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Testbed 2014

From June 2 to 27 2014, the third edition of the ESSL Testbed took place in our ESSL Research and Training Centre in Wiener Neustadt, Austria.



2014

ESSL Testbed

The ESSL Testbed is a project to enhance severe weather forecasting across Europe. The Testbed provides forecaster training, testing of forecasting tools, and is a platform for interaction for researchers and forecasters, who attend the Testbed typically for one week.

This year's Testbed was again very successful with an attendance of 50 participants from 14 countries. The participants and ESSL staff engaged in an intense exchange of knowledge about forecasting convective severe weather.

This year, two new products of the DWD were under evaluation: the vertically integrated liquid water (VIL) and VIL-track and the rotation and rotation-track. A new version of the Mesocyclone Detection Algorithm product was evaluated as well as an integrated visualisation into the Testbed nowcast display of the products: NowcastMix by DWD and the Overshooting Top Detection by Kristopher Bedka.

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Verification and overshooting top detection algorithm

Posted on June 18, 2014 (14:32 UTC) by admin

This week severe weather is likely to occur mainly in Italy and Balkan Peninsula. As usually, we began our day with Pieter's verification of previous day1 and day2 forecasts. Quick look on them below:

Day 2 Forecast: valid Tue 17 Jun 2014 06:00 - Wed 18 Jun 2014 06:00 UTC
Issued: Mon 16 Jun 2014 14:38 UTC, Forecaster: ESSL TESTBED

RECENT POSTS

- Verification and overshooting top detection algorithm
- Stormchasing presentation
- Is the level 3 for Albania too much?
- The person behind this blog
- Week no. 3

RECENT COMMENTS

The following products are once more part of the Testbeds product evaluations: GLD360 by Vaisala and COSMO-DE-EPS, now including vertically integrated total water and total graupel. The Testbed activities were posted on the Testbed blog on a daily basis: <http://www.essl.org/testbed/blog/>.

In 2015, the Testbed will take place from 25 - 29 May, 1 - 5 June, 15 - 19 June and 22 - 26 June at our ESSL Research and Training Centre in Wiener Neustadt, Austria. The registration is now open.

For further information have a look at <http://www.essl.org/cms/essl-testbed/> or contact **Magdalena Pichler**, e-mail: testbed@essl.org

RAIN Project has started

Since May 2014 the ESSL is engaged in the new FP7 EU-project RAIN. ESSL is leader of Work Package 2, dealing with Hazard Identification.

The EU-project on Risk Analysis of Infrastructure Networks (RAIN) will evaluate the vulnerability of Europeans transport, energy and telecommunication infrastructure, and develop strategies to minimise the impact of extreme weather events on these networks. The project plans to develop early warning systems, decision support tools and engineering solutions to ensure rapid reinstatement of the network. This will improve reliability of critical infrastructures and reduce disruption for citizens. Further information can be found on the RAIN website: <http://rain-project.eu/>.



As part of the RAIN project, ESSL organized a workshop jointly with the project partners at the **Freie Universitaet** of Berlin, that brought together very interested stakeholders and the RAIN researchers. Different extreme event types were actively discussed, and a panel discussion at

the end of the workshop tried to nail down what we can learn from past events. The discussion revealed how different needs from CI stakeholders can be, and that regarding warnings individual arrangements between CI providers and a weather service will often be the optimum solution.

ESWD summary 2014

In 2014, the ESWD has been expanded by 12,687 severe weather reports (as of 18 March 2015), which is a new record high of reports in any single year (Fig. 1.). Most of these reports, 4331 (34 %), are related to the weather type severe wind gusts, followed by the types heavy rain with 3438 reports (27 %) and large hail with 2432 reports (19 %). The absolute numbers and percentage in terms of weather type are listed in table 1. The spatial distribution of all reports is shown on the map below.



Apart from 2 reports all of the 2014 related reports passed the first quality control level QC0+ and no fewer than 91 % are considered “confirmed by reliable sources”, i.e. QC1 or higher and thereby usable for most analyses (Tab. 2). The absolute number of reports in the ESWD up to 2014 exceeds 79 500.

