INCREASING ADAPTIVE CAPACITY AT A SPECIES LEVEL: UNEP/CMS DUGONG INITIATIVES

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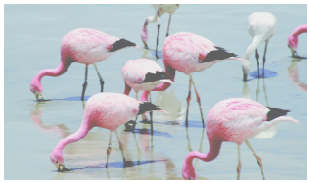
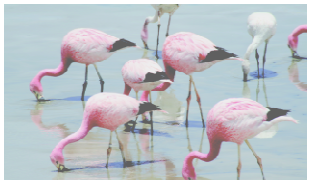




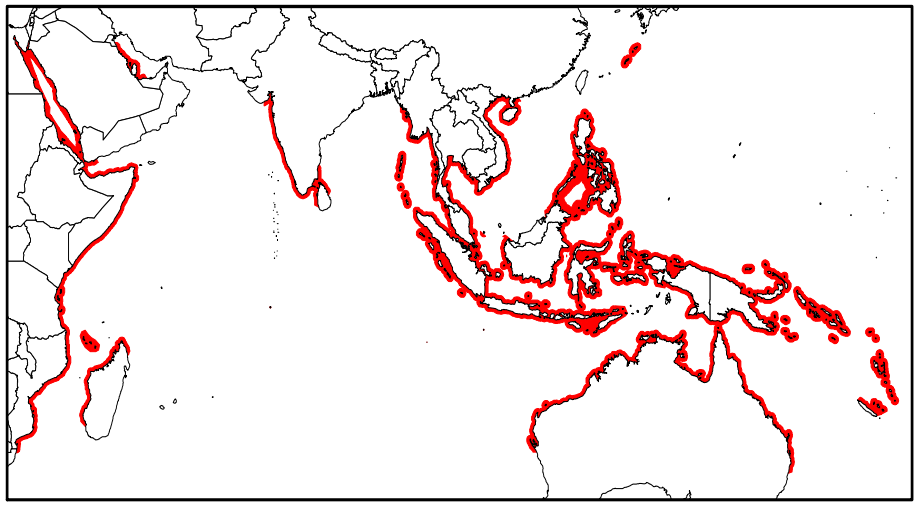

What is the Convention on Migratory Species (CMS)?

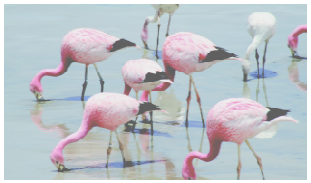
- International Treaty managed by UNEP
- Secretariat based in Bonn, Germany
- Principal objective: conservation of migratory species of wild animals
- To date, 114 countries are Party to CMS
- Two main legal tools: species listings and regional agreements





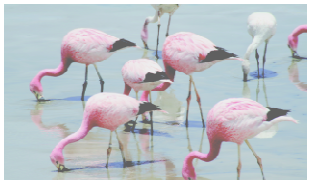

The Dugong MoU





CONSERVATION SIGNIFICANCE

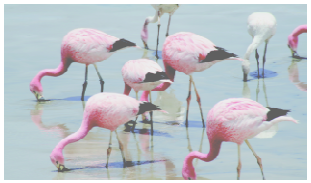
- Only member of family Dugongidae
- Only strictly marine herbivorous mammal
- Largest population size & range of extant Sirenia (dugong and manatees)
- Currently classified as vulnerable at global scale by IUCN
- BUT locally extinct; data deficient, critically endangered, endangered and vulnerable at regional scale.






Impacts from Global Climate Change

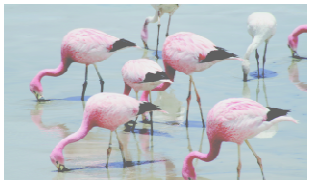
- Many uncertainties about the impacts from climate change
- Indirect effects of climate change & human activity through impacts on the main food source – seagrass
- ??Positive/beneficial changes in sea level and water temperature – more inshore habitats & expanded access
- Impacts more likely to be negative
- Loss of seagrass
  - increased water depth reduced light penetration to existing deep water seagrasses
  - Increased T – seagrass ‘burn-offs’
  - Increased intensity/frequency of storms – seagrass ‘die-off’
- Lower reproduction, direct mortality or emigration
- Increased fisheries pressure – increased risk of incidental capture: windfall for fishers






Challenges & Issues for Dugong Conservation

- Long-lived, slow breeding – rate dependant on food
- Restricted coastal habitat subject to large-scale diebacks
- Move across jurisdictions at local and regional scales
- Lineages cross jurisdictions
- Diverse values: ecological, high genetic biodiversity, good to eat, cultural, umbrella/iconic/charismatic megafauana
- Depleted populations with increased vulnerability to threats – lowered resilience to cope with climate change
- Competing crisis: climate change, biodiversity, fisheries – what gets you first?
- Building resilience at a species/ecosystem and human community level






Tools

Inter-disciplinary Tools

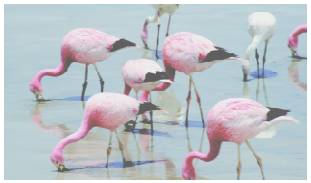
- Sustainability of marine ecosystem services
- Sustainability of way of life eg. hunting & fishing

Dugong MoU Management/MitigationTool

- Data collection & Monitoring: Standardised Survey Tool
- Risk Assessment: spatially explicit model – hot spots
- Management: Incentive-based eg. gear change/modification; fisheries practices; spatial; temporal; cultural

Community-based management

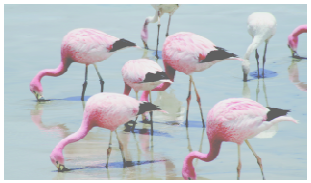
- Building social capital
- Governance: local, provincial, national






Policy Implications

- Need to build resilience & well-being: species, ecosystem and coastal community level
- Inter-disciplinary approach is required – recognise coupling of coastal ecosystem services, coastal communities fishing/way of life & governance
- Shared conservation synergies: eg. Sustainable fisheries and species conservation; marine wildlife species in coastal ecosystems – habitat protection
- Outcome /solutions based- not just re/defining the issue to build community and species/ecosystem resilience and capacity to cope.






UNEP CMS

Shukran

Thank you

For more information please visit

http:// www.cms.int
http://www.cms.int/species/dugong/index.htm