

Icelandic Met Office



Impact based warnings

training the public and getting the message across

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NMM31

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The Basics of IMO

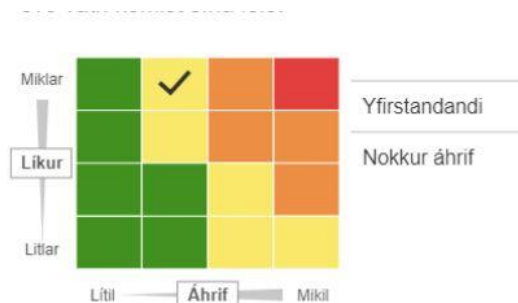
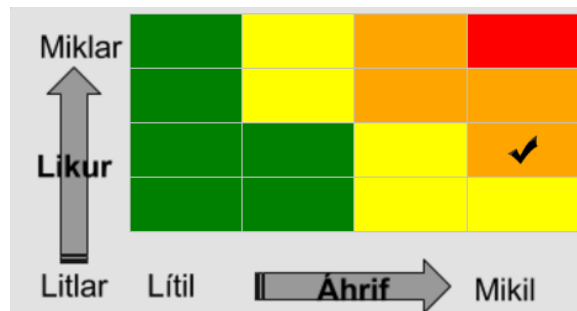
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- **Icelandic Meteorological Office in Reykjavík, with an avalanche forecasting and research centre in Ísafjörður, NW Iceland**
 - **A multi-hazard monitoring and research institute, with meteorological, hydrological, vulcanological and geophysical monitoring 24/7**
 - **12 forecasters, 6 full time – all do aviation, marine, general forecasting and warnings**
 - **Population of ~340.000**
 - **Tourists ~2.000.000**
-

Weather forecasting at IMO

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- **Great advances in modelling for Iceland in the past decade**
 - **Available models are now 2,5 km resolution Harmonie-Arome model run in cooperation with DMI**
 - **Replaced lower resolution forecasts**
 - **Better ECMWF forecasts**
 - **Better forecasting skills have changed the needs for some text products traditionally produced by the forecasters while others remain important**
 - **With better model skills it is easier to issue warnings and forecasts with higher resolution and a longer lead time**
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An impact based warning system

- Changes from the old system were the consideration of impact, colour coded warnings and a 5 day outlook.
- Replaced and older single threshold system – consideration made for seasons, forecast regions and recent events



Home > Alerts

Alerts

Reykjavik area
SE severe gale (Orange condition)
11 Jan. at 16:30 – 19:30
SE 18-25 m/s. Travel disruption is expected and potentially damaging winds.
More +

South
SE severe gale (Yellow condition)
11 Jan. at 18:00 – 12 Jan. at 00:00
SE severe gale, strong wind gusts near mountains. Travellers should be cautious.
More +

Faxaflói
Southeasterly 18-25 m/s (Orange condition)
11 Jan. at 16:00 – 20:00
SE 18-25 m/s. Travel disruption is expected and potentially damaging winds.
More +

Breiðáfljóður

Warning parameters

// met alert type	Veðurvá	Tákn
" <u>met_alerttype_Wind</u> "	<u>Vindur</u>	
" <u>met_alerttype_Extreme thawing</u> "	<u>Asahláka</u>	
" <u>met_alerttype_Precipitation</u> "	<u>Rigning</u>	
" <u>met_alerttype_Snow</u> "	<u>Snjókoma</u>	
" <u>met_alerttype_Lightning</u> "	<u>Eldingar</u>	
" <u>met_alerttype_Snow storm</u> "	<u>Hríð</u>	

Introducing a new way of thinking

Impact Matrix of the Icelandic Meteorological Office

	<p>Minimal or no hazard. No damage likely.</p>
	<p>Medium or high likelihood of medium impact weather which can have localized affects. This weather could affect travels between different areas of Iceland. The weather is potentially hazardous if precautions are not taken and can cause damages or accidents. Yellow warnings are fairly common and should not cause systematic disruptions to transport, public services or infrastructure. Yellow warning can also indicate the possibility of very severe, high impact weather 3-5 days ahead.</p>
	<p>Medium or high likelihood of medium or high impact weather. This weather can will likely have short term impact on transportation, public services and infrastructure. This weather may cause damages or accidents. Can be a threat to lives if precautions are not take. Amber warnings happen every year. Show caution and make the necessary arrangements.</p>
	<p>High likelihood of extreme weather causing high societal impact. Extreme weather with very hazardous conditions is forecasted. This weather can cause threat to life and property. High likelihood of nationwide disruptions to transportation, public services and infrastructure. Pay close attention to all available information and updates from IMO and Civil Protection.</p>

Introducing a new way of thinking

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- **A new system was introduced on November 1st when it was launched on the IMO website and officially put in use with the forecasters**
 - **Had been in two different test phases**
 - **To consider societal impact and likelihood added considerable pressure to the forecasting room**
 - **The weather cooperated as warnings went out immediately, both for the next day and 5 days in advance which gave a good test case while the media was still interested**
 - **Made for closer cooperation with Civil Protection Authorities**
-

