

H-SAF CASE STUDY

Product Name	H10 – SN-OBS-01	Validation Institute	IMWM
Case Study Period	08-07-2010	Case Study Geographical Area	Poland

METEOREOLOGICAL EVENT DESCRIPTION

The day of 8.07.2010 was selected as a case study to check the performance of H10 product in the summer season with no snow conditions. It was a hot, sunny day over the Poland area (Fig. 41) almost without clouds. There are not weather conditions to existence of snow cover.

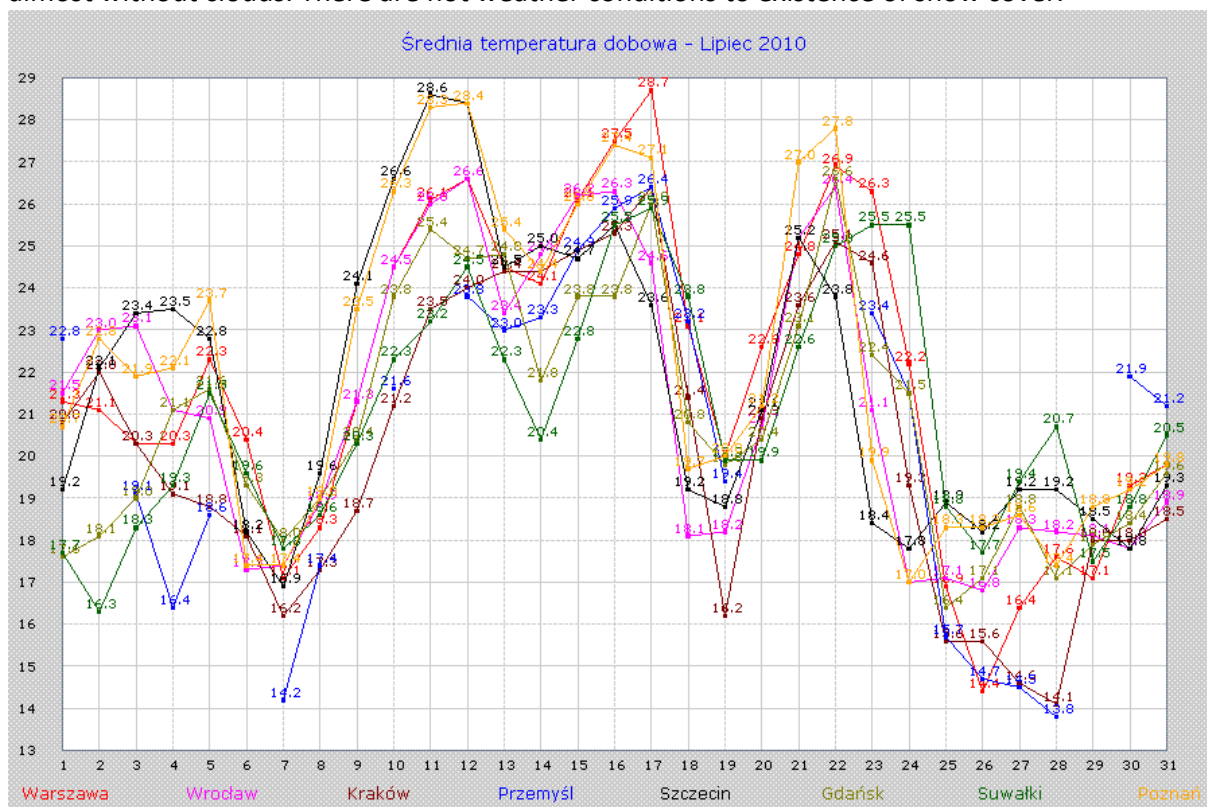


Figure 1 Mean daily temperature (Y-axis) for July (X-axis) 2010 for eight cities over Poland

DATA/PRODUCTS USED

Reference data: data from Polish SYNOP network and lower level posts from SH database.

