



BEeS

The LifeWatch ERIC Biodiversity & Ecosystem
eScience Conference



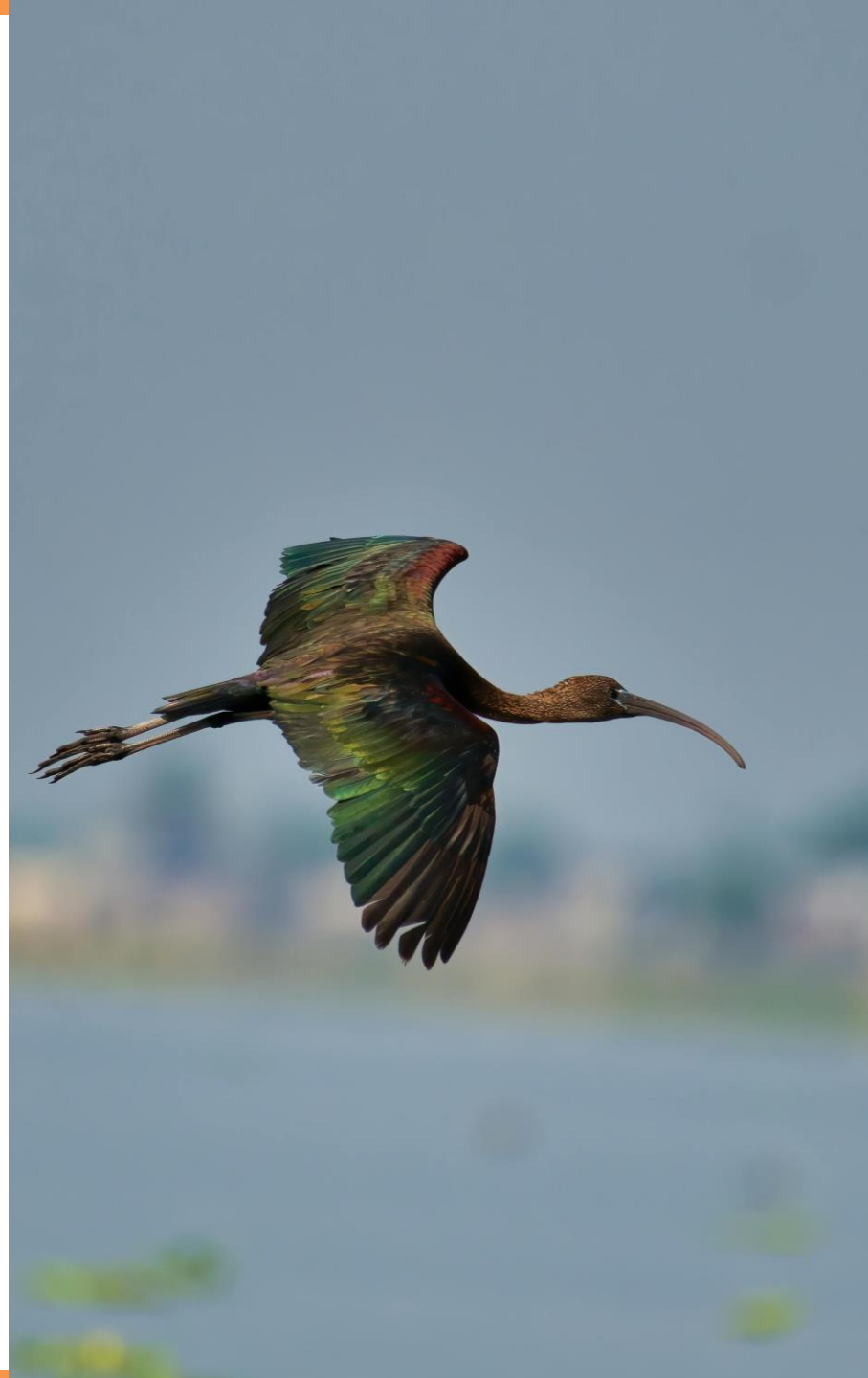
Heraklion, 30 June - 3 July 2025

01 July 2025 | 11:15



Session: Mapping life on planet: Biogeography in a changing world

1 July 2025 | 11:30-13:00



Biogeographical monitoring of Europe's islands: harnessing opportunities for multiple wins

