

Symposium celebrating the 25th anniversary of the NVBM

The Future Weather Factory: Weather, Climate and Society

9:00: Walk in

9:30: Welcome by NVBM chairman Albert Klein Tank

9:35: Robert Mureau: *The NVBM and the role of the forecaster: what's new?*



Role of the forecaster

Anything new?

Robert Mureau

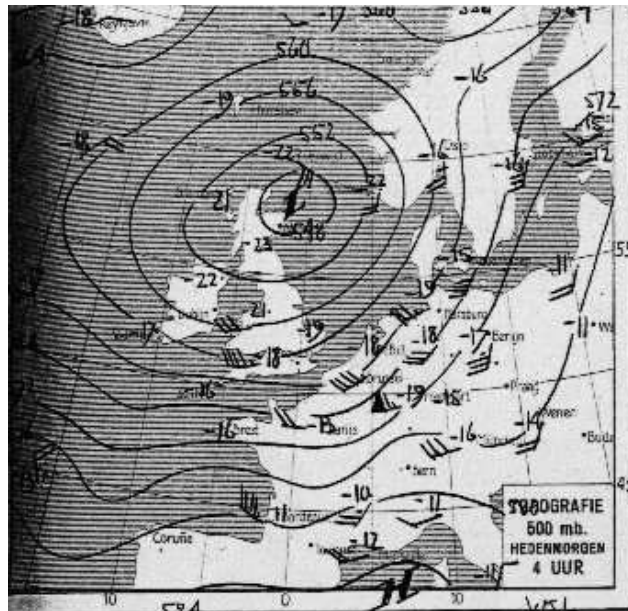
Why me?

Answer : yes and no

- Historic perspective
 - technology gap and the angry (white) forecaster
- Role of NVBM
- The two roles: guidance forecaster and communicator advisor
- Current situation at KNMI, MeteoGroup, JMG, TV
- Future : mesoscale forecasting and the proactive forecaster

History

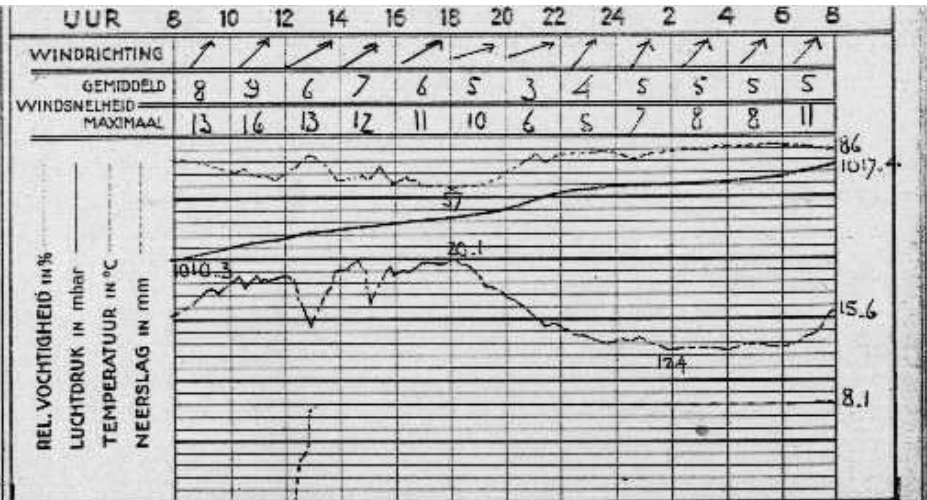
1952



ERWACHTING, geldig van hedenavond tot morgenavond (opgemaakt te 10 uur):

Droog, overwegend zonnig en vrij warm met een matige zuidelijke wind.

BVT



ALGEMEEN OVERZICHT:

De golfvormige storing, die Zaterdagochtend boven het Kanaal lag, trok Zaterdagavond langs het W. van ons land en bewoog vervolgens verder naar het NW., waar hij zich bij Schotland verenigde met de kern, die Zaterdag boven Ierland lag. Het oclusiepunt, dat ten ZW van Schotland lag, trok in het afgelopen weekeinde naar het ZO en werd vanmorgen ten Z. van het weerschip J aangetroffen. In de bovenstrooming is deze storing als een trog te zien. Het Azoren-hogedrukgebied en dat boven Groenland ondergingen in de afgelopen dagen weinig verandering.

