

MED-Amin

Réseau méditerranéen d'information sur les marchés agricoles
Mediterranean Agricultural Market Information Network

Fertilizer markets & food production

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Edito

Experts and high-level country representatives of MED-Amin Member countries gathered for the first time in Paris, on November 30th and December 1st 2023. They discussed lessons learnt from recent crises affecting food supplies and trade, and suggested ways **to strengthen Mediterranean cooperation through MED-Amin**.

In almost 10 years of existence, MED-Amin has succeeded in building trust and sharing information across the Mediterranean region, with the continuous collaboration of key international organizations such as the Food and Agriculture Organization of the United Nations, in particular the Agriculture Market Information System - AMIS, the International Grains Council (IGC) and the European Commission, in particular its Joint Research Center.

The participants formulated recommendations for Mediterranean policy-makers on priority information and cooperation **to set-up contingency strategies and increase preparedness and food systems resilience**. Participants identified priority topics and modalities to strengthen exchanges at political level. Those will be summarized in a Policy brief in 2024 and prioritized in the MED-Amin Action Plan 2024-2026. **The development of a dashboard or platform** to facilitate rapid response by decision-makers is one of the priorities.

The recent experience of the European Commission was shared by Mr. Fabien Santini, Head of the Unit on Governance of agri-food markets at the General Directorate of Agriculture and Rural Development. In response to global and EU food security challenges, intensified by COVID-19 and the Russia-Ukraine conflict, the European Commission has taken several measures to mitigate the risks and monitor the threats to EU food security.

The **European Food Security Crisis Preparedness and Response Mechanism** is the master piece of such strategy. It aims at providing a **forum where all actors involved in the food supply chain, public and private, can exchange on challenges ahead** and ways to mitigate them. Under this mechanism, the Commission adopted in November 2023 two recommendations: (i) [on crisis communication](#) laying out actions to communicate effectively during crises and (ii) on [diversity of sources of supply](#), on ways to balance between shorter and longer food supply chains. A new sub-group dedicated to **mitigating risks and vulnerabilities in the food supply chain** will complement, in 2024, the work on food security, building on a study which maps [risks and vulnerabilities in the EU food](#)

[supply chains](#) released end of 2023.

This collaborative work helps the European Commission and other actors **to better tailor their action to the needs in times of crises and uncertainties**. For example, in 2022 and 2023, the Commission approved several extraordinary support packages, totaling approximately 1 billion euros, to aid farmers impacted by extreme weather conditions and economic challenges, including trade issues with Ukraine, high input costs and inflation, this allowing continuity of food production in the EU.

Through these complementary measures, the European Commission is showcasing a proactive stance in addressing food security challenges, combining immediate, responsive actions with long-term strategic planning, aiming to ensure a stable and secure food supply in the EU and beyond. Beside the source of inspiration such mechanism can be for partner countries in the Mediterranean area, a continuous and well-functioning EU food supply chain in times of crises also plays a **crucial role in contributing to food security in the Mediterranean region, by allowing undisrupted trade relations** in the region.

ESPAGNE

Alerte sécheresse

(LeMonde, 15/12; ElPais, 15/01)

Cela fait trente-sept mois selon le décompte que font, mois après mois, les médias et les autorités catalanes –, que la région du nord-est de l'Espagne souffre d'un déficit de pluviométrie (-25% par rapport à une année normale). La **Catalogne se prépare à entrer au 1er février en phase d'alerte sécheresse**, ce qui impliquera des restrictions plus visibles et, pour la première fois, un accès réduit à l'eau potable dans la région de Barcelone.

