This risks it being little more than another version of the GER office, and probably would not work. The sensible alternative would be to see it as one of the players in the overall national scheme. If this fits with NERC's own vision, we need urgently to draw up the oganagram and flow chart that links the Interdisciplinary Research Centre to the other players. Perhaps your office could contact David Warrilow here to explore some possibilities.

From our point of view, research which leads to conclusions of a global significance ought to feed into the IPCC process. Some more specialised material might need to underpin Hadley. Work that was rather more specific to the UK ought to underpin the climate impacts initiative which is run for us by the ECU. The test at the end of the day ought to be that the outside world sees this as the "joined-up" activity, and that we minimise time wasting on fruitless turf wars.

JKB 2.98

Yours sincerely

[redacted]

NERC CHIEF EXECUTIVE'S OFFICE

FROM: Professor J R Krebs

TO: Dr M Tricker
[redacted]

DATE: 1 December 1998

cc: file/db

1. The attached note reports a conversation with Colin Hicks.

2. To summarise to date:

   - EPSRC/ESRC are "supportive". Not yet in a position to put cash into the pot

   - STB chairmen are supportive

   - DTI/DETR are supportive but DETR would like to see an organogram to show how the proposed centre would fit with, for example, Hadley Centre, ECU in Oxford, CSERGE

   - ACBE needs some more explanation which I will provide via [redacted]

3. I will revise the document in light of comments received to date.

4. At the moment I wish to use ACBE as the line into industry although I would not wish to rule out going to Shell and BP shortly.

5. If we can get our "ducks lined up" we may be able to align an announcement with the number 10 Climate Seminar planned for early 1999.

JOHN R KREBS

Filenote

NOTE OF TELECON WITH COLIN HICKS ON 27 NOVEMBER 1998 RE: THE CLIMATE CHANGE VIRTUAL CENTRE AND ACBE

1. ACBE's primary interests are in:

   - low carbon technologies
   - emission trading rules
   - carbon trusts.

2. Could the virtual centre embrace these?

3. Emphasise to ACBE that we are not asking for money.

4. Number 10 seminar will be late January/early February - RCs should be involved.

5. An aim might be to get an announcement of the virtual centre concept for (AoO) the number 10 meeting, preferably with ACBE on board.

6. JK should liaise with [redacted] and [redacted] asap. [redacted] may be able to prepare a note for 9 December 1998 meeting of ACBE. (JK not required to attend).

JOHN R KREBS

27 November 1998

27 NOV 1998 /2

UNIVERSITY OF ST ANDREWS

School of Environmental & Evolutionary Biology

Gatty Marine Laboratory
St Andrews, Fife, KY16 8LB, Scotland, UK
Tel: 01334 463441 (Secretary)
Fax: 01334 463443

Ian A Johnston FRSE
Chandos Professor of Physiology
Head of School & Director,
Gatty Marine Laboratory

NERC Sea Mammal Research Unit
[redacted]

26 November 1998

[redacted]

Professor John Krebs FRS
Chief Executive
NERC
Polaris House
North Star Avenue
Swindon SN2 1EU

Dear John

Thank you for your letter about a "post Kyoto" climate initiative. I would also like to take this opportunity to write to you about two additional matters.

First, with respect to your concept note about a new Interdisciplinary Research Centre for Climate Change. I believe that this is a potentially excellent idea, provided the focus for the new institute is carefully defined, so that there is no needless competition with existing centres, such as SOC, Hadleigh Centre, UEA, etc. One potentially attractive focus might be on the innovative, mathematical, statistical and computational techniques, necessary to tackle such complex problems. I think that a physical centre would have more value than a virtual centre, just because of the benefits that accrue from day-to-day conversations between bright individuals.

[redacted]

04 RSG file

[redacted]

~~Separate~~ also filed with Marine Fines ... Papers

filed in Genome Valley

Best wishes

[redacted]

Ian A Johnston

From: [redacted]
To: [redacted]
Date: 25 November 1998 3:42pm
Subject: RE: CLIMATE CHANGE CENTRE

Prof Krebs

I note Coline Hicks wants us to bring our proposal for a climate change centre to the attention of ACBE.

In my response to your note I suggested we did this and send to Shell and BP. Have we done this?

Mike Tricker

CC: [redacted]

not so far.

