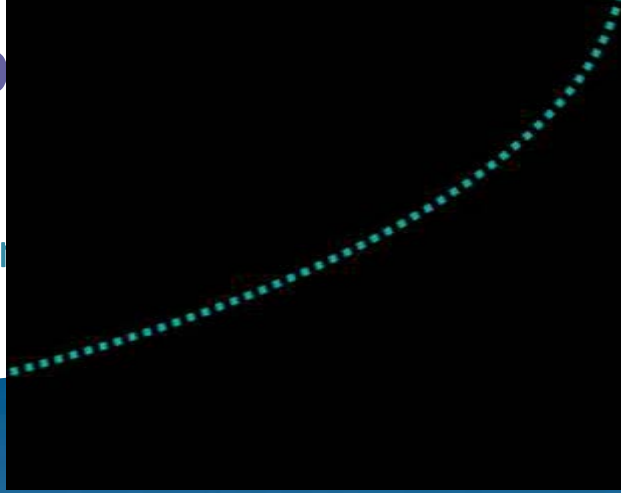


How well do Asian protected areas cover biodiversity?

Dr. Stuart Butchart, BirdLife International



Aichi Target 11

By 2020, at least 17 per cent of terrestrial and inland water areas, and 10 per cent of coastal and marine areas, especially areas of particular importance for biodiversity and ecosystem services, are conserved through effectively and equitably managed, ecologically representative and well connected systems of protected areas and other effective area-based conservation measures, and integrated into the wider landscapes and seascapes.

So how much progress has been made?



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Aichi Target 11

By 2020, at least **17** per cent of **terrestrial** and inland water areas, and **10** per cent of coastal and **marine** areas, **especially areas of particular importance for biodiversity** and ecosystem services, are conserved through effectively and equitably managed, **ecologically representative** and well connected systems of protected areas and other effective area-based conservation measures, and integrated into the wider landscapes and seascapes.

Here we focus on:

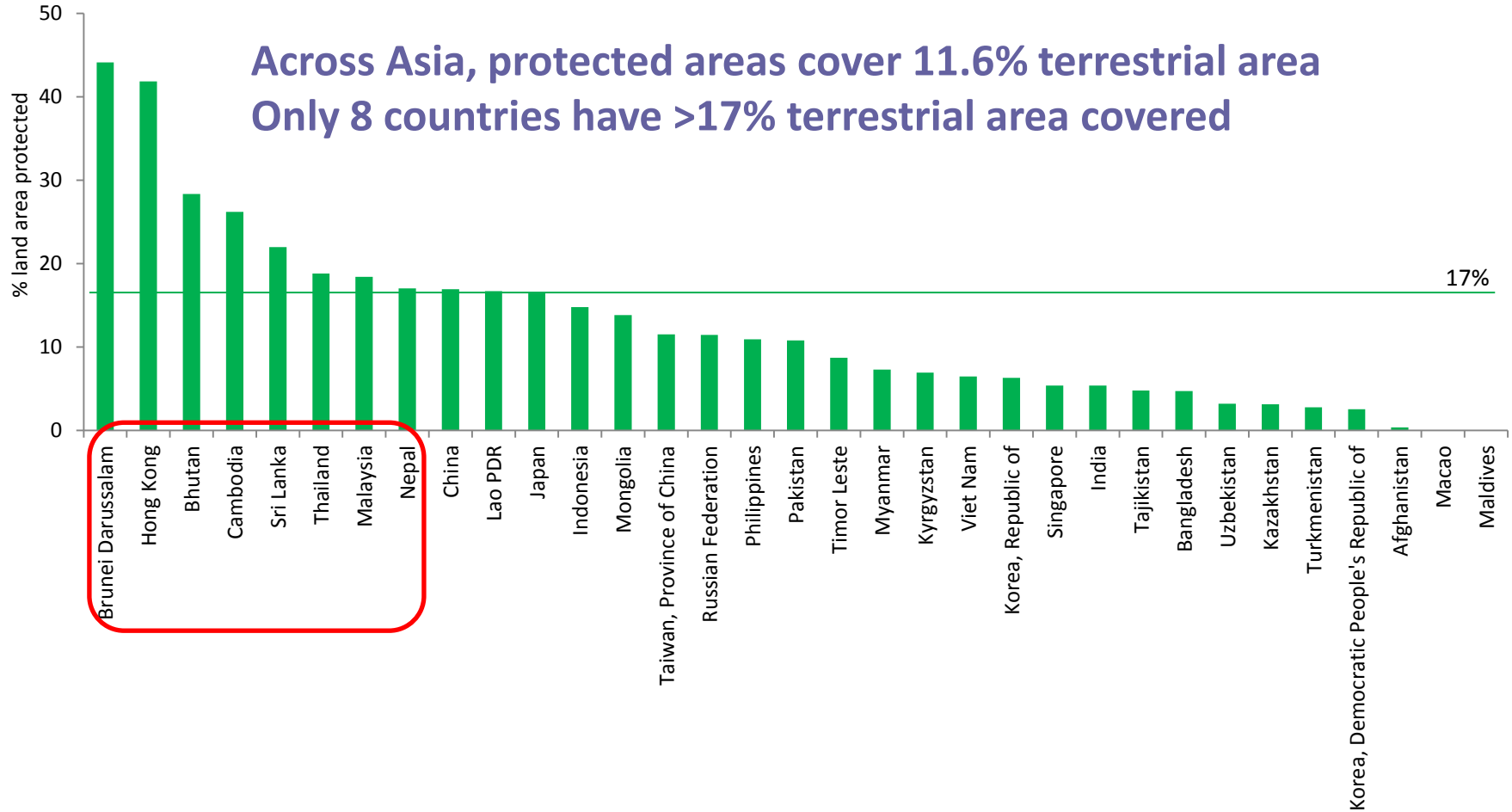
- Numeric thresholds for % terrestrial & marine
- Sites of biodiversity importance
- Ecological representativeness

Data sources: World Database on Protected Areas (Jan 2013), IUCN Red List (species maps), BirdLife International (Important Bird and Biodiversity Areas), Alliance for Zero Extinction (AZE sites), WWF (terrestrial ecoregions), Marine Ecoregions of the World



