

# Combining science and functionality in a powerful new tool for the energy sector – an introduction to the C3S ECEM Demonstrator



Climate Change

C3S European Climatic Energy Mixes (ECEM)  
Webinar Programme  
22 September 2017

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# From Climate variables to Energy systems

## Calibrated climate variables

Temperature  
Rainfall  
Wind Speed  
Snow depth  
Global Radiation  
MSLP  
Relative humidity

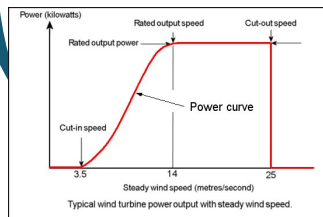
- Skill & Reliability
- Assessment of Seasonal Forecasts of Energy Variables

## + Event Case Studies

## Impacts of Climate Variability & Change on Energy Variables

- Country/cluster scale
- Historical Period
- Seasonal Forecasts
- Climate Projections

Define Models / Transfer Functions  
Select / Gather relevant Datasets



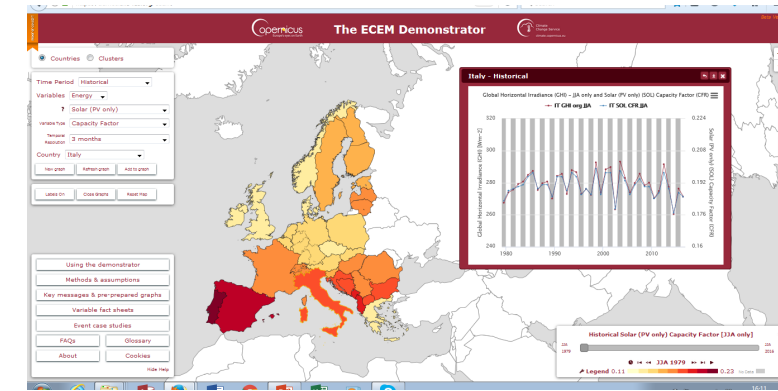
## Energy variables

Hydro Power

Demand

Solar Power

Wind Power

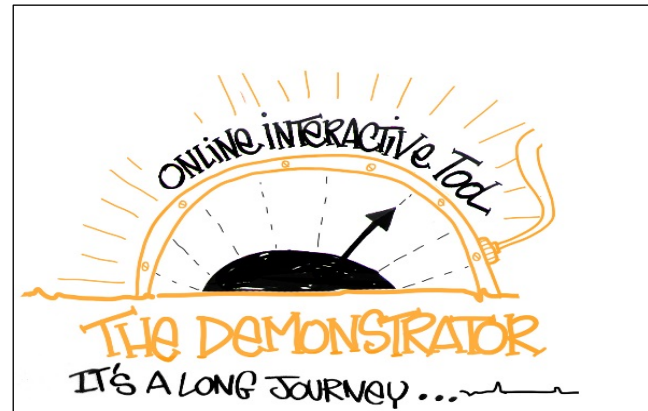




Climate  
Change

# The purpose of the ECEM Demonstrator

To enable the energy industry and policymakers to assess how well different energy supply mixes in Europe will meet demand, over different time horizons (from seasonal to long-term decadal planning), focusing on the role climate has on the mixes.



User-friendly and interactive access to and exploration of the climate and energy indicators produced by ECEM





Climate  
Change

# C3S ECEM Demonstrator Development

## First vision

Including  
proposed  
climate  
and energy  
variables

## Demonstrator logic

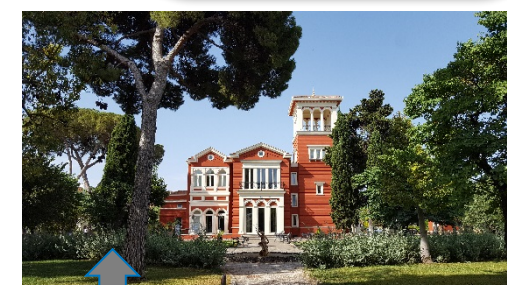
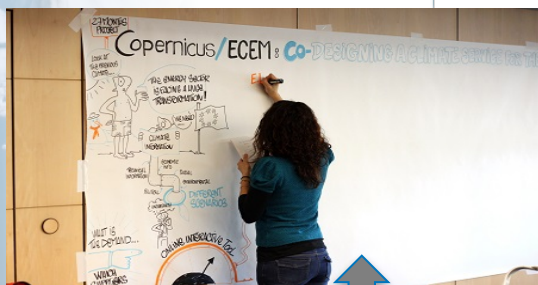
- landing page
- display  
functionality
- menu  
choices/variants

