



Engaging UK Climate Service Providers – a series of workshops in November 2014

Belfast, London, Edinburgh and Cardiff

Four workshops were held during November 2014 to engage organisations (providers, purveyors and users) within the UK that have a role or interest in providing climate services to users to support decision making and other activities. In addition to providing an opportunity to better understand the climate service community across the UK, and current developments and opportunities within the UK and Europe, the workshops aimed to:

- Identify the nature of the demand and supply of climate services and associated barriers and enablers;
- Contribute to identifying research needs, knowledge gaps and innovations that would support organisations in providing climate related services, and consider how these can be linked to UK and European Horizon 2020 initiatives; and
- Explore links, partnership opportunities and challenges, including the role that a network or community of providers of climate services could play at the national, UK and European levels.

Scope of Climate Services

For the purpose of these workshops, climate services were defined as:

The transformation of climate related data – together with other relevant information and data – into customised products such as projections, forecasts, information, trends, economic analyses, assessments (including technology assessments), counselling on best practices, development and evaluation of solutions, and other services in relation to climate or responding to climate change that are of use to society.

The uses to society considered are in the context of climate change impacts, risk and vulnerability assessments, as well as adaptation, mitigation, and disaster risk management.

It was noted that many users are not familiar with the use of the term climate services (some even believe it is similar to ecosystem good and services) and that there are data, information and knowledge being provided and used that are not called climate services.

Types and scope of participants

The workshops attracted representatives from academic institutions, consultancies, industry, policy makers (government departments at different levels), government agencies and knowledge exchange organisations.

A total of 92 participants were engaged (Belfast – 18; London – 33; Edinburgh – 22; and Cardiff – 19). They represented a wide spectrum of providers, purveyors and users of climate services.



It was noted that although participants were all interested and saw themselves playing a role in climate services, they were not necessarily aware of the roles of other participants nor did they see themselves as being engaged as a community. There were differences in this level of awareness and engagement across the four workshops that for the most part reflected the relative maturity of the 'climate service markets' represented at the different workshops and the extent of previous collaborations among participants. These differences were also reflected in the range of expressed needs for collaborative links and in the nature and roles of the required climate service community.

Discussions with participants revealed that many played different roles within the climate service space and this was seen as particularly important where climate services are user-driven and science informed. There is often not a clear boundary between users and providers/purveyors. Individuals and the organisations they represented saw themselves as both users of climate services, but also providers/purveyors in that they provide data and information and add value to that of others before making products available to users. As such, they recognised that their roles often spanned and needed to span a range of roles (e.g., knowledge and data production, synthesis, translation, mobilisation, and the provision of advice and guidance).

The Climate Service Market

Looking across the organisations and sectors represented at the workshops, there is the potential for a wider range of private and public organisations to use climate services. Overall, the current market could be described as immature but evolving slowly due to a lack of demand and limited awareness of the services and providers available. It was also noted that for many organisations, responding to climate change is not perceived as an immediate need with economic and other drivers taking priority. This could reduce the demand for climate services and hinder the development of the market.

It was noted that the state of the market is not yet driving/informing supply and more action is needed to both improve awareness and understanding of their potential along with stimulating uptake and use of climate services. Further contributing to the status of the market is the limited capacity within the user community in terms of ability to access and use climate services. Additionally, for the most part there is not a clear understanding of who are the providers, purveyors and users (customer base) of climate services.

The maturity of the market in the water and transport sectors was noted as being relatively high, whilst the housing and health sectors were identified as particularly low. It was also noted that the potential for growth of climate services may be higher in those sectors (e.g., agriculture, forestry and disaster risk management) that traditionally use weather services, in which long-term decision-making is the norm and where major, long-term investments are being made (e.g., infrastructure).

The growth in the demand for climate services can be attributed to the recent requirements of EU, UK and other regulations and policies and an increasing awareness by organisations of the potential implications of climate change, including extreme weather events.

At present, climate services (supply and demand) are primarily comprised of data and information on climate change science (e.g., model and scenario projections and observations) and products derived from this science. There appears to be a lack of availability (or demand for) services that integrate this data and information with those from other relevant areas (e.g., hydrology and land-use change). In addition, much of what is available is generic for the UK, with a lack of local data and information specific to a particular region or sector.

Participants expressed the need for greater engagement of the customer base in the co-design, co-development and co-evaluation of climate services, greater consideration of the type and/or level of information needed to inform decisions and a better understanding of the varied capacities of users to work with climate services.

Research needs, knowledge gaps and innovations

Drawing across the discussions at the four workshops, the following overarching elements can be highlighted:

Demonstration to stimulate action and learning and to highlight the added value of climate services

- Includes peer-to-peer work, case studies and pilot studies looking at both the specific outcomes and the processes used to achieve impact.
- Demonstrate the value of climate services (e.g. through the use of demonstration projects and case studies) to leverage wider engagement and demand. Start with those organisations already involved and which have case studies and examples to share.
- Overcoming the barriers of lack of appropriate and relevant knowledge and information would promote the use of climate services within decision making.
- Demonstrating the value of climate services in the context of existing decision-making frameworks.

