What is needed to establish and sustain a community of researchers and users capable of informing the development and delivery of climate information to support decision making and of effectively contributing to related EU and international efforts?   Ruth Hughes

Action required or enabling mechanism (s)?	**Knowledge exchange funding to support development of climate, and other, research for stakeholders - drawing on research <u>from multiple research councils</u>**
What would this achieve (what is it that you believe should be achieved / what do you see as indicating success)**?**	**--Translation of research into services – impact!** **- Establishment of teams comprising researchers from different disciplines, able to develop knowledge for use by stakeholders**

What are the barriers?

- **Available funds from multiple research councils <u>at the same time</u>**

Who should be involved?

- **LWEC research council partners**

What are the next steps and when would these need to happen?

- **Research councils (under LWEC) to agree funding and approach**

What is needed to establish and sustain a community of researchers and users capable of informing the development and delivery of climate information to support decision making and of effectively contributing to related EU and international efforts?   Ruth Hughes

		What are the barriers?
Action required or enabling mechanism (s)?	**A UK Climate Service which draws on the expertise from UKMet Office and the whole research base – a model that brings multiple organisations together to develop climate services (see NOAA)**	- **Gaining agreement across organisations** - **IP sharing**
		Who should be involved?
What would this achieve (what is it that you believe should be achieved / what do you see as indicating success)**?**	- A UK climate service drawing providing 'best possible information' for decision-makers	- **Met office** - **Research centres + Universities** - **Environment Agency** - **Defra**
		What are the next steps and when would these need to happen?
		- Agree principle

What is needed to establish and sustain a community of researchers and users capable of informing the development and delivery of climate information to support decision making and of effectively contributing to related EU and international efforts?   Ana Lopez

Action required or enabling mechanism (s)?	1) "Basic" research to improve understanding of climate system, including research on different mathematical/statistical/computational tools to address open problems. Research on decision tools able to cope with ill defined problems from the point of view of current decision theories. 2) "Applied" research: driven by users' information requirements, and not by what scientists can offer. Demonstration projects based on real situations and addressed by multidisciplinary teams in close collaboration with users. Development of practical tools for vulnerability/ adaptation. Results in 1) should be used to inform 2). But funding decisions and time scales regarding to 1) should be independent of 2).
What would this achieve (what is it that you believe should be achieved / what do you see as indicating success)**?**	1) Success measured by standard measures for blue skies research: peer reviewed papers, etc. 2) Not clear how to measure success. But clearly same metric as in 1) might not be appropriate. Indication of success might be that methodologies/ tools are actually applied by different users. Not clear how to evaluate this in the lifetime of a research project.

What are the barriers?

Barriers to support decision making:
Acknowledgment of ignorance seen as a failure, instead of a motivation to seek alternative / novel ways of addressing problems.
Lack of acknowledgment of limits to modelling (in general, not just climate science)
Researchers locked into their own research niches: principal agent problem.
Difficulties in establishing a dialogue between climate, impacts and adaptation scientists, social scientists and between them and users in the "non-academic" world, lack of common language, etc.
Lack of integration of the "climate change problem" with the wider issue of sustainability ,water-food-energy, natural resources and interplay with population growth

More general barriers: Budget cuts and "austerity" programmes.

Who should be involved?

Users (or potential users) of climate services in public and private sector.
Scientist from a broad range of disciplines.
In a wider sense: people /businesses interested in sustainability.

What are the next steps and when would these need to happen?

Don't know the institutional constraints to answer this question: next steps by government? Research councils?

What is needed to establish and sustain a community of researchers and users capable of informing the development and delivery of climate information to support decision making and of effectively contributing to related EU and international efforts?   Ag Stevens

Action required or enabling mechanism (s)?	• Decide what "climate services" means • Centralised funding and coordination of all activities that are considered as "climate services". • Generate a register of (i) all relevant organisations, their (ii) areas of expertise and (iii) portfolio of delivered "climate services" • Fund a UK "Climate Service" that acts as a frontline for connecting up the "users" with the "service providers" and recording the outputs in the public domain. Document this process in a way that it can be re-produced and therefore good practice approaches can emerge. • Ensure that climate data archives are robust, consistent and reliable
What would this achieve (what is it that you believe should be achieved / what do you see as indicating success)**?**	• A clear and unambiguous definition of what a "climate service" is • A clear distinction between services based on peer-reviewed science and any other activities. This implies some kind of review and/or accreditation of climate services themselves. • Funding of a "tools" infrastructure that allows interrogation of large climate datasets without all users needing to be experts.

