

ECSN Quarterly Report July-September 2007

Prepared by the ECSN Manager and the Project Leaders

General remarks

The summer months were used to give follow up actions to the 12th EAC meeting and to prepare contributions to the EMS7/ECAM8 (1-5 October 2007, San Lorenzo de El Escorial, Spain). The EAB and the convenors of the two climate sessions (Cl1 and Cl2) spent much skill and energy in arranging an attractive programme. Special thanks are addressed to the convenors: Christof Appenzeller, Jean-Pierre Ceron, Ricardo Garcia-Herrera, Raino Heino, José Antonio Lopez Diaz, Martina Rebetz and Martina Junge (EMS secretariat). INM (Manuel Palomares) hosted the conference in a hospitable and adequate manner.

New Member (EMHI)

In September 2007, the Estonian Meteorological and Hydrological Institute decided to participate in the ECSN programme. We heartily welcome the Estonian delegate, Mrs. Tiina Tammets, who many of us already know as active participant of ECA&D.

EMS7/ECAM8 (1-5 October 2007, San Lorenzo de El Escorial, Spain)

We can look back on a very successful conference. The climate contributions (Cl1 and Cl2) were very strong. Many high quality presentations were given by representatives from our ECSN members. The attendance was high: between 100 and 125 per climate session.

EMS8/ECAC7 (29 September- 3 October 2008, Amsterdam, Netherlands)

In close collaboration with the EAB and with the support of a number of the delegates a draft programme has been composed for the ECAC7. The theme of the conference is *Tools for understanding of and adaptation to current and future climate*. The programme comprises 10 sessions; 5 devoted to understanding, 4 to adaptation and 1 panel session on the communication on adaptation in Europe. For more information have a look at the special flyer (annex).

6th ECSN Data Management Workshop (20-22 November 2007, Vienna, Austria)

Preparations for the 6th Data Management Workshop continued during the reporting period. Due to the extension of the deadline for abstract submission, the number of announced presentations has increased significantly. The meeting will bring together scientists from NMSs and Universities from 20 European countries. 5 sessions will be organised covering the topics of data rescue, Q-control, homogenisation, gridding and data services and products. The international convenor team could accept 48 oral and 6 poster presentations. The detailed program can be found on the Conference web-site: <http://www.zamg.ac.at/aktuell/veranstaltungen/>

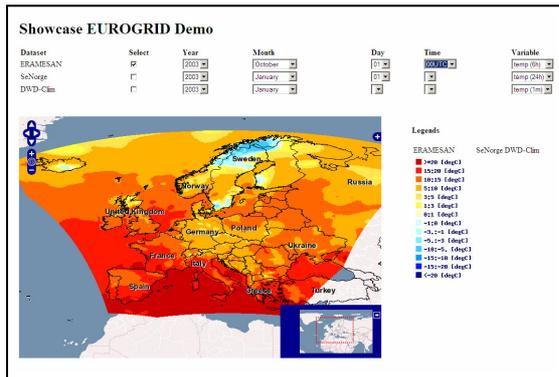


Showcase EUROGRID (SMHI)

A majority of the fourteen participating institutes have agreed on the in-kind contributions and signed the MoU between SMHI and the participant. There is however still a delay regarding these issues for some participants. The work within the programme will now continue based on the agreements obtained so far.

Nine different high-resolution gridded datasets for Europe or parts of Europe, already available at the participating institutes, are likely to be made available within the project (four datasets already present). One of the datasets already present covers the whole of Europe, but with a lower resolution, while each of the other datasets has a strict cover of the respective national land-area.

The inconsistency between the different datasets regarding methodology, variables, time period, resolution in time and space etc. is an issue that cannot be resolved easily and has to be accepted within the Showcase. Yet, for a future full-scale EUROGRID it will be very important to address this problem, as the need for a consistent high-



resolution dataset covering Europe is evident. The web site www.e-grid.eu is divided into three sections: "public", "members" and "products". The public section, where a general presentation of the Showcase EUROGRID programme is available, is open to everybody and can be accessed by a link from the EUMETNET/ECSN homepage. For the other sections login/password combinations are required and only available to members and approved test-users, respectively. The products-section consists of an OpenLayers frontend which is used for a harmonized presentation of the available datasets. In this framework, the different datasets are accessed using the OGC Web Map Service (WMS) protocol. This setup allows for the harmonized visualization of distributed data sources in a simple and extensible way, i.e. maps served by different WMS-servers can easily be included in the presentation. For the dissemination of demo-data and products the OGC Web Coverage Service (WCS) protocol is a promising candidate and will be tested in future versions of the Showcase products-site. The utilization of open standards allows for an easy access of maps/data from a variety of user clients and platforms. Showcase EUROGRID will discuss, i.e. in relation to the INSPIRE directive, but not resolve data policy issues. A specific Article within the Showcase EUROGRID MoU regulates data policy issues connected to the project. Data made available within the implementation or execution of the Showcase can not be used for commercial

