

ECSN Advisory Committee

Minutes of the 11th Meeting, Exeter, UK, 21-23 June 2006

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Participants

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|-----------------------------|----------------|
| Ingeborg Auer | Austria |
| Marc Vandiepenbeeck | Belgium |
| Raino Heino | Finland |
| Philippe Dandin | France |
| Peer Hechler | Germany |
| Sandor Szalai | Hungary |
| Aryan van Engelen | Netherlands |
| Eirik Forland | Norway |
| Antonio Mestre | Spain |
| Erik Liljas | Sweden |
| Christof Appenzeller | Switzerland |
| Walter Kirchhofer (Minutes) | Switzerland |
| John Prior | United Kingdom |

Retirements

Hartwig Dobesch, ZAMG

Tom Sheridan, Met Eireann

Bengt Dahlström, SMHI

New Delegates

Ingeborg Auer, ZAMG

Liam Keegan, Met Eireann

Erik Liljas, SMHI

1. Opening of the Meeting and Welcome

On behalf of the UK Met Office, David Griggs, Director Climate Research, welcomed the Delegates very warmly in the Auditorium at the new Head Quarters in Exeter. He underlined the importance of the EUMETNET Optional Programme ECSN and he affirmed that the UK Met Office will play a more active role in the context with ECSN.

The ECSN Manager, Walter Kirchhofer, welcomed the participants to this EAC Meeting. He thanked Director David Griggs and John Prior for their kind invitation and for organizing the Meeting. Special greetings were going to Ingeborg Auer, Philippe Dandin, Erik Liljas, Peer Hechler and Antonio Mestre who were joining for the first time an ECSN Advisory Committee Meeting.

2. Adoption of the Agenda

After some minor changes, the agenda was adopted.

3. Approval of the Minutes of the 10th EAC Meeting in Copenhagen

The Minutes of the 10th EAC Meeting in Copenhagen were approved without any changes and with thanks to the ECSN Manager.

4. Reports

4.1 EAC Chairman

Aryan van Engelen started with a sincere welcome to all Delegates and expressed his gratitude. The WMO status of the global climate 2005 shows some of the climate events that had a certain impact on our work in the last intersessional period. He mentioned the severe floodings in Eastern Europe (May-August), the severe summer drought and forest fires in Western Europe and also the dryness of last spring in the Mediterranean area. We expect that coming summer temperatures will be high in that area. Therefore we see two indications: first the Western Mediterranean sea-water temperatures are higher than normal, and secondly, due to the dry spring, the ground is also very dry and the energy coming from the summer sun will not be used for evapotranspiration but directly for heating.

He stipulated some items that are related to our work and attracted his attention:

1. Last August the COPES (the Coordinated Observation and Prediction of the Earth System) programme was launched as part of WCRP strategic framework 2005-2015. It offers us a baseline statement for our activities by stating that: The aim of COPES is to facilitate analysis and prediction of earth system variability and change for use in an increasing range of practical applications of direct relevance, benefit and value to society. A statement in which he recognizes many of the aims of ECSN.
2. In the beginning of the last summer holidays he launched a questionnaire concerning DARE needs and prospects to all NMHS's of RAVI. He really appreciated the

extensive responses and he thanked for such a strong support.

3. At the RAVI-XIV meeting in Heidelberg, 7-15 September 2005, the conception of a closer collaboration of our EAC with the RAVI WG on Climate-related Matters has been discussed. Especially attention was paid to the prospects of a so called RCC's, being of direct importance to the ECSN NMHS's.
4. From 3-10 November 2005 the 14th Session of the Commission of Climatology, CCI XIV, took place in Beijing. Quite many ECSN Delegates attended this very important event. He congratulated Pierre Bessemoulin for his election as president of CCI and Raino Heino for his election as chair of OPAG 1 on climate data and data management.
5. He received many interesting and relevant papers related to our work. He mentioned the Klimastatusbericht from DWD and the latest update of the DMI daily climate data collection 1873-2005. He suggested that in the future - for the sake of mutual exchange of information - we could arrange on the ECSN web site links to such publications and links to the formal web sites of our institutes.