What are the barriers?

Unclear definition of "climate services"

Reluctance for research community to "serve" the commercial community unless good science is absolutely at the heart of it

Who should be involved?

Scientists, archive managers, software developers, communicators, policy makers, commercial partners/users, public, NGOs etc etc

What are the next steps and when would these need to happen?

What is needed to establish and sustain a community of researchers and users capable of informing the development and delivery of climate information to support decision making and of effectively contributing to related EU and international efforts? Adam Corner

Action required or enabling mechanism (s)?	To obtain a much clearer understanding of what decision-makers need from climate science To embed social science expertise at every stage of climate science communication To co-ordinate climate scientists and social scientists more closely at an institutional level (from research councils through to interdisciplinary research teams) Also…train early-career and emerging researchers in communication/public engagement/media skills (if they want them)
What would this achieve (what is it that you believe should be achieved / what do you see as indicating success)**?**	A coordinated chain of communication for climate science, such that each stage is well informed by the best available expertise

What are the barriers?

Lack of funding for 'boundary organisations'

Lack of capacity for genuine interdisciplinarity (working together, rather than working alongside)

Fear of doing public engagement among many researchers

Who should be involved?

Tyndall Centre are a good example of model for this in UK

Requires high-level buy in – so Research Councils & Strategic priorities

What are the next steps and when would these need to happen?

Take outputs of this meeting forward & design & fund coordinated strategy for UK climate science

What is needed to establish and sustain a community of researchers and users capable of informing the development and delivery of climate information to support decision making and of effectively contributing to related EU and international efforts?   Ruth Hughes

Action required or enabling mechanism (s)?	**Trained intermediaries who can interpret stakeholders needs into research areas.** **+/- network to bring together intermediaries for shared learning**
What would this achieve (what is it that you believe should be achieved / what do you see as indicating success)**?**	- Focal points that can make connections between research community and stakeholders

What are the barriers?

- **Funding**
- **Huge area so individuals need focus – perhaps by sector (e.g. construction, finance)**

Who should be involved?

- **Research councils**
- **Environment Agency**
- **Others..**

What are the next steps and when would these need to happen?

- **Agree principle**

What is needed to establish and sustain a community of researchers and users capable of informing the development and delivery of climate information to support decision making and of effectively contributing to related EU and international efforts?   Ruth Hughes

Action required or enabling mechanism (s)?	**Showcase research capability to policy/business/NGO stakeholders & opportunities to meet and stay in contact (How - Workshops? Research showcase event? Webinars?)**	
What would this achieve (what is it that you believe should be achieved / what do you see as indicating success)**?**	**-Raise awareness of the capabilities available from UK research** - **Generate interest in stakeholders** - **Greater number of stakeholders involved**	

What are the barriers?

- **Difficulty in attracting stakeholders – stakeholder fatigue**

Who should be involved?

- **UKCIP**
- **Intermediary organisations, e.g. trade/members organisations, KTNs**
- **LWEC Climate Challenge Steering Group?**

What are the next steps and when would these need to happen?

- **What mechanism most appropriate to convey info**

What is needed to establish and sustain a community of researchers and users capable of informing the development and delivery of climate information to support decision making and of effectively contributing to related EU and international efforts?   Ruth Hughes

Action required or enabling mechanism (s)?	**Funding for demonstration projects to show how existing data and models can be applied to stakeholder needs – and climate services developed**
What would this achieve (what is it that you believe should be achieved / what do you see as indicating success)**?**	-**Understanding of the steps required to develop services** **-Translation of science into services – impact!** **- Establishment of teams comprising researchers from different disciplines, able to develop knowledge for use by stakeholders**

What are the barriers?