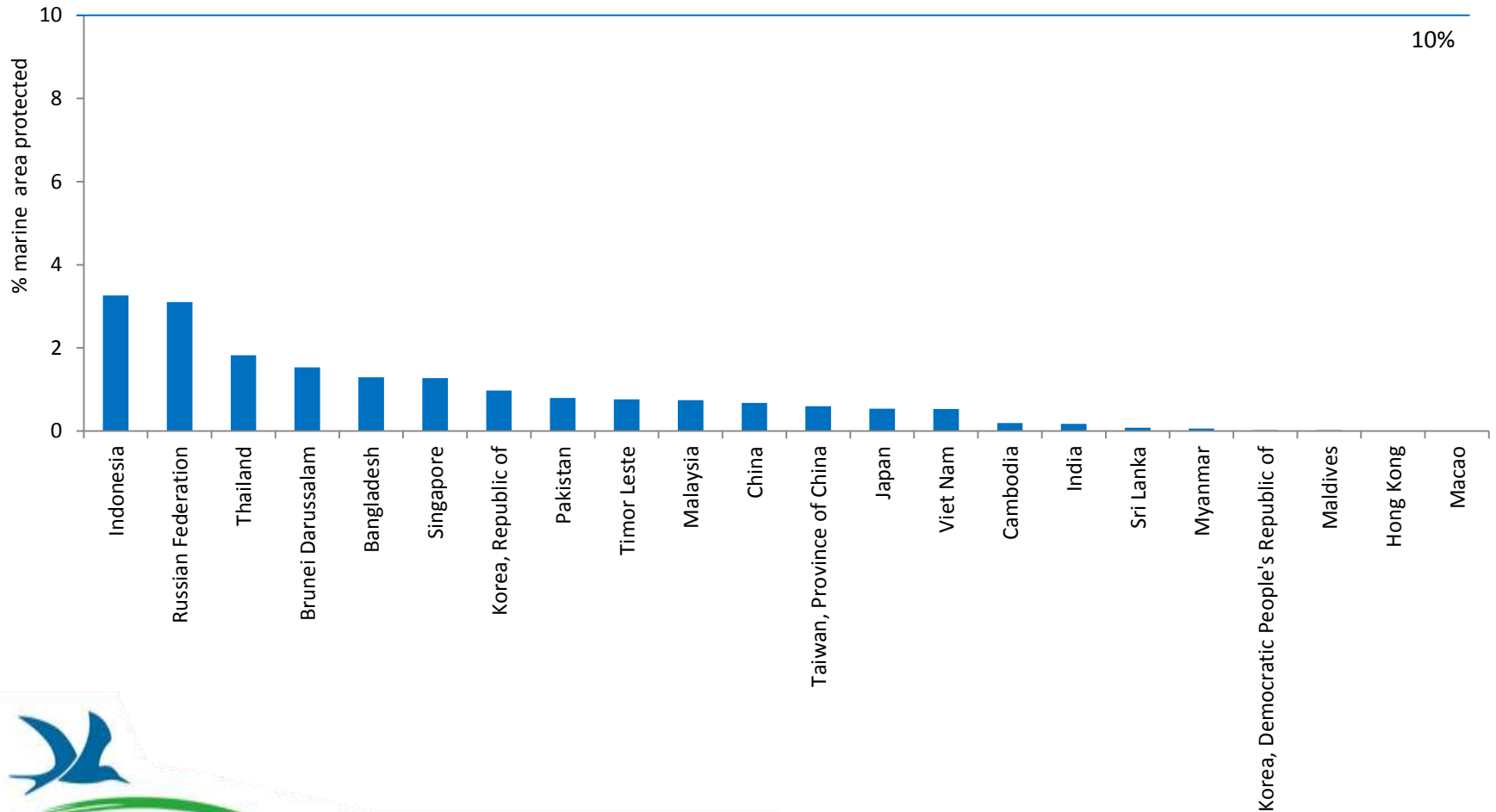
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Area coverage



