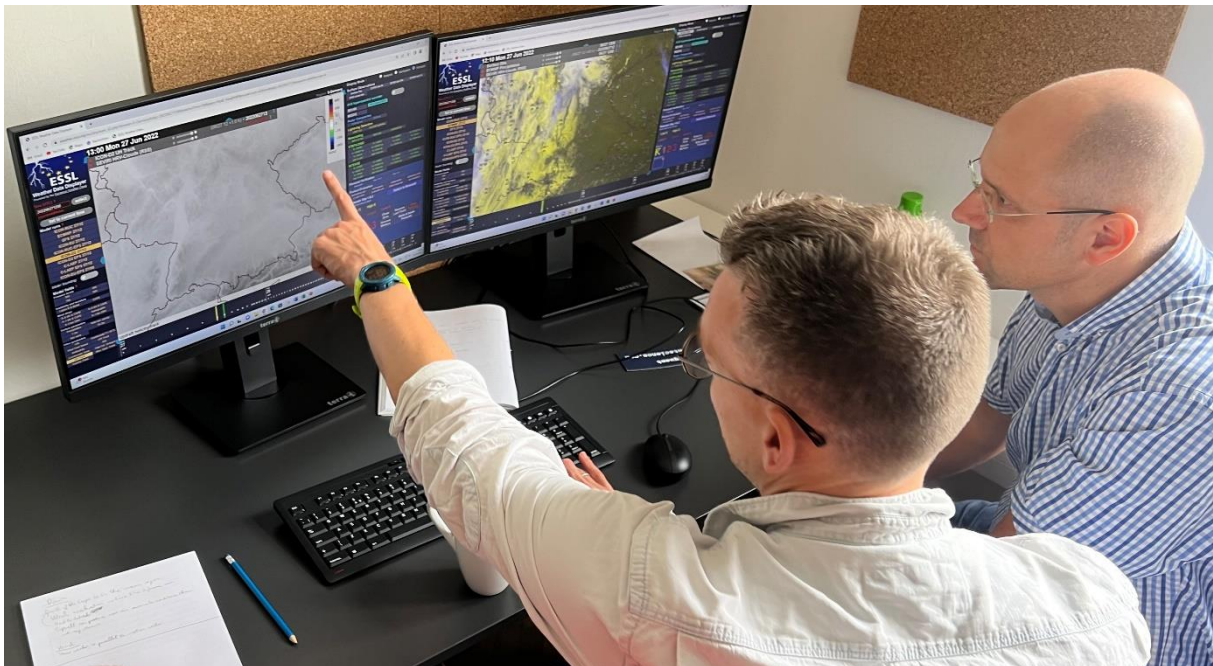


# ESSL Expert Workshop on Severe Weather Warnings: from Expectations via Physical Ingredients to Impact-based Warnings and Beyond



<b>Venue</b>	ESSL Research and Training Centre Wiener Neustadt, Austria
<b>Planned mode</b>	<p>On site only, no online participation. Why? Recent experience has proven problematic aspects of hybrid workshops.</p> <p>Participants are kindly asked and strongly advised being present during the entire programme of the workshop, as late arrival, intermittent participation or early leaving seriously deteriorates the quality of the teamwork and of the event as a whole. We kindly ask you to plan your travel accordingly.</p>
<b>Dates</b>	16 October 2023, 13:00 to 18 October 2023, 16:00
<b>Target audience</b>	<p>Forecasters (“warners”) and heads of forecasters Researchers and practitioners related to warnings Civil protection authorities End users of warnings (especially from critical infrastructure)</p>
<b>Maximum no. of participants</b>	20



*Forecasters discussing warning aspects at the EUMETSAT-ESSL Testbed on 12 October 2022*

**„Issuing warnings is not a purely mechanistic process, which can be easily automated.“**

From book „Towards the ‚Perfect‘ Weather Warning“ - Golding (Ed.), WMO, ..., 2022 (TPWW22)

## Workshop Topics

1. The broad multidisciplinary view: risk ethics (philosophy, moral reasoning), human behaviour (psychology) and legal frameworks (just) in the context of the warning process
2. Limitations and new prospects for ingredients-based warning approaches: How should the risk matrix be defined? Can more life be brought to forecasting impacts beyond the marketing term?
3. Communication - dealing with uncertainty: Why is there so little progress in communicating the warning uncertainty, and how can this be improved?
4. Action advice and public education: from understanding to response and action. We are seeking for good practice examples.
5. General and tailored warnings: What are the necessary differences? And how can the gaps between warners, emergency managements and end users be best bridged?
6. From physical ingredients to impact warnings: Are impacts in high-end meteorological events easier to predict and stronger tied to the physical magnitude than in more frequent and modest events?
7. A critical moment in the meteorological sphere: transition from forecasting to nowcasting and the resulting potential sudden jump in probability of extremely rare events. Should there be a stronger focus on the warning means in the “last hour”? When in time and at which probability and intensity threshold should sirens and other “strongly interrupting and potentially also frightening” means of warning be used?
8. Cross-institutional and cross-border communication: What is needed to ensure the flow of relevant information in extremely time-critical and high workload situations?