When introducing 5 day warnings...

veourspar

Staðaspár - allt landið

▶ Veðurþáttaspár - allt landið

Höfuðborgarsvæðið

Faxaflói

Breiðafjörður

Vestfirðir

Strandir og Norðurland vestra

Norðurland eystra

Austurland að Glettingi

Austfirðir

Suðausturland

Suðurland

Miðhálandið

Textaspár

Spárit

Atlantshafsspár

Skýjahuluspá

Norðurljósaspá

Eldingaspá

Athugasemd veðurfræðings

Veðurathuganir

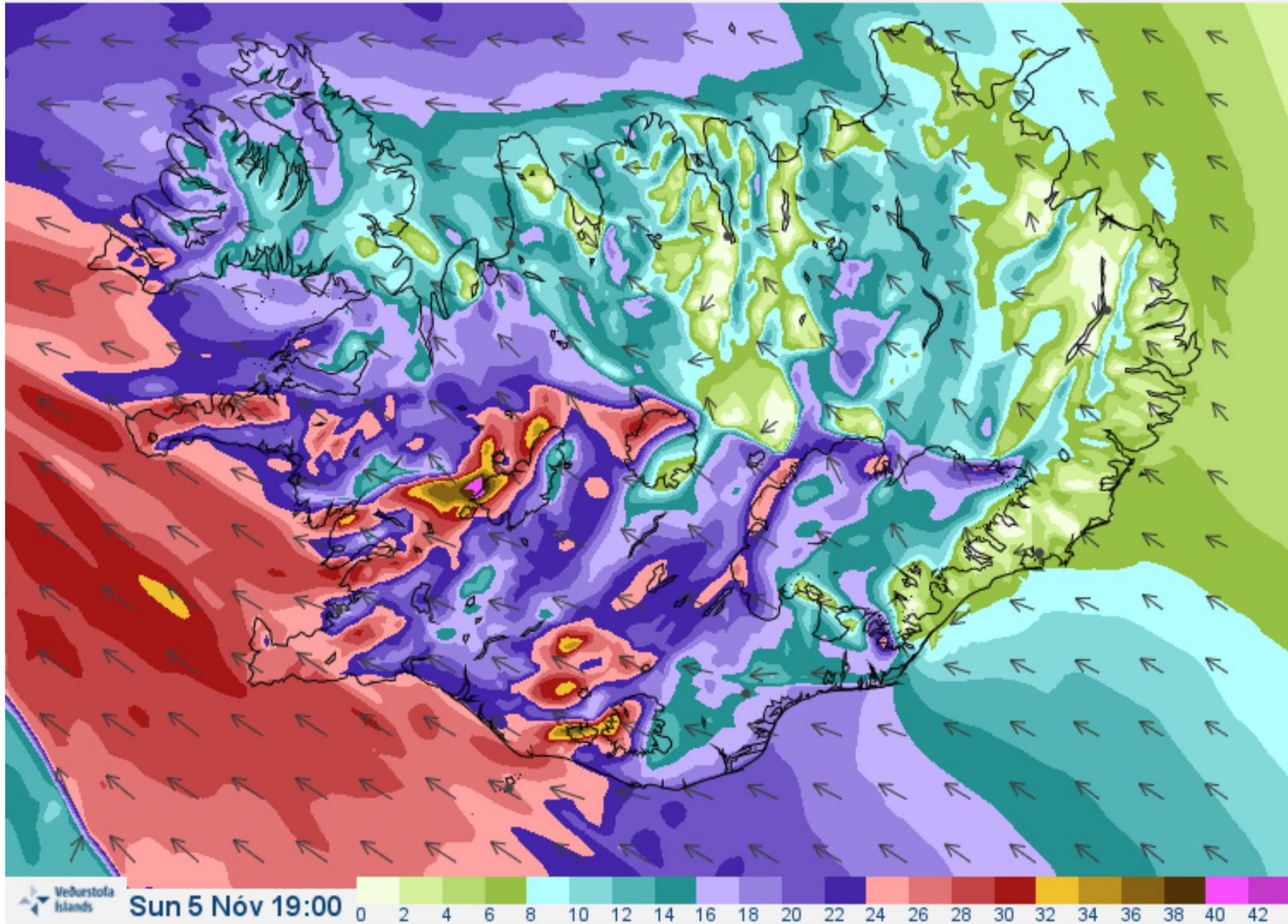
Sjóveður

Flugveður

Veðurfar á Íslandi

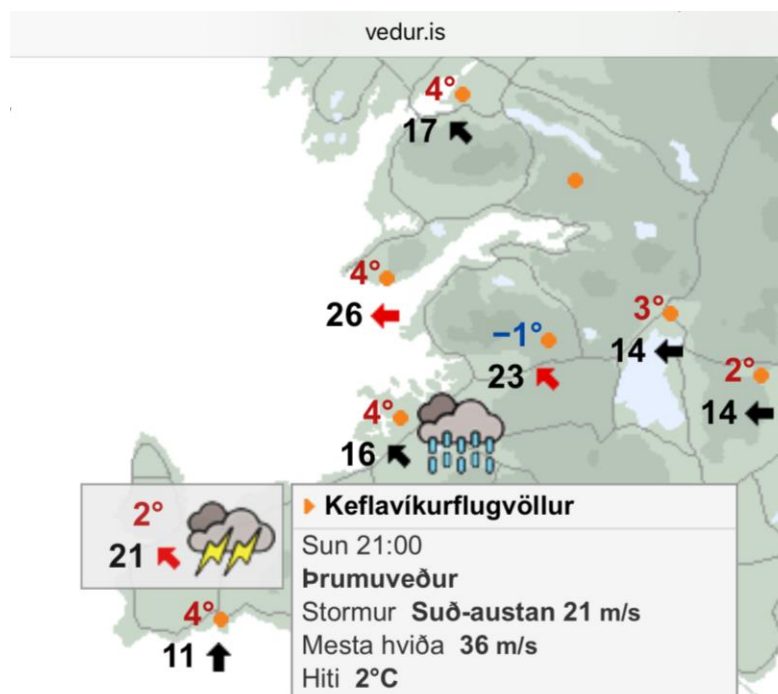
Vindur í 10m hæð (m/s)

Veðurstofan/Harmonie: 05.11.2017 06:00 UTC (+13)



Lightning

- **Not many strikes or impressive bolts, but knocked out the electricity for 100.000 people for a few hours. = Impact**



Design and dissemination

-
- **A specifically designed interface for meteorologists**
 - **System designed to add more types of warnings**
 - **CAP 1.2 standard**
 - **XML / JSON messages available for consumption from docs.vedur.is – repository open for all**
 - **As IMO is a multi hazard monitoring service, remaining natural hazards will be incorporated into the CAP system in the next few years.**
-

Yellow fatigue and other matters

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- **All in all the launch of the new system was a success**
 - **Civil protection took well to the system as well as other stakeholders**
 - **No red warnings**
 - **Yellow fatigue**
 - When yellow warnings were out 10 days straight, they missed the mark
 - **Borderline cases**
 - Should have escalated to orange
 - Should not have escalated to orange
 - Put out yellow too far in advance – had to cancel or go to green
 - Timing – when is it too late to advance a warning?
-

Publication of warnings

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- **All warnings are visualized on our website and the Vedur app from IMO**
 - **Media outlets catch on right away usually and write about the warnings**
 - **Facebook / Twitter**
 - Sporadic
