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Implications for world food security and agriculture arising from disruptions of supply chains in the Gulf region, including the closure of key maritime routes

Executive summary

The conflict that erupted in the Middle East in February 2026 has generated a major shock to global energy, fertilizer and other critical inputs for the agrifood systems. The disruption of trade through the Strait of Hormuz – a strategic corridor carrying approximately 20 million barrels of oil per day (one-quarter of global seaborne oil trade) and significant volumes of liquefied natural gas, as well as 20-30 percent of exports of fertilizers – has triggered sharp increases in input costs for farmers and created cascading risks for the agrifood systems and potential risk for food security in the remaining half of the year and during 2027.

Within days of the conflict, tanker traffic through the Strait collapsed by more than 90 to 95 percent. Brent crude prices briefly reached USD 115–120 per barrel, while European natural gas prices surged by 50–95 percent. The fertilizer market, for which no strategic reserves exist, experienced immediate shocks, with Middle East granular urea prices rising nearly 20 percent within one week. Up to 30 percent of globally traded fertilizers normally transit the Strait, and an estimated 1.5–3 million tons of fertilizer trade per month have been stalled.

The conflict transmits shocks to agrifood systems through four primary channels: (i) disruption of food imports to Gulf countries, which rely on imports for 70–90 percent of their staple food supply; (ii) rising energy prices impacting the cost of living of households and increasing food prices at consumer level due to higher transportation and processing costs; (iii) rising energy and fertilizer costs that erode farmers' margins and may reduce future crop yields; and (iv) potential reductions in household income starting with lower remittance flows from Gulf economies to South Asia, Southeast Asia and Africa, affecting tens of millions of households and increasing risk to global growth.

Import-dependent countries in Asia, Africa and Latin America are particularly exposed. Many African economies rely heavily on imported fertilizers from Gulf producers. In South Asia, for example, Bangladesh sources 53 percent of its fertilizers from the Gulf and applies 170 kg of nitrogen per hectare, representing an extreme risk profile. If the Strait of Hormuz continues to be closed the effects could move East to West and South to North, potentially having a significant impact over food supplies for the second half of 2026 and in 2027.

Using the MIRAGRODEP computable general equilibrium model, three scenarios were simulated: a short conflict (one month blockade), a medium-term disruption (three months) and a long-term

shift (extending into 2027–2030). Under the long-term scenario, global household real income declines by 1.6 percent, global agrifood income contracts by 1.9 percent and cereal producer income falls by 4.8 percent. Gulf countries face strong declines in real income of 14–18 percent. Latin America and Asia experience declines of 1–2 percent in household welfare.

The Islamic Republic of Iran faces particularly acute pressures. With a wheat import dependency of approximately 15 percent, a maize import dependency of roughly 95 percent and cooking oil prices having risen by over 200 percent year-on-year in early 2026, the country's agrifood system is under severe strain. Pre-emptive export bans on all food and agricultural products, implemented on 3 March 2026, have further tightened regional supply.

A coordinated policy response is urgently needed. Short-term measures include developing alternative trade routes, enhancing market monitoring, avoiding export restrictions on energy and fertilizers, providing financial support for farmers, and avoiding sudden biofuel demand surges that could divert food crops to energy production. Medium-term measures focus on diversifying import sources and strengthening regional coordination. Long-term strategies must prioritize sustainable domestic agriculture, green fertilizer production, renewable energy investments and structural adjustments to cope with persistent price volatility.

Diplomatic efforts to de-escalate tensions and ensure freedom of navigation in the Strait of Hormuz remain the single most effective way to stabilize global energy and food markets. However, proactive multilayered interventions are essential to protect vulnerable populations, particularly in Small Island Developing States, Least Developed Countries and Landlocked Developing Countries, which face compounded vulnerabilities from this crisis.

Suggested action by the Council

The Council is invited to:

1. take note of the analysis presented in this document regarding the global agrifood implications of the 2026 Middle East conflict; and
2. endorse the proposed short-term, medium-term and long-term policy responses outlined in section VI, recognizing the need for coordinated international action to stabilize markets, protect vulnerable populations and build structural resilience.