Ancillary data: NWC SAF Cloud Type (CT) product, METEOSAT-9 RGB ch.139i

RESULT OF COMPARISON

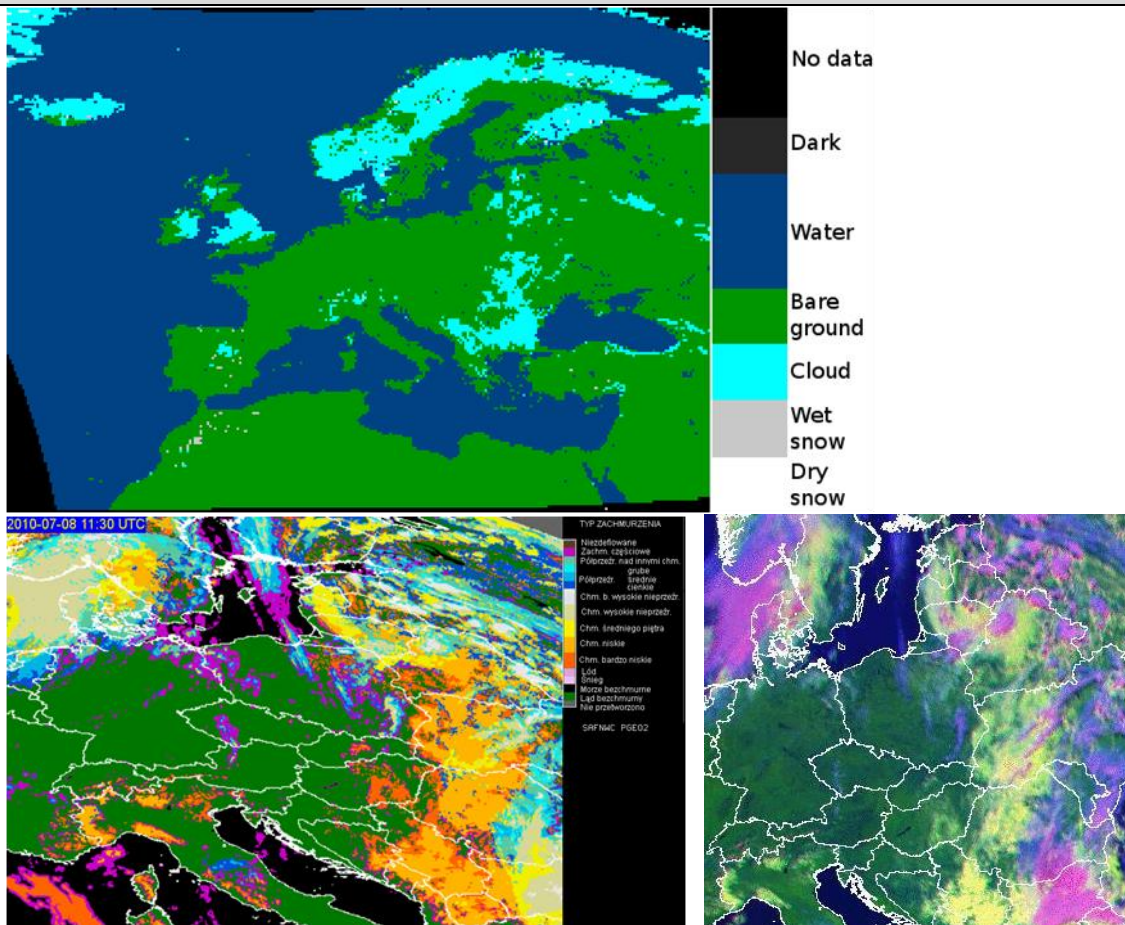


Figure 2 H10 Visual verification. Case study 8.07.2010. Top - H-SAF H10 product; bottom left - NWC SAF Cloud Type (CT) product 11.30 UTC (snow – pink, middle level clouds – yellow, semitransparent clouds – pale green/cyan/purple, ground - green); bottom right – METEOSAT-9 RGB ch.139i 11.30 UTC (snow - red, high clouds/ice – pink/violet, low clouds – yellow, ground - green)

Few clouds occurred along eastern border of Poland which was detected by Meteosat-9 RGB ch.139i and NWC SAF CT and properly classified in H10 daily product. However, thin and scattered clouds visible in the north and west of Poland were not marked in H10 product. The reason is not clear - it could be excluded from daily H10 product classification because of its short-lived nature and due to characteristics of product generation algorithm or it could be simple misclassification. Snow is absent on all products compared.

Scores evaluated

Quantitative validation was not performed due to the lack of station data for the date in SH database.

Because, at the time this investigation was performed, data from CBDH with QF were not available we could only assume (with high probability) that there was no snow at all even in high mountains where the snow cover could occur also in summer time.

CONCLUSION

Visual verification and comparison with NWC SAF Cloud Type product and METEOSAT-9 RGB product show that bare ground and clouds have been generally properly classified.

Thus, although qualitative validation could not be performed, the performance of H10 seems to be good.