4.2 ECSN Manager

Walter Kirchhofer expressed his thanks to all the EAC Members for their substantial support. A special thank went to the project leaders. Without their leading functions the ECSN Programme could not succeed. A very warm thank went also to Aryan van Engelen, EAC Chairman, and to the retired ECSN Delegates for their active support.

Current projects:

- a) European Climate Assessment & Dataset
- b) Generate Climate Monitoring Products
- c) ENSEMBLES
- d) Alpine Tmap

On 4th April 2006 , the 27th EUMETNET Council agreed to establish the Showcase EURO-GRID as an ECSN project, to create and promote a modern and rational quality assured production of climatological services within the European National Meteorological and Hydrological Services, based on information from high resolution gridded data. The focus is on infrastructural, non-commercial, climatological applications.

The combined Conference of EMS with the European Conference on Applied Meteorology, EMS/ECAM, has taken place in Utrecht, 12-16 September 2005. This EMS/ECAM Conference contained also a substantial part of climatological topics which were assisted by the ECAC Advisory Board (EAB) of ECSN.

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.

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) and by selected conveners. This EMS/ECAC-2006 Conference will grow to a big event, about 500 oral and

poster presentations are announced.

Aryan van Engelen, KNMI, has invited the ECSN Manager to an informal Consulting Meeting to De Bilt, 17-18 May 2006. In a sense of a preparatory approach for the coming EAC Meeting in Exeter, the status of the actual projects and the implementation of new projects activities have been discussed.

5. Status Reports on ECSN Projects

5.1 European Climate Assessment & Dataset (KNMI)

A geographical overview was presented of all participating countries. It was especially noted that Belarus was still not yet able to participate. In the GCOS conference in Leipzig the representative of Belarus expressed his commitment and he was subsequently formally invited by a letter. Up to now no response was received.

An overview was presented of the increase of datasets since the Copenhagen meeting: 409 stations, all with free downloadable series of temperature and precipitation. ECA&D is the platform for data collation for ENSEMBLES Wp 5.1. Now, with the introduction of the series collected for ENSEMBLES, the ECA&D database contains 1864 stations, of which 1100 stations provide free downloadable series of next to temperature and precipitation also pressure, sunshine, cloudiness, humidity and snow depth. Altogether 7301 series.

Since Copenhagen the ECA&D web portal is extended by a map server which allows the user to geographical zooming and gives an on map access to the metadata of a station (station setting, characteristics of available series).

In the beginning of 2007 the launching of the third assessment report is foreseen. An overview was given of the various composing chapters and the input, generally in the form of text-boxes, will be prepared by international partners as Slovenia, Hungary, Austria, Poland, France, Finland, Portugal, Italy, Latvia, Ireland, Switzerland and The Netherlands.

The collaboration of ECA&D and the Millennium project was introduced. Millennium is an EU Fp6 project in which 40 partners (Universities, GTI NMHS's) collaborate for a detailed reconstruction of the climate of Europe since the last 1000 years. KNMI is the leader of Workpackage 1 that will provide, based on the ECA&D-ENSEMBLES platform, the access to long instrumental climatic time series of temperature and precipitation, that will be used for the calibration of paleoclimatic models and proxy climatic data. ECSN is considered in the Millennium consortium as the most authoritative body for HQ meteorological data.

5.2 Generate Climate Monitoring Products (DWD)

GCMP, an ECSN project which had been completed successfully in 2004, is a web platform operated in a quasi-operational mode allowing access to national and European climate monitoring products. Operated by DWD, meanwhile 18 NMHSs contribute to this platform.

The RA VI Bulletin is a joint effort of RA VI Members resulting in a yearly publication on the climate in RA VI. Co-ordinated and edited by DWD, about 40 Members (out of 49) provide input every year. The RA VI Bulletin can be accessed electronically via GCMP.