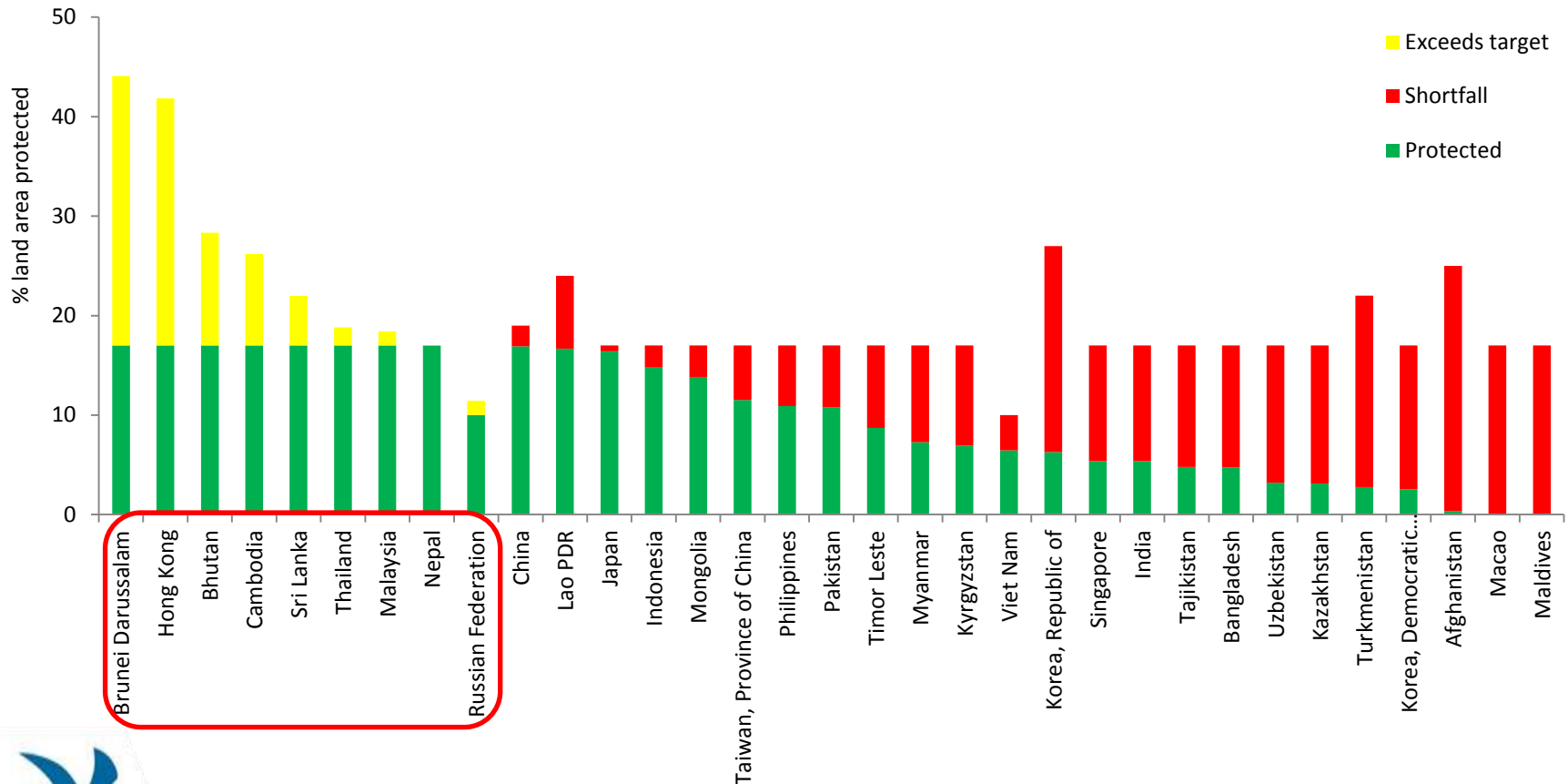
Area coverage

Across Asia, protected areas cover 1.9% territorial marine area
No countries have >10% marine area covered



Area coverage

Some countries have set individual national targets for terrestrial coverage
...but only 9 have met them



Coverage of sites

- Target 11 refers to “areas of particular importance for biodiversity”
- There are many global prioritization schemes for broad regions of biodiversity importance e.g. Hotspots, Ecoregions, Wilderness Areas etc
- But only two systematically identified networks of such sites have been identified globally:
 - Important Bird and Biodiversity Areas (IBAs)
 - Alliance for Zero Extinction sites
- Both fall under the umbrella of Key Biodiversity Areas



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Coverage of sites

1. Important Bird and Biodiversity Areas (IBAs)

www.birdlife.org/datazone

- Identified nationally through multi-stakeholder processes, coordinated by BirdLife International and its Partners
- Globally standardized criteria with quantitative thresholds based on populations of:
 - Globally threatened species
 - Restricted-range species
 - Biome-restricted species
 - Congregatory species
- Identified for birds, but documented to be v important for other taxa
- Over 12,000 terrestrial and marine sites identified
- All are actual or potential management units, i.e. candidates for protected areas



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Coverage of sites

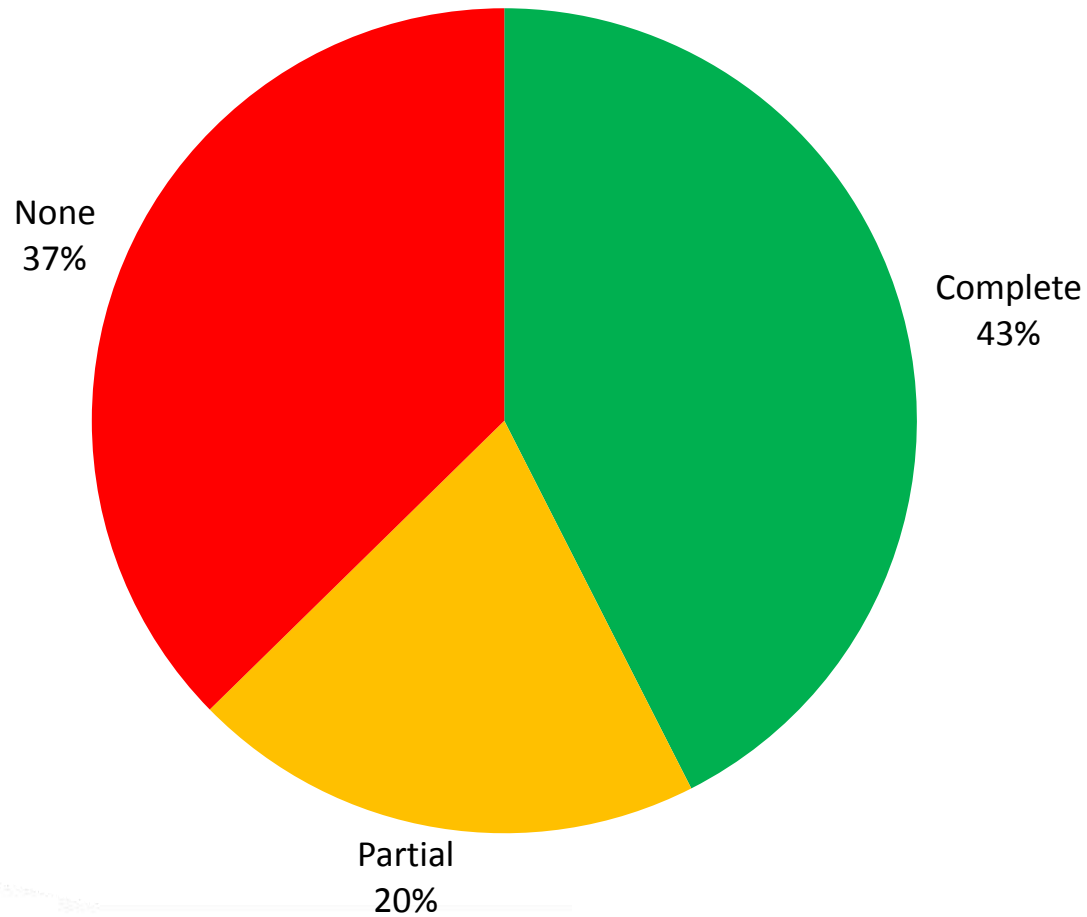
Important Bird and Biodiversity Areas (IBAs)



