



AGROMETEOROLOGICAL CONDITIONS

Expert group for the common organisation of agricultural
markets, Arable crops

29 February 2024

JRC MARS Bulletin

Crop monitoring in Europe

February 2024

Wet and warm conditions have mixed effect on crops

Dry weather remains a concern in some southern regions

Warmer-than-usual conditions have prevailed in most parts of Europe, yet most distinctly in the south; whereas wetter-than-usual conditions prevailed in north-western, northern-central and eastern regions. Marked rainfall deficits occurred in several parts of the Mediterranean and Black Sea regions.

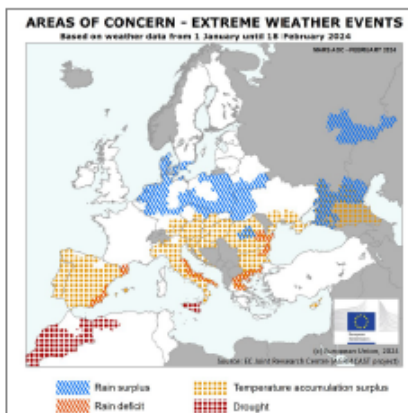
The map on the right provides a synthesis of weather anomalies that marked the review period, from 1 January to 18 February 2024. However, events that did not last beyond mid-January, such as the cold spell in northern Europe, which was reported in the January edition of the Bulletin, are not repeated here.

Continued **rain surplus** in the Benelux countries and north-western Germany, albeit less extreme than in the preceding months, maintained soil conditions at close to water saturation, and caused waterlogging – and localised flooding – in low-lying areas. Apart from being unfavourable for crops, overly wet fields cannot be worked and are hard to access, leading to delays in fertilisation. A similar situation is reported for Denmark and south-eastern Sweden, further exacerbated by intense rainfall on 5 and 6 February. Distinct precipitation surpluses in eastern Germany, Czechia, Poland, Belarus, western Ukraine, central Romania, and European Russia, mainly

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Covers the period from 1 January until 18 February 2024



due to very high precipitation. In February, did not cause concern for crops.

Rain deficits negatively affected winter crops in south-eastern Romania and north-eastern Bulgaria, where rainfall during the review period was less than half of the long-term average (LTA). In some coastal Mediterranean areas of Spain, the ongoing rain deficit further deepened, to the detriment of crops and water reserves. The rain deficit and unusually high temperatures in the breadbasket regions of Greece did not affect crops thanks to adequate soil-moisture reserves. In many parts of Italy, the review period ranked between third and fifth driest in our records since 1991.

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1. Agrometeorological overview

Significantly wetter-than-usual conditions in most of the Iberian peninsula, and from Benelux, across North European Plain to the Carpathians.

Drier-than-usual conditions in parts of Mediterranean Spain and France, Sicily and the Adriatic coast of Italy, southern Greece, and in eastern Romania and Bulgaria.