- **Available funds**
- **Interest from stakeholders**
- **Interest from research community to be involved**

Who should be involved?

-**Met Office**
-**Researchers from disciplines relevant to stakeholder needs**

What are the next steps and when would these need to happen?

-**ID interested stakeholders, researchers with relevant knowledge and willingness to be involved**
-**Open competition?**

What is needed to establish and sustain a community of researchers and users capable of informing the development and delivery of climate information to support decision making and of effectively contributing to related EU and international efforts?   Iain Brown

Action required or enabling mechanism (s)?	Define better name/identity
	Establish an active Network
	Develop a gateway for resources
	Build a wish list from 'users' then prioritise it
	Provide regular updates on science & policy developments to facilitate KE
	Explore Funding to establish sustainability
What would this achieve (what is it that you believe should be achieved / what do you see as indicating success)**?**	Clearly identify where to go for decision makers to seek support/advice/information/collaboration
	Facilitate delivery of actions following CCRA1 and a better mechanism for moving towards CCRA2 (e.g. via indicators)
	Disseminate best practice and aid robust decision making as climate changes and knowledge improves
	Facilitate interaction/integration across sectors
	Provide a **UK**-wide initiative & international links

What are the barriers?

For a simple network – none

Gateway (etc) would require more concerted effort and funding

Possibly conflicting priorities (cf. UKCP09)

Who should be involved?

UK Gov & DAs
Agencies
Research centres
(+ wider stakeholder community)

What are the next steps and when would these need to happen?

1 Set up network to establish presence
2 Scope user requirements and gateway
3 Identify who does what
4 Seek funding
[1-3 within 6 mnths, after that partial dependence on 4]

What is needed to establish and sustain a community of researchers and users capable of informing the development and delivery of climate information to support decision making and of effectively contributing to related EU and international efforts?   Ruth Hughes

Action required or enabling mechanism (s)?	**Develop historical climate trends for the whole of Europe (see http://www.climatetrendshandbook.adaptationscotland.org.uk/index.html)**
What would this achieve (what is it that you believe should be achieved / what do you see as indicating success)**?**	- Develop working groups developing climate knowledge/services across Europe **- Resource for stakeholders** - **A benchmark against which we can measure future climate change.**

What are the barriers?

-   **Coordinating on international landscape**

Who should be involved?

- **Climate JPI**
-**European + national Environment Agency**

What are the next steps and when would these need to happen?

- Establish who would use this?

What is needed to establish and sustain a community of researchers and users capable of informing the development and delivery of climate information to support decision making and of effectively contributing to related EU and international efforts?   Ruth Hughes

Action required or enabling mechanism (s)?	**Data portal (or network) with clear signposts to where climate/climate impacts/ social science data** **Needs to be labelled and accessible to wide range of users from researchers to policy/business stakeholders**
What would this achieve (what is it that you believe should be achieved / what do you see as indicating success)**?**	- Stakeholder can access data - Research opportunities from combining data - Climate impacts researchers access latest physical climate models

What are the barriers?
- **Cost**
- **Time**
(so build on the data projects that are already on-going)

Who should be involved?
- **Met office**
- **Research councils /centres**
- **Environment Agency**
- **Others..**
- **British Library?**

What are the next steps and when would these need to happen?
- **Agree principle**

What is needed to establish and sustain a community of researchers and users capable of informing the development and delivery of climate information to support decision making and of effectively contributing to related EU and international efforts?   Rowan Sutton

Action required or enabling mechanism (s)?	1. A regular (biennial?) national conference on Climate Risk Assessment and Adaptation, with components addressing:
	    a. Vulnerability Assessment (to identify the *specific* aspects of climate to which particular sectors or systems are vulnerable)
	    b. Understanding the drivers of change in the specific aspects of climate raised by a, and quantifying the changing probabilities. (This includes climate forecasting for a range of decision-relevant lead times.)
	    c. Identification and assessment of Adaptation Options
	
	 2. Multidisciplinary research programmes addressing specific knowledge gaps in a and b *together*.

What would this achieve (what is it that you believe should be achieved / what do you see as indicating success)**?**	Actions 1 & 2 would directly build a community of researchers and users, and share best practice. The conference should be targetted at businesses and government as well as the academic community.

