

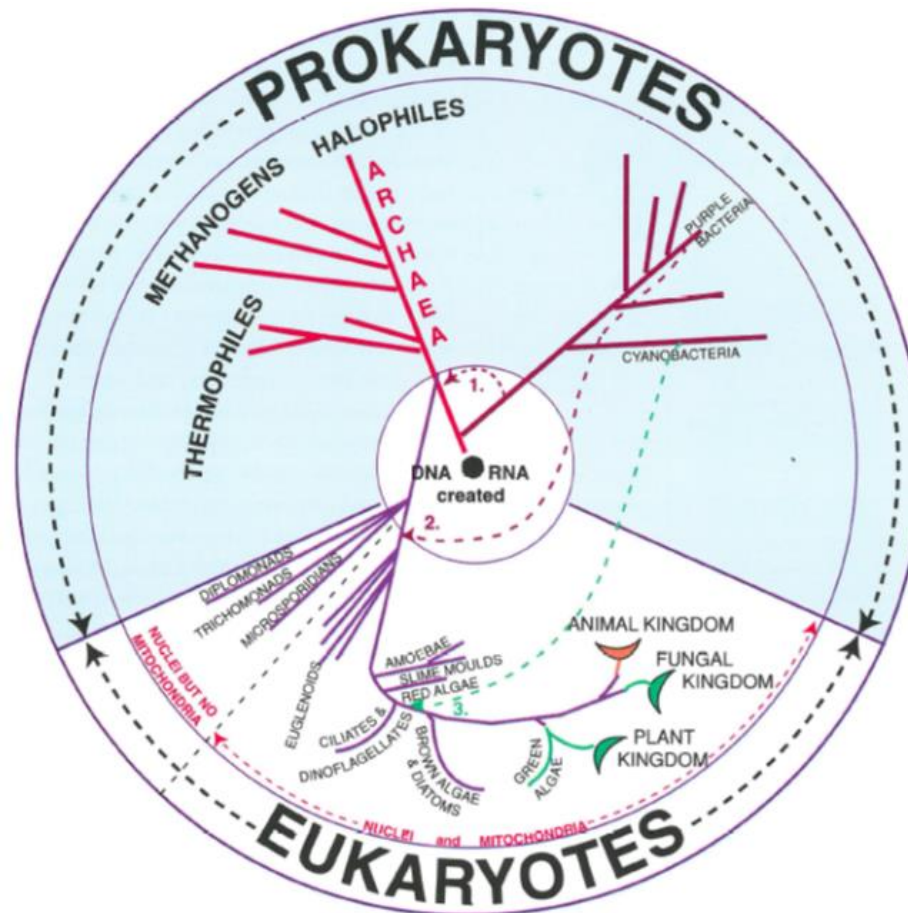
Koalas, Kookaburras, Marine Turtles,  
Iron Ore, Bauxite, Electricity, Trade,  
Travel, Prosperity, Growth, Legislation,  
International Agreements and Stars at  
Night in Australia.

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# Australia



# ALAN and Biosphere I



# Biosphere II – a motivator



# Environmental Impact Statement

## ✚ EIS, EIA, EEA, REF

## ✚ Triggers

- world heritage Ramsar wetlands
- threatened species
- migratory species
- Commonwealth marine environments
- Commonwealth land

## ✚ Commonwealth / State bilateral agreement

## ✚ Environment Protection and Biodiversity Conservation Act 1999 – threatened species

- Extinct, Extinct in the wild, **Critically Endangered**, **Endangered**, **Vulnerable**, Conservation dependant ([fauna 13 / 339](#), [flora 0](#))

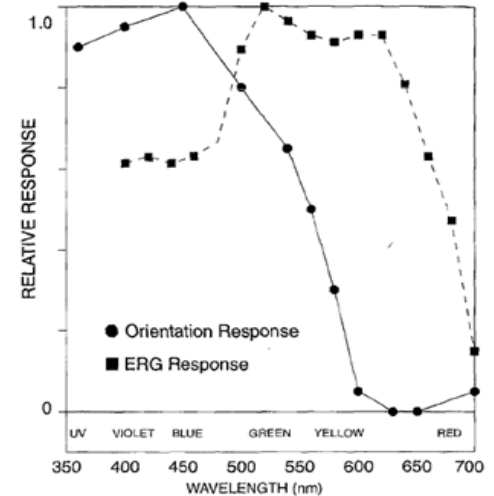
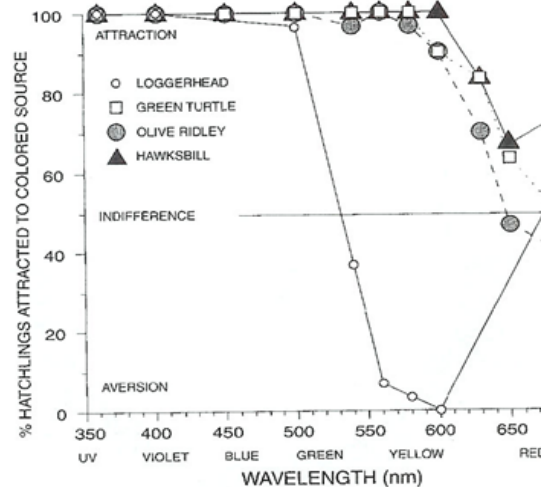
## ✚ Migratory species ([22 / 255](#))