RAINFALL

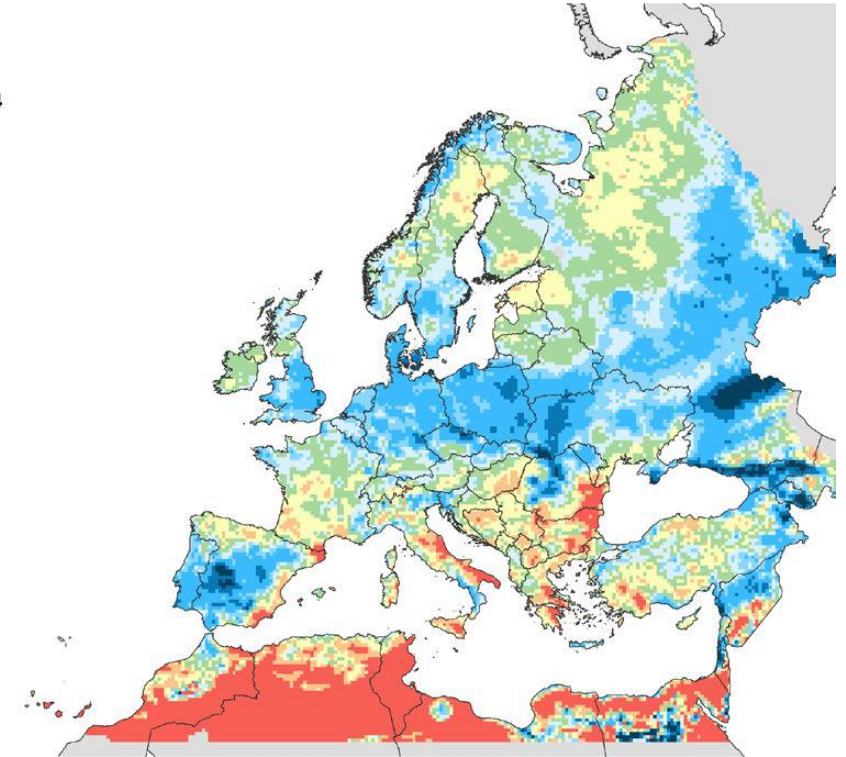
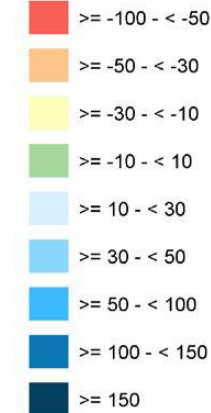
Cumulative values

from: 01 January 2024
to: 18 February 2024

Deviation:

Year of interest - LTA

Units: %



20/02/2024
Resolution: 25 x 25 km



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Source: EC Joint Research Centre (AGRI4CAST project)