C

27 NOV 1998 | 3

DEPARTMENT OF EARTH SCIENCES
UNIVERSITY OF CAMBRIDGE

DOWNING STREET
CAMBRIDGE CB2 3EQ
UNITED KINGDOM
Tel: (0)1223 333400
Fax: (0)1223 333450

24 November 1998

Professor J.R. Krebs, FRS
NERC
Polaris House
North Star Avenue
Swindon SN2 1EU

Dear John

"Post-Kyoto Climate Initiative: The Climate Research Agenda beyond Kyoto/Buenos Aires"

Thank you for your letter and two-page outline for this proposal. In brief I welcome such an initiative, and if it finds general favour I hope very much that an expanded version could be put before my board (ESTB) at its next meeting so as to widen and deeper input. Such a proposal is, of course, very much in the spirit of multidisciplinary working and cross-Council activities that Council has already identified as highly desirable.

With matters at this preliminary stage, I don't think a lengthy analysis is called for. I would, however, make a few initial observations that I hope you find helpful. First, my initial preference is for an identified research centre rather than a virtual centre, and your mention of an Isaac Newton Institute as a model is timely. The range of topics promoted in the Newton Institute is quite remarkable, and I find it difficult to believe that a "virtual centre" will be able to generate such a degree of synergism. If this path is to be pursued I am sure time spent with individuals such as [redacted] and [redacted], who have been instrumental in the success of the Newton, would be sensible. The other point I would stress, which you bring out in this preliminary proposal, is the importance of involving social and economic scientists. I would imagine that many relevant university departments would express keen interest in this venture, but I would sound a preliminary note of warning concerning the wide range of intellectual credibility. It is clear that this country has a number of

/....

superb departments, especially in economics, that would be a vital ingredient to the success of such a centre. It is also apparent, however, that other "business schools" are underpowered intellectually. It would be very important, therefore, to identify at the earliest stages of planning individuals of the highest calibre in such areas as economics, environmental resources, insurance, and public policy.

My final point is that the Research Councils may be in a position to advise Government and others about the scientific consequences of post-Kyoto strategies, but the need for action arises from what can only, in the final analysis, be called social irresponsibility. That need not surprise us, but the ultimate decisions are in the political, economic and moral spheres. In other words, NERC should help to carry this burden, but even with the assistance of the other Research Councils we may need to look for resources from a wider arena.

Yours sincerely

S. Conway Morris, FRS

From: <M.J.Pilling[redacted]
To: Swindon.HQ(HQPO)
Date: 20 November 1998 2:48pm
Subject: Re:Climate research

Dear John,

Thanks you for your interesting note on the climate research agenda. I think that the idea is excellent and is well worth pursuing. I have a couple of comments:
1. The Hadley Centre is, I suspect, the largest climate change operation in the UK and is closely linked to DETR. It would, presumably, be necessary to get them on board and to link closely to them. Similarly, UGAMP would need to be linked in as well.
2. I think that the idea of making the Centre a cross between the Newton Centre and a virtual centre is excellent. It is necessary to have a heart and to provide a location where people can work in contact. At the same time, one needs to key into the vast amount of research in the rest of the country. We are making progress with CAST, which aims to provide some of the tools for on-line collaboration - it may be feasible to use some of those ideas.

best wishes,

Mike

Mike Pilling
School of Chemistry
University of Leeds
Leeds LS2 9JT
[redacted]

JK 26-11-98

Awaiting reply from

DETR

2 STB chairs

ERC

20 NOV 1998 18

EPSRC

Engineering and Physical Sciences Research Council

[redacted]

cc [redacted] DR TR. 20/11/98

Professor Richard J Brook
Chief Executive

Polaris House
North Star Avenue
Swindon SN2 1ET
Telephone (01793) 444429
Local Fax (01793) 444505
[redacted]

Professor John R Krebs FRS
Chief Executive
Natural Environment Research Council
Polaris House
North Star Avenue
SWINDON SN2 1EU

19 November 1998

Dear John

Thank you for your letter of 16 November 1998 and the paper relating to a possible climate research centre.

The note is most helpful as the EPSRC seeks to clarify thoughts for the centre in the light of the positive (if still qualitative) reaction from Council.

I am asking colleagues to prepare a position paper which can build on the NERC statement; this will, I hope, form part of the resolution of forward plans emerging from our December Council meeting. The formal confirmation of forward commitment will probably require a further iteration (the February Council meeting).

I hope that this timetable is consistent with your own intent to put a description of the joint initiative in the NERC 1999 operating plan.

Yours sincerely

[redacted]

Richard Brook

16 November 1998

Professor R Amann
Chief Executive
ESRC
Polaris House
SWINDON

I have drafted a short concept note on the idea of an interdisciplinary initiative in climate change.

I am aware that, as it stands, the note is rather short on EPSRC/ESRC related ideas and I hope that you will be able to enlarge upon these points.