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I. Introduction

1. The conflict that erupted in the Middle East in February 2026 represents a major geopolitical shock with profound implications for global energy, fertilizer and agrifood systems. Unlike previous crises – including the 2022 war in Ukraine – this conflict strikes at the heart of global energy supply chains, threatening a strategic chokepoint through which approximately one-quarter of the world's seaborne oil trade and up to 30 percent of globally traded fertilizers normally transit.

2. The Strait of Hormuz, connecting the Persian Gulf to the Arabian Sea, is the sole maritime exit point for the Gulf States: Bahrain, Iran (Islamic Republic of), Iraq, Kuwait, Oman, Qatar, Saudi Arabia and United Arab Emirates. Under normal conditions, the Strait carries roughly 20 million barrels per day of crude oil and refined products, along with significant volumes of liquefied natural gas (LNG) and fertilizer exports. This concentration of flows means that even short disruptions can remove millions of barrels per day from global markets, triggering rapid price increases that ripple across economies worldwide.

3. The outbreak of conflict on 28 February 2026 led to an immediate and dramatic reduction in Gulf exports. By early March, tanker traffic through the Strait had fallen by over 90 percent and Gulf oil production had been curtailed by an estimated 10 million barrels per day. The International Energy Agency (IEA) announced a coordinated release of 400 million barrels from strategic petroleum reserves on 11 March 2026 – the largest such action in its history – yet this volume represents only about 20 days of normal Gulf oil supply, underscoring the limited capacity of emergency reserves to offset prolonged disruptions.

4. The purpose of this document is to provide the Council with a comprehensive analysis of the conflict's impacts on global agrifood systems, with particular attention to the vulnerabilities of Small Island Developing States (SIDS), Least Developed Countries (LDCs) and Landlocked Developing Countries (LLDCs). These country groups face compounded risks due to their high dependence on imported food, fertilizers and energy, as well as their limited capacity to absorb price shocks.

5. The document is organized as follows: section II examines the role of Gulf countries in energy and fertilizer markets and the impact of supply disruptions; section III traces the transmission of the regional crisis to global agrifood systems; section IV assesses threats to food security, including the situation of Gulf countries and the Islamic Republic of Iran as a special case; section V presents modelling outcomes, scenario simulations and future risks; and section VI proposes a suite of policy options to mitigate negative impacts.

II. Gulf countries' role in energy and fertilizer markets and disruption impacts

A. Energy trade and the strategic importance of the Strait of Hormuz

6. The Gulf region sits at the heart of global energy markets. Prior to the conflict, the Strait of Hormuz carried roughly 20 million barrels per day of crude oil and refined products, approximately 25 percent of global seaborne oil trade. The Gulf States collectively account for more than 25 percent of global oil output and 34 percent of global oil exports. The region also supplies approximately one-fifth of global LNG exports.

7. The Gulf is similarly critical for refined fuels. In 2025, Gulf refineries provided an estimated 45 percent of Europe's jet fuel and 20 percent of its diesel. This means that any major disruption in the Gulf directly threatens global energy security, with immediate knock-on effects for transportation, industrial activity, agriculture and food supply chains.

8. Within days of the conflict's outbreak, tanker traffic through the Strait of Hormuz plunged by more than 90 percent, falling from an average of approximately 106 ship transits per day in February 2026 to barely 7–16 per day in early March 2026. By mid-March 2026, export volumes of crude oil, fertilizers and natural gas through Hormuz were at less than 10 percent of pre-conflict levels. Only Saudi Arabia and the United Arab Emirates have pipeline capacity to bypass the Strait,

with limited spare capacity of up to 5.5 million barrels per day – about one-quarter of the region's usual export volume.

9. According to IEA projections, global oil supply in March 2026 declined by 8 million barrels per day, falling to 98.8 million barrels per day – its lowest level since the first quarter of 2022. This sudden supply loss marks one of the largest disruptions in oil market history.

B. Energy price responses

10. Global energy markets reacted swiftly and turbulently. In the first days of March 2026, Brent crude oil futures jumped 20–35 percent compared to pre-conflict levels, briefly soaring to approximately USD 115–120 per barrel – the highest prices seen since 2022. The US[1] benchmark, West Texas Intermediate, spiked from approximately USD 70 in late February 2026 to above USD 100 at its peak in early March 2026. By mid-April 2026, it is 42 percent above pre-conflict levels.