applications. The Parties are not allowed to redistribute said data to third Parties for commercial use. In a similar way a Collaboration Agreement between SMHI and each approved test-user will regulate that data made available within the project can not be used for commercial applications. Since Showcase EUROGRID is a demo, only selected years will be made available as maps/data. At present, three datasets for 2003 are available for visualization. Besides 2003 with a severe heat and air pollution episode resulting in a significant increase of mortality in parts of Europe, the year 2002 with a major flooding event in central Europe is likely to be chosen.

The next Showcase EUROGRID meeting will take place at ZAMG, Vienna, Austria on 22-23 November, 2007. Thus, the Showcase EUROGRID meeting will follow immediately after the 6th ECSN Data Management Workshop arranged by ZAMG.

HRT-GAR (ZAMG)

The phase of estimating the best method for air temperature interpolation for the Greater Alpine Region (GAR) is still in progress. Effort was put on the modelling of spatial features of air temperature during winter months as winter season residuals will determine the final level of model uncertainty in general. The final approach uses monthly regionalised multi-linear regressions of air temperature with altitude, latitude and longitude.

Further adjustments of temperature field incorporated in the model are the land-sea effect and landuse effects (urban effect, lake effect, possibly



also the effect of forest on temperature). For the region of the Alps the model allows for inversion layers in medium sized valleys (e.g. tributary valleys of Salzach valley or Inn valley) between about 700 m a.s.l. and 2000 m a.s.l. These val-

leys are treated in a different way to the larger sized cold air basins like e.g. “Klagenfurter Becken”. However, the incorporation of these inversion-effects into the model is not finished yet.

Generate Climate Monitoring Products GCMP / European Climate Information System EuCLIS (DWD)

The quasi-operational mode of the GCMP platform www.gcmp.dwd.de is still ongoing without any significant change. Some further updates became necessary due to some more changes of websites of some participating countries, but the product supply continued with continuing reliability and stability.

The Annual Bulletin on the Climate in WMO Region VI for the year 2006 has been printed in August 2007 and is now also available in an electronic version on the GCMP website. This publication is a comprehensive review of climate anomalies and significant climate events of the year 2006 within the WMO Region VI (Europe and the Middle East), based on submissions of 44 out of 49 countries of RA VI and compiled by DWD.

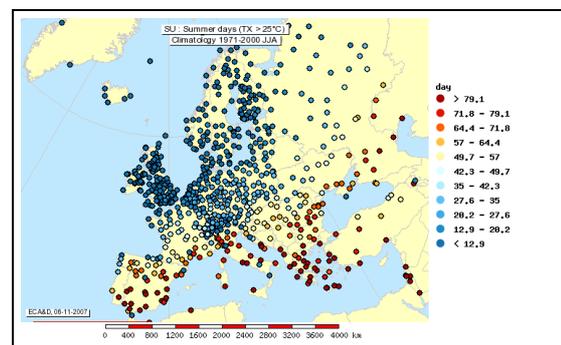
The beta version of the new EuCLIS platform is operating in the new DWD web portal, but still not accessible for the public. However, the internal test phase has now been nearly finished at the end of this quarter of the year after some more bugs have been found and removed. Tests were now especially concentrated on the configuration of the system by XML files, website accessibility for disabled users, the correct use of WMO metadata standards and the exception handling of bugs. Some of the text information and the layout on the EuCLIS site have been revised.

The start of the new DWD web portal to go public is now planned for the end of October 2007. This will also be the envisaged start of the beta testing phase of EuCLIS. The beta testing will be carried out by testers of four NMHSs. The start of the operational phase, open to all ECSN participants, is still foreseen for the beginning of 2008. An overview of the functionalities of EuCLIS and further plans of how to proceed during the operational phase will be given at the 6th ECSN Data Management Workshop on 20-22 November in Vienna.

European Climate Assessment & Dataset (KNMI)

ECA&D has the ambition to provide Regional Climate Center-services for daily station data and extremes indices data in WMO Region VI (Europe and the Middle East).

