

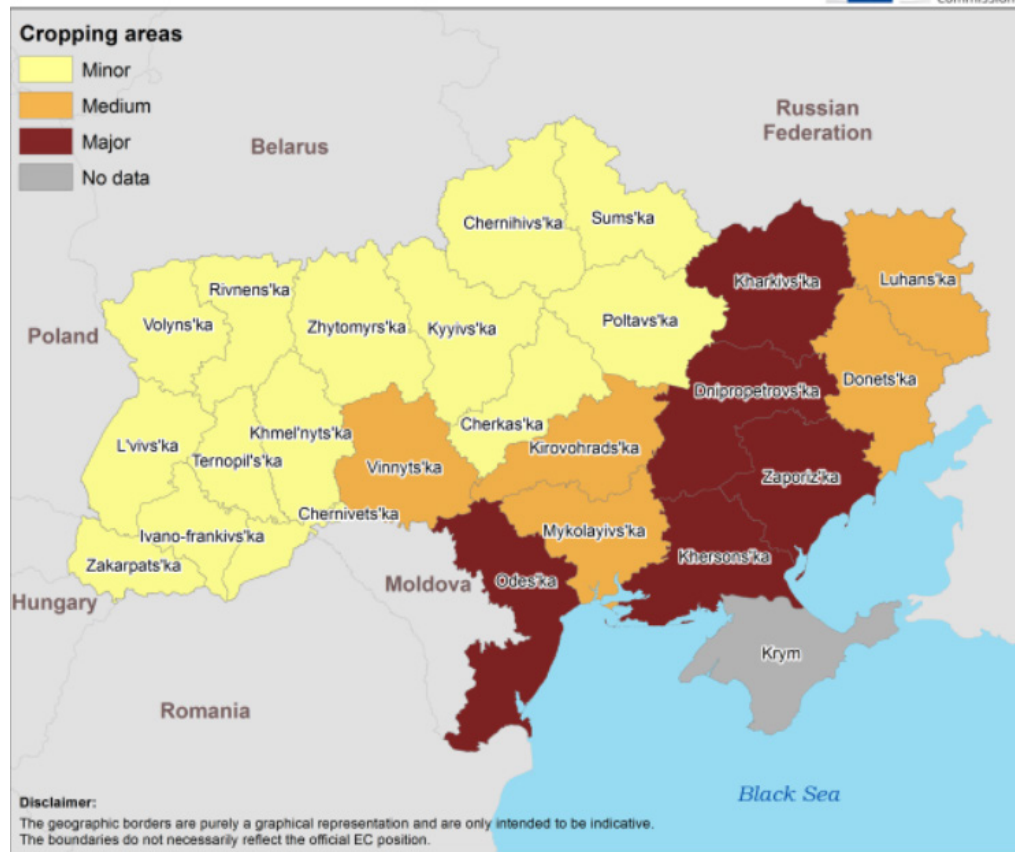
Winter Crops Conditions in Ukraine

Wassim BEN AOUN & Maurits VAN DEN BERG

JRC – D.5 Food Security Unit

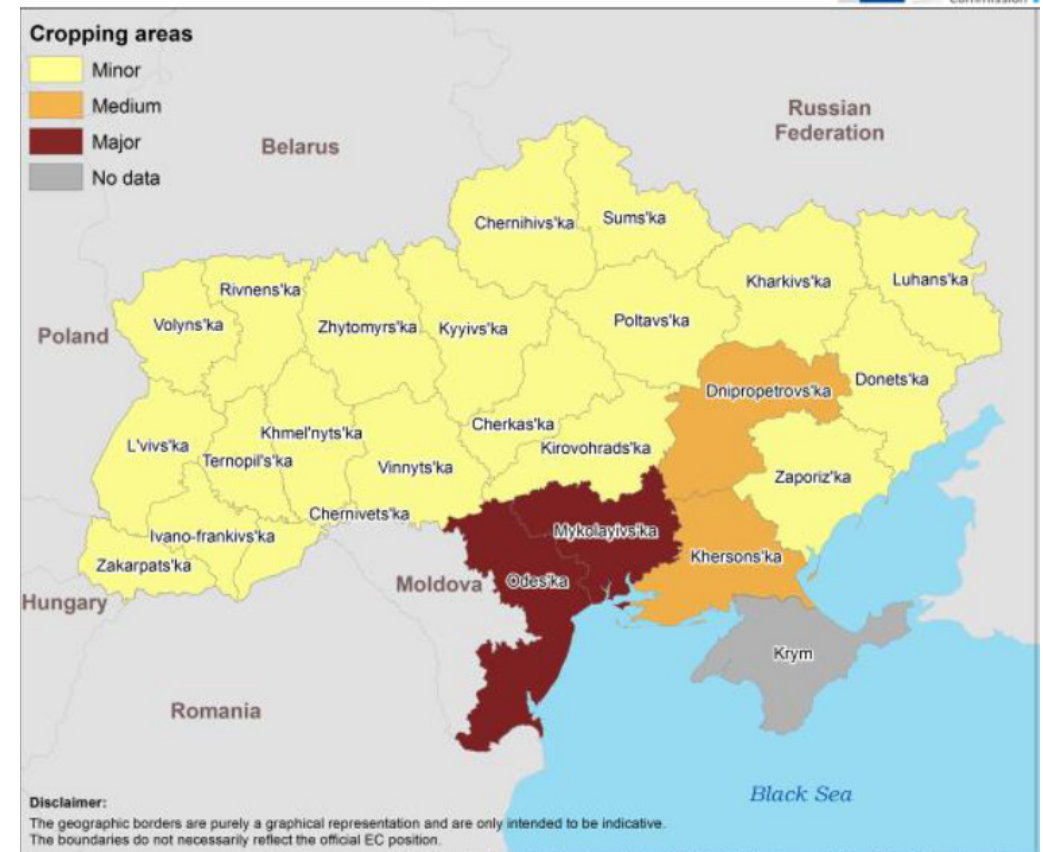
The south is the main producer of winter cereals

Wheat production



Data source: administrative boundaries from FAO GAUL 2014, cartographic elaboration based on State Statistic Service of Ukraine using average areas per region for wheat for 2020

Winter barley production