MAROC

Nouvelle sécheresse en vue

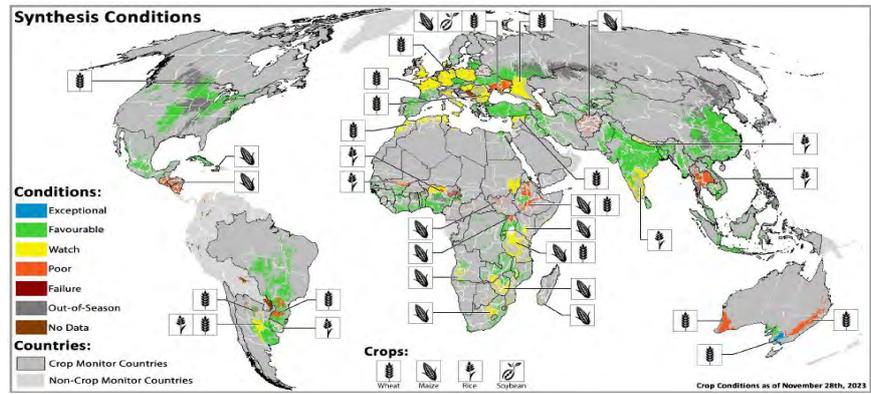
(TelQuel, 05/01; Medias24, 16/01)

Le déficit pluviométrique cumulé laisse planer la menace d'une sixième année consécutive de sécheresse. La rareté des précipitations depuis octobre dernier, complique les semis et les travaux culturaux. Les réserves d'eau stockées dans les barrages sont passées de 14 milliards de m³ en 1980 à seulement 5 milliards maintenant (malgré les nouvelles retenues construites) après cinq années de sécheresse. Le cumul pluviométrique moyen s'établit à **77 mm depuis le début de la campagne agricole, soit -54 % par rapport à la moyenne long terme** et -44 % par rapport à l'année dernière qui était déjà sèche, ce qui laisse présager d'une campagne céréalière à nouveau compliquée et incertaine.

EUROPEAN UNION

State of Food Security

In the framework of the Contingency plan for ensuring food supply and food security in times of crisis, the qualitative assessment of the [State of food security in the EU](#) has been released, based on the inputs of different members of the expert group on the European Food Security Crisis preparedness and response mechanism (EFSCM).



OVERVIEW OF MAJOR CROP CONDITIONS AS OF 28 NOV. 2023

Fertilizer crisis and global food production: a review of factors

Feature [Article of the AMIS Market Monitor](#), No. 114 Dec. 2023.

This article reflects on the events of the last two years and analyzes linkages between fertilizer markets and global food production. One of the key questions to consider is why global production of major food crops remained high irrespective of the fertilizer crisis.

Supply factors: Despite initial concerns, fertilizer supplies were impacted by the crisis only to a certain extent. When the Ukraine war started, Western countries applied trade sanctions on Russia and extended sanctions on Belarus, creating nervousness among market participants because of the significant share of these countries in world fertilizer supply. However, fertilizers were eventually exempted from most of those restrictions and exports from these origins reached international markets through pre-existing or new logistical routes. Another concern was rising production costs for EU manufacturers, who faced escalating prices of natural gas, the main feedstock for most nitrogen fertilizers. While European fertilizer production took a hit, global nutrient supply was largely ensured by fertilizer production elsewhere. In addition, several governments supported domestic availability by limiting exports of locally produced fertilizers.

Trade factors: Looking at trade flows, not all countries were impacted by the crisis in the same way; several major food producing countries were also not the most exposed to availability constraints. China and the USA, for example, could rely on local production for much of their nitrogen and phosphate demand; Brazil and India continued importing fertilizers from Russia, often benefitting from two-tier pricing as products diverted from other destinations were looking for a home; and the EU allowed more imports from far-away origins to fill the gap. The timing of trade

requirements also mattered. At the peak of the crisis in spring 2022, countries in the northern hemisphere had mostly completed their fertilizer purchases. Since then, import demand has been rather sluggish, with countries shifting to just-in-time purchases to benefit from decreasing prices.

Demand factors: While the price hike impacted global fertilizer demand, this did not translate into reduced global harvests. Indeed, the price elasticity of demand varies across nutrients. Potash and phosphorus applications can be punctually reduced without major yield changes. For other crops than nitrogen-fixing such as soybean, the higher costs for fertilization was frequently buffered by their higher selling prices on world markets. What is more, application rates in several grain exporting countries are relatively high, so lower application rates may have actually improved efficiency. As a case in point, recent research demonstrates that lower application rates could be adopted in many EU countries without hampering yields.