11. Natural gas markets experienced an even more dramatic response. The European gas benchmark, Dutch TTF, surged by 50–75 percent in the conflict's first two weeks. By mid-April 2026, it is 41 percent above pre-conflict levels in Europe and 83 percent in Asia.

12. Refined fuel markets were also severely affected. Diesel and jet fuel prices surged worldwide as key suppliers – including Saudi Arabia and the United Arab Emirates – cut refinery runs and exports due to full storage tanks and security threats. The abrupt loss of Gulf diesel and jet supply left little spare refining capacity elsewhere to fill the gap.

13. The coordinated IEA release of 400 million barrels from emergency oil reserves on 11 March 2026 provided temporary relief but has not fully calmed oil prices, which remain volatile. This intervention is equivalent to only 20 days of Gulf countries' normal supply, highlighting the world's exposure to the region. Prolonged disruption could push oil prices significantly higher, potentially reaching USD 150 per barrel.

C. Fertilizer trade and disruption impacts

14. Beyond oil, the Gulf region is a critical hub for global fertilizer production and trade, especially nitrogen fertilizers (urea and ammonia) and phosphate fertilizers. The region's abundant natural gas resources allow Gulf countries to produce fertilizers at competitive costs, making them essential suppliers for import-dependent countries.

15. Up to 20-30 percent of globally traded fertilizer products – roughly 16 million tons per year of nitrogenous fertilizers, phosphates and sulfur – normally transit the Strait of Hormuz. The Gulf region provides an estimated 30–35 percent of the world's urea exports and approximately 20-30 percent of ammonia exports. Qatar's QAFCO[2] complex alone produces 14 percent of global urea trade.

16. In addition, Gulf countries represent directly about 25 percent of sulfur production and about 50 percent of global sulfur exports. This sulfur is a key component to process raw phosphate rock into plant-available fertilizer. Increased cost of sulfuric acid and shortage will impact the full fertilizer value chain, including in other producing countries like Morocco**.**

17. With the outbreak of conflict, these fertilizer flows have been severely disrupted. Key facilities have been damaged or shut. Qatar's Ras Laffan LNG and fertilizer operations were struck on 2 March 2026, halting output of 112 billion cubic metres of LNG and associated ammonia production. Major fertilizer plants in Iran (Islamic Republic of the), Jordan, Qatar, Saudi Arabia and United Arab Emirates have reduced or suspended production due to attacks and insecurity.

18. The effective closure of the Strait of Hormuz means that an estimated one-third of all fertilizer trade is stalled. Unlike oil, the fertilizer sector does not have internationally coordinated

[1] United States of America
[2] Qatar Fertiliser Company

strategic reserves, making supply disruptions more difficult to manage. This loss creates an immediate global shortfall with no quick substitute.

19. Fertilizer prices reacted immediately. In the first week of March 2026, Middle East granular urea prices climbed to over USD 590 per tonnes, up by USD 90 (19 percent) from late February 2026. US Gulf diammonium phosphate (DAP) rose to USD 655 per tonnes, approximately 5 percent higher. By mid-April 2026, and compared to pre-conflict level, urea prices have increased by 52 percent in the US Gulf and 60 percent in Brazil. Diammonium phosphate prices (US Gulf) have increased by 14.7 percent.

D. Implications for commodity prices

20. Major agricultural commodity prices have begun to rise, although the impact is somewhat mitigated by ample global grain supplies entering 2026. The FAO Food Price Index averaged 128.5 points in March 2026, up 3.0 points (2.4 percent) from its February 2026 level, marking a second consecutive month of increase. It remains below the peak levels recorded during the 2022 global food price spike following the war in Ukraine (160 points), but it has begun to rise again, reflecting renewed uncertainty in global commodity markets.

21. In March 2026, prices for corn and vegetable oils started to increase on international markets. Futures markets for key cereals on the Chicago Board of Trade have shown early signs of tightening, with corn and soybean futures rising to multimonth highs.