Data source: administrative boundaries from FAO GAUL 2014, cartographic elaboration based on State Statistic Service of Ukraine using average areas per region for winter barley for 2020

Agrometeorological conditions: Autumn (1 Sep – 30 Nov)

RAINFALL

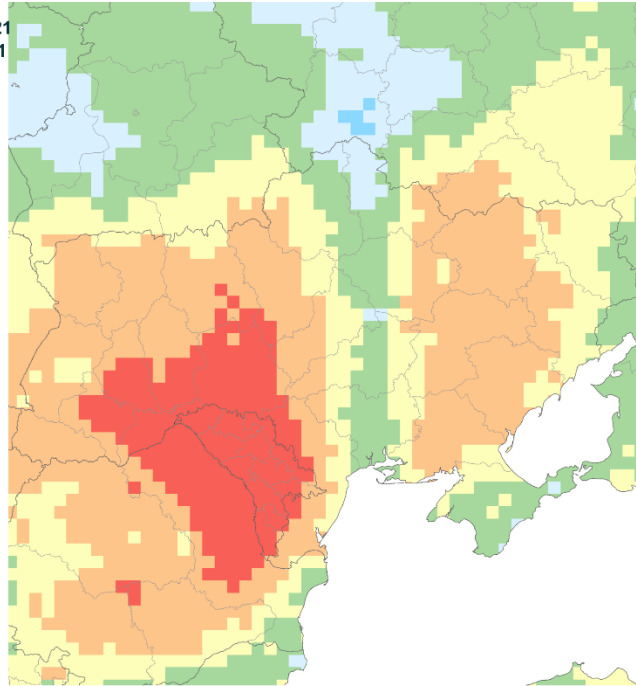
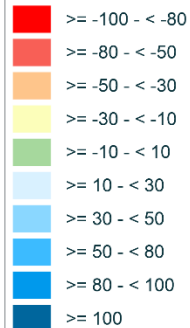
Cumulated values

from : 01 September 2021
to : 30 November 2021

Deviation:

Year of interest - LTA

Unit: %



08/04/2022
resolution: 25x25 km



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Source: Joint Research Centre (JRC MARS4CAST)
Processed by: Alterra consortium

