**Strengthen biosecurity when rewiring global food supply chains**

Russia’s invasion of Ukraine this year has further highlighted global food security’s vulnerability to geopolitical disruption of supply chains. As members of the Biosecurity Research Initiative at St Catharine’s (BioRISC), we argue that effective biosecurity measures against invasive species and pathogens must accompany necessary transport route diversions.

Beyond food security, global biological invasion risk could increase 3-20-fold by 2050 with burgeoning trade and political instability (A. Sardain *et al. Nature Sustainability* 2, 274–282; 2019 [https://doi.org/10.1038/s41893-019-0245-y](https://eur03.safelinks.protection.outlook.com/?url=https%3A%2F%2Furldefense.com%2Fv3%2F__https%3A%2Feur03.safelinks.protection.outlook.com%2F%3Furl%3Dhttps*3A*2F*2Furldefense.com*2Fv3*2F__https*3A*2Feur03.safelinks.protection.outlook.com*2F*3Furl*3Dhttps*3A*2F*2Fdoi.org*2F10.1038*2Fs41893-019-0245-y*26data*3D05*7C01*7Capc58*40cam.ac.uk*7C6d56df7514b244aebcd108da48a3d007*7C49a50445bdfa4b79ade3547b4f3986e9*7C0*7C0*7C637902165642394636*7CUnknown*7CTWFpbGZsb3d8eyJWIjoiMC4wLjAwMDAiLCJQIjoiV2luMzIiLCJBTiI6Ik1haWwiLCJXVCI6Mn0*3D*7C3000*7C*7C*7C*26sdata*3DQiCF1osv9EyonGjINlVU0Ym80vxla*2Fsm*2FQ6BK*2BU2ftA*3D*26reserved*3D0__*3BJSUlJSUlJSUlJSUlJSUlJSUlJSUlJSUl!!NLFGqXoFfo8MMQ!tbY1_vaL9svax6jkGp0ObX2XKRBQRGDvLDuPINLtZpWFzZiZmZg9EX-J3XP7ZRSAL2LyP9sh4HBFn8Cbqw*24%26data%3D05*7C01*7Csop21*40cam.ac.uk*7C6d84005aadd843ed162f08da4a532bbe*7C49a50445bdfa4b79ade3547b4f3986e9*7C0*7C0*7C637904018314290824*7CUnknown*7CTWFpbGZsb3d8eyJWIjoiMC4wLjAwMDAiLCJQIjoiV2luMzIiLCJBTiI6Ik1haWwiLCJXVCI6Mn0*3D*7C3000*7C*7C*7C%26sdata%3DTz*2FAQV39eVgGqhVHGuLOCUaAFME2Vu19J*2Fl6FIWKrPM*3D%26reserved%3D0__%3BJSUlJSUlJSUlJSoqKioqJSUqKioqKioqKioqKioqKiolJSoqKiolJSUlJSUlJSUlJSUlJSUlJSUlJSUl!!NLFGqXoFfo8MMQ!pziGtLqMKkI-QFX7durrrnAzyCmEhnoew8oO1t82LSsw05gi2l_O6aFSL-mV0xgFksg96weQ3DRUL9jT3A%24&data=05%7C01%7Capc58%40universityofcambridgecloud.onmicrosoft.com%7C9de8661fbb6640038aef08da4e1e71f6%7C49a50445bdfa4b79ade3547b4f3986e9%7C0%7C0%7C637908190262405242%7CUnknown%7CTWFpbGZsb3d8eyJWIjoiMC4wLjAwMDAiLCJQIjoiV2luMzIiLCJBTiI6Ik1haWwiLCJXVCI6Mn0%3D%7C0%7C%7C%7C&sdata=xcEQ5wxKkaoFw8n8HClQL8U83o4dhixjlxRA74lPAkk%3D&reserved=0#_blank)), substantially raising damage and management costs of US$162.7 billion from 2017 (C. Diagne et al. *Nature* 592, 571–576; 2021 [https://doi.org/10.1038/s41586-021-03405-6](https://eur03.safelinks.protection.outlook.com/?url=https%3A%2F%2Furldefense.com%2Fv3%2F__https%3A%2Feur03.safelinks.protection.outlook.com%2F%3Furl%3Dhttps*3A*2F*2Furldefense.com*2Fv3*2F__https*3A*2Feur03.safelinks.protection.outlook.com*2F*3Furl*3Dhttps*3A*2F*2Fdoi.org*2F10.1038*2Fs41586-021-03405-6*26data*3D05*7C01*7Capc58*40cam.ac.uk*7C6d56df7514b244aebcd108da48a3d007*7C49a50445bdfa4b79ade3547b4f3986e9*7C0*7C0*7C637902165642394636*7CUnknown*7CTWFpbGZsb3d8eyJWIjoiMC4wLjAwMDAiLCJQIjoiV2luMzIiLCJBTiI6Ik1haWwiLCJXVCI6Mn0*3D*7C3000*7C*7C*7C*26sdata*3DipsBYSp9Ve1qV6DyPly58ysb5wlAVEliQ7YrsdUYF*2B4*3D*26reserved*3D0__*3BJSUlJSUlJSUlJSUlJSUlJSUlJSUlJQ!!NLFGqXoFfo8MMQ!tbY1_vaL9svax6jkGp0ObX2XKRBQRGDvLDuPINLtZpWFzZiZmZg9EX-J3XP7ZRSAL2LyP9sh4HC-ii233g*24%26data%3D05*7C01*7Csop21*40cam.ac.uk*7C6d84005aadd843ed162f08da4a532bbe*7C49a50445bdfa4b79ade3547b4f3986e9*7C0*7C0*7C637904018314290824*7CUnknown*7CTWFpbGZsb3d8eyJWIjoiMC4wLjAwMDAiLCJQIjoiV2luMzIiLCJBTiI6Ik1haWwiLCJXVCI6Mn0*3D*7C3000*7C*7C*7C%26sdata%3Dp4Q4Oy8woctnZq1Jh7*2FjLn0VSjj*2Bz8gBmVJz5D8smmI*3D%26reserved%3D0__%3BJSUlJSUlJSUlJSoqKioqJSUqKioqKioqKioqKioqKiolJSoqJSUlJSUlJSUlJSUlJSUlJSUlJSUlJQ!!NLFGqXoFfo8MMQ!pziGtLqMKkI-QFX7durrrnAzyCmEhnoew8oO1t82LSsw05gi2l_O6aFSL-mV0xgFksg96weQ3DRKIrb7MQ%24&data=05%7C01%7Capc58%40universityofcambridgecloud.onmicrosoft.com%7C9de8661fbb6640038aef08da4e1e71f6%7C49a50445bdfa4b79ade3547b4f3986e9%7C0%7C0%7C637908190262405242%7CUnknown%7CTWFpbGZsb3d8eyJWIjoiMC4wLjAwMDAiLCJQIjoiV2luMzIiLCJBTiI6Ik1haWwiLCJXVCI6Mn0%3D%7C0%7C%7C%7C&sdata=Rwe8k5V%2BMSNMLlY5oyWP1LDvnEHlIcSsLEjpFH5LMR4%3D&reserved=0#_blank)).

New, hastily developed transport routes could facilitate crop pest and disease transfer (e.g., fungal pathogens harboured in goods or packaging stored for longer periods) to regions with reduced response capacities which already face severe food shortages (R. Early et al. *Nat Commun*. 7, 12485; 2016 <https://doi.org/10.1038/ncomms12485>). We must pragmatically strengthen biosecurity by identifying and prioritising threats, targeted monitoring and early warning systems, preparing rapid response plans, and asset-based protection of national resources – demonstrated by the [EU Invasive Alien Species (IAS) Regulations](https://www.iucn.org/theme/species/our-work/invasive-species/eu-regulation-invasive-alien-species).

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