EUROPEAN COMMISSION
Joint Research Centre
ipsc
MARS AGROMETEOROLOGICAL Bulletin
Monitoring Agriculture with Remote Sensing

CLIMATIC UPDATE

Situation between 1 - 14 December 2004

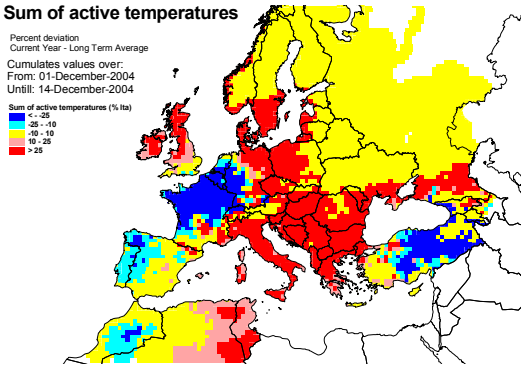
Date: 16/12/2004
Report Number: CU2004/12

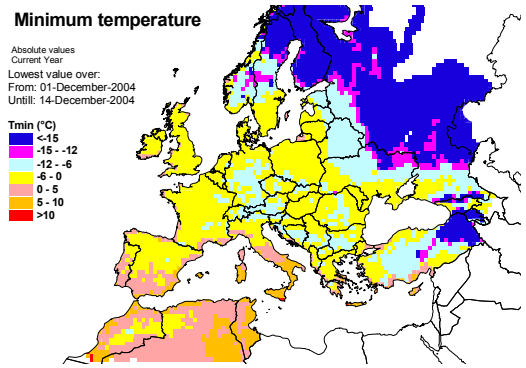
Drier than usual, frost spells in eastern Europe

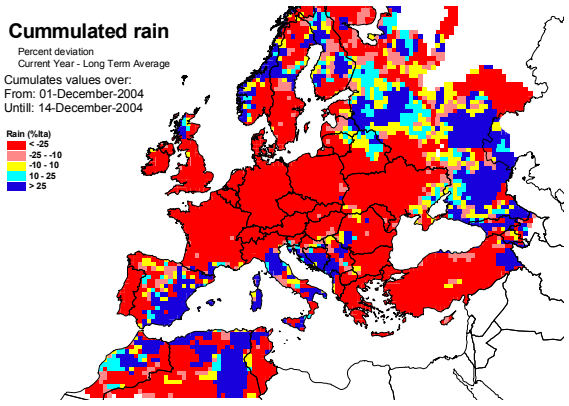
OBSERVED TEMPERATURE AND RAINFALL

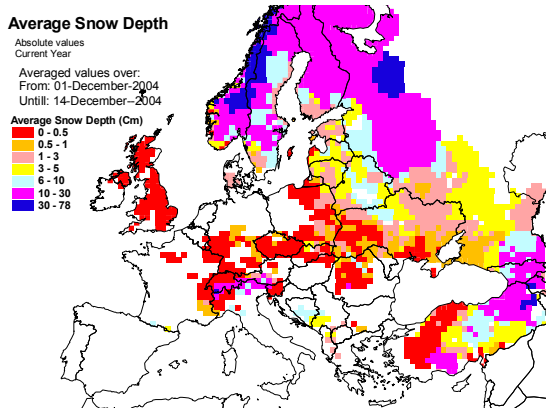
The first half of December 2004 was **hotter** (more than 10% from long term average) for Ireland, UK (except southern), Denmark, southern Sweden, eastern Germany, western Poland, Czech republic, Italy, Hungary, most agricultural areas of Romania, southern Ukraine and the Balkans area. North-western France, Portugal, western Spain and central Turkey were cooler than usual. The crops development was influenced accordingly. Minimum temperatures below 0°C were recorded for almost all countries in Europe, but this is a normal situation for this period. Minimum temperatures between -6° and -9°C were recorded for central and southern Germany, Austria (but mainly outside of the main agricultural areas) and southern Bulgaria. It is not expected a significant negative effect of these minimum temperatures on the winter crops. The minimum temperatures below -15°C, may affect the crops in Turkey, limited areas in northern Ukraine, large areas of Russia and Finland.

This period may be considered as **dry** for most of Europe, except southern Spain, different areas of Italy, north-western Balkan, northern Belarus, western Sweden and large areas from Russia (in these last three regions there were noticed some surfaces with insufficient snow cover).