Most recently, the GCMP system and responsibi-

lity has been moved from DWD-Hamburg (R. Zöllner, J. Gerpott) to DWD-Offenbach (P. Hechler, P. Bissolli, M. Rocek). It is expected to switch operations from GCMP to EuCLIS by January 2007.

Both GCMP and the RA VI Bulletin can be considered as excellent examples of international collaboration capitalising on the competence and know-how of the Members. WMO has asked to utilise both activities to contribute to WCDMP activities.

5.3 Alpine Tmap (ZAMG)

Alpine Tmap, the ECSN project „High Resolution Temperature Climatology in Complex Terrain - demonstrated in the test area Greater Alpine Region (GAR)“.

For the Alpine region, a number of national climatologies are representing national or regional temperature distributions, (e.g. for Austria, Croatia, France, Hungary, etc.). However, all those are not comparable at all, due to different methods and scales. The final goal for the project is to provide a temperature climatology for the GAR (4-19°E, 43-50°N) in monthly resolution in a spatial resolution of 1 km. In addition to the value itself, the product will allow for various applications. For example, a merge of the GAR climatology and the HISTALP temperature data will provide high resolution monthly temperature fields back to 1760. The method was successfully applied to the HISTALP precipitation data and the Alpine precipitation climatology in a collaboration of the University of East Anglia, ZAMG and Meteo Swiss.

The kick-off meeting took place in Vienna on 2-3 February 2006, gathering participants from

Switzerland, Slovenia, Norway, Croatia, Bosnia, Herzegovina, Hungary, Czech Republic, Italy and Austria. It was agreed to form a core group for spatial modelling (CGSM) with one representative from Switzerland, Italy, Slovenia, Croatia, Bosnia & Herzegovina, Hungary, Germany and France. The lead of the group was given to ZAMG. However, the group is open and other participants may join. During the ECSN Meeting the UK's representative showed its interest to send representatives into this core group as well. It was decided to send out the report of the kick-off meeting to all EAC Members.

In the meantime, ZAMG has collected the data of 1885 stations and could adopt 1733 stations. 1696 of those could be used for the first analyses, 37 will be used later due to their special locations (eg. urban stations). The coordinates of all stations were controlled and corrected if necessary, by contacting the data holders and using metadata. All series were adjusted to the Kämtz mean, the most common mean calculation algorithm of the respective NMSs. Utilising the optimal data situation of the WMO's reference period all data were adjusted to the mean 1961-1990. The period 1971-1990 is foreseen to be prepared in a later step.

First analyses were undertaken by calculating multiple linear regressions using altitude, latitude and longitude for the entire GAR, and the respective residuals. A stepwise linear regression was applied to all stations above 1500 m, the so called "high Alpine region". For the lower elevated sites the input of the CGSM for the computation of sub-regional MLRs has to be taken into account, however sub-regions have to be large enough to ensure robust statistical models.

5.4 Implementation of the Showcase EURO-GRID project (SMHI)

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 at the 26th EUMETNET Council meeting in Helsinki. 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 the work to revise the

EUROGRID Showcase proposal has been started.

At the 27th EUMETNET Council meeting in Toulouse, the ECSN Manager has been invited to present the revised proposal on the Showcase EUROGRID project. Such an approach is fundamental to improve the EUROGRID concept accordingly, so that individual NMHSs and the participating network of European NMHSs can benefit as much as possible from a joint European project. At this 27th Council meeting an overwhelming vote supported the revised proposal and declared it as an important step forward in European climatology. Unfortunately, in a second vote, only a small majority of 7 Member countries, namely Austria, Iceland, The Netherlands, Norway, Spain, Sweden and Switzerland have been ready to declare their financial support for this Showcase EUROGRID project. But with the support of this small core group the project can be launched! The Council requested the CO to send out a Call for Proposals to become Responsible Member of the Showcase EUROGRID project.

After the Council meeting the ECSN Manager informed the EAC Members that they have to discuss the fine tuning of the project in order to improve the partnership and to convince the aside standing NMHSs to come on board of the yachter EUROGRID. A European partnership is fundamental, also because of the costs.