Conclusion: The recent hike of fertilizer prices was undeniably a great source of concern for food security. While the crisis might have caused challenges at local scale it did not significantly impact outputs in major food producing countries. Still, the crisis highlighted the importance of a better assessment of fertilizer markets in a context of rising uncertainties on global trade. With the support of the G20, AMIS is building reliable information systems comprising up-to-date global supply and demand analysis, as well as comprehensive understanding of policies impacting fertilizers. Further efforts are required to collectively understand the complex interplay of changing fertilizer trends on food production in specific geographies.

Storm Daniel Flood Impact in Greece 2023: Mapping Crop and Livestock Exposure from SAR (2023)

He, K., Yang, Q., Shen, X., Dimitriou, E., Mentzafou, A., Papadaki, C., Stoumboudi, M., and Anagnostou, E. N.: Brief communication: Storm Daniel Flood Impact in Greece 2023: Mapping Crop and Livestock Exposure from SAR, *Nat. Hazards Earth Syst. Sci. Discuss.* [preprint], (2023).

This publication analyzes the crop area and numbers of livestock exposed to flooding from the historic precipitation caused by storm Daniel in central Greece on September 3–8, 2023. An inundated area totalling 1,150 km², located mainly in the Thessalian plain, was derived from the near-real-time RAdar-Produced Inundation Diary (RAPID)

system. By overlaying a land cover map on the RAPID inundation map, it was found that ~820 km² (70%) of the inundated area was agricultural land. A detailed distribution map of crop type and animal farms revealed that the crop most affected by the flooding was cotton; the inundated area of more than 282 km² comprised ~30% of the total area planted with cotton in central Greece. In terms of livestock, more than 14,000 ornithoids and 21,500 sheep and goats were impacted in the estimation. Consequences for agriculture and animal husbandry in Greece are expected to be severe.

Estimates by academics suggest the short-term effects alone could cost the Greek economy up to 5 billion euros (\$5.3bn; £4.3bn). Thessaly, a richly fertile area, is often referred to as Greece's breadbasket, which counts on about 20% of the country's agricultural land, and is extremely important for the Greek cotton crop, a major export.

This article illustrates methods to evaluate the impacts of extreme events in a context of climate change.

➔ Read the [abstract of the preprint article](#).

Trade disruptions in Red Sea cast shadows on global grain trade and food security

Extract from the [article](#) of Miller Magazine, 27 Dec. 2023.

The Houthi group's assaults on commercial vessels navigating the Bab al-Mandeb Strait, linking the Red Sea to the Gulf of Aden, have sent shockwaves through the global supply chain and international trade. These Houthi attacks in response to Israel's bombardment of Gaza deal a serious blow to global trade, as they force the world's largest shipping companies to change the routes of their ships. **Recent increases in oil prices are directly linked to these attacks.** Exacerbating the crisis is the fact that the Panama Canal is also currently experiencing a disruption due to the drought, leading to unprecedented situation with **both the Suez and Panama Canals under risk of simultaneous closures.**

Four of the world's five largest container shipping companies - CMA CGM, Hapag-Lloyd, Maersk and MSC - have halted transit through the Babul-Mandeb Strait, through which about 30% of global container traffic passes. These four companies account for 53% of global container trade. They are now **diverting their ships to the route through the Cape of Good Hope.** Other significant players have also paused Red Sea transits. With 40% of Asia-Europe trade passing through Suez, a blockage here has the potential to have a major economic impact. Experts describe it as "the most significant threat to global shipping in recent years".

For the world economy, a prolonged closure of the Suez Canal means **longer trade routes and higher costs due to higher insurance premiums.** The diversion adds about 6,000 nautical miles to a typical journey from Asia to Europe, potentially adding three or four weeks to product delivery times.

