Evidence for the Environmental Audit Committee of the UK Parliament in relation to Climate Change and Security

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Evidence for the Environmental Audit Committee in relation to Climate Change and Security provided by:

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Terms of reference of the Call for Evidence

1. This submission addresses section two of the call regarding Potential solutions. Evidence is sought regarding the UK Government's current approach to anticipating, preventing and responding to the security threats posed by climate change. More specifically, the evidence offered here addresses the following question: What updates to Government policy and strategy documents, such as the National Adaptation Programme, the Integrated Review of Security, Defence, Development and Foreign Policy, and the Defence Command Paper, would improve the UK's ability to address the security implications of climate change?

Cranfield University's Relevant Experience

2. This submission combines expertise from the following Cranfield University's schools.

    - Cranfield Defence and Security (CDS) expertise is trusted by governments, armed forces, industry, and security services providing specialist knowledge underpinning defence and security sector reform around the world.

    - Cranfield's School of Management (SOM) has expertise in terms of sustainability and also in terms of understanding transformation and change.

Background and Rationale

3. The idea driving this research was to support the MOD in its strategic ambition to reduce its emissions and increase its sustainability activity, and thus as a department, contribute to the achievement of the UK's commitment to reach net zero carbon emissions by 2050. The intention was to establish ways in which to engage with people throughout the military community in order to develop a new 'mindset' of defence which incorporates a concern for climate change and sustainability. The project intended to enable leaders and others involved in the direction of policy

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and implementation to address a significant quandary "how to balance the importance of practical 'green' sustainability in the Armed forces while being mindful of military strategic contingencies".[1]

4. The research focused on culture as a fundamental enabler to transformational change. Concentrating on the MODs aspirations was also essential as some estimates suggested it is responsible for around half of all emissions by government; in turn, curbing its carbon outputs would allow the MOD to act as 'pathfinder' for other government departments when it comes to achieving His Majesty's Government's overall net zero 2050 target.

5. The main purpose for this this research was to develop a methodology that could be used to measure organisational culture within the Ministry of Defence at scale.

6. This evidence builds on findings from research funded by Research England Policy Support Fund and carried out between November 2021 and July 2022.

Methodology

7. There were three components in this research on defence culture and climate change. There was an initial Literature Review combined with a Survey and Interviews. Each component supported the development of a methodology which can be rolled out at scale and together they can be thought of as providing the basis for a 'cultural audit'. The present evidence describes the findings the Survey and Interviews. Ethical approvals were obtained from Cranfield University's own system (CURES) and from MODREC.

8. Survey

    - Rather than adopt an entirely new questionnaire of our design, our aim with this phase of the project was to identify whether there were any scales that could be used to provide a multi-faceted measure of climate attitudes.

    - The reason social scientists prefer to use scales rather than single questions is that social 'constructs' [like attitudes to climate change] are usually more complex than can be answered with one question. Individually the answers to each of those questions offer valuable insights. However, examining how these questions are related to each other, provides different understanding about underlying 'factors'. These are things which cannot directly be measured with a single question, but that can be measured by combining different questions.

    - The use of scales that were already being used in the literature was adopted. A literature search[2] identified scales that could be used to measure cultural attitudes as follows: Awareness of Consequences[3], Personal normative beliefs[4], New Environmental Paradigm

[1] Humphries, J. (2021) Greening' the United Kingdom's Armed Forces (Part Two): some suggestions. https://defenceindepth.co/2021/02/08/greening-the-united-kingdoms-armed-forces-part-two-some-suggestions/

[2] This was carried out with the expert assistance of Dr Lara Zibarras at City University whose work helped define relevant scales relating to attitudes to sustainability.

[3] Stern, P. C., Dietz, T., Abel, T., Guagnano, G. A., & Kalof, L. (1999). A value-belief-norm theory of support for social movements: The case of environmentalism. Human Ecology Review, 81–97.

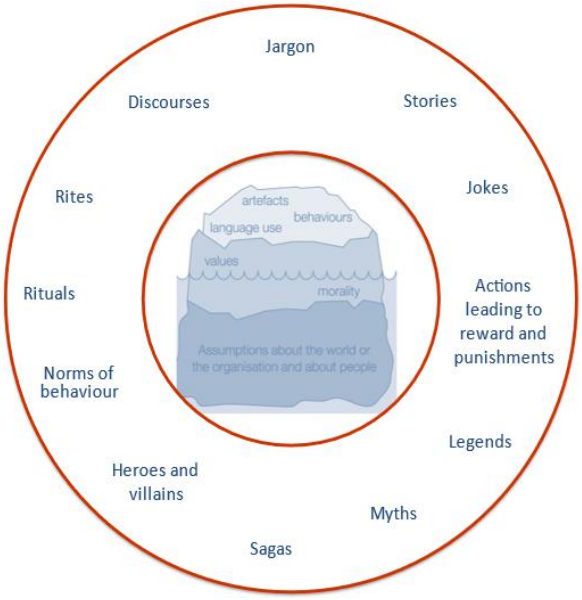
[4] Ibid. , (Stern et al. 1999)

(NEP)[5], Perceptions of the impact of climate change[6], Attitude about need for action in response to Global Warming[7], General Attitude Scale[8], Scepticism scale[9], Holistic affect[10] (Van Der Linden, 2015)

- A total of 235 participants started the questionnaire. However, 29 of these responses had over 50% missing data and were dropped from further analyses. Therefore, the analyses were conducted on 206 responses.

