



Qualitative estimation of the 2019 wheat and barley production

Bulletin - June 2019

Crop forecasting exercise in the MED-Amin network

Content

Executive Summary	1
Introduction	2
Results	3
1. Identification of areas with anomalies on agro-meteorological and remote-sensing indicators.....	3
1.1. Mid-April analysis.....	3
1.1.1. Proposed pre-screened areas (PA).....	3
1.1.2. Field feedback from the MED-Amin countries.....	4
1.2. Mid-May analysis.....	5
1.2.1. Pre-screened areas (PA) update.....	5
1.2.2. Field feedback from the MED-Amin countries.....	5
2. Qualitative assessment of the upcoming harvest in the MED-Amin countries	6
2.1. Mid-April MED-Amin outlook	7
2.2. Mid-May MED-Amin outlook	8
2.3. Comments on the crop conditions and yield outlook at the two dates	9
Soft wheat.....	9
Durum wheat.....	9
Barley	9
3. Agro-meteorological and crop conditions at mid-May in each MED-Amin country	10
Conclusion.....	14

Executive Summary

The MED-Amin network countries participated for the third consecutive year in a crop forecasting exercise for cereal crops (soft wheat, durum wheat and barley) which consisted in comparing agrometeorological indicators of terrestrial observation provided by the MED-Amin Secretariat and the Joint Research Centre of the European Commission (JRC) to field observations in each of the 13 participating countries.

The methodology applied in 2019 is based on the identification of zones (and their corresponding administrative units) for which positive or negative anomalies can be highlighted on the base of agrometeorological and remote sensing indicators. This phase was carried out at mid-April, with an update mid-May. For each of these two phases, the MED-Amin National Focal Points qualitatively assessed the yield prospects of these target areas through a feedback from field experts. The preliminary establishment of sub-national statistical references makes it possible to visualize the potential impact of the identified hot-spots on each country.

Results coming from the crop monitoring exercise at mid-May (a few weeks before the harvest in the south and more than a month in the north) highlight overall a more frequent occurrence of negative-to-failure crop conditions for western MED-Amin regions and a more frequent favourable-to-exceptional crop condition for central and eastern MED-Amin regions.

Whether for the cultivation of **soft wheat, durum wheat or barley**, the general conditions are favourable in France and Turkey (main producers of the MED-Amin network) and in Albania, Algeria, Egypt, Greece, Italy and Lebanon (see the corresponding graphs in the report). They are even exceptional in Tunisia, which benefited this year from significant rainfall.

On the contrary, there are poor conditions in the three western countries - Spain, Portugal and Morocco - which have suffered from a recurrent lack of water and pronounced and high temperatures since the beginning of the campaign. Although the delay between this diagnosis and the harvest may allow some local improvement, 2019 cereal yields are likely to be below the five-year average in these three countries (> 10% down).

Bulletin – June 2019

Following the positive evaluation of the two first crop forecasting exercises (pilot) carried out in 2017 and 2018, the MED-Amin network decided during its 6th annual meeting (Meknes, 22 -23 January 2019) to continue this activity in 2019, with the involvement of the 13 MED-Amin countries.

The methodology defined in 2018 has been kept as well as the focus on the three cereals: Soft Wheat, Durum Wheat and Barley. The main effort of the 2019's exercise, with the objective to be semi-operational, focused on shortening the delays of the production of the qualitative assessment, still relying on a network of local experts in the countries, which involved, compared to the 2018's exercise:

- i) A preliminary building by the MED-Amin Focal points of a sub-national data reference (baselines); this Baseline allows to weight the observed crop conditions reported to obtain quickly a national outlook ;
- ii) Two successive pre-screenings of Pre-screened Areas (PAs) with substantial anomalies on Earth observation indicators, carried out jointly by JRC and the MED-Amin secretariat early April and early May 2019;
- iii) With two questionnaires sent earlier to focal points (sent the 19 April and 22-23 May, compared to 15 June in 2018) for a qualitative assessment of the yield outlook and shorter delays of answer, with the overall objective to produce a synthesis in June (instead of October in 2018) in a semi-operational context.

The achievement of this objective has been greatly facilitated by the 2018 experience, with a good understanding of the overall methodology and of the nomenclature used to report crop conditions, some further simplification in the pre-screening and questionnaire with important clarifications on the reporting of situations outside pre-screened area.

In practice, nine MED-Amin countries provided updated information to build sub-national baseline: Albania, Algeria, France, Greece, Lebanon, Morocco, Portugal, Spain and Tunisia. Other sources (including public National statistics websites) allowed completing this information for the others except for Egypt.

The present Bulletin displays the **results of the 2019 forecasting exercise that covers the two monitoring dates (situation at the 11 of April and 10 of May) for the 13 countries with different degree of detail according to the information received from the Focal points.**

Results

1. Identification of areas with anomalies on agro-meteorological and remote-sensing indicators

1.1. Mid-April analysis

1.1.1. Proposed pre-screened areas (PA)

Figure 1 shows the 18 pre-screened areas (PAs) initially detected by the JRC and provided to the focal points by mid-April by the MED-Amin Secretariat. Each PA, schematized by a circle, shows significant anomalies of the fraction of absorbed photosynthetic active radiation (FAPAR biophysical indicator), temperature and / or precipitation (agro-meteorological indicators). Red circles represent PAs with unfavourable weather conditions and/or deficient biomass accumulation with respect to (middle-term) average values, which may lead to negative impact on yields; green circles, those where a positive impact is possible. Areas outside the PAs are considered normal by default with average yield prospects.