## Visual tool First version

## Wireframe Dec. 2016

## Updated Wireframe

**Final version**  
Including  
documentation,  
ready for pre-  
operational  
phase



1<sup>st</sup> SH WS  
16 Feb 2016  
Paris

2<sup>nd</sup> SH WS  
28 Jun 2016  
London

3<sup>rd</sup> SH WS  
22 Feb 2017  
Barcelona

4<sup>th</sup> SH WS  
30 Jun 2017  
Bari

Nov 2017

SH: Stakeholder  
WS: Workshop



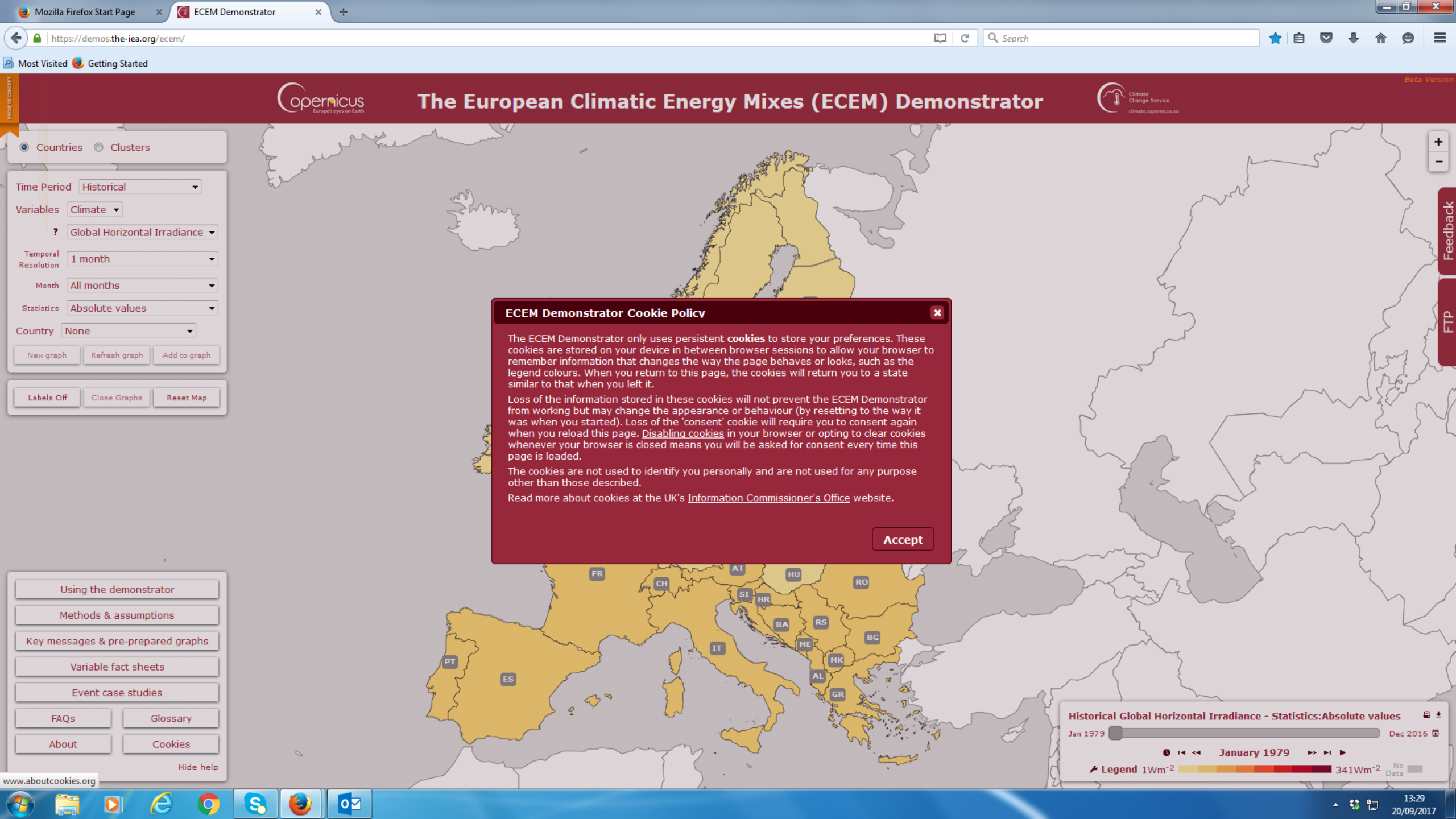


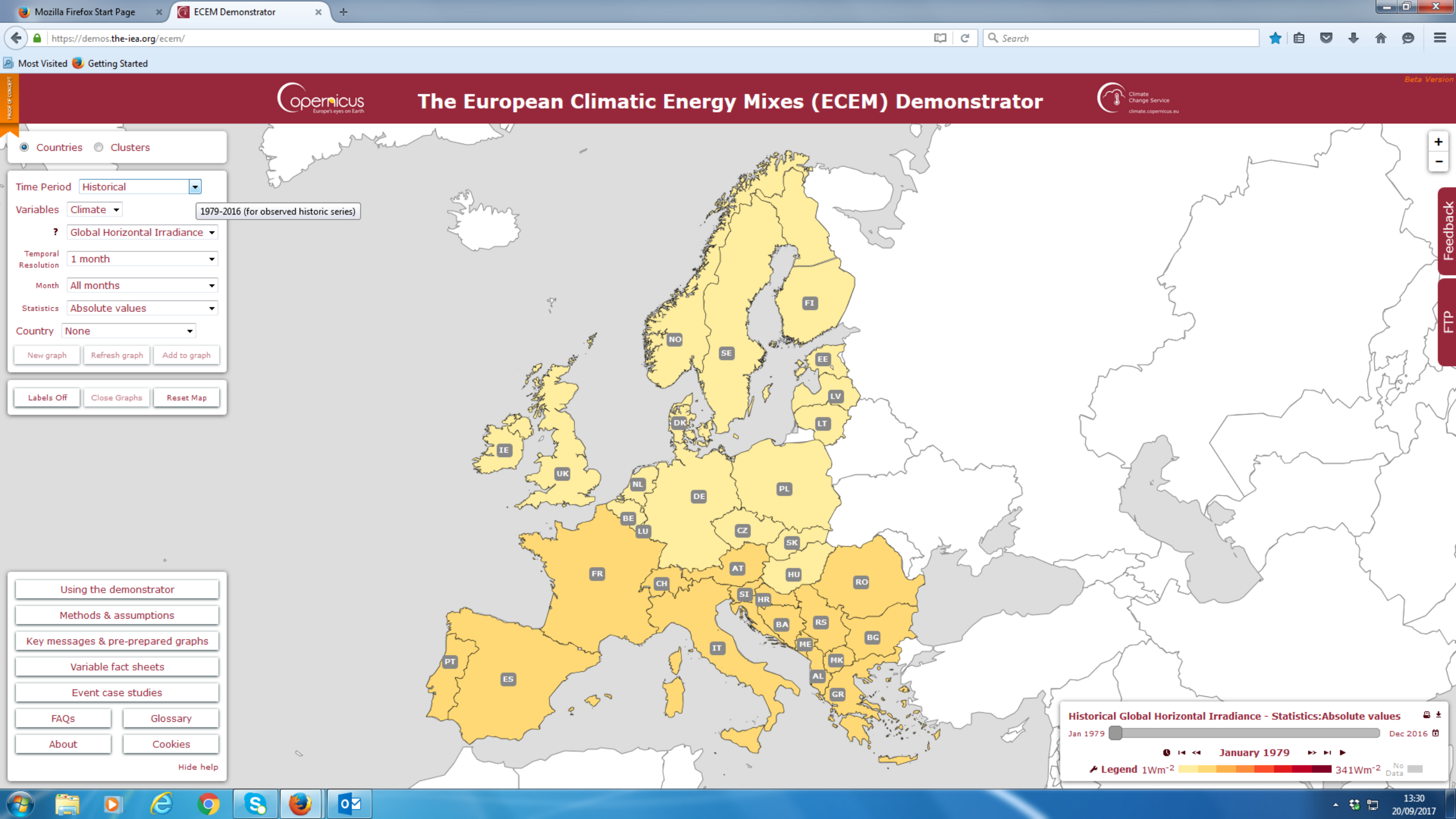


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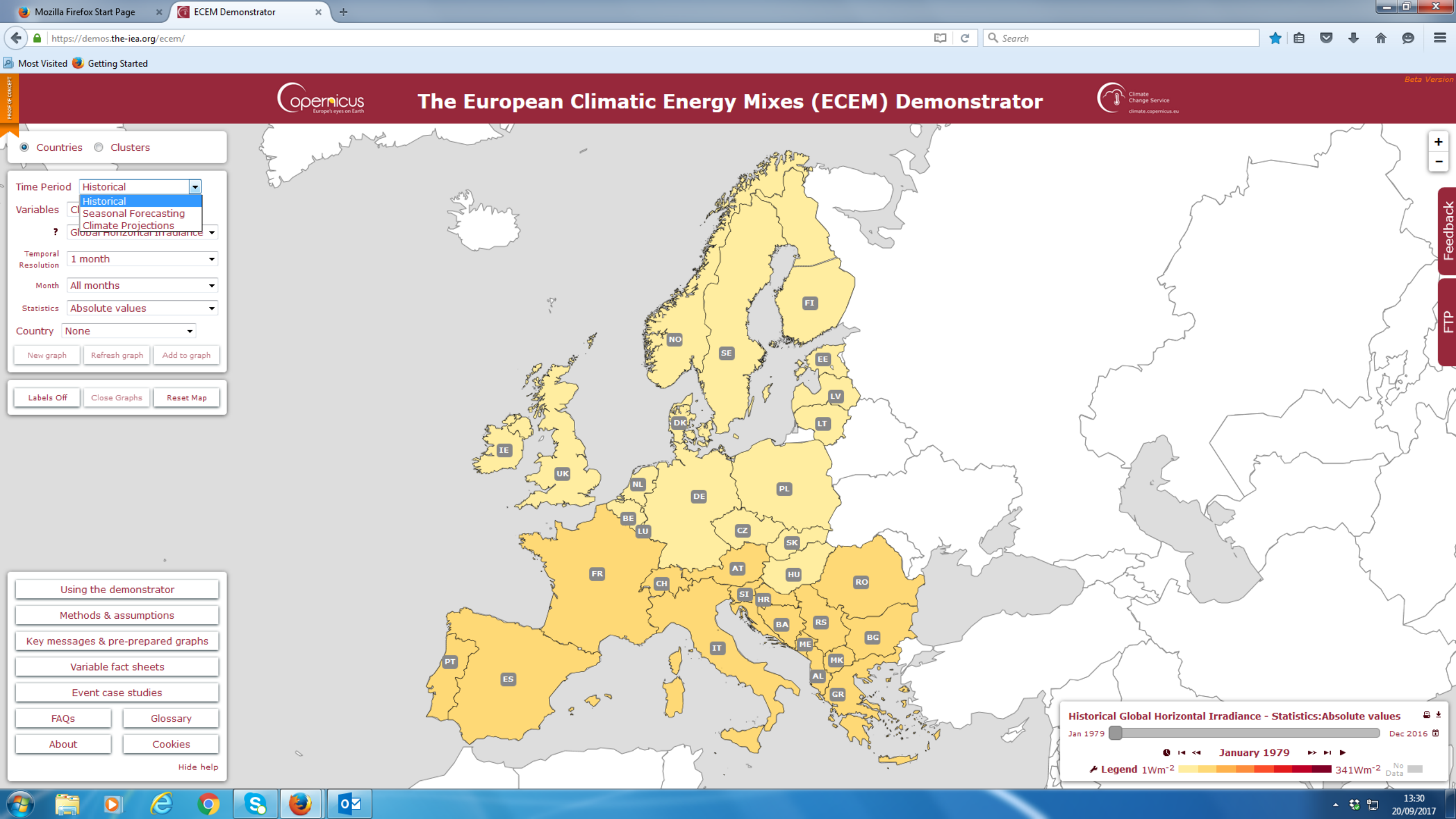
So now, let's link to the Demonstrator

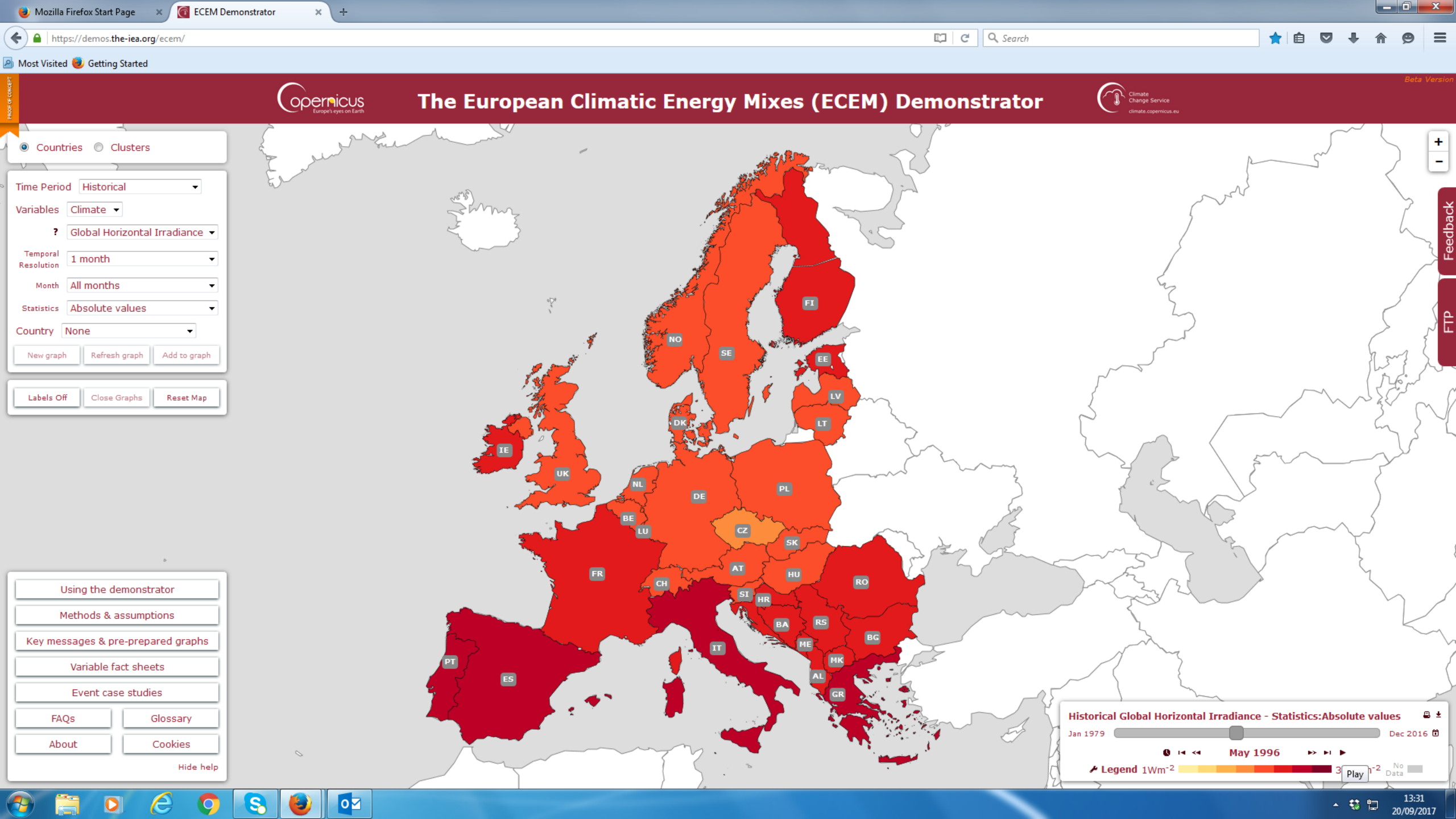
<http://ecem.climate.copernicus.eu/demo>