9. Interviews

- The design of the interview questions was guided by the metaphor of the culture iceberg[11] and also on lessons from social anthropology and a storytelling perspective to understand cultural attitudes to climate change. Questions sought to gather different aspects of story-telling (rituals, rites, legends, myths, sagas, themes of heroism, jokes, jargon, actions intended to reward or punish, basic norms, things that are taboo, things that are sacred and so on). These form what is often referred to as a story-telling 'halo' (Figure 1).



[5] Whitmarsh, L. (2008). Are flood victims more concerned about climate change than other people? The role of direct experience in risk perception and behavioural response. Journal of Risk Research, 11(3), 351–374.
[6] Yu, H., Wang, B., Zhang, Y. J., Wang, S., & Wei, Y. M. (2013). Public perception of climate change in China: results from the questionnaire survey. Natural Hazards, 69(1), 459–472.
[7] Curry, T. E. (2004). Public Awareness of Carbon Capture and Storage: A survey of attitudes towards Climate Change Mitigation. Massachusetts Institute of Technology.
[8] Op. Cit., (Whitmarsh 2008).
[9] Peters, E., & Slovic, P. (2007). Affective asynchrony and the measurement of the affective attitude component. *Cognition and Emotion*, *21*(2), 300–329.
Van Der Linden, S. (2015). The social-psychological determinants of climate change risk perceptions: Towards a comprehensive model. *Journal of Environmental Psychology*, *41*, 112–124.
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Whitmarsh, L. (2011). Scepticism and uncertainty about climate change: Dimensions, determinants and change over time. *Global Environmental Change*, *21*(2), 690–700
[10] Ibid., (Van Der Linden 2015).
[11] Desjardins, J. (2018). The Iceberg That Sinks Organizational Culture Change. Visual Capitalist Website at https://www.visualcapitalist.com/iceberg-organizational-culture-change/

Figure 1 The cultural iceberg and elements of culture in the story-telling 'halo' [Source: adapted from Watson (2006)][12]

- Stories are the main way in which people make sense of the world, and they are also central to how culture is transmitted. Elements within these stories could be the source of cynicism or trivialisation of climate change. If these gain currency and are readily reshared they can be significant barriers to implementing sustainability. Equally understanding different aspects of story-telling can become the basis for designing stories that are inspirational and motivate successful change.

- Individual interviews are a proven suitable method for finding out more about individuals' views, experiences and values. In-depth semi-structured interviews were conducted to examine participants' perspectives of climate change and sustainability.

- We interviewed 40 stakeholders from the MOD. Though a range of different people working in various parts of the armed forces and the ministry participated; it is important to emphasise that this sample is not a representative population. Instead, the interviews offer insights as to whether it is possible to develop and test a methodology to measure culture within the MOD and that could be rolled out at scale.

- Those who agreed to participate were invited for an online interview. They were asked to provide consent. The interviews were recorded and transcribed verbatim using the recording facility available on the online platform.

10. Findings from the Survey

- The analysis of the survey exposed that two scales could track attitudes within the MOD to climate change. The first is ***scepticism*** (the extent there is doubt about the severity of the threat) towards climate change, the second is a measure of ***urgency*** (the perceived need to respond quickly).

- Based on the findings from that research, 6 questions were identified as they measure 2 different, relevant dimensions.

- The following three items give a scepticism measure [there is a recommended minimum number of items to make up a scale]

The evidence for climate change is unreliable.
There is too much conflicting evidence about climate change to know whether it is actually happening.
Too much fuss is made about climate change

- The following three items give an urgency measure [there is a recommended minimum number of items to make up a scale]

I consider climate change to be an unacceptable risk.

[12] Watson, T. J. (2006). *Organising and managing work: Organisational, managerial and strategic behaviour in theory and practice*. Pearson Education.

Climate change is something that frightens me.
I feel a moral duty to do something about climate change.

11. Findings from the Interviews

- Interviews allowed us to recognise the kinds of stories that are circulating across the organisation as a whole. Discourses (the set of connected concepts, comments expressions and statements that constitute a way of talking or writing about an aspect of the organisation) are one element of the story-telling construct.

- In analysing extracts from interview, we found several examples of such discourses (connected statements that provided a frame of reference for people and a way of talking about the issue of climate change).

    - **To do with time - the long- and short term discourse**
    - **To do with choices – (a) the Trade-offs discourse**
    - **To do with choices – (b) the win-win discourse**
    - **To do with bottom lines - the no compromises / uncomfortable truth discourse**

- In the context of defence, these findings indicate that the MOD will need to find a way of creating stories that provide the same kind of imperatives which people experience as members of a units facing combat (for example) and of tracking the effectiveness of these in changing cultural attitudes to climate change.

- This methodology would enable the MOD to create and 'seed' such stories and track their effectiveness at scale over time, modifying these as needed and removing barriers to change such as cynicism or taken for granted assumptions.

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