

Future IUU Fishing Trends in a Warming World

A Global Horizon Scan



Royal United Services Institute for Defence and Security Studies

- Founded in 1831
- Think tank and UK charity





Background and rationale

We are already seeing shifts in IUU activity due to climate change

As fish stocks and distributions shift, and as livelihoods and food security are affected by climate change:

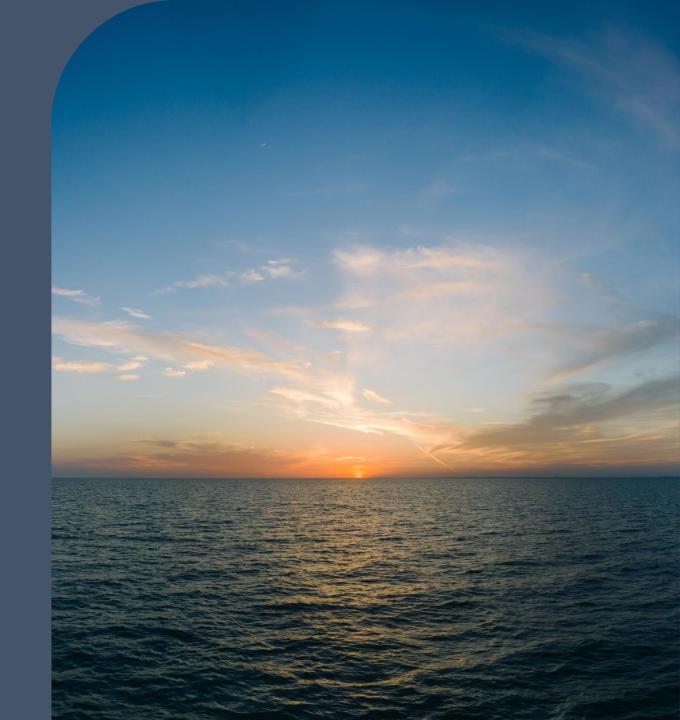
- existing IUU actors will adapt
- legitimate fishers may be pushed into IUU activity
- governance and enforcement models will be challenged

Yet little research has analysed the links – exclusive focus on the present-day threat



Methodology

Scanning the Horizon





What is Horizon Scanning?

A recognised technique for detecting future developments through a systematic evaluation of potential threats and opportunities.

It brings together experts across relevant subject areas:

- to critically analyse and synthesise available data,
- and explore viable solutions.

It has been applied to other environmental crimes, but not to IUU fishing.



A global call for participation results in 148 trends submitted A consolidated list of 95 trends is produced, with duplicates merged and invalid submissions removed An additional four trends are 'saved' by the assessors 27 'assessors' are asked to independently score trends based on their novelty, plausibility and impact The 50 resulting trends are randomly assigned to assessors to investigate 46 trends are shortlisted Findings are discussed via five virtual workshops and an online workspace to validate and consolidate trends Assessors independently re-score trends based on their novelty, plausibility and impact 10 trends are combined based on the final scoring, resulting in a ranked list of

40 trends, with 20 selected as priority trends



Overview of the Findings





Top 20 Trends:

 Ranked by novelty, plausibility and impact Shifting fish stocks and distributions

Contested maritime boundaries and ungoverned spaces Evolving socioeconomic and criminological dynamics Challenges and opportunities for monitoring and enforcement

1. Global fish redistributions with oceanic warming 8. Potential for fisheries conflict and shifting maritime boundaries

5. Climate stress and shifts in socio-ecological systems 2. Rising pressure for transparency of ownership and access agreements

3. 'Race to fish' expanding stocks in the Arctic 17. Declining fisheries and geopolitical tensions in the South China Sea

10. Extreme weather:
A 'perfect storm'
of risk-taking
and vulnerability

4. Technological advances and monitoring of changing vessel activity

6. Ice loss and surging demand for krill in the Antarctic

19. Increasing incursions into MPAs

11. Climate-related shifts in crime convergence

9. Infrastructural investments and unintended consequences

7. Variations in supply chain lengths and transparency and control measures

20. The place of IUU fishing in maritime security discourse

15. Strengthening organised criminal dimensions of large-scale IUU fishing 13. Lack of systematic evaluation of interventions to disrupt IUU fishing

12. Novel interactions between industrial fleets and small-scale vessels

18. Increase in exploitative labour practices linked to IUU fishing

16. Coordination gaps between intergovernmental organisations

14. Potential climate-driven current system shifts in Peru and Chile



1. Shifting fish stocks and distributions

- Global fish redistributions with oceanic warming (Rank 1)
- 'Race to fish' expanding stocks in the Arctic (Rank 3)
- Ice loss and surging demand for krill in the Antarctic (Rank 6)
- Potential climate-driven current system shifts in Peru and Chile (Rank 14)
- Novel interactions between industrial fleets and small-scale vessels (Rank 12)
- Variations in supply chain lengths and transparency and control measures (Rank 7)