The PAs are attached to specific administrative units and concern 25 units (NUTS 1,2 or 3): Albania (Tiranë, Elbasan), Algeria (Tlemcen, Mila, Constantine, Tébessa and Oum el Bouaghi), Egypt (Ismailia), Spain (Castilla y Leon), France (Central, Nord-Pas de Calais, Languedoc-Roussillon), Greece (West Macedonia, Central Macedonia), Lebanon (Nabatieh, North Lebanon), Morocco (Tensift, Oriental), Portugal (Alentejo), Tunisia (Kairouan, Kasserine, Beja, Le Kef, Siliana) and Turkey (Gaziantep, Sanliurfa).

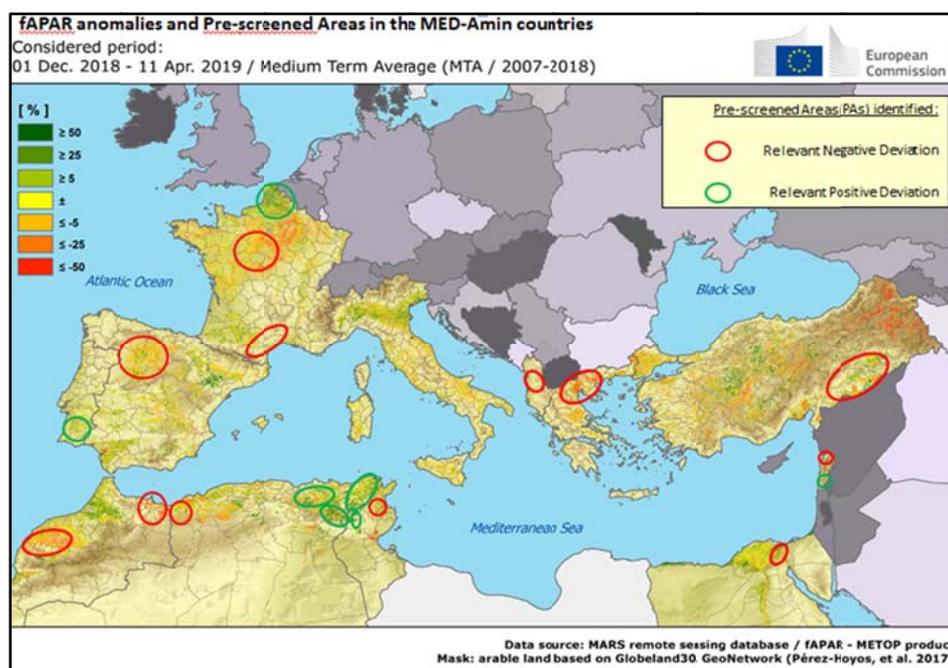


Figure 1: Initial Pre-screened Areas (PAs) in the 13 MED-Amin countries (April 2019)

NB: The background image (pixels in colour) represents the fAPAR relative anomalies considering the period from 1 December 2018 to 11 April 2019 in the MED-Amin countries.

1.1.2. Field feedback from the MED-Amin countries

Figure 2 represents the feedback received from the focal points of each MED-Amin country and displays for each administrative unit the general crop conditions of soft wheat. New areas have been added to Fig. 1 based on information collected by field experts outside the PAs. For each region, the main agro-meteorological drivers are indicated (see the legend and the Terms of Reference in *Annex*).

The colour of each unit (see map legend) corresponds to the yield outlook taking into account the growing conditions and according to the GEOGLAM international nomenclature: the "*Exceptional*" category means that these prospects are much better than the average at the time of the survey; the "*Favourable*" category that the conditions and yield outlook are close to average; the "*Watch*" category that a risk factor is identified, but its impact is not definitive and the yield outlook are not far from the average (for example in the case of improved conditions in April-May) ; in the "*Poor*" category, conditions are well below average with a very likely negative impact on yields; the category "*Crop failure*" corresponds to very low yields, including the existence of crop failure cases. In the case of several categories for the same area, only the most significant was selected based on the comments of the focal points.

Where no PA information was provided by the focal points, the corresponding areas were greyed out using the "*Missing information*" category. Finally, to facilitate the reading of these maps, very minor administrative units for cereal production (with about 1% or less of national production) were not shown.

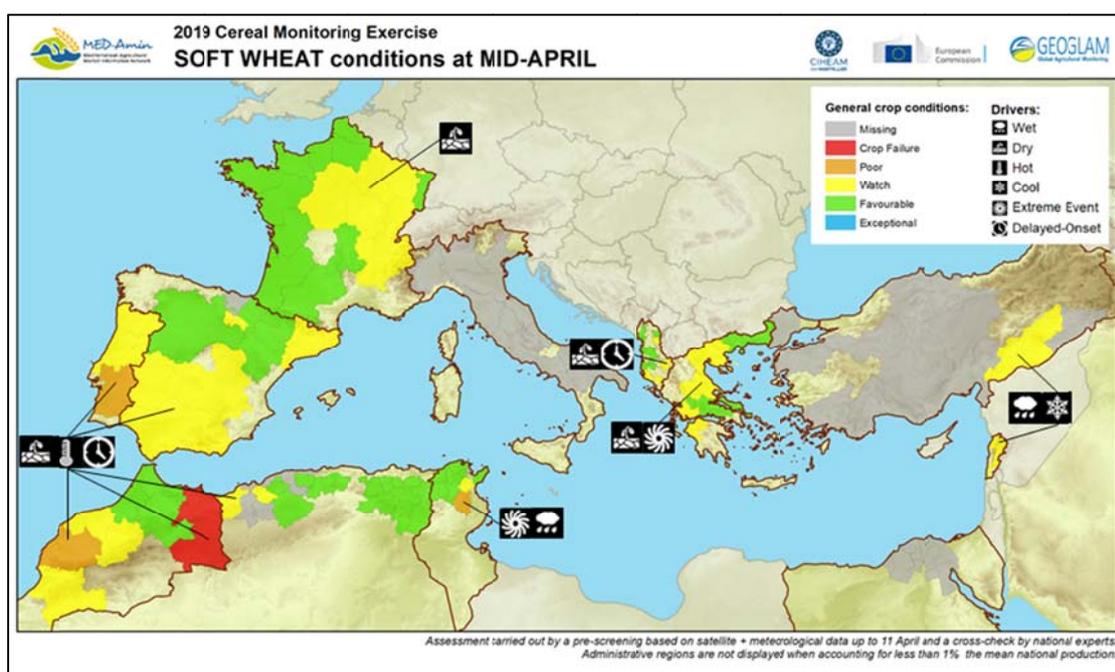


Figure 2: Crop conditions and yield outlook for Soft wheat (Mid-April)

