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THE IMPACT OF THE STRAIT OF HORMUZ CRISIS ON THE INTERNATIONAL OIL MARKET AND SUSTAINABLE DEVELOPMENT

The Strait of Hormuz is a vital chokepoint in international oil and gas trade, making it a critical vulnerability for global energy security. High oil prices, in turn, significantly impact sustainable development.

The Strait of Hormuz is only 21 nautical miles wide at its narrowest point, yet approximately 21% of global daily oil consumption and about 25% of global liquefied natural gas (LNG) pass through its waters every day. Eight countries-Iran, Iraq, Kuwait, Saudi Arabia, the United Arab Emirates, Qatar, Bahrain, and Oman-depend on it primarily for their hydrocarbon exports, although Saudi Arabia, Oman, and Iran also have access to ports outside the strait. [1, p. 3]

About 20% of global oil exports pass through the Strait of Hormuz, amounting to approximately 15 million barrels per day (mb/d) of crude oil and about 5 mb/d of petroleum products. The strait also accounts for about 20% of global LNG shipments, totaling approximately 86 million tons per year (Mt/y). [2, p. 1]

The consequences vary depending on the duration of the blockade:

A blockade in March 2026 already led to a two-thirds drop in oil exports, with approximately 13 million barrels of petroleum products per day being blocked, causing record price spikes. Countries without bypass routes (Kuwait, Qatar, Bahrain) lost nearly all their revenue. [2, p. 1] Overall, oil prices rose by 12%, gas by 30%, and food by 2,7%. The greatest losses were suffered by South Asian and African countries, where dependence on imported fertilizers is critical. [1, p. 8]

Damage to energy infrastructure is estimated at approximately \$25 billion USD. Restoring LNG export capacity in Qatar and Iran could take up to five years, providing an incentive for investment in alternative bypass pipelines such as the East-West pipeline, IPSA, and Tapline. [2, p. 11] While markets partially adjust, global oil prices increase by +3,01%, gas by +6,12%, and food by +1,04%. However, structural losses

persist, particularly due to seasonality, as a closure in March coincides with the peak planting season in the Northern Hemisphere. Even a brief crisis can disrupt the entire agricultural cycle. [1, p. 11]

Consequences for cities in the event of a blockade include, sharp spikes in oil prices leading to classic cost-push inflation. Transportation tariffs, food prices, construction costs, and utility bills rise simultaneously, severely undermining the purchasing power of those least prepared. Urban households feel these energy shocks most acutely through transportation and food costs. [3, p. 1] For example, during the 2022 fuel price spike, public transport fares in Nairobi rose by more than 40%, and petrol price increases in Lagos quickly led to higher fares in informal minibus networks, affecting labor mobility, access to employment, and the availability of essential services. This leads to the conclusion that rising fuel prices rapidly spread to urban food markets, increasing the cost of transporting agricultural products from rural areas, raising cold chain logistics costs, and driving up retail prices. [3, p. 1]

Regarding the impact of the crisis on Sustainable Development Goals (SDGs), for energy-importing countries in general, this crisis underscores the urgent need for diversification. Reducing dependence on Persian Gulf hydrocarbons-through the adoption of renewable energy sources, building infrastructure for LNG imports from non-Gulf suppliers, and investing in energy efficiency-is the most effective long-term mitigation strategy. [1, p. 13] Natural gas is a crucial raw material for the chemical industry. There is no ready substitute for methane as a feedstock in the Haber-Bosch process used to produce ammonia-the foundation of almost all nitrogen fertilizers. When gas prices spike, chemical producers cannot simply switch to alternative feedstocks; they face soaring costs or are forced to cut production. Similarly, oil is a critical feedstock for refining-refineries are designed for specific grades of oil and cannot adapt easily.

This chain of events is as follows:

Energy Crisis. Oil and gas exports from the Persian Gulf are blocked, leading to a sharp rise in global energy prices.

Chemical Bottleneck. Production of gas-dependent chemicals (especially fertilizers) faces significant cost increases due to extremely limited substitution options.

Food Price Pass-through. Higher fertilizer costs affect the cost of growing wheat, grains, oilseeds, vegetables, and other food products. [1, p. 13]

The timing of the strait's closure makes the fertilizer issue particularly acute. The spring planting season in the Northern Hemisphere requires nitrogen fertilizers right now-March and April are the peak demand months that determine yields for the entire

growing season. Fertilizers cannot simply arrive three months late; a delay in application means reduced yields or total crop failure. This seasonal aspect means that even a relatively short closure can disrupt the entire growing season, with consequences for food security that will persist long after the strait reopens. [1, p. 13]

Unstable oil price dynamics hinder sustainable industrial development by increasing production costs, deterring investment in renewable energy, and slowing progress toward SDG 9. Therefore, stable and predictable energy prices are crucial for achieving the overarching Sustainable Development Goals. [4, p. 1]

In conclusion, the crisis in the Strait of Hormuz has profoundly affected and will continue to affect the international energy market and, consequently, the Sustainable Development Goals.

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