22. A critical concern is “cross-commodity price contagion”, whereby a price shock in one commodity spreads to others. If farmers cut fertilizer use due to high costs, future harvests may shrink, leading to tighter grain supplies and a surge in food prices later in 2026. Higher energy prices drive up costs for farm inputs, transportation and food processing, while pricier fertilizer makes crop production more expensive.

23. The conflict also strengthens the link between energy and food markets through biofuels. Higher oil prices increase the profitability of ethanol and biodiesel production, raising demand for feedstocks such as maize, soybean oil and palm oil. This feedback loop means that volatility in energy markets can rapidly transmit to food markets, potentially amplifying price volatility in 2027 and beyond.

III. From regional crisis to global impacts on agrifood systems

A. Transmission channels and vulnerable regions

24. The conflict in the Gulf is transmitting a dual shock to agrifood systems worldwide, simultaneously tightening input supply and weakening export demand. On the supply side, surging energy and fertilizer prices are eroding farmers’ margins, increasing liquidity pressures and risking cuts in input use that could depress yields in the coming seasons. On the demand side, the closure of Gulf markets removes a critical outlet for high-value agricultural products from exporting countries.

25. Many countries are deeply dependent on Gulf energy and fertilizer flows. South Asian nations are among the hardest hit. India and China each rely on the Gulf for an estimated 20 percent of their fertilizer imports. Pakistan sources virtually all its LNG from Qatar and the United Arab Emirates. Bangladesh sources 53.3 percent of its fertilizers from the Gulf and applies 170.35 kg of nitrogen per hectare, representing an extreme risk profile.

26. Many African nations are also highly vulnerable. War-torn Sudan imports 54 percent of its fertilizers from Gulf sources. In East Africa, countries including Kenya, Mozambique, Somalia and United Republic of Tanzania obtain a large share of their fertilizer from Gulf exporters. Kenya normally imports approximately 40 percent of its fertilizer from the Gulf and already struggles with 90 percent dependency on imported wheat.

27. In Latin America, Brazil presents a significant vulnerability. Sourcing one-fifth of its fertilizers from the Gulf, Brazil is directly vulnerable to logistical bottlenecks. Because Brazil uses

such a massive volume of nitrogen, any surge in global fertilizer prices will dramatically inflate production costs for farmers. As a global agricultural powerhouse – a leading exporter of soybeans, corn and sugar – reduced Brazilian yields would transmit shocks directly into global food markets.

B. Rising costs for farmers and implications for yields

28. The shock to fertilizer supply and prices is forcing farmers worldwide to make difficult decisions. In many regions, farmers may reduce fertilizer application rates, shift to less fertilizer-intensive crops or, in extreme cases, reduce planted areas. Each of these responses carries implications for future crop yields and global food supply.

29. For smallholder farmers in sub-Saharan Africa, where fertilizer use is already minimal, any price spike can drastically reduce input usage and further depress already low yields. Higher fertilizer prices are likely to hit resource-poor farmers the hardest, risking lower harvests, reduced household consumption and increased food price inflation.

30. For commercial farmers in Latin America, already facing difficult market conditions with low commodity prices before the conflict, the additional increase in input costs may force reductions in fertilizer use and planted areas. The MIRAGRODEP simulations presented in section V project that Latin American cereal producers face the deepest losses, with real income declines of up to 7.3 percent in the most severe scenario.

31. The ultimate risk is a reduction in global agricultural output later in 2026 and into 2027. Delayed or insufficient fertilizer supplies could translate into lower yields for staple crops such as rice, wheat and maize. This poses a particularly serious risk for densely populated regions of Asia, where these crops account for the bulk of food consumption and are central to food security.

C. Loss of export markets and farm revenue

32. Countries that export food and agricultural goods to the Gulf region are also affected. The wealthy Gulf States are among the world's largest importers of staple foods, meat and dairy. The region accounts for 14 percent of global rice imports, 6 percent of barley imports and 5 percent each of wheat, maize and sweetener imports.

33. Grains are sourced from North America, Europe and the Black Sea region; rice from South Asia; and meat from South America and South Asia. Disruptions in Gulf shipping and economic activity mean that some normal trade flows have been interrupted or delayed. India, a key rice and meat supplier to Gulf markets, may see short-term declines in export volumes or logistical hurdles in reaching Gulf buyers.