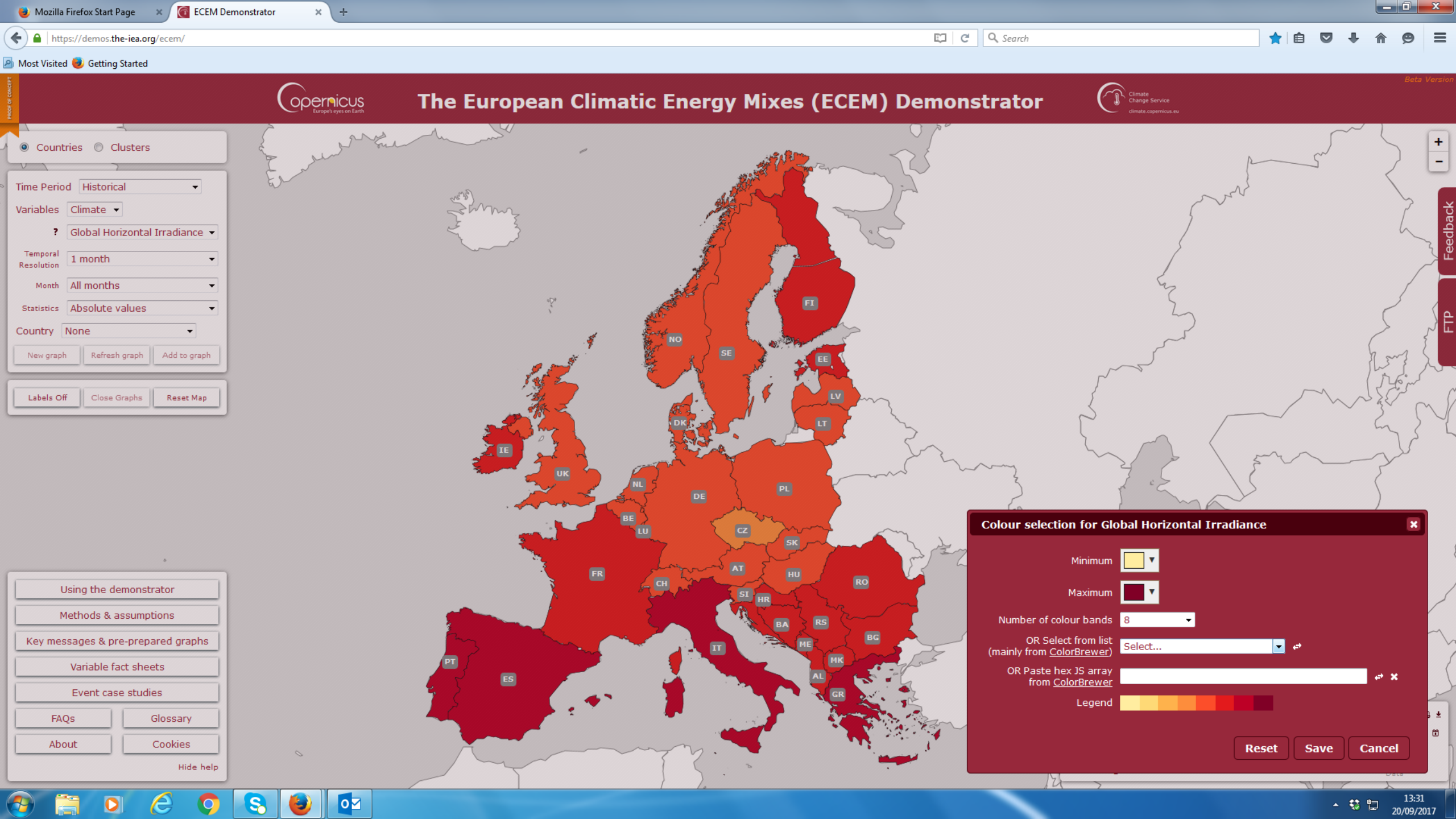




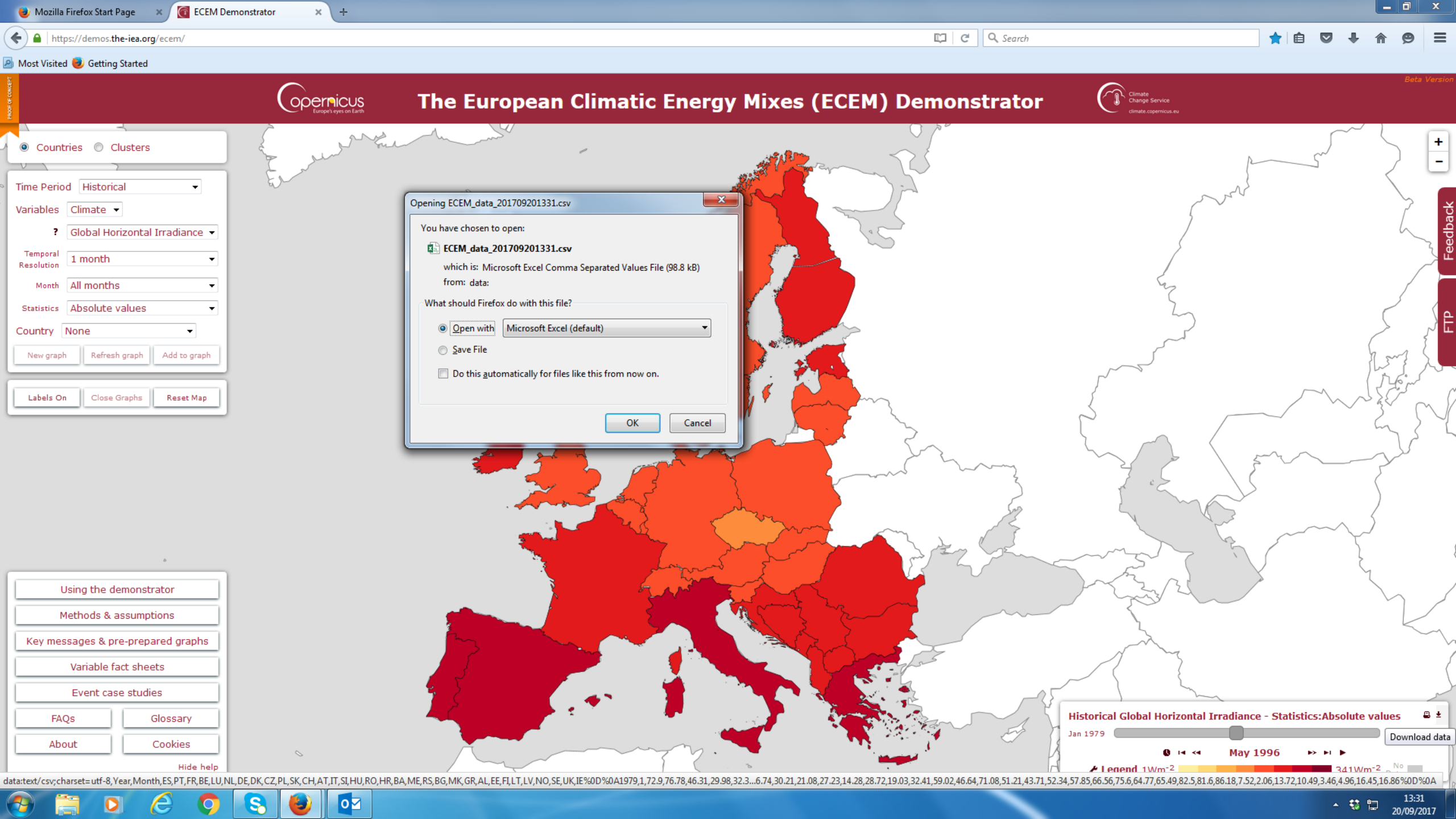


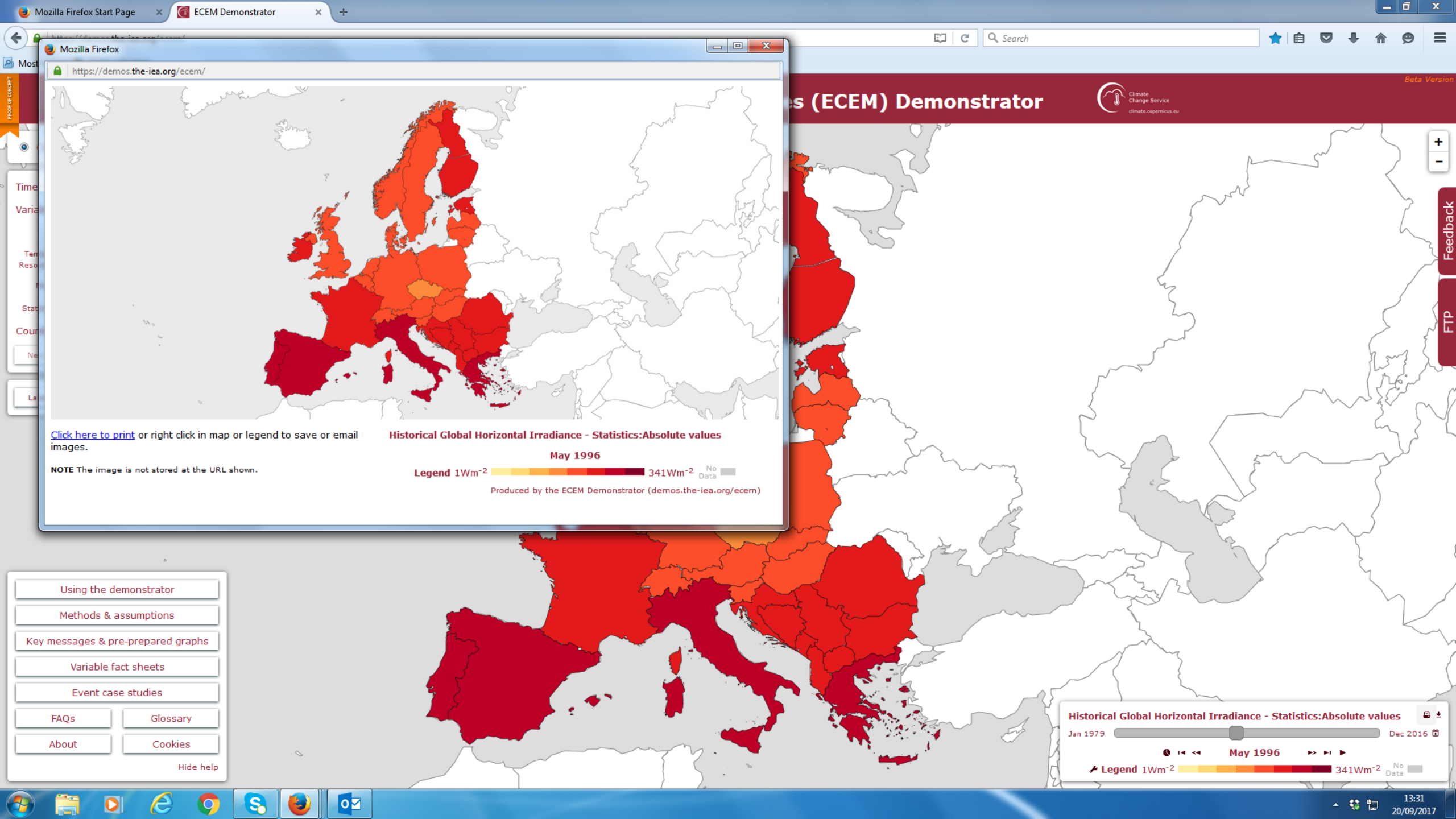


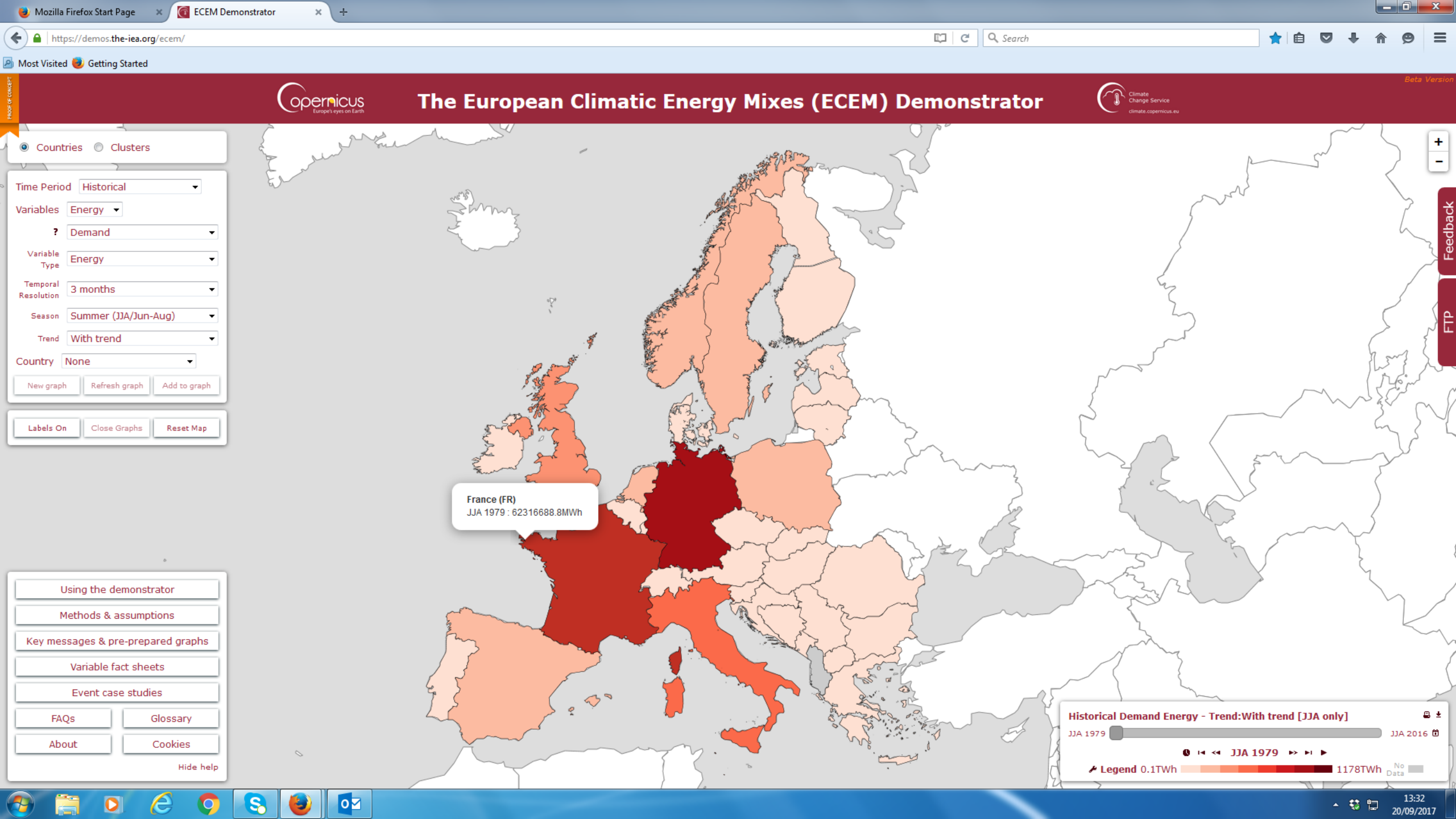




