

In 2024, climate change-induced disruptions to agriculture have intensified, compelling countries worldwide to rethink food security policies and trade agreements. Rising temperatures, extreme weather events, and shifting agricultural zones are affecting crop yields and food production, driving many nations to view food security as a priority in their trade agendas. This report examines how climate change impacts global food systems, the role of trade in ensuring food security, and how countries are reshaping trade agreements to mitigate the risk of food shortages and stabilize supplies.

### THE IMPACT OF CLIMATE CHANGE ON GLOBAL AGRICULTURE IN 2024

Climate change has increasingly destabilized agricultural production across the globe. Droughts, floods, wildfires, and changing rainfall patterns are making certain areas less suitable for agriculture, while others may see improved conditions for certain crops. However, the overall effect has been a reduction in reliable food production in many areas, which threatens food supplies for both producing and importing countries.

For example, severe droughts in major grain-producing regions, such as the U.S. Midwest and Australia, have reduced crop yields for staples like wheat, corn, and soybeans. At the same time, higher temperatures have disrupted rice production in Asia, and erratic monsoon patterns have threatened the reliability of this crucial food staple. Climate change has also affected livestock farming, as heat stress and water scarcity impact animal health and productivity. Such disruptions are increasing the volatility of food prices, straining global supply chains, and putting vulnerable populations at greater risk of food insecurity.

# PRIORITIZING FOOD SECURITY IN TRADE AGREEMENTS

In response to climate-related threats to agriculture, countries are increasingly incorporating food security clauses into trade agreements. This shift in trade policy reflects the need to ensure a stable supply of essential foods, particularly for nations heavily reliant on imports to meet domestic needs. Key features of these new trade agreements include measures for:

- Supply Chain Stability: Agreements now frequently include provisions that guarantee food exports even in times of crisis. These "food security clauses" prevent countries from restricting food exports to protect their own supplies, ensuring a predictable flow of essential goods across borders.
- 2. Reduced Tariffs on Staple Foods: Lowering tariffs on staple foods such as grains, pulses, and dairy products is increasingly common in trade agreements. By reducing import costs, countries can better secure affordable food supplies even when domestic production falls short.

- 3. Encouragement of Sustainable Agriculture: Recognizing the impact of climate change on agriculture, many countries are promoting sustainable farming practices as part of trade agreements. By supporting climate-smart agricultural practices, countries aim to reduce the environmental impact of farming while improving resilience to climate extremes.
- 4. Collaboration on Food Innovation and Technology: Trade agreements now emphasize cooperation on agricultural research, technology transfer, and innovation. From drought-resistant crop varieties to precision agriculture, technological solutions are seen as key to adapting agriculture to changing climate conditions.
- 5. Food Stockpiling and Reserves: Some agreements now encourage countries to maintain strategic reserves of essential foodstuffs to buffer against supply chain shocks. These reserves allow countries to meet immediate needs in times of crisis, such as during sudden disruptions to international trade routes.

## ROLE OF INTERNATIONAL TRADE IN PREVENTING FOOD CRISES

International trade plays a vital role in preventing food shortages and managing price volatility. When domestic production falls short due to climate-related disruptions, imports can help stabilize supply and offset price increases. Trade provides a buffer against localized shocks by allowing countries to source food from different regions. For example, during a drought in North America, increased imports from South America or Eastern Europe can help maintain supplies in the affected areas.

Moreover, trade allows countries to specialize in crops best suited to their climates, which promotes more efficient food production globally. As countries face increasing risks to agriculture, many are seeking to diversify their import sources to reduce dependency on any single region. This diversification of trade partners, often formalized in bilateral and multilateral agreements, is becoming an essential strategy for maintaining food security in an unpredictable climate.

In 2024, multilateral organizations such as the World Trade Organization (WTO) and the United Nations Food and Agriculture Organization (FAO) are promoting international cooperation in food trade policies. They advocate for the reduction of trade barriers, discouraging export restrictions that exacerbate food insecurity in importing countries. These organizations are also pushing for greater transparency in food trade, so countries can monitor food stock levels and trade flows more effectively, helping to preempt potential crises.