If the idea finds favour, my aim is to incorporate reference to the centre in my 1999 operating plan and I would hope that it could be described as a joint initiative from the three Councils.

JOHN R KREBS

cc file/db

16 November 1998

Professor R Brook
Chief Executive
EPSRC
Polaris House
SWINDON

I have drafted a short concept note on the idea of an interdisciplinary initiative in climate change.

I am aware that, as it stands, the note is rather short on EPSRC/ESRC related ideas and I hope that you will be able to enlarge upon these points.

If the idea finds favour, my aim is to incorporate reference to the centre in my 1999 operating plan and I would hope that it could be described as a joint initiative from the three Councils.

JOHN R KREBS

cc filedb

16 November 1998

To Chairmen of Science & Technology Boards

At RSG I referred to a "post Kyoto" climate initiative. Here is a draft concept note for your comments.

If the idea finds favour, I would see it as a genuinely cross-board (and hopefully, cross research council) initiative.

Please may I have your reactions.

JOHN R KREBS

cc file/db

Dr D J Fisk
Chief Scientist
Department of the Environment, Transport and Regions
4/F1, Ashdown House
123 Victoria Street
London
SW1E 6DE

In recent months I have referred to the idea of a new interdisciplinary centre for climate change.

I enclose a concept note outlining the idea. I would very much welcome your comments at this stage.

I am circulating the note to EPSRC and ESRC and to STB chairmen. If the idea develops sufficiently, it could be referred to in the 1999 Business Plan.

JOHN R KREBS

cc file/db

PROFESSOR JOHN LAWTON - called to say thanks for your Post Kyoto draft, he thinks it is 'spot on'

16 November 1998

Dr C Hicks
Director - Environment Directorate
Dept of Trade and Industry
Room 415
151 Buckingham Palace Road
London
SW1W 9SS

In recent months I have referred to the idea of a new interdisciplinary centre for climate change.

I enclose a concept note outlining the idea. I would very much welcome your comments at this stage.

I am circulating the note to EPSRC and ESRC and to STB chairmen. If the idea develops sufficiently, it could be referred to in the 1999 Business Plan.

JOHN R KREBS

PS We touched briefly on the question of whether this might be part of a contribution to the proposed #10 seminar in December.

cc file/db

NATURAL ENVIRONMENT RESEARCH COUNCIL

THE CLIMATE RESEARCH AGENDA BEYOND KYOTO/BUENOS AIRES

Background

1. This concept note outlines a proposal for a new **interdisciplinary research centre for climate change.**

2. Whilst there are still major uncertainties in climate prediction, there is now consensus that global warming is a reality and that human activity is a significant cause. This has been accepted in the UK by government and industry and by the other signatories to the Kyoto protocol.

3. Research to improve understanding of the climate system and reduce uncertainty in regional predictions will continue to be a high priority, but a new additional, research agenda has emerged. The thrust of this new agenda is to link understanding of the climate system to prediction of impacts of climate change and of the consequences of mitigation and adaptation strategies.

4. The effects of climate change may include sea level rise, enhanced storminess, enhanced variability and changes in mean temperature and rainfall. These will have impacts on all aspects of business including agriculture, construction, transport, insurance and energy.

5. Mitigation strategies for climate change in the medium term will be driven by the need to meet greenhouse gas emissions. Significant uncertainties exist in the economics, technical feasibility and effectiveness of strategies for reduction of individual greenhouse gasses. Equally there is uncertainty about the interaction between gasses. For example, reduction of NOX emissions will reduce the capacity of terrestrial vegetation to absorb carbon.

6. Adaptation to global warming will require new technologies (eg. carbon-free energy) as well as new economic, social and fiscal policies. There is a major research agenda to explore these issues.

The Way Forward

7. The UK has very significant strengths in the relevant disciplines of climate science, social and economic sciences and engineering/technology. However these communities have not worked together. The new research agenda requires more interface between these disciplines.

8. It is proposed that the research councils (EPSRC, ESRC and NERC) work jointly to set up and sponsor an interdisciplinary centre for climate change research, building on existing strengths, and utilising the expertise of existing groups.

9. A variety of models for implementing a research centre are possible including a single interdisciplinary institute (analogous to the German Potsdam Institute) to a virtual centre, networking groups together.

10. An attractive possibility would be to develop the "Isaac Newton Centre" model: a research centre with a small number of core staff, including an inspirational leader, that can act as a research hotel for visiting groups and individuals.

11. If a joint initiative can be agreed, there would be an AoO and competitive bidding process.

Outputs

12. The centre would work towards the following objectives:

    (a) To advance basic and strategic knowledge of the climate system, its impacts and mitigation adaptation strategies.