It is inevitable that the rise in shipping costs will have a **cascading effect on nearly every product.** Notably, among these products are grains, which hold immense importance for global food security (shipping insurance, supply chains, grain prices). Mr Arnaud Petit, the Executive Director of the International Grain

Council (IGC), clarifies that, despite the attacks, dry bulk vessels carrying grains have not been diverted away from the Red Sea, **the war risk premium scheme is set to be activated,** becoming mandatory for shipping companies from December 22, 2023. Petit highlights that this scheme, though voluntary for shipping companies, introduces new trade cost concerns in particular for net importing countries. The fact that the **Black Sea and EU origins are currently the most competitive** in terms of Wheat FOB prices reinforced the need to keep the Red Sea sailing open to **avoid any domestic market chocks, especially in eastern African Countries.**

Petit acknowledges the dynamic global wheat trade this marketing year and suggests that the replenishment of stocks may offer flexibility in timing. However, he warns that delays and increased shipping costs could impact grain exporters, stating, "The increased cost of transportation and/or delays in delivery would put further pressure on their FOB prices to stay competitive to the alternatives offered by the fresh harvest in South America and North America export campaign. A longer low prices in relation to the high cost of production might **incentivise the farmers to shift their planting intention** to further spring crops such as maize or oilseeds."

Petit also highlights the **financial pressure on net grain-importing countries** with weak currency exchange rates. Any increase in transportation costs would further inflate their food import bills, potentially exacerbating their existing challenges. Rerouting grain cargoes from the EU and Black Sea region via the Cape of Good Hope would increase of 15% to 24% the cost of transportation to Asia due to longer journeys. Despite the **deployment of a US-led coalition to secure the strait,** questions linger about its readiness and addressing Houthi capabilities under the fear to expand the war in the Middle East.

FAO Food Index ↔

(FAO, 05/10/2023)

L'Indice FAO des prix des céréales a atteint 122,8 points en décembre, soit +1,5% vs novembre, mais -16,6% vs décembre 2022. **Après quatre mois consécutifs de recul, les prix du blé à l'exportation ont augmenté** en décembre, sous l'effet de perturbations logistiques dues aux conditions météorologiques dans certains des principaux pays exportateurs et de tensions en mer Noire dans un contexte de forte demande. Les prix mondiaux du maïs ont eux aussi progressé en décembre, du fait de craintes concernant les semis de la seconde récolte du Brésil et de contraintes logistiques entravant les expéditions d'Ukraine. Les prix mondiaux de l'orge ont aussi augmenté, tandis que ceux du sorgho ont légèrement baissé. **Les prix de décembre de tous les riz ont gagné 1,6%** vs novembre à la suite des commandes importantes d'Indonésie et du fait d'une concurrence réduite entre les exportateurs consécutive aux restrictions à l'exportation de l'Inde. Sur l'année, **l'Indice FAO des prix des céréales de 2023 a baissé 15,4% vs moyenne annuelle record de 2022.**

FRANCE

Inondations dans le Nord

(Terre.net, 18/01)

2024 commence mal alors que les pluies et inondations de la fin d'année ont eu des répercussions sur les cultures et sur les semis. On estime aujourd'hui « entre 10 et 20 % de surfaces non semées » ou qui ne donneront rien car semées dans de trop mauvaises conditions, soit **500 000 ha de blé tendre en moins** par rapport à la moyenne, indique l'Association Générale des Producteurs de Blé et autres céréales (AGPB).

SCOOPS

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Nutrition-sensitive food distribution amidst inflationary shock: Evidence from a randomized intervention in Egypt (2023)

Abay, Kibrom A.; Abdelfattah, Lina; Elkaramany, Mohamed; Elsabbagh, Dalia; and Kurdi, Sikandra. 2023. IFPRI Discussion Paper 2218. *International Food Policy Research Institute (IFPRI)*. 2023, 12, 3298.

The study evaluated the impacts of a traditional food distribution and a nutrition-sensitive food distribution intervention in the context of a rapidly increasing inflationary pressure in Egypt. Besides evaluating the relative and absolute impacts of these interventions on household food and nutrition security, it also examined their impacts on households' preferences for in-kind versus cash transfers. A clustered randomized control trial was used through which communities were randomly assigned into: (i) "nutrition-