AVERAGE DAILY TEMPERATURE

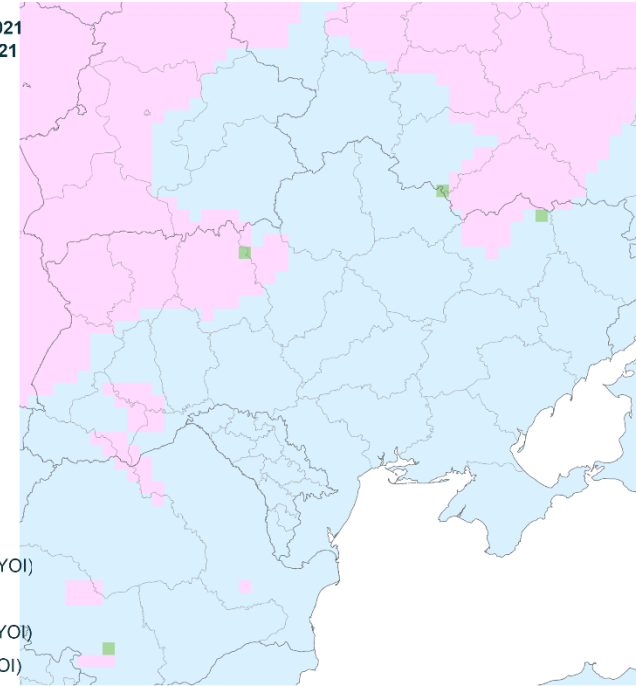
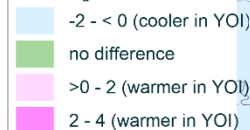
Averaged values

from : 01 September 2021
to : 30 November 2021

Deviation:

Year of interest - LTA

Unit: degrees Celsius



08/04/2022
resolution: 25x25 km



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Dry and cold conditions (particularly October) delayed emergence/early growth
Winter Crops in the south were under-developed in the beginning of winter.



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Agrometeorological conditions: Winter (1 Dec – 28 Feb)

RAINFALL

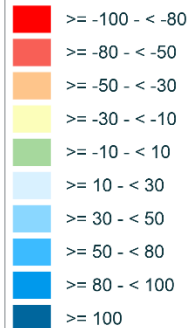
Cumulated values

from : 01 December 2021
to : 28 February 2022

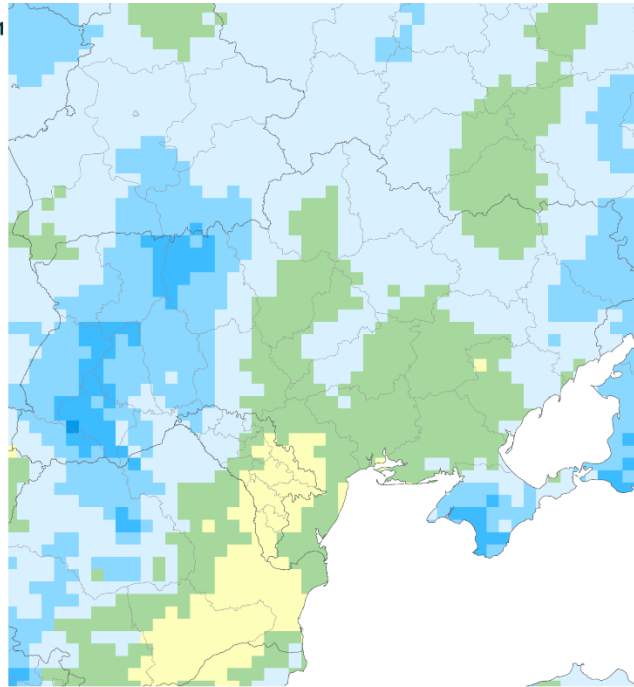
Deviation:

Year of interest - LTA

Unit: %



08/04/2022
resolution: 25x25 km



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AVERAGE DAILY TEMPERATURE

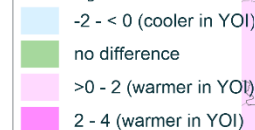
Averaged values

from : 01 December 2021
to : 28 February 2022

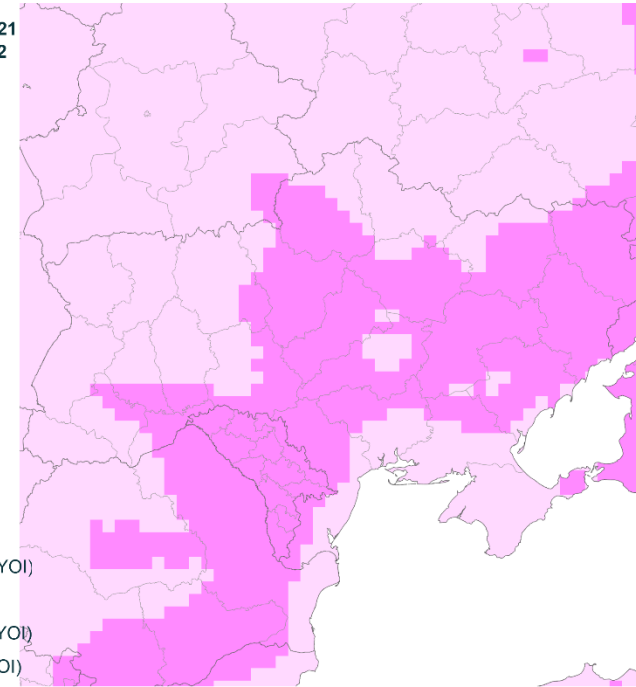
Deviation:

