

:VISUALISATION

Exhibition guide









EUROPEAN UNION Investing in Your Future European Regional Development Fund 2007-13



The expert workshop on climate change visualsation

Held at:

Bedruthan Steps Hotel, Cornwall, UK

19–21 May 2014

Organised in collaboration between:

The Environmental Protection Agency, Ireland

and

The European Centre for Environment and Human Health, University of Exeter Medical School



RIZK Game

Faux Pause / War and Peace



Prof Chris Rapley University College London, UK

Developer: Playerthree

http://www.sciencemuseum.org.uk/climatechanging/rizk.aspx

In a world not too different from our own a Plant lies sleeping... Can you manage the threats to its survival?



Wesley Grubbs *Pitch Interactive, California, USA*

Creative Direction: Wesley Grubbs Data Scientist: Shujian Bu Design: Mladen Balog, Ri Liu

Commissioned by Scientific American Magazine / Popular Science Magazine

http://www.scientificamerican.com/article/earth-will-cross-the-climate-danger-threshold-by-2036/

Delta RAC Visualization



Prof Stephen Sheppard

The University of British Columbia, Vancouver, Canada

http://calp.forestry.ubc.ca/sea-level-rise-project-in-delta-bc/

Approximately 25,000 people live in rural Delta and Ladner, in lowlying areas vulnerable to sea level rise. With sea level rise, and without adaptive action, there could be cumulative inundation events: over time, by 2100, parts of this area could flood regularly through dike breaches and over-topping. This document visualises the impacts, costs and benefits of different scenarios for managing this situation over time.

Infographic overview of the IPCC AR5 WGII Summary for Policymakers



Dr Will Stahl-Timmins

European Centre for Environment and Human Health, University of Exeter Medical School, UK

http://www.ecehh.org/news/ipcc-climate-change-graphic/

The latest report from the IPCC shows how wide-ranging, significant and certain the current impacts of climate change are, and how these will intensify for the rest of the 21st Century. This graphic aims to give quick, efficient access to the key facts, and to provide a reference to the different sections of the summary.

The simple guide to Ireland's Greenhouse Gas Emissions



David Dodd

Environmental Protection Agency, Dublin, Ireland

http://www.epa.ie/pubs/reports/climatechange/thesimpleguidetoirelandsgreenhousegasemissions.html

In recent years Infographics have become a very popular way of presenting data and facts in a user friendly and visually appealing format. The Environmental Protection Agency has many different responsibilities from monitoring the state of the environment to licensing and regulating industrial and waste activities. We have designed a number of infographics on Air Quality, Waste, Transport and Domestic Wastewater Treatment. The infographic on display for this workshop presents Ireland's Greenhouse Gas Emissions by sector over the period 1990 to 2012 including details of the European Union reduction targets for greenhouse gases by the year 2020.

Facilitating Climate Change Adaptation through Fuzzy Cognitive Mapping



Dr Barry O'Dwyer

Coastal & Marine Research Centre, University College Cork, Ireland

www.climateireland.ie

The EPA funded project Ireland's Climate Information Platform – Phase 2 (ICIP2) aims to develop a one-stop web-based resource of climatic information for Ireland to facilitate decision-makers in planning for climate change adaptation.

"Adaptation to short term climatic variability and extremes will reduce vulnerability to longer-term climatic change" (IPCC, 2012)

As a part of ICIP2, visualisation (spatial and conceptual mapping) plays a key role in facilitating users in planning for climate change. Users can begin to scope how projected future changes climate change might affect their areas of operation.

3D Visualizations of Climate Projection Data



Paul Nolan / Alastair McKinstry Irish Centre for High-End Computing, Dublin, Ireland

At ICHEC, we are using Global and Regional Climate Models (RCMs) to simulate climate change. The RCM provides information with enhanced spatial resolution over a sub-domain of interest. To address the issue of model uncertainty, we are employing a Multi-Model Ensemble approach.

3D visualizations will be presented of both global [1] and high-resolution RCM projections for Ireland. These visualizations are produced for outreach events and to encourage public engagement with the challenges of climate change.

[1] http://www.youtube.com/watch?v=FoLnRkaayAg

Climate Change Impact Report Cards



Liane Bradbrook, Neil Veitch The Environment Agency, Bristol, UK

http://www.lwec.org.uk/resources/report-cards

The LWEC Climate Change Impact Report Cards are a quick, easy-touse, pull-together of the latest evidence on climate impacts.

They will be particularly useful for policy advisors, ministers, local authorities and indeed any decision-makers at any level of society and in any organisation.

