

# GCC food security: mitigating the impact of climate risks among supplier countries



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*While GCC states have proven food-resilient during Covid-19, the looming effects of climate change on food security warrant efforts to develop adapted environmental and trade policies. In particular, GCC states need to place more emphasis on trade relations, yet also understanding the climate risks in producing countries to ensure future supply chain sustainability and thus food security.*

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## Background

When Covid-19 started hitting in earnest during spring 2020, a major global concern was the potential disruption to food trade. GCC Economies in particular feared a re-run of the 2007/08 and 2010/11 food price spikes which had caused tremendous challenges on the world food markets and risky domestic social challenges in the Gulf. At that time, economies that had been historically able to rely on imports without much disruptions felt a crunch on the world markets through the physical scarcity of staple foods. One consequence of these food crises was the investment in overseas' agricultural land (in particular in East Africa), which turned out to be too controversial and economically futile. Fortunately, and thanks to functioning global supply chains, the 2007/08 and 2010/11 scenarios were averted in the Covid-19 pandemic. In fact, global food trade has remained remarkably resilient so far.

Yet, the changing climate with more prolonged heat waves affecting the GCC and an environment which is unsuited to produce agricultural crops will only relegate the problem into the future with the exception of indoor farming, which although promising, is unlikely to address domestic needs. The GCC economies will continue to rely on high levels food imports to ensure food security. However, what is often missing is the careful assessment of supply chain sustainability in light of climate and environmental change.

## Current trade patterns for key commodities

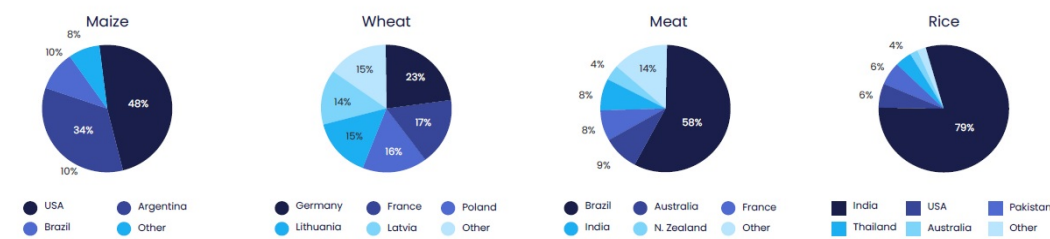
Unlike the relatively sudden onset of the Covid-19 pandemic, the slow-burn impact of climate change will allow more time for national economies to adapt and mitigate for the looming challenges. In the GCC context, this means a dual approach, leveraging technological innovation on one hand and securing resilient trade relations on the other. Sustainable seawater desalination being key to long-term water security, international partnerships in research and development are essential in addition to domestic initiatives. Food production can also theoretically benefit from less water intensive methods including hydroponics, although these are unlikely to scale sufficiently for growing domestic needs. Hence the bulk of governments' efforts will be in establishing and reassessing trading relations, an activity which will form the cornerstone of their food security policy. In particular, this will require policymakers to model the long-term effects of climate change on crop yields in their food-supplier countries, and thus determine whether existing trade partnerships are addressing their needs.

At present, countries like Saudi Arabia and the UAE import their food requirements from various countries around the world. The figures below illustrate the trade picture in maize, wheat, meat and rice for the year 2018. Net-exporting countries such as the United States, Brazil, or India play an important role in both countries' food security. The UAE displays a high dependency on the Russian Federation, its major provider of wheat. In Saudi Arabia, European countries such as France, Germany, Latvia and Lithuania are the key providers of wheat. Both KSA and the UAE are heavily dependent on specific countries for specific agricultural commodities. While this can seem expected upon a first view for instance in the case of rice, a deeper analysis of the top rice-exporting countries shows that while India does indeed lead with an export volume of 11.7 MMT (Million Metric Tons), Thailand is not far behind with 11.1 MMT of exports in 2018<sup>1</sup>. As such, there appears to be an over-dependency on India, even if there may be fallback agreements with other countries.

<sup>1</sup> Source: Tridge



## KSA Imports



## UAE Imports

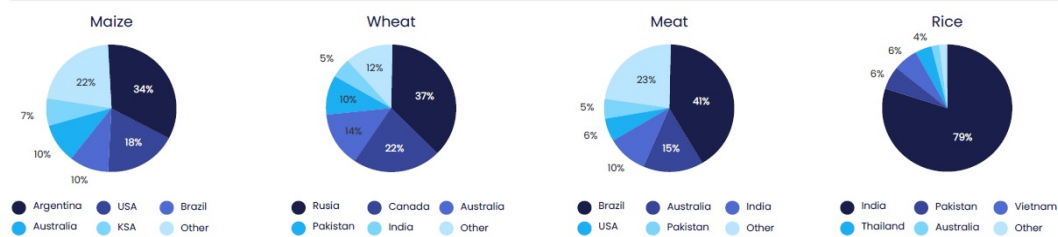


Figure 1: Food import concentration of KSA and UAE for selected agricultural goods (value of goods imported). Source: Chatham House 2018