Year of interest - LTA

Unit: degrees Celsius



08/04/2022
resolution: 25x25 km



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No frost kill damages thanks to the warmer than usual temperatures.
Rain deficit in southern oblasts raise concerns.

Agrometeorological conditions : March 2022

RAINFALL

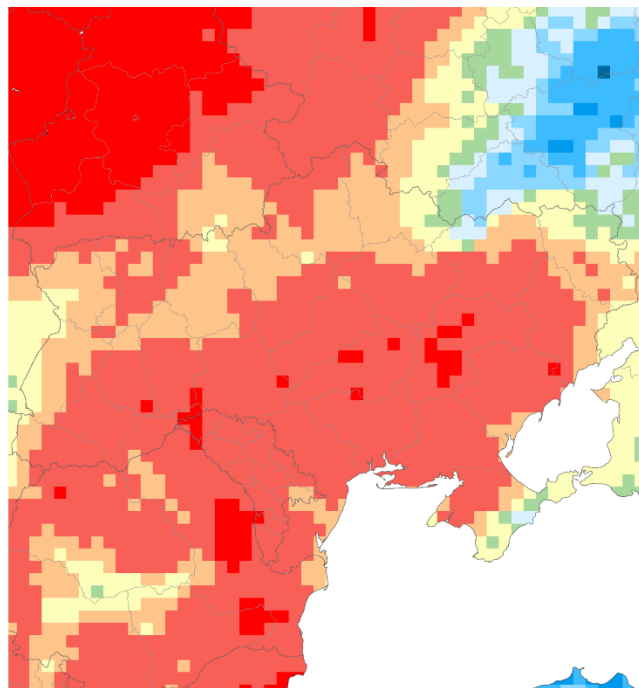
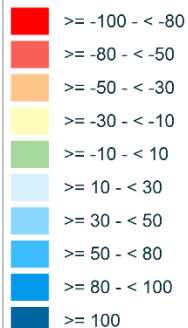
Cumulated values

from : 01 March 2022
to : 31 March 2022

Deviation:

Year of interest - LTA

Unit: %



08/04/2022
resolution: 25x25 km



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Source: Joint Research Centre (JRC MARS4CAST)
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AVERAGE DAILY TEMPERATURE

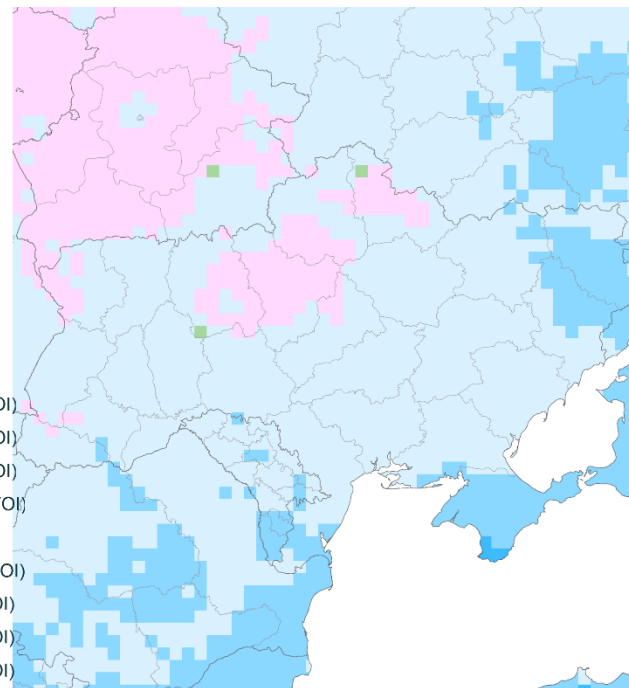
Averaged values

from : 01 March 2022
to : 31 March 2022

Deviation:

