



MED-Amin Bulletin 2021 – 3

Winter crops early outlook at 10 June 2021

June 2021

Winter crops in most of the northern Mediterranean growing regions are faring well during the final stages of the 2020-2021 campaign. Exceptions occurred for those regions where cereals were hampered by cold spells, high temperature fluctuations or long-lasting dry periods (e.g. Greece and Turkey). Here, expectations for the final production are below-average. Rainfall shortages negatively impacted winter crops production in large parts of Algeria whereas an exceptional campaign is confirmed in Morocco.

The present bulletin is the final outlook about the progress of cereal crops in the Mediterranean region. It provides **early qualitative forecasting** of the 2020-2021 campaign, with particular focus on soft wheat, durum wheat and barley. This final outlook reviews crop conditions from the sowing up to 10 June 2021 and comes after two first reports published previously in March and May.

This crop monitoring and early warning initiative was progressively developed since 2016 by the MED-Amin network, using a general approach similar to the one implemented by GEOGLAM for the Agricultural Market Information System (AMIS).

The MED-Amin network, gathering **13 Mediterranean countries** and coordinated by the CIHEAM, aims to reduce prices volatility in agricultural markets. This initiative lays the foundation for an **early warning system** strengthening food security in the region.¹

Regional outlook summary

At 10 June 2021, the general outlook for winter **crops across the Mediterranean is rather positive despite mixed conditions illustrating differences between the regions**. New agro-meteorological events affected the region during the period May-June 2021, following the previous monitoring at [end-of-February](#) and [end-of-April](#).

Winter crop conditions are fairly good and even with a potential for exceptional harvest in the Iberian Peninsula and in the most productive regions of **Morocco** and north-eastern **France**.

¹ For more info: <http://www.med-amin.org>, <http://ec.europa.eu/jrc/en/mars> and <http://cropmonitor.org>