Extreme weather events have been reported in most Mediterranean countries for the 2018-2019 campaign (see drivers on maps), with likely effects on yields and / or grain quality. In mid-April 2019, the campaign is favourable even exceptional for the 3 crops in Algeria, Italy, Tunisia thanks to abundant rainfall. Its evolution is to be monitored in Albania, France and Greece with more concerns in Morocco, Portugal and Spain. In addition, the extreme east of the basin (south-east of Turkey, Lebanon) received historical records of rainfall, with consequences still complex to evaluate.

Crop conditions for durum wheat and barley crops are relatively similar to soft wheat. However, barley crops performed better than durum wheat and soft wheat in Algeria, while in France and Greece durum wheat suffered more. (See maps in *Annex*).

1.2. Mid-May analysis

1.2.1. Pre-screened areas (PA) update

Figure 3 is the update of the 15 PAs following the second screening from meteorological and remote-sensing data observation at May 10, as provided to Focal Points in mid-May.

The evolution in one month shows PAs in the same MED-Amin countries as in the first screening, except for Greece and Albania, which might have found favourable conditions (dashed-line circles).

At this stage, 23 administrative units were concerned, namely: Algeria (Mila, Constantine, Tébessa and Oum el Bouaghi), Egypt (Ismailia), Spain (Castilla y Leon, Castilla la Mancha, Extremadura), France (Centre, Nord-Pas de Calais), Lebanon (Nabatieh), Morocco (Tensift, Casablanca-Settat, Oriental), Portugal (Alentejo, Algarve), Tunisia (Kairouan, Kasserine, Beja, Le Kef, Siliana) and Turkey (Gaziantep, Sanliurfa).

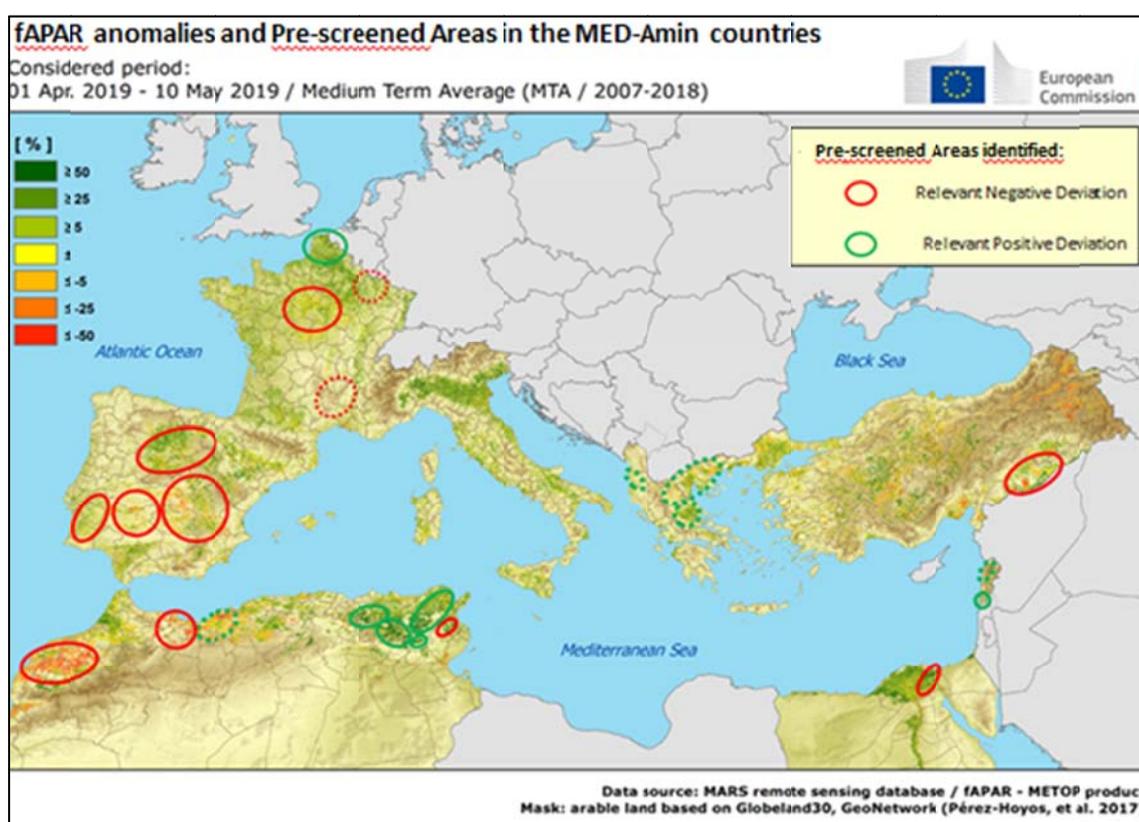


Figure 3: Updated pre-screened areas (PAs) in the 13 MED-Amin countries (mid-May)

NB: The map layer (coloured pixels) corresponds to the anomalies relating to the fAPAR index for the period from 1 April to 10 May 2019 in the MED-Amin countries.

1.2.2. Field feedback from the MED-Amin countries

The Figure 4 represents the general crop conditions for soft wheat, taking into account the responses of the focal points in each MED-Amin country, according to the legend of Figure 2 and the modalities described in paragraph 1.1.2.