What are the barriers?

Lack of leadership

Who should be involved?

All Research Councils and LWEC partners

What are the next steps and when would these need to happen?

Need to identify clear leadership, asap.

What is needed to establish and sustain a community of researchers and users capable of informing the development and delivery of climate information to support decision making and of effectively contributing to related EU and international efforts?   Rowan Sutton

Action required or enabling mechanism (s)?	3. International programme to address the frontiers of climate modelling, to target critical uncertainties beyond the limits of national computational capabilities.
What would this achieve (what is it that you believe should be achieved / what do you see as indicating success)**?**	Major (often dominant) uncertainties arise in climate risk assessments as a consequence of lack of fidelity in climate models. This programme would target critical issues for improving climate model fidelity and hence reduce uncertainties, enabling more robust risk assessments and adaptation.

What are the barriers?

Challenges of building effective international partnerships

Who should be involved?

- NERC & Met Office (Joint Weather and Climate Research Programme)

-**DECC and other LWEC partners.**

- **European partners**

What are the next steps and when would these need to happen?

- High level engagement with key European partners.

What is needed to establish and sustain a community of researchers and users capable of informing the development and delivery of climate information to support decision making and of effectively contributing to related EU and international efforts? Rowan Sutton

Action required or enabling mechanism (s)?	4. Develop and publicise widely concrete examples of good *and bad* practice in climate risk assessment, and assessment of adaptation options. Risk assessments must not ignore aspects of uncertainty that are hard to quantify.
What would this achieve (what is it that you believe should be achieved / what do you see as indicating success)**?**	Spread good practice

What are the barriers?

Not learning from past mistakes

Who should be involved?

NERC, LWEC partners

What are the next steps and when would these need to happen?

What is needed to establish and sustain a community of researchers and users capable of informing the development and delivery of climate information to support decision making and of effectively contributing to related EU and international efforts?   Richard Jones

Action required or enabling mechanism(s)?	1) Understanding user needs - Connect info users and providers in projects 2) Building confidence in climate information - Stop talking about uncertainty/demonstrate value 3) Climate variability to change info delivered from trusted analysis/dissemination system; 4) Raising awareness amongst (potential) finders that new funds are required for cross-discipline work - Demonstrating funding required is significantly less than funding provided and value gained
What would this achieve (what is it that you believe should be achieved / what do you see as indicating success)**?**	1) Demonstration to funders of concrete requirement for and applicability of climate information 2) Remove concern that info providers are only interested in funding for more science and that uncertainty is a barrier to effective action 3) Reduce the requirement on development/infrastructure funders to fund ad-hoc consultancy for climate info freeing (reduced) funds for more coordinated work 4) More effective exploitation of available information and efficient use of research/development/infrastructure funds

What are the barriers?

1) **Generators of climate info not aware of requirements/ poor at communication**
2) **Insufficient cross-discipline work**
3) **Coordinated funder network**
4) **Trusted climate info system**

Who should be involved?

1) **Multilateral development agencies**
2) **Recipient governments**
3) **UK funding coordinators (e.g. UKCDS)**
4) **International collaborators (e.g. EU, WMO/WCRP)**

What are the next steps and when would these need to happen?

Convene meeting(s) of parties that need to be involved and plan set of demonstration projects

What is needed to establish and sustain a community of researchers and users capable of informing the development and delivery of climate information to support decision making and of effectively contributing to related EU and international efforts?   Paul Buckley

Action required or enabling mechanism (s)?	In the first instance there needs to be a focus for this. It would seem extremely optimistic to engender any sense of community for researchers AND users, there are too many players. Communities of interest (for example based around the 11 CCRA sectors and / or the 11 LWEC climate challenge areas) might be a useful starting point.
What would this achieve (what is it that you believe should be achieved / what do you see as indicating success)?	The Marine Climate Change Impacts Partnership (MCCIP) has some experience in this field, especially bringing together the research community for one area (Marine and fisheries) and hope we could pass on benefits of our experience. Already advising LWEC on producing climate impact report cards for the terrestrial environment (Water sector and Biodiversity). The user community has to be engaged at a level beyond vague high-level principles. Success measured through people actively seeking input from these communities of interest (UK and more widely) as a recognised authority / example of best practice.