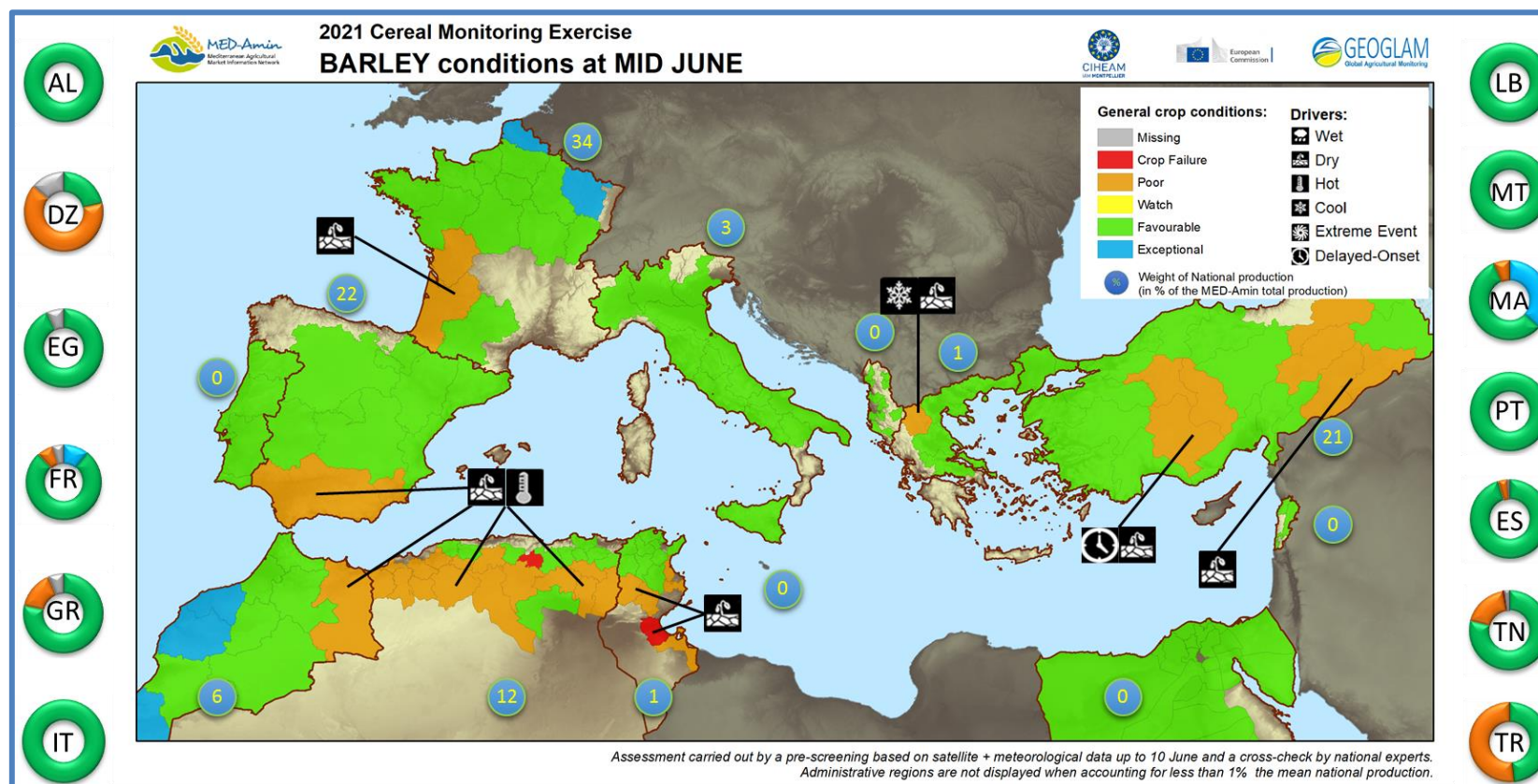
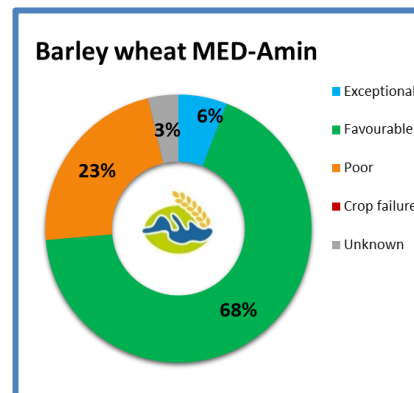
Crop conditions improved during May-June in the northern Mediterranean rim, in particular France and Italy, thanks to beneficial and well distributed rainfalls in spring, which followed the hampering winter storms, cold spells and temperature fluctuations in the autumn-winter period. However, anomalies remain in some regions due to lasting dry conditions, in South-Western regions of **France**, the central Anatolian regions of **Turkey** and Southern **Spain**.

The lasting drought is more significant in large parts of **central Maghreb**, often associated with hot temperatures, hampering the final harvest in **Morocco's** Oriental, in a belt of hinterland wilayas from West to Centre-East of **Algeria** and central-western and southern **Tunisia**.

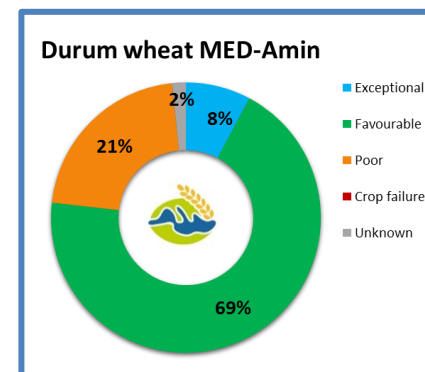
Crop conditions are overall stable and in-line with an average season in Italy, Malta, Lebanon and Egypt.

BARLEY is concerned by mixed to adverse abiotic conditions in several critical regions of the Mediterranean area (see the pie-chart on the right). About a quarter (23% of the monitored areas) of MED-Amin planted area is highlighted as 'poor', which correspond to downgraded conditions compared to the outlook of April. This can be partially compensated by 6% of the MED-Amin barley area under 'exceptional' growing conditions.