At this EAC meeting the Delegates discussed the Showcase EUROGRID project in depth. The decision was to postpone the start of the project to 1st January 2007. It was also indicated that the project should be extended in time to 24 months. Furthermore, as a recommendation to the proposal-writing for the potential Responsible Member (SMHI), the cost of the project should be reduced

to cover just the part of management and workshops.

The reason behind these recommendations was, that the EUROGRID concept is a key concept within the EUMETNET climate undertakings. Also the „big“ EUMETNET Members have this view and the concept is supported by the Council. On the other side, the low number of participating NMHS's in the project is small and those that normally provide the essential funding are not there. The situation as it stands from the Council should create a heavy burden on Spain. Thus, the new postponed proposal will take these things under consideration. The new proposals for the ECSN EUROGRID Showcase project will be worked out in informal contacts with Météo-France, DWD, UK Met Office and other NMHS's in order to have their agreement to contribute in kind. In that way we will have an ECSN project that is financed in a way similar to COST Actions. It will be easier for the NMHS's to enter the project by supporting it mainly by manpower.

Another problem with the project is the relation to EURRA. In the coming months we have to contact ECMWF, and perhaps also EEA, to find out the actual situation.

The potential Responsible Member (SMHI) has the intention to revise the proposal well in advance before the 29th EUMETNET Council meeting in spring 2007. This new proposal should provide the Council with evidence on acceptable progress. It is up to the new RM to assemble an editorial board to assist the proposed undertaking.

6. Status Reports

6.1 ENSEMBLES (KNMI, MeteoSwiss)

ENSEMBLES consists of 10 research themes,

while each research theme is divided into several work packages. KNMI and MeteoSwiss co-operate in the work package that involves the development of a daily resolution gridded dataset for Europe.

KNMI and MeteoSwiss started in February 2005 with the collation, quality control and homogenization of data which will be used for the gridding. The gridded datasets will include several climate variables, as minimum/maximum temperature, precipitation, air pressure and snow cover. The datasets will go back as far as station availability allows, 45 years or possibly even longer.

In March 2006, two deliverables of the ENSEMBLES project were completed: an assessment of the available station density for the gridding and daily data quality/homogeneity, and a report on the analysis of possible gridding methods. Both deliverables can be downloaded from the ENSEMBLES WP5.1 website: http://www.knmi.nl/samenw/ensembles_rt5/WP51.html. For more information about the ENSEMBLES gridding project see also this website.

As the ENSEMBLES dataset is embedded in ECA&D, the homogeneity of each temperature and precipitation series is tested with the absolute homogeneity test of Wijngaard et al. (2003) that is implemented in the database. Additionally, at the same time, a first version of the ENSEMBLES dataset has been tested by MeteoSwiss using an automated relative homogenization procedure. It combines a method to derive deviation series (Steinacker et al., 2000) with Alexandersson's homogeneity test (Alexandersson, 1986). The results of this relative procedure revealed that only 9 to 32 % of the series are homogeneous for the period 1960-2000, depending

on the climate variable. A journal paper in which this homogeneity procedure is tested and the results for the ENSEMBLES dataset are described is in progress.

At the same time, new series have been collected and a second version of the dataset has been created. The number of series available for the gridding project is now 1357 for maximum temperature, 1361 for minimum temperature, 1218 for mean temperature, 1838 for precipitation, 266 for air pressure and 154 for snow depth.

Further progress has been made investigating methodologies for gridding daily station data. Much effort has gone into improving the kriging method so that it now provides the most skillful estimates of all methods in a cross validation exercise. This is very promising as extensions to the kriging method using simulations provides one of the most robust ways to assess spatial uncertainty arising from the interpolation process. The conditional interpolation method is now implemented and a comparison is currently being made with the other methods. Since this method estimates area average rainfall directly we can not assess its skill using the cross validation procedure that has been used until now. The reduced space optimal interpolation method was investigated as another potential method but deemed inappropriate for this exercise due to insufficient spatial density of the station network. Our final comparison will therefore focus on five interpolation methods.