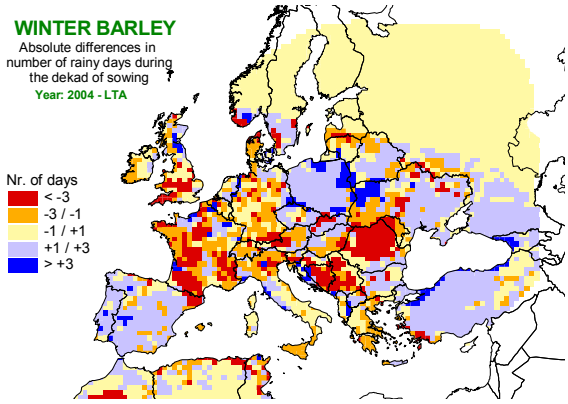


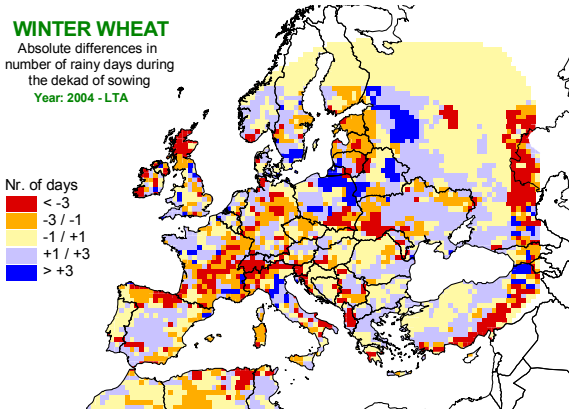


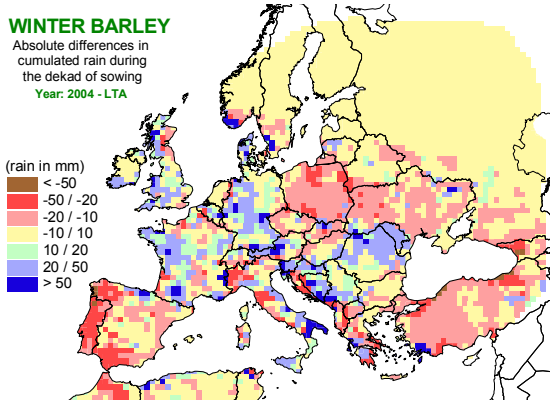
Editorial staff: F. Micale, C. Lazar, A. Royer, G. Genovese, AGRIFISH Unit – MARS STAT Action /JRC.
Data production: AGRIFISH Unit, JRC and Alterra, (NL), Meteoconsult (NL).