Year of interest - LTA

Unit: degrees Celsius



08/04/2022
resolution: 25x25 km



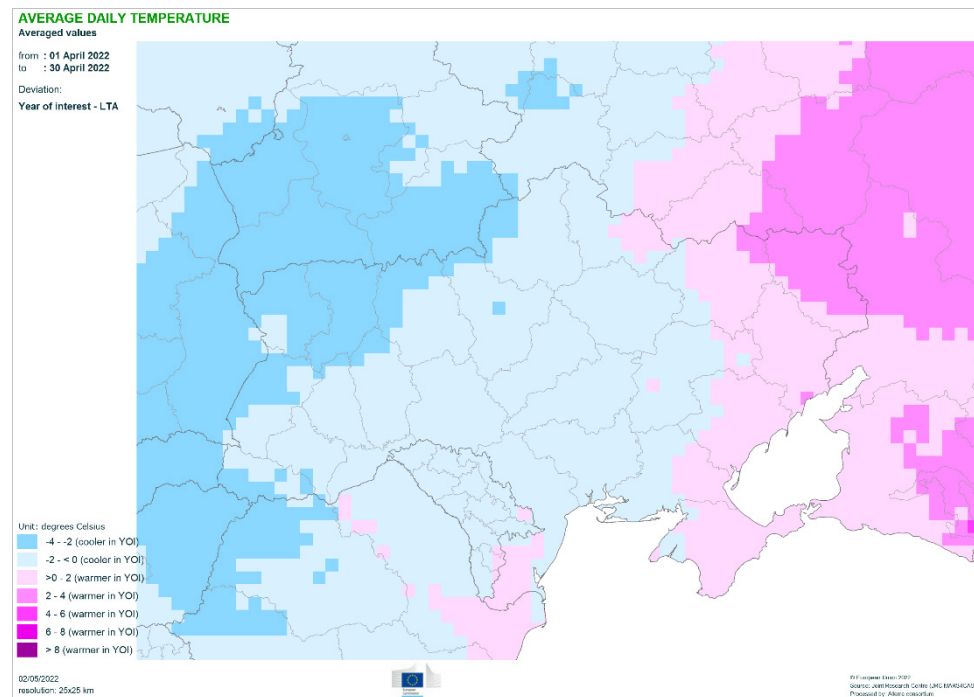
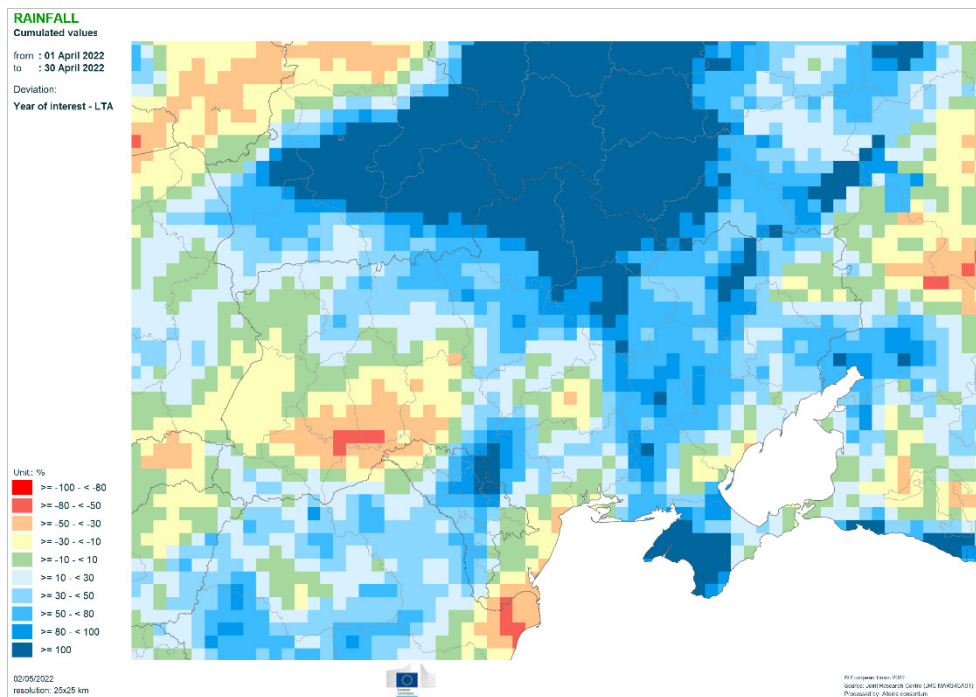
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Winter crops are further delayed due to the below-average temperatures.
Dry conditions from early January may already have reduced the yield potential.