Investigating climate change imagery



Dr Saffron O'Neill University of Exeter, Department of Geography, UK

http://saffrononeill.wordpress.com/

Visual representations of climate change influence our emotions, our understanding, and even our policy preferences about the issue. Yet , despite much work exploring climate texts, little research has investigated the visualisation of climate change. This research poster presents work examining the visual representations of climate change in newspapers from the UK, US and Australia (O'Neill, 2013). It describes how people in each of these countries engaged with these images (O'Neill et al., 2013). Ongoing research in this area, including investigations of the visual representations of climate change arising from media coverage of the IPCC, and in social media fora, is also presented.

See the invisible

Why 'concrete visualisation' can help in climate change communication



Adam Nieman (Creative Director) / Anthony Turner (CEO) Carbonvisuals, UK

http://www.carbonvisuals.com

The above image is from a Carbon Visuals film showing the carbon dioxide emissions of New York City in real time (one day's emissions: 149,903 metric tons).

Carbon Visuals is dedicated to helping everyone on the planet make more sense of the invisible. Images, films, animations and interactive web tools provide a fresh and visual communications approach. Our core expertise is in creating scientifically accurate volumetric images that help the audience make more sense of the data. We call this 'concrete visualisation' - an approach to data visualisation that provides quantitative insight physically rather than purely numerically or geometrically.

Climate data visualization:

Visual analysis, communication and sceptical images



Thomas Nocke

Potsdam Institute for Climate Impact Research (PIK)

This presentation provides snapshots into three issues related to climate data visualization. First, it illustrates visualisation examples targeting on the visually supported analysis of climate data, and presents a constructive solution integrating successful, often nonstandardized visualization techniques into an easy-to-use software wizard. Second, it summarizes ongoing research reflecting how web portals communicate climate data visually, with a focus on explicit uncertainty presentations. Experiences with the recently developed web portal www.climateimpactsonline.com will be discussed. Finally, results from a recent study reviewing images in climate sceptical media will be presented.

AIR: Pressure



15–19 April · Falmouth University

Falmouth University in partnership with Exeter University's European Centre for Environment and Human Health (ECEHH), and Environment and Sustainability Institute (ESI).

http://www.falmouth.ac.uk/content/air-pressure

AIR: Pressure was a week of events jointly organised by Falmouth University, University of Exeter, and the Academy of Innovation Research (AIR), Penryn Campus, UK. The AIR building was taken over for a week in April 2013, transforming it into an exhibition space and focal point for a diverse series of events. The exhibition included works by artists, designers, photographers, film-makers and performers.

Adapting to climate change: making model data useful



Alberto Arribas *Met Office, Exeter, UK*

http://www.metoffice.gov.uk/research/climate/seasonal-to-decadal

Near-term climate predictions are critical for early warnings of extreme climate events and adaptation to climate change. However, making these near-term climate predictions useful requires a sophisticated post-processing that takes into account the user needs and requirements. To achieve this, an agile and interactive process between scientists and users is required and relevant IT tools are needed. Finally, information needs to be visualise in a way that facilitates decision-making by users. This presentation will focus on ways of achieving that.

The Climate Dress, an iconic surface to explore how we feel about our world



Contributors: Helen Storey, Tim Kurz, Nancy Tilbury, Michelle Moinzadeh, Michael Saunby, Helen Hanlon, Felicity Liggins, Philip Sams.

Met Office, Centre for Sustainable Fashion, V&A, Exeter College, Studio-XO, University of Exeter, RS Components, Unilever.

http://climatedress.tumblr.com/

In September 2013 for Digital Design Weekend, part of London Design Festival, scientists, designers, and students responded to several challenges with a theme of climate change and fashion. Helen Storey challenged the participants to imagine a flowing dress which served both as screen and projector for moving images of the impact of climate change on our planet and lives. From the outset it was intended that this 'Climate Dress' would develop into a canvas for public engagement with climate science at COP 21 in Paris, December 2015. This exhibit shows how the project is evolving.

Climate Science for Business



Joanna Benn

University of Cambridge Institute for Sustainability Leadership, European Climate Foundation

http://www.cisl.cam.ac.uk/ipcc

The Cambridge Institute for Sustainability Leadership, together with the Cambridge Judge Business School, with support from the European Climate Foundation is teaming up with various sectoral partners and summarising the latest climate science for the wider business community. This infographic is one of a series of thirteen, designed specifically for different communities and framed in their language, addressing their priorities. The infographics form an integral and popular part of these business briefings which are based on the IPCC Fifth Assessment Report (AR5) - the most comprehensive climate assessment to date.

With thanks to all the exhibitors

From

The workshop organising committee:

Petrina Bradbrook David Dodd Lora Fleming Will Stahl-Timmins Sarah Watts