What are the barriers?

At what level do you engage to provide anything meaningful or that can be applied by the user community

Getting end users, especially industry, interested in actually doing something when climate change is low down on their list of priorities

Who should be involved?

As broad a group as possible that isn't seen as too government heavy. Business interests through trade associations and insurance companies – use later to monitise impacts for user communities

What are the next steps and when would these need to happen?

Identify natural communities of researchers that will co-operate. Embed spokespersons from communities within broad-ranging user groups (which might already exist).

What is needed to establish and sustain a community of researchers and users capable of informing the development and delivery of climate information to support decision making and of effectively contributing to related EU and international efforts?   Nigel Arnell

Action required or enabling mechanism (s)?	Clarity on objectives Co-production of knowledge between "climate" community and users *More concretely*: Set up a steering committee/contact group with wide representation Produce suite of documentation summarising not only state-of-the-art, but also current and likely future requirements in different sectors
What would this achieve (what is it that you believe should be achieved / what do you see as indicating success)**?**	Awareness of opportunities and constraints amongst the whole community ("producers" and "users") Avoid development of inappropriate / unusable products Stimulate research into development of new products

What are the barriers?

Language
Modes of operation
Ensuring representativeness from researcher and user community
Time

Who should be involved?

…all…

What are the next steps and when would these need to happen?

What is needed to establish and sustain a community of researchers and users capable of informing the development and delivery of climate information to support decision making and of effectively contributing to related EU and international efforts?   Myles Allen

Action required or enabling mechanism (s)?	Sustained research into the reliability of climate information for decision-making, including direct observations, risk estimates, decadal predictions and long-term projections
What would this achieve (what is it that you believe should be achieved / what do you see as indicating success)**?**	Objective measures of the reliability of climate information leading to internationally agreed standards for the quality of information used in decision making. Needs to deliver useable standards: lots of work in this area is over-theoretical and hard to use.

What are the barriers?

Products already out there have "supporters", making it increasingly difficult to establish objective standards.

Much work on reliability is highly theoretical.

Who should be involved?

Users of climate information
Empirical decision-analysts
Statisticians
Climate forecasters
Climate impact analysts

What are the next steps and when would these need to happen?

Network proposal to draw together (extensive) existing work on this topic?

What is needed to establish and sustain a community of researchers and users capable of informing the development and delivery of climate information to support decision making and of effectively contributing to related EU and international efforts?   Emily Shuckburgh

Action required or enabling mechanism (s)?	Aim: Translate climate data into actionable information 1. understand what climate data may be appropriate for translation into what actionable information 2. arrange a series of workshops bringing together different stakeholders and the research community to discuss particular topics which may be appropriate to address 3. form knowledge network around key topics to deliver preliminary actionable information 4. create prestigious fellowships for early-career researchers to get involved in this interdisciplinary work
What would this achieve (what is it that you believe should be achieved / what do you see as indicating success)**?**	A series of flag-ship examples across a broad range of sections where climate data has been translated into actionable information A network of high-flying researchers and leaders in relevant stakeholders who are alumni of the prestigious fellowship programme and can act as ambassadors

What are the barriers?

1. **Need to move away from a model where commercial opportunity is primary goal**
2. **Need to recognise that interdisciplinary work can (at present) be seen as a "career-limiting" move for young researchers (hence fellowships)**

Who should be involved?

All potential stakeholders.

Requires high-level strategic organisation at initial stages to identify topics

What are the next steps and when would these need to happen?

