FOOD POLICY MONITORING
in the Near East and North Africa region

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Food Policy Monitoring
in the Near East and North Africa region
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# ACRONYMS AND ABBREVIATIONS

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<tr>
<td>AFSA</td>
<td>Abu Dhabi Agriculture and Food Safety Authority</td>
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<td>Agritech</td>
<td>Agricultural technology</td>
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<td>BMZ</td>
<td>German Federal Ministry for Economic Cooperation and Development</td>
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<td>BoA</td>
<td>Bank of Africa</td>
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<td>CARI</td>
<td>Consolidated Approach for Reporting Indicators of Food Security</td>
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<td>COP</td>
<td>Conference of the Parties</td>
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<td>DAP</td>
<td>Diammonium phosphate</td>
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<td>EBRD</td>
<td>European Bank for Reconstruction and Development</td>
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<td>FAO</td>
<td>Food and Agriculture Organization of the United Nations</td>
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<td>FAO RNE</td>
<td>Food and Agriculture Organization of the United Nations Regional Office for the Near East and North Africa</td>
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<td>FAOSTAT</td>
<td>Food and Agriculture Organization’s Statistics Database</td>
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<td>FBS</td>
<td>Farm Business School</td>
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<td>FPMA</td>
<td>FAO Food Price Monitoring and Analysis Tool</td>
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<td>FTA</td>
<td>Free Trade Agreement</td>
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<td>GCC</td>
<td>Cooperation Council for the Arab States of the Gulf</td>
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<td>ICFA</td>
<td>Indian Chamber of Food and Agriculture</td>
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<td>IDGC</td>
<td>Industry Disruptors-Game Changers</td>
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<td>IGC</td>
<td>International Grains Council</td>
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<td>ILO</td>
<td>International Labour Organization</td>
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<td>IMF</td>
<td>International Monetary Fund</td>
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<td>IPC</td>
<td>Integrated Food Security Phase Classification</td>
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<td>JRC MARS</td>
<td>Joint Research Centre on Monitoring Agricultural Resources Bulletin</td>
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<td>MoU</td>
<td>Memorandum of Understanding</td>
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<td>Abbreviation</td>
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<td>NENA</td>
<td>Near East and North Africa</td>
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<td>OIA</td>
<td>Oman Investment Authority</td>
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<td>SALIC</td>
<td>Saudi Agricultural and Livestock Investment Company</td>
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<td>SMEs</td>
<td>Small and medium-sized enterprises</td>
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<td>SSP</td>
<td>Smallholder Support Programme</td>
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<td>TIA</td>
<td>Tunisian Investment Authority</td>
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<td>WFP</td>
<td>World Food Programme</td>
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Global commodities and food prices continued their downward trend in the third quarter of 2023; however, food price inflation remains a great concern in the Near East and North Africa (NENA) region. While the oil-exporting Gulf countries are faring well through the ongoing macroeconomic challenges, other NENA countries are struggling with high energy and input costs, economic challenges, domestic currency depreciation and serious food insecurity in the conflict zones. Lebanon, Libya, Mauritania, the Syrian Arab Republic and Yemen are expected to lack the resources to deal with reported critical problems of food insecurity.

Wheat harvesting finalized in June and July under mixed conditions due to erratic and insufficient rainfall in many areas, with below-average yields in central, east and northeastern Morocco, northwest, central eastern Algeria, north-central Tunisia, the main wheat-producing governorate of Hassakeh in the Syrian Arab Republic, and northwestern Iraq. For the next season, wheat planting was expected to begin in October in most parts of the region.

The region’s food policy-related developments in the third quarter of 2023 have seen a great emphasis on the transformation of agrifood systems by addressing climate change and water scarcity. These include: desalination projects in Algeria and Oman; artificial river construction in Egypt; new water-saving technologies in Iraq; indoor farming in Qatar, Saudi Arabia and United Arab Emirates (the); using renewable energy in agriculture in Egypt and Oman; reducing agricultural waste in Egypt (banana fibre food packaging); developing plant-based foods in Saudi Arabia; increasing resilience in Saudi Arabia (preventing forest fires); harnessing the value of data, including using Artificial Intelligence to combat desertification and advance afforestation in Saudi Arabia; using blockchain technologies in carbon counting in the United Arab Emirates; preserving biodiversity in Tunisia (bees); and women empowerment through financial literacy in Oman. Arab countries also pursued international cooperation in smart agriculture research (the United Arab Emirates with South Korea) and in the development of drought-resistant plants (Egypt with China).

To increase food security, countries strive to expand domestic production of food. Egypt has focused on cattle; Jordan leases additional land for production; Mauritania and Oman have focused on livestock; Morocco has targeted the production of vegetable oils; Oman has undertaken fishing vessel construction and boosting wheat production; Saudi Arabia has targeted key commodities and camel farming; Tunisia – cereals, the United Arab Emirates undertook increasing procurement from domestic farms; and expand fertilizer production (Iraq). Egypt and Oman developed trade infrastructure, Iraq repurposes domestic agricultural subsidies from fertilizers towards modern irrigation methods, the United Arab Emirates has pursued investments in agriculture abroad (cultivating rice and avocado in Angola and investing in agriculture in Pakistan). As per early warning and prevention measures, the Food and Agriculture Organization of the United Nations (FAO) has launched an emergency seeds distribution campaign in the Sudan to support farmers in critical regions during the ongoing main crop production season (June–October 2023).
Trade facilitating measures included reducing subsidies for imported grain to increase cost efficiency in Morocco, and enhancing port infrastructure in the United Arab Emirates to facilitate imports of Kazakh agricultural products. Trade restricting measures in the United Arab Emirates aimed at restricting the export of rice as a response to the Indian export ban on the same commodity.

The focus topic of this bulletin is on increasing the resilience of regional agrifood systems to shocks and stresses through the adoption of holistic and multi-hazards anticipatory action systems in the region. These aim to act ahead of predicted hazards to prevent or reduce acute humanitarian impacts before they fully unfold. The bulletin presents a review of anticipatory action, challenges, and opportunities to develop such tools in the NENA region. It also provides recommendations and examples of FAO projects that assist countries of the region in building capacity on anticipatory actions and support their integration across development, disaster risk reduction, and sectoral and sub-sectoral policies and programmes.
SECTION I: FOOD MARKETS AND FOOD SECURITY SITUATION

Global food markets

Global food prices continued their downward trend in 2023, though they remain high compared to the 2019–2020 Food Price Index levels. The FAO Food Price Index averaged 121.5 points in September 2023, 24.0 percent below its peak reached in March 2022 (Figure 1). The FAO All Rice Price Index in August rose by 9.8 percent month-on-month to reach a 15-year nominal high, reflecting India’s July ban on Indica white rice exports.

