



How will the COVID-19 pandemic impact food security and virtual water “trade”?

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How will the COVID-19 pandemic impact food security and virtual water “trade”? This is not an easy question as we must consider the multifaceted and complex nature of the aspects and variables at play. Aspects to consider are both the global food supply system and access to food. The global food system is based on food production, food processing, food transport and trade. Furthermore, elements which could be affected by the virus are the food retailing sector and the income of final consumers. It is also necessary to look at how the pandemic impacts people's access to food in rich and poor economies, in rural and urban settings. The question therefore is, how is the pandemic impacting all these different aspects? Current studies have connected how the current food-system plays a determinant role in the use of irrigation water worldwide (1). When food is traded, the consequent “trade” of water embedded in food – virtual water “trade”- happens in parallel (1). Thus, if any disruption or greater change is going to happen in the current food-trade and food patterns, a parallel change in global virtual water trade is likely to follow.

Scenarios could move from a new food-protectionism to a completely opposite outcome: an increase in current patterns of food trading. Assuming that land and availability of capital remain unchanged and unaffected by COVID-19, two other factors in agricultural production could instead play a major role: availability of labour and availability of energy for irrigation.

Regarding food-trade, petrol for food-transportation will also play a relevant role in the final price of goods. If input factors such as labour or energy should decrease for major food-exporters, the availability of food in the international market will decrease. In parallel, if labour shortage shall hit importing countries, they might require more food stocks from the market to fully cover their national consumption needs. Should these two factors fail to be available in food-exporting regions, the entire food trade could change worldwide. Currently, Saudi Arabia and Russia have increased their oil production, the use of gasoline and other fuels is dropping, and oil prices are at their lowest level in a generation (2). A possible outcome from the drop in energy price in the agricultural sector could be an increase in large-scale irrigation. As a consequence, big agri-food companies could increase their share in the global market. In parallel, a decrease in the costs of energy and oil would probably lead to a decrease in transportation costs and result in an increase of world food trade; therefore, increasing virtual water trade. On the other hand, it is not possible to predict the future conditions of agricultural workers and farmers in a post-coronavirus future. This will depend on political sentiments of governments toward immigrant workers and agricultural workers' health rights and their overall conditions.

In conclusion, the impact of COVID-19 on available workers and their health is certainly a determinant



factor. The availability of energy at a low cost is another key factor (3). We believe that farmers worldwide and rural workers in the field should be protected and taken care of by national health systems now and for free. They are the most exposed to poor living conditions. Agricultural workers, especially the migrant workforce (4), usually live in congested slums or informal settlements (especially in developing countries) (3; 5), where social distancing is impossible to practice. To ensure food security for all, we should protect poorer communities now more than ever, including those who produce and harvest our precious food and those who are not able to access it.

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Bibliography

1. Sojamo, S., Keulertz, M., Warner, J., and Allan, J.A. (2012). Virtual Water Hegemony: the role of agribusiness in global water governance. *Water International*, 37(2), 169-182.
2. The Associated Press (1 April 2020). Virus Spreads and Car Sales, Energy Prices, Markets Tumble [Press release]. Retrieved from: <https://apnews.com/7109230536236905a7bf3f8b2de9dec5>
3. FAO (2004). Water charging in irrigated agriculture: An analysis of international experience. Retrieved from: <http://www.fao.org/3/y5690e/y5690e00.html>
4. UNHCR (12 March 2020). The coronavirus outbreak is a test of our systems, values and humanity [Press release]. Retrieved from: <https://www.unhcr.org/news/latest/2020/3/5e69eea54/coronavirus-outbreak-test-systems-values-humanity.html>
5. Weston, M. (2020). How to Tackle Coronavirus in Slums. Retrieved from: <https://www.globaldashboard.org/2020/03/27/how-to-tackle-coronavirus-in-slums/>