Select topics for workshops (including allowing broader community to suggest topic areas)

What is needed to establish and sustain a community of researchers and users capable of informing the development and delivery of climate information to support decision making and of effectively contributing to related EU and international efforts? Emily Shuckburgh

Action required or enabling mechanism (s)?	Aim: put in place required infrastructure for delivery of climate information Mechanisms: a) formulate protocols (internationally agreed) for treatment of uncertainty etc; b) introduce certification process (eg via RMetS) for climate information providers together with appropriate training
What would this achieve (what is it that you believe should be achieved / what do you see as indicating success)**?**	Robust platform. Minimise reputational risk.

What are the barriers?

1. **Coherent and universally agreed strategy**

Who should be involved?

JWCRP, RMetS, relevant international linkages

What are the next steps and when would these need to happen?

International leadership to progress protocol formulation

Discussions with RMetS concerning certification

What is needed to establish and sustain a community of researchers and users capable of informing the development and delivery of climate information to support decision making and of effectively contributing to related EU and international efforts? Emily Shuckburgh

Action required or enabling mechanism (s)?	Aim: attract to the field a new generation of researcher who can perform high-quality research while communicating clearly to a wider audience Mechanisms: a) training, education and publicity (incl. run a series of events to highlight and showcase exciting opportunities or examples of successful collaborations), b) encourage the opportunity to switch between research and stakeholder throughout career Step 1: develop and test training session Step 2: identify topics to be showcased and arrange publicity event Step 3: broaden industrial fellowship and KE fellowship schemes
What would this achieve (what is it that you believe should be achieved / what do you see as indicating success)**?**	Capacity-building Ultimate success if career structure were such that a breed of researcher could move seemlessly back and forth across the fence between research and stakeholder throughout their career.

What are the barriers?

1. **Best done once there is in place some opportunities for researchers in this domain**
2. **Recognise that there will be two distinct groups a) those want to stay in research but become more involved in outreach; b) those who want to jump the fence to engage with research from within stakeholders**

Who should be involved?

What are the next steps and when would these need to happen?

Set in place fellowship scheme for post-doctoral researchers (needs to be more prestigious than current KE fellowships)

What is needed to establish and sustain a community of researchers and users capable of informing the development and delivery of climate information to support decision making and of effectively contributing to related EU and international efforts? Emily Shuckburgh

Action required or enabling mechanism (s)?	Aim: ensure fundamental research is addressing some of the key barriers to providing actionable information
	Mechanisms: regularly assess limitations of currently-available actionable information and gaps in stakeholder needs; feed into thematically determined grand challenge research directives (involving international collaboration where appropriate) – both on modelling and observational data sides
What would this achieve (what is it that you believe should be achieved / what do you see as indicating success)**?**	State-of-the-art research being applied to support decision-making.
	Complete two-way knowledge exchange.

What are the barriers?

1. **Ideally would feed into international collaborative research (possible under next EU framework?)**

Who should be involved?

International research community and key stakeholders

What are the next steps and when would these need to happen?

Draft framework for gaps analysis

What is needed to establish and sustain a community of researchers and users capable of informing the development and delivery of climate information to support decision making and of effectively contributing to related EU and international efforts? Emily Shuckburgh

Action required or enabling mechanism (s)?	Aim: Engage with a broad range of stakeholders to address the direct and indirect challenges that climate and climate change will present to society over the coming decades Action: Form non-traditional partnerships between commercial, non-governmental, governmental and research organisations to brainstorm about the key challenges and how to deliver sustainable solutions under a collaborative framework Step 1: high-level brainstorming sessions on sustainable leadership involving all partners Step 2: identification and facilitation of subject-specific working groups	
What would this achieve (what is it that you believe should be achieved / what do you see as indicating success)**?**	Broader than the traditional concept of "climate services". Intellectually stimulating. Equal-partner with stakeholders, rather than service-partner. Potential to make transformational change in society.	

What are the barriers?

1. **Requires a mind-set change of what "climate services" means to encompass a broader remit**

Who should be involved?

All potential stakeholders

What are the next steps and when would these need to happen?

