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# Biodiversity Conservation

EcoEducation - making the connections  
to biodiversity conservation



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Do you consider experiential learning of biodiversity in the natural environment a priority for your students?





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**If yes, why?**



Land clearing and degradation,  
salinity, water and air pollution,  
waste, introduced species...

**What do we lose?**





Biodiversity – the variety of all life forms:

the different plants, animals, fungi and microorganisms,  
the genes they contain, the ecosystems of which they  
form a part...

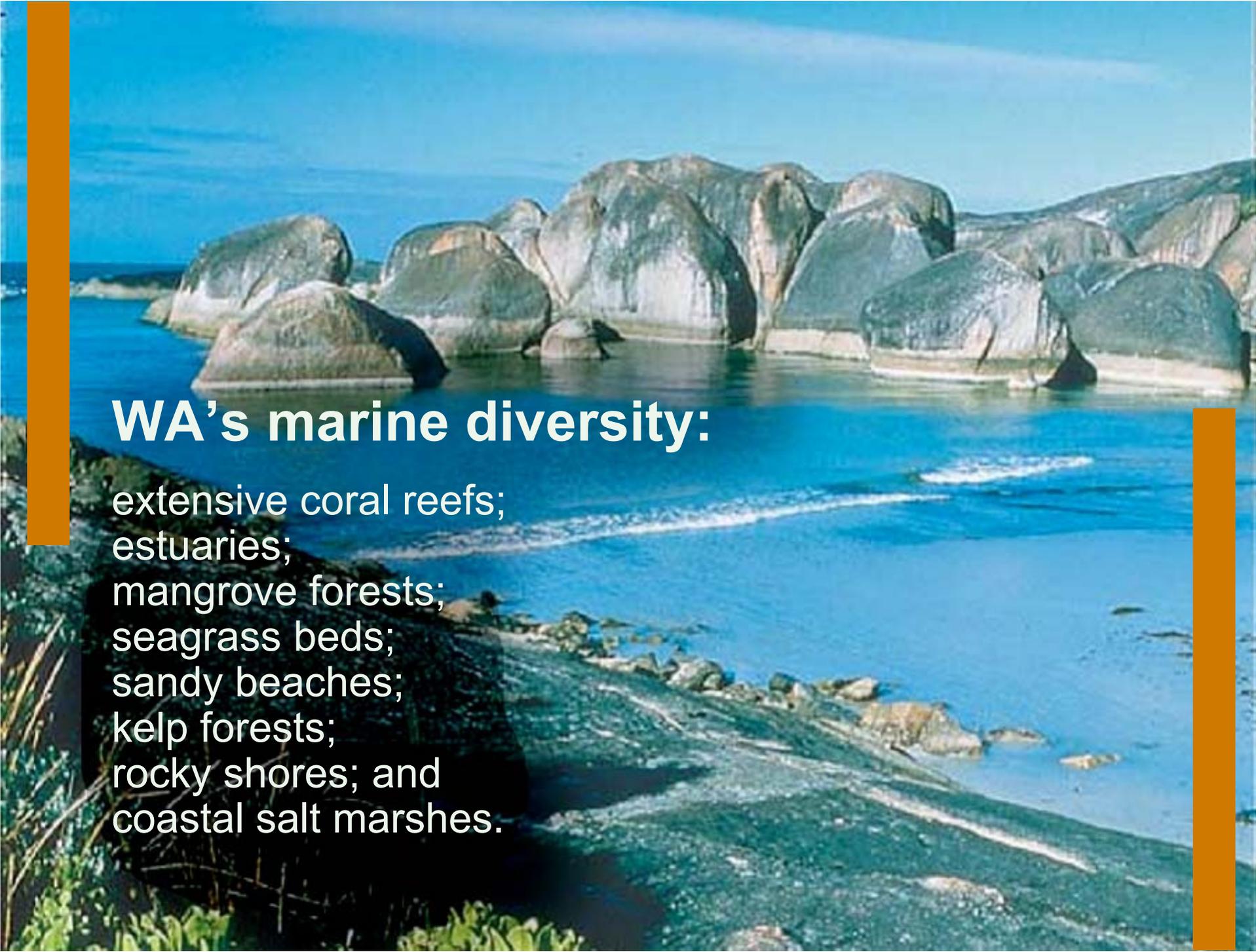
Biodiversity is greater than the sum of its parts.



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A scenic view of a rocky coastline. In the foreground, a rocky shore is covered with green seaweed. The water is a vibrant blue, with white foam from waves breaking against the rocks. In the background, large, rounded boulders are scattered across the water and the shore. The sky is a clear, bright blue.

## WA's marine diversity:

extensive coral reefs;  
estuaries;  
mangrove forests;  
seagrass beds;  
sandy beaches;  
kelp forests;  
rocky shores; and  
coastal salt marshes.

## **WA's terrestrial diversity:**

tropical to temperate;  
rainforest;  
savannah woodland;  
grasslands;  
deserts; and  
heathlands.





## WA's plant diversity

**WA is recognised nationally and internationally for its wealth of species and uniqueness.**

- Rich plant diversity of south-west – 79 per cent endemic to WA.
- WA has 11,501 plant species (vascular).
- WA contains 50 per cent of Australia's known flowering plants.





## WA's fauna diversity

- WA has 220 of Australia's 305 mammal species – 34 endemic.
- Only wild populations in Australia e.g. numbat.
- 5,120 reptile species, 187 are endemic.
- 3,028 fish species





## Biodiversity hotspot

WA has one of the world's 25 biodiversity 'hotspots', the **only** global hotspot in Australia (a 'hotspot' re (a) biodiversity richness + (b) threatening processes).

Nearly 80 per cent plant species of the

**South West Botanical Province** are endemic.

The region contains 'super rich' areas e.g.

Fitzgerald River National Park (1,800 species).



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## Tropical marine biodiversity hotspot

- Coral reef habitats of west and north west – global significance.
- One of 18 world ‘hotspots’.
- 3,300 fauna and plant species in Dampier Archipelago.





## Shark Bay World Heritage Area

- There are 812 World Heritage sites.
- Only 160 sites worldwide are listed for natural criteria only.
- Only 17 of those 160 listed sites meet all four natural criteria.
- Shark Bay is one of only 17 sites worldwide – which makes it pretty special!
- This puts Shark Bay in a league with the Grand Canyon, Yellowstone and the Galapagos Islands.





## Stromatolites

“An outstanding example representing major stages in the Earth’s evolutionary history.”





# What has all this got to do with us?

## The connections

Biodiversity provides 'products' and 'services' including food, clothes, building materials, medicines, recreational enjoyment, clean water and air etc ...



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**I have a right to exist ...**





## Conservation of biodiversity underpins sustainability

The quality of life of present and future generations of Western Australians is dependent on our ability to effectively manage natural resources on a sustainable basis.

What are the threatening processes?



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## Threatening processes

- Continued pressure from resource and land development for primary industries and urban expansion.
- Introduced animals and plants.
- Salinisation.
- Inappropriate fire and grazing regimes.





## What have we lost?

- 18 animal species – extinct
- 15 plant species – extinct
- 3 ecological communities presumed destroyed
- 547 taxa threatened with extinction
- Major decline in ecosystem diversity
  - Modification of wetlands
  - Vast areas - native vegetation removed in SW
  - Irreparable damage to pastoral lands



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Can we make the connections without  
experiential learning of biodiversity  
in the natural environment?

**Questions?**



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