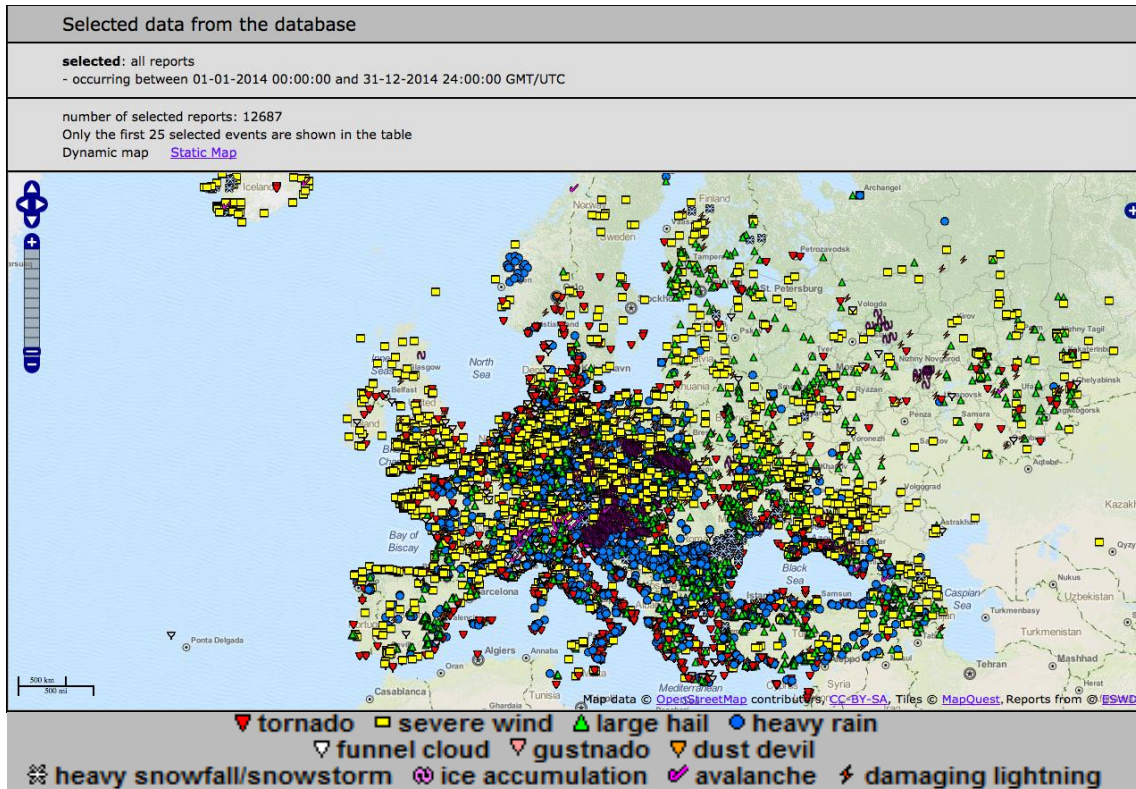


Figure 1. All 12,687 ESWD reports from 1 January to 31 December 2014 (as of 18 March 2015). Symbols of severe weather events overlap in some areas.