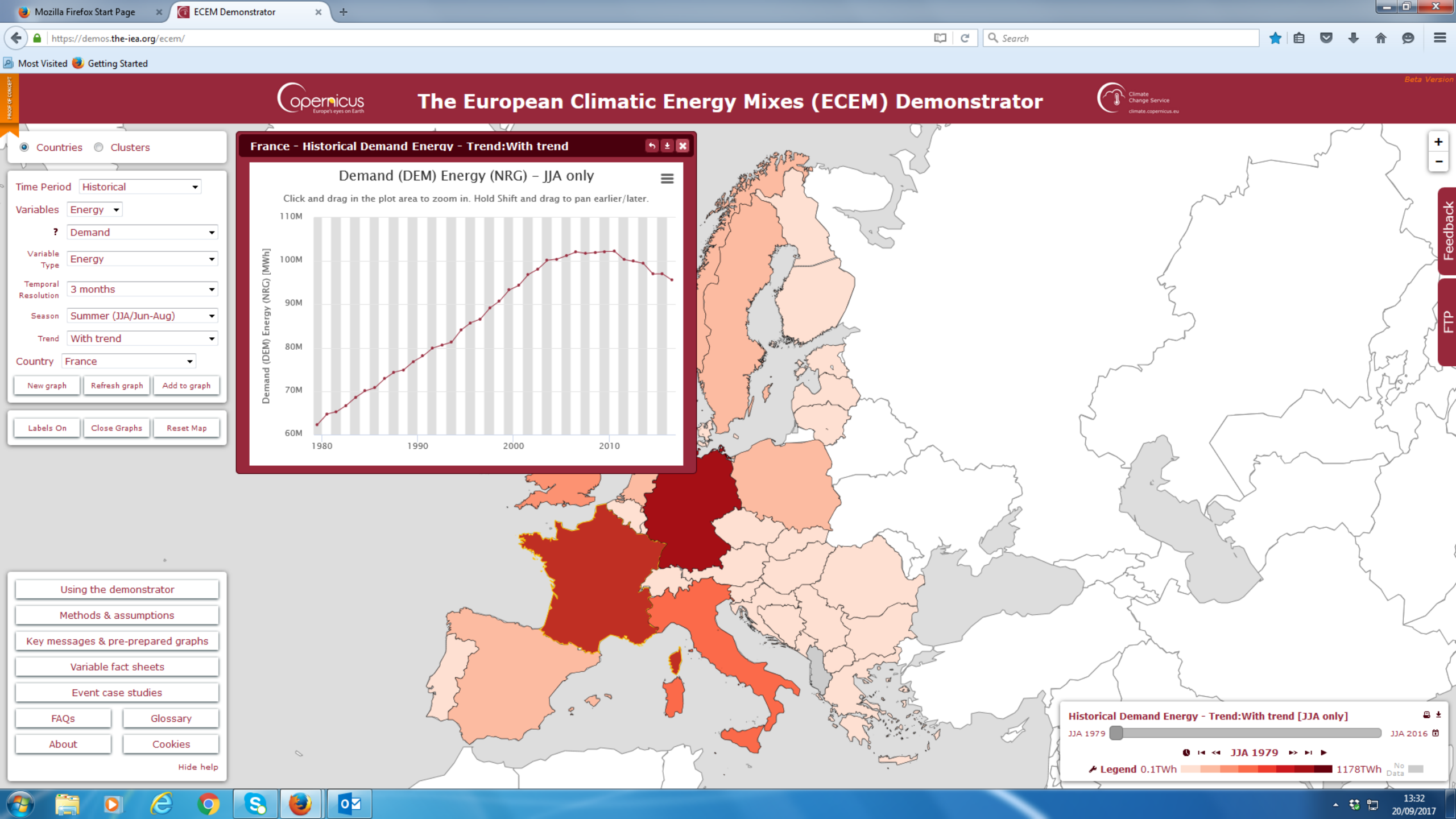


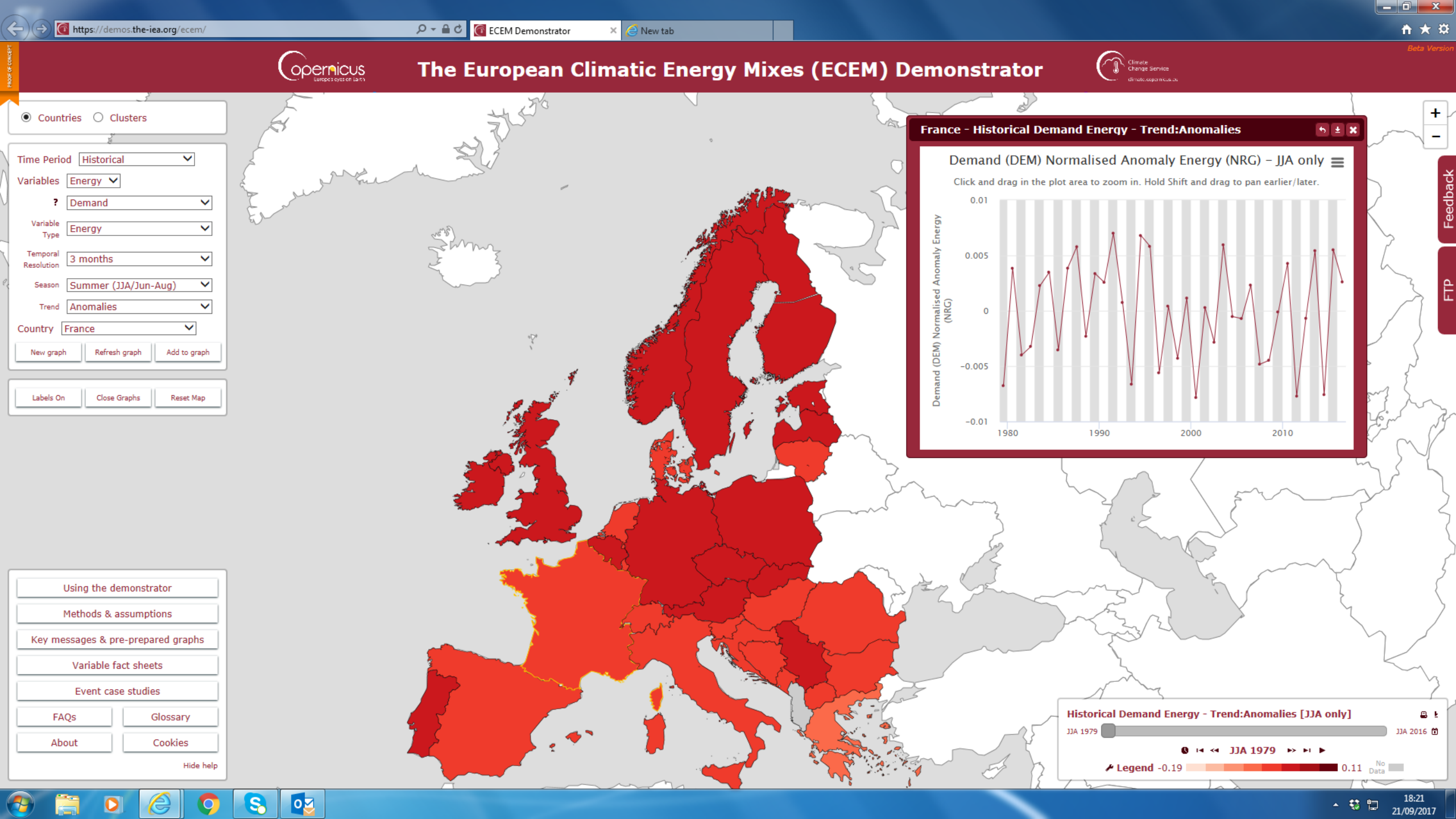


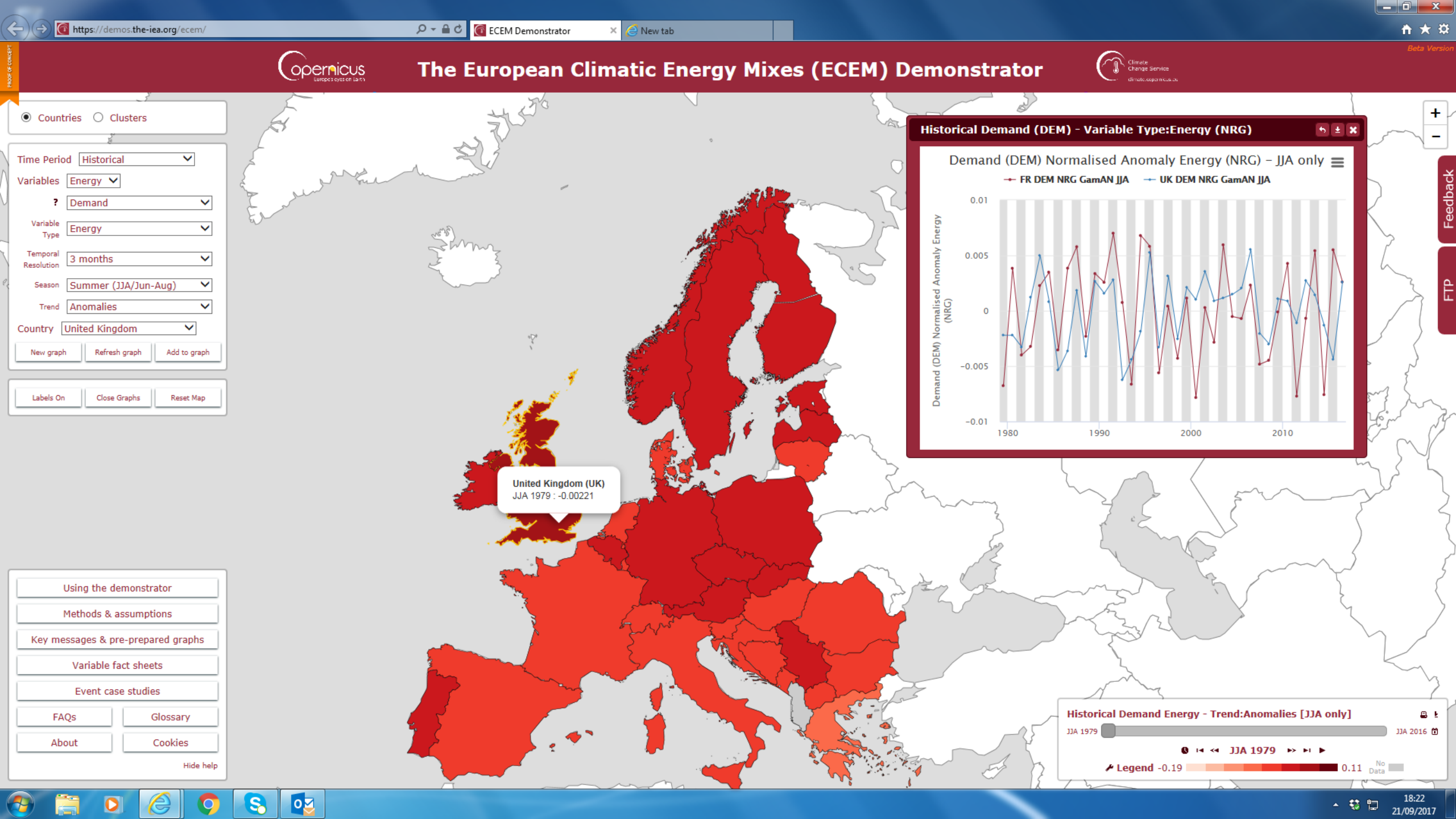