6.2 UNIDART-Uniform Data Request Interface (DWD)

The Uniform Data Request Interface Programme (UNIDART) is aimed at the development of services to access meteorological data and products

from distributed databases through one Web portal. A Web interface allows registered users to log on and get access to data stored in, and controlled by the participating meteorological centres. The current project phase II is scheduled to be finished by the end of 2006.

Status

The UNIDART software is currently running in a non-operational environment at DWD and Met. Norway. A central metadata catalogue used by UNIDART is hosted at DWD. Efforts are under way to implement the system at KNMI, FMI and MeteoSwiss. Several EUMETNET Members expressed their interest in the system, whilst some raised objections (e.g. security policy reasons). With the UNIDART software available and prototypes implemented, the project reaches its natural end by the end of 2006.

Meanwhile a call for participation as data provider has been launched by DWD inviting all UNIDART-contributing NMHSs to join the system.

Note: A NMHS can use the UNIDART software to connect its national climate data base to the UNIDART data grid; prerequisite is the existence of a relational data base containing climate time series and of a server machine which is accessible from the Internet and on which the UNIDART software can be installed.

An important feature of UNIDART is the description of the own database by agreed metadata standards (WMO metadata standard based on ISO 19115 and 19139). UNIDART provides means to develop the required metadata documents.

The potential use of UNIDART for the data collection for the EUROGRID project proposal is envi-

saged by related work package 2 „Test of the UNIDART system“.

DWD is using the UNIDART software to meet national requirements for climate data exchange. Furthermore UNIDART is used within a Virtual Global Information System Centre (VGISC) portal prototype. GISCs are considered special nodes in the future WMO Information System (WIS) architecture. A related joint CBS/RA VI contribution comprises a prototype implementation of a virtual GISC. Whilst the prototype VGISC Web interface provides the features for the communication with the users, UNIDART services submit the final user request to the corresponding data centres. Within the VGISC prototype application, DWD provides its related climate data via the already implemented UNIDART interface.

Outlook

- extension of number of participants (->call for input);
- use of UNIDART within related national and international DWD activities;
- use of UNIDART in the WIS approach.

A DWD proposal for a EUMETNET-UNIDART phase III is currently not envisaged.

7. New Initiatives

7.1 European Climate Information System EuroCLIS (DWD)

EuCLIS was introduced as the GCMP successor platform, and discussed accordingly, at the 2nd Workshop on the ECSN Project GCMP (Hamburg/Germany, 25-27 September 2002). In accordance with the workshop's recommendations, the new system had been specified in detail afterwards. The development phase started in December 2005, the system is envisaged to be available

in September 2006 and operational by January 2007.

Overall implementation strategy(-> 2006-2007):

Note: The abbreviation EuCLIS is used as a synonym for the technical successor platform to GCMP. EuroCLIS is used as a synonym for efforts to establish a co-ordinated European climate monitoring utilising the infrastructure tool EuCLIS.

The technical platform EuCLIS is currently being realised by the software company MeteoSolutions (Germany) as a voluntary contribution of DWD. The system shall be implemented at DWD in the course of August for testing. After an acceptance review at DWD in September it is envisaged to brief the GCMP participants in order to implement the partners' GCMP contributions into EuCLIS. Consequently it is planned to switch operations from GCMP to EuCLIS by January 2007. For 2007 it is planned to raise the number of participating institutions, first of all RA VI NMHSs, as well as the number of data, products and services on a voluntary basis.

Taking into account the resources needed to move from one system to the other as outlined above, it is proposed to focus the ECSN-GCMP/EuCLIS/EuroCLIS-activities in 2006 and 2007 on EuCLIS, its technical implementation and operational readiness as an RA VI-wide function.

