Press release

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Free trade can prevent hunger caused by future shifts in climate patterns

An international team of researchers investigated the effects of trade on hunger in the world as a result of climate induced crop yield changes. The conclusion is encouraging: international trade can compensate for regional reductions in agricultural production and reduce hunger when protectionist measures and other barriers to trade are eliminated.

Climate change has consequences for agriculture worldwide, with clear differences between regions. Expectations are that sufficient food will remain available in the Northern hemisphere, but in regions such as Sub-Saharan Africa or South Asia, falling crop yields may lead to higher food prices and a sharp rise in hunger. According to the authors of the new study published in Nature Climate Change, further liberalization of world trade can relieve these regional differences. Food deficiencies can, for instance, be reduced if regions like Europe and Latin America, where wheat and corn thrive, increase their production and export food to regions under heavy pressure from global warming. In other words, international trade could allow us to make the most of regional differences in climate change impacts.

The results further show that import tariffs present a major barrier to international trade in food as they increase the cost of importing basic food crops like wheat, corn or rice. Around a fifth of the worldwide production of these grains is traded internationally. That makes good trade agreements very important in the battle against hunger. The early 21st century saw a major liberalization of the international market, which caused the average import tariffs on agricultural products in Europe, Sub-Saharan Africa, and South Asia to drop by a third. The research indicates that this liberalization makes global food provision less vulnerable to climate change and that further reduction and phasing-out of tariffs can intensify this positive effect.

There are also other barriers. In some countries, the logistical aspect is a sticking point. Roads are sometimes poor or ports are not equipped for loading and unloading large container ships, while countless complicated trade procedures can drive up the effective cost of trade. The authors therefore argue that a global food strategy must go hand in hand with improvements to trade infrastructure.
The study highlights that where barriers to trade are eliminated, around 20 million people will still endure undernourishment due to climate change. While this number is high, it is a vast improvement on the 73 million people that would potentially be exposed to hunger without the suggested measures. In the more mild climate scenarios, an intensive liberalization of trade may prevent even more people from enduring hunger owing to climate change. Yet a liberalization of international trade may also involve potential dangers. The researchers warn that if South Asian countries would, for example, increase rice exports without making more imports of other products possible, they could be faced with increased levels of undernourishment within their own borders, and that a well thought-out liberalization is needed to avoid such collateral effects.

“Sadly enough, we see that in times of crisis, countries are inclined to adopt a protectionist stance. Since the start of the current corona crisis, around ten countries have closed their borders for the export of important food crops,” says study lead author Charlotte Janssens, a guest researcher in the IIASA Ecosystems Services and Management Program and a researcher at KU Leuven. “In the context of climate change, it is highly important that they avoid such protectionist behavior and instead continue to maintain and utilize the international trade framework.”

Reference

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