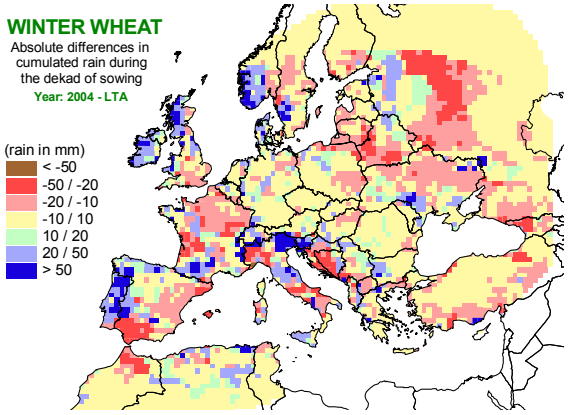
2004/2005 GENERAL OVERVIEW: FIRST PHASE OF THE NEW CAMPAIGN

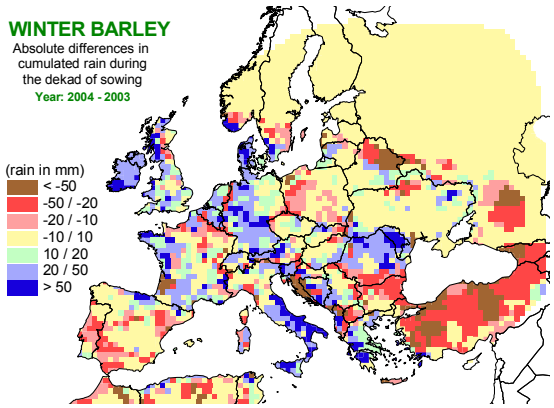
As a whole, the new sowing campaign matched quite favourable weather conditions and let be optimist concerning the success of the first part of the winter crops growing season. In general, both the **rain** during the sowing period (temporary and spatially well distributed) in the different areas and the **temperatures** (practically absence of frost risks and higher than average cumulated active temperatures) as well as the **solar radiation** (high values especially in the northern latitudes) during the following period have not been limiting the normal course of the field activities and the first stages of the crops cycle (germination, emergence and leaves development). However, it must be noticed that despite that general evaluation, during the most common sowing period for winter wheat in various localized areas (i.e.: southern France, Northern Spain, Portugal, Central Italy, Ireland) and for winter barley (mainly Western Germany, Belgium and British Islands) the weather conditions weren't optimal, forcing the normal agronomic practices scheduling. Similarly, a few but significative **extreme rainy events** occurred in November in southern Italy (mainly in Apulia) caused damages both on the present crops and on the soils ready for the new crops (temporary flooding, run-off, soil erosion and damage on fields drainage systems). According to that agrometeorological analysis, positive information is coming form the **satellite data analysis**, which highlighted general better conditions in the northern areas both in comparison with the long term average and with the previous year. It is also evident a delay in the canopy cover in the Western Iberian Peninsula and Southern France likely caused by the delayed sowings compared with the previous campaign.

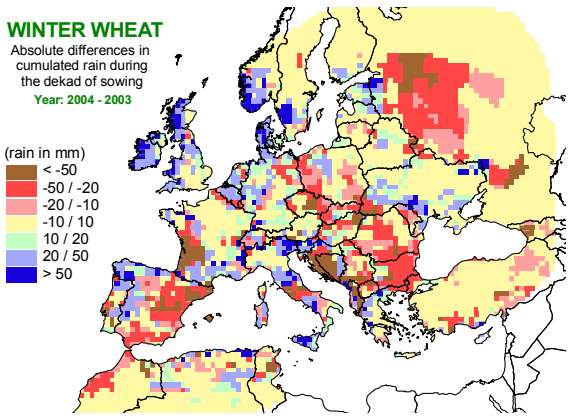












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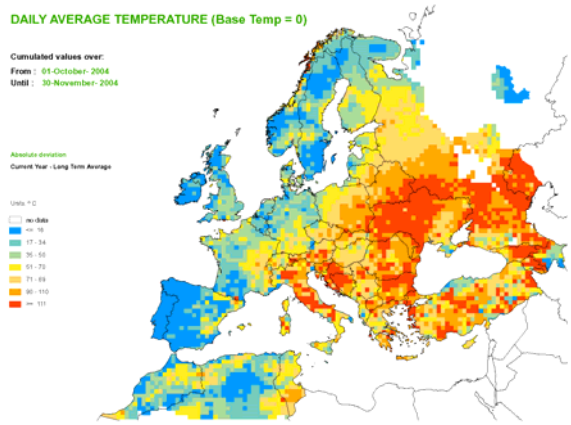