Figure 1. FAO Food Price Index


2 The maps presented in this document do not imply the expression of any opinion whatsoever on the part of the Secretariat of FAO concerning the legal status of any country, territory, or the delimitation of its frontiers or boundaries.
The wheat subindex of the Grains and Oilseeds Index by the International Grains Council (IGC), which tracks the price movement across seven essential commodities, was 22.7 percent lower at the end of September 2023 than a year earlier (Figure 2). However, wheat prices are currently still above their 2019–2020 price levels. Wheat prices are under pressure from abundant Black Sea exports at competitive prices, but markets remain volatile as the termination of the Black Sea Grain Initiative and Russian attacks on Ukraine export facilities have heightened uncertainty.

![Figure 2. Wheat subindex of the Grains and Oilseeds Index by IGC](image)


The World Bank natural gas index peaked in August 2022; it returned to its June 2021 levels by September 2023 (Figure A1, Annex). Prices of fertilizers, particularly nitrogen fertilizers, are significantly affected by natural gas prices as their production requires massive energy. The prices of fertilizers have fallen back since their peak in April 2022. However, in July and August 2023, their prices increased in parallel with the price of natural gas. In August 2023, diammonium phosphate (DAP) prices were 29.4 percent lower than a year before, urea prices went down by 34.8 percent and potassium chloride prices by 60.3 percent (Figure A2). However, prices of all fertilizers are still above their level in 2020. Mineral fertilizers play an important role in the agrifood sector by providing essential nutrients for agricultural production.
Food price inflation remains a great of concern in the NENA region

Global headline inflation is expected to fall from 8.7 percent in 2022 to 6.8 percent in 2023, to 5.2 percent in 2024. In the NENA region, food consumer prices remain high except for oil-exporting Gulf countries with moderate food inflation.

Egypt and Lebanon continue to be on the World Bank’s Top 10 Food Inflation List and have experienced 66 percent and 280 percent nominal food inflation, respectively, between March 2023 and June 2023. In Tunisia, food prices increased by 15.3 percent year-on-year in August 2023, mainly due to the increase in the prices of coffee powder by 35 percent, sheep meat by 33 percent, eggs by 29.7 percent, edible oils by 23.7 percent, and beef by 20.4 percent.

According to the FAO Data Lab price nowcasting tool, the average food consumer price index in the NENA region was 16.1 percent at the beginning of September 2023. On 29 September 2023, based on FAO Data Lab (Figure 3), the six-month moving average food consumer price index is as follows: Algeria (13.09 percent), Bahrain (6.1 percent), Egypt (63.9 percent), Iraq (5.89 percent), Jordan (0.26 percent), Kuwait (6.62 percent), Lebanon (306.44 percent), Libya (3.63 percent), Mauritania (13.41 percent), Morocco (14.2 percent), Oman (2.67 percent), Palestine (2.64 percent), Qatar (0.66 percent), Saudi Arabia (1.17 percent), the Sudan (20.35 percent), the Syrian Arab Republic (28.09 percent), Tunisia (15.33 percent) and the United Arab Emirates (4.56 percent).

Figure 3. Expected year-over-year food price variation map (FAO Data Lab)


Note: The final boundary between the Sudan and South Sudan has not yet been determined. The final status of the Abyei area is not yet determined.

Food retail prices are varied across the NENA region countries, Figure 4 shows some examples of wheat price developments. Since January 2021, the cost of wheat flour has increased by
19.4 percent in Djibouti, by 27.5 percent in Iraq, by 57.4 percent in Mauritania and by 37.8 percent in Somalia. Conversely, the retail price of wheat flour has decreased in Yemen by 25.6 percent. In recent months, the increasing price trend seems to slow down, and even reverse, as prices have ceased to increase (such as in Djibouti or Iraq), or have decreased (Mauritania, Sudan, Somalia, Yemen), though price levels are still significantly higher than prices at the beginning of 2021.

**Figure 4.** Wheat (flour) retail prices in selected NENA countries


### Crops harvesting under mixed conditions

Wheat harvesting finalized in June and July 2023 under mixed conditions due to erratic and insufficient rainfall in many areas with below-average yields in central, eastern and northeastern Morocco, northwestern, central eastern Algeria, north central Tunisia, the main producing wheat governorate of Hassakeh in the Syrian Arab Republic, and northwestern Iraq (Figure 5). For example, Tunisia’s grain harvest for the year fell by 60 percent to 250 000 tonnes due to drought.

Land preparations were underway for wheat planting at the beginning of October. In Libya and Morocco, recent extreme events are not expected to impact upcoming planting activities. Tropical Storm Daniel impacted Libya on 10 September, bringing strong winds, heavy rains, and devastating flooding to the northeastern areas. Two dams collapsed in Derna, and two more were overwhelmed by rapidly rising water in the northeast, raising concern for potential additional collapses. However, water pumps were being installed to relieve pressure, and irrigated crops were not expected to be impacted for the upcoming planting in October.
In **Morocco**, a 6.8 magnitude earthquake impacted the country on 8 September with an epicentre in the High Atlas Mountains. Additionally, forecasts of incoming rains heighten the risk of landslides. However, crops for the upcoming season are not expected to be impacted as the effects were largely isolated to the mountain areas. In **Egypt**, summer-planted rice harvesting is now underway while Nili season (Nile Flood) rice as well as maize crops continue to develop; overall conditions are favourable as flows of the Nile remain adequate. In **Iraq**, rice is primarily grown with irrigation from the Euphrates River, and limited rainfall in recent years as well as low outflows from neighboring countries have resulted in near-record low water levels in both the Tigris and Euphrates Rivers. A reservoir in the north was constructed to manage water flows and collect excess water during flood periods for use during dry periods. However, in May 2022, the Iraqi government announced restrictions on rice cultivation to preserve water resources, and the government renewed restrictions for 2023 as water shortages continue. Rice production is forecast at 20 000 metric tonnes, the same as 2022 and 89 percent below the five-year average.

**Figure 5.** The situation of wheat crops and the wheat calendar

![Wheat Calendar](https://cropmonitor.org/documents/EWCM/reports/EarlyWarning_CropMonitor_202308.pdf)

**Source:** Crop Monitor Early Warning. Issue No. 86. September 2023. [Cited September 2023]. https://cropmonitor.org/documents/EWCM/reports/EarlyWarning_CropMonitor_202308.pdf

Note: The final boundary between the Sudan and South Sudan has not yet been determined. The final status of the Abyei area is not yet determined.