Hence an EuroCLIS proposal in order to tackle co-ordinated operational climate monitoring activities of RA VI Members can not be expected before 2008. Such a proposal might address the further development of European monitoring products, the extended use of both remote sensing and model output data for climate monitoring activities in addition to in-situ data, the harmoni-

sation of the national climate monitoring products, the development of products for dedicated climate applications and capacity building measures.

The EAC is invited

- to support the outlined approach;
- to encourage the ECSN NMHSs, and also the non-ECSN member NMHSs within RA VI, to contribute to the EuCLIS platform with related products and services.

Strategic considerations (-> from 2008 onwards): The EuCLIS system is seen as a potential nucleus for a RA VI RCC function. Designed as a node of a respective network, the platform is intended to provide a given set of minimum climate monitoring products and services as approved and provided by the RA VI Member community. Following RCC procedures to be implemented, Members will be invited to contribute national products as well as products and services covering the whole RA VI, or at least parts of it, in a formalised manner. Consequently, the EuCLIS platform, together with the related DWD product suit, will be DWD's contribution to the RA VI invitation to provide RCC-related services on a voluntary basis up from 2007.

Note: The evolution of RA VI RCC functions follows the subsequent milestones: requirements and capabilities analysis (done), RA VI resolution on the implementation of a RCC pilot (done), provision of services on a voluntary basis, elaboration of a designation procedure and rules of eligibility as well as provision of an implementation plan template (WG CRM, 2006), overall RA VI RCC network concept, detailed implementation plan, consolidation of services, designation by RA VI-XV.

The ultimate ambition is a co-ordinated European climate monitoring based on the expertise and resources of the RA VI Members. This aim shall be achieved strictly along the mandate of the RA VI Members and within the WMO framework.

An excellent example for a comprehensive climate monitoring and analysis presentation is provided by the NCDC/US (<http://lwf.ncdc.noaa.gov/oa/climate/research/monitoring.html>). A co-ordinated operational European climate monitoring function, however, shall be based on optimised input data, local know-how and more sophisticated interpolation techniques.

The RA VI RCC requirements questionnaire showed a significant Members' interest in climate monitoring as a potential RCC function. In order to specify this requirement, and in the context of Res. 5.1/2 of RA VI-XIV, it is planned to launch another questionnaire to explore in more detail the Members' present and future climate monitoring requirements as well as their willingness and ability to contribute products and services (questionnaire to be sent out in 2006, resp.: P. Hechler).

Partner involvement (-> Sept.-Dec. 06):

The EuCLIS platform will be implemented on a DWD Bea Weblogic Server, its development complies with the J2EE standard, the metadata will be documented in accordance with related ISO- and UNIDART rules and the system fulfils the requirements of the German Accessibility policy. In particular, it allows to distinguish between open and restricted user groups.

Each partner NMHS will be invited to appoint a local administrator. The administrator inserts

the information on the products/services intended to be provided into the system using a special administration tool accessible via the WebBrowser. With this approach each country bears responsibility for the products and services provided. The local administrator will be able to insert national as well as European / RA VI products. The overall system administrator is located at DWD.

Up from 01 September 2006 three NMHSs, Météo-France, UK Met Office and the Met Institute of Belgium will volunteer to check the system from abroad (... inserting some example products via the administration tool, checking restricted/open access, modifying products ...). This test will be part of the acceptance review of the system. A preliminary manual in English and German will be available then.

Starting by mid of September the GCMP contributing NMHSs will be briefed in order to implement the GCMP products contributions into the EuCLIS system.

7.2 Carpathian basin climatology and information system (HMS)

Introduction:

The Carpathian basin is lacking in unified, climatologically established processing. The last comprehensive works are from the beginning of the 20th century. The region is open to the south and surrounded by the Carpaths. The central part is quite even, but very complex near the borders.

Nowadays, 9 countries belong to this region: Austria, Croatia, Hungary, Romania, Serbia, Montenegro, Slovakia, Slovenia and Ukraine. All of these countries are members of WMO, provide data to different international databases, own detailed national climatological databases, publish

several books and articles about the smaller scale climate of the countries, but there is not enough attention paid to fitting of data quality among the different countries, near boarder areas and to the high resolution interpolation.