    (b) To link disciplines to achieve these aims.

    (c) To work with business to ensure effective knowledge transfer.

    (d) to act as a one-stop-shop for industry and government seeking knowledge and advice.

    (e) To work with international partners to optimise the UK contribution in a broader context.

From: [redacted]
To:
Date: 11 November 1998 11:43am
Subject: KYOTO AGENDA

RECEIVED 11 NOV 1998 14

Professor J Krebs
cc [redacted] Ian Dwyer

RE: KYOTO AGENDA

You asked for comments on your note of 6th November.

1.I agree with the broad thrust of your concept note

2.We should extend the consultation to include industry and in particular ACBE, BP, Shell, power generation and the financial sector

3.I agree with [redacted] that we need more than a virtual centre. I like the idea of a 'research hotel' with a charismatic leader. This would provide the hub for the virtual links

Ian Dwyer will be in post on 16th November. Please can we all include him on future circulation lists.

M J TRICKER
DIRECTOR, PID
11 November 1998

CC: [redacted]

JK 14.11

(i) I have modified 1-2, 3 ~~Buchanan~~

(ii) Circulate to:

Committees, Bond RSIC (Helen A)

Ron Amann, Richard Brook (Helen B)

STB chairs (Helen C)

PLANNING AND COMMUNICATIONS DIRECTORATE

To: Professor J R Krebs

File: PCD/Db

cc: [redacted]
Dr M J Tricker

From: [redacted]

Subject: **KYOTO AGENDA**

Date: 9 November 1998

1. Thank you for the opportunity to comment on your draft concept note.

2. In terms of outputs (para 12) you may wish to add a fifth objective:

   (e) to work with business to ensure that any new technologies are successfully exploited.

   Together with objective (c) this could provide the interface with the proposed ACBE Business-led Climate Technology Co-ordination Centre.

3. On handling, I agree that we should aim for the concept to be articulated in our draft operating plan. We might also wish to include it in our draft Strategic Plan (January 1999).

4. In addition to consulting Board Chairmen, we might also seek views from one or two of our business Council members (Robin Bidwell and Geoff Randall?).

5. In terms of getting something to Colin Hicks and David Fisk, it would be appropriate to aim for the end of the month (in view of the proposed Downing Street Seminar planned for December).

6. Happy to discuss.

[redacted]

NERC CHIEF EXECUTIVE'S OFFICE

FROM: Professor J R Krebs

TO: [redacted]
Dr Tricker

DATE: 6 November 1998

cc: file/db

KYOTO AGENDA

1. I attach a draft concept note for the climate agenda beyond Kyoto.

2. My intention is, following your comments/advice to circulate the note more widely to gain further feedback from:

   - Board Chairmen
   - EPSRC & ESRC
   - DTI (Colin Hicks); DETR (David Fisk).

3. I would value your comments both on the draft and the consultation process referred to in 2.

4. the aim is to have an agreed concept to be included in the draft operating plan in January 1999.

JOHN R KREBS

DRAFT

THE CLIMATE RESEARCH AGENDA BEYOND KYOTO/BUENOS AIRES

Background

1. This concept note outlines a proposal for a new ~~virtual~~ interdisciplinary **research centre for climate change.**

2. Whilst there are still major uncertainties in climate prediction, there is now consensus that global warming is a reality and that human activity is a significant cause. This has been accepted in the UK by government and industry and by the other signatories to the Kyoto protocol.

3. Research to improve understanding of the climate system and reduce uncertainty in regional predictions will continue to be a high priority, but a new additional, research agenda has emerged. The thrust of this new agenda is to link understanding of the climate system to prediction of impacts of climate change and of the consequences of mitigation and adaptation strategies.

4. The effects of climate change may include sea level rise, enhanced storminess, enhanced variability and changes in mean temperature and rainfall. These will have impacts on all aspects of business including agriculture, construction, transport, insurance and energy.

5. Mitigation strategies for climate change in the medium term will be driven by the need to meet greenhouse gas emissions. Significant uncertainties exist in the economics, technical feasibility and effectiveness of strategies for reduction of individual greenhouse gasses. Equally there is uncertainty about the interaction between gasses. For example, reduction of NOX emissions will reduce the capacity of terrestrial vegetation to absorb carbon.

6. Adaptation to global warming will require new technologies (eg. carbon-free energy) as well as new economic, social and fiscal policies. There is a major research agenda to explore these issues.

The Way Forward

7. The UK has very significant strengths in the relevant disciplines of climate science, social and economic sciences and engineering/technology. However these communities have not worked together. The new research agenda requires more interface between these disciplines.

