

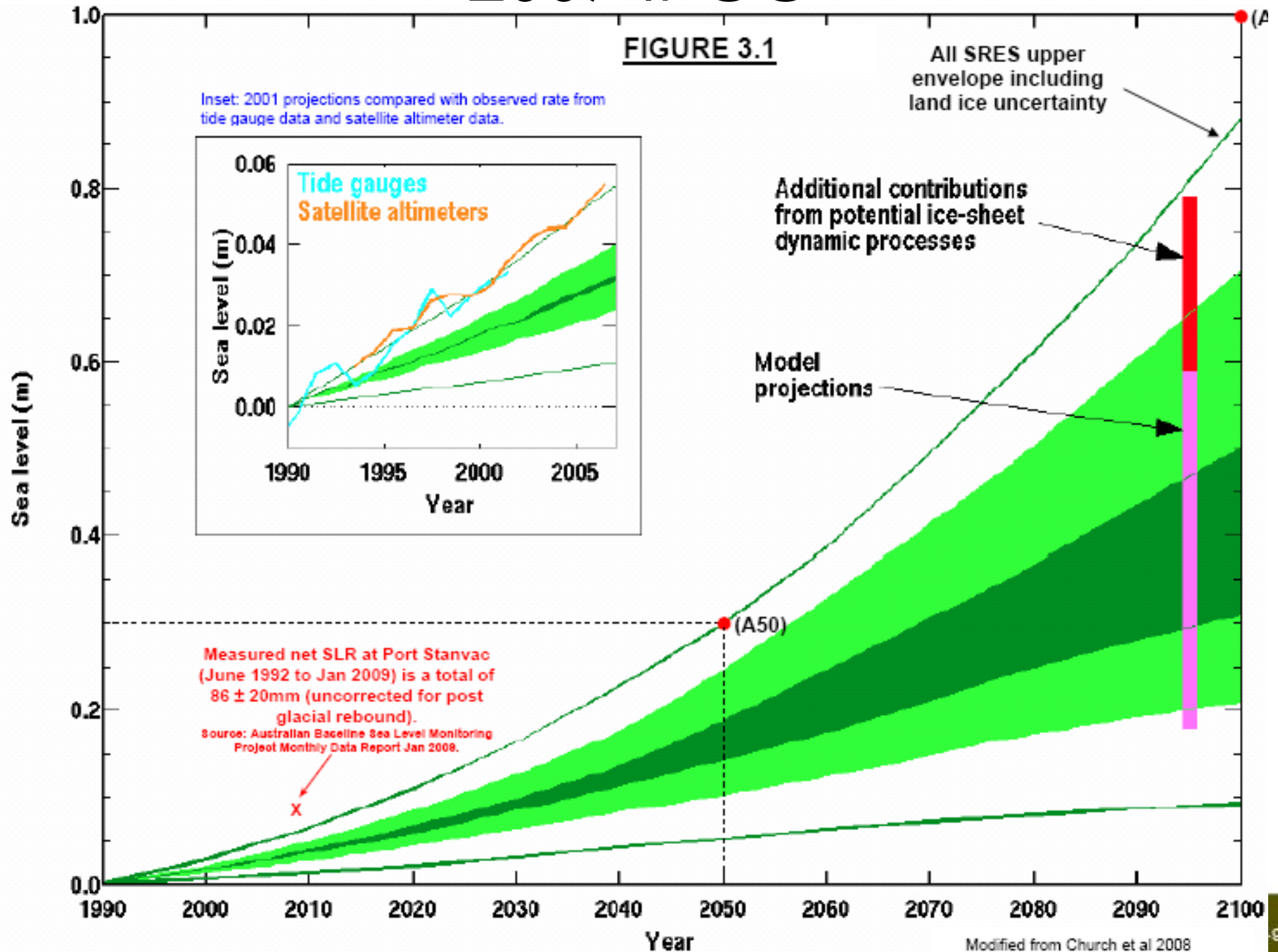
Department of
Environment, Water
and Natural Resources