ALW

History

- Technology gap, reflection of society
- < 1980 forecasters did the entire process, fantastic job, lots of responsibilities, storm of 1953
- Massive revolution in models (ECMWF 1980) , satellites, radar, data analytics in 50 years time
- Big shift in job requirements not manageable for the same people



Threats

- Scientist : we can do it better, fully automated, keep your hands of my model
 - Mos prediction in 1980 : in 10 years time the forecaster is not needed anymore
- Management : cost cutting, streamlining, lean and mean (cookery factory)

Weather factory

- The expression weather factory has the wrong connotation. You can try to construct decision trees, but weather forecasting is knowledge based and is dynamic
- Weather forecasting is not a cooky factory

NVBM



NVBM and ECAM

- NVBM founded because of upcoming commercial activities
 - Certification was the main issue
 - More or less settled itself, but: *there is a need for one central training facility, thus automatically certifying the forecaster.*
- Role of the forecaster was put on agenda by forecasters in 1996, 2002
- ECAM organized plenary forum discussions every two years



Changes?

- Yes, the forecaster is not doing the same things anymore
- No, the discussion about the needs are still going on
- The scientist of 1980 had to repeat his prediction every 10 years
- The new managers are still looking for efficiency, but they are faced with the stubbornness of reality

The forecaster is still there

- Feedback from KNMI, MeteoGroup, JMG, TV

Two types of forecaster

- Guidance forecaster
- Communicator/ advisor

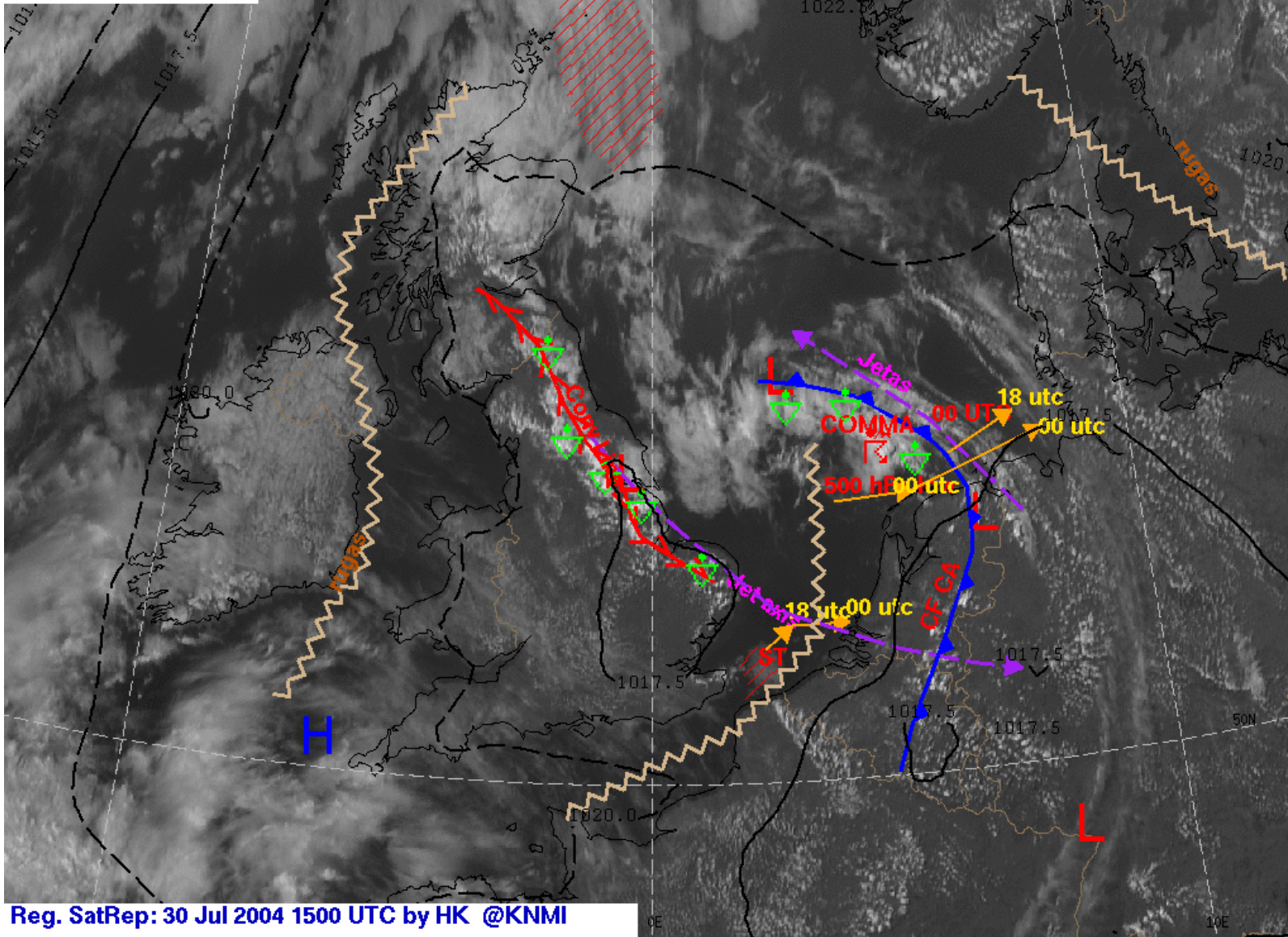
- Scientific background
- Excellent communication skills