In **Somalia**, land preparation is underway for the Deyr season crop, and planting will begin in October. Above-average precipitation is expected from October to December, which could lead to further flooding along the Shabelle and Juba river basins in addition to flash floods in localized areas across the country.

In the **Sudan**, main season millet and sorghum crops are in vegetative to reproductive stage, and while agroclimatic conditions have improved with enhanced rains, concerns remain regarding the ongoing conflict situation and related socio-economic challenges. The country
has experienced mostly average to above-average rainfall from June to September, although there are deficits in some southern regions, and warmer temperatures are contributing to the negative effects on vegetation development in these areas. Below-average rainfall is expected to continue through October in localized areas of the south with a low risk of flooding, though episodes of intense rainfall may still flood some central-eastern areas that receive flows from the Ethiopian highlands. Afterwards, above-average rainfall is expected across the south of the country in November and December which could result in localized flooding and prevent adequate drying for harvesting activities. Furthermore, cultivation has been widely disrupted as the conflict situation entered its fifth month in September. Minimal to no planting has been reported in areas close to the conflict due to restricted field access. In less impacted semi-automated and irrigated production areas in the southwest, farming activities were also impacted by financial constraints resulting from a deteriorated economic situation, as well as the delayed availability of costly inputs. As a result, the area planted is expected to be below-average for the ongoing main agricultural season, and overall output and yields are also expected to decline.

In Djibouti, main season millet and sorghum crops are developing under favourable conditions.

In Yemen, harvesting of the spring wheat crop was finalized in September while harvesting of sorghum continues. Beneficial rains contributed to favourable vegetation conditions in the western highlands, but persistent conflict and socio-economic challenges continue to result in yield declines below the pre-conflict level. However, the active conflict situation remains relatively suppressed following a slight uptick in late July, while economic warfare between the major parties continues.

**Food security situation in the region**

According to FAO Global Information and Early Warning System (July 2023), Lebanon, Libya, Mauritania, Syria and Yemen are expected to lack the resources to deal with reported critical problems of food insecurity.

Syrian Arab Republic (the) has seen favourable sowing conditions, but high costs of inputs hinder sowing of 2023 cereal crops and overall agricultural production. Despite the below-average production, the cereal import requirement in the 2022/23 marketing year is forecast at 2.7 million tonnes, similar to the previous year but 10 percent below the five-year average as ongoing economic challenges and lack of foreign exchange hamper the country’s ability to finance imports. The main drivers of food insecurity include economic challenges, continuing currency depreciation, rising inflation, and energy and fuel shortages. According to the World Food Programme’s (WFP) Consolidated Approach for Reporting Indicators (CARI, used in the Humanitarian Needs Overview, 2023), it is estimated that approximately 15 million people are in need of some form of food and agriculture assistance (68 percent of the total population), of whom about 12.1 million are food insecure. Approximately 2.9 million people are estimated to be at risk of food insecurity in the country.

With ongoing civil insecurity, economic and political instability and high food prices, about 300 000 people are estimated to be in need of humanitarian assistance in Libya, while over 472 000 people in Mauritania required humanitarian assistance during the June to August 2023 lean season.
Acute food security escalates in Lebanon, the Sudan and Yemen

Food insecurity has worsened as economic challenges persist in Lebanon. Approximately 1.4 million Lebanese, Syrian and Palestine refugees in Lebanon (PRL) and Palestine Refugees from Syria (PRS) were classified in IPC Phase 3 or above (Crisis or worse) for the period from May to October 2023. Of which, 112 000 people are expected to be in IPC Phase 4 (Emergency) and about 1.3 million people in IPC Phase 3 (Crisis). Rising inflation and rapid currency devaluation continue to be the key drivers of food insecurity affecting all segments of the population, with a particularly detrimental impact on most vulnerable households.

In the Sudan, the economic downturn, floods and outbreak of conflict have driven about 20.3 million people into high levels of acute food insecurity in IPC Phase 3 or above (Crisis or worse) between July and September 2023. Of which, 14 million people are in crisis (IPC Phase 3) and 6.3 million people are experiencing worse conditions in IPC Phase 4 (Emergency). As per early warning and prevention measures, FAO has launched an emergency seeds distribution campaign to support farmers in critical regions during the ongoing main crop production season (June–October 2023). In partnership with USAID’s Bureau for Humanitarian Assistance, the Central Emergency Response Fund, and the governments of Germany, the Netherlands and Norway, FAO aims to aid over one million vulnerable farmers and families (5 million individuals) by providing 10 000 tonnes of sorghum, millet, groundnut and sesame seeds across 17 states. Despite security and logistical challenges, FAO has already delivered 3.3 tonnes of seeds to eight states and initiated distribution. The initiative is crucial to enabling farmers to plant and harvest up to 3 million tonnes of cereals by November–December 2023, fulfilling the cereal needs of approximately 13–19 million people. FAO’s mission in the Sudan is to preserve livelihoods, ensure food access and alleviate acute food insecurity. With a goal of USD 95.4 million, FAO has garnered nearly USD 20 million to date, supporting various life-saving interventions for 15 million individuals, encompassing seed provision, farming equipment and livestock protection.

Despite slight improvement in food insecurity and malnutrition situation in Yemen in 2023, the IPC projection for June to December 2023 reveals that approximately 3.9 million people are likely to experience high level of acute food insecurity (IPC Phase 3 or above) and 456 000 children are expected to be malnourished and in need of treatment during the projection period for October 2022 to September 2023. The main drivers of the deterioration are due to a projected 20 percent decrease in humanitarian assistance, higher prices in food and fuel (estimated about 30 percent above the five-year average levels) and ongoing conflict.
Food policy-related developments and international support to improve food security

**Algeria**

**August 2023:** The largest wheat importer in the region allocated over USD 2.2 billion to desalination plants to combat water scarcity. The nation partnered with Russia and explored innovative startups for solutions, adopting a comprehensive strategy encompassing desalination projects, smart irrigation, wastewater treatment, efficient water transport, and collaborations in agriculture and tourism. These measures aim to alleviate the water crisis and ensure water supply across various sectors.

**Comoros**

**August 2023:** The Comoros achieved a remarkable advancement in African food safety via the European Union-supported project, “Strengthening of capacities and governance in food and phytosanitary control.” The nation has successfully completed a food safety assessment, becoming a pioneering model for others. Collaborating with local authorities, stakeholders and FAO, the Comoros has enhanced food safety and aligns with global standards. This achievement, endorsed on 4 August, underscored the Comoros’ dedication, and paved the way for Kenya and other countries to adopt the FAO/WHO assessment tool for enhanced food safety and regional trade.