Presenter: Prof. Richard Field

(University of Nottingham, UK)

Value of biodiversity & nature

Biodiversity vs nature

- Variety vs abundance

Types of value

- Ecosystem services / Nature's contributions to people
- Cultural / spiritual / religious
 - E.g. Some Indigenous groups don't distinguish between people and nature
- Risk and 'materiality'
- Biological 'insurance'



Goals and Targets

- Global Biodiversity Framework
 - Goals: ecosystems, species, genes
 - Targets, including '30 by 30'
 - NBSAPs
- Natura2000
 - Habitats Directive
 - Birds Directive
- Sustainable Development Goals
 - Life below water (SDG 14)
 - Life on land (SDG 15)



Convention on
Biological Diversity



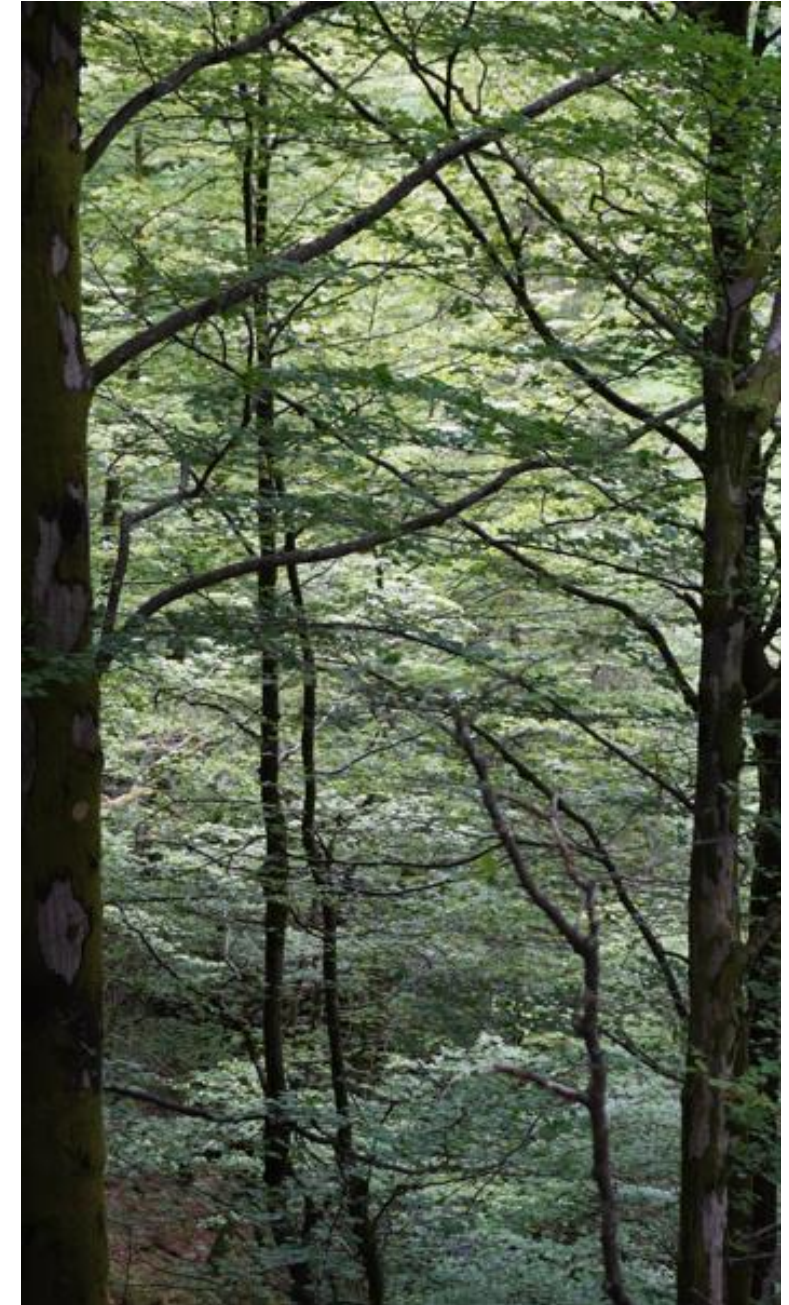
Need for monitoring

- How do we know if we've met our goals and targets? Or how close we are? Or even whether we are moving towards them?
 - > Monitoring!
- Surprising how data poor we are for biodiversity conservation
 - Very limited monitoring of protected areas
 - Many issues with Natura 2000 reporting data (Technical Reports – Standard Data Forms)
- IPBES Monitoring Assessment
 - Called for by countries