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## EXAMPLES OF RECENT FOOD-FOCUSED TRADE AGREEMENTS

- 1. The EU-African Food Security Partnership: The European Union and African Union signed a landmark trade agreement in 2024 focused on food security. This agreement reduces tariffs on key agricultural products and promotes sustainable agriculture in African nations. Additionally, it establishes a framework for the EU to provide funding for climate-resilient farming practices, improving food production capabilities in Africa while stabilizing imports to the EU.
- 2. The U.S.-ASEAN Agricultural Resilience Pact: The United States and ASEAN countries entered into a pact aimed at building agricultural resilience in Southeast Asia. The agreement facilitates the exchange of agricultural technology, supports the development of drought-resistant crops, and ensures that the U.S. maintains a steady export of grains and pulses to Southeast Asian countries affected by erratic monsoon patterns.
- 3. The India-GCC Food Security Corridor: In response to climate-driven disruptions, India and Gulf Cooperation Council (GCC) countries established a food security corridor to ensure the continuous flow of essential food items, such as rice, wheat, and meat. India, as a major food exporter, provides GCC nations with a reliable source of staple foods, while the GCC countries invest in India's agricultural technology and water management projects to bolster production.

### **RECOMMENDATIONS FOR COMPANIES**

- **1. Diversify Sourcing**: Companies should source food products from multiple regions to reduce dependency on a single supplier, minimizing the risk of supply chain disruptions.
- **2. Invest in Climate-Resilient Agriculture**: Agricultural companies should adopt sustainable practices, such as water-efficient irrigation and soil conservation, to protect yields from climate impacts.
- **3. Monitor Trade Policies**: Companies involved in food trade should stay informed of emerging trade agreements and policies that may affect tariffs, export restrictions, and supply chain dynamics.
- 4. Adopt Technology and Innovation: Use climate-smart technologies, such as drought-resistant crop varieties and precision agriculture, to increase resilience to climate impacts.
- **5. Establish Local Partnerships**: Form partnerships with local suppliers in various regions to increase flexibility and secure alternative sources during times of crisis.
- **6. Create Strategic Reserves**: Companies can establish reserves of essential raw materials to cushion against short-term supply chain disruptions.
- **7. Promote Sustainable Practices**: Implement sustainable farming practices that align with trade agreements and attract government incentives for climate-resilient agriculture.
- 8. Collaborate with Government Programs: Work closely with government initiatives focused on food security and sustainable agriculture to leverage available funding and support.
- **9. Enhance Supply Chain Transparency**: Use digital tools to improve supply chain visibility, helping to manage risks and identify potential disruptions early.

- Engage in Policy Advocacy: Participate in industry coalitions to advocate for trade policies that support global food security.
- Explore Alternative Markets: As climate impacts shift growing regions, consider sourcing from emerging agricultural markets that are less climate-vulnerable.
- **12. Support Localized Production**: For companies with global operations, consider establishing regional production facilities to ensure stability in food supply.

#### **RECOMMENDATIONS FOR LEGISLATORS**

- 13. Incorporate Food Security in Trade Policy: Ensure that all new trade agreements prioritize stable access to essential foods and prevent restrictive export policies.
- **14. Promote Climate-Resilient Farming**: Support R&D for drought-resistant crops, pest-resistant seeds, and water-efficient farming methods through government-funded programs.
- **15. Encourage International Cooperation**: Work with other nations to establish cooperative frameworks for food trade that prevent disruptions during crises.
- **16. Reduce Tariffs on Essential Goods**: Lower tariffs on staple foods to improve affordability and accessibility, especially for countries with high import dependency.
- 17. Create Incentives for Sustainable Agriculture: Offer tax breaks, subsidies, and grants for farmers and companies that adopt climate-smart agriculture.
- 18. Establish Strategic Food Reserves: Develop national food stockpiles to buffer against immediate shortages due to climate-related disruptions.
- Implement Early Warning Systems: Invest in technology to monitor food supply chains and predict potential food crises, enabling rapid response.
- **20. Promote Open Trade Policies**: Work towards reducing trade barriers, such as tariffs and quotas, on essential food products in global trade agreements.
- **21. Support Food Security Research**: Fund initiatives to develop sustainable and climate-adaptive agricultural practices and technologies.
- **22. Encourage Transparent Reporting**: Promote transparency in agricultural production and trade statistics, allowing better global coordination.
- **23.** Foster Innovation in Supply Chains: Encourage private sector collaboration on resilient, climate-smart supply chain management.
- **24.** Engage with Multilateral Organizations: Collaborate with organizations like the WTO and FAO to standardize food security measures in international trade agreements.



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