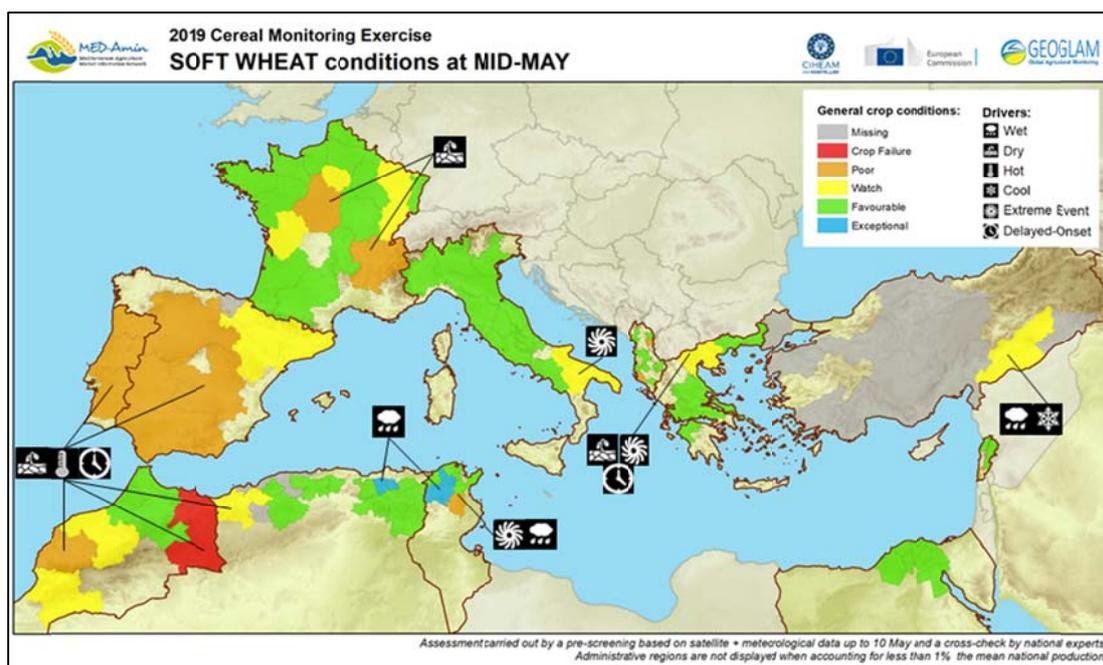


Figure 4: Crop conditions and yield outlook for soft wheat (mid-May)

At mid-May, given the development of soft wheat the general diagnosis is clearer, with a reduction of areas in "Watch". It highlights a significant worsening of the situation in Portugal and Spain, which remains worrying in Morocco as the situation improves in Albania, Algeria, Greece and Lebanon. The situation is more complex in France and Tunisia, with regions that have benefited from changes in agro-meteorological conditions, while others have suffered.

Crop conditions of the other two crops, durum wheat and barley, are relatively similar. The associated maps are visible in *Annex*. The differences noted in Algeria, Greece and France in April are still valid in mid-May.

2. Qualitative assessment of the upcoming harvest in the MED-Amin countries

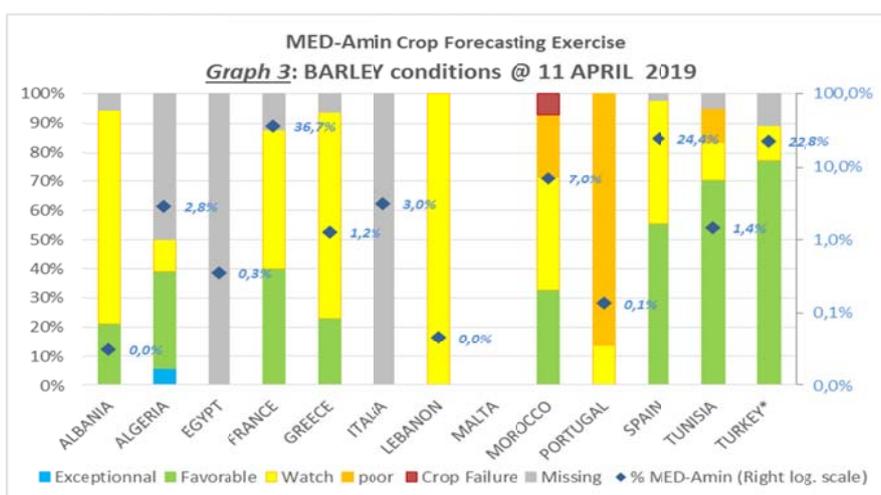
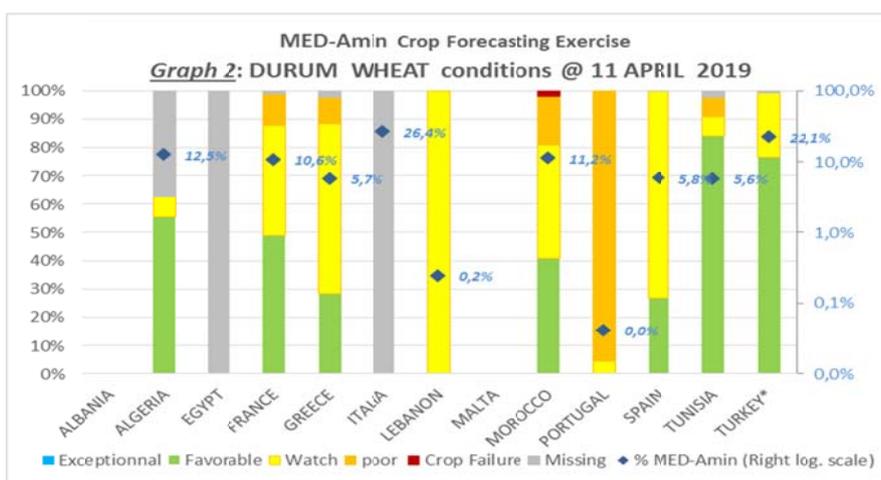
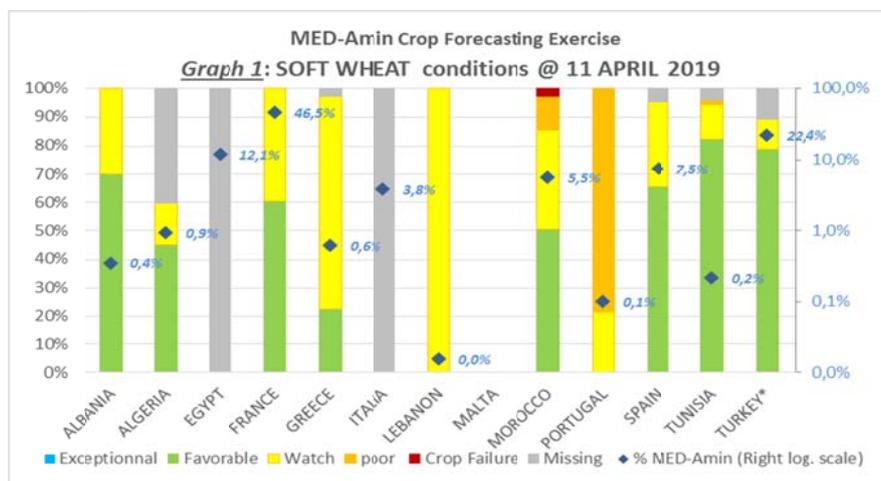
The following graphs show the potential impact of growing conditions on the 2019 harvest for each MED-Amin country, using the same combo-chart template than in 2018:

- For each MED-Amin country, general crop conditions are expressed as a percentage of average national production (left axis)
- The regional importance of each country in relation to the MED-Amin total is visualized by a point and the indication of the percentage of the average national production, using a logarithmic scale (axis of right) given the great disparity between countries.

These graphs were constructed using the average weight of each administrative unit in relation to the *baseline* (average of the last 5 years), and according to the considerations expressed previously (paragraph 1.1.2.) for the maps: missing information, main categories.

2.1. Mid-April MED-Amin outlook

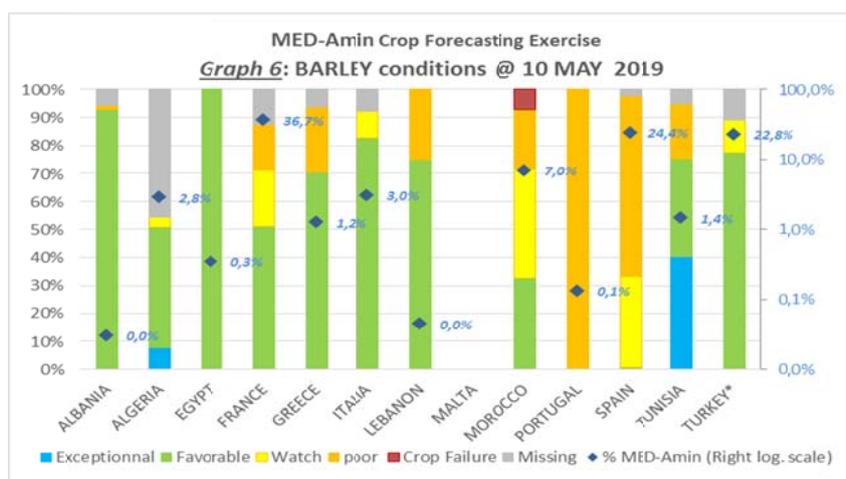
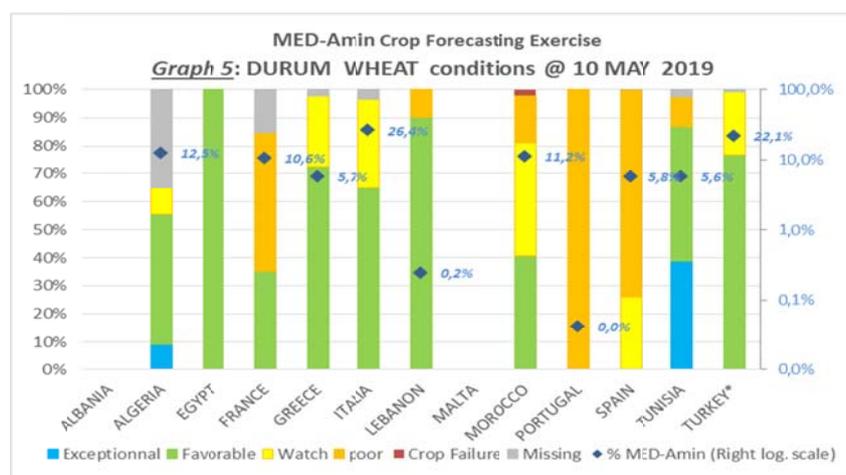
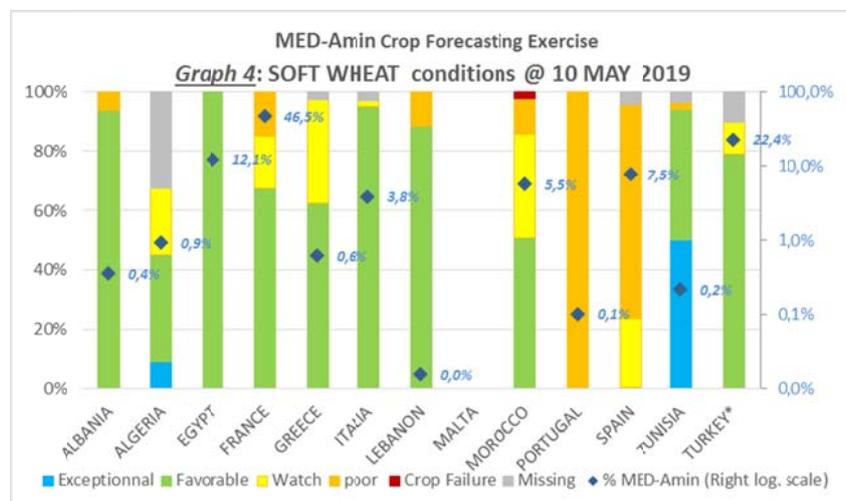
In the Graphs 1, 2 and 3 below we can read for example that 27% of the durum wheat crop in Spain (which produces 5,8% of the MED-Amin production) is cultivated at mid-May, under favourable conditions while 73% is "to watch".