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Coverage of sites

Data available for 4954 IBAs in Asia



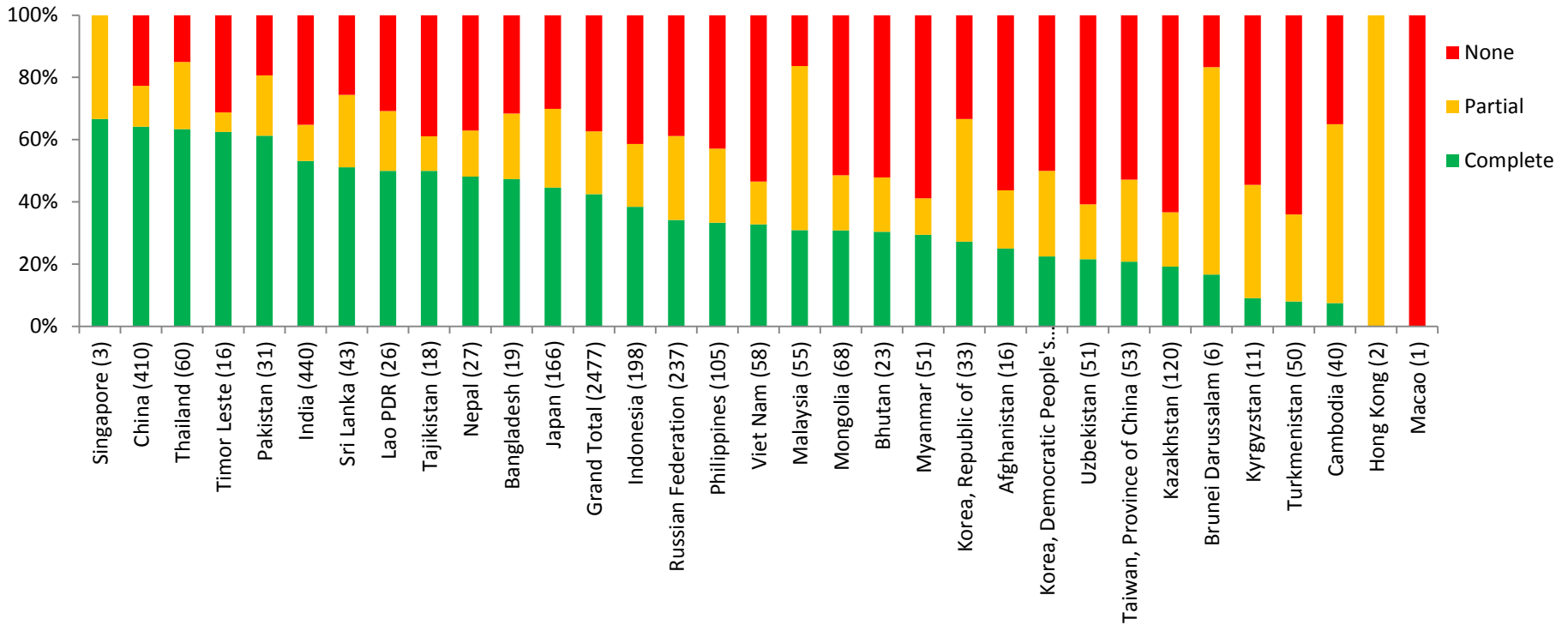
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Coverage of sites

No countries have protected all their IBAs

Only 7 have fully protected at least half of their IBAs



2. Alliance for Zero Extinction sites

www.zeroextinction.org

- Sites holding the last remaining population of at least one Critically Endangered or Endangered species
- Identified for mammals, birds, amphibians, reptiles, conifers & corals
- 587 sites for 920 species globally
- Sites are actual or potential management units, i.e. candidates for protected areas

Coverage of sites

2. Alliance for Zero Extinction sites

www.zeroextinction.org



ALLIANCE FOR Zero Extinction
Pinpointing and conserving epicenters of imminent extinctions