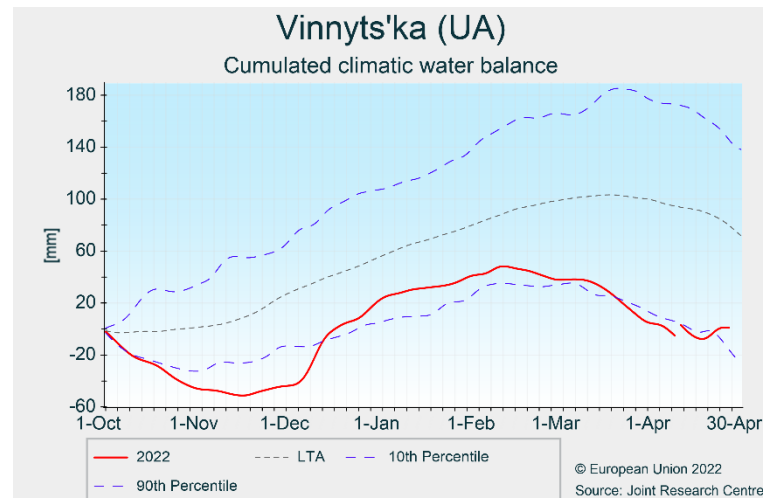
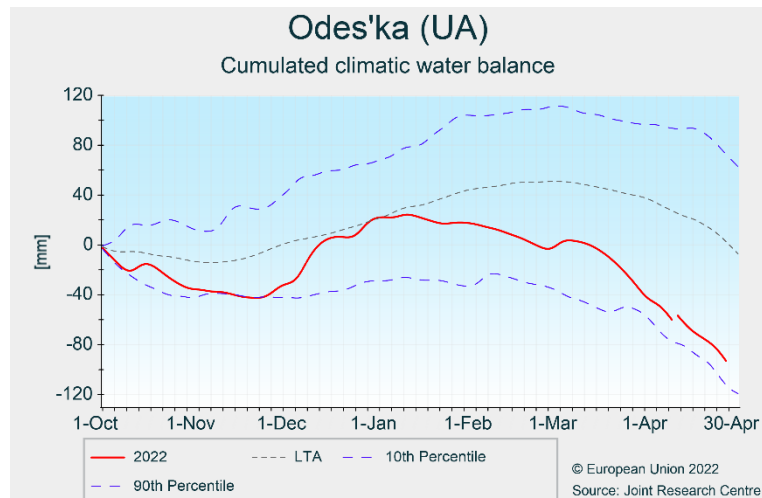
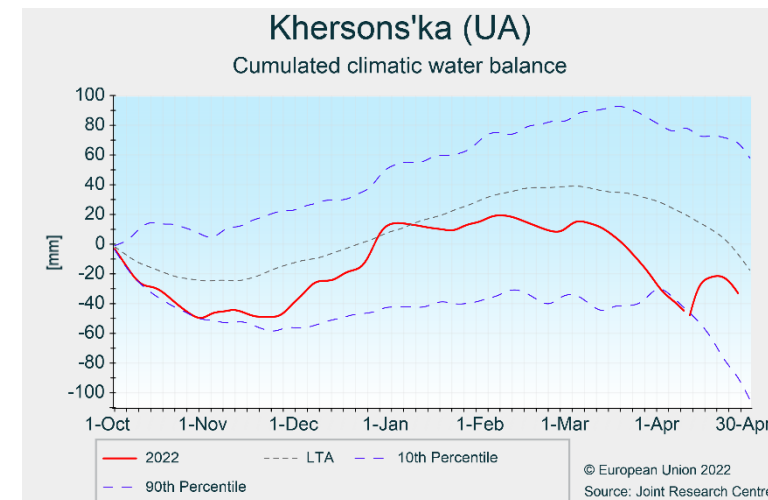
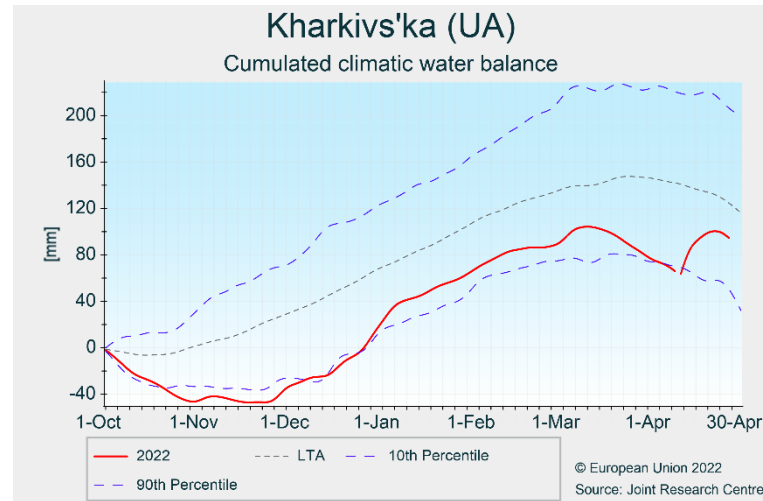
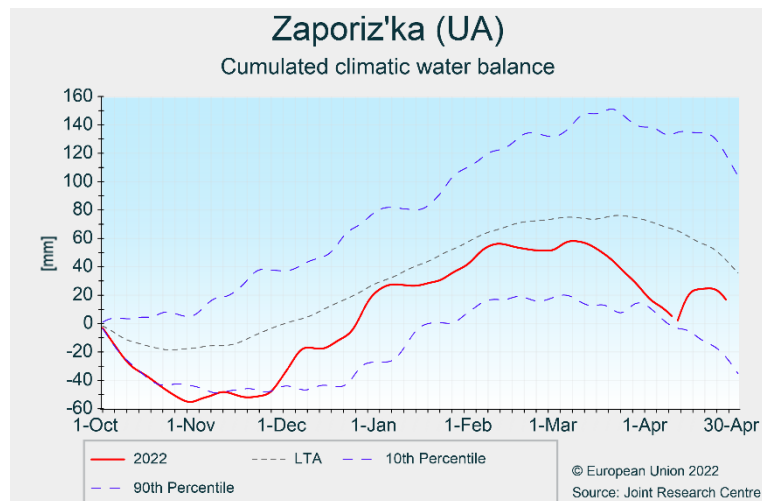
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Agrometeorological conditions : April 2022