Graphs 1, 2, and 3: Crop conditions and yield outlook for the 3 cereals (mid-April 2019) and weight of the national production in the MED-Amin region.

2.2. Mid-May MED-Amin outlook

In the graphs 4, 5 and 6 below we can read for example that, at mid-May, the barley crop in Tunisia (1.4% of the MED-Amin production of barley) has been cultivated under mostly favourable conditions (35%) or even exceptional (40%); 20% are in poor conditions; 5% are not informed.



Graphs 4, 5, 6: Crop conditions and yield outlook for the 3 cereals (mid-May 2019) and weight of the national production in the MED-Amin region after the second screening feedback.

2.3. Comments on the crop conditions and yield outlook at the two dates

MID-APRIL: At the end of the first analysis, prospects for soft wheat harvesting are in general:

- favourable in Albania, Algeria¹, Spain, France, Tunisia and Turkey;
- to watch in Greece and Lebanon;
- poor in Portugal;
- mixed in Morocco with half of the crops in a favourable situation and the other half with a significant proportion of "watchful" or even bad crops.

The situation is similar for durum wheat and barley, except that:

- Durum wheat is to be watched in France and Spain, as is the case in Greece and Lebanon. In France and Greece, a sizeable proportion of production is affected by poor conditions;
- Barley crop remains at risk and need to be monitored in Albania, France, Greece and Lebanon. The conditions are poor in Portugal and alarming in Morocco (where situations of crop failure are observed). Part of the production could be exceptional in Algeria¹.

MID-MAY: One month later, the outlook and trends for the next harvest are becoming clearer given the progress of vegetation development and the uncertainties that are diminishing both on the lower impact of current conditions on crops but also on the shorter gap for improvement or deterioration in the coming weeks (especially for southern countries). Generally, the category "*watch*" is less applicable except in the case of South Italy, lately affected by extreme events (hail) with impacts still difficult to assess.

Soft wheat

The growing conditions and yield prospects are mainly the following:

- favourable in France and Turkey (main producers) and in Albania, Algeria¹, Egypt, Greece, Italy, Lebanon: the situation improved significantly in one month in Greece and Lebanon;
- favourable or even exceptional in Tunisia (and partly in Algeria);
- poor in Spain (much more than in the first analysis) in Portugal, where the situation has deteriorated further, and in Morocco.

Durum wheat

The prospects for durum wheat are:

- favourable in Algeria, Italy, Turkey (main producers) and Albania, Egypt, Greece, Lebanon;
- favourable or even exceptional in Tunisia;
- poor in Morocco and France (respectively 4th and 5th MED-Amin producers of durum wheat), Spain and Portugal.

Barley

The outlook for barley is:

- favourable in Turkey (3rd MED-Amin producer of barley), Albania, Algeria, Egypt and Italy;
- favourable or even exceptional in Tunisia;
- poor in Spain (2nd MED-Amin producer), Morocco and Portugal;
- mixed in France (1st MED-Amin producer), Greece and Lebanon.

¹ To put in perspective since a significant part of the Algerian production was not covered in the current exercise.

3. Agro-meteorological and crop conditions at mid-May in each MED-Amin country

The following paragraphs are generated from the National focal Points' synthesis, the assessment of the JRC and the MED Amin Secretariat, sometimes completed by other sources of information.

Albania

Weather conditions for this season are moderately favourable for the development of wheat and barley. The dry autumn season delayed the planting season in most of the country, which had a positive effect on the prevention of fungal diseases in the coastal zone and allowed a rapid development from January to February thanks to mild temperatures (excellent germination). Rains in April and May were generally very beneficial by allowing a good filling of the grains (quality, mass). A concern remains in the mid and low elevation regions where the development of weeds and fungal diseases (rust) has been favoured by moisture. In northern and mountainous areas, cool temperatures for the season delayed vegetative development, but late April and early May rains normalized crop development.

Under these conditions, there should be no significant change from the average of the previous years: the harvest should be slightly above medium-term average (yield around 4 t/ha), slightly delayed by one week about.

In the regions of Fier and Vlorë, the experts fear the repetition of extreme events (hail or wind storms) that can destroy local crops and degrade the next harvest. Sudden temperature changes like those experienced in April can also be directly or indirectly (diseases) detrimental.

Algeria

A below-average to good rainfall distribution has been recorded in Algeria from east to west since September 2018 to date. This was in favour of preparatory field work operations and the successive establishment of cereals. The alternation between rainy and sunny days observed between November 2018 and January 2019 was beneficial to the continuation of these operations despite the presence of over-moistured soils in some places. **In general, the climatic conditions of this season have been favourable for the development of cereals, especially for north-eastern districts where yields are expected to be above the 5-year average.**

Among the main producing regions, the Directorates of agricultural services of the wilayas of Oum El Bouaghi and Tebessa reported very favourable conditions up to the stage of grain filling (soft wheat and durum wheat) and maturity (barley), opposite of the previous years, giving hope a few weeks from the harvest of yields above the local average (around 1.4 t/ha for wheat and 1.8 t/ha for barley). The conditions are even exceptional in the wilayas of Constantine and Mila, as well as their yield forecasts (> 2.8 t/ha for wheat and > 3.3 t/ha for barley). In the West, in the wilaya of Tlemcen and adjacent regions, the situation improved slightly after the rain deficit recorded in February / March. Conditions are close to normal with rains recorded in late April and early May, and average harvest is expected at least for barley.