1. Agrometeorological overview

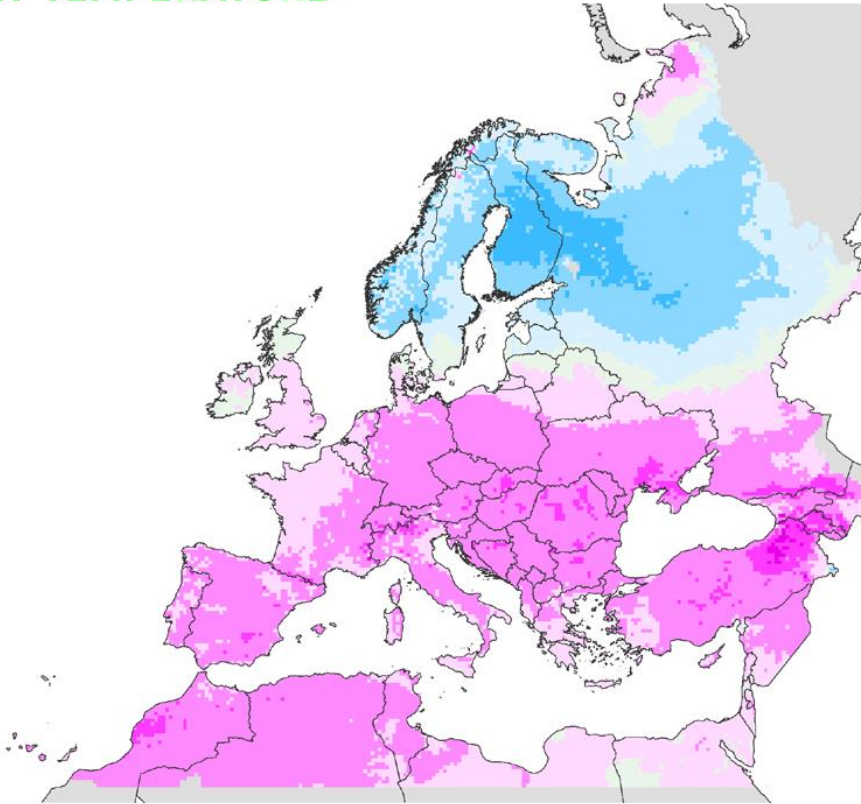
AVERAGE DAILY TEMPERATURE

Averaged values

from: 01 January 2024
to: 18 February 2024

Deviation:
Year of interest - LTA

Units: °C



20/02/2024
Resolution: 25 x 25 km

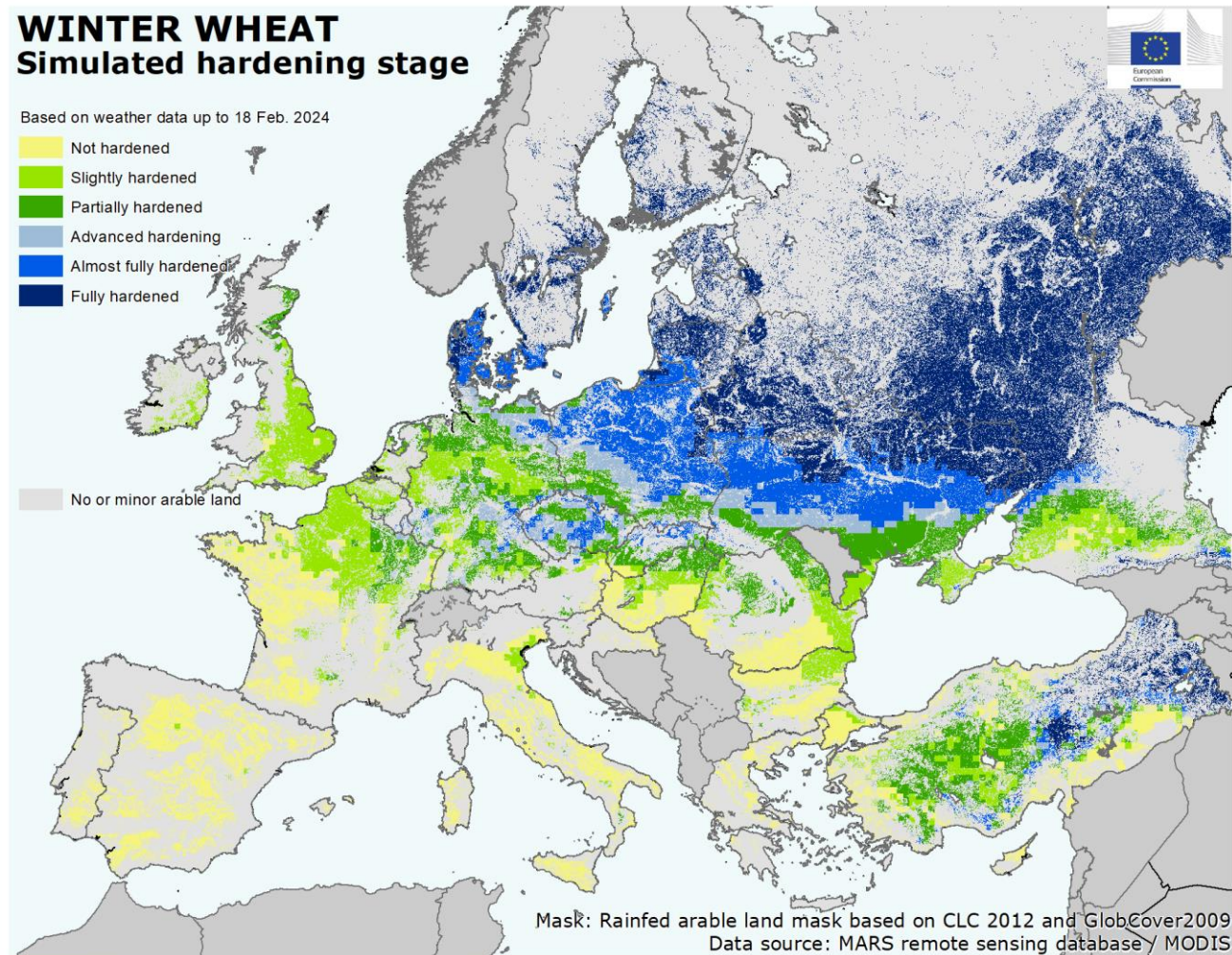


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Source: EC Joint Research Centre (AGRI4CAST project)

Warmer-than-usual conditions in parts of Spain, central Europe, the Balkan Peninsula, and the Black Sea region.