In order to meet this new challenge, the software is put through a major overhaul which will be finalized at the end of 2007. Hardware is upgraded in parallel. The aim of this effort is two-fold. First and foremost one needs to be able to give more frequent updates of the data, weekly rather than the now current monthly updates. An increase in computational power and the use of more computationally efficient algorithms is deemed necessary to broaden the spectrum of climate indices and to calculate these indices using the latest insights from statistical climatology. Secondly, efforts are put into making the website more interactive and into building an additional functionality to the ECA&D website which provides for making online statistical analysis with the ECA dataset.



The ECA&D infrastructure is used in several related activities. UNIDART will build a uniform user interface to the ECA dataset and other meteorological databases.

Within ENSEMBLES, a gridded dataset of daily temperature and precipitation for model evaluation is developed on both a 0.25x0.25 degree and 0.5x0.5 degree resolution based exclusively on ECA&D data. These datasets are made publicly available through the ENSEMBLES and ECA&D websites. EUROGRID will further elaborate this gridded dataset.

The collaboration with the MILLENNIUM project has resulted in the calculation of monthly mean values of all stations in the ECA database.

European approach on climate change scenarios (MeteoSwiss)

At the 12th EAC meeting it was decided that MeteoSwiss should take the lead by collecting the available national reports (related to national climate change scenarios) on the ECSN web based on a survey via a questionnaire. The survey will next to scenario's also draw up an inventory of related research initiatives.

On September 19 a questionnaire on the national reports was disseminated to all ECSN delegates with 31 October as the deadline for response.

It is planned to provide the new ECSN web-page on climate scenarios beginning next year.

Questionnaire Climate Scenarios, send completed forms to: Henk_Kon@meteoswiss.ch or Christof_AgassonTer@meteoswiss.ch

Country	Web page of the national Met Service to National Climate Scenarios	Web page of the national Met Service to Climate Change	Related research initiatives / Comments
Austria			
Belgium			
Croatia			
Cyprus			
Denmark			
Finland			
France			
Germany			
Greece			
Hungary			
Iceland			
Ireland			
Italy			
Latvia			
Lithuania			
Netherlands	http://www.knmi.nl/klimaatscenario/	www.knmi.nl	
Norway			
Portugal			
Spain	http://www.mmm.es/web/guest/infoclima/temas/temas@ECSN+2007/04/04.pdf		
Sweden			
Switzerland	Advisory Body on Climate Change (OCCO) www.abcc.ch Report http://www.occc.ch/rodriguez/abcc2007/04/04.pdf WMO-Service: http://www.wmo.ch	MeteoSwiss www.meteoswiss.ch Information: http://www.meteoswiss.ch/web/infoclima.html	
UK			

National differences in recording dew and rime, a survey in the Nordic countries (Met.no)

A questionnaire on national practices for the statistical treatment of observations of dew and rime/hoar frost is under development by Met.no. It is foreseen that it will be launched during the fourth quarter of 2007.

Carpathian basin climatology and information system (OMSZ)

The Hungarian Meteorological Service (OMSZ) organized a summer school on the preparation of a climate atlas in the frame of SEE ERA-NET, an FP6 project. (Sitke, west Hungary, 10-15 September 2007). This project is one of the almost 70 ERA-NET projects and focuses to the South-eastern European (SEE) region. OMSZ is not participating in this project, but applied to a call of proposals of it. The topics of the school were: data quality control and databases, homogenisa-

tion, interpolation, thematic requirements of climate atlases.

Additionally, the participating countries prepared national reports, where the situation on similar topics (network, DQ, status of database, applied homogenisation and interpolation methods, experiences on climate atlas if any) in the country was summarized. These reports will be published and distributed for a more wide publicity to establish the further co-operation with these countries. The participating countries from the SEE region were Albania, Croatia, Greece, Romania, Serbia, Slovenia and Hungary. The number of participants and lecturers from the SEE region was 18. ECSN strongly supported this action: all non-SEE lecturers except two (one from the Tarragona University, Spain and one from WMO –only by presentation, but not personally-) were ECSN members (Austria, Germany, Netherlands, Norway). It is noted that 3 SEE lecturers were also ECSN members, e.g. Hungarians.

It is planned to continue such type of activities and to look for contacts with countries that were not present in the summer school. Some steps have been undertaken already on bilateral basis: Hungary has an official bilateral co-operation on similar topics with Croatia and Slovenia, and it is planned to extend similar collaborations to other countries in the region.

