

ECSN Quarterly Report October-December 2005

Prepared by the ECSN Manager and the Project Leaders

General remarks

The 26th EUMETNET Council meeting has taken place in Helsinki, Finland, 11-12 October 2005.

The ECSN/HRT-GAR project was approved at the 24th Council meeting as a two-year project dedicated to the preparation of a High Resolution Temperature Climatology in Complex Terrain over a 30-year period. ZAMG was accepted as the Responsible Member and the project will start on 1st January 2006. At the 26th Council meeting the Programme Decisions have been validated and financial support will be given by the countries Austria, France, Germany, Hungary, Italy, Luxembourg, Norway, Switzerland and United Kingdom.

With the purpose to realize a EUROGRID concept and to study the feasibility of a EUROGRID programme, a preliminary project for a Showcase has been worked out. The proposal for the Showcase was prepared by SMHI in close co-operation with ECSN to create and to promote a rational and quality assured climatological production of high resolution gridded data. This EUROGRID Showcase has been presented and discussed at the Council meeting. The importance of the content of the project was undisputed and warmly supported. But it was stated that the costs are too high for such a prototype phase, and the link with other similar activities, such as the developments connected with EEA and ECMWF regarding the INSPIRE directives, and the link with other

ECSN activities, such as ECA&D and ENSEMBLES, have to be improved and integrated in the proposal.

The ECMWF workshop to discuss a potential European Regional Reanalysis project (EURRA) has taken place in Reading, 21-22 November 2005. The future results of EURRA, high resolution meteorological fields with about 2 km resolution covering Europe, will mean an immense increase in potential benefits for Europe related to environment, meteorology, climatology, hydrology, oceanography and to sectors such as energy, agriculture and forestry. The fact that the developments are planned to be realized in accordance with the INSPIRE data policy is of particular importance. The ECSN EUROGRID concept has also been presented at the EURRA workshop, and it looks reasonable to relate the EUROGRID concept to the EURRA approach. With this horizon in mind a revised EUROGRID Showcase proposal will be prepared.

The 5th ECSN Data Management Workshop has taken place in De Bilt, The Netherlands, 7-9 December 2005. The following main topics have been presented and discussed: Data rescue, Databases, Gridding and UNIDART. The Workshop was a real success. About 80 participants were updated on the actual state of climate data management in Europe and professional contacts among experts have been intensified. The ECSN Manager thanked the participants for their active participation and the Workshop organizers, espe-

cially Aryan van Engelen and Maarten van der Hoeven, for their engagement and for their very kind hospitality.

The next combined Conference of the European Meteorological Society (EMS) together with the European Conference on Applied Climatology (ECAC), EMS/ECAC-2006, will take place in Ljubljana, Slovenia, 4-8 September 2006.

The scientific part of the ECAC Conference will be managed by the ECAC Advisory Board (EAB). The first EAB Working Meeting has taken place in Ljubljana, 4-5 January 2006, where the following 12 main topics have been proposed and discussed:

1. Climate prediction and climate variability
2. Climate change detection and climate trends
3. Regional climate modelling and scenarios
4. Statistics in climatology
5. Synoptic climatology and weather types
6. Weather and climate related extremes and risks
7. Climate reconstruction and climate monitoring
8. Information systems in climatology
9. Remote sensing in climatology
10. Agrometeorology and Phenology
11. Human biometeorology, urban climatology and tourism
12. International climate projects and climate programmes

European Climate Assessment & Dataset (KNMI)

The last months of 2005, effort is taken to process new data as provided by the participants and non ECA&D projects. As new data entered the system, new activities needed to be done, such as improving quality control procedures (more data means more exceptions), finalizing the GIS-functionality (displaying far more data on dynamically created maps) and procedures which ena-

ble to process raw data in various formats (as a rule of thumb, almost every participant used own dataformats to deliver data to the ECA&D project) in such a way that this data can be further processed by the ECA&D system. This last point is certainly something that is worth to pick up in the future, for example a development of a general purpose data entry module in the ECA&D system. Experience learned that about 60% of the project time is consumed by transferring the various formats of raw data into the one-size-fits-all format .