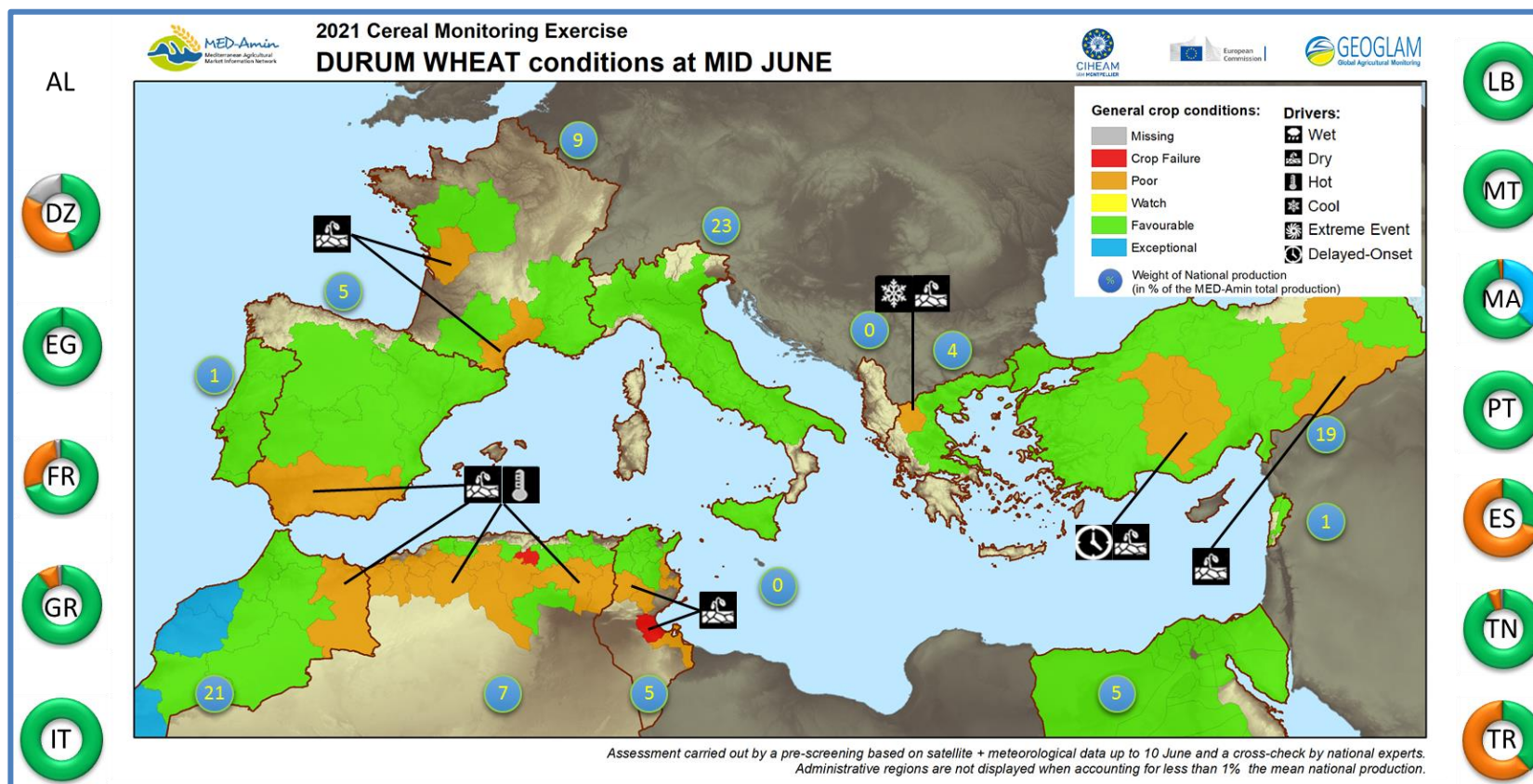
For example, in **Spain** (ES) accounting for 22% of MED-Amin area barley supply (based on the last 5-Y average), *Andalucia* and *Murcia* regions are under 'poor' conditions (4% of the Spanish production, see pie chart on the left side of the map below). Please refer also to the National Highlights section below (p. 6).