*Heavy snowfall in Filzmoos area near Salzburg (Austria) on 31 January 2022*

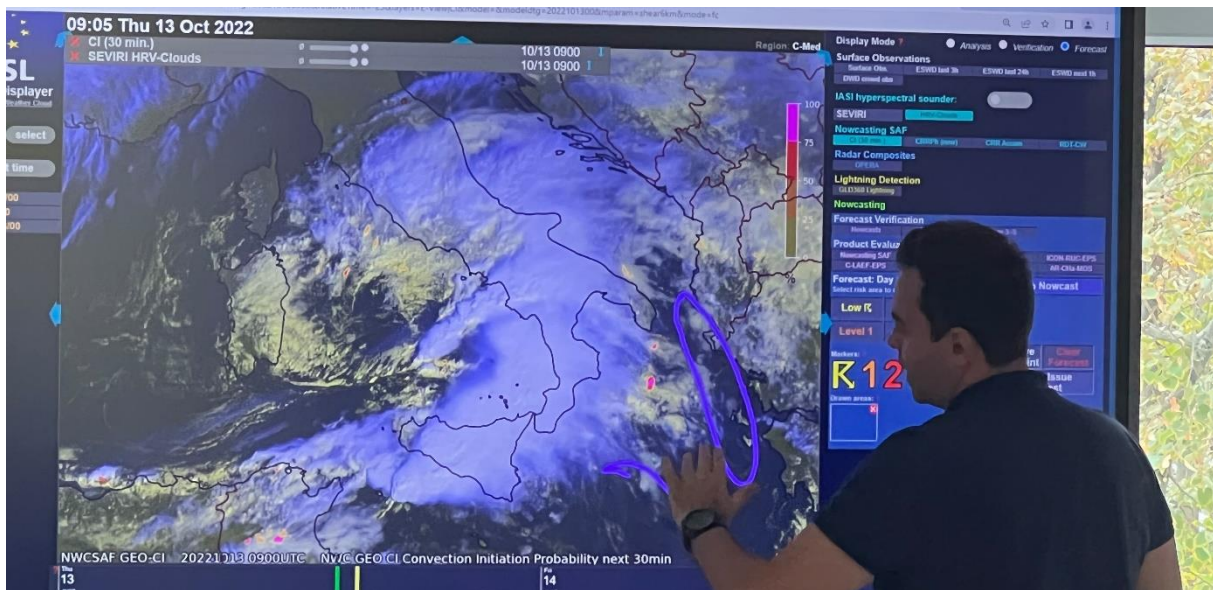
**„The question of what makes a warning successful is one of the key aspects identified in the high impact weather context. Yet often the producer assumes that it is sufficient to verify the observable components of the information content, using statistically correct methods, and is then surprised if the receiver has a quite different perception of the value ...“**

From TPWW22

## Draft Programme Outline

16 Oct. 2022 (Mon) afternoon	Oral presentations (max 20 minutes each) and discussion
17 Oct. 2022 (Tue) morning	One or two oral presentations followed by joint work on a recent case study (meteorological data provided in ESSL Testbed Displayer), discussion of all aspects of the integral warning process
17 Oct. 2022 (Tue) afternoon	One or two oral presentations followed by joint work on a second recent case study and wrapup of the day
18 Oct. 2022 (Wed) morning	One or two oral presentations followed by joint work on a third recent case study
18 Oct. 2022 (Wed) afternoon	Discussion and wrapup of the workshop. Joint effort on writing down the most important findings of the workshop in the form of a draft summary.

The final workshop summary will be published as an “ESSL Report” on the ESSL webpage.



*Forecaster using satellite data to assess the risk for severe convective storms over the Mediterranean Sea at the EUMETSAT-ESSL Testbed on 11 October 2022*

**„In producing the warning, the warner is as much an artist as a scientist, crafting a persuasive story out of a selection of uncertain facts, using their experience of context and precedent and fitting the result into a variety of formats to be delivered through different media, all while under considerable time pressure.“**

From TPWW22



**„Expert warning forecasters assimilate the incoming data,  
generating a conceptual model of the situation  
and enabling a level of situational awareness sufficient to anticipate events.“**

From TPWW22 (freely available book): <https://link.springer.com/book/10.1007/978-3-030-98989-7#toc>



*Part of a tree blown to a major road by severe wind gusts*

### **Participation and registration**

- We encourage all participants to actively contribute to the workshop by sending a presentation title and very short abstract to [alois.holzer@essl.org](mailto:alois.holzer@essl.org).
- Registration fee: from 300 EUR (for participants from ESSL member institutions) to 500 EUR  
Please contact us in case financial support is required.
- Please register for the workshop via the ESSL webpage: <https://www.events.essl.org/>

Contact of main workshop organizer:

Alois M. Holzer, ESSL Director of Operations, [alois.holzer@essl.org](mailto:alois.holzer@essl.org)

Programme as of 16 December 2022

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