34. Countries that have both high shares of import dependency on the input side and high shares of export specialization towards Gulf countries are particularly exposed. The most vulnerable farmers are located in South Asia (Bangladesh, India, Pakistan and Sri Lanka), East Africa (Kenya, Somalia and Sudan), and the Middle East (Jordan and Türkiye).

IV. Threats to food security

A. The situation of the Gulf countries

35. Despite their oil wealth, Gulf countries are extremely vulnerable on the food front. They rely on imports for 70–90 percent of their staple foods due to limited domestic agriculture resulting from arid climates and water scarcity. Qatar imports approximately 90 percent of its food, mostly via seaports. Saudi Arabia and the United Arab Emirates similarly import the bulk of their cereal grains, meat and dairy needs.

36. The closure of the Strait of Hormuz jeopardizes the main maritime supply line for food into the Gulf. Normally, huge volumes of wheat, rice, sugar, vegetable oil and other foodstuffs flow into Gulf ports each month from global suppliers. With shipping traffic at a standstill, these essential imports cannot easily reach their destination.

37. Alternative routes are limited. Some Gulf countries can re-route a portion of imports through the Red Sea, but the Red Sea shipping lane has also experienced some risks, which disrupted Red Sea cargo traffic by approximately 60 percent in late 2023. Overland options are even more constrained. Approximately 100 million tonnes of food are imported by the region every year – about 274 000 tonnes per day, equivalent to 10 000–14 000 trucks daily.

38. Gulf governments maintain strategic food reserves that can cover 4–6 months of normal consumption. These reserves, along with high per capita income, provide some short-term resilience. However, if conflict and import disruptions persist beyond a few months, Gulf nations will face serious food supply challenges. Domestic food prices could rise sharply, and certain products might become scarce, particularly in smaller Gulf States with less storage or less diversified supply chains.

39. Qatar is uniquely vulnerable, as it has no alternative port outside the Persian Gulf. The country's main food logistics hub would have to rely on air cargo or small-scale land routes, which are insufficient for its needs. If maritime access to the Persian Gulf remains blocked, the options to feed over 50 million people in these countries become very limited.

B. The Islamic Republic of Iran: A special case

40. The Islamic Republic of Iran, as both a party to the conflict and a major regional economy, faces a dual threat to its agrifood systems: direct impacts from the conflict (including sanctions, export bans and infrastructure damage) and indirect shocks through soaring import costs and inflation. The Government responded on 3 March 2026 by banning all food and agricultural exports to retain stocks at home – a measure underscoring the severity of domestic food security concerns.

41. The Islamic Republic of Iran is partially self-sufficient in some staples but heavily dependent on imports for many key foods. Wheat provides approximately 42 percent of per capita calorie intake. The country generally produces 70–85 percent of its wheat needs domestically but still relies on imports for the remainder – roughly 15 percent import dependency. Approximately half of the Islamic Republic of Iran's imported wheat comes via the Caspian route from the Russian Federation and over one-quarter from Türkiye. Flows from both sources have been partially disrupted.

42. Maize, crucial for livestock feed, is 95 percent imported, mostly from Brazil and Ukraine, with shipments typically passing through or near the Persian Gulf. Rice requires annual imports of approximately 1.2 million tonnes (28 percent of total rice supply), mostly from India. Oilseeds and vegetable oils are particularly vulnerable: the country imports virtually all of its soybeans and vegetable oil, with projected soybean imports of 2.8 million tons primarily from Brazil and Argentina.

43. The impact on Iranian consumers has been severe. Even before the conflict, food inflation exceeded 40 percent year-on-year due to a sharply devalued rial. By early March 2026, overall food prices were estimated to be 110 percent higher than a year prior. Wheat flour prices in Tehran rose by approximately 120 percent in a single month and nearly 200 percent compared to the previous year. Cooking oil prices have risen over 200 percent. Long queues form for government-subsidized bread, and many households can no longer afford previous levels of meat or dairy consumption.

44. Domestic wheat stocks were approximately 4 million tons as of late 2025 – enough for only 3–4 months of consumption. If imports remain constrained, the Islamic Republic of Iran could face a serious wheat shortfall by mid-2026. International humanitarian agencies are closely monitoring the country for signs of acute food shortages.

