

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

Moderator:

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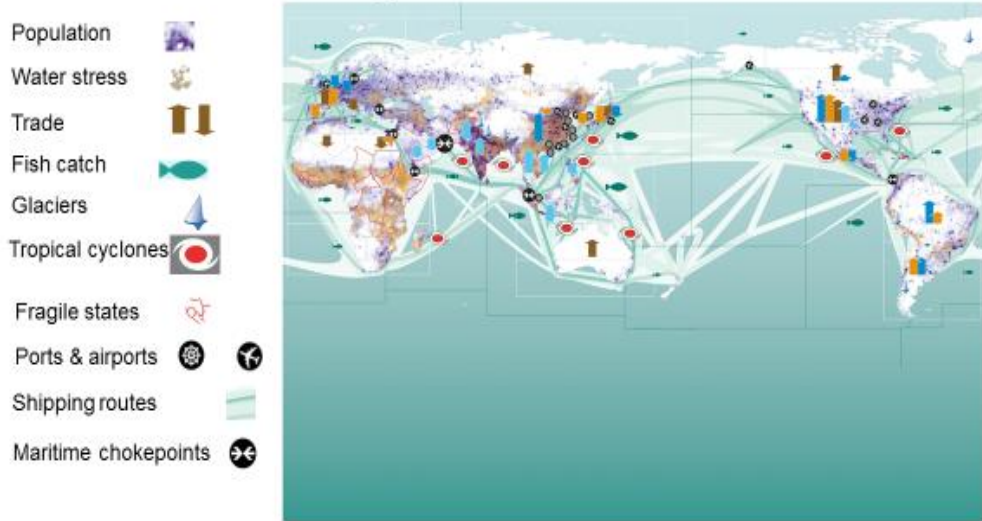
UK MOD

# Why is climate change important to Defence?

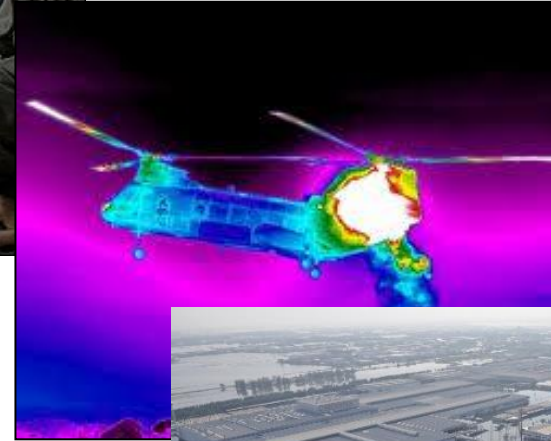
- **Several National Security and Defence Strategies, UK DCDC Global Strategic Trends - climate change and energy insecurity** endanger our people and territory, while **wider environmental stresses** could exacerbate potential conflict.
- **Climate change = security risk multiplier**
  - 2<sup>nd</sup> / 3<sup>rd</sup> 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.

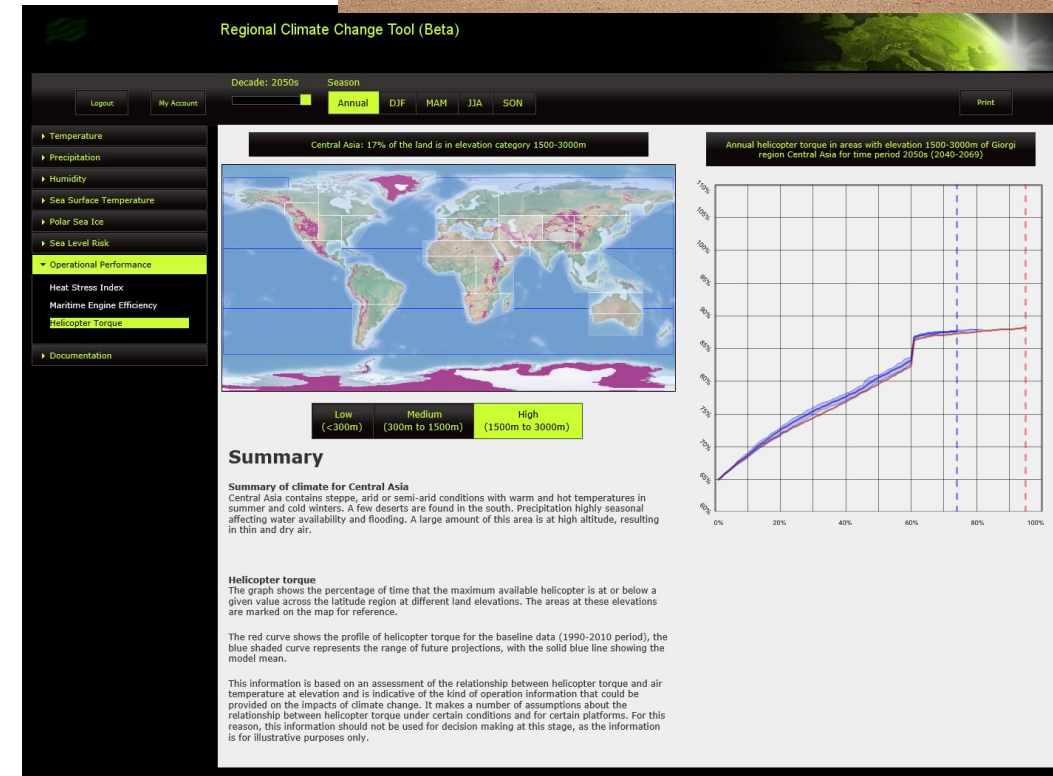
# Climate, energy, military & civilian society