**Egypt**

**July 2023:** Indian Prime Minister Narendra Modi visited Cairo to strengthen economic and diplomatic ties between Egypt and India. Both nations aimed to collaborate in trade, politics and Global South influence. Egypt launched the ambitious ‘New Delta’ project, constructing a USD 5.25 billion artificial river to boost agricultural productivity. WorldFish and Norway’s CeREA initiative collaborated to enhance renewable energy solutions in Egypt’s aquaculture sector.

In a breakthrough, Egypt and Ethiopia aimed to finalize an agreement on the Grand Ethiopian Renaissance Dam to address the long-standing Nile water dispute. Amid global cotton shortages, Egypt expanded cotton cultivation, emphasizing its significance in the textile industry. Egypt’s ‘Decent Life’ initiative also sought to uplift livestock production and enhance the local cattle sector.

**August 2023:** Responding to supply needs, the government released corn and soybean feed supplies to support the agricultural sector. It also integrated agriculture into the second phase of its economic and social reform plan, highlighting its role in employment, food security, and environmental preservation. The General Authority For Supply Commodities (GASC) secured a wheat deal to bolster reserves and stabilize supply amid global conflicts. The government also began conducting economic-focused sessions in the National Dialogue, discussing pressing issues such as agriculture, food security and private investment.
Addressing import reliance, Egypt collaborated with Al Dahra and ADEX of the United Arab Emirates to secure a USD 500 million wheat deal. Efforts to stabilize the commodities market continued, including the inclusion of sugar in the Egyptian Commodities Exchange. Additionally, the Ministry of Agriculture announced the release of 284,000 tonnes of corn and soybeans worth around USD 141 million. Papyrus Australia’s innovative banana fibre molding line was finally ready for dispatch to Egypt after six months of preparation; the project holds the potential to transform Egypt’s banana waste into biodegradable food packaging.

Egypt and China deepened their cooperative ties for agricultural cooperation to enhance resilience and self-sufficiency by enacting a partnership initiative, focusing on water-deficit challenges for drought-sensitive crops. Egypt’s General Authority for Land and Dry Ports (GALDP) and Ocean Express Shipping collaborated to develop the Burj Al-Arab Dry Port, enhancing trade networks. The New and Renewable Energy Authority (NREA) partnered with Orascom Construction, ENGIE and Toyota Tsusho Corporation to build a 3 GW wind farm to boost clean energy and job creation.

Iraq

July 2023: AAA Holding Group began expanding its fertilizer production, doubling its capacity to one million tonnes annually; the construction of a new production line for diammonium phosphate (DAP) fertilizer is underway. This investment is aimed at boosting Iraq’s agricultural productivity, enhancing food security and supporting the national economy. The Ministry of Agriculture will purchase all the fertilizer produced at the expanded facility.

August 2023: The Iraqi Minister of Water Resources announced the successful implementation of a Japanese water-saving technique, collaborating with JICA to address water scarcity and increase agricultural productivity. Iraq also engaged in crucial water discussions with Turkey, emphasizing joint projects and technology transfer to tackle shared water challenges. The discussions also focused on climate change, drought, desertification and declining rainfall, highlighting the urgency of addressing environmental challenges in the region.

Additionally, Iraq’s cabinet issued a comprehensive set of measures aimed at enhancing agricultural efficiency and bolstering food security. The decisions include strategic moves such as reorienting fertilizer subsidies towards modern irrigation methods and involving the Economic Council in determining wheat purchasing prices for the upcoming season. Iraq’s government also approved the transfer of 58 billion dinars to the Kurdistan Ministry of Trade and Industry, settling dues for farmers’ 2023 wheat crop contributions.

Jordan

July 2023: The Jordan Valley Authority (JVA) worked on facilitating the leasing of agricultural facilities as per the 2022 bylaw. Currently, JVA has leased 3,843 dunums for fruit projects through 55 contracts, with more expected soon. Additionally, 18 investment project contracts have been signed for various purposes, including quarries, tourism, and commercial/industrial investments, covering 238 dunums in total.

August 2023: The Cabinet granted its approval to the 2023 compensation system for farmers impacted by agricultural risks. This system provides compensation for non-fund-
enrolled farmers, acknowledging the influence of climate change, floods, and storms on crop productivity in the Kingdom. In collaboration with the Qatar Fund for Development, SPARK Jordan announced a new initiative focusing on the expansion of green entrepreneurship in Jordan, a move that could lead to the creation of 24 million global jobs by 2030. This initiative aligns with Jordan's national strategic plan to generate 31,000 jobs by transitioning to a green water sector and promoting sustainable agricultural practices. The advocacy campaign's primary focus is to raise awareness about the growing need for skilled workers and employers within the green economy, particularly in the water, agriculture and energy sectors.

**Mauritania**

**July 2023:** Mauritania was set to receive USD 767,000 from the African Development Fund, a branch of the African Development Bank Group, to boost its livestock farming industry – a crucial livelihood source in the country, with 60 to 70 percent of its populace relying on it for income. The project focuses on enhancing agropastoral resources in the Hodh Chargui region’s northeastern area (Dahr), addressing sector challenges such as inadequate infrastructure, limited regional services capacity, conflicts over natural resources and low value addition.

During a meeting in Beijing, collaborative plans were set in motion between China and Mauritania to intensify bilateral ties, including expanding practical cooperation in agriculture, fishery, animal husbandry, through the Belt and Road initiative, while promoting cultural exchanges and mutual support for development and revitalization.

**Morocco**

**August 2023:** The National Interprofessional Office of Cereals and Legumes, Morocco’s grains market regulator, announced a reduction in grain subsidies for imported wheat, aiming to encourage wheat importers to seek cost-efficient suppliers. Starting from 1 August 2023, subsidies are now calculated based on the average cost prices of the lowest origin among Argentina, France, Germany and the United States of America. The policy shift is a response to last year’s severe drought and aims to bolster Morocco’s agricultural industry while safeguarding food security and the economy. The government’s measures include The Generation Green Plan 2020–2030, which aims to enhance food security for cereal crops, halt the common wheat import support programme to alleviate inflation, and strengthen the certified seed sector.

The Moroccan government also unveiled a pioneering vegetable oil production plant in the El Marsa industrial park which boasts a total investment of MAD 190 million (USD 52 million). The facility has a daily production capacity of 100 tonnes of vegetable oils and is projected to generate 120 direct jobs and 250 indirect jobs. Notably, 60 percent of its output is intended for export, primarily targeting African nations such as Chad, Mali, Mauritania and Niger. This venture is expected to curtail the USD 900 million spent on importing vegetable oils and contribute to local economic growth. The plant’s establishment aims to elevate Morocco’s domestic production of oilseeds, addressing the nation’s structural gap in this sector. Morocco relies on imports for 98 percent of raw materials needed for edible oil manufacturing and so it has faced challenges related to international market price fluctuations. The launch of this plant marks a significant step towards reducing these import dependencies and mitigating the impact of price volatility on consumer purchasing power.
Oman

**August 2023.** The animal feed production plant being constructed by the Oman Flour Mills Company in the Muttrah region reached 70 percent completion. The project aims to further the growth of Oman's agricultural and livestock sector.

