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CLIPC: User Expectations

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User Requirements work led by Annemarie Groot, Alterra, with contributions from TEC, HZG and MetNo
CLIPC Mission

- CLIPC will provide access to climate information of direct relevance to a wide variety of users, from scientists to policy makers and private sector decision makers;
- The “one-stop-shop” platform will provide data and information on climate and climate impacts, and ensure that the provenance of science and policy relevant data products is thoroughly documented;
- Engage with user communities to inform development.
22 partners, 9 countries + 1 international

**UK**
- STFC
- Magellium Ltd.
- University of Reading
- UK Met Office
- British Oceanographic Data Centre

**Netherlands:**
- Dutch Met Office
- Alterra
- Maris

**Germany:**
- Technical Uni. Dortmund
- Potsdam Inst. for Climate
- Climate Services Centre

**France:**
- IPSL
- CERFACS
- TEC

**Finland**
- Met Office
- Environment Agency (SYKE)

**Sweden**
- SMHI
- Linköping University

**Norway**
- Met Office

**Italy**
- CMCC

**Spain**
- University of Barcelona

**International**
- Joint Research Centre
CLIPC is one of 5 projects funded in the last FP7 SPACE call to support the launch of the Copernicus Climate Change Service
● Provide harmonised access to data from many sources;
● Information on data value and limitations;
● Indices of climate change and climate change impact;
● A knowledge base of authoritative information;
● A toolkit to update and extend the collection of indices.
User involvement in CLIPC

- Important for developing a user-oriented portal
- Learning from past and ongoing project and networks
- Four different user categories
- Online survey and interviews: first insights into user requirements
1. June 2014: survey of interested users
2. From September 2014: capturing user needs – questionnaire and interviews (skype/tel)
3. February 2015: workshop on consolidating user needs and presentation beta-version portal
4. From October 2015: user panel periodically provides feedback on evolving portal
Summary user requirements: Online survey

7. How would you describe yourself in terms of using climate data? Please select the characterization that is closest to your own.

- Climate scientist: 26%
- Impact researcher: 23%
- Intermediary/boundary organisation: 35%
- Societal end user: 13%
- Other: 3%

Options for location:
- East: 46%
- North: 31%
- South: 14%
- West: 9%
8a. For what purpose do you require access to climate data and climate impact indicators?

- To give advice on climate data and climate impact indicators to others
- To support the development of adaptation strategies and plans
- To use as input in research on climate change
- To make risk and vulnerability assessments
- To create awareness
- To develop and test models (climate related)
- For commercial purposes
- Other
Where do you currently retrieve climate data and climate impact indicators from?

- Other
- Consultants
- Earth System Grid Federation (ESGF)
- National research projects
- National meteorological services
- ESA Climate Change Initiative research projects
- FP7 research projects
- EEA
- EUMETSAT
- ESA
- European Centre for Medium Range Weather Forecast (ECMWF)
- International and intergovernmental organisations (e.g. UNEP, IPCC, IIASA database for scenarios)
- US climate portal(s)
- My national climate portal
<table>
<thead>
<tr>
<th>User type</th>
<th>Top features ranked as very important</th>
</tr>
</thead>
<tbody>
<tr>
<td>Climate scientist</td>
<td>Free open access</td>
</tr>
<tr>
<td></td>
<td>Availability and quality of metadata</td>
</tr>
<tr>
<td>Impact researcher</td>
<td>Free open access</td>
</tr>
<tr>
<td></td>
<td>Accessibility of data</td>
</tr>
<tr>
<td></td>
<td>Information on uncertainty</td>
</tr>
<tr>
<td>Intermediary/ boundary organisation</td>
<td>Free open access</td>
</tr>
<tr>
<td></td>
<td>Explanations of climate data and climate impact indicators</td>
</tr>
<tr>
<td></td>
<td>Accessibility of data</td>
</tr>
<tr>
<td>Societal end user</td>
<td>Usage of understandable language</td>
</tr>
<tr>
<td></td>
<td>Diversity of subjects</td>
</tr>
<tr>
<td></td>
<td>Free open access</td>
</tr>
</tbody>
</table>
Qualitative Interviews

- Deepen understanding about requirements for data and impact indicators

<table>
<thead>
<tr>
<th></th>
<th>Climate scientists</th>
<th>Impact researchers</th>
<th>Intermediaries (or boundary workers)</th>
<th>Societal end users</th>
<th>Climate scientists/Intermediaries</th>
<th>Impact researchers/intermediaries</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>No. of respondents</strong></td>
<td>8</td>
<td>8</td>
<td>4</td>
<td>2</td>
<td>2</td>
<td>1</td>
</tr>
</tbody>
</table>
User Requirements

User friendly and dynamic interfaces

• Supporting user to quickly retrieve data
• Connect data to relevant metadata
• Simple structure
• Control mechanism to prevent common mistakes
• Offer different search functions (eg sectors, regions) and include examples
• Flexible design – adapt to evolving needs, development of new indicators, research finding and observations
• Sustained interaction with other users
• Facilitating training for users
User Requirements

Data – impact indicators (examples)

- Raw data, model data, observational data, long term and seasonal predictions, ground data and satellite data, historical data, processed data
- Extreme values are needed, not just means
- Ensure data quality
- Standardisation (data, tools, …)
- Resolution – need for high resolution data (impact researchers)
- Format: transformable, different formats provided
- Impact indicators: task at hand, economic impact indicators
- Metadata: important for all user categories
- Free access
User Requirements

Functionalities (examples)

Post processing
• Tools for simple calculations and visualising data
• Tools for grid and calendar harmonisation, downscaling and, spatial and temporal selection

Guided search
• Support team, FAQ, case studies

Personalised selection and browsing
• Possibility of personal bookmarks and saving personal queries
User Requirements Workshop 3 Feb 2015: objectives and focus

- To test, discuss and receive user feedback on components of the CLIPC portal
- To further specify and prioritise requirements for a data platform and climate impact toolkit
- To manage expectations
- To identify needs/opportunities for user consultation in the next 1.5 years
3 Feb 2015: User Requirements Workshop

- Three subgroups/topics for discussion:
  - Data format and access, finding the data
  - The CLIP-C Portal – architecture and interface
  - Impact data processing and exploration tools

25 participants from 3 user groups (climate scientists, impact researchers and intermediary organisations)
Topic 1: Data

- **Key outcomes:**
  - Guidance, descriptive texts and explanations on both the data and on the impact indicators important for all users
  - Bias correction: already done, or users can correct if needed – guidance useful
  - Start at demand side – what do users intend to do with the data
  - Feedback system of users on data
Key outcomes:

- Added value of CLIPC is in availability of processing tools
- Need global and regional model data
- User-user interaction to share experiences, and how-to guidance
- Maps seen as illustrative – also need trends in graphs
- Uncertainty information (in words) needed
- Involve end users in interface development
Interfaces for users from CLIPC homepage
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Data Visualisation and Viewing (indicators)

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Topic 3: Impact Data Processing and Exploration Tools

• Key outcomes:
  • Guidance on processing, and what you are doing
  • Also for less experienced, or end user
  • Standardisation – to allow data sharing with other projects
  • Full freedom of use? Can lead to poor outcomes – some restrictions needed, e.g. what makes sense
  • User-to-user interactions as real added value
Next steps..

- User requirements document available in March
- More information about CLIPC existing and developing systems in Martin Juckes’ presentation on Thursday

Thank you