- 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?**

## Phoenix flights cancelled because it's too hot for planes

3 hours ago | US & Canada

f t b e Share



# Climate Change and decision support

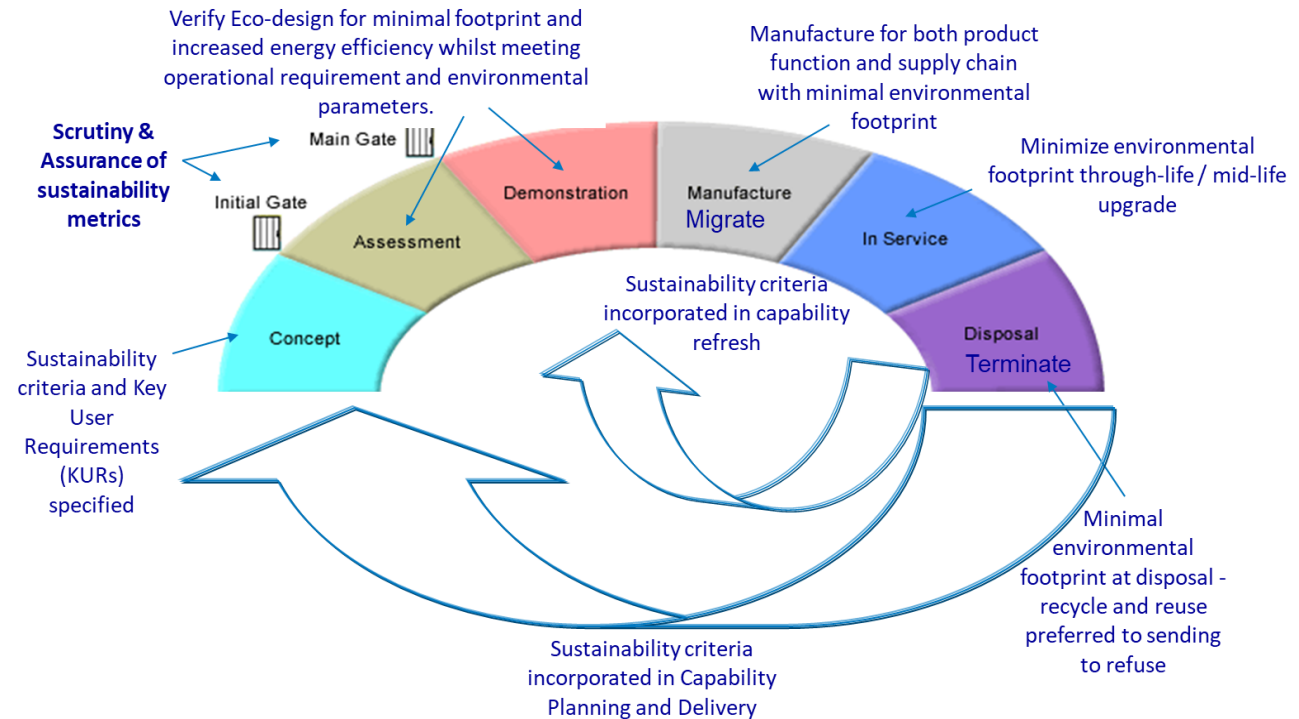
- **Energy and environmental considerations are not routinely factored into defence capability development to maximum effect.**

- **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...