On the topic of renewables, the Sur Independent Water Project is set to become the first facility of its kind in Oman and the wider Middle East region to be powered by renewable electricity. This project aligns with Oman's goal to achieve 30 percent of its electricity from renewables by 2030.

Helping to strengthen Oman's trade capabilities, the launch of a new floating dock is set to enhance the repair and maintenance capabilities of Asyad Drydock's facility at Duqm on Oman's southeast coast. This expansion will transform the yard into a comprehensive shipyard, supported by the recent delivery of locally built ships.

Despite being among the five most water-stressed countries, Oman is implementing measures to enhance water use efficiency, including advanced water desalination projects using renewable energy, infrastructure investments like dams and sewage treatment, and proactive flood protection plans. The nation's efforts extend to public awareness campaigns, aiming to promote responsible water use and cultivate a culture of sustainability.

Fisheries Development Oman, a key player in Oman's fisheries sector, introduced the fishing vessel *Acila* to the fleet of its subsidiary, Oman Pelagic. The vessel, constructed in collaboration with the Ministry of Agriculture, Fisheries and Water Resources, showcases the country's dedication to sustainable fishing practices and the economic advancement of Oman's fisheries industry.

Looking towards gender empowerment, the month of August also included a collaboration between Visa, the global digital payment service provider, and Lahunna Oman to empower young female leaders and enhance financial literacy through Sidrah, the local youth leadership programme for Omani women. The success of the Sidrah programme is demonstrated by the opportunities participants gained, including internships, scholarships and engagements with Oman Vision 2040.

With regards to sustainable energy, Oman Electricity Transmission Company inaugurated the Suwayhat grid station, a key component of the Rabt national infrastructure project, which focuses on enhancing Oman's electricity transmission network to meet growing demand and improve power supply reliability. Finally, the Ministry of Housing and Urban Planning signed 40 usufruct contracts in Dhofar to boost wheat production and strengthen food security initiatives, supporting the agricultural sector. Among the contracts, 37 pertain to wheat cultivation in Dhofar’s Najd area and the remaining three agreements focus on agrotextile projects and nurseries in Salalah and Barka.

Palestine

**August 2023.** Palestine's Minister of Foreign Affairs and Expatriates, Riyad al-Maliki, met with Tajikistan's Minister of Foreign Affairs in Dushanbe to discuss enhancing mutually beneficial
cooperation between the two nations. They signed several agreements including one between both ministries of agriculture on agricultural cooperation, solidifying their commitment to strengthened ties.

**Qatar**

**August 2023**: The Qatar Research, Development and Innovation (QRDI) Council’s flagship programme, Qatar Open Innovation, has launched an opportunity in collaboration with Hassad Food Company to propose technologies for indoor lettuce farming. The initiative aims to address arid conditions and limited resources through innovative indoor farming techniques, aligning with Qatar’s sustainable goals. By leveraging advancements like hydroponics and aeroponics, the project seeks to enhance food security and resource optimization. The QRDI Council and Hassad Food are seeking proposals for commercially viable lettuce production using indoor farming methods, underscoring a move towards sustainable agriculture and circular economy practices.

**Saudi Arabia**

**July 2023**: Saudi Arabia focused on enhancing food security and agricultural sustainability through various initiatives. The Agricultural Development Fund signed SAR 926 million (USD 246.8 million) in financing agreements to support the import of essential agricultural commodities like maize, soybeans and barley.

Saudi Arabia’s Public Investment Fund launched the Al Madinah Heritage Company to elevate the quality and production of Ajwa dates, aligning with the diversification goals of Saudi Vision 2030. Meanwhile, the country’s transformation of its food systems resulted in a surplus of over 11 million tonnes of agricultural products. The transformation included changes such as substantial rises in agricultural investments and loans and the establishment of strategic food reserves, further enhancing self-sufficiency and price stability for key commodities.

Innovation took centre stage as the Saudi Ministry of Environment, Water and Agriculture initiated an Agriculture Hackathon to promote digital solutions for sustainable agriculture, addressing food and water security, productivity, and technological adoption. Collaborations were also under the stewardship of the Saudi Ministry of Environment, Water and Agriculture to develop plant-based foods with animal protein flavors, promoting healthy eating and local vegetarian options. These efforts not only encourage better dietary habits, but also alleviate pressure on traditional livestock systems, contributing to food security and waste reduction.

Lastly, humanitarian efforts by the King Salman Humanitarian Aid and Relief Center made a significant impact in Yemen through water supply projects and medical assistance, including a water supply and environmental sanitation initiative to improve clean water accessibility.

**August 2023**: Saudi Arabia made significant strides in various policy domains. One notable development was the successful collaboration between IVECO and Arabian Auto Agency, resulting in the delivery of 20 S-Way vehicles to the Arabian Agricultural Services Company (ARASCO). These vehicles will bolster ARASCO’s fleet to efficiently transport chicken feed.

In alignment with the ambitious Vision 2030 goals, the introduction of Sawani Company stands out as a pivotal step in the promotion of camel farming and the production of camel dairy products.
products. This initiative aims to modernize operations, adopt cutting-edge technologies, and collaborate with the private sector to ensure the growth and sustainability of camel-based industries in Saudi Arabia.

Saudi Arabia’s allocation of USD 1.5 billion for projects in Egypt across diverse sectors demonstrates the country’s commitment to fostering economic development and job creation in its neighboring nation. Concurrently, the nation is collaborating with a Dutch greenhouse company to pioneer innovative solutions for desert agriculture. By creating a ‘synthetic climate’ using advanced technologies, Saudi Arabia aims to ensure year-round agricultural productivity in arid environments, aligning with its pursuit of food security and innovative farming practices. The Saudi Food and Drug Authority announced the lifting of the 21-year ban on the import of South African meat in effect since 2002, after successful inspections were conducted in South African abattoirs and feedlots in June.

Collaborative initiatives continued in Saudi Arabia when the Islamic Corporation for the Insurance of Investment and Export Credit, a member of the Islamic Development Bank, signed a Memorandum of Understanding (MoU) with Saudi Pak Industrial and Agricultural Investment Company, aiming to enhance trade ties.

