Seventh Framework Programme

Theme 6

Environment

Project: 603864 – HELIX

Full project title:

High-**E**nd c**L**imate **I**mpacts and e**X**tremes

D1.6 Launch beta version of HELIXscope visualisation tool

Original Due date of deliverable: 31/10/15

Actual date of submission: 30/04/16

The delay has been approved by the Project Officer

HELIXscope visualisation tool

Introduction

The design of web portals has evolved in recent years. Previously, web portals were designed and fully functional prior to any user testing and often designed at the end of a project, leaving little opportunity for stakeholder engagement. Recent advances in visualisation and design have led to a key step to be added to the process – that of usability testing (UX) on a UX portal. UX web portals are cheaper to develop meaning that comments from users can be fully considered in developing the final, fully functional web portal. This process also allows for stakeholders to be consulted earlier, allowing them to guide the development process.

UX-beta version

The UX-beta version of HELIXscope (https://projects.invisionapp.com/share/DJ71KRHH2#/screens/152953423) has been developed with guidance from the HELIXscope Expert User Group, which consists of representatives from all partners within the HELIX Consortium. This allows the HELIX team to test concepts and data visualisation ideas with stakeholders in order to make sure the final product will meet the needs of the greatest number of people. It is the most cost-efficient way of developing the best portal possible. This version can be easily, and cheaply, modified so that multiple iterations can be tested against a wider range of audiences – something that would have been prohibitively expensive if a UX-beta was not prepared.

The maps and graphs in this UX-beta version of HELIXscope are based on similar data and models that will be placed into the final HELIXScope once results start to become available in October 2016 (in line with deliverable deadlines). The data visualisations in this version come from the pattern-scaled climate data at 2°, ~4°C, and 6°C for temperature and precipitation (average and uncertainty from 21 models), biodiversity model output from the Wallace Initiative biodiversity models (2°, ~4° and ~6°C) and AgMIP data (ISI-MIP) for maize yields for one climate model, and one crop model (2° and 4°C). As the full HELIXscope data become available there will be more climate data, more models, and more impacts will be added.

Stakeholder engagement

The design of HELIXscope is intended to be a highly iterative process: in the first instance, the UX-beta will be presented to members of the Expert User Group and HELIX Steering Committee. Following the first stage of amendments, stakeholder groups from within and outside of the EU, will be consulted on the portals structure and usability. Subject to availability, we expect this to consist of the secretariat of the UK government's Climate Change Committee, the UK's Foreign and Commonwealth Office climate change team, members the DG-Research and Innovation team at the European Commission, selected government contacts of HELIX partners in other countries, and selected members of the HELIX International Advisory Board. Methods of engagement will be determined by Stakeholder availability and expectations of their requirements in using the portal, however, we envisage combining a mix of online engagement (email and webinars) and face to face to face engagement (either one-to-one meetings or small user groups).

A user guide and PowerPoint presentation shall be developed, providing simple, easy to follow navigation instructions, to help users gain the most of the tool. This shall be rolled out alongside the external stakeholder engagement; any significant issues identified at this stage will be corrected in the final webportal.

A user's guide to the UX-beta version of HELIXscope

1) The first (or landing) page has a few key parts –
   a) Clicking on the large "HELIXscope" in the top left will return the user to the home screen and the about Helix information.
   b) The main screen has information on various impacts at differing Specific Warming Levels (SWLs). The different screen can be seen by pressing the right or left arrows to cursor through the screens. Below the text information is a button that can be pressed to take the user to where the actual data is visualised. At the moment these screens are illustrative only, and the real information will come directly from HELIX outputs when they start to come online in October. Above the text box is a series of circles (o o o o o) and this indicates which page the user is currently on.
   c) The key user feature on this page is at the top of the page – the three buttons that are labelled **Global Scenarios, Countries and Compare**

Global Scenarios, Countries and Compare are the buttons that users will use to actually navigate to the data. They allow a user to either select which temperature level (SWL) they want to look at, to search for a specific country to look at, or to compare either countries or SWLs.

GLOBAL SCENARIOS – Clicking the Global Scenarios button brings up a screen with the three SWLs (2°, 4° and 6° C), as well as buttons to select which data to look at – climate or impact. The button marked lever will be used for some of the impact models to choose from options such as CO_2 fertilization, irrigation use, or whether to include dispersal in biodiversity models. To see how this works, click on the 2°C button. A map comes up showing the amount of change in average temperature relative to 1961-1990 for each country. The actual program (as opposed to the UX version) will allow users to turn layers on and off and explore the data in more detail. For the UX testing phase it shows the data for the ensemble average of 21 models. The actual program will also allow users to zoom in and out of the map. If a user clicks on the **+** button they can then add a map to the screen for comparison.

COUNTRIES – Clicking on the Countries button will take the user to a page to allow them to select a country of interest. For that country, charts of different impacts at different SWLs will then come up on the screen. In the UX version there is a list of some of the impacts that will be included in the final version. The program will also allow users to download the data for their country or to share it via social media.

COMPARE – Clicking on the compare button will allow the user to compare two countries for a given impact across all SWLs.