Effects of the Changing Security Landscape for Military Installations, Operations and Personnel

Moderator:

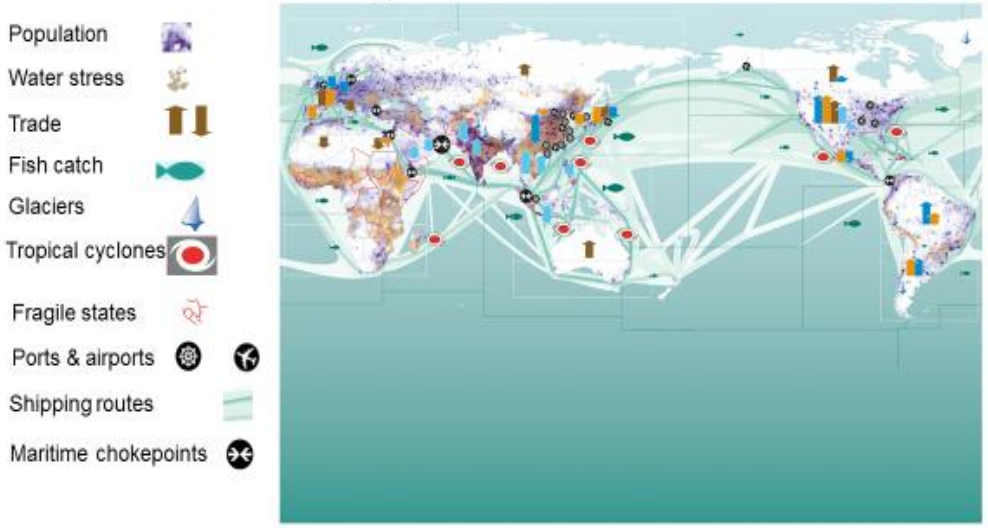
Richard BREWIN

UK MOD

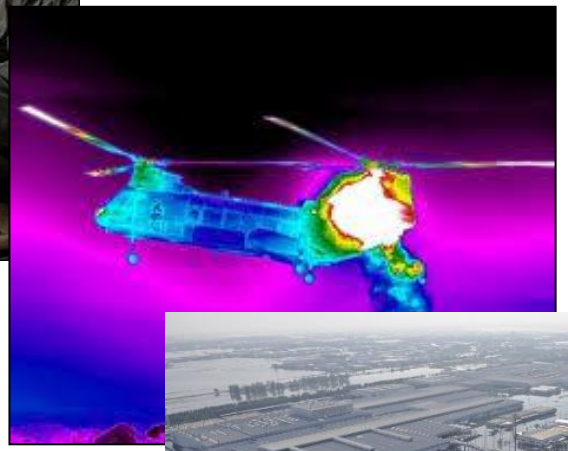
Why is climate change important to Defence?

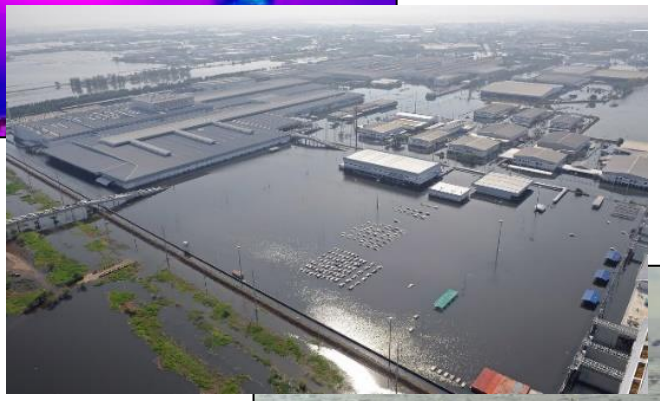
- **Several National Security and Defence Strategies, UK DCDC Global Strategic Trends - climate change and energy insecurity** endanger our people and territory, while **wider environmental stresses** could exacerbate potential conflict.
- **Climate change = security risk multiplier**
  - 2nd / 3rd order consequences: loss of land/livelihood, famine, drought.
- **Affect all aspects of Defence capabilities**: frequency & nature of deployments (where/how), equipment (functionality), people, planning, logistics, infrastructure.
- **Supply chains**: e.g., Thailand floods slowed EU & US automotive & ICT industry.
- **Energy insecurity = cost & life risk multiplier**

So how can we go from this….



To this?….