Saudi Arabia also launched a project aimed at preventing forest fires in the country’s southern and southwestern regions. The project, undertaken by the National Center for Vegetation Cover in cooperation with King Khalid University, will be centered around synthesizing information and data on the forests to study the causes of forest fires, signifying the country’s prioritization of natural resource conservation efforts.

Reinforcing domestic food supplies continued to be a national priority for Saudi Arabia, as the Sustainable Agricultural Rural Development Programme (Reef), operating under the Ministry of Environment, Water and Agriculture has successfully boosted self-sufficiency rates in the value-added agricultural sector to over 63 percent. By diversifying and increasing production, Reef has successfully stabilized domestic markets, contributing to food security and mitigating the impact of global price fluctuations. Saudi’s Reef also received enhanced developmental financing support, when it signed an MoU with the Agricultural Development Fund to boost the efficiency, productivity and technical skills of farmers, rural families and craftsmen. This partnership will uplift farmers’ living standards and aligns with the Fund’s mission to support agricultural activities in the nation.

With regards to water management, Saudi Arabia’s National Water Company awarded a 15-year, 1.6 billion Saudi Riyal contract to Alkhorayef Water and Power Technologies for the maintenance of Riyadh’s sewage treatment plants. Moreover, the Saudi Water Regulator presented a whitepaper at the Gulf Cooperation Council (GCC) Independent Water Regulatory Forum, highlighting effective regulations and laws related to water security to boost economic and social development, as well as public health in the region. This law aims to develop water resources, regulate water services, encourage private sector engagement to enhance efficiency, water security, localization of water technologies, and contribute to the national economy.

A significant stride towards data-driven collaboration has been achieved through the formalization of a memorandum of cooperation between the Agricultural Development Fund (ADF) and the General Authority for Statistics in Riyadh. The focus of this agreement lies in...
exchanging data, information and statistical indicators pertaining to the ADF’s economic activities and aligns with global trends wherein data is recognized as a crucial economic resource for innovation, growth and competitiveness.

Additionally, the Saudi Arabian Ministry of Communications and Information Technology partnered with India to boost collaboration in digitization and electronic manufacturing. Building on the support given to the tech sector, the Ministry of Environment in Saudi Arabia introduced an innovative programme that combines remote sensing technologies and artificial intelligence (AI) to combat desertification and advance afforestation, notably through the Green Saudi initiative which seeks to plant 10 billion trees across 40 million hectares. Lastly, a financing contract has been signed between the government’s Agricultural Development Fund and the Agricultural Society to establish the first city dedicated to expanding coffee bean growth in Al Bahah in the southwestern part of the kingdom. This initiative is part of Saudi Arabia’s broader efforts to promote the growth of coffee and related industries, including plans for a coffee industry training academy in major cities like Riyadh, Jeddah and Dammam.

Syrian Arab Republic

During a meeting at the second United Nations Summit on Food Systems in Rome in July, Syrian Agriculture and Agrarian Reform Minister, Mohammed Hassan Qatana, emphasized the importance of enhancing trade between regions and facilitating direct access for Syrian agricultural products to Saudi markets. He urged Saudi Arabia to participate in the Quartet Agreement signed by Jordan, Iraq, Lebanon, and the Syrian Arab Republic to strengthen trade cooperation and exchange of agricultural products. Saudi Minister of Environment, Water and Agriculture, Abdulrahman Al-Fadley, welcomed the idea of reactivating the MoU between the two countries and underscored the strong relations between them.

Tunisia

July 2023: Tunisia’s grain harvest for the year fell by 60 percent to 250 000 tonnes due to drought, which has resulted in financial challenges for the country as it seeks an international rescue package. The decline in the grain crop was anticipated by the farmers’ union; a significant portion of the crop was durum wheat. The drought’s impact led to measures like cutting off nighttime drinking water in certain areas to curb consumption amid severe water scarcity.

August 2023: The region of Jendouba announced that private investments surged by 40.66 percent, reaching about TND 273 million as part of the 2016–2020 development plan across sectors, with a significant allocation of TND 111 million to agriculture.

Aligned with Tunisia’s goals, the Ministry of Agriculture, Water Resources and Fisheries unveiled a strategic plan to expand the cereal cultivation area to 1.2 million hectares by 2035. This plan emphasizes growing wheat on 650 000 hectares, with 500 000 hectares for durum wheat and 100 000 hectares for soft wheat. The aim is to increase barley cultivation from 341 000 to 500 000 hectares and triticale to 50 000 hectares. This strategy aims to ensure sustainable cereal production, enhance value chains, and improve the economic and social environment. Tunisia’s increased commitment to the olive and olive oil sector is showcased through a strategy targeting an annual production of 250 000 tonnes of olive oil by 2035.
Finally, in the Zaghouan governorate, the agricultural development group for beekeepers initiated a plan to **incubate over 10,000 beehives** during the autumn and winter seasons to compensate for the substantial losses incurred due to consecutive years of heatwaves and drought. Degraded pasture management has elevated the cost of concentrates and pesticides, resulting in a 50 percent decline in hive health.

**United Arab Emirates**

**July 2023**: Dubai Investments and E20 Investment, an Abu Dhabi-based agribusiness investment company, signed an MoU to develop 3,750 hectares of agricultural land in Angola. The collaboration aims to cultivate rice and avocado crops, leveraging Angola’s fertile soil and climate conditions for substantial yields. E20 Investment’s experience in managing large-scale agricultural projects and sustainable practices is expected to contribute to the project’s efficiency and profitability, fostering economic diversification and sustainable growth. Sharjah’s Electricity, Water and Gas Authority teamed up with the Emirates Water and Electricity Company to **enhance energy infrastructure and boost electricity production efficiency**.

The COP28 United Arab Emirates Presidency introduced its **Food Systems and Agriculture Agenda**, urging governments to sign the first-ever Leaders Declaration on Food Systems, Agriculture and Climate Action during the Food Systems Summit in Rome. The Declaration aims to align national food systems and agriculture strategies with Nationally Determined Contributions (NDCs), National Adaptation Plans (NAPs), and National Biodiversity Strategies and Action Plans (NBSAPs). The COP28 Presidency is also calling for collaboration with stakeholders in the food and agriculture sector to accelerate initiatives across food systems, agriculture and climate action.

**August 2023**: A smart agriculture research collaboration was formed between the United Arab Emirates and Korea with the aim of using the latest technology to **detect infections and control factors affecting plant growth**.

With regards to technology, Abu Dhabi Developmental Holding Company (ADQ) partnered with Netherlands-based Safe Haven Solutions to establish a **technologically advanced greenhouse** at ADQ’s AgTech Park in KEZAD, aiming to enhance sustainable food production in the United Arab Emirates. The initiative focuses on offering high-quality local produce, reducing food waste and developing local expertise.