C. Regional food security risks

45. Beyond the Gulf and the Islamic Republic of Iran, several regional countries are already experiencing high and persistent levels of acute food insecurity, driven by a combination of conflict, economic fragility and climate shocks that predate the Gulf crisis.

46. In Lebanon, the most recent Integrated Food Security Phase Classification (IPC) analysis shows that approximately 874 000 people (about 17 percent of the population analysed) are facing Crisis (IPC Phase 3) or Emergency (IPC Phase 4) levels of acute food insecurity, with projections

rising to nearly 961 000 people in the April–July 2026 period. In Yemen, IPC estimates indicate that more than 17 million people are experiencing high levels of acute food insecurity (IPC Phase 3 or higher), with pockets of the population projected in IPC Phase 5 (Catastrophe).

47. Countries like the Syrian Arab Republic and parts of Jordan are also highly vulnerable, with prolonged droughts and conflict having sharply reduced domestic cereal production. The Syrian Arab Republic's 2025 wheat harvest was cut by an estimated 40 percent due to severe drought, forcing much higher import dependency. This confluence of shocks means that any additional pressure on regional food markets risks spiralling into broader food price inflation and deeper hunger.

D. Global food security risks

48. Rising energy prices linked to the conflict in the Gulf are having a direct and immediate impact on household living standards. Higher fuel and electricity costs reduce disposable income, particularly for low- and middle-income households, for which energy expenditures represent a significant share of total spending. These effects are especially pronounced in energy-importing countries, where price increases are rapidly transmitted to consumers, intensifying cost-of-living pressures and worsening affordability of basic services.

49. These energy shocks also translate into higher food prices for households and, even, changes in food commodity prices. Increased fuel and electricity costs raise expenses for food transportation, processing, refrigeration, retail distribution and even cooking. As these costs are passed along supply chains, consumers face higher prices for staple foods, even in the absence of domestic supply shortages. For households already allocating a large portion of income to food, these increases can force reductions in diet quantity or quality.

50. The combined rise in energy and food prices disproportionately affects vulnerable households, heightening risks of food insecurity and poverty. Without adequate policy responses, households may resort to negative coping strategies, including reduced food consumption or foregone essential expenditures such as health and education.

V. Modelling potential outcomes: Scenario simulations, future risks, and policy options to mitigate negative impacts

A. Scenario-based modelling and projected impacts

51. To accurately isolate the economic impact of the conflict, FAO has employed the MIRAGRODEP computable general equilibrium model. This multisectoral, multicountry, dynamic model captures the intricate input-output linkages between energy, fertilizers and global agrifood systems. It dynamically represents bilateral trade flows and calculates real income effects at household level – essential for assessing impacts on food consumption and affordability.

52. Three distinct scenarios were designed to capture the range of potential outcomes:

a) Short conflict (Scenario 1): The blockade of the Strait of Hormuz lasts for one month. Oil prices spike to USD 120 per barrel for up to three months, remaining at USD 80 afterwards until the end of 2026. Fertilizer price increases only impact Southern Hemisphere producers who have not yet purchased inputs; Northern Hemisphere farmers are not impacted during spring planting.

b) Medium-term disruption (Scenario 2): The blockade extends to three months. Oil prices reach USD 120 in March, rise to USD 140 in April and May, then stabilize at USD 120 until the end of 2026. Fertilizer prices affect all farmers during the year in both hemispheres.

c) Long-term shift (Scenario 3): The situation in 2026 is identical to Scenario 2, but disruptions extend into 2027 (80 percent of the 2026 shock maintained) and are gradually removed through 2030. Growth trajectories are impacted and total factor productivity is adjusted accordingly. No major infrastructure destructions are considered.

53. The simulations assume a strict “policy inaction” baseline – no emergency interventions by global or regional policymakers, neither export restrictions nor monetary or fiscal policy responses are implemented. This establishes the raw, unfiltered magnitude of the crisis, enabling accurate evaluation of necessary policy solutions.

54. Global results: At the global aggregate level, the crisis is undeniably a net negative for consumers. Under the long-term scenario, global household welfare (real income) declines by 1.6 percent, the volume of household food consumption shrinks by 1.3 percent and global agrifood income contracts by 1.9 percent. Agrifood real retail prices increase by 0.6 percent, indicating limited food price pressure in the short run but significant pressure on producer margins.