Sea level rise and the lower lakes

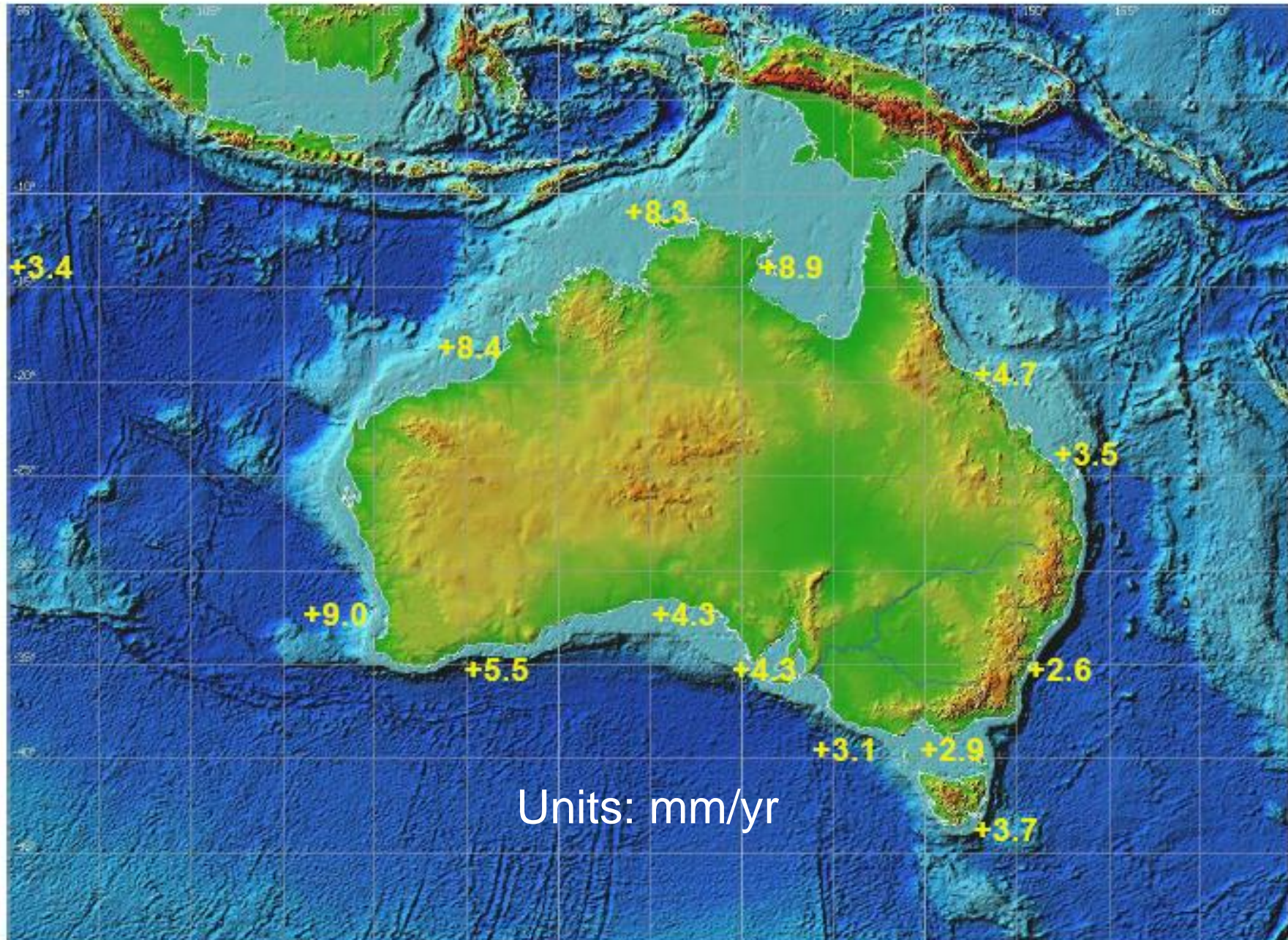
Murray Townsend