Working towards the country’s Vision 2023, the Ministry of Climate Change and Environment oversaw the signing of the first deal facilitated by the National Farm Sustainability Initiative Task Force, wherein ADNH Compass Group and Manbat will **supply national farm products** totaling AED 500 million over five years to major public sector institutions in the United Arab Emirates. The initiative strives to increase major entities’ purchases from local sources to 50 percent by 2023, 70 percent by 2025, and 100 percent by 2030.

The Ministry of Climate Change and Environment also witnessed the signing of a MoU between the Ministry of Climate Change and Environment, the Industrial Innovation Group LLC and Venom Foundation on their cooperation to establish the world’s first national system for **carbon credits using blockchain technology**. This collaboration aims to reduce emissions and enhance sustainable agriculture, environmental health and biodiversity in the United Arab
Emirates, providing transparency, reliability and security in managing carbon credits issuance, transfer, calculation and tracking.

In the wake of India enforcing a ban on lower-grade rice exports, including de-oiled rice bran, the United Arab Emirates swiftly followed suit by announcing its own four-month ban on rice exports and re-exports, which includes Indian-origin rice. These developments have disrupted the global food market, compounded by drought conditions in Thailand, the second-largest rice exporter, and Russia’s withdrawal from the Black Sea Grain Initiative.

On the global stage, the United Arab Emirates and Pakistan are working on a Comprehensive Economic Partnership Agreement (CEPA) to boost bilateral trade and exports, creating opportunities for entrepreneurs from both countries. The agreement highlights the United Arab Emirates’ interest in investing in Pakistan’s agriculture, textiles, marble and tiles, gemstones, mining and petroleum sectors.

The Government of Kazakhstan announced its discussions with Abu Dhabi Ports to establish a joint venture facilitating the transport of Kazakh agricultural exports via ports in Iran and the Gulf. Traditionally exporting primarily to neighboring Central Asian countries, China and Black Sea ports via Russia, this venture aims to diversify Kazakhstan’s export routes and bolster ties with the United Arab Emirates.

The United Arab Emirates’ CEPA with both Turkey and Indonesia have come into effect, aiming to boost bilateral trade to USD 50 billion within five years. These agreements focus on reducing tariffs, eliminating trade barriers and promoting investment in various sectors including logistics, energy and tourism.

To promote agritourism, the Department of Culture and Tourism in Abu Dhabi has revealed updates to its holiday homes policy, permitting farmhouse owners in the capital to acquire licenses to convert their properties into holiday homes. The move aims to diversify accommodation options within the Emirate, tapping into new economic potential for farmhouse owners.

**Yemen**

**August 2023**: As part of a collaborative effort to address food insecurity and support vulnerable communities in Yemen, Life for Relief and Development (LIFE) partnered with the Mohammed bin Rashid Al Maktoum Global Initiatives campaign, One Billion Meals Endowment, in the United Arab Emirates.
SECTION II: ANTICIPATORY ACTIONS IN THE NENA REGION

Hazards to agrifood systems in the NENA region

The region is threatened by serious, complex, and overlapping shocks and stresses that undermine the food security and nutrition of millions of people. Conflict, climatic extremes (droughts and floods), environmental hazards, transboundary animal and plant pests and diseases, and economic shocks are among the most significant shocks that drive risks and vulnerabilities throughout the agrifood systems (Figure 6).

Figure 6. Major hazards to agrifood systems in the NENA region

The strategic need for anticipatory actions in the NENA region

The recurrent nature of most hazards, such as drought, floods, and animal and plant pests and diseases can be confronted by taking both proactive preventative and anticipatory actions to reduce risks and mitigate their impact.

**Anticipatory action** is defined as acting ahead of predicted hazards to prevent or reduce acute humanitarian impacts before they fully unfold. This requires pre-agreed plans that identify partners and activities, reliable early warning information, and pre-agreed financing, released predictably and rapidly when an agreed trigger point is reached. Anticipatory actions are connected to forecasts and implemented before a shock has impacted people; they are essential to, and part of, effective disaster risk reduction and management.

By shifting the focus from response to shocks to anticipatory action and livelihood protection, the resilience of farmers and agrifood systems to shocks and stresses is increased, thus enhancing food security. This is why FAO has been a long-time advocate of anticipatory interventions.

FAO’s five key elements of an anticipatory action system integrate a deep understanding of hazards and risks, supported by an active early warning system, with clear triggers to guide the implementation of proactively identified and planned actions using well-established flexible financing for a swift response. The system’s effectiveness is further heightened by impact evaluation to inform policy decisions concerning the effectiveness of anticipatory actions. Case studies show that every USD 1 invested can create a return for farming families of more than USD 7 in avoided losses and added benefits.

**Element 1: Understanding hazards and risks** means identifying major hazards that could impact the agriculture sector (national level) or livelihoods and food security (community level). At the broader level, this also includes understanding the impacts of various hazards over time, what actions were taken or not, and an understanding of which actions would be best fit to take at specific times at different levels.

**Element 2: Early warning systems** are an integrated system of hazard monitoring, forecasting and prediction, disaster risk assessment, communication and preparedness activities and processes that enable individuals, communities, governments, businesses and others to take timely action to reduce disaster impacts in advance of hazardous events.

**Element 3: Anticipatory actions** can be a variety of different interventions that must be risk-informed, contextualized and flexible. In the agriculture sector, this means actions designed to protect the productive assets of farmers, herders and fishers.

**Element 4: Flexible financing** enables agile programming and delivery of anticipatory actions. Given that hazards and disasters are dynamic, financing should also allow for adjustments to ensure that time-sensitive and risk-informed actions can be taken.

**Element 5: Evidence** of the effectiveness and benefits of anticipatory action beyond the event needs to be communicated to convince stakeholders that acting early makes economic sense.
State of anticipatory actions in the NENA region

FAO undertook a rapid review of anticipatory action in the NENA region focusing on (a) the existence of early warning systems that reflect a good understanding and prioritization of disaster risk and are linked to triggers and warning levels; and (b) the existence of anticipatory action planning and implementation mechanisms including institutional and coordination arrangements, and sources of financing actions.

Existence of early warning systems

The region has a fair number of early warning systems both at country and regional levels; however, they mostly focus on one hazard (i.e. hazard-based systems) and are not complemented with triggers for anticipatory actions.