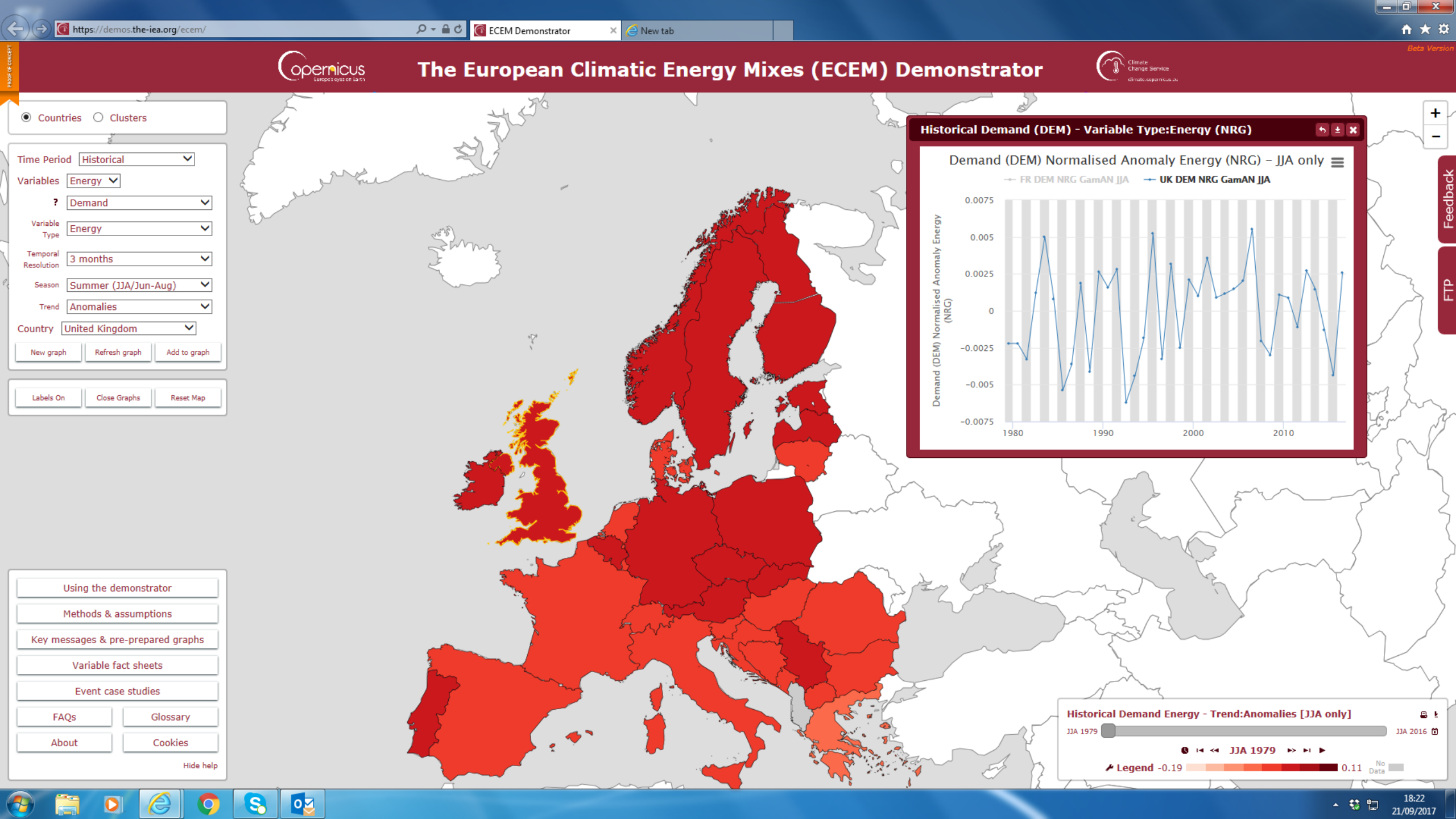


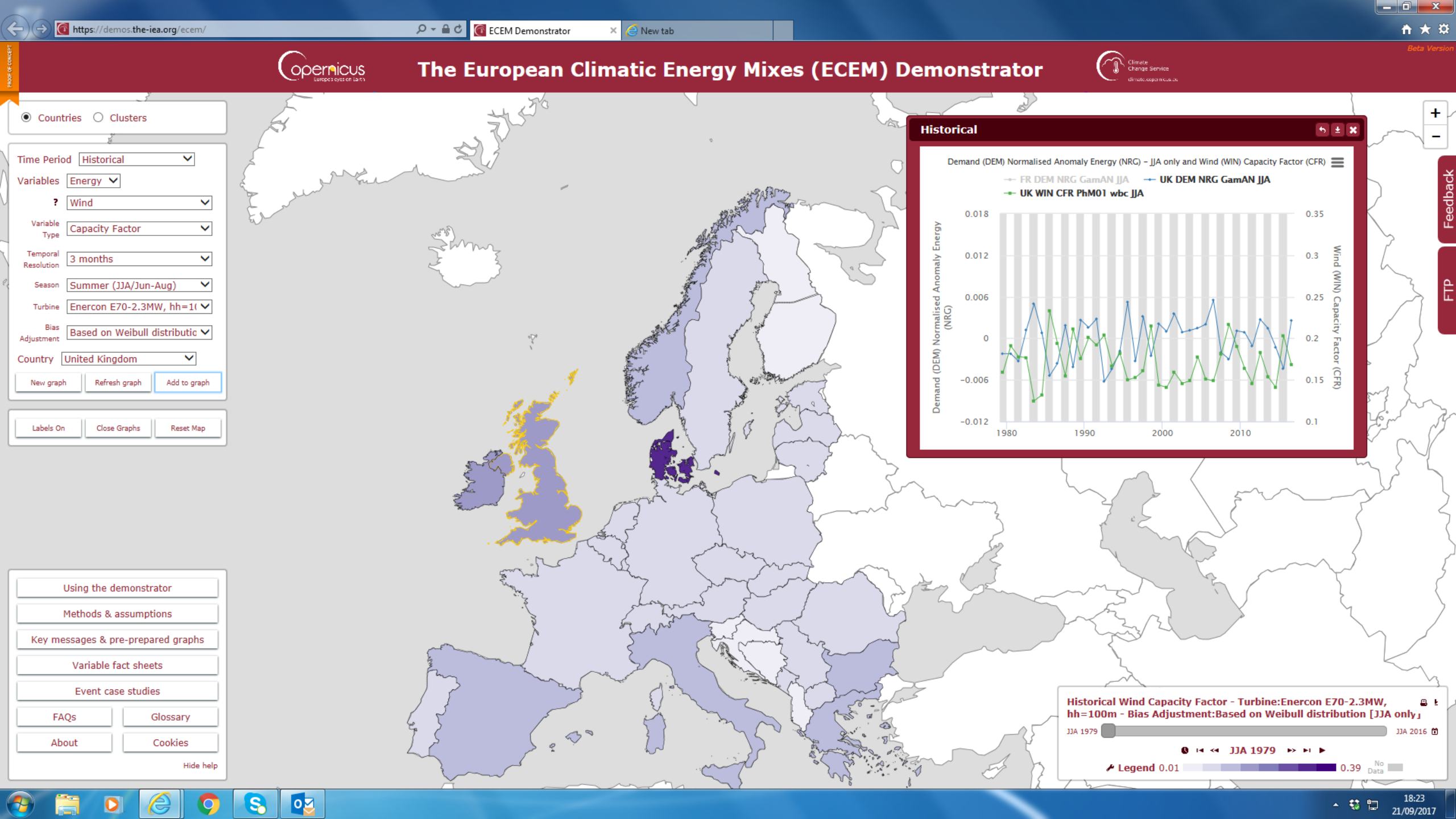


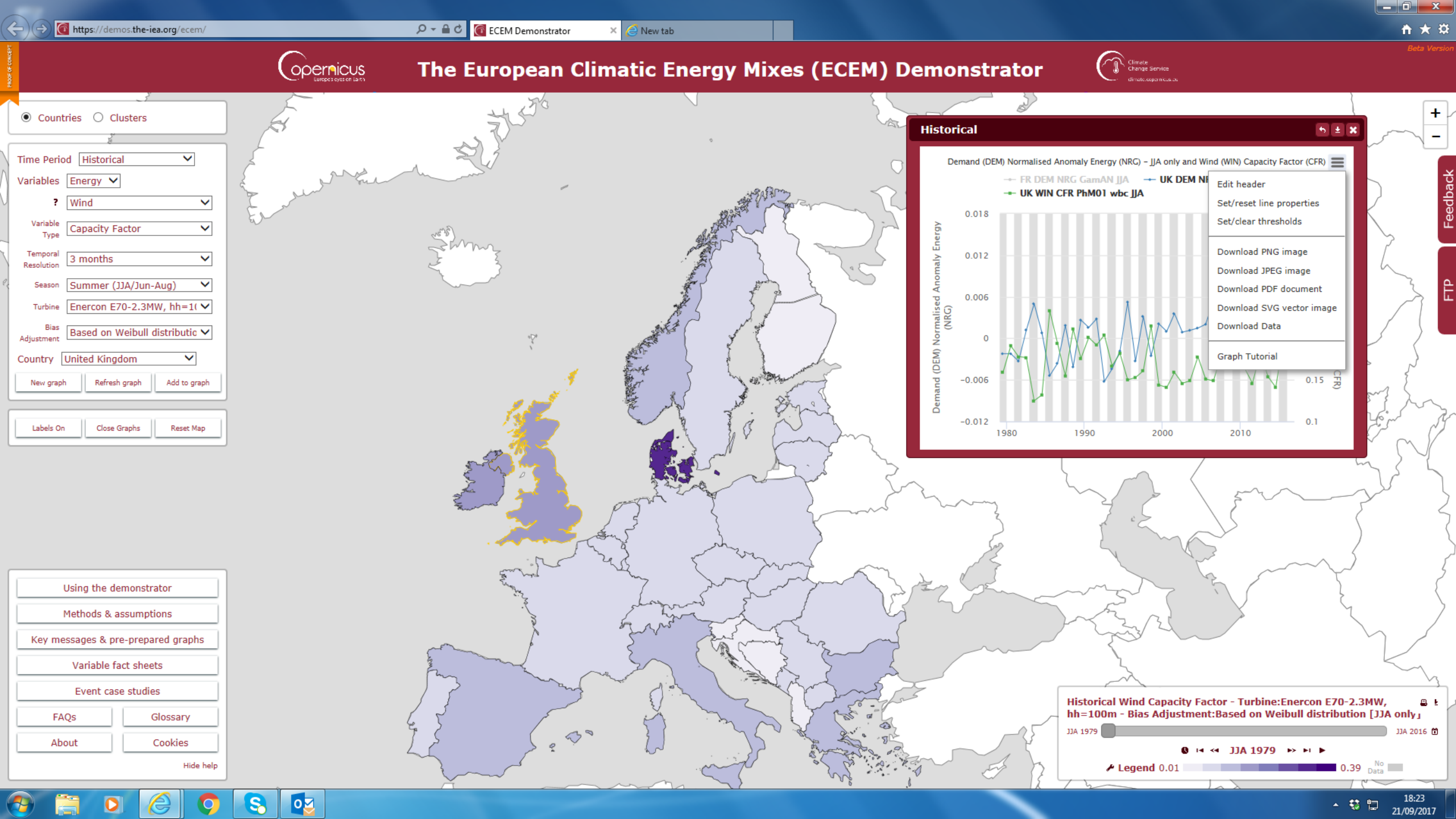


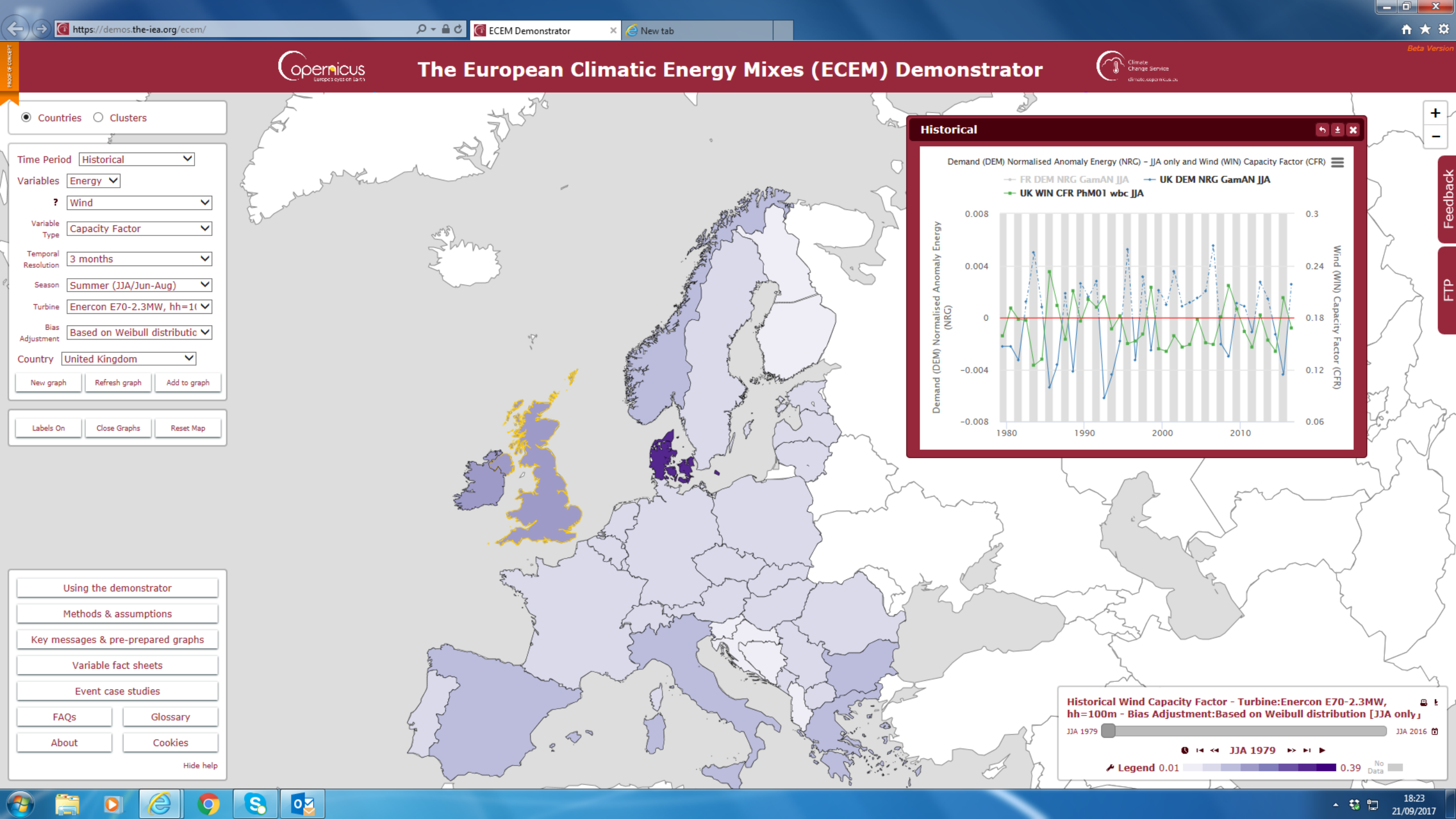