Egypt

The growing conditions were favourable for wheat during this campaign. The average productivity may vary between 6.2 and 6.7 t/ha.

Feedbacks from the field confirm that conditions are rather favourable in the Ismailia governorate (which was pre-screened), with an above-average productivity forecast, as well as in Dakahlia, Monifya and Qulubia governorates. On the other hand, some governorates are expected to have lower than average cereal productivity (e.g. Qena, Luxor, Aswan) due to abnormally high temperatures.

Spain

After a very hot and dry September in Spain, the months of October and November were very rainy, which generated a significant delay in planting. This delay explains the lateness in biomass accumulation compared to the average that was observed during satellite monitoring and field expertise. From December 2018 to March 2019, the water deficit widened (except in the Cantabrian range) due to the absence of rain, and above-average daily temperatures, with possible impact on crop growth in certain agricultural areas. This is particularly the case in Castilla-y-Leon, Extremadura and Castilla-la-Mancha. Thanks to the April rains in most of Spain (abundant rains) and depending on the coming weather in May and June (these months are crucial in Spain), the crop conditions could still improve till the harvest. However, the shortage of rains in May was decisive: **the next cereal crop will be below average (-15% to -20% depending on the crop).**

Greece

In the main winter grain growing areas (northern Greece and Thessaly), weather conditions were critical at the start of the 2018-19 season, the driest in the last 30 years. The delay of sowing followed a random development of the tillers. Precipitation during the second half of April was very beneficial for crop recovery.

The situation has improved in most regions (especially in Central Macedonia and West Macedonia) and the development of cereals has returned to normal levels.

According to experts from regional agricultural services, the three cereals recovered well, in one month, in the provinces of Pieria and Thessaloniki (Central Macedonia), Kozani, Grevena and Florina (Western Macedonia) and Magnisia and Larisa (Thessalia). Locally, this could lead to even above average yields (soft wheat > 3 t/ha, durum wheat > 2.5 t/ha, barley > 3.5 t/ha). On the contrary, the combination of late planting and early heading is likely to result in lower than usual yields in the province of Serres. In the Kilkis area, April rains were not enough to improve the outlook, and below-average yields are expected, especially for barley, which usually grows faster than wheat. In the Kastoria region, April rains improved the condition of cereal crops, but not those damaged by frost in January-February (50% are "poor"). Recent disease outbreaks make performance estimates difficult. In the remaining regions (Anatoliki Makedonia & Thraki, Sterea Ellada), the conditions have generally returned to normality and suggest average or even slightly above-average yields.

France

The month of April recorded mild temperatures for a very large part of France, allowing a relatively good development of crops during the vegetative growing stages, throughout the country. This is even more beneficial because temperatures were accompanied by good rainfall, with exception for the Mediterranean regions, the Center Val-de-Loire and Nord Pas-de-Calais. The first decade of May was cooler in France: local frosts could even bring some fears for barley at flowering. Crop development is once more delayed compared to normal phenology. At the national level, the condition of winter crops stabilized at the April level, albeit slightly down.

The growing conditions of winter soft wheat, winter barley and durum wheat have indeed lost some points with now 79%, 75% and 70% respectively classified as "good" or "very good" at 13 May 2019. Conditions remain, however, generally favourable. It is still too early, at more than a month before harvest, to estimate yields.

In the region of Centre-Val de Loire, observers confirm that the situation deteriorated further in April 2019 compared to March, as a result of an increased disease pressure, particularly on barley, and a water deficit that appeared during the growth, which could degrade the yield potential.

In Lorraine and Ile-de-France, the situation remains stable compared to April, with rather favourable conditions but to be monitored (and “poor” in 7 to 9% of cases). In Champagne-Ardenne, the state of the crops improved with "favourable" conditions to 94% for soft wheat and 92% for barley. The conditions in March and early April were good in Nord Pas-de-Calais and Normandy, with a good water supply and a few summer days in early April that boosted the growth of cereals. The latter slowed in April - early May, and diseases appeared (including yellow rust and septoria). The general state of the crops is very good in these regions, but it is still too early to conclude for exceptional conditions and yields outlook.

In the South of France, despite Earth observation indicators back to normal, regional observers on Rhône-Alpes and Languedoc-Roussillon are still expecting a rather complicated situation, which has worsened with a significant lack of water. The "favourable" category decreases with respect to the benefit of the "watch" category. In Provence-Alpes-Côte d'Azur, the situation remains worrying for durum wheat.

Italy

In general, the northern and south-central regions experienced persistent winter rains during soil preparation and sowing periods of cereals. In addition, low temperatures were recorded during vegetative growth. Crop development was still delayed at ripening stage.

For the 2019 harvest, estimates suggest slightly higher yields for common wheat and average for durum wheat and barley.

However, it should be noted that in Italy, the month of May 2019 was marked by bad weather conditions, especially with hail in Puglia (Taranto and Foggia) and locally in Basilicata, which could lead to a revision to a lower production, particularly for durum wheat, but whose impact remains difficult to evaluate.

Lebanon

From a meteorological point of view, this is an exceptional year in Lebanon with significant rain accumulation (with nearly two times the last 30-year average!) registered in most of the country. Field surveys and farmer interviews confirmed a negative impact on crop production (locally over-moistured soils). These notable conditions applied till April with sometimes below-average temperatures, constraining accordingly the cereals development in particular in the north (North-Lebanon) and in the south (Nabatieh).

Hence, the forecast was rather pessimist by mid-April for the national production. However, a drier April and early-May coupled with seasonal temperatures seem to have restored normal growing conditions. Average cereals yields at the national level are now expected.