DURUM WHEAT is a typical Mediterranean production (47% of World production). Latest crops developments in May and June confirmed the previous monitoring with **expected impacts from adverse abiotic conditions**. However, more than 3/4 of the acreage in the MED-Amin region developed under normal / 'favourable' or 'exceptional' conditions (69% and 8% of the monitored areas respectively). More than 21% are considered developing under 'poor' conditions (see pie chart beside on the right).

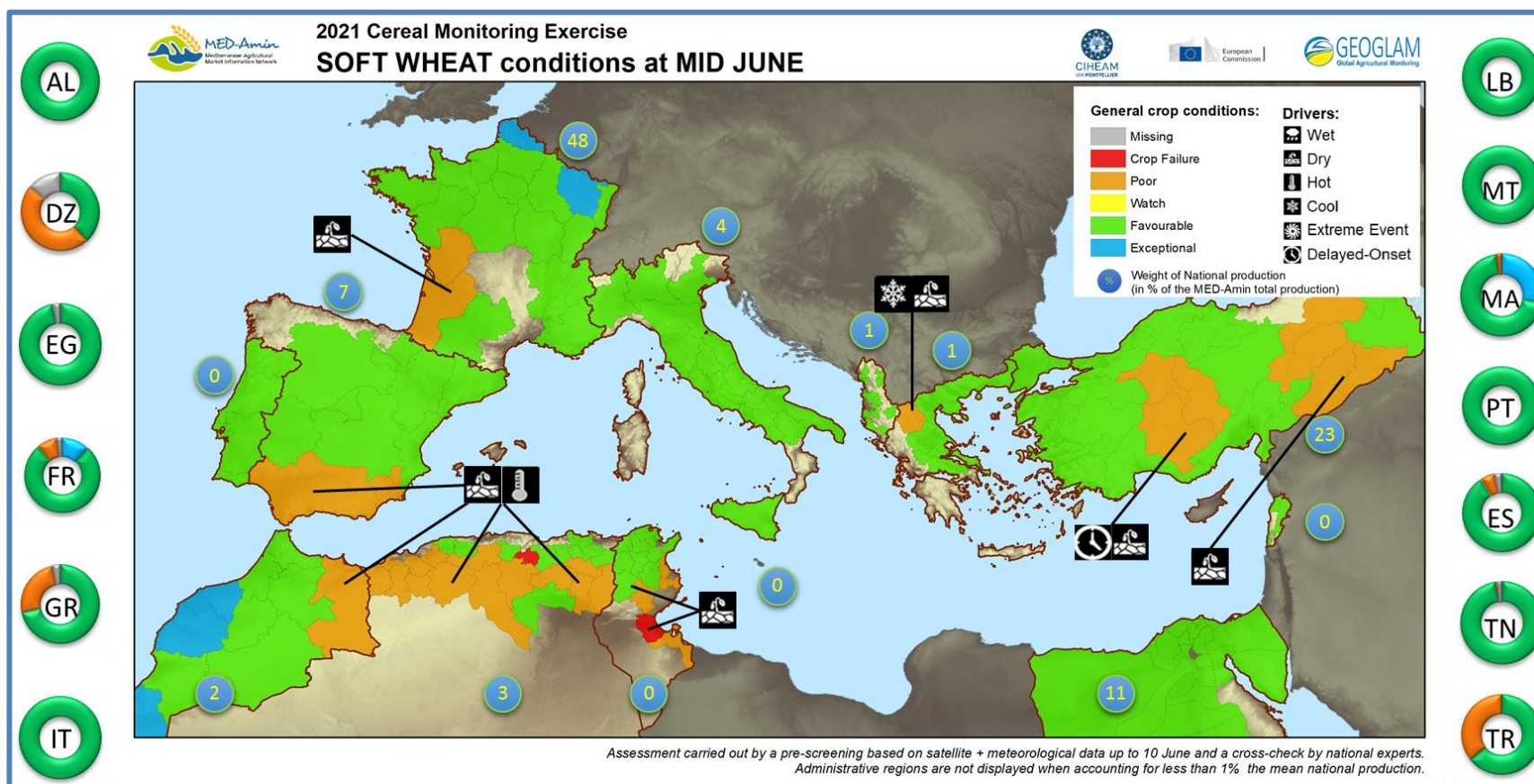
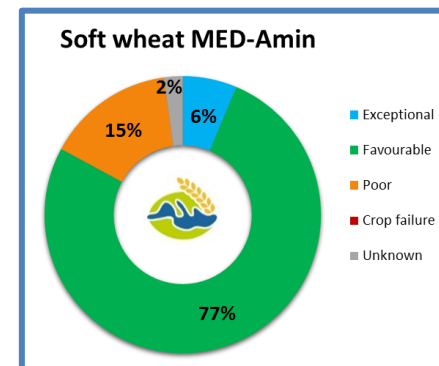


