

Dr Basil Germond, Senior Lecturer, Lancaster University – Written evidence (DCC0006)

This document contains written evidence in response to a question asked during the oral evidence session on 17 May 2022.

Information on the respondent

I am a Senior Lecturer at Lancaster University, with over 15 years of experience as a researcher in naval and maritime affairs¹. I have published two books and in excess of 25 peer-reviewed journal articles and academic book chapters on maritime security, seapower, navies, and the maritime dimension of Global Britain. My response to this Call is based on my academic knowledge of the question and is given in a personal capacity.

1. Executive summary

1.1. My evidence addresses the inquiry's specific question about **climate change**²:

'The Integrated Review and the Defence Command Paper identify climate change and biodiversity loss as a "global challenge" and a "threat multiplier. How severe are these threats, and how might they manifest themselves vis-à-vis the UK? How prepared is the UK to respond to such challenges?'

1.2. The 2021 *Integrated Review* and the accompanying *Command Paper* make it clear that the security and prosperity of the UK depend on a free, safe, secure, and 'resilient' maritime domain.

1.3. From freedom of navigation to resilient ocean, **climate change threatens Britain's security interests in the maritime domain.**

1.4. Research has shown that climate change's effects on natural systems (e.g. sea level rise, extreme weather events) impact on human systems (e.g. poverty, health – generating resentment, grievance), which then creates incentives to engage in **maritime crime.**

1.5. The melting of the polar ice cap has created opportunities but also challenges in the **Arctic** region: from marine environment protection to geopolitical tensions with Russia.

¹ Lancaster University page for [Dr Basil Germond](#).

1.6. To respond swiftly and pre-emptively to climate change-induced maritime security threats, **risk assessment and early warning** are key capabilities.

2. Climate change impacts on maritime security

2.3. The 2021 *Integrated Review* describes tackling climate change as a top priority and stresses the need to work towards “resilient ocean”³. What is missing, though, is an account of the impacts of climate change on security in the maritime domain and on the broader maritime interests of the UK.

2.4. Research has shown that climate change is a **“threat multiplier” at sea**: the effects of climate change on natural systems (e.g. sea level rise, ocean salinity, sea temperature, extreme weather events) then impact on human systems (e.g. poverty, food shortages, health). This, in turn, fuels resentment and grievance and creates incentives and opportunities to engage in **maritime crime** (e.g. piracy, illegal fishing, human trafficking)⁴.

2.5. What is happening far away from the UK will then eventually impact on Britain’s security, via **disruption of freedom of navigation**, illegal immigration and **people smuggling**. This will also impact on the **maritime sector’s business continuity** and ability to operate in a safe and stable environment⁵.

2.6. The House of Lords’s 2022 report on UNCLOS mentioned the importance of climate change for maritime security⁶, and in response the Government acknowledged that “climate change is likely to lead to additional maritime security challenges, particularly in the Arctic”⁷.

2.7. In the **Arctic**, climate change has created opportunities (especially with the Northern Sea Route becoming a potential complement to the Malacca-Suez route) but this is not without challenges: with increasing

³ HM Government (2021), *Global Britain in a competitive age: The Integrated Review of Security, Defence, Development and Foreign Policy*, Presented to Parliament by the Prime Minister by Command of Her Majesty, CP 403 (accessed [online](#)), pp.92-3.

⁴ Basil Germond & Antonios Mazaris (2019), “Climate Change and Maritime Security”, *Marine Policy*, Vol.99, pp.262-266.

⁵ Basil Germond, oral evidence given to the House of Commons’ Transport Committee on “Maritime 2050: implementation, objectives and effects, HC 160”, Wednesday 25 May 2022, Ordered by the House of Commons to be published on 25 May 2022 (<https://committees.parliament.uk/oralevidence/10307/html/>), Q96.

⁶ House of Lords, International and Defence Committee (2022), “UNCLOS: the law of the sea in the 21st century”, Second Report of Session 2021–22, HL Paper 159, Published by the Authority of the House of Lords, 1 March 2022 (accessed [online](#)), para 111 and 112.

⁷ House of Lords’ International Relations and Defence Committee, “UNCLOS: the Law of the Sea in the 21st Century”, Government Response, Received 31 May 2022 (accessed [here](#)), p.16.

maritime economic activities taking place in the Arctic region, the marine environment needs to be protected⁸.

2.7.1. In the current context, Russia cannot be trusted to abide by international law and conventions. As the UK's main competitor, Russia poses a geopolitical challenge in the High North. Both economic opportunities (which necessitates freedom of navigation) and ocean resilience in the Arctic are now compromised by Russia.

2.7.2. The Arctic Council's operations are currently on hold, which increases the risk of environmental mismanagement (e.g. illegal, unregulated, unreported fishing (IUUF) by non-riparian fishing fleets, which Russia might welcome)⁹.

3. Impacts on the *Integrated Review's* objectives?

3.3. **Security in the maritime domain:** an increase in maritime crime will result in maritime insecurities and challenges to the rule of law. Criminal activities in the maritime domain, even if they take place far away from the UK, will eventually impact on the UK's security (e.g. illegal immigration, people and drug smuggling).

3.4. **Freedom of navigation and prosperity:** an increase in piracy and other forms of maritime crime challenges the principle of freedom of navigation that is core to the UK's national interest, values and strategic objectives as defined in the *Integrated Review* and the accompanying *Command Paper* "Defence in a competitive age".