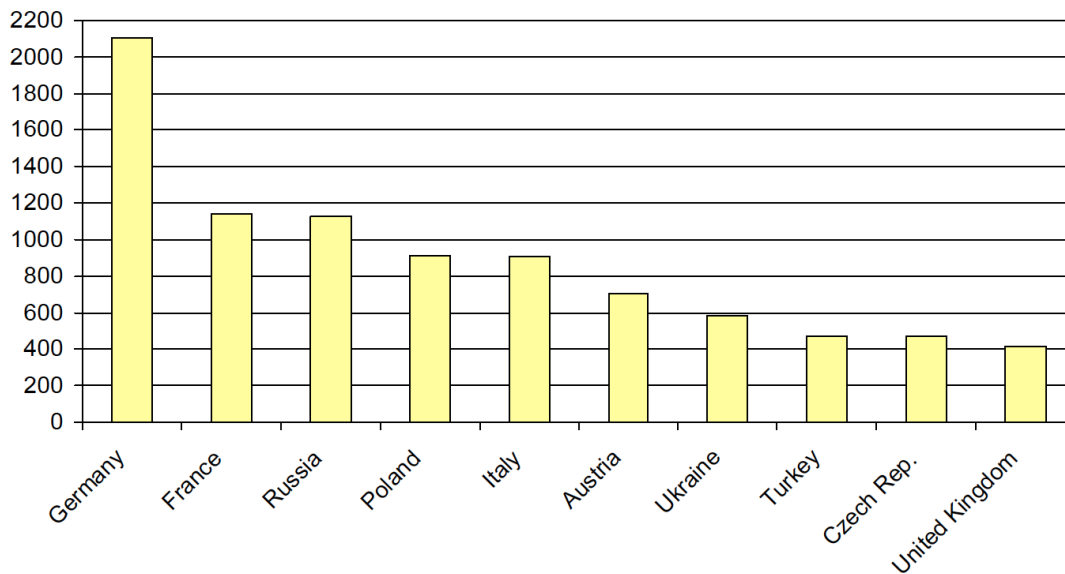


Table 1: Number of reports listed by country, which added those to the ESWD in 2014 (as of 7 January 2015). Only top ten countries are listed.

<i>quality control applied to report</i>	<i>number of reports in 2014</i>	<i>percentage</i>
QC0, as received	2	0.01
QC0+, plausibility checked	1146	9.03
QC1, report confirmed by reliable sources	11151	87.89
QC2, event fully verified	388	3.05

Table 2. Number of ESWD reports for the year 2014 per quality control category (as of 18 March 2015).

<i>weather type</i>	<i>number of reports in 2014</i>	<i>percentage</i>
tornado	806	6.35
severe wind gust	4331	34.13
large hail	2432	19.16
heavy rain	3438	27.09
funnel cloud	421	3.31
gustnado	1	0.007
dust devil	11	0.08
heavy snowfall	155	1.22
ice accumulation	487	3.83
avalanche	54	0.42
damaging lightning	551	4.34
total	12687	100

Table 3. Number of ESWD reports for the year 2013 per severe weather type (as of 18 March 2015).

ESSL General Assembly 2014

The ESSL General Assembly (GA) 2014 took place as a side meeting of the 14th European Meteorological Society (EMS) Annual Meeting and the 10th European Conference on Applied Climatology (ECAC) in Prague (Czech Republic) on 8th October 2014. One of the main points of the agenda of the annually GA is the ESSLs Annual Report 2013 which was accepted. The full report can be found in the "Publications" section of our webpage <http://essl.org/>. Furthermore, Hans-Joachim Koppert was re-elected as Advisory Councillor for the period 2015 - 2018.

ESSL publishes Climatology of Tornadoes in Europe

In the December 2014 issue of the Journal Monthly Weather Review, ESSL researchers Pieter Groenemeijer and Thilo Kühne have published an article describing the climatology of tornadoes in Europe, based on the data contained in the European Severe Weather Database (ESWD).

The study found that, typically, more than 300 tornadoes over land are reported each year in Europe, of which 31 are significant (F2 or stronger), which is still a considerable underestimate of the true number. There is especially a strong underreporting of tornadoes in southern Europe. The authors estimate that between 10 and 15 people are killed by tornadoes annually. The maximum of the tornado season is in early summer across the Balkans, in mid-summer in most of central, northern and western Europe, and in autumn in the Mediterranean. The full article can be found under: <http://journals.ametsoc.org/doi/abs/10.1175/MWR-D-14-00107.1>

The publication is listed in the 'Top 10 Most Read MWR Articles' for the previous 12 months.

8th European Conference on Severe Storms - ECSS 2015

The official first announcement for the 8th European Conference on Severe Storms (ECSS) was published in 2014. The ECSS 2015 will take place in Wiener Neustadt, Austria, from 14 to 18 September 2015.