ENSEMBLES (MeteoSwiss, KNMI)

With the 4th general Assembly of ENSEMBLES, 12-16 November 2007 (Prague), the work on Wp5.1 is completed with as important deliverable the high resolution daily gridded historical data set for European temperature, rainfall and surface pressure. (Universities of Oxford and east Anglia). Other deliverables are the paper on the observational dataset (KNMI), that is submitted to the Int. J. of Climatology and the paper on homogeneity methods (MeteoSwiss), available in draft form.

Millennium - European climate of the last millennium (KNMI)

All daily series in the ECA&D database have been processed into monthly values, thereby strictly following the WMO recommendations. The rationale is that the Millennium community expressed a need for monthly values in a first instance for the calibration of monthly proxies into instrumental terms. Comparisons have been

made between the longest (starting before 1850 and ending after 1990) of these series with corresponding series from GHCN. The outcomes will be published on the ECAD website.

Preparations have been made for a paper in which the benefits of daily data for the calibration of proxies will be explored.

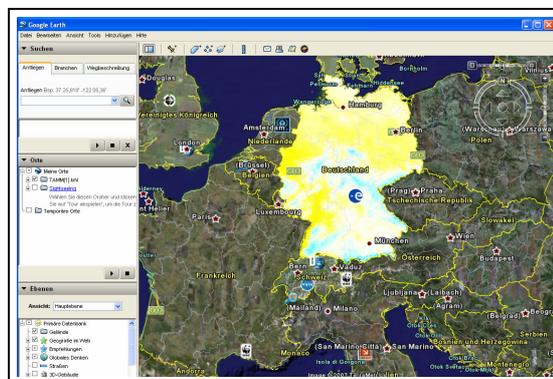
The university of Freiburg organised the Millennium Analytical Workshop on Instrumental and Documentary Data in the Climate Reconstruction of the past Millennium in Europe (Freiburg, 29 – 31 August 2007)

UNIDART-II

DWD continued the development of the UNIDART software. The main focus is on the implementation of new services to access data of further data categories. So far, access services have been developed for climate time series and forecast data sets. A UNIDART service for gridded climate data sets has been realised recently. This service allows the access to remotely stored sets of raster files and files including climate maps. The Web application WebWerdis (Weather Request and Distribution System of DWD) provides a new interface that gives users the possibility to select and download these files. WebWerdis can be called at <http://werdis-cbs.dwd.de/bvbw/bvbwDWD.portal>.

At present, only gridded data sets of DWD are available. Other applications which can take advantage from this new UNIDART component are OGC-compliant Web Map Services (WMS). An OGC WMS produces maps of spatially referenced data dynamically from geographic information. This international standard defines a "map" to be a portrayal of geographic information as a digital image file suitable for display on a computer screen. Map Viewers, e.g. Google Earth, are client programs which are able to connect to WMS servers in order to display the maps. Figure 1 shows a screenshot of Google Earth. A climate map that presents the yearly average between 2001 and 2006 of monthly mean air temperatures for Germany is displayed. A data provider can either host its own WMS server or can use a WMS server of another organisation for the provision of maps build on meteorological data. In the latter case the UNIDART service can be used to transfer the data from the provider to the WMS server.

The establishment of an operational mode of the UNIDART software at KNMI and MeteoSwiss is still in progress.



A new release of the UNIDART software has been developed which allows a secure version of the UNIDART web services. This version needs a host certificate for the server that runs the web services. A user has to authenticate against the secure web service with a client certificate before he can submit a request to the service. Whether the user is authorized to complete the request, will be checked before the UNIDART service tries to execute this request.

Agenda

Training Workshop on the use of satellite data for climate applications, jointly organised by EUMETSAT, DHMZ, WMO and DWD, Zagreb Croatia, 2-5 November 2007

6th ECSN Data Management Workshop, Vienna, Austria, 20-22 November 2007

S-EUROGRID Workshop adjoined on 22-23 November at ZAMG

International Workshop on Rescue, Digitization of Climate records in the Mediterranean Basin, jointly organised by WMO, INM and the Universitat Rovira I Virgili, Tarragona, Spain, 28-30 November 2007.

Twenty-seventh session of the IPCC and press conference, 12-17 November 2007, Valencia, Spain

7th European Conference on Applied Climatology, together with the *8th EMS Annual Meeting*, Amsterdam, RAI, 29 September-3 October 2008

Aryan van Engelen
KNMI, 06 November 2007