Get buy-in to idea at CEO-level

What is needed to establish and sustain a community of researchers and users capable of informing the development and delivery of climate information to support decision making and of effectively contributing to related EU and international efforts? David Sexton

Action required or enabling mechanism (s)?	• Get some funding!!!
	• A research program that brings users and scientists together and has research themes that have to interact and share responsibility for a successful project e.g. like ENSEMBLES. Delivers exemplars that demonstrate good practice at how to use climate and weather info in decision making.
	• Need to involve translators that can communicate with both scientists and understand users' decision space
	• Identifying knowledge gaps to be targeted by research programs:
	    – Seamless prediction and better understanding of model's strengths and weaknesses in terms of weather
	    – Better understanding of sources of uncertainty
	    – Better understanding of how to synthesis model and obs data
	    – Users to better understand their vulnerability
	    – Development of tools and techniques for using climate and weather info

What would this achieve (what is it that you believe should be achieved / what do you see as indicating success)**?**	• Establishment of a network of researchers and users • Case studies that are used to guide good practice in real decision making • Maximise utility of climate and weather information

What are the barriers?

• **Lack of obs availability for understanding vulnerability to climate and weather**
• **Different parts of climate science (see below) are a disjointed chain not a network). Providers etc need to understand model limitations, developers need to know user-relevant variables**
• **Users being represented by senior managers, not actual users of the info**
• **Lack of understanding of users' decision space by climate info providers**
• **Consultancy is a labour intensive process**

Who should be involved?

• **Users who will actually use the climate/weather information**
• **Climate and weather scientists (obs, model developers and evaluators, climate information providers impact scientists, consultants)**
• **Data providers and IT specialists**
• **Funding bodies/research councils/PI**
• **Translators/social scientists**

What are the next steps and when would these need to happen?

• **Get BIS involved**
• **Set up some large community research project with diverse themes which interact e.g. like ENSEMBLES but for UK**

What is needed to establish and sustain a community of researchers and users capable of informing the development and delivery of climate information to support decision making and of effectively contributing to related EU and international efforts?   Clare Goodess

Action required or enabling mechanism (s)?	Mapping of current networks (projects and groups etc) Some guidelines/synthesis/cataloguing to make sense of the huge amount/type of information/ climate service-related activity that is now available (in the UK and more broadly in Europe/internationally) Updating/reviewing of UK work/activity in the light of CMIP5/CORDEX (and AR5) Demonstrating/evaluating the use/value of existing climate services in practical decision making
What would this achieve (what is it that you believe should be achieved / what do you see as indicating success)**?**	UK best practice shared and learning from best practice elsewhere Less confused users! Improved definition of 'climate services' and 'actionable science' For the academic community, more clearly defined/ expressed REF impact indicators

What are the barriers?

The explosion of information and the number of players – including increasing commercial (consultancies and 'big business') interests.

Avoiding overlap with other initiatives (ICCS, GFCS)

Who should be involved?

All! Should be an element of self-evaluation together with more independent evaluation of current climate services and future needs – recognising that all involved have, in part, their own agendas

What are the next steps and when would these need to happen?

In time to feed into the Second ICCS in Hamburg, Sept 2012 and the GFCS technical meeting/ extraordinary WMO congress in late November 2012.

What is needed to establish and sustain a community of researchers and users capable of informing the development and delivery of climate information to support decision making and of effectively contributing to related EU and international efforts?

Action required or enabling mechanism (s)?	**Make available to research community information on stakeholder needs for climate/impacts knowledge: what decisions are they taking (How - Workshops? Webinars? Website?)**
What would this achieve (what is it that you believe should be achieved / what do you see as indicating success)**?**	**-Raise awareness of the knowledge needs of stakeholders, in the research community** - **Generate interest in research community** - **Greater number of researchers involved**

What are the barriers?

- **Difficulty in translating stakeholders needs into research – it is an iterative proccess**

Who should be involved?

- **UKCIP**
- **LWEC Climate Challenge Steering Group?**

What are the next steps and when would these need to happen?

- **ID is this would be genuinely useful for research community**
- **What mechanism most appropriate to convey info**