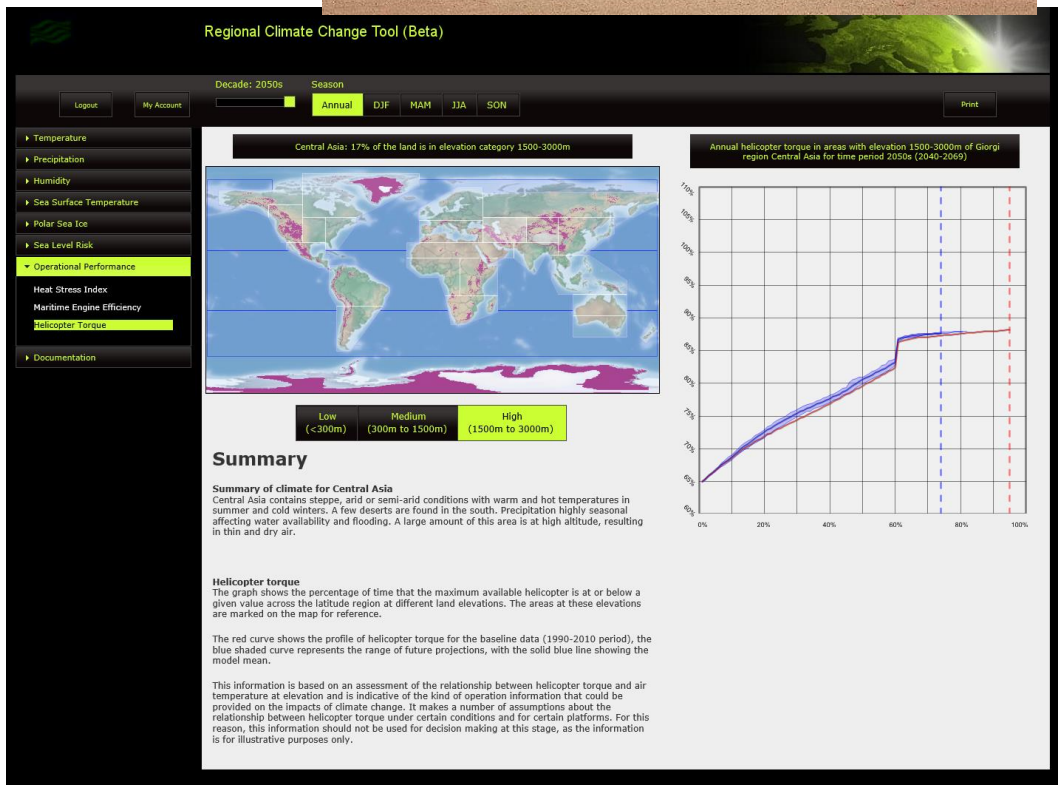




- *By addressing the circle of insecurities.*
- Maintain effective delivery of Defence capability that is **robust to environmental risks** but does not substantially contribute to environmental degradation…..
- Military **fights as it trains….**
- **Start at home**…. build into defence planning… then to front line operations
- **Role for research & technology** in military capability development.

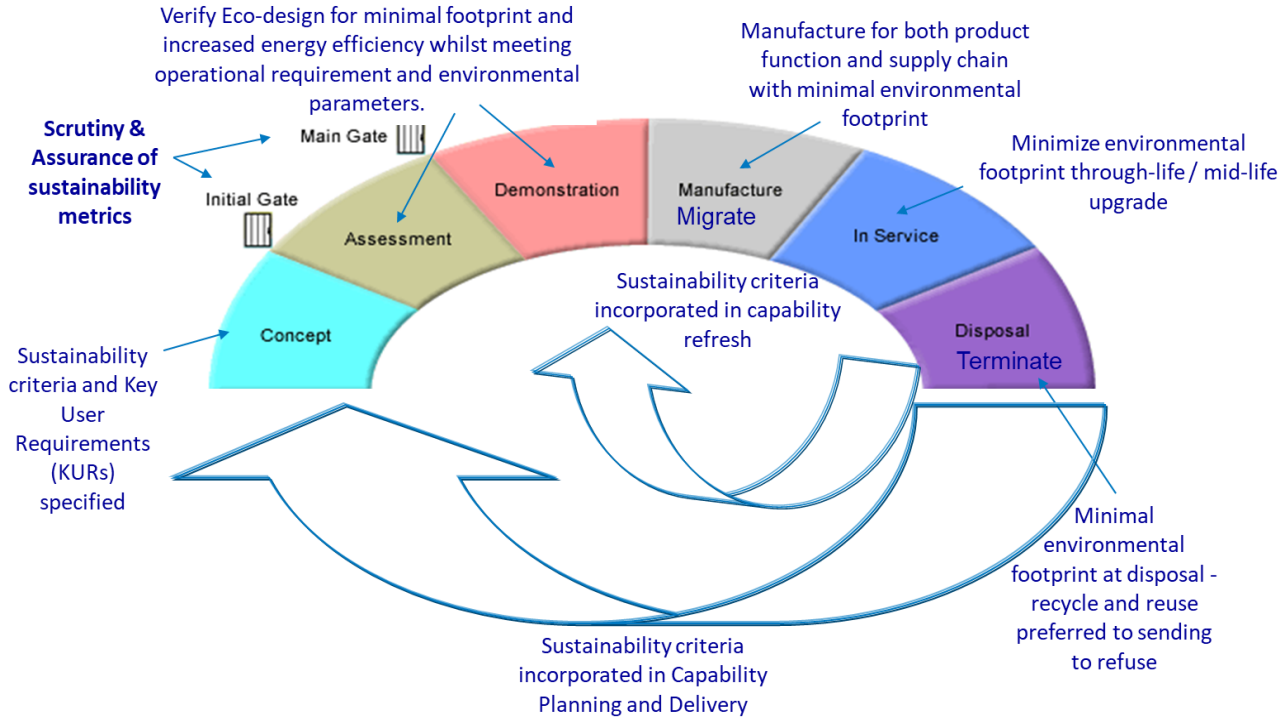
Climate, energy, military & civilian society

- At higher temperatures air has lower density (thinner) = reduced lift generated on aircraft's wings = engines need to generate more thrust to get airborne = more fuel.
- Chinook helicopter (loads & search/rescue): 714 engine developed and introduced to improve performance, specifically around the requirement to operate hot / high.
- Helicopter: 80% torque is available 50% of time in today's climate… reducing to 45% of time in 2050s: Central Asiatic
- *What does this mean for mission / infrastructure energy profiles?*
- Use of artificial intelligence in centralized power management?
- **Joined up civilian-military response**
- Opportunity in National Planning?
- Opportunity for **joint civ-mil workshops / events**?



Climate Change and decision support

- **Energy and environmental considerations are not routinely factored into defence capability development to maximum effect.**
- **Often dealt with as a bolt-on / afterthought.**
- **At worst they are not dealt with at all.**
- Leading to **increased through-life costs and risks** in acquisition cycle.



- **Develop tools which support integration of climate security considerations at appropriate capability development stages and during the development of force mix options for military tasks including training and forward operations.**

Questions at the panel session…