2. Contested maritime boundaries and ungoverned spaces

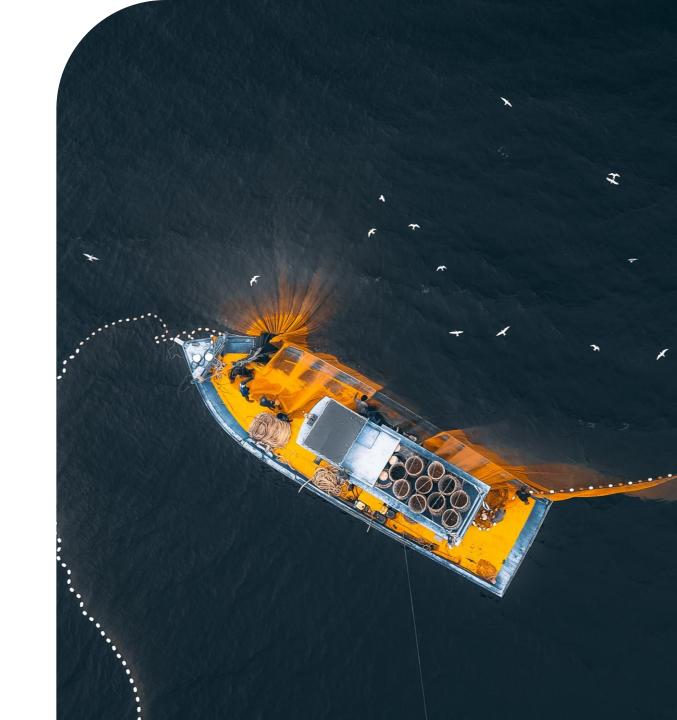
- Potential for fisheries conflict and shifting maritime boundaries (Rank 8)
- Declining fisheries and geopolitical tensions in the South China Sea (Rank 17)
- The place of IUU fishing in maritime security discourse (Rank 20)
- Increasing incursions into MPAs (Rank 19)





3. Evolving socioeconomic and criminological dynamics

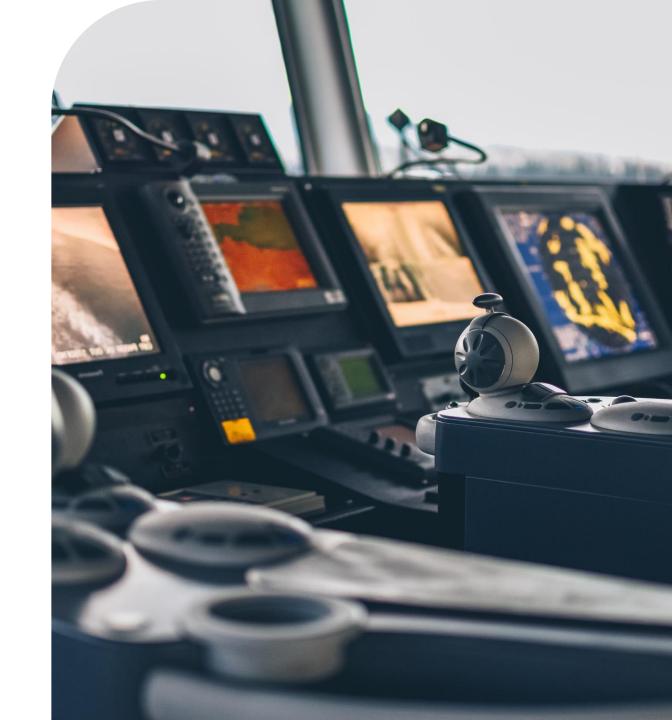
- Climate stress and shifts in socio-ecological systems (Rank 5)
- Extreme weather: A 'perfect storm' of risktaking and vulnerability (Rank 10)
- Increase in exploitative labour practices linked to IUU fishing (Rank 18)
- Strengthening organised criminal dimensions of large-scale IUU fishing (Rank 15)
- Climate-related shifts in crime convergence (Rank 11)





4. Challenges and opportunities for monitoring and enforcement

- Technological advances and monitoring of changing vessel activity (Rank 4)
- Lack of systematic evaluation of interventions to disrupt IUU fishing (Rank 13)
- Coordination gaps between intergovernmental organisations (Rank 16)
- Infrastructural investments and unintended consequences (Rank 9)
- Rising pressure for transparency of ownership and access agreements (Rank 2)





Key Considerations





Key Considerations (1):

- Advance planning is essential.
- Vessel-monitoring capabilities must be bolstered to detect climate-driven changes in activity.
- Enforcement must be strengthened and adapted to a climatechanged future.
- Enhanced transparency and traceability must be pursued.



Key Considerations (2):

- Geopolitical stakes woven into fishing activity must be accounted for.
- Resilience among artisanal fishing communities must be strengthened.
- High-volume IUU fishing must be treated with the severity it deserves.



Podcast

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Cathy Haenlein
Director, Organised Crime and Policing
cathyh@rusi.org