sensitive" food box, (ii) traditional "staple-heavy" food box, and (iii) control group. The study finds that the nutrition-sensitive food distribution cushioned falls in dietary quality and food security of targeted households relative to the control group while the impact of the traditional and staple-heavy food distribution appears to be negligible. The nutrition-sensitive food boxes increased beneficiary households' dietary diversity by about 9 % while also increasing energy, protein, and iron intake by 12, 13, and 19 %, respectively. It also finds that experience with the food boxes increases households' preference for in-kind transfers, more so among households experiencing high

inflation rates and among those households not covered by other food and cash transfer programs. Receiving food boxes increases preference for in-kind transfer by about 9-11 % points. The findings have important implications for the debate on the efficacy of alternative interventions to support poor households as food prices rise and the relative efficacy of in-kind and cash-transfers. The lack of effectiveness of the staple-heavy food boxes suggests that the design and content of in-kind transfers are crucial when considering this policy option, including compared to cash.

↳ See the [article here](#).



REPORT: Risks and vulnerabilities in the EU food supply chain - Bertolozzi-Caredio, D., Severini, S., Pierre, G., Zinnanti, C., Rustom, R., Santoni, E. and Bubbico, A., Office of the EU, JRC135290, August 2023



This study investigates the risks and vulnerabilities affecting food supply and food security in the EU, including differences across Member States, sectors and stages of the EU food supply chain. The study uses data from a systematic literature review, semi-structured interviews and an online survey of key stakeholders, and employs qualitative and quantitative methods to analyse risks and vulnerabilities. It finds that the EU food supply chain faces a broad range of risks and sheds light on the factors that make it vulnerable to these risks.

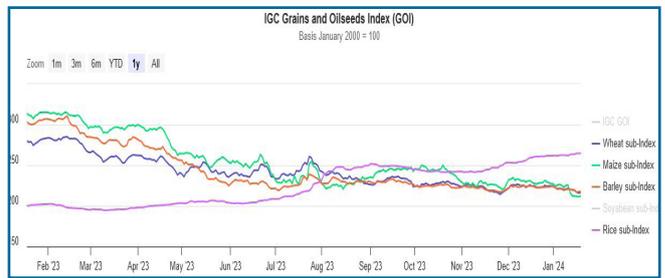
The analysis identifies key characteristics of risks, such as origin, time horizon, likelihood of occurrence, potential impact and exposure. Key risks to food supply and food security are highlighted, as are the main risks threatening different Member States (including the outermost regions) and the different sectors and stages of the EU food supply chain. Emerging risks that warrant further attention are also identified. The study provides a basis for strategic decision-making by highlighting the sources of risks and potential areas of intervention to reduce the vulnerabilities of the food supply chain. Its findings will support EU policymakers, particularly within the European Food Security Crisis Preparedness and Response Mechanism (EFSCM), in improving the preparedness of the EU food supply chain for future crises.

↪ Download the [complete report](#).

Trends on Global Markets

	Global Price Index ¹ (Dec. 2023)	Supply & Demand in Dec. 2023 ¹	
		From previous forecast (M/M)	From previous season (Y/Y)
Blé/Wheat	224 ↗	▲	↔
Maïs/Maize	230 ↗	▲	▲
Riz/Rice	258 ↗	▲	▼
Orge/Barley	224 ↗	n/a	▼

¹: Monthly average in USD, base 100=year 2000, ↗↘↔ vs last month (▲ : Easing ; ▼ : Tightening ; ↔ : Neutral, n/a : not applicable)
Sources : AMIS Outlook - <http://www.amis-outlook.org> and [International Grains Council](#) (for the Barley) and the graph below.



Events



Earth Observation (EO) applications for Crop Watch (Webinar)
Webinar series on Open EO Applications for Food Security, into the impact of satellite technology, exploring its role in revolutionizing agricultural monitoring and crop-production estimation globally, featuring the Global Agriculture Monitoring (GLAM) system.
↪ See link for [registration](#).

BLACK SEA GRAIN EUROPE – 2024 (Prague, Czech Rep.)
Producers and crushers of grains & oilseeds, traders, agri-food, logistics and finance sectors, government authorities and industry associations will gather to establish effective interaction in commodity supply chains originating in Ukraine. It is organized back-to-back to the 8th Prague Karlsbourse to encourage closer cooperation of Ukrainian and European operators.
↪ See the [website](#).



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