More rainfall is still needed, particularly in the south!
Crops are still delayed, with a (so far slight) negative effect on yield potential.

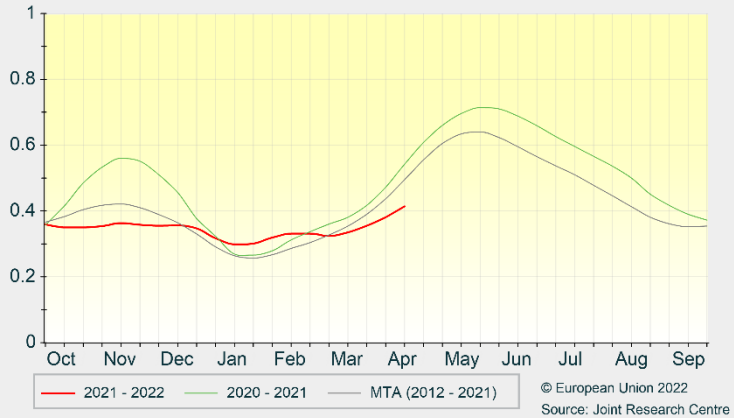
Water Balance : Sharp decline in March



Below-average NDVI confirm a delay in crop development

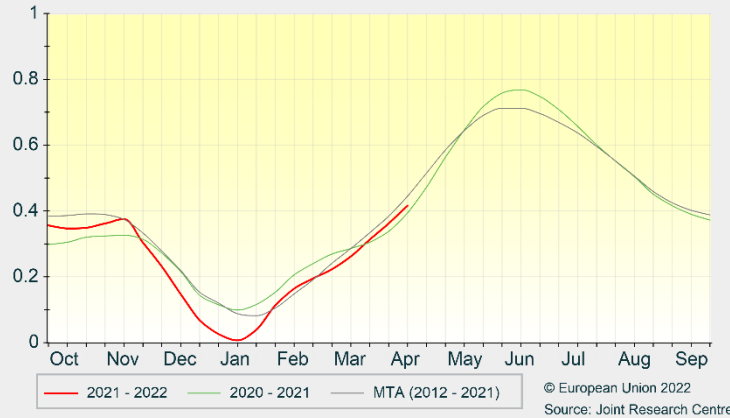
Zaporiz'ka (UA)