Algeria (DZ) is accounting for 7% of the MED-Amin production. Difficult crop growing conditions are registered throughout the current campaign for most of the wilayas: 45% are under 'favourable' conditions but more than 37% are under 'poor' conditions as maturing is being completed in most of the regions. In **Turkey (TR)**, accounting for 19% of the MED-Amin production, 70% of cultivated areas develop under 'poor' conditions. Please refer to the section page 6.



SOFT WHEAT crops developed under a more favourable conditions since the beginning of the campaign than durum wheat and barley, with a large majority under favourable conditions (83% of monitored areas are identified under ‘favourable’ or ‘exceptional’ conditions, +7% vs last month monitoring, see pie chart beside). Harvest expectations are positive in most of the productive regions.

Soft wheat performed well both in **France** (FR) and **Morocco** (MA). In France, whose production accounts for 48% of MED-Amin production, only a little share is estimated under ‘poor’ conditions (*Aquitaine* and *Poitou-Charente* region; see the corresponding pie chart for FR on the right side of the map below). In **Morocco** (2% of MED-Amin production), the outlook for soft wheat is very promising with several regions with exceptional conditions. Please see the National Highlights section below (p. 6).



National highlights²



Albania: Crop conditions for winter cereals are favourable in the whole country. Favourable weather conditions were beneficial for cereals which improved with respect to the previous outlook. The main drivers in this period have been the drought- for *Elbasan, Fier* and *Vlorë* (which negatively affected the milk and wax phase). Wet conditions were registered for *Berat, Durrës and Korçë* while hot weather was instead monitored for *Kukës, Lezhë and Elbasan* regions. In *Durrës, Fier* and *Elbasan*, weeds pressure spread due to excess of moisture, but did not have a real impact on crop yields. Regarding the harvest, manual harvesting has started in the hilly-mountainous areas and mechanical harvesting in some plain areas. In *Lezha, Shkodër, Elbasan* and *Kukës*, the harvest is scheduled at end-of-June. The **expected yield for soft wheat and barley varies from 3.7 (Kukës) to 4.5 (Durrës) t/ha, in line with the last 5-year average**. In *Korçë*, the most productive region for winter cereals, rainfalls in May and June improved soil moisture in most of fields.



Algeria: The rainfall deficit featuring the current campaign, negatively affected cereals development **in many important western and central regions of the country, hampering crop biomass accumulation and yield formation, with a direct consequence to the expected final production**. The rainfalls of April and May slightly improved the situation in the Central and Eastern inland wilayas, especially for late planted areas. On the other hand, the rainfall deficit featured the western regions since January 2021 with rainfall amounts not exceeding 50 mm, which affected the yield and consequently the production in the region.



Egypt: The winter cereals harvest is over. Warmer-than-usual thermal conditions characterized the season until harvest in Egypt. Exceptionally temperature occurred in *Menia* (40% the durum wheat production) but these events did not trigger any impact on biomass accumulation. Satellite imagery shows **average to above-average conditions for cereals**, which indicates a sufficient water supply from irrigation to support growth during the vegetative cycle.³



France: The fall planting campaigns went off without a hitch and was on schedule thanks to the overall favourable conditions for a good planting. The settlements were very good thanks to the rains. The abundant rainfall in December - January did not have a major impact on crops, except

² Highlights relating to each country are detailed in a section using a coloured background depending on the overall assessment of the situation: green if favourable, blue if exceptional, yellow if mixed, orange if poor.