Strategic planning

- We need to use our land and sea for many things -> should seek multifunctionality and win-wins
 - Best achieved by strategically planning
- IPBES Monitoring Assessment. Strong foci:
 - Essential biodiversity variables
 - FAIR principles
 - Remote and automated monitoring
 - Local co-design
 - CARE principles



Biogeography – lends itself to planning

Study of the spatial and temporal distribution of life on Earth and the processes underlying those patterns

- Scale (space, time, phylogeny)
 - hierarchical
- Pattern and process
- Takes into account both geography and environment

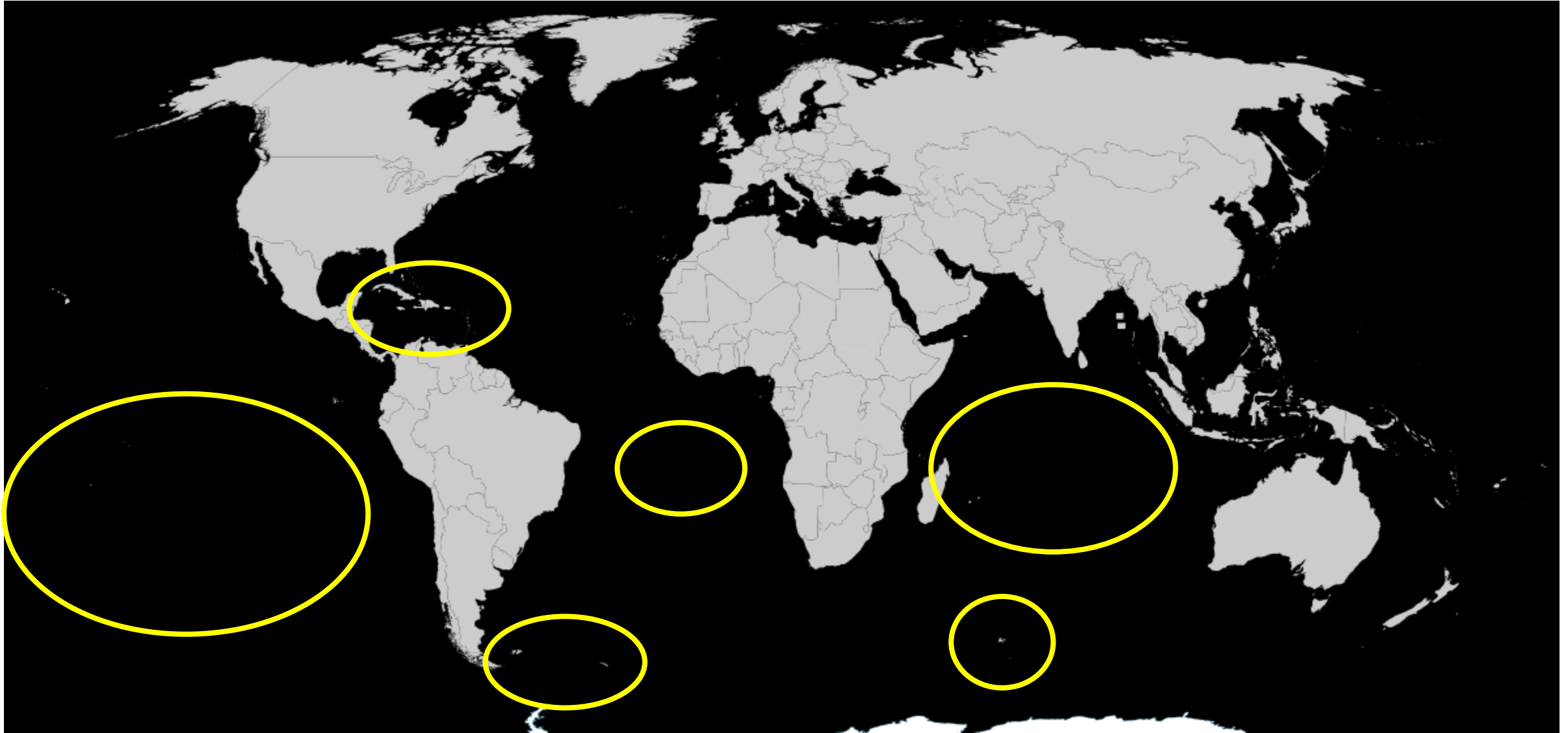


Biogeography of Europe's islands

'The Island List' –
European Islands Atlas



Biogeography of Europe's islands



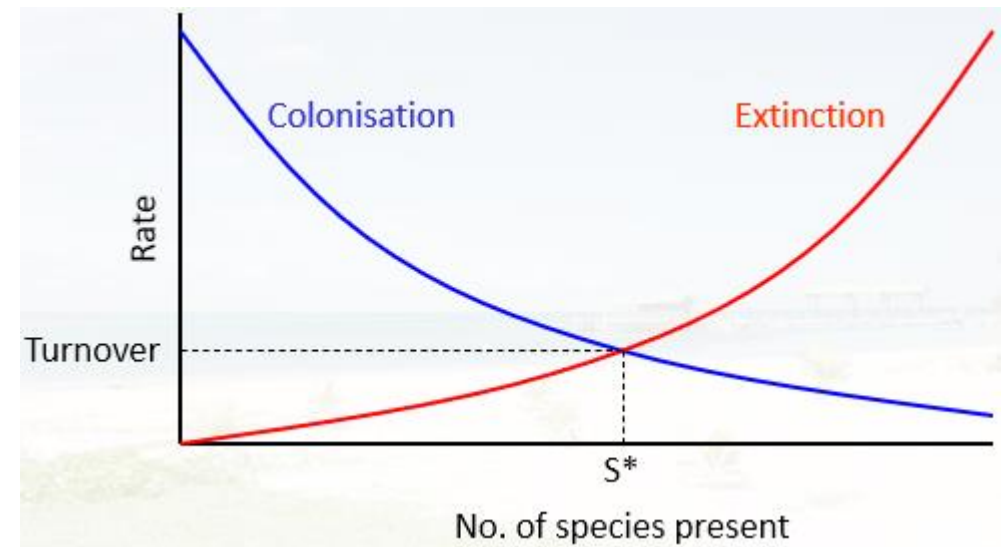
Biogeography of Europe's islands

- UK: no. of native plant species 1692 (+1753 alien; UK CEH). 47 endemics.
- Crete: 1750 species (>150 endemic)
- Canary Islands: 1452 spp (+964 alien), of which >600 are endemic (FloCan)
- La Reunion: 848 (+829 alien); 237 endemic
- Disproportionate amount of new species discoveries in Europe are on islands
- Disproportionate extinction on islands
- A lot of diversity in the mountains, too!



Islands' research value

- The Island Paradigm (Wallace)
- Island biogeography theory has long been a cornerstone of conservation theory
 - Patchiness of landscapes
 - Especially under humans
 - Also works well for mountains!



Islands' needs

- A lot of unique biodiversity, under threat
- Island -> mainland migration of people
 - Especially younger people
 - Identified as key targets for EU funding for 'development'