- Bonn convention
- China–Australia Migratory Bird Agreement CAMBA
- Japan–Australia Migratory Bird Agreement JAMBA
- Korea–Australia Migratory Bird Agreement ROKAMBA



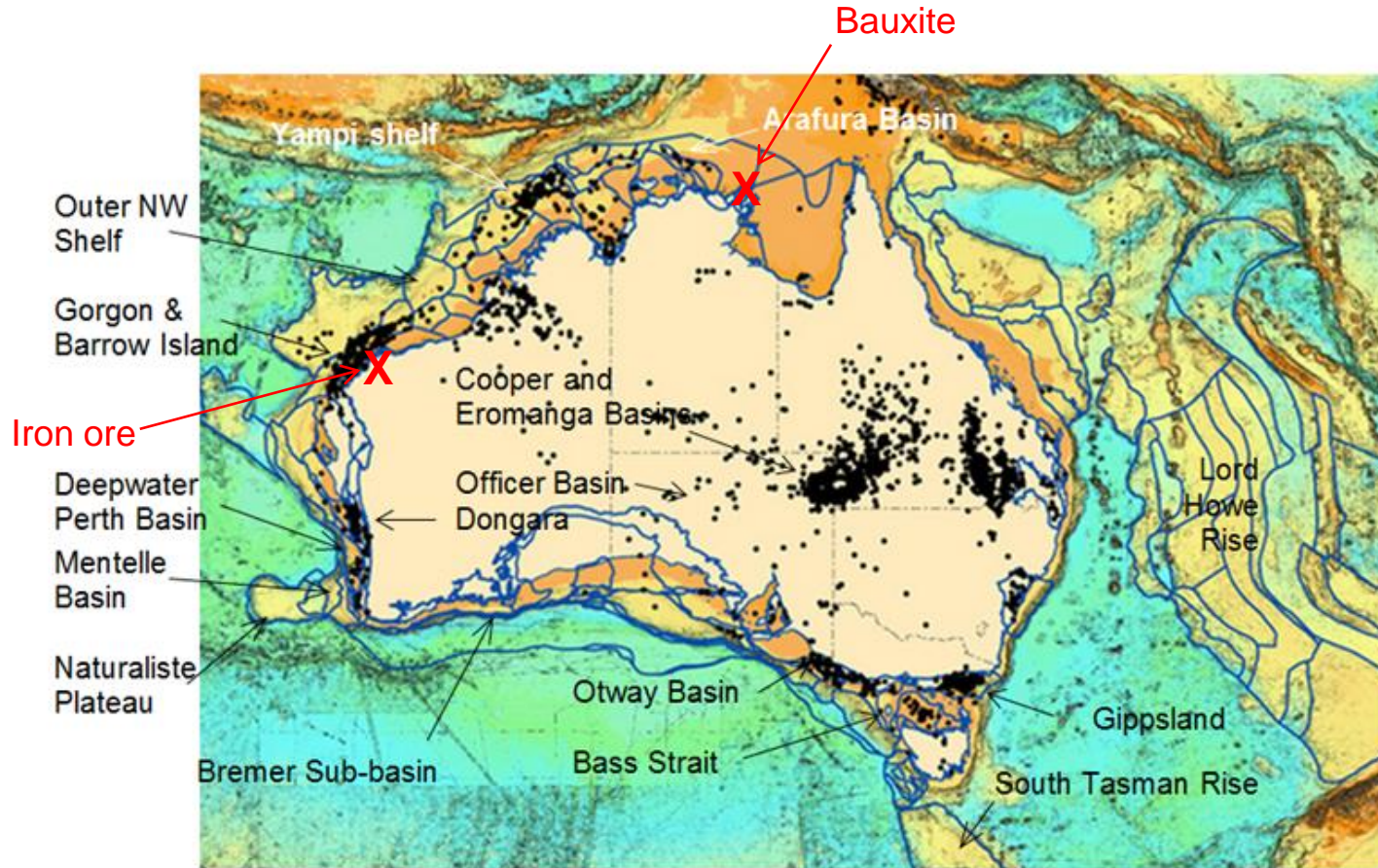
# ALAN & behavioural response

- ERG v's behavioural response
- response threshold
- behavioural variation
- area of consideration
- static environment
- adaptation
- direct effect
- indirect effect