Integration of data and information to support decision making

- Integration of climate data, information and knowledge with other data and information that are specific to decision making in priority sectors
- Identifying the data and information needs to support assessment and decision making related to life-cycle management, 'hot spots' and interdependencies within and across sectors/systems
- Increase the understanding and application of uncertainty – relevance, clarity and integration of uncertainties that impact on decisions, including those associated with climate, socio-economic, hydrological and ecosystem impacts, and adaptation.

Understanding and improving links within the climate service landscape

- Identifying what data, information and knowledge is available (including baseline data) and where (who are the providers/purveyors), and ensuring that the appropriate infrastructure is in place to provide access by the intended users.
- Promoting and demonstrating to users the added value of climate services to their decision-making and the resulting decisions.
- Identifying what can be done to facilitate better working across sectors to support the development of climate services, including within private/public partnerships and within regions.

- Improving engagement of ‘early adopter’ users with the provider/purveyor community to facilitate co-design, co-development and co-evaluation.

Understanding users and their decisions

- Designing, developing and evaluating climate services by starting with an understanding of the targeted decisions and how the risk-based approach works in practice, including understanding where decisions are/can be influenced by climate services.
- Understanding users’ needs and how these manifest themselves in terms of the climate services (e.g., levels of information, scales needed) and access required.
- Understanding data and information gaps and their implications for decision making as a means to prioritise further action

Supportive tools and resources, and training

- Develop and provide user-friendly interactive platforms that provide access to climate services that reflect that there are a number of such platforms (e.g., collaboration and a common framework)
- Building the capacity to use climate services to inform decisions, including knowledge and skills development as well as supportive infrastructure (e.g., IT)
- Tools and resources to enable consideration of social and economic implications in the short and longer terms
- Messaging and communication of data, information and knowledge, but also of decisions, including consideration of uncertainties. Need to consider means and mechanisms for targeting sectors and disciplines
- Educational and awareness-raising resources to support professional training and education

The specifics associated with the above research needs, knowledge gaps and innovations often reflected the relative maturity of the climate service market (use and provision) represented by the participants, but also specific issues of concern within the different regions of the UK. There were similarities and differences [<http://www.ukcip.org.uk/projects/engaging-with-climate-services-providers/>] that in themselves support the suggestion for at least a UK-focused climate services, but also the need for a specific focus at a more regional level.

It was suggested that there is space for research councils and other funding agencies to stimulate and support this work, but support from government departments and end-users is also needed to drive developments. This includes long-term funding to support the capturing and transferring of evidence and information for the development of climate service science and services. There was a question as to whether something similar to the UK Water Research and Innovation Programme (<http://www.ukwrip.org>) was needed.

Climate Service network or community

There is support for a climate service community, possibly at the UK level, but with elements that focus on the specific contexts and issues relevant to NI, Scotland, England and Wales.

This could be linked and/or similar to the European Climate Services Partnership, but focussing on specific national and regional needs. The roles and advantages of such a community include:

- Opportunity to share learning and sharing of perspectives on challenges, opportunities and innovations
- Identify and map current activities, stakeholders and information needs
- Strong engagement of users, providers and purveyors

- Fostering links and collaborations (enabling partnership opportunities) at both the research and innovation project level and beyond, including with those in other countries – tackling barriers and disconnects
- Opportunity to support capacity building
- Creating a cohesive climate service community could help drive growth and avoid the risk of activities being side-lined or siloed, and grow capacities across the UK
- Providing a stronger national voice promoting priorities within and across the UK

There is an overall preference to use existing and trusted mechanisms and structures rather than inventing new organisations – avoiding duplications of effort, and stimulating and supporting working with others. Specific mention was made of organisations within the respective countries – Climate Northern Ireland, Adaptation Scotland and ClimateXchange, Natural Resources Wales, the Climate Change Commission for Wales and the Climate Change Consortium for Wales, and the Environment Agency – as well as the need to re-examine the nature and scope of Climate Services UK in this context. Such an approach would need to recognise that additional resources would be required, and that flexibility would be needed to allow suitable responses to meet emerging requirements.

Next Steps

Each of the workshops identified next steps [<http://www.ukcip.org.uk/projects/engaging-with-climate-services-providers/>]. These included the dissemination of the reports from the individual workshops (to be shared with participants of all the workshops) and of this summary report. They also included continuing to inform the workshop participants of developments around the Horizon 2020 Roadmap on Climate Services, including the launch workshop (Tuesday, 17th March 2015 in Brussels), and keeping the participants informed of relevant research and innovation calls.

Also identified was the need for further action related to continuing the dialogues on climate services and developing an appropriate climate service community. The use of existing mechanisms and providing occasional updates were seen as a first step, but there was also a strongly expressed need for continued engagement.

Towards better understanding the need, participants were asked to share their thoughts on the nature and scope of the climate service community that would best meet their needs and support the growth of the UK climate service market. In doing so, deliberations at and following the workshops emphasised the need for targeted action towards establishing and supporting such a community. Specifically, it was suggested that there is a need for further discussions involving, as a starting point, NERC and Innovate UK to explore and identify possible mechanisms and opportunities. In addition the Environment Agency has indicated that it will be consulting on developing a proposal for a UK-wide providers' network to inform national capability and enable partnership opportunities.