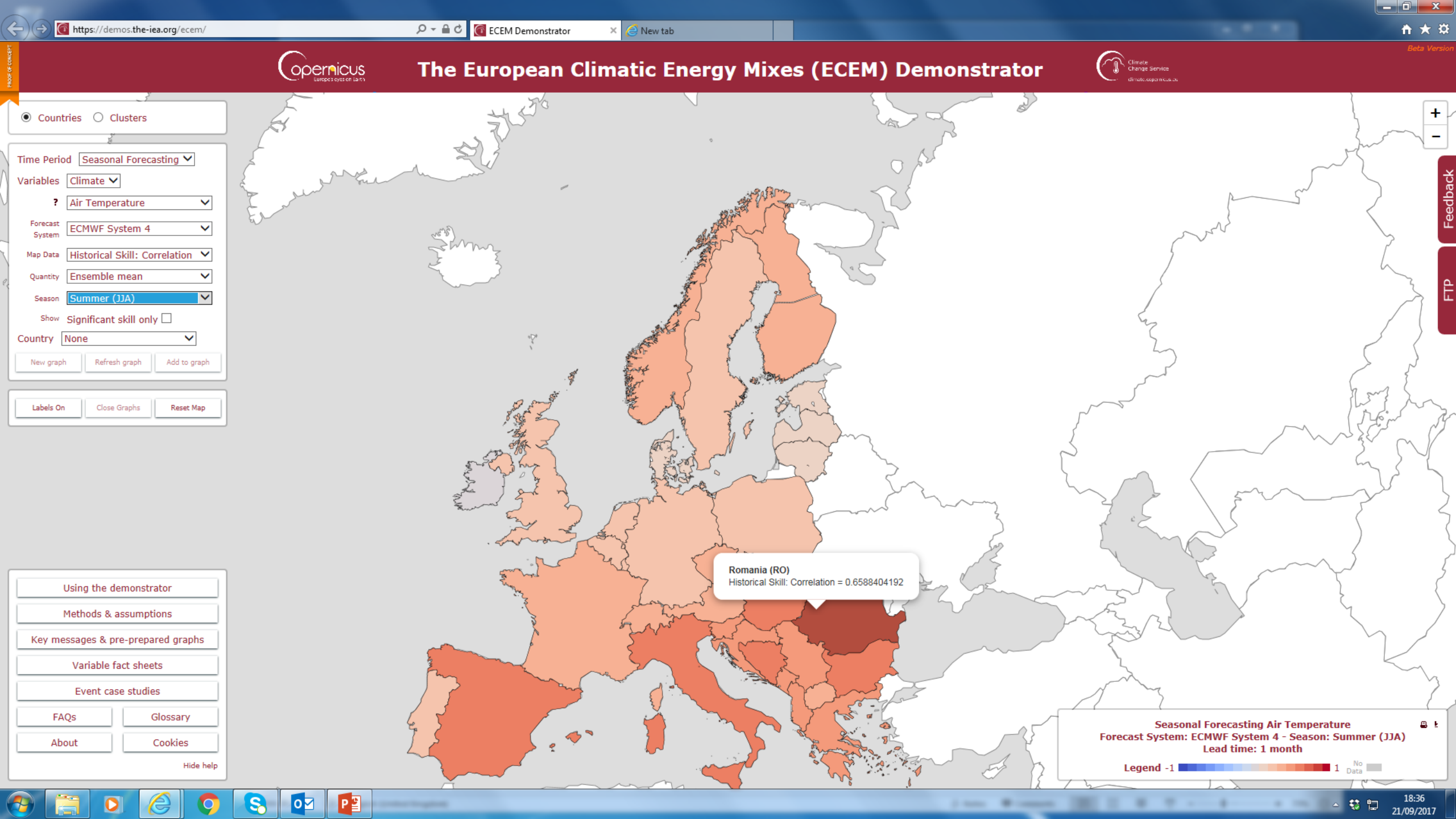


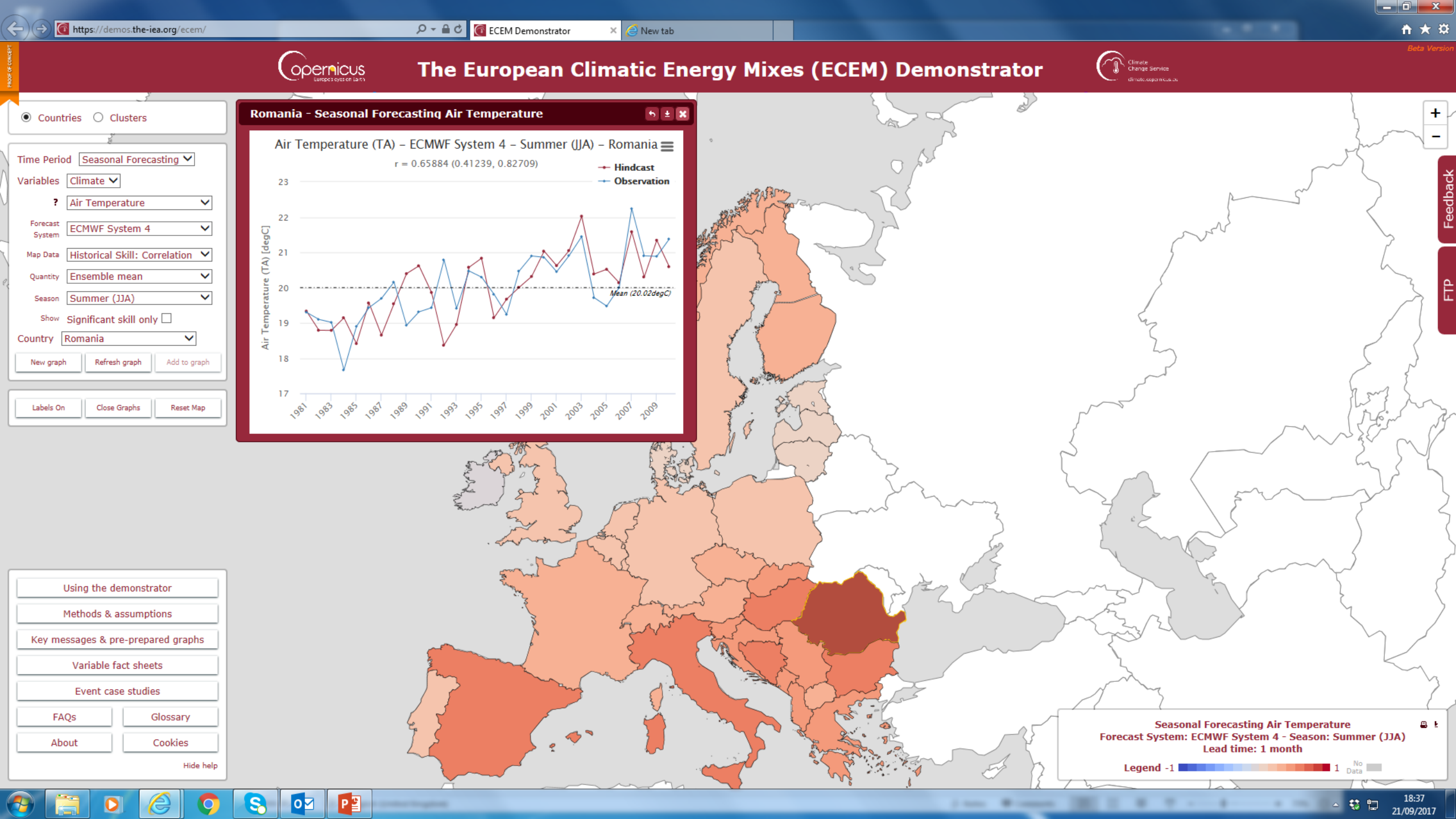


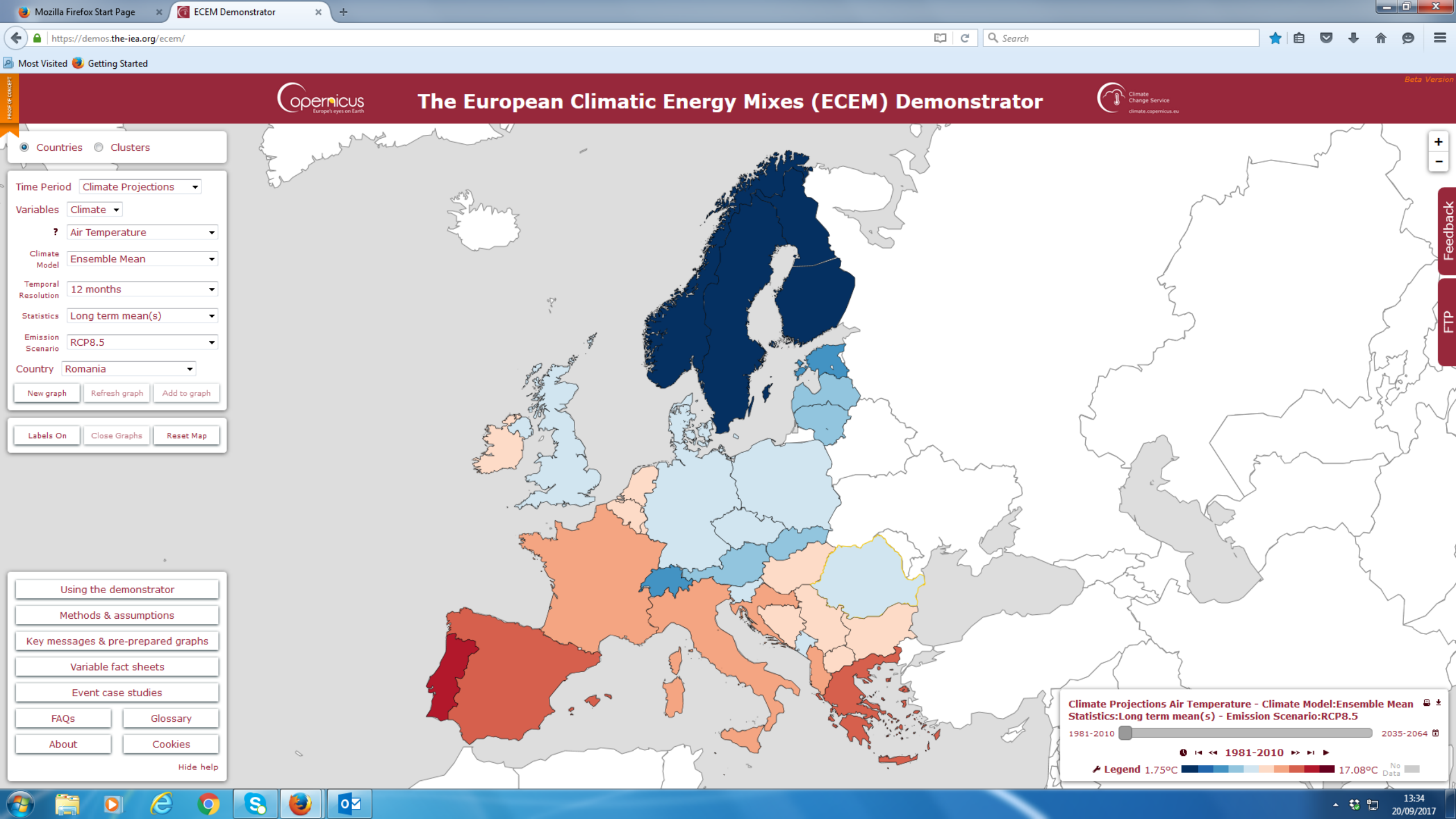


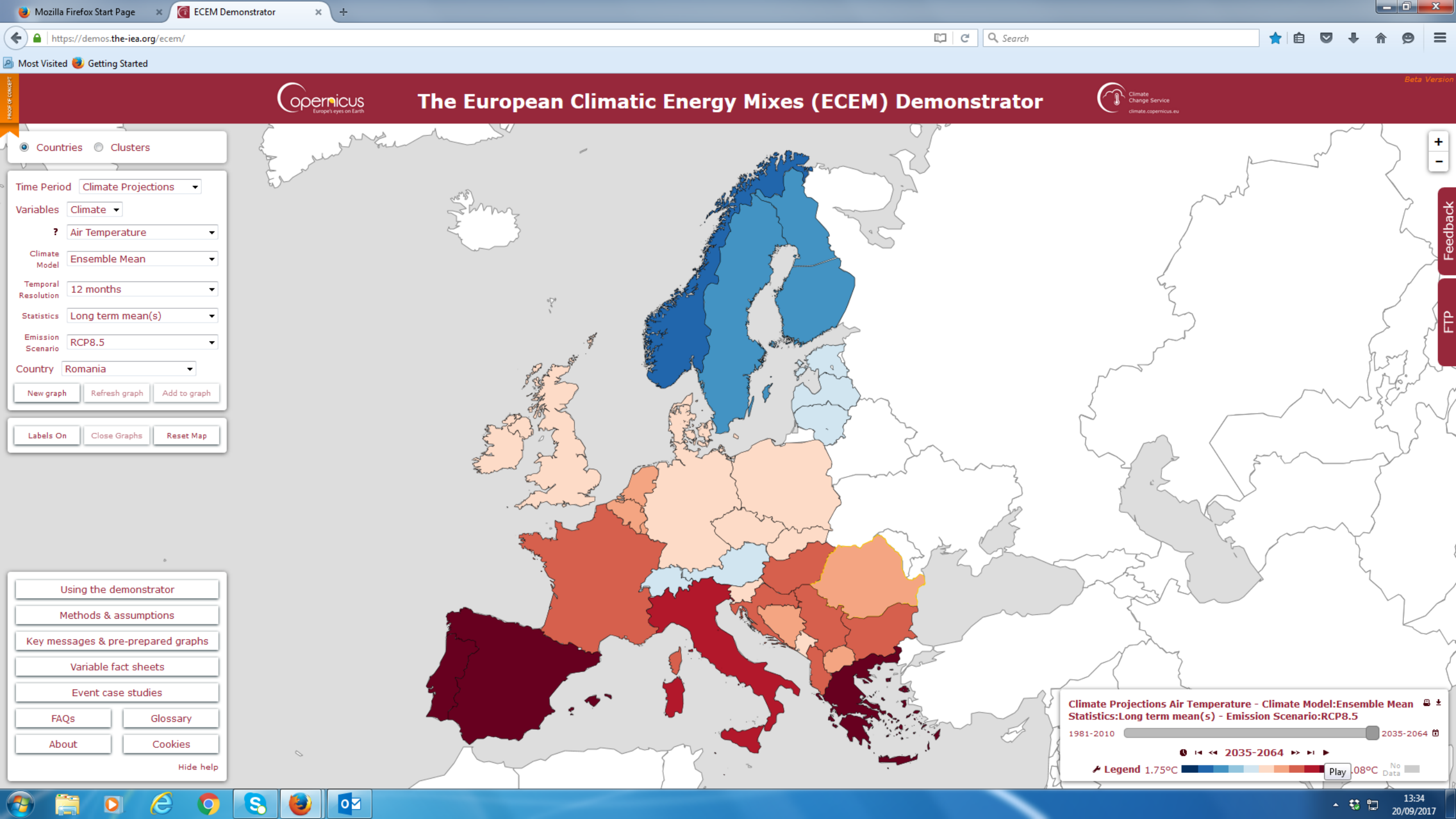














☒ Countries ☐ Clusters

Time Period: Climate Projections

Variables: Climate

? Air Temperature

Climate Model: Ensemble Mean

Temporal Resolution: 12 months

Statistics: Absolute values

Emission Scenario: RCP8.5

Country: Italy

New graph Refresh graph Add to graph

Labels On Close Graphs Reset Map