55. Gulf countries: The most devastating impact falls on real household income within the Gulf countries. Assuming no policy response, these countries face a catastrophic decline of 14–18 percent in real income. Food consumption in the Gulf plummets by 17–20 percent. Paradoxically, local agrifood production in the Gulf increases (0.9–7.7 percent), as blockaded countries are forced to ramp up whatever local production they can muster – a classic wartime import-substitution effect.

56. Asia, Latin America and Africa: Other regions experience more moderate but still significant declines. Asia faces household welfare declines of approximately 1.5 percent and Latin America up to 1.2 percent. Africa’s aggregate results mask a sharp internal division: oil-exporting nations (Angola and Nigeria) capture revenue windfalls, while the vast majority of African nations – net importers of energy and fertilizers – face severe shocks without compensating revenue gains.

57. Sectoral results: The more reliant a sector is on fertilizers, the deeper the economic impact. At global level under Scenario 3, broader agrifood income drops by 1.89 percent. Narrowing to the farm level, the loss deepens to 3.01 percent. For cereals, the decline plunges to 4.78 percent. Latin American cereal producers face a 7.27 percent drop in net real income – the deepest regional sectoral impact.

58. Long-term scarring (2030 outcomes): Under Scenario 3, comparing the global economy in 2030 with and without the conflict shows that initial supply shocks evolve into structural macroeconomic drags. Global food consumption remains 0.94 percent lower, household welfare is down 1.45 percent and real agrifood producer income remains 1.38 percent below baseline. Latin America’s agrifood sector partially recovers from a 2.68 percent decline in 2026 to a 1.67 percent decline by 2030, reflecting structural adaptation, but cannot fully offset the penalties of a disrupted global market.

B. Additional risks

59. Macroeconomic long-term risks: Sustained high energy prices increase production and transportation costs for goods and services far beyond the region, fuelling broader commodity price inflation. The International Monetary Fund has highlighted that a protracted closure of the Strait of Hormuz could push global inflation significantly higher, while slowing recovery in fragile economies. Central banks may react by increasing interest rates, putting more pressure on economic growth, indebted countries and farmers.

60. Remittance reductions: Gulf economies host millions of foreign workers from South Asia, Southeast Asia and Africa who send home billions of dollars in remittances annually. If security conditions force expatriate workers to return or if Gulf economies contract, countries including Bangladesh, Egypt, India, Nepal, Pakistan and Philippines could see sharp drops in remittance inflows. This loss of income for tens of millions of households would have knock-on effects on poverty and consumption.

61. Extended shift to biofuels: When energy prices spike, policymakers and markets can lean more heavily on biofuels as a partial energy alternative. This policy-driven increase in demand for biofuel feedstocks can encourage farmers to shift acreage towards corn, soybeans or other energy crops and away from other staple food crops. That shift reduces the effective supply of food crops and compresses inventories, pushing food commodity prices higher over the medium term. In a stressed

global market, this could lead to larger supply shocks and stronger food price responses in 2027 and beyond.

VI. Policy options to mitigate risks

62. Ensuring regional stability and maintaining freedom of navigation in the Persian Gulf are essential for global energy and food security. Diplomatic engagement to de-escalate tensions and reopen the Strait of Hormuz for civilian trade should be prioritized. However, proactive multilayered policy responses are urgently required to manage short-term shocks, safeguard vulnerable populations and strengthen long-term resilience.

A. Short-term measures (0-90 days): Stabilize markets and ensure supply flows

63. Develop alternative trade routes and contingency logistics: Reduce dependence on the Strait of Hormuz by expanding pipeline capacity for oil and gas to Red Sea and Mediterranean ports, improving rail and trucking corridors (including through Türkiye or the International North-South Transport Corridor), and securing access to alternative ports (Oman and Red Sea hubs). Temporary measures such as naval escorts for commercial shipping and war-risk insurance guarantees can help restore partial flows.

64. Enhance market monitoring and preparedness: The Agricultural Market Information System and agencies, including the IEA and FAO, should continuously monitor oil, gas, fertilizer and staple food markets to detect volatility and emerging supply gaps. Early warning systems can trigger interventions – including strategic petroleum reserve releases or targeted fertilizer stock allocations – to prevent panic-driven price spikes.