The picture is more worrying when climate risks are incorporated in food-exporting economies supplying the GCC. According to the latest Climate Risk Index, many of these economies are vulnerable to extreme weather events and their consequences. India, which supplies around three quarters of Saudi Arabia's and the UAE's rice imports was the fifth most affected country globally by extreme events in 2018. The USA and to a lesser extent Argentina, key providers of Maize for the same countries, were also categorized as particularly vulnerable based on 2018 events. But beyond the extreme weather events, gradual temperature increase and water scarcity is likely to affect agricultural production in the key economies of India, Australia, Pakistan, France, Germany and even the United States. Water scarcity is now a fact in India's leading export regions such as West Bengal, Uttar Pradesh and Punjab. Export controls would be the first measures to be applied if climate events limited production, hence India may not be a safe import option if the water and climate crisis further unfolds.

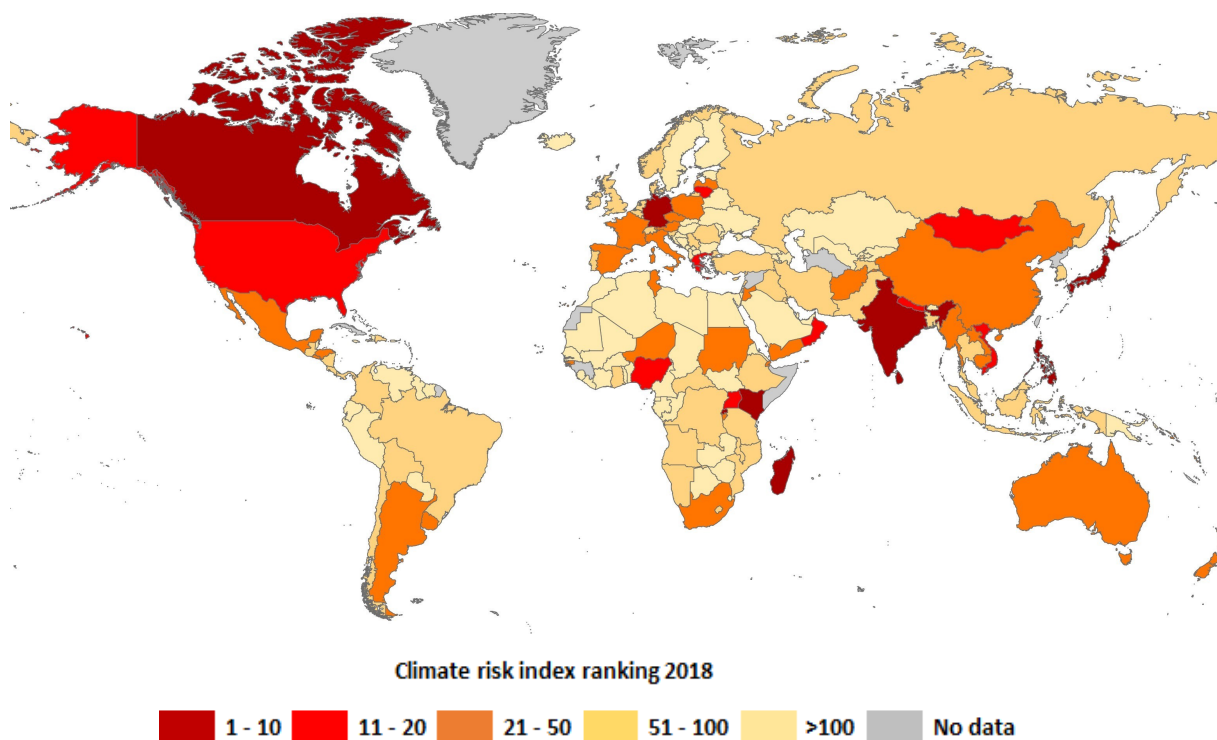


Figure 2: Global Climate Risk Index 2018. Source: Germanwatch.org

## *The Way Forward*

GCC States need to do more than pool financial resources to adapt themselves to the future. What is more important is to understand and address the foreign policy dimension that particularly affects trade policies. In order to enhance the food resilience of GCC states, coordinated foreign policy efforts have to be made to address climate change in a way that serves their national and regional interests. This means the time is ripe to carefully assess future trading relations in light of climate and environmental change. For example, future trade with India may be reassessed on the basis of potential production shortages due to increasing water shortages in the North of India. Climate proofing of trade can be achieved through using state-of-the-art databases and models to understand where the GCC may have to diversify trading relations to avoid a climate crunch.

Shrinking natural resources such as food, water but also biodiversity will force GCC states to change not just their domestic but also foreign policies. While they have long been able to rely on safe food imports from other parts of the region, climate change will test the resilience of trade links. Covid-19 has provided a sudden experience of how global affairs can quickly change and what future challenges may be ahead of import-dependent countries. Covid-19 should serve as a wake-up call for GCC decision-makers to further invest in climate-proof trade policies and tools to understand climate risks that can lead to diversified supply chains to ensure undisrupted future food imports.

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