Smoothed NDVI of rainfed arable land



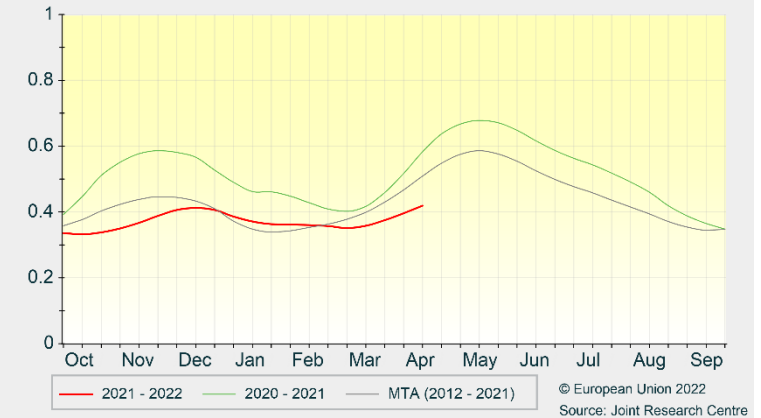
Kharkivs'ka (UA)

Smoothed NDVI of rainfed arable land



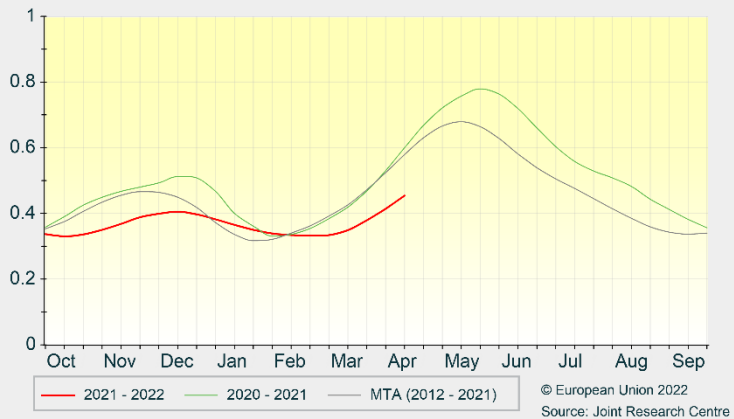
Khersons'ka (UA)

Smoothed NDVI of rainfed arable land



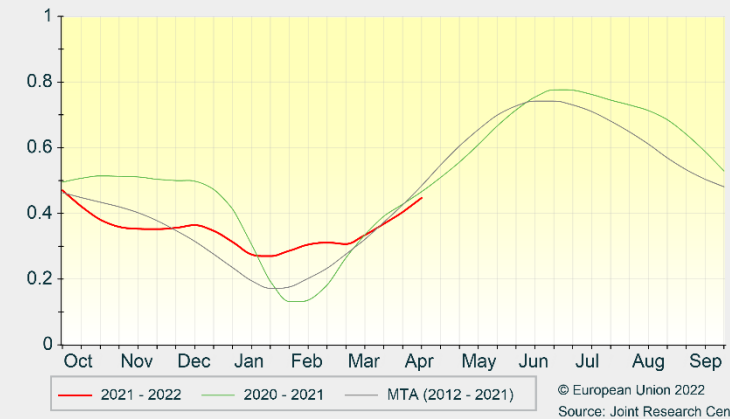
Odes'ka (UA)

Smoothed NDVI of rainfed arable land



Vinnyts'ka (UA)

Smoothed NDVI of rainfed arable land



MARS Yield Forecast in Ukraine (t/ha)

Crop	March 2022	April 2022	Change April-March	Change 2022/2021 (in %)
Soft Wheat	4.39	4.21	-0.18	-7.2
Barley	3.45	3.31	-0.14	-13.0
Grain Maize	7.29	7.29	0.00	-5.0
Soybean	2.56	2.56	0.00	-3.0

March 2022 : Our starting points correspond to the trend yield.
April 2022 : Winter crops yield forecasts were revised downwards.
Current forecasts assume regular field operations such as nitrogen fertilisation and disease control.

Thank You !

The JRC MARS Bulletin is available at <https://ec.europa.eu/jrc/en/mars/bulletins>

AGRI4CAST Resources are available at <https://agri4cast.jrc.ec.europa.eu>

Contact: JRC MARS Bulletin: JRCMARSBULLETIN@ec.europa.eu