# Natural resources



# Natural resources

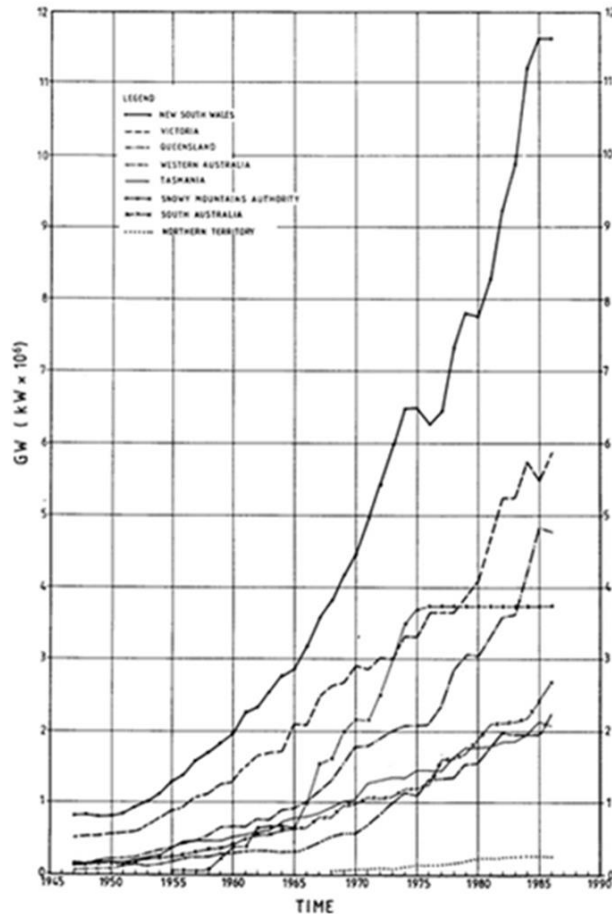




# Natural resources



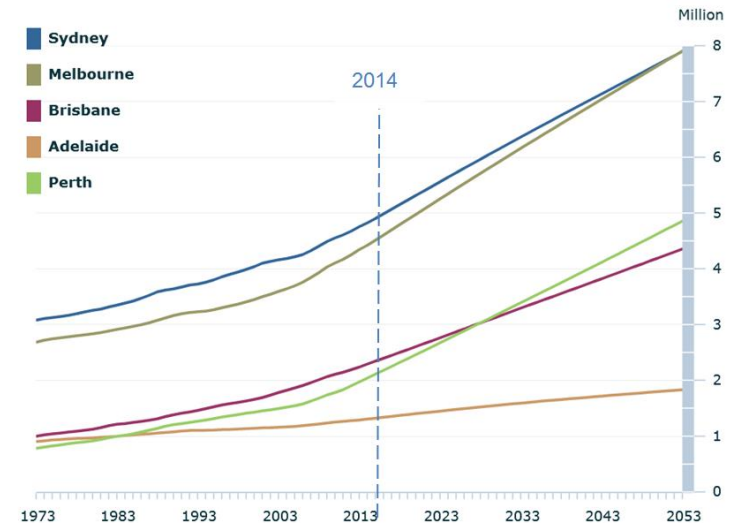
# Electricity, growth, travel



Population increase (1840 – 30K / 2014 – 23.5M)

Electric streetlight increase (a handful 1890's – 1,935k 2013)

Estimated & projected(a) population, larger Greater Capital Cities - 1973 to 2053



# Electricity, growth, travel

## Prosperity – light is for humans

- ✚ 24hr shift work
- ✚ fear of crime
- ✚ floodlit sports venues
- ✚ outdoor advertising
- ✚ art and light festivals



# Electricity, growth, travel

- Motor cars 2.4 times more affordable (2013 / 1950)
- 13 million cars (2013)



Major highways



# Stars at night



Mt Stromlo (ACT)

Siding Spring observatory (NSW)  
Orana Regional Plan No 1

Thank you

(image: Norfolk Island – Lone Pine  
Robinnisbet photography)