587 Sites
920 Species

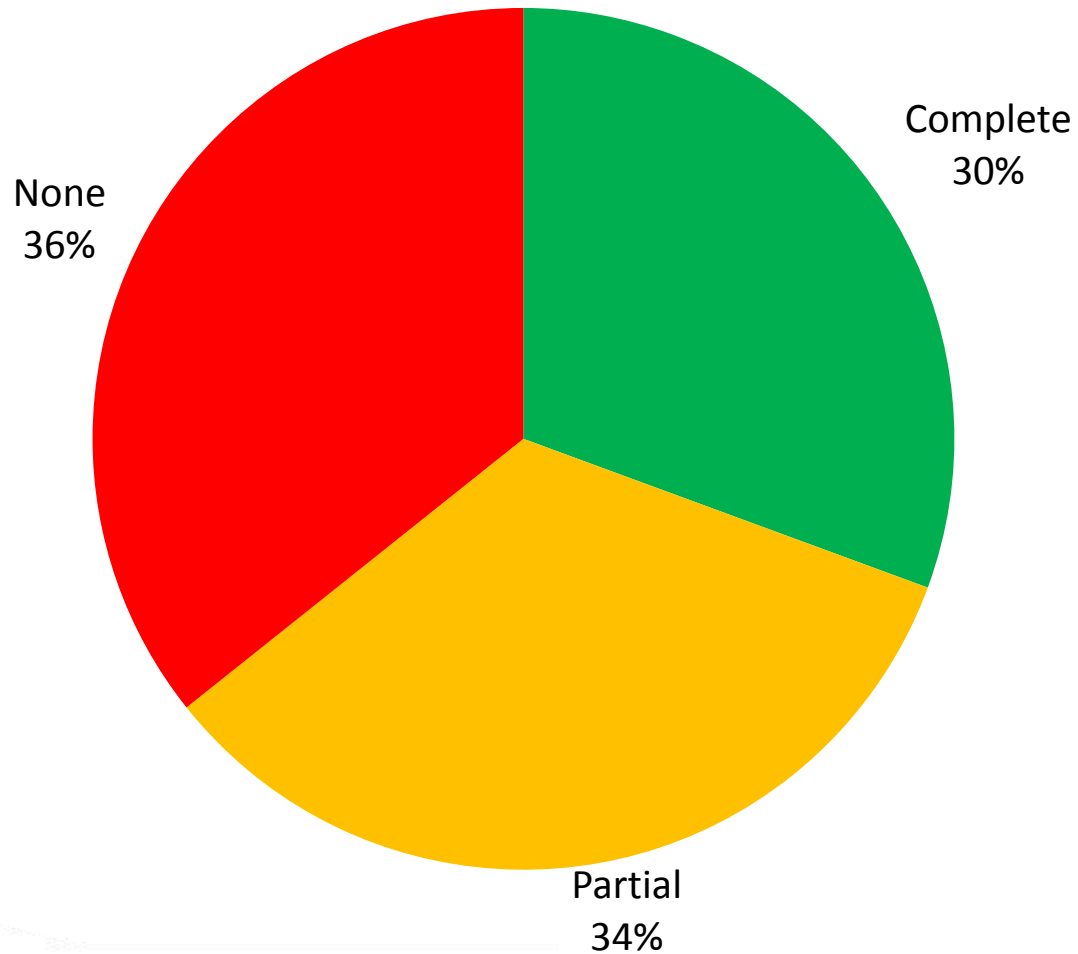


WELCOME Formed in 2000 and launched globally in 2005, the **Alliance for Zero Extinction (AZE)** engages 88 non-governmental biodiversity conservation organizations working to prevent species extinctions by identifying and safeguarding the places where species evaluated to be Endangered or Critically Endangered under IUCN-World Conservation Union criteria are restricted to single remaining sites. The map below shows 587 sites for 920 species of mammals, birds, amphibians, reptiles, corals, and reef-building corals, providing a tool to defend against many of the most predictable species losses



Coverage of sites

Data available for 99 AZEs in Asia



How well do Asian protected areas cover biodiversity?

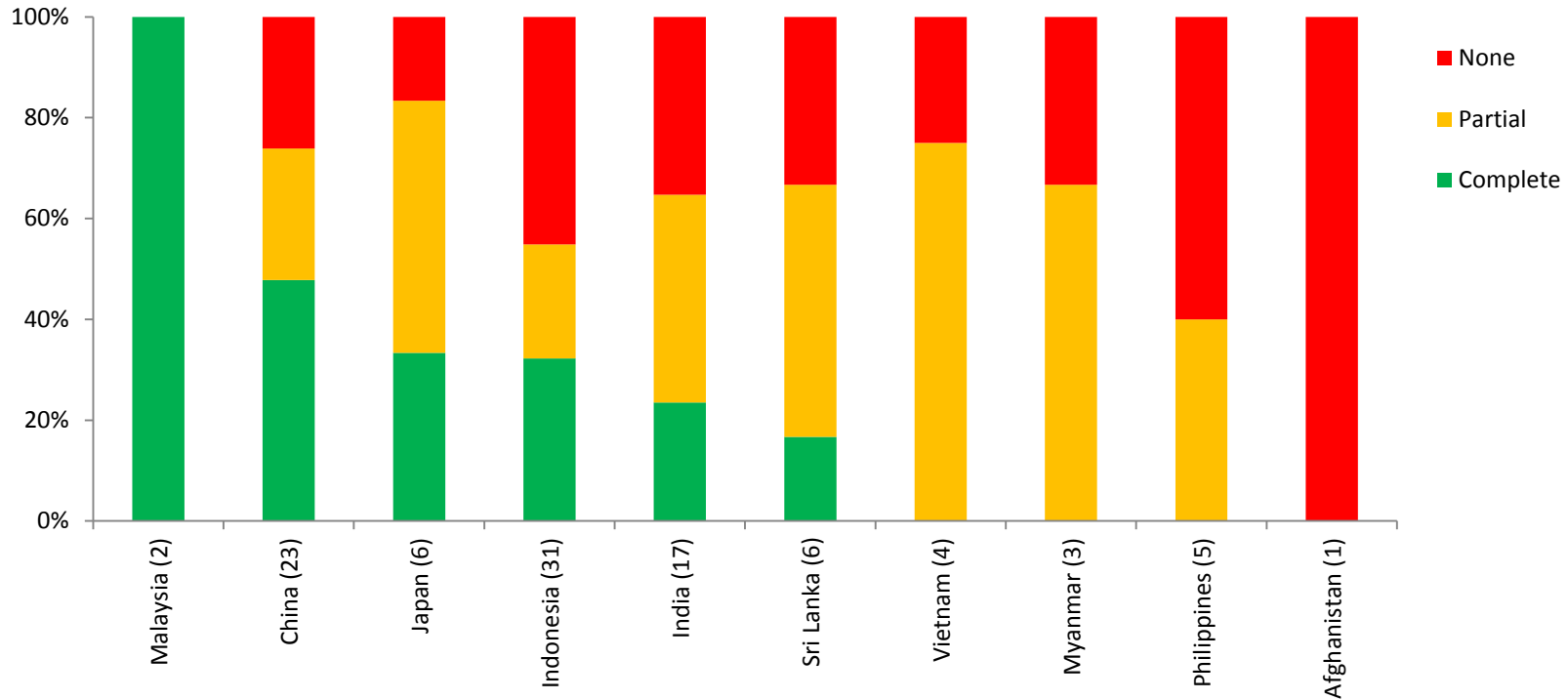
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Coverage of sites

