Lessons from other dialogues and experiences

Climate Services Sverige
05-06th May 2014

Roger B Street
Director, Adaptation Science

Climate Services

Different definitions – wide variety of stakeholders and needs, as well as of the differing functions of the organisations delivering

Global Framework of Climate Services:
▪Providing climate information in a way that assists decision making by individuals and organizations. A service requires appropriate engagement along with an effective access mechanism and must respond to user needs.

JPI Climate
▪User driven development and provision of knowledge for understanding the climate, climate change and its impacts, as well as guidance in its use to researchers and decision-makers in policy and business.

Climate Services Partnership
▪Production, translation, transfer, and use of climate knowledge and information in climate-informed decision making and climate-smart policy and planning.

Climate Services
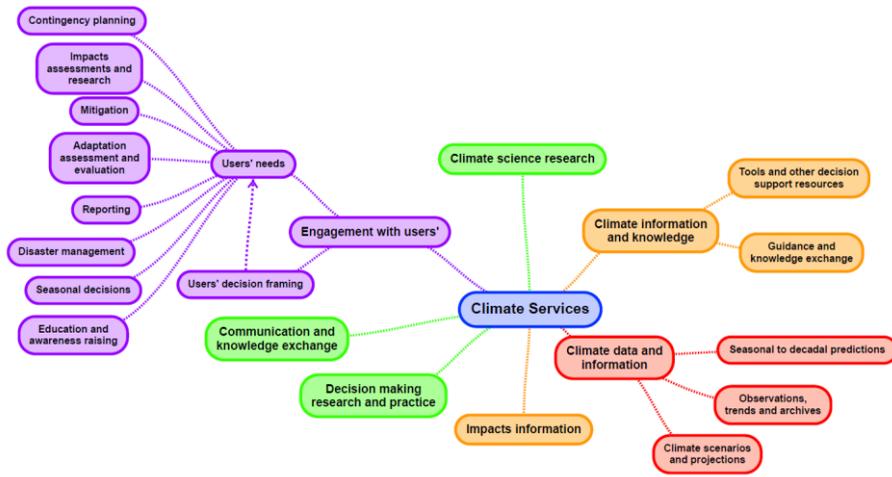
© UKCIP 2014

Lessons Learned – Users' Needs

- Services needed are those that support decision and policy making
  - Starting with the decision / policy framing – vulnerabilities, sensitivities
  - More than just descriptions of the current (and future) climate or impacts
  - Adaptation is a decision-making process that requires reflection of uncertainties framed in the context of that process
- Reliable baseline information on current climate, including anomalies and extremes (more than climate variables) – relative to thresholds and sensitivities
- Future information (e.g., relative to thresholds, extreme, spatial and joint dependence between variables, end-user derived variables and derived metrics, annual maximum rainfall, monthly and seasonal rainfall with inter-annual variability, heat and cold waves, and wind)

Support and engagement are critical elements of climate services – understand what is available and how it can and is intended to be used; recognising that these will change over time

Lessons Learned – Users' Needs

Climate summaries, trends and projections / scenarios related to:
▪Known thresholds, variability and extremes related to requirement to inform adaptation decisions, not just impacts
▪Drought, water availability, and river flow
▪Extremes (temperature and precipitation), but also related to storms and wind

Need for demonstration projects / programmes / activities that:
▪Bridge gaps between providers, users and climate research
▪Demonstrate how existing and new climate information can improve decision making

Development and dissemination of good practice guidance:
· Learn from research and application projects
· End-user engagement in science for climate services through trans-disciplinary research and knowledge exchange

Lessons Learned – Providers' Needs

Awareness of users' / decision makers' needs and of what climate services are providing and can provide:
▪The gap between climate data and information provided and that needed

▪How climate services fit into users' decision-making processes

▪How to put users and the heart of climate services and climate service science – reflecting the diversity of users' needs

▪Where users currently access climate services and why

▪Nature and scope of current and future users' needs (foresight)

▪Users' current and changing technical capacity to ingest climate services

▪Capacity (including funds) and willingness to be engaged in developing and delivering climate services and in the related science

Lessons Learned – Providers' Needs

Relative priority of climate considerations in decision-making processes
▪Enhancing the pull from users for climate services
▪A lack of policy (or even regulatory) drivers for users to consider climate in decisions

Breadth of users those engaged represent and how better to engage the spectrum of users

Need for interdisciplinary research to support development of climate services that meet users' needs – services fit-for-purpose

Climate Adaptation Services

An evolving understanding:
- Adaptation services focus on provision of policy and action-oriented information and knowledge as opposed to the provision of climate data, information and related products and services
- Increasing the capacity of society, cities and infrastructure to be able to adapt to climate change (Climate-KIC) – taking knowledge from climate services and translating it to concrete services and solutions further downstream to make a real impact.
- An information service supporting the assessment of vulnerability in a wider perspective and includes design and appraisal of adaptation strategies (Climate Adaptation Services) – going the last mile by translating climate impact information to policy relevant and usable science.