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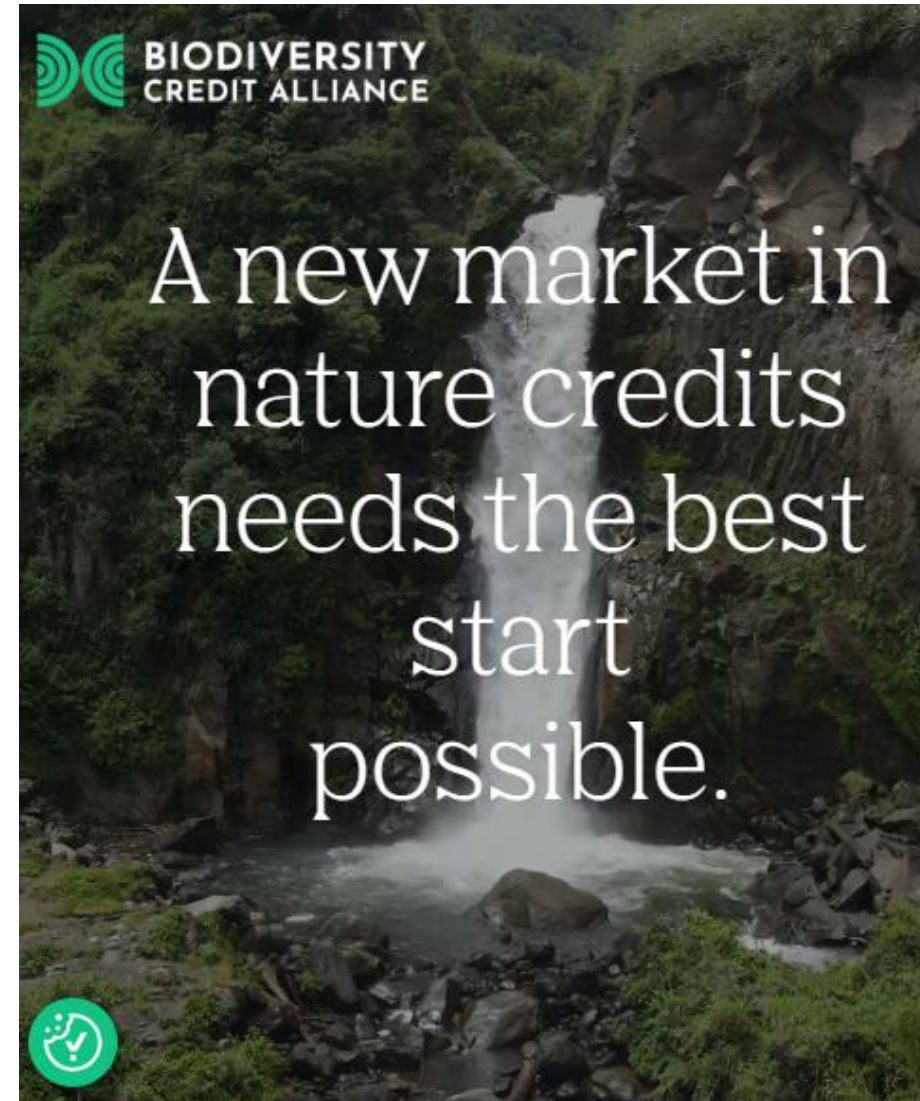
Islands' needs

- A lot of unique biodiversity, under threat
- Island -> mainland migration of people
 - Especially younger people
 - Identified as key targets for EU funding for 'development'
- Coincidence of key European needs. But:
- Islands are some of the most data-poor parts of Europe, especially for biodiversity



Biodiversity finance – great opportunities for income generation

- Range of instruments, including:
 - Public funding
 - Philanthropic funding
 - Biodiversity credits
 - Biodiversity claims within value chain, to address dependencies and for ESG
- Depends a bit on attitudes to offsetting
 - Strategic approach to 30 by 30 would benefit
 - Values of nature are also about bringing people and nature together



Data needs for Europe's islands

- Better knowledge of state – field campaigns
 - Much better base of in-island expertise
- Better knowledge of baseline – 'experiments'
 - Removal of aliens, grazing, etc.
- Ongoing monitoring
 - IPBES Monitoring Assessment: Strong foci on:
 - Essential biodiversity variables
 - Remote and automated monitoring
 - FAIR and CARE principles
 - Local co-design



Take-home: prioritise islands for coordinated biodiversity monitoring

- Particularly valuable for meeting biodiversity targets
- Evidence of biodiversity change for finance – valuable for meeting equality/development targets



Thank you!



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Questions?

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