65. Avoid export restrictions on energy and fertilizers: This will be essential to avoid exacerbation of input price increases.

66. Support food consumption of vulnerable households through social protection systems and protect humanitarian logistics channels, and mitigate costs to food insecurity hotspots.

B. Medium-term measures (90-360 days): Diversify supply and strengthen regional cooperation

67. Support vulnerable import-dependent countries: Low-income nations facing surging import costs require immediate support. International financial institutions and donor governments should provide emergency food aid, balance-of-payments support (including through FAO's food import facility) and humanitarian assistance to countries at risk, including Afghanistan, Lebanon, Somalia and Yemen. Safety nets and targeted subsidies are essential to shielding populations from sharp price increases.

68. Finance farmers and maintain agricultural production: Access to credit and financial support for farmers exposed to higher fertilizer and energy costs is critical to avoid liquidity constraints that could compromise planting decisions and future yields. Policies should protect farmers from interest rate spikes caused by tight monetary conditions. This is particularly important for smallholder farmers in SIDS, LDCs, and LLDCs.

69. Avoid short-term biofuel demand surges: In response to high fossil-fuel prices, incentives and subsidies for biofuels should be carefully managed to prevent a rapid diversion of food crops towards energy production, which could exacerbate food price volatility. A temporary waiver or relaxation of biofuel blending mandates may be warranted during the acute phase of the crisis.

70. Diversify import sources and enhance regional coordination: Countries dependent on Gulf energy, fertilizer or food supplies should expand procurement from alternative partners, including North America, Latin America and Africa. Fertilizer-importing nations can explore North African sources or invest in regional production capacity. Gulf States and neighbouring countries should coordinate reserve sharing and avoid export restrictions that worsen shortages.

71. Promote market resilience and contingency planning: Governments should continue to develop risk-mitigation strategies for supply disruptions, including maintaining strategic reserves of critical commodities and reinforcing storage, as well as distribution infrastructure. For fertilizers, where no global strategic reserves exist, regional reserve mechanisms should be explored, particularly in vulnerable regions such as South Asia, East Africa, and Latin America.

72. Strengthen remittance protection mechanisms: For countries heavily dependent on remittances from Gulf workers, governments should work with international financial institutions to establish emergency social protection floors and explore mechanisms to facilitate the continuation of remittance flows during the crisis. Diplomatic engagement with Gulf host countries should prioritize the protection of migrant workers' rights and livelihoods.

C. Long-term measures: Build structural resilience

73. Invest in sustainable domestic agriculture and energy alternatives: Countries should invest in sustainable agricultural productivity and input-saving technology to expand domestic food production, where feasible. Globally, investments in renewable energy and energy efficiency can reduce reliance on volatile Gulf oil and gas supplies. For Small Island Developing States, Least Developed Countries and Landlocked Developing Countries this includes support for climate-resilient agriculture, water-efficient irrigation and decentralized renewable energy systems for agrifood processing.

74. Develop sustainable fertilizer production: Localized production, including green ammonia initiatives using renewable energy, can decrease dependence on imported fertilizers and buffer markets against external shocks. For Landlocked Developing Countries, which face high transportation costs for imported fertilizers, regional production facilities offer particular promise. For Small Island Developing States, investments in organic fertilizer alternatives and soil health management can reduce import dependency.

75. Prepare for structural market shifts: Prolonged instability may drive long-term changes, including expanded biofuel production, altered cropping patterns and persistent commodity price volatility. Policymakers should incorporate these potential shifts into agricultural, energy and fiscal planning to mitigate cascading effects on food security and economic stability. This includes developing early warning systems for food-fuel price interactions and building adaptive capacity in national agricultural research and extension systems.

76. Strengthening global governance of strategic chokepoints: The current crisis highlights the vulnerability of global agrifood systems to disruptions at strategic maritime chokepoints. The international community should consider mechanisms for ensuring freedom of navigation during conflicts, including potential roles for the United Nations, IEA and other multilateral bodies in coordinating emergency responses and maintaining minimum trade flows for essential food and agricultural inputs.