Objectives and methods:

The main goal of the intended collaboration is to discover the fine scale climatology of the Carpathian basin, to investigate the climate variability and change and their possible regional features.

The lowest planned resolution of mapping will be 1 km. The minimum number of stations is according to the CLIMAT stations with monthly temperature and precipitation time series, at least since 1961.

The national Quality Control QC and interpolation practice should be compared. The QC -with special regards to the homogeneity- has to be approved by the national methods. Similar procedure is suggested for the interpolation methods.

Deliverables:

This project will provide monthly average climatological maps of the region, first of all for temperature, with some possible precipitation applications, and climate variability and change investigations based on comparable time series.

EAC proposal:

The Delegates have discussed the project proposal „Carpathian basin climatology and Information system“, presented by the Hungarian Met Office, and underlined its importance. But because a large number of the envisaged participating countries are not ECSN Members, EAC did recommend to prepare a preliminary proposal and to present it first to the 28th EUMETNET Council

meeting, in order to get a feed back concerning the political and the financial situation.

7.3 European approach on climate change scenarios (MeteoSwiss)

C. Appenzeller provided an overview on European activities related to the development of climate change scenarios and raised questions whether ECSN should play a more active role. In favor for such a position are the facts that many customers need climate data to make optimal decisions in various different sectors. Adaptation to climate change needs not only past but also future climate data (that need to be derived from model based climate change scenarios). The national climate services have a long experience in providing past climate data. Hence one might argue that they should strengthen their role in providing future climate data. After a stimulating discussion it was clear that the involvement of the different NMHSs in such activities varies widely. As a first step it was decided to collect the available national reports (related to national climate change scenarios) on the ECSN web.

7.4 Partnership of ECSN and the WMO RA VI WG on Climate-related Matters (DWD)

Both ECSN and the WMO RA VI Working Group on Climate-related Matters (WGCRM) run activities aiming at improving the RA VI Members' climate-related capabilities by means of international co-operation. Hence, it is proposed to consider the development of a strategic partnership of both groups, resulting e.g. in a co-ordination of activities in domains of common interest and in an optimised exchange of information.

General remarks:

Both ECSN and the WGCRM provide excellent

opportunities to strengthen the Members' climate-related capabilities in the framework of EUMETNET and in the WMO context. The related potential can be exploited even more efficiently by joint actions. Especially ECSN has the potential to act as nucleus for RA VI-wide activities.

Examples of concrete collaboration:

- Evolution of the RA VI RCC network;
- Achievement of a co-ordinated European climate monitoring capability;
- Facilitation and simplification of data exchange;
- Close exchange of information.

EAC proposal:

The Delegates have discussed the proposals made by P. Hechler, Chair of the re-established WG on Climate-related Matters, and they warmly support the establishment of a potential ECSN - WG-CRM partnership.

8. Meetings and Conferences

8.1 EMS/ECAC-2006, Ljubljana, September 2006

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 is managed by the ECAC Advisory Board (EAB) and by selected conveners.

The ECAC Conference will contain the following 12 main topics:

1. Climate prediction and climate variability
2. Climate change detection and climate trends
3. Regional climate scenarios
4. Statistics in climatology
5. Synoptic climatology
6. Weather and climate related extremes and risks

7. Climate reconstruction and 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 programmes

This EMS/ECAC-2006 Conference will grow to a big event, about 500 oral and poster presentations are announced.

8.2 EMS/ECAM-2007

The next combined Conference of the European Meteorological Society (EMS) and the European Conference on Applied Meteorology, EMS/ECAM-2007, will take place in Madrid - El Escorial (EuroForum), 1-5 October 2007.

This EMS/ECAM Conference will possibly also contain a substantial part of climate topics, assisted by ECSN.

8.3 ECSN Data Management Workshop, 2007

Ingeborg Auer has informed that ZAMG has agreed to host the 6th ECSN Data Management Workshop in Vienna, probably in November 2007.