Manager Public Land and
Coastal Conservation



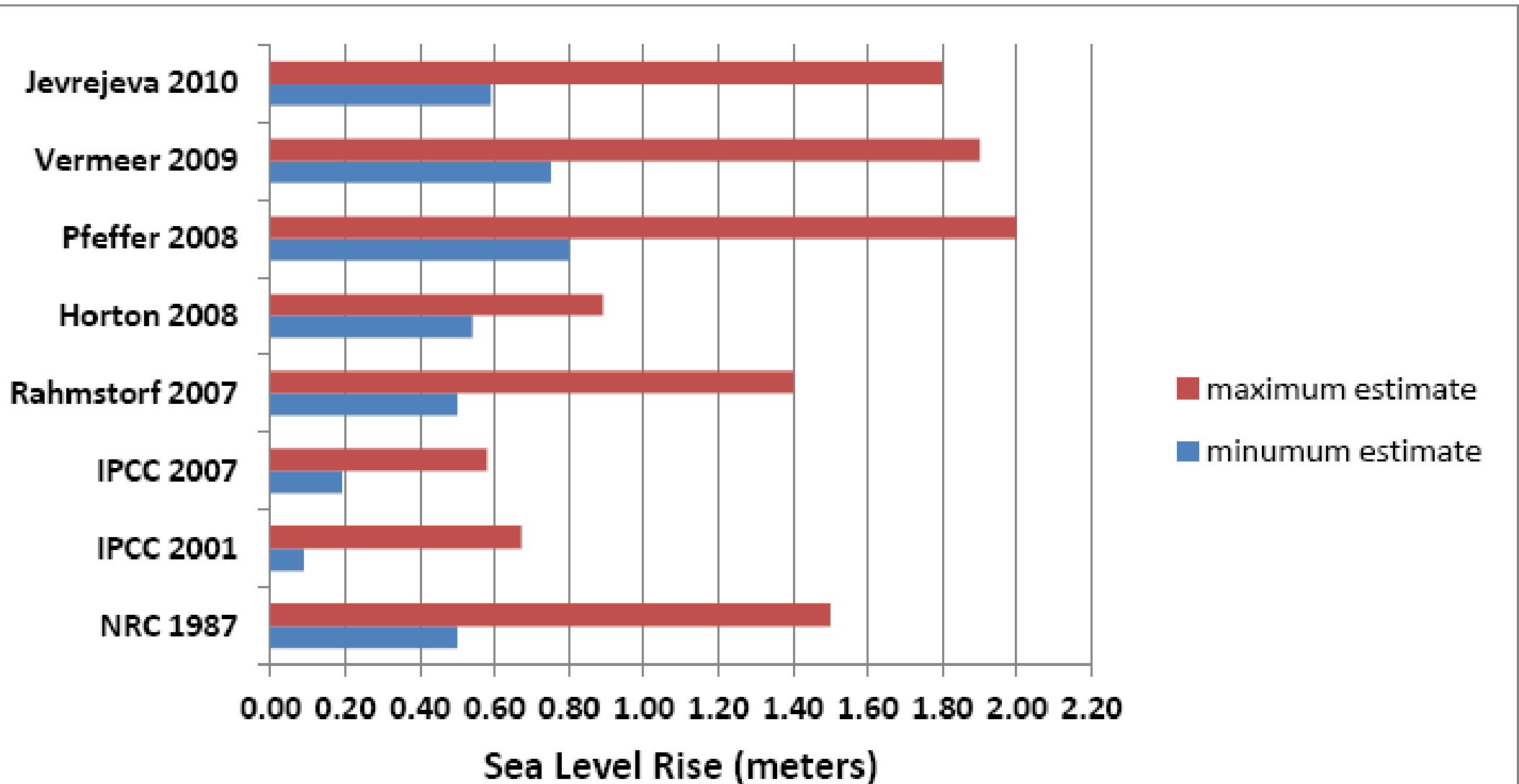
2007 IPCC



