

MS41: Links to Climate-ADAPT: review

Review of solutions for links to Climate-ADAPT, due Month 14.

1 Background

The Climate-ADAPT platform¹ is run by the European Environment Agency on behalf of the European Commission in order “to support Europe in adapting to climate change”. The Copernicus Climate Change Service (C3S) will generate a significant flow of information to be disseminated through Climate-ADAPT. Efficient management of this information flow will require automation of the procedures which migrate complex data products and associated documentation from C3S into the dissemination platform.

ECMWF has been appointed to run C3S, but the technical annex giving details of the services they have committed to is not, unlike the annexes for marine and land services, going to be made public².

The Climate-ADAPT platform is hosted at the European Environment Agency, but data and associated documentation on climate observations and scenarios held at and made available to Climate-ADAPT by the Joint Research Centre in Ispra. This information is also used for maintenance of the climate indicators in the EEA environmental indicator system. The challenge is thus to couple two distributed software infra-structures.

This review will feed into the production of deliverable 4.5 “Link to Climate-ADAPT”. Deliverable 4.5 (due month 35) report “*will analyze practical solutions for links to Climate-ADAPT and guide the process of delivering products to Climate-ADAPT developed in WP4*³”. The ambiguous description of the final deliverable needs further clarification: since CLIPC is not expected to provide operational services at a level which could deliver data dynamically to the live Climate-ADAPT portal, the project will be demonstrating a technical capability and analysing the work-flows needed to implement a service. This will meet the FP7 call requirement that the project should “*explore how to best link the wealth of climate data sets to the EU Clearinghouse Mechanism on Adaptation (CHM) and provide practical solutions*”.

The C3S web site states (June 2015) that “Customized information products in the form of climate change indicators and ancillary information relevant to the sectors will be disseminated via the Climate-ADAPT platform.”

2 Review process

The CLIPC project has organised two meetings with the European Environment Agency in Copenhagen (Denmark) and one meeting at the offices of JRC (a CLIPC partner) in Ispra (Italy), in which the possible technical and substantial connections between CLIPC products and EEA climate indicators and Climate-ADAPT were discussed.

Minutes:

EEA, 2014: w3id.org/clipc/meetings/copenhagen_may2014

EEA, 2015: w3id.org/clipc/meetings/copenhagen_may2015

1 <http://climate-adapt.eea.europa.eu/>

2 Confirmed by email from Hugo Zunker, DG for Internal Market, Industry, Entrepreneurship and SMEs.

3 A typographical error in the Description of Work Part A refers to WP3 in the deliverable description, but it is clear from the WP4 description that WP4 will deliver products directly to Climate-ADAPT.

Ispra:

http://www.clipc.eu/media/clipc/org/documents/meeting%20reports/clipc_ispra_meeting_20150428_minutes.pdf and presentations:

http://www.clipc.eu/media/clipc/org/documents/Meeting%20reports/clipc_ispra_meeting_20150428_minutes_annex_2_small.pdf

3 Outcomes

Web services for automated data delivery

Web services will allow automated transfer of information between the CLIPC and Climate-ADAPT platforms. These services should support the transfer of data files, images and meta-data associated with the data files.

Exploiting standards to build inter-operable services

The CLIPC platform will exploit the same core standards as the Climate-ADAPT platform. Namely, the INSPIRE standard for meta-data and Open Geospatial Consortium (OGC) standards for web services. Adoption of these standards is not sufficient to ensure inter-operability of services, but it provides a solid foundation and a common framework for describing the problem. Care needs to be taken in the implementation to ensure compatible profiles of the standards are adopted.

Standards driving inter-operability

The fact that JRC and the EEA are already operating a distributed system based on well-known standards will make integration of the CLIPC services considerably easier than it might have been otherwise. JRC and EEA have INSPIRE compliant catalogue information. Open Geospatial Consortium web services are used to exchange information between the European Climate Adaptation catalogue and the visualisation tool which runs at both EEA and JRC.

Two-way information flow

While the primary motivation for developing an efficient link is to enable delivery of data to Climate-ADAPT, it will be important within the CLIPC project to ensure that a two way flow of information between the CLIPC platform and the JRC data holdings.

Deployment in ClimateAdapt

The fact that the C3S Sectoral Information System will disseminate results through Climate-ADAPT implies that any visualisation system needs to be compatible with deployment inside a the EEA system, as the JRC time series tool currently is.

4 Next Steps

A further meeting, probably a telephone conference, is planned with the EEA in the Autumn of 2015. The JRC staff responsible for the time-series tool should be involved in this.

At this meeting, the options for integration of the CLIPC impact indicators toolkit (visualisation and processing tools) into the Climate-ADAPT platform will be discussed.

5 Annex I: Technical notes

The EEA ClimateAdapt platform has a dynamic visualisation service for climate observations and scenarios: climate-adapt.eea.europa.eu/tools/time-series-tool.

This tool allows users to select and visualise data which is drawn from a JRC “geoserver” service: climate-adapt.jrc.ec.europa.eu:8080/geoserver/ows

When a dataset is selected, INSPIRE compliant catalogue information from a JRC service is shown in a pop-up window: e.g. The following link shows a digital map for rainfall from the E-OBS dataset (note that access to the data behind this indicator is restricted). climate-adapt.jrc.ec.europa.eu:8080/geonetwork//srv/en/metadata.show?currTab=simple&uuid=3d23d753-7e83-40ea-a3fa-1a249c7ddbdc

The time series tool running in the EEA ClimateAdapt platform is also visible at JRC: climate-adapt.jrc.ec.europa.eu/home.html

This JRC service is the gateway to the European Climate Adaptation catalog. The European Climate Adaptation contains 68 indicators.