Morocco

The 2018-19 campaign was characterized by low rainfalls significantly below the 30-year average and even more compared to the previous year. This low total rainfall has been aggravated by a rather unfavourable temporal distribution. Nearly $\frac{3}{4}$ of rainfall occurred in autumn (October - December 2018) and the poor rainfalls during the following months constrained crop development and decreased the yield potential, more or less importantly depending on the region.

The 2018/19 cereal season can be described as bad all over the country, with the exception of north-western regions where average-to-good conditions were observed.

Thus, in the central regions of Tensift and Casablanca-Settat regions, conditions are poor and clearly below-average yields are expected to be harvested (between 0.5 and 1.1 t/ha depending on crops and regions). Barley production is expected to be particularly affected as its growing cycle (more advanced

than wheat) by drought in place since the beginning of the year, with the observation of crop failures. This is the case in the Oriental region.

According to the forecasts of the Moroccan Ministry of Agriculture, the national cereal production should fall to about 6 Mt in 2019 (-40% compared to 2018). This volume includes 3.5 Mt of common wheat, 1.3 Mt of durum wheat and 1.2 Mt of barley.

Portugal

Unlike the previous season, the rains occurring during autumn 2018 enabled a rapid establishment and early development of cereal crops from which a favourable pre-screening in early April. The hydric deficit observed since beginning of 2019 has widened so far, causing poor development or even early senescence of these crops (dieback).

This situation observed in Alentejo the main cereal producing region of Portugal during grain-filling even worsened and extended to almost all Portugal till beginning of May. However, crops recovered slightly after (in particular soft wheat), benefitting from rainfalls of end of April and May.

The national harvest will be significantly lower than last year and fairly poor with mixed yields outlook compared to the 5-year average: -4%, -6%, +2% instead of earlier estimation of -6%, -6%, -10% values (respectively for barley, durum wheat and soft wheat) and in line with the June's estimates of the National Institute of Statistics of Portugal.

Tunisia

Unlike 2017-2018, the country experienced a 2018-2019 campaign particularly wet with heavy rainfall in fall. Good rainfall has allowed reconstituting water stocks in dams undermined by previous years.

Overall, the campaign promises to be exceptional and national production should exceed 2 million tons according to the Ministry of agriculture of Tunisia.

In the north-western / western regions, the conditions are very favourable, even exceptional. At the stage of grain maturation, all conditions are met to achieve exceptional levels of yield in these regions, whether for wheat (governorates of Béja, Le Kef, Siliana) or for barley (governorates of Kasserine and even Zaghuan). The only exception concerns the rainfed crops of the north-east (Kairouan governorate) which seem not to have benefited from these abundant rains. Crop conditions here are quite poor and yields are expected likely below the local average.

Turkey

The Sanliurfa and Gaziantep provinces (extreme south-east of the country) have been identified by the pre-screening early April, due to very exceptional meteorological conditions (somehow similar to what was observed in Lebanon): cumulated rainfall close to twice the climatic average (historical record since 30 years) and important delay and poor development of the vegetation. The water excess and warm conditions observed in May could have caused problems of root anoxia, local floods or diseases outbreak.

The impact on crops (partially irrigated) - including possible changes in the land use and acreage - and on the 2019 harvest could be significant as these 2 provinces represent more than 20% of the average national production of durum wheat and more than 10% for soft wheat and barley. It remains however uncertain in the absence of field feedback.

Conclusion

The 2019 crop forecasting exercise was conducted in a shorter time than in previous years and with very good participation from MED-Amin member countries. It has become a semi-operational monitoring platform, providing timely and relevant information, even qualitative on the current cereal campaign.

It appears that the methodology is well understood, simple and fits the intended purpose. Most field experts confirm the analyses of the Secretariat and the JRC concerning areas with anomalies. However, their comments are very valuable for getting a more detailed and accurate view at the sub-national level, or even adjusting forecasts.

The 2019 forecasts illustrate how conditions can vary from one year to the next, even from one month to another in the same campaign, and affect very different countries or regions, ignoring borders (e.g. Algeria / Tunisia). In addition, poor harvests are not confined to southern countries, and may affect northern countries as well (e.g. Spain and Portugal this year).

With a few specificities, crop conditions are similar for the three cereals monitored. The question will rise for the following exercises to know if the analysis should continue or not to cover in detail the three crops, or how it would be possible to lighten the exercise.

Each cereal campaign is unique. Unlike the previous campaigns, the campaign 2018-2019 presents a particularly difficult situation for the countries of the western Mediterranean (Spain, Portugal, Morocco), because of high temperatures and drought. Despite lower yield prospects in these three countries, particularly in areas with high cereal production, food security will not be jeopardized due to trade, stocks and import policies of the concerned countries. Poor annual conditions can be smoothed over a multi-year period, and world wheat and barley supply is sufficient to meet the global demand.

It is clear that early assessment of future agricultural production is an essential tool for market management, particularly for net importing countries with high inter-annual variability, which must best manage their grain supply and pay attention to the food security issue.

However, it remains difficult to derive a direct benefit from information at the MED-Amin network level, due to the absence of an integrated market, and given the wide disparity of situation / outlook between its 13 countries. This explains the form chosen by MED-Amin exercise that highlights information at the national level, compared to a global (GEOGLAM AMIS) or regional synthesis (first MED-Amin forecast exercise in 2017).

The continuation of this initiative carried out by the MED-Amin network under operational conditions will indeed depend on the usefulness of the information at national level, but also its sharing or its effective dissemination in a near-real time i) among all MED-Amin countries; ii) so that the information can be used by all the public and private actors involved in this sector, as discussed at the 6th MED-Amin meeting in Meknes.

More generally, the MED-Amin crop monitoring offers a unique opportunity to connect national services in charge of markets with those of agricultural monitoring. Moreover, the sharing between MED-Amin countries enables know-how and information exchange, allowing better national management and increasing trust between the members of the network, a key-ingredient for enhanced and strong cooperation.



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