Colder-than-usual conditions in the Scandinavian Peninsula and the Baltic Sea region.

2. Winter hardening and frost kill



Crop hardening = winter cereals building resistance to freezing conditions, for the winter dormancy period.

- Since mid-January, warmer-than-usual conditions leading to crop dehardening (except Scandinavia).
- So, no frost damage expected for period.
- temperature swings draining crop resources, implications for yields to be seen in coming months.
- To monitor: cold spells over coming weeks.

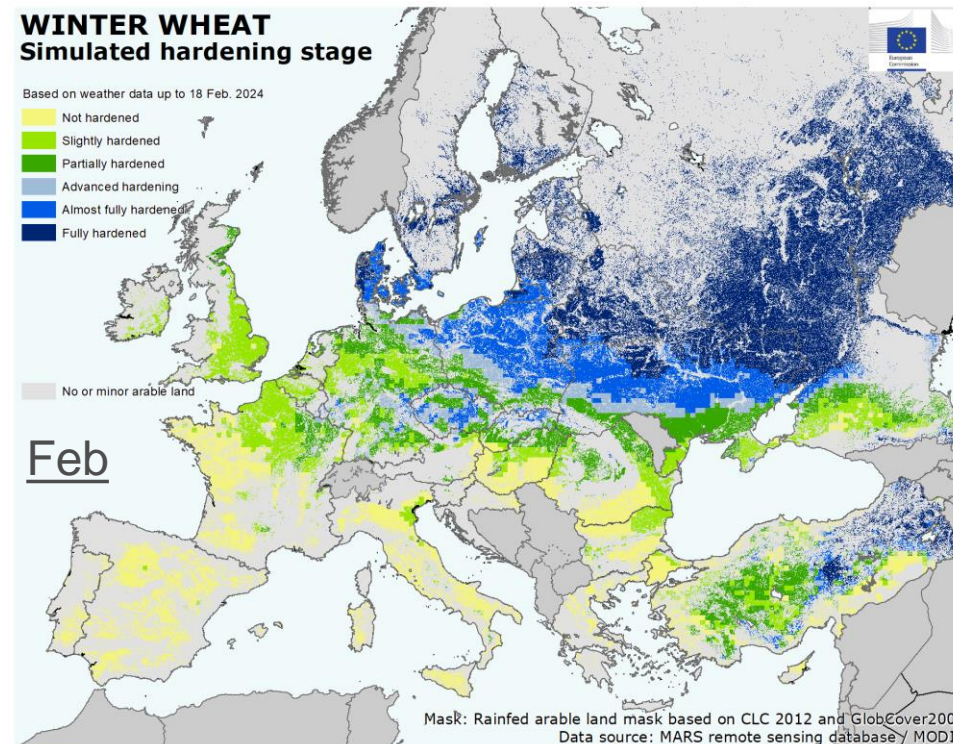
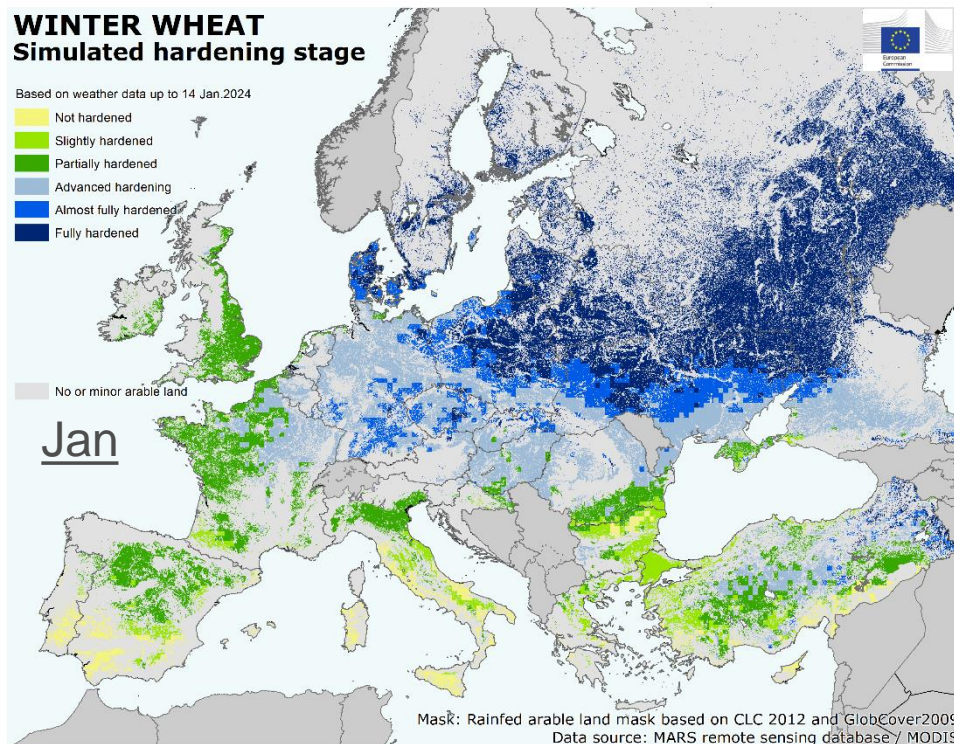
2. Hardening Comparison to January