Guidance forecaster

- Knows all the ins and outs of model, of satellites, of data
- Modifies model if needed
- Focus on short range (tomorrow), where small corrections are sometimes needed
- Focus on nowcasting (models, mixed with satellites and observations), mesoscale forecasting can still be developed
- More complex, many models to look at, many RGBs of satellites, rapid updates of surface observations

HRVIS 30-07-04 1500 UTC

Wind Temperatuur Mist Opmerkingen



Reg. SatRep: 30 Jul 2004 1500 UTC by HK @KNMI

Communicator / Advisor

- Formulates the forecast and communicates to user
- Gives advise to the client (what does it mean for him)
- Gives feedback to the client

KNMI

- Both types of forecasters
- Role in monitoring the weather is extended
 - Slippery road conditions forecast
 - Seismic activity
 - Solar Weather
- Advice is more integrated with the scientific department
- Forecast is more impact based
- Automation will go on, efficiency pressure will stay

MeteoGroup

- Both types of forecasters, focus on advisor
- Clients get training
- Many bespoke products and websites with user relevant tables, colour codes, decision support systems (“deep in the workflow of the customer”)
- Client still asks for personal contact (otherwise he leaves)
- MG is a European organization so the language is very labour intensive

JMG (Military forecasts)

- Both types of forecaster, good communication skills
- Very user specific, if/when needed on location
- Customers are trained
- Advisor role is important, also because client is searching the web himself
- > Boudewijn

Television forecaster

- Communication forecaster
- People prefer to listen rather than read
- Entertainment
- Personality and trust
- Reliability (TV so it must be good)
- Regional media feel efficiency pressure

What is a good forecast?

- How to demonstrate the “quality” (standard metrics do not work)
 - Small scale features are difficult to capture in RMS errors
 - Timeliness
 - Personal contacts
 - Help with interpretation

Conclusion

- Forecaster has changed but is still there, users appreciate the personal contact and the feedback
- There will be continuous development of models, satellites, data and automation, so forecaster has to be proactive and look for new challenges
- There is a need for central training

Stellingen

1. Weather factory

- The expression weather factory has the wrong connotation. You can try to construct decision trees, but weather forecasting is knowledge based and is dynamic
- Weather forecasting is not a cooky factory

2. Central Training Facility

- A central training authority will automatically settle the certification issue

3. Proactive forecaster

- Human forecaster will remain in the next 10 years, despite the evolving automation, but he has to be proactive in handing over routine jobs and finding new challenges