³ These information on crop conditions in Egypt was made available from the JRC-MED-Amin analysis and the latest JRC MARS Bulletins for North Africa: https://ec.europa.eu/jrc/sites/default/files/jrc-mars-bulletin_north_africa-june_2021.pdf

for some local events, notably in *Nouvelle-Aquitaine*. The frost episode occurred in early April had very little impact on cereals, apart from the spring barley sown in the fall, which locally manifested cold stress. In the South of France, where are normally more advanced, the cold during the meiosis gave rise to some problems with empty ears. The water deficit which spread between March and mid-May in the South of France degraded growing conditions in *Midi-Pyrénées*, *Languedoc-Roussillon* and *Aquitaine*, *Poitou-Charentes*. Tillers regressions were monitored, as well as crop nitrogen uptake concerns. In *Centre Val de Loire*, the rains in May relieved crops and limited the damage. Conditions are expected to be exceptional in *Lorraine*, *Nord-Pas-de-Calais* and *Ile-de-France*⁴. Durum wheat in *Languedoc*, suffered greatly from the combined action of frost and drought. Cultivation conditions have improved in view of the good plantings, the good sanitary condition and the low impact of frost throughout the northern half and the south-eastern quarter, with very good conditions increasing. According national qualitative estimation, good and very good growing conditions took place for 81% of the areas for soft wheat, 76% for winter barley and 69% for durum wheat. The outlook is much better than the five-year averages for winter barley and soft wheat, and to a lesser extent for durum wheat. Expectations are also much higher than the 2019-2020 cropping season, which was impacted by poor sowing conditions in autumn / winter, and also affected by a water deficit in the main producing regions in spring. All of this directs to a [general positive outlook on 2021 harvest in France](#).



Greece: Temperatures followed the LTA values and rainfall was well-distributed across all the main agricultural areas in Greece (see the MARS Bulletin of June⁵). Farmers have almost completed the harvest operations for winter crops. In the Macedonian regions, wheat harvest is planned for the second half of June. Winter crop condition was hampered by unfavorable weather events during the season: above-average temperature during dormancy and a cold-spell in mid-spring. [Final expectations for winter crops production is slightly below-average](#). In particular, in *Dytiki Makedonia*, beside the delayed development stages, the shortening of the cycle of development might drive to below average yields due to poor cropping conditions.





Italy: Above-average temperature conditions moderately decreased wheat biomass accumulation (see the MARS Bulletin of June⁵). In northern Italy, May was cooler than usual, temperature increased in June and precipitation was average-to-abundant (north-eastern regions) and scarce in *Piemonte* and western *Emilia-Romagna*. Winter crops are at the grain-filling. Soft wheat is in sub-optimal conditions. In central Italy, drier-than-


⁴ In *Ile-de-France*, an extreme storm event (heavy rains, gust) occurred on June 19, affecting particularly *Seine-et-Marne* (hence, 15% of cultivated areas were classified under poor conditions by FranceAgriMer – Céré’Obs). Even if this is out of the monitored period (as of June 10), we decided to cut the regional outlook to ‘favourable’ in *Ile-de-France*.


⁵ <https://ec.europa.eu/jrc/sites/default/files/jrc-mars-bulletin-vol29-no6.pdf>

usual conditions were observed in *Marche* and *Umbria*, with nearly average temperatures that prevented excessive soil moisture depletion. Durum wheat is at the end of grain filling, soft wheat is delayed compared to the average season. In *Sicilia*, the winter crop campaign is closing under optimal conditions. In *Puglia* and *Basilicata*, favourable conditions prevailed during grain-filling leading to average to slightly above-average crop production expectations. In general, **winter crops are set up for a positive outlook for 2021 harvest**.