Almost or fully hardened: Scandinavia, Baltics, NE-PL, CZ, SK

Advanced hardening area significantly decreased: NE-DE, C-PL, CZ, SK

Slightly or partial hardening: NE-FR, most DE, AT, N-HU, N-RO

De-hardened: ES, most FR, IT, S-HU, S-RO, BG, EL

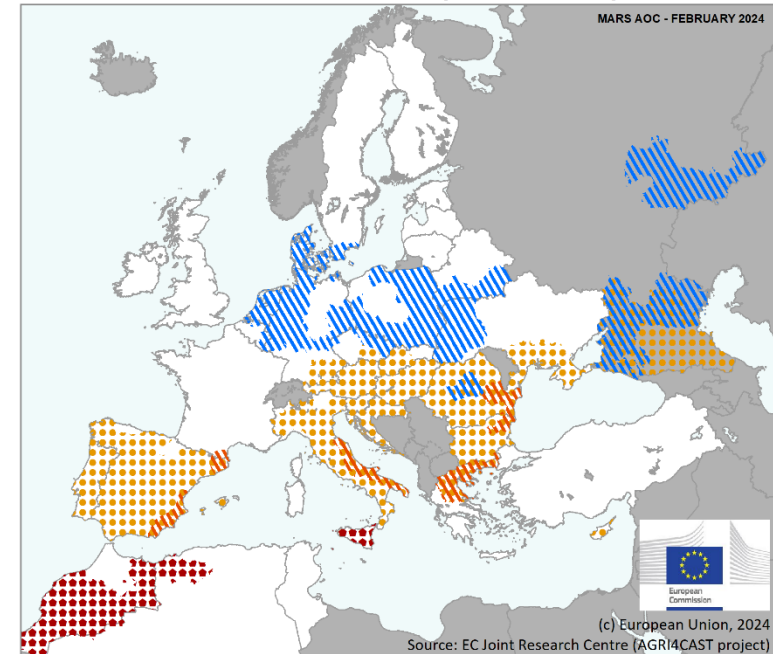


3. Areas of concern

- Excess rainfall – water saturated fields in Benelux, N-W DE, DK, and S-E SE.
- Rain deficit – negative effect on winter crops in coastal ES, S-E RO and N-E BG. Drought in Sicily continues.
- High temperatures – dehardening crop vulnerability in S-E DE, AT, CZ, SI, HR, HU, RO and BG.

AREAS OF CONCERN - EXTREME WEATHER EVENTS

Based on weather data from 1 January until 18 February 2024



Blue diagonal lines Rain surplus
Orange diagonal lines Rain deficit

Yellow dots Temperature accumulation surplus
Red dots Drought

Thank you



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