Currently, the ECA&D system does now offer all the data (and the corresponding indices, trend and homogeneities) that has been provided so far. Also, the GIS-functionality is now available as well. But work continues, in the year 2006 new data will be inserted into the system.

ENSEMBLES (KNMI, MeteoSwiss)

Daily station series of minimum and maximum temperature, precipitation, air pressure and snow depth are still being collected for the development of the ENSEMBLES high-resolution gridded datasets. The partners MeteoSwiss and KNMI are still working on the quality control and on the development of methods to detect inhomogeneities in the series, while the British partners in the project are investigating several interpolation methods.

A website with more information about the ENSEMBLES gridding project was launched in October 2005:

http://www.knmi.nl/samenw/ensembles_rt5/WP51.html.

At the 5th ECSN Data Management Workshop in De Bilt, a special session was dedicated to grid-

ding. Three presentations about the ENSEMBLES gridding project were given at this workshop. Links to these presentations can be found at the above mentioned website. Along with this workshop, an ENSEMBLES meeting was organized to discuss the gridding project with the four ENSEMBLES partners (KNMI, MeteoSwiss, University of Oxford and University of East Anglia).

The need for long homogeneous climate series with a high spatial and a daily time resolution was recognized at the data management workshop, as well as the need for free and unrestricted exchange in meteorological data. We also appealed for additional daily series for the ENSEMBLES project and have high expectations that more series will be supplied for the project, especially from countries where the station density is currently sparse.

Generate Climate Monitoring Products (DWD)

The GCMP communication platform

<http://www.gcmp.dwd.de>

is maintained on a quasi operational basis since the completion of the project early in 2004. It is continued and developed further concerning the climate monitoring products as well as the number of participating European NMHSs.

Meanwhile the development of a successor platform, EuCLIS, is under way. According to the plans it will be operational by the end of June 2006. Currently the software design is developed. There will be administration tools available to the participating countries by which they can configure the paths to the products they wish to contribute.

Parallel to the development of the EuCLIS platform a proposal for the establishment of a new ECSN project "European Climate Information System", EuroCLIS, will be submitted in spring 2006, a logical further step towards a high sophisticated system for the provision of national and European climate monitoring products on a routine basis. In EuroCLIS the contributions to the EuCLIS platform and the cooperation of the participating countries will be planned and organized.

Alpine Tmap (ZAMG)

The project aims to prepare a High Resolution Temperature Climatology for the Greater Alpine Region over a 30yrs period. The official project start has been dated with 1st of January 2006. However, a lot of pre-project work has been carried out.

Data collection

Data collection was characterised by an intensive search for existing temperature data for the period 1961-1990 with the leading principle to achieve the highest possible spatial density. The original number of collected single station datasets was approximately 1800, but not all of them finally met the requirements in terms of completeness and data-quality. Moreover, the problem of imprecise station coordinates in respect to the now existing highly resolved elevation and land-use grids had to be solved. For Italy, Bosnia and Herzegovina some of the sampled datasets had either gaps or did not cover the entire 1961-90 period. The vast majority of incomplete datasets could be gap-filled and/or adjusted using highly correlated comparative station datasets assuming constancy of the inter-station tm-diffe-

rences. Finally a network of 1704 stations passed the location-correction and the gap-filling and sample adjustment procedures.

Adjustments to a common mean-calculation algorithm

Observation hours and calculation algorithms differ from provider to provider and have to be adjusted before being analysed. The data were provided based on three different algorithms for the calculation of means: 813 based on the Kämtz-Formula, 481 as "true means" (TRMs), either based on hourly values or pre-adjusted to TRMs, 402 based on the mean daily extremes. Kämtz-formula turned out to be the optimised estimate for the true means and its maximum deviations of 0.2K from TRMs can be tolerated for climate mapping compared to other uncertainties. This allowed more than half of the data to be included without change, to apply minor adjustments to those with TRMs and to concentrate on finding feasible solutions for the stronger adjustments necessary for the 402 French and Italian stations.

Planning of the project kick-off meeting in Vienna, February 2006

The kick-off meeting will take place in Vienna, 2-3 February 2006 at ZAMG. The Workshops intends to bring together ECSN members, plus for the project relevant data providers, but it will also be open for external project members and observers.

Dr. Walter Kirchhofer
MeteoSwiss