The scope of the conference covers all aspects of severe convective storms. Researchers, operational forecasters, and risk and emergency managers are invited to submit contributions. In light of the global relevance of the conference themes, participants from all over the world are encouraged to attend.

The 8th ECSS will be hosted in Wiener Neustadt, Austria, home of the ESSL Research and Training Centre. As a side meeting of this conference, the next **ESSL General Assembly (GA)** will be held on 13 September 2015, starting at 17:00. Registration and abstract submission for the conference opened 15 January 2015. The deadline for abstract submission is **10 April 2015**. For more information, please visit www.ecss.eu.

ESSL Tornado and Windstorm Damage Assessment Workshop

From 1 to 5 September 2014 ESSL organized a workshop dedicated to the field of forensic meteorology.

The workshop focused on a special field of “Forensic Meteorology” to determine the type of a past damage event (windstorm or tornado) and to estimate the strength of the maximum wind. The workshop started with learning the theoretical background of forensic meteorology. Experts lead through very active discussions. On day three and four the whole team went to Slovenia and Italy to recent damage sites. Participants split up into four groups, three persons each group, and went into the field in order to assess damage to buildings and trees.



Pictures by Thomas Schreiner, ESSL.

Another damage assessment workshop is tentatively planned for late summer 2016: In late summer 2015 ESSL staff will be busy with preparations for the upcoming ECSS, but ESSL is tentatively planning to organize a similar workshop in early September 2016. If you are interested to pre-register, please send an email to magdalena.pichler@essl.org

Book: "Stürme über Europa" by Katrin Pfeifer

Katrin Pfeifer has studied past severe storms across Europe from a cultural historical viewpoint. The resulting book - in German language - with a focus on events in Austria and in the Netherlands has now become available.

The book "Stürme über Europa" (storms over Europe) describes a selection of events in the Netherlands and Austria from the viewpoint of cultural history. A new cultural historical approach is introduced together with meteorological fundamental terms and scales of measuring storms. Several partly non-published sources are analysed on how contemporary witnesses experienced and managed severe storms. For more information, follow this link: <http://www.lit-verlag.de/isbn/3-643-50280-3>.

Upcoming Activity Calendar

Date	Event	Additional information	Registration deadline
25 - 29 May 2015 1 - 5 Jun 2015 15 - 19 Jun 2015 22 - 26 Jun 2015	ESSL Testbed 2015		until fully booked
29 Jun – 3 Jul 2015	Seminar Forecasting Severe Convection II, Dynamics and Prediction of Severe Thunderstorms	by Dr. Johannes Dahl, USA	until fully booked
7 - 11 Sep 2015	EMS Annual Meeting and ECAM	co-sponsored by ESSL in Sofia, Bulgaria	
14 - 18 Sep 2015	8 th European Conference on Severe Storms ECSS 2015	in Wiener Neustadt, Austria	Early rate until 15 Jun 2015 no deadline
21 - 25 Sep 2015	Seminar Forecasting severe convection I	by Dr. C. A. Doswell III, USA	Early rate until 15 Jun 2015 until fully booked
5 - 8 Sep 2016	Workshop on Tornado and Windstorm Damage Assessment	by ESSL staff and expert guests	Early rate until 1 Mar 2016, until fully booked
11 - 16 Sep 2016	EMS Annual Meeting and ECAC	co-sponsored by ESSL in Trieste, Italy	
27 - 29 Sep 2016	Workshop: Identification and Classification of Subtropical and Tropical Storms in the Mediterranean	in Wiener Neustadt, Austria	
10 - 15 Sep 2017	EMS Annual Meeting and ECAM	co-sponsored by ESSL in Dublin, Ireland	
18-22 Sep 2017	9 th European Conference on Severe Storms ECSS 2017	in Croatia	

The current calendar can always be found on the website: www.essl.org

For further information on registration for these events, please contact Ms. Magdalena Pichler: phone: +43 664 59 35 330, email: magdalena.pichler@essl.org.