In eight countries in the region, multi-hazard early warning systems are available or there have been concrete steps to establish such mechanisms. These include Egypt, Iraq, Jordan, Kuwait, Lebanon, Palestine, Qatar, the Sudan, and the United Arab Emirates. At the country level, early warning capacities for drought and flood are relatively more established. Observatories and weather forecasting systems are well-established and operational in Egypt, Jordan, Lebanon, Morocco and Tunisia. The Morocco Drought Observatory is currently being established within the digital hub of the Ministry of Agriculture.

In most of the conflict-affected countries, existing early warning systems have been eroded by years of instability, some of which are also physically damaged. This is the case in the Syrian Arab Republic, which plans to rebuild its early warning system to a multi-hazard early warning system with FAO support.

With the help of FAO, the Regional Desert Locust Commissions for the Central and Western regions have established desert locust early warning and surveillance systems that enable the early dissemination of early warning that triggers control actions led by individual agencies in the countries. **FAO Commission for Controlling the Desert Locust in the Western Region** includes Algeria, Libya, Mauritania, Morocco and Tunisia from the NENA region. The FAO Commission for Controlling the Desert Locust in the Central Region has Bahrain, Djibouti, Egypt, Iraq, Jordan, Kuwait, Lebanon, Oman, Qatar, Saudi Arabia, the Sudan, the Syrian Arab Republic, the United Arab Emirates and Yemen from the region.

Another regional example is **REMESA**, the Mediterranean Animal Health Network, which includes the Chief Veterinary Officers from a number of countries in the region (Algeria, Egypt, Jordan, Lebanon, Libya, Morocco, Mauritania and Tunisia) with the aim of improving prevention and control against the major transboundary animal diseases and zoonoses through the strengthening of the national and regional resources and capacities, the harmonization and coordination of surveillance and control activities.

Given the hazard focused early warning capacities, countries and agencies tend to develop their own sectoral or hazard specific action plans. This is the case for the plant pests and animal diseases, or flood and drought, when addressed sectorally. The consequence of this is the limited inter-agency coordination, lack of agreed multi-hazard triggers and organized funding for anticipatory action, making scale up challenging.
Disaster risk management

In most of the regional countries there are established institutional arrangements related to disaster risk management. However, there are gaps related to the existence of clear mechanisms to finance anticipatory actions and limited coordinated actions.

Most countries have multiple institutional mechanisms for climate change adaptation and disaster risk reduction and management. National disaster risk management coordination mechanisms and policies have long been established as part of country commitments to the Hyogo Framework for Action 2005–2015 and later as part of the implementation of its successor, the Sendai Framework for Disaster Risk Reduction 2015–2030. Most countries in the region have national disaster risk reduction strategies and risk management plans in place. However, there is a clear gap in financing.

Challenges and opportunities

Regional collaboration plays an integral role in improving forecasting and early warning across multiple hazards. The region has a number of regional mechanisms specializing in weather, hydrological and transboundary information, expertise and services that could potentially expand coordinated anticipatory action beyond a single country, such as regional climate centres, networks and initiatives like RICCAR, the Regional Initiative for the Assessment of Climate Change Impacts on Water Resources and Socio-Economic Vulnerability in the Arab Region. The challenge is to harmonize these different regional platforms. There is also the potential to capitalize on learning between countries by promoting harmonized monitoring and reporting to better understand how to effectively promote resilience building through anticipatory actions.

Some challenges related to the development of triggers of anticipatory actions in response to multiple hazards include a lack of disaggregated data and the need to enhance monitoring systems and early warning systems that effectively trigger anticipatory actions.

Some countries have some form of sector-specific or multi-hazard early warning systems; however, the majority of these systems are either limited in use or have yet to scale up to cover wider hazards or establish wider coordinated multi-stakeholder actions. Increased national interest in the establishment of multi-hazard early warning systems has been growing, recognizing the need for a holistic approach to risk governance. In March 2022, the UN Secretary-General launched the Early Warnings for All initiative which called for every person on Earth to be protected by early warning systems by 2027. It is an important step at the international level to raise the profile of the need for early warning systems that trigger anticipatory action and promote its use.

There is an opportunity to build on the strengths of different forecast and modeling systems to expand modeling to include hazards of transboundary nature and other socio-economic factors. For instance, meteorological models could help track vector-borne diseases in animals. Further, in conflict-affected contexts, mechanisms such as the Integrated Phase Classification (IPC) system for monitoring food insecurity and migration information could be overlaid with natural hazards and food production, supply and market information to inform tailored and anticipatory actions. The challenge is to have one established umbrella without
taking away from the specific mandated work of various sectors. Jordan is in the early stages of designing an observatory housed in its National Center for Security and Crisis Management.

Anticipatory action, with preparedness and contingency plans updated to include early warning, triggers and guidelines for coordinated delivery of anticipatory action should be systematically embedded into national disaster (risk) management policies.

**FAO supports the establishment of anticipatory action systems in the region**

Being a powerful tool for protecting lives and livelihoods from shocks, and increasing the resilience of farmers and agrifood systems, FAO recommends regional countries to:

- Enhance and continuously update sector-specific and multi-hazard risk information systems;
- Develop anticipatory action triggers linked to risk information systems and continuously monitor their effectiveness;
- Allocate flexible financial resources for timely and appropriate anticipatory actions;
- Fully integrate anticipatory actions in disaster risk reduction and management, and climate change adaptation policies; and
- Create and enhance national and regional platforms to build collaboration in anticipatory actions.

FAO assists countries of the region in building capacity on anticipatory actions and supports their integration across development, disaster risk reduction, and sectoral and sub-sectoral policies and programmes. For example, FAO has provided capacity building, equipment and regular technical advice on transboundary pests and diseases surveillance, monitoring and early action. FAO also conducts crop and price monitoring of products and agriculture inputs.

FAO worked with the Sudan Meteorological Authority to establish agriculture-related early warnings for drought and floods. The information generated has informed FAO’s response to drought and floods in affected areas in the country.

Yemen, through its work with FAO, has started the rehabilitation of weather stations that track hydro-meteorological data and disseminate information through mobile messages. FAO also works with the Yemen Civil Aviation and Meteorological Authority, the National Water Resources Authority and the Ministry of Agriculture and Irrigation in issuing early warning information on various hazards related to floods, droughts, animal diseases and other hazards affecting the agriculture sector. Triggers are currently being developed jointly by these agencies.

FAO is committed to supporting the development of agriculture in the NENA region through developing multi-hazard anticipatory action systems and other tools to help countries seize opportunities in the agriculture sector to combat the challenges they face.
ANNEX

Figure A1. Crude oil (USD/barrel) and natural gas index (2010=100) of the World Bank


Figure A2. Prices of fertilizers: Diammonium phosphate (DAP), urea, and potassium chloride (USD/tonnes)