8. It is proposed that the research councils (EPSRC, ESRC and NERC) work jointly to set up and sponsor an interdisciplinary centre for climate change research, building on existing strengths, and utilising the expertise of existing groups.

9. A variety of models for implementing a research centre are possible including a single interdisciplinary institute (analogous to the German Potsdam Institute) to a virtual centre, networking groups together.

10. An attractive possibility would be to develop the "Isaac Newton Centre" model: a research centre with a small number of core staff, including an inspirational leader, that can act as a research hotel for visiting groups and individuals.

11. If a joint initiative can be agreed, there would be an AoO and competitive bidding process.

Outputs

12. The centre would work towards the following objectives:

    (a) To advance basic and strategic knowledge of the climate system, its impacts and mitigation adaptation strategies.

(b) To link disciplines to achieve these aims.

(c) to act as a one-stop-shop for industry and government seeking knowledge and advice.

(d) To work with international partners to optimise the UK contribution in a broader context.

(e) To work with business to ensure effective knowledge transfer

27 OCT 1998

cc [redacted] 27/10/98

26 October 1998

E·S·R·C
ECONOMIC & SOCIAL RESEARCH COUNCIL

Professor John Krebs
Chief Executive
NERC

CHIEF EXECUTIVE
Professor Ronald Amann
MSoc Sc PhD

Dear John.

After the recent meeting of SEBCC we talked briefly about the possibility of a new research centre (or virtual centre) in the general area of Climate Change and Global Warming. I have thought about this idea further and discussed it with colleagues in the office. As you know, ESRC is already well advanced in its plans for a new research programme in this area. Several of your officers are closely in touch with these developments, since we are working towards a closer synergy as a primary objective. We shall also be considering soon the long-term future of C-SERGE. However, both of these developments are quite consistent with ESRC's possible participation in a research centre which would fulfil much the same role as the current Isaac Newton Centre in Cambridge. I would be very grateful, therefore, if you could keep me informed about your discussions with Richard Brook. Any outline ideas which have been committed to paper would be particularly interesting.

With best wishes JK 28.10.98

[redacted] DTB/DL 28/10/98

(i) What happened in EPSRC Council? (21.10.98)

(ii) After RSG we will need to write something down

JK

POLARIS HOUSE
NORTH STAR AVENUE
SWINDON SN2 1UJ
TELEPHONE 01793 413000
DIRECT 01793 413004
FACSIMILE 01793 413002
http://www.esrc.ac.uk

NERC CHIEF EXECUTIVE'S OFFICE

FROM: Professor J R Krebs

TO: [redacted]

DATE: 19 October 1998

cc: file/db

CLIMATE CHANGE

1. Thank you for your notes on ACBE and your conversations with Colin Hicks.

2. To summarise the issues we will need to keep in mind:

   (i) whether any proposed centre is joint with EPSRC or also with ESRC (I have mentioned it informally to Ron Amann);

   (ii) the form of the centre (Isaac Newton Institute, IRC, Virtual Centre);

   (iii) links to ACBE etc, NERC profile within the centre;

   (iv) links to STB proposals coming to RSG in November;

   (v) links with more general joint initiatives with ESRC on "delivering sustainability" (DAB note of 9 October 1998);

   (vi) any "labels" that come on CSR allocation to NERC.

3. If EPSRC Council is supportive we will need to consider 2(i) - 2(vi) in presenting the case to RSG in November.

JOHN R KREBS

13 OCT 1998/2

PLANNING AND COMMUNICATIONS DIRECTORATE

To: Dr M J Tricker
cc: Management Team

File: PCD/13/67
PCD /08/16
Db

From: [redacted]

Subject: **CLIMATE CHANGE: POST KYOTO**

Date: 12 October 1998

1. At our bilateral with EPSRC today, it was agreed that EPSRC would include the NERC proposal of a (virtual) climate change centre as one of several IRC proposals going to their Council meeting on 21 October.

2. Whilst we should be enthusiastic about EPSRC's support for such a centre, I am a little concerned that they might regard the centre as a direct response to ACBE's recommendation for a "technology fix-it" centre to be established for business.

3. You may recall from the ACBE meeting (8 June) which we both attended, that the technology centre was one of a number of recommendations to emerge from the ACBE Report "Climate Change: a strategic issue for business".

4. We must ensure that the NERC remit in any climate change centre is clearly articulated and has a central rôle.

JR 16.10.98

[redacted]

S:\PCD\PLANOP\OPENDESK\SSZ\MEMOS\TRICKER.DWL