

Closing the border in extreme pandemics worthwhile for island nations

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It may sometimes make sense for island nations like New Zealand to temporarily close their borders in extreme pandemic situations, a new study by Wellington researchers suggests.

The study of [costs](#) and benefits of complete border closure in New Zealand in response to new pandemic threats has just been published in the international journal *PLoS ONE*.

One of the authors Professor Nick Wilson from the University of Otago, Wellington, says the study found that despite the costs/disruptions caused to tourism and even trade, there could be significant overall societal benefits to border closure in certain severe pandemic scenarios.

"With increasing risks of new pandemics due to the growing density of human populations and various socio-economic, environmental and ecological factors, there is a need to look at different scenarios for better pandemic planning," says Professor Wilson.

The researchers note that although for most countries border closures to prevent pandemic spread are thought to have little benefit, the situation is different for island nations where border closure may be viable.

The study analysed data from past influenza pandemics and looked at healthcare costs, valuation of life, lost tourism revenue and even lost trade. It also considered the option of trade still occurring without cargo ship crews ever having to leave their vessel.

Study co-author Professor Michael Baker, also from University of Otago, Wellington says: "Indeed, the options for New Zealand will improve in this regard if current international work on drone cargo ships with minimal or no crew becomes a reality."

"Other technological advances in such areas as early outbreak detection and communication will also support the kind of measures we are discussing here," says Professor Baker.

The authors argue that this new study shows that island countries like New Zealand need more detailed studies of the costs and benefits of border closure. There is also a need for updated [pandemic](#) plans and the legal capacity for the Prime Minister and Cabinet to order the borders closed in under one day of deliberations.

"It will be a very hard call – but in the case of some severe pandemics it could save thousands of lives and huge costs from illness if [border](#) closure is rapidly achieved" says Professor Wilson.

More details on this work can be [found in this blog](#).

More information: Matt Boyd et al. Protecting an island nation from extreme pandemic threats: Proof-of-concept around border closure as an intervention, *PLOS ONE* (2017). [DOI: 10.1371/journal.pone.0178732](https://doi.org/10.1371/journal.pone.0178732)

Provided by University of Otago

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