3.5. **Defence:** the growing competition in the Arctic region can result in further tensions with Russia but also with China whose presence in the region is likely to increase at the request of Russia.

3.6. **Ocean resilience:** the direct effects of climate change on ocean systems (e.g. sea level rise, salinisation, change of temperature and currents) pose a challenge to ocean resilience. Moreover, scarcer resources and food security issues in the Global South will increase pressures on the ocean as a source of income and food, further impacting on their resilience.

3.7. Addressing these four challenges will put more **pressure on naval forces**, whereas the Royal Navy's resources are already stretched¹⁰.

⁸ MoD (2021), *Defence in a competitive age*, Presented to Parliament by the Secretary of State for Defence by Command of Her Majesty, March 2021, CP 411 (accessed [online](#)), para 1.8.

⁹ Elizabeth Buchanan (2022), "The Ukraine war and the future of the Arctic", *RUSI Commentary*, 18 March 2022 (accessed [online](#)).

¹⁰ House of Commons, Defence Committee (2021), "We're going to need a bigger Navy", Third Report of Session 2021–22, Ordered by the House of Commons to be printed 7 December 2021 (accessed [online](#)).

4. Current approach to address the issues

- 4.3. HMG's **whole of government/whole system approach** is well adapted to address maritime security challenges: it is multi-agency, multi-stakeholder and multinational.
- 4.4. There is an important emphasis put on **public-private partnerships**. Whereas the onus is on the industry to assure the security and safety of their systems and operations¹¹, it is expected to be achieved via information and intelligence sharing, coordinated technological innovation and co-developing relevant regulations and guidance¹².
- 4.5. The multiplicity of governmental departments, agencies and non-governmental stakeholders creates coordination challenges. However, this has been addressed by creating the **Joint Maritime Security Centre** that has overarching responsibilities for coordinating all actors involved in maritime security, from the MoD (including the Royal Navy) to the FCDO and from Counter Terrorism Police to the MMO.

5. Capabilities

- 5.3. **Risk assessment and early warning capabilities** are key assets that need to be prioritised to target areas of intervention:
- 5.3.1. Firstly, to prevent climate-change induced maritime security issues to develop by supporting partners in the **Global South** and in a holistic way (i.e. via development aid and assistance for security sector reform (SSR)).
- 5.3.2. Secondly, if/when prevention is too late, **to tackle threats as far away from the UK as possible and as soon as they materialise**.
- 5.4. Whereas **threats** have already been identified (piracy, drug and people smuggling, illegal immigration, IUUF), HMG shall continuously assess the **risks**, i.e. what are the likely **impacts** of climate change on maritime security, what are the intended consequences, what is the **probability** this will happen, how **confident** are we in this assessment, how **vulnerable** is the UK to the outcomes of these processes.

¹¹ Department for Transport (2019), *Maritime 2050: Navigating the future*, DfT (accessible [here](#)), especially para 71 in regard to cyber security.

¹² Basil Germond, oral evidence given to the House of Commons' Transport Committee on "Maritime 2050: implementation, objectives and effects, HC 160", Wednesday 25 May 2022, Ordered by the House of Commons to be published on 25 May 2022 (<https://committees.parliament.uk/oralevidence/10307/html/>), Q97.

5.5. Finally, HMG need to assure that we have the **mitigation capabilities** in place, both at home and in the Global South.

From threats identification to risk assessment and management	
1.	Threats identification -Maritime crime -Disruption of freedom of navigation -Geopolitical challenges
2.	Risk assessment mechanisms -Impacts/consequences of the threat (e.g. on prosperity, security, ocean resilience) -Probability this will happen -Confidence in the assessment -Early warning
3.	Pre-empting threats by developing capabilities in the Global South -Security sector reforms (SSR) -Development assistance
4.	Capabilities to address the threats as far away from the UK possible and as soon as they materialise -Intervention capacity (including naval capabilities)
5.	Mitigation capabilities at home

6. Conclusion and recommendations

6.3. Climate change is likely to increasingly **impact on ocean resilience, to contribute to disruption of freedom of navigation, and to generate or reinforce insecurities in the maritime domain.**

6.4. The end result of the processes highlighted above can eventually **impinge on the security and prosperity of the UK**, i.e. Britain's core interests as per the *Integrated Review*. If tackled too late, this will put immense pressure on the UK's intervention and mitigation capabilities.

6.5. Based on the above, I have the following two recommendations:

6.5.1. Whereas the UK is in a strong position (to contribute) to prevent climate change-induced maritime security threats, **priority should be given to threat/risk assessment and early warning capabilities.**

6.5.2. To that effect, and in the spirit of the whole system approach, **collaboration with industry** (shipping industry, maritime insurances, fishing industry, etc.) **and academia** should be enhanced as much as possible. Industry is a key user of the maritime domain and as a driver of innovation to address climate change and maritime insecurity challenges. (note: this argument is valid beyond the specific topic of this evidence, i.e. it is also true for other domains of defence, such as cyber security).

7. Suggested questions for HM Government

- 7.3. How does HMG plan to tackle the impacts of climate change on the occurrence of maritime crime and on the disruption of freedom of navigation that will impinge on the UK's maritime objectives and harm Britain's overarching interests?
- 7.4. What are the mechanisms in place to assure that the whole system approach fully includes industry and academic stakeholders?

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