 - Natural Hazards specialists monitor Facebook and a few people monitor twitter and add to the media without any organized plan
 - Is to change with a new Director of Communications
 - Schedule of shift workers to tight to put in extra work, some do of their own initiative
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@Vedurstofan

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Veðurstofa Íslands

Published by Haukur Hauksson [?] · 3 May at 17:13 ·

Þetta myndskleið af tungu Hoffellsjökuls sýnir glögglega áhrif loftslagsbreytinga á jökla á Íslandi á 35 ára tímabili. Myndir byggja á ljósmyndum sem teknar voru úr flugvél 1982 af Landmælingum Íslands og flygildi 2017 og sýna vel myndun jaðarlónsins og læk jökulsins. Það var Kieran Baxter sem setti þetta áhugaveru saman.



Your video is popular with men aged 35-44

1.8K Views

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Veðurstofa Íslands

@Vedurstofan

Mælir, rannsakar & miðlar upplýsingum, hefur eftirlit með & sendir viðvaranir vegna veðurs jarðhræringa ofanflóða og vatnsflóða. Icelandic Meteorological Office

Iceland

vedur.is

Joined January 2013

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Veðurstofa Íslands @Vedurstofan · May 14

Cooling weather this evening & over night, temp below 0 likely on mountain roads. In W half light snow showers expected with possible slippery conditions on roads tonight & tomorrow morning. In easternmost part of Iceland it could snow on mountain roads. Take care travelling



Veðurstofa Íslands @Vedurstofan · May 14

Í kvöld kólnar í veðri og fer hiti jafnvel undir frostmark á fjallvegum á vesturhellingi landsins. Útlit fyrir dálitil él. Hálsa gæti myndast á fjallvegum í nótt og snemma í fyrramálið. Þá kemur úrkomubakki inn austast og gæti snjóað á fjallvegi þar fram á daginn.



Veðurstofa Íslands @Vedurstofan · May 10

Í vor uppgötvaðist sprunga sem liggur skáhallt niður vesturhlíð Svínafellsheiðar. vedur.is/um-vi/frettir/...