Only 1 country has protected all their AZEs

8/9 have fully or partially protected at least half of their AZEs

Loss of *any* of these sites will result in a global extinction

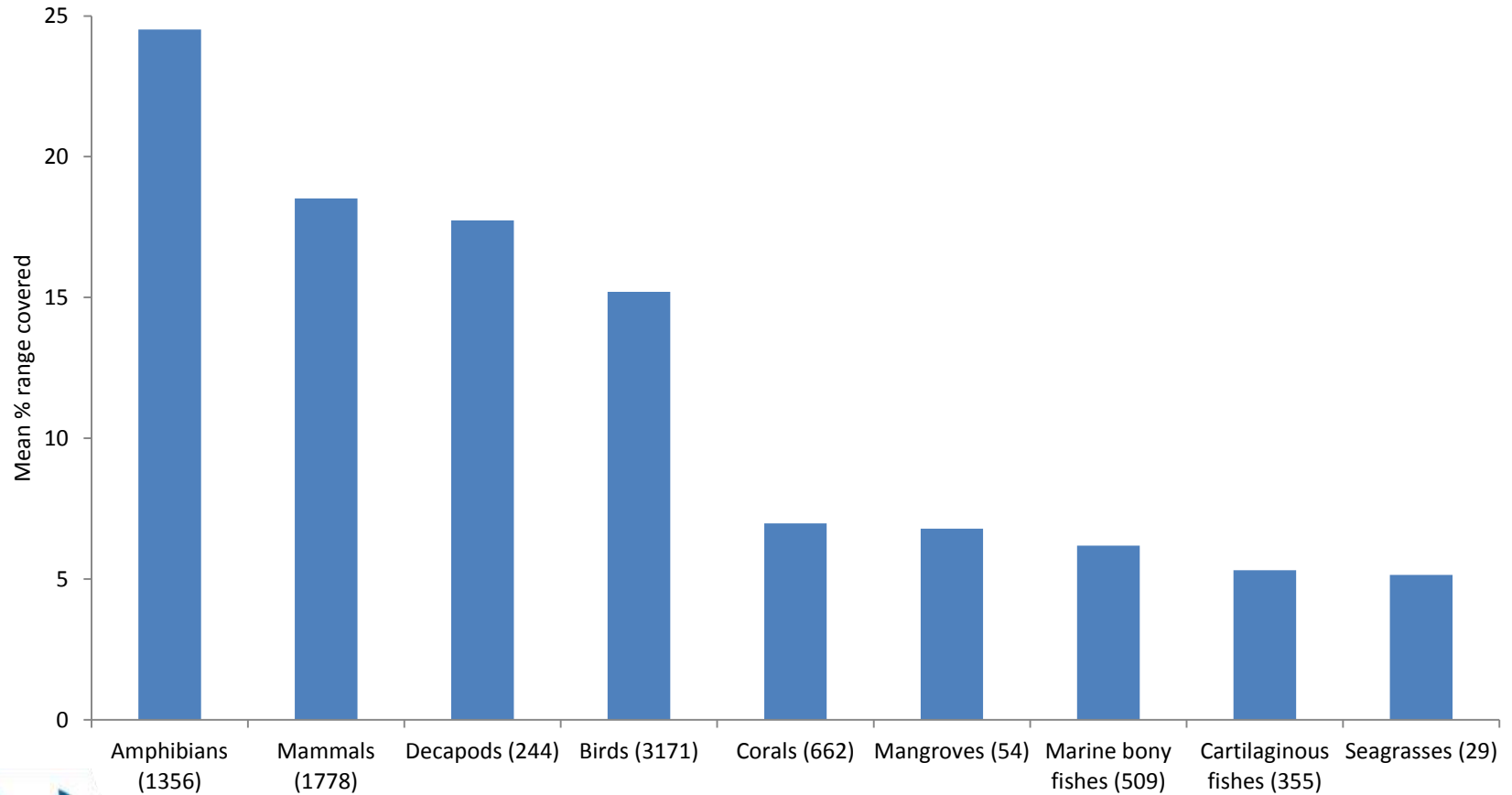


Coverage of species

- Species are the building blocks of ecosystems and have great public resonance
- Governments have committed to preventing extinction of known threatened species under Aichi Target 12
- Protected areas play an important role in species conservation, particularly for those with smaller ranges
- Spatial data on species distributions are available from the IUCN Red List for all species worldwide in 9 species groups:
 - Mammals, birds, amphibians
 - Cartilaginous fishes, marine bony fishes (selected groups)
 - Decapods (crabs, lobsters, crayfish)
 - Corals
 - Mangroves, seagrasses

Coverage of species

On average, 16% of each Asian species' range is covered by protected areas

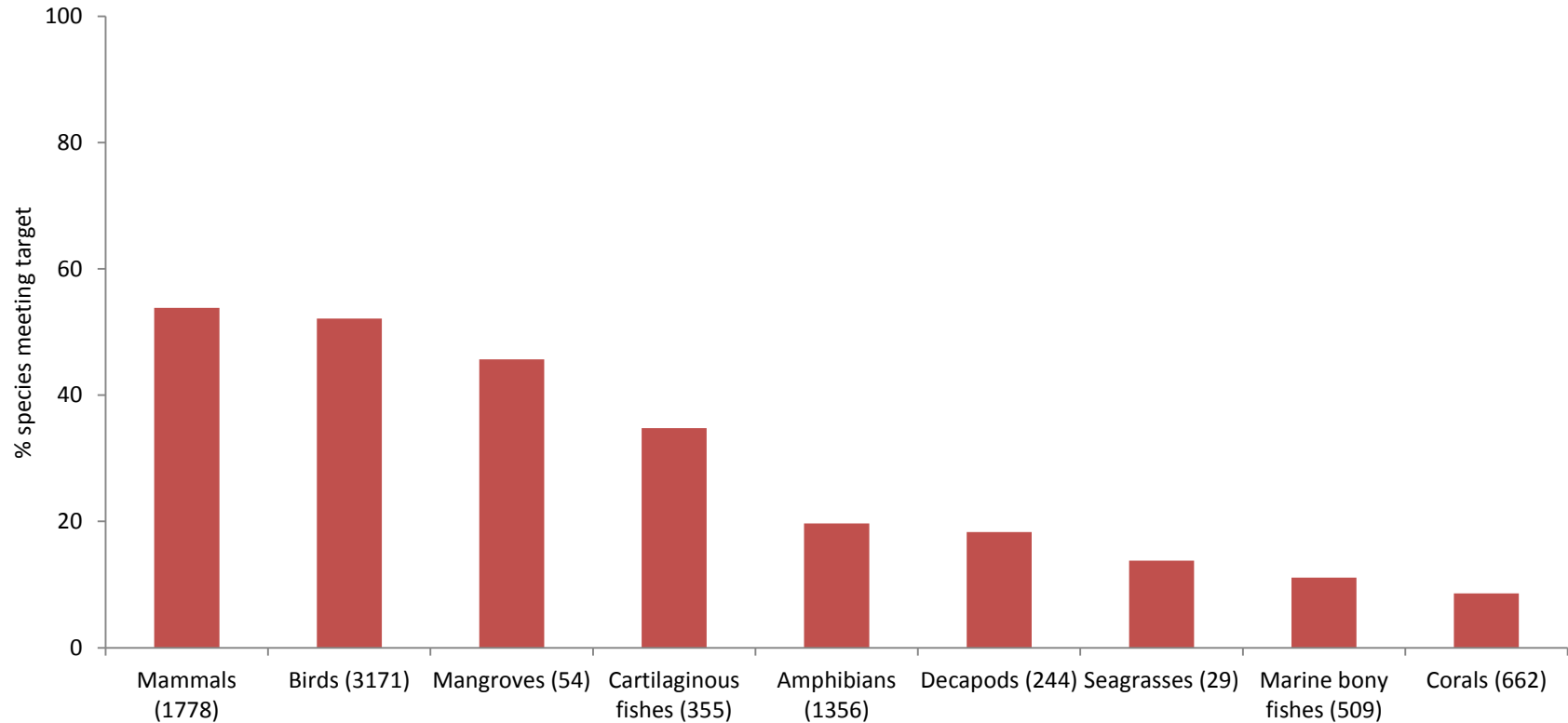


Coverage of species

- But protected areas are not the most appropriate tool for conservation of species with very large ranges
- Such species need policy measures at a landscape or seascape scale
- Therefore set species-specific targets for proportion of range required to be protected:
 - 100% for species with distributions $<1,000 \text{ km}^2$
 - 10% for species with distributions $>250,000 \text{ km}^2$
 - Linearly interpolated on a log-linear scale between these two thresholds
 - Set a cap so that no species has a target $>1 \text{ million km}^2$

