

**Key messages:**

- Multi-disciplinary approach on providing a set of recommendations for emergency response to infectious disease outbreak on cruise ships including environmental preparedness.
- Actions should include also the mental health of crew and passengers on coping with stress during infectious outbreaks.

## Environment related practices for emergency response to infectious disease outbreak on cruise ships

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### Issue/problem:

COVID-19 pandemic halted cruise operations globally. This project explored strategies and measures that could be adopted internationally for mitigating a disease outbreak on-board of a cruise ship by bringing evidence-based recommendations for an emergency response against current COVID-19 outbreak and future infectious threats.

### Description of the problem:

Research took place in October 2020-March 2021. Methods comprised of: a) consultation sessions with five international experts on public health, epidemiology, tourism and cruise management, b) both systematic and narrative literature reviews. Present guidance analysed why cruise ships promote an opportunistic environment for infectious outbreaks, along with a strategy for reducing the risks among passengers and crew.

### Results:

Results were organised under four main themes: a) advice on surface interactions and virus viability; b) prevention and control measures; c) suggestions on short and long term responses; d) advice on thermal and ventilation conditions and how they affect virus transmission. The guidance was very similar to other built environment contexts, ignoring the particularities of sociospatial interactions in cruise ships. Moreover, there was limited provision for the wellbeing and mental health during the outbreak.

### Lessons:

This project summarised recommendations for the preparedness of cruise ships during a pandemic from ports, off-board and on-board measures to repatriation. Demonstrated the importance of spatial characteristics in the preparedness of a ship. Pointed the effect pandemic can have upon crew and passengers. This needs to be taken into account when operations restart. Cruise experience would have to change due to covid-19, especially when social activity on board has to be restricted. The importance of future studies focusing on how this change will impact cruise industry arose, including crew hygiene, safety and supporting mental health during outbreaks.