 **Lebanon:** This campaign was characterized by high precipitation with a cold period, which had a positive effect on crop potential production that remains favourable according to farmers. **Yield outlook is positive with a good level of production** and increased wheat acreage compared to the previous season. The *Eurygaster* insect was early detected and treated properly with no impact on yields. Also, there is no new locust swarm observed since April 2021⁶. No significant negative impact has been observed on the general status of cereals production in Lebanon apart from the economic global crisis that affects the country and might have indirect consequences on agriculture.

 **Malta:** No extreme events are noted so far and crop conditions are monitored in-line-with the average season.

 **Morocco:** The winter cereals campaign is concluded and the outlook for cereals remains very positive for both barley and wheat. In general, crops benefitted from mild temperatures and wide water availability. **The national production is clearly well above the 5-year average** just after two consecutive years of persistent drought. Yet, the start to the season was harsh and similar to the 2019-2020 campaign: crop cycles were delayed by late autumn rains and crop sowings and establishments were postponed compared to an average season. Favourable conditions in January to March with substantial rainfalls highly contributed to sustain a positive outlook until the harvest. Above-average yields are expected at national level.

 **Portugal:** Beside normal to above-average accumulated precipitation since the beginning of crop campaign, May 2021 was hot and very dry, like March and April compared to the medium-term monthly average. According to the meteorological drought index, there was an increase in the area and intensity of drought. The soil moisture availability may have decreased throughout the territory. However, these meteorological and hydrological conditions remained favourable as winter cereals were well advanced towards full maturation stage and the reduction of soil moisture was not as relevant as expected. **Productivity is estimated to increase of 5% for soft wheat and barley and stable for durum wheat compared to the previous (good) season**. In *Alentejo*, dry conditions cut slightly the final yield potential even though grain maturing performed

⁶ <http://www.fao.org/ag/locusts/en/info/info/index.html>

well, which reduced 2021 output of this most productive region in Portugal with the help of a reduced planted area vs last year. In *Trás-os-Montes*, it is also expected a little decrease of yield compared to the previous campaign.



Spain: At the beginning of June, a rapid weather change caused by an Isolated Upper Atmospheric Depression affected the whole national territory in a progressive way. The high temperatures recorded at beginning of June allowed the normal ripening of cereal crops, especially in the later harvesting areas located in the northern half of Spain. There, crop development is about 20 days delayed compared to an average season (MARS Bulletin of June). The arrival of stormy rainfall in mid-June has interrupted harvesting in some areas and in some plots hail has caused damage. The positive harvest forecast has been downgraded, but remains in the domain of a positive outlook. In *Andalucia, Murcia* and parts of *Castilla la Mancha*, poor conditions still prevailed because of dry conditions⁷. Nevertheless, **production is expected to be around the average of recent seasons, although far from last year's record harvest**. According to unofficial sources (personal communication shared by field experts), yields are lower than those obtained last season but the quality of the new crop is described as "acceptable".



Tunisia: Favourable crop biomass accumulation is present in the northern regions of Tunisia (e.g. *Bizerte* and *Béja*), where crops fared well thanks to seasonal conditions in terms of water surplus and temperatures. By contrast, a negative hotspot can be observed in the most western inland regions of the country (e.g. *Kasserine* and *Kairouan*), where a rainfall deficit (-35 mm, i.e. 40% below the LTA) was registered over the period February - June. In general, at the national scale, **this campaign will be better than the previous one and the 5-year average, notably for barley**, but not as good as that of 2018-2019 record harvest (see the MARS Bulletin of June³).



Turkey: Due to high temperatures and drier-than-usual conditions in November and December 2020, planting and plant emergence were harsh and delayed crop development stages, in particular in Central Anatolian regions, the cereals basket of the country. The persistence of dry conditions in spring and beginning of summer did not allowed a recover along with a shortened development cycle throughout some provinces in Turkey. Crops could not fully complete their vegetative development due to the lack of rainfall, especially in May in some parts of the West, Central to Northeast Anatolia (e.g. *Konya, Kirrikale, Ankara, Malatya* and the *Erzurum* regions). In addition to this, the spike fertility - number of grains per head - remained low. In the South-eastern Anatolian regions (e.g. *Sanliurfa* and the *Mardin* regions), a slight decrease in yield is expected due to the low level of precipitation since April and long-lasting high-temperatures where irrigation systems may have encountered