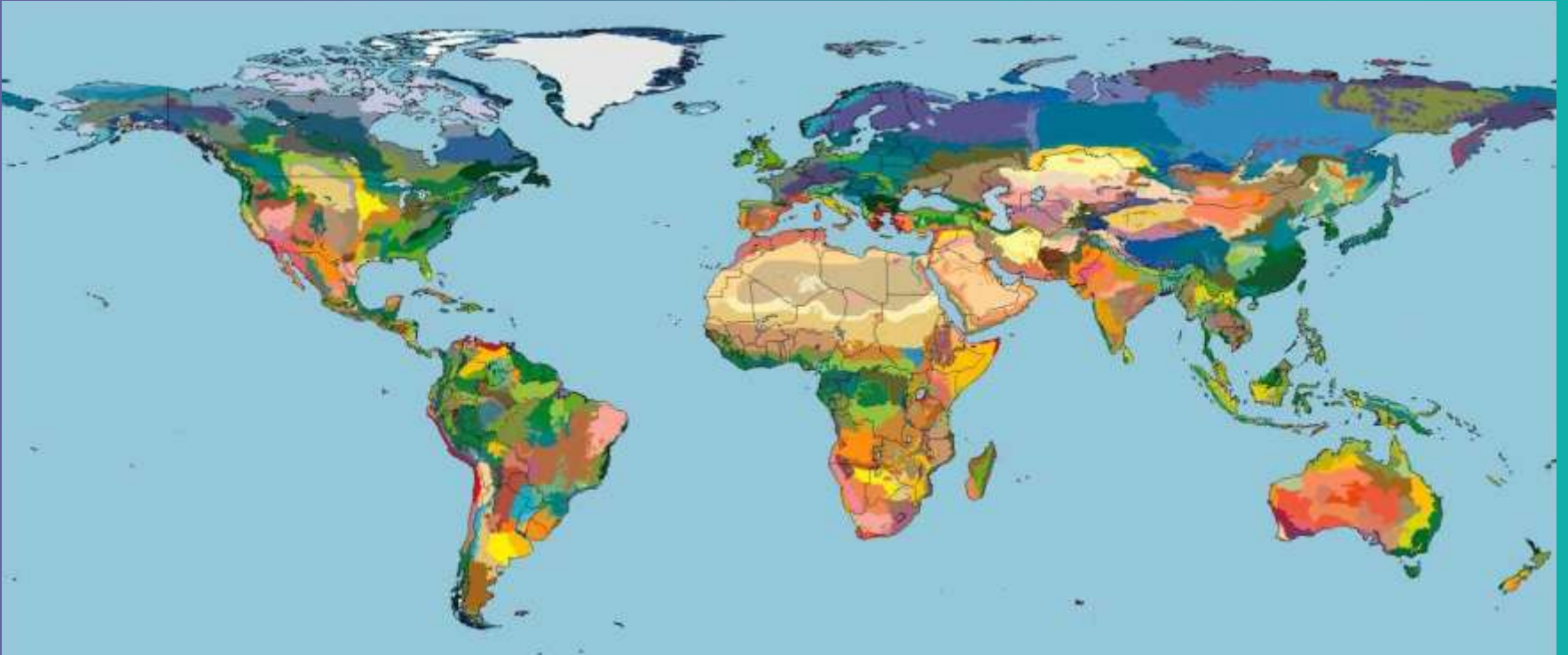
Coverage of species

Only 42% of Asian species meet their target for protected area coverage



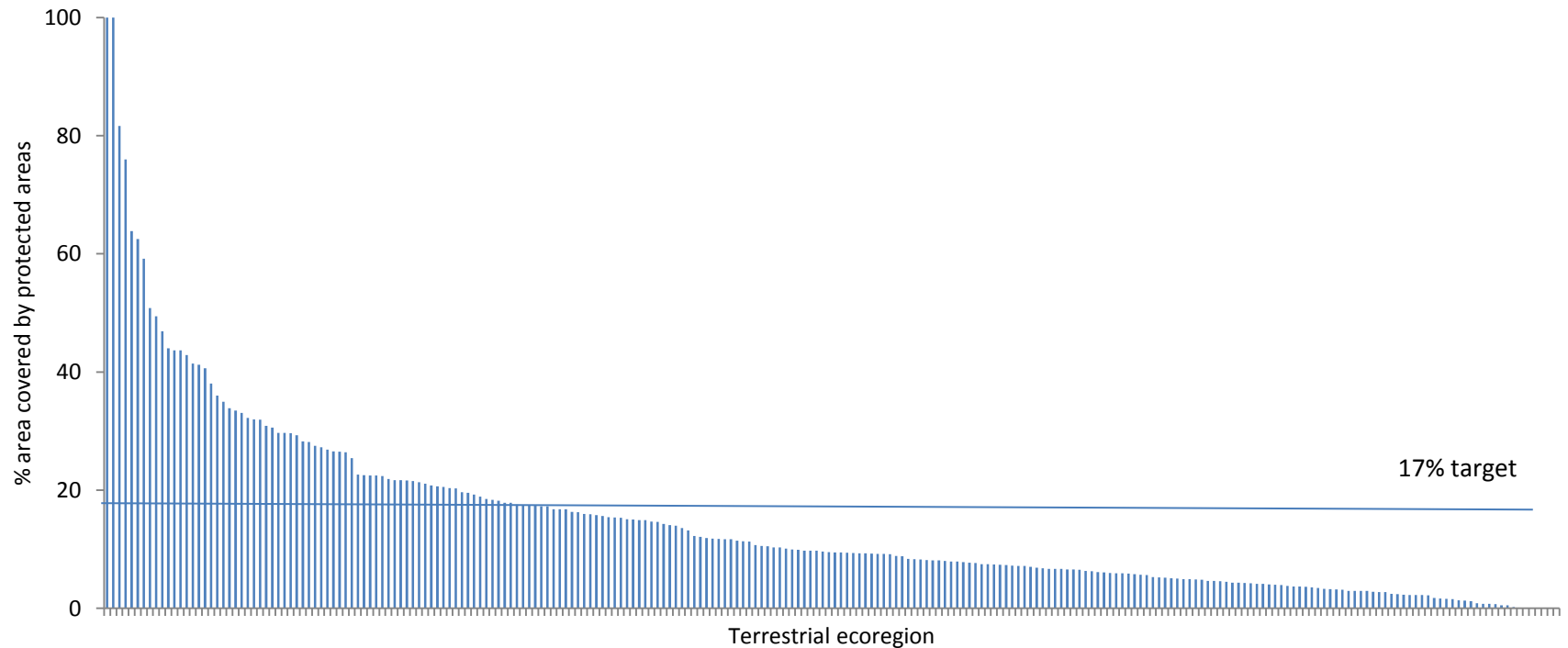
Coverage of ecoregions

- Target 11 calls for protected areas to be ecologically representative
- We examined protected area coverage of ecoregions



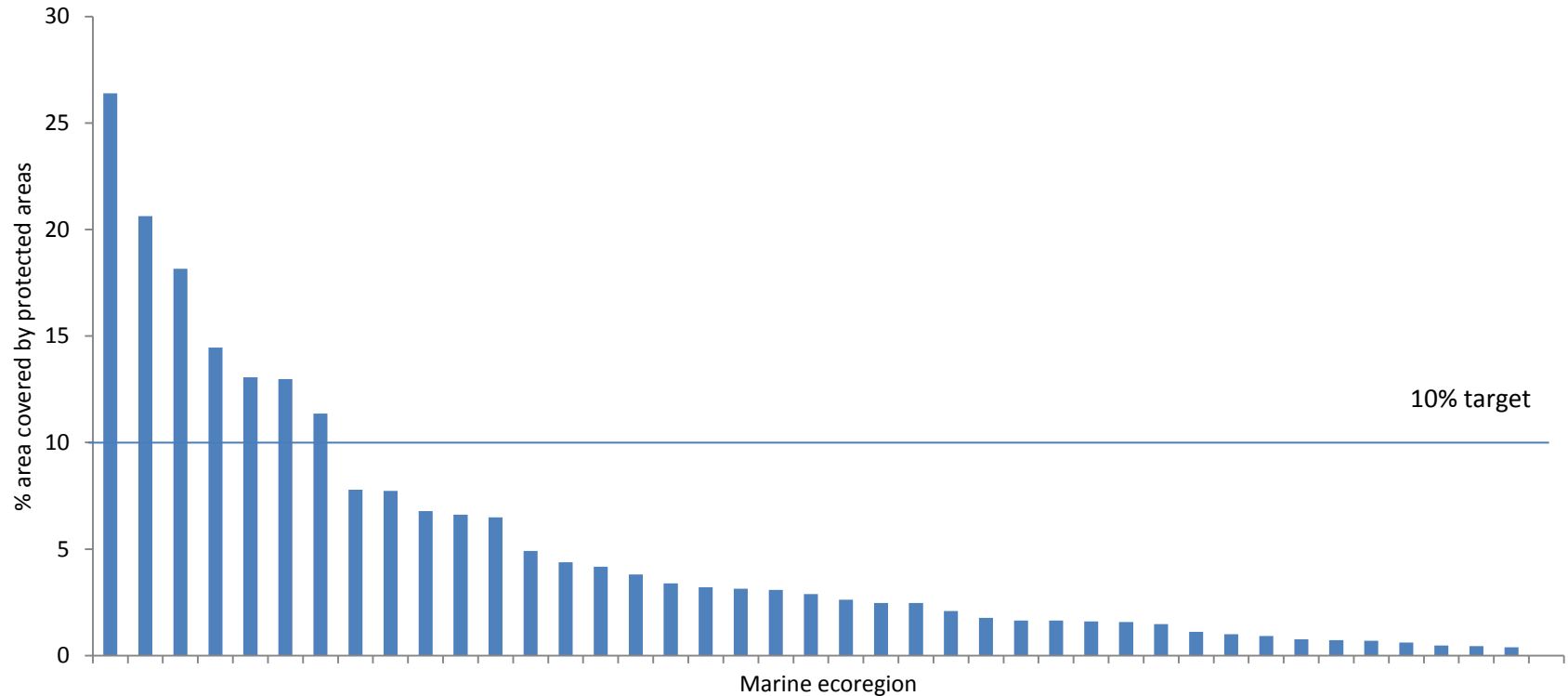
Coverage of ecoregions

For 238 Asian terrestrial ecoregions, 15% of their area is protected on average. Only 31% of ecoregions meet the target of 17% coverage by protected areas



Coverage of ecoregions

For 42 Asian marine ecoregions, 5% of their area is protected on average.
Only 17% of ecoregions meet the target of 10% coverage by protected areas



Summary

Area – only 24% of countries have met the terrestrial area target
& none have met the marine area target

Sites – no countries have fully protected all their IBAs & only 21% have done so for half their IBAs
– protection of AZEs is higher, but two-thirds have no/partial protection

Species – across 9 taxonomic groups of vertebrates, invertebrates and plants, only 42% of species have sufficient protection
– protection is higher for terrestrial than marine species

Ecoregions – only 31% of terrestrial and 17% of marine ecoregions have met target levels of protection

Summary

- These results are from a global analysis to be presented at the World Parks Congress in Sydney in November 2014
- Next steps are to explore options & trade-offs for filling gaps
- Results to date show that protecting the unprotected and partially protected important sites for biodiversity conservation (i.e. Important Bird & Biodiversity Areas & Alliance for Zero Extinction sites) can make a significant contribution to meeting Aichi Target 11 (plus Target 12 and others)



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Acknowledgements

For further information contact stuart.butchart@birdlife.org

Collaborating organisations:



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