The ECSN Manager thanked for this kind invitation.

8.4 EMS/ECAC/ECAM, 2008

Aryan van Engelen, Chair EAC, has risen the question, whether the EAC should take action and plead to combine the ECAC and the ECAM Conferences.

After a short brain storming, the Delegates came to the conclusion, that this item has to be postponed because of the lack of a basic paper.

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9. Other matters

9.1 Brochure on ECSN activities

The evaluation of the Questionnaire on EUMETNET Programmes has clearly shown up the lack of visibility on the ongoing ECSN activities. This unsatisfied situation led at the last two EAC meetings to discussions to create an ECSN brochure.

At this EAC meeting the Delegates stated that such an approach should rather be realized in connection with a redesign of the ECSN Website. In this context it was also mentioned to implement a neutral ECSN Internet address in order to get a common ECSN appearance.

9.2 Access to climate data stored in the NCDC World Climate Data Centre (Meteo-France)

Pierre Bessemoulin, President of CCI, informed the ECSN Manager about the situation concerning the NOAA National Climate Data Center (<http://www.ncdc.noaa.gov>) and he proposed to adopt a common action towards NCDC.

On line „access to international data“ the access is denied for a list of countries, mainly for the European ones. It appears that NCDC never asked, neither for permission to include additional data within a database, nor for possible conditions that we could have put on the data. It seems that NCDC does not fulfil its role of a World Data Center, as it does not offer free access to essential data to anyone. The idea is to agree on a common action towards NOAA/NCDC aiming at defining a kind of MOU, including the free access to all essential data and the identification of countries putting conditions on additional data.

After a short discussion, Philippe Dandin, Météo-

France, proposed to act and to take the lead in tackling these kind of problems with NOAA/NCDC, and he will inform the EAC in due time.

9.3 EU proposal for the development of a European Severe Weather Database

Some National Weather Services have been approached by the WG on ESWD European Severe Weather Database, in order to collaborate with the WG on ESWD in connection with an EU proposal for the development of a severe weather database (see <http://www.essl.org/ESWD/>).

It was discussed whether such a European database should not rather be managed and implemented within the future European Regional Climate Centres, whose missions should also cover this type of information exchange.

Peer Hechler, DWD, has given some additional information about the actual status of ESWD and proposed to consider such an approach in the framework of a new EuroCLIS project.

10. National activities

John Prior, UK Met Office, presented the new Head Quarters in Exeter and gave a brief overview on the history and on the climat units of the UK Met Office.

The Climate Units relay upon:

- Network managements
- User requirements
- Site representativity tools (GIS based)
- Automatisisation-trial
- Met monitoring and central data collection
- Data quality control
- Data bases
- Develop analysis and presentation techniques
- Prepare UK climate statistics

- Develop databases and interfaces
- Produce monthly/seasonal/annual summaries
- Dissemination of climate information
- Paper on climate trends analysis
- Applied climatology, e.g. energy, transport, hydrology and construction
- Participation in ECSN activities

Rob Allan, Hadley Centre, infomed about the project activities on Long Historical Instrumental Data Sets, as instrumental series reconstructions, sea level pressure time series in Europe and about the RECLAIM (REcovery of Logbooks And International Marine data) project.

He pointed out that the Hadley Centre would welcome closer ECSN collaborations and partnerships in data rescue and digitisation initiatives.

11. Date and place of the 12th EAC Meeting

Date and place of the 12th EAC Meeting in 2007 are open, but pobably in June and on invitation of the new Responsible Member for ECSN.

12. Closure of the Meeting

The EAC Chair, Aryan van Engelen, and the ECSN Manager, Walter Kirchhofer, thanked all the participants for their engagement. They congratulated the organizers, especially John Prior, for their kind hospitality. It was a pleasure to meet in Exeter at the UK Met Office Head Quarters.

The Meeting was closed at 13:00h on the 23rd of June 2006.