⁷ The level of water reserve in dams is in decline and already below average, especially in the South of the country, which could (have) limited last stage development of crops prior harvest (<https://www.embales.net/>)

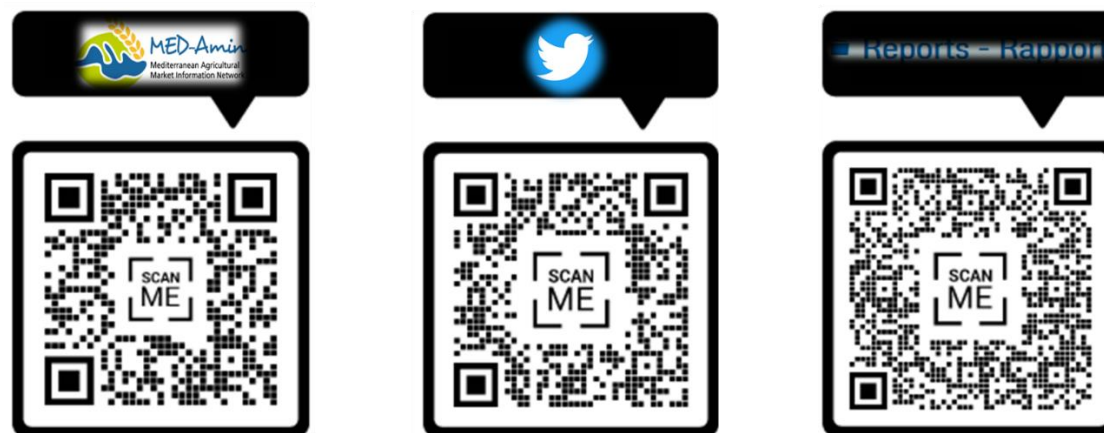
difficulties in keep soil water availability to the optimal values. More in general, a yield loss is expected comparing this season to the previous one, especially in account of the rainfed cropping regions. However, late heading crops took benefit from early June rainfall in some part of the regions. Furthermore, crop conditions in the coastal regions were very favourable in May. Consequently, it is expected that the impact of dry weather in May will negatively impact the Centre and Southeast regions. These conditions are also expected to be compensated by the positive outlook in other main regions; particularly thanks to additional improvements in the national irrigation web and due to an increasing trend in planted area. In summary, at the national level, it is expected **a reduction of wheat and barley yields compared to the last 5-year average and therefore a slight reduction of the relative productions.**

General methodology: *The forecasting methodology is based on the monitoring of crop conditions using indicators derived from Earth observation, carried out jointly by the CIHEAM-IAMM and the Joint Research Centre of the European Commission (JRC). This allows detecting areas of concern, deviating from normal conditions, which are characterized using the GEOGLAM scale and nomenclature (see below). These pre-screened areas of concern, defined at a sub-national level, are then analyzed, validated or completed by each National Focal-points of the MED-Amin network, taking into account feed backs from field observation and local experts.*

Crop conditions legend (GEOGLAM scale and nomenclature):

- **Exceptional:** *Conditions are much better than average at the time of reporting. This label can only be used between the grain-filling stages to the harvest stage (which started only in Egypt).*
- **Favourable:** *Conditions range from slightly below to slightly above average at the time of reporting.*
- **Poor:** *Conditions are well below average and are very likely to impact production with a harvest clearly below average.*
- **Crop failure:** *Crops have been strongly damaged, low yield and area reduction will strongly impact the production.*

Follow the evolution of the harvest forecasting throughout the campaign:



<https://www.med-amin.org/fr/> et https://twitter.com/MEDAmin_network.

Authors:

David Gasc (CIHEAM, Montpellier)

gasc@iamm.fr

Giacinto Manfron (EC-JRC, Ispra)

giacinto.manfron@ec.europa.eu



MED-Amin

Coordination

CIHEAM at CIHEAM Montpellier

↳ contact@med-amin.org

Site Web

↳ <http://www.med-amin.org>