Climate Adaptation Services
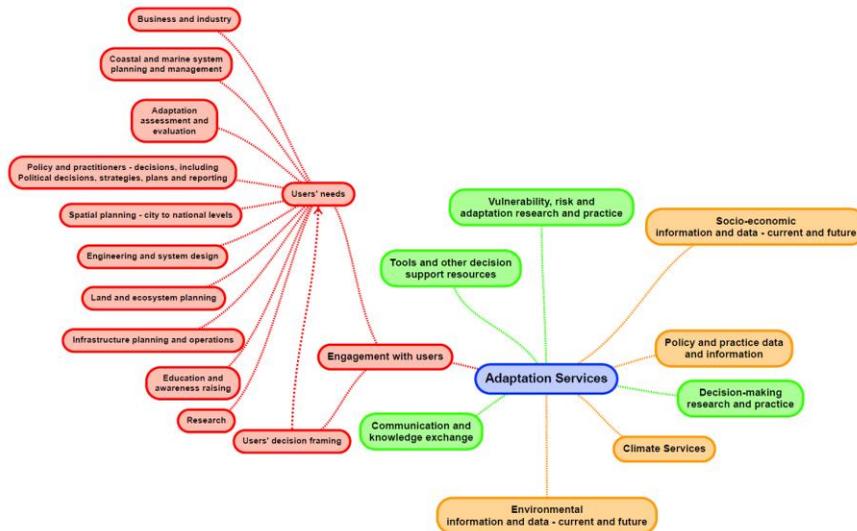
'Successful' Climate Services

Associated attributes – a service that demonstrates:
- Relevance to users' needs and capabilities
- Credibility and reliability of service and service providers
- Transparency of development and delivery
- Accessibility
- Multiple / hierarchical and flexible formats
- Services that are adaptable to meet differing needs
- Timeliness
- Supported with guidance, case studies and metadata
- Some form of quality assurance and quality control

A service with these attributes more likely to lead to demand from users for the climate services on offer

Delivering 'Successful' Climate Services

An engaged climate services community (researchers, providers and users):

▪Supporting the development and delivery of climate services, including through co-production and co-evaluation of the services

▪Establishing and implementing standards for service quality and appropriate use (regulations and certification)

Support for, and investment in, the development and maintenance of engaged climate services community

Climate services that are valued from the perspective of relative contributions to better informing decisions in addition to scientific quality

Delivering 'Successful' Climate Services

Need for an overarching climate service programme with spectra of services supported from generic to bespoke

▪Supported by multiple funding streams engaging both public and private sector organisations and agencies with clarity about responsibilities for delivery and funding

Recognition of the value of climate service science and contributions from climate services within the scientific community

Realising these Needs

Sustained engagement of users and providers of climate services
▪Aim is informed engagement from concept to delivery and beyond
▪Continuous improvement informed by users' needs and science capabilities
▪Both access and support are necessary

- ▪ Defined and delivered working with users and providers
- ▪ Variety of information / knowledge reflecting diversity of users
- ▪ Single snapshots are insufficient – evolving information and support
- ▪ Different delivery mechanisms – time series, images, web-based, etc.

▪Continuous learning and sharing of practice and theory are necessary – users' forums
▪Ability to map climate services along with other data, information and knowledge relevant to users' decisions

Move from a data (supply)-driven approach to one that is decision (demand) driven informed by science

Realising these Needs

Need for mechanisms to support engagement / networks – open
▪Raise awareness of supply and demand for climate services
▪Co-evaluate the effectiveness of climate services and process with users
▪Discussions related to QA/QC
▪Need for mechanisms to support development of skills needed to work in inter-disciplinary and trans-disciplinary space
▪Users need to be better coordinated to bring needs forward to climate science

Need for capacity to identify and understand users' needs, as well as to respond to those needs
▪Extracting decision relevant information from observational information, seasonal and decadal forecasts, and climate projections, including that related to variability and extremes

Realising these Needs

Funding to support the building and maintenance of the infrastructure to support climate services, including:
- The natural, physical and social sciences – climate service science
- Supportive databases (decision-relevant climate information, impacts, vulnerabilities and adaptation metrics (qualitative and quantitative))

Funding to support engagement, and knowledge exchange and mobilisation
- Enhancing users' capacity to participate
- Supporting users' contributions to climate service science (co-production, evaluation and dissemination)
- Networking of users, providers and researchers

UKCIP eci UNIVERSITY OF OXFORD

Structures and Mechanisms to Support

- An **interdisciplinary research programme** supporting development and delivery of climate services, including the support of research funders, research coordination, engaged users and research community, and sufficient funding to be seen as viable.

- Targeted **demonstration projects/activities** – to enhance engagement and to demonstrate how climate services can be used to inform decision making – end-to-end value of climate services

- A **service delivery approach** to the provision of climate services that includes targeted engagement of users, purveyors and providers with an appropriate public good-bespoke balance and quality assurance of climate services.

- An **'open-access' information hub / knowledge management platform**, including mapping of current networks (projects and groups) delivering climate services and related science, and information on users' needs.

UKCIP eci UNIVERSITY OF OXFORD

Structures and Mechanisms to Support

- Need for climate information and knowledge to support **national / regional risk assessments and adaptation strategies / plans**

- **Enhancing users' capacity** to understand, access and use climate services, including accredited training

- A **practice culture or regulatory environment** that encourages / requires consideration of weather and climate risks in decisions. Involvement of regulators, professional bodies, trade organisation, policy makers and economists

www.ukcip.org.uk