



## High impact weather service at the Finnish Meteorological Institute

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In Finland many severe weather phenomena such as low pressure wind storms, thunderstorms and heavy snowfall are able to produce damage to the society. Because of this the Finnish Meteorological Institute has developed severe weather services to authorities and other critical service producers. The platform of severe weather service is nowadays separated into three different sections:

1. Following forecast/nowcast from high impact weather perspective

- a. A tool for following forecasts that is updated several times a day and reaches up to ten days ahead. Forecasts are presented to customers in a user-friendly and understandable way, separating different phenomena from each other, using color-coding as a risk level, and expressing probability of high impact weather.
- b. Video briefing held to customers once a week in which severe weather risk for upcoming days is discussed.

2. When evident high impact weather is approaching

- a. Special advisory is released, usually 1-3 days prior the event. The progress of weather event is evaluated from time and areal perspective, keeping in mind of potential consequences (e.g. amount of power outages). Situation awareness is illustrated using figures and videos.
- b. Specific video briefing is held to customers from the event where severe weather forecaster can share desktop view and clarify forecast and uncertainty.

3. When high impact weather is evolving/on-going

- a. By keeping video briefing the development of weather event can be followed via observations, latest forecast adjustments, and give customers a chance to ask more detailed questions. Information of even small changes in forecast or risk level can be quickly communicated to customers.

This service has helped customers to better prepare for high impact weather situations. The society has also benefited from this service for example in terms of shorter power outages. However, further development is needed to provide better areal precision and allow customers to choose more accurate products. In addition, there is a need to focus more on forecasting the potential consequences of high impact weather situations.