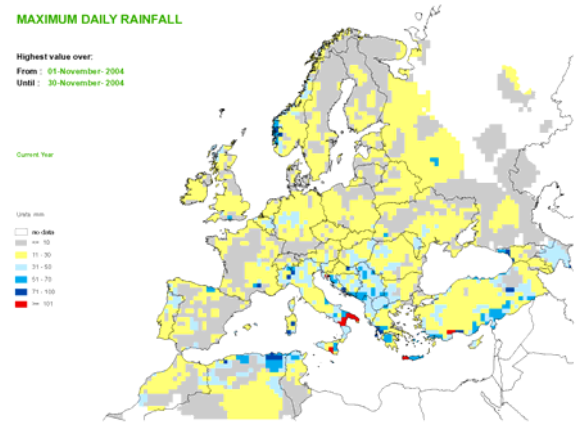
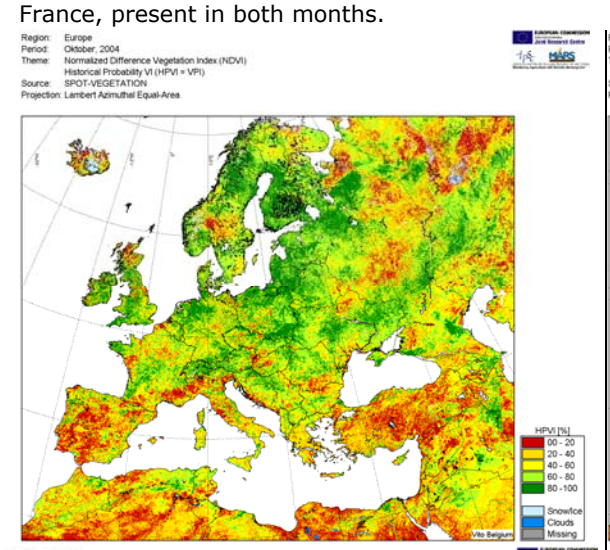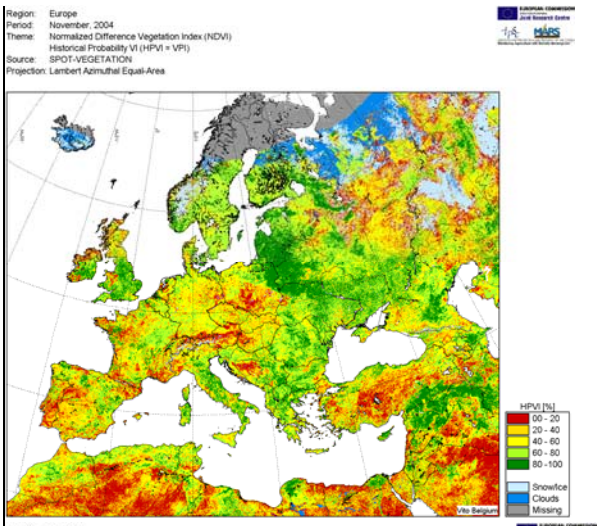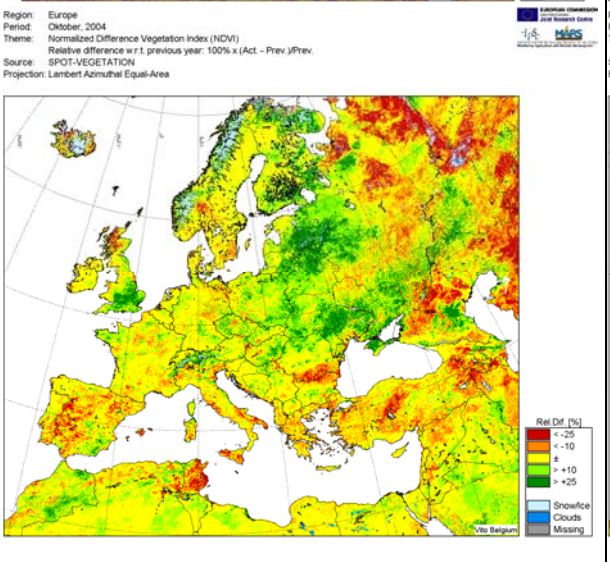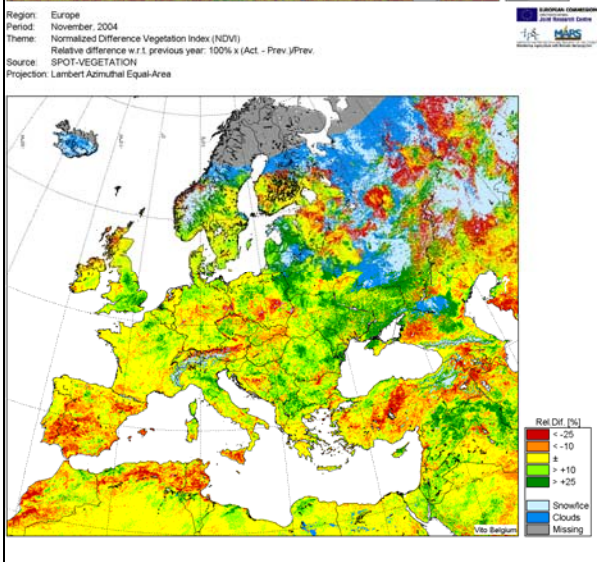
The following two images are related to the percentile attributed to the NDVI indicator respectively in October and November 2004 (hereby expressed as *Historical probability*).
It is possible to see that in the Central and Eastern Countries and Balkans the values are located in the highest part of the relative distribution (i.e.: above the threshold of 80 %), it means that only in the 20 % of the studied cases was possible to find higher than the current values. These high values can be explained in accordance with the favourable weather conditions experienced in those areas.
It must be noticed also the delay in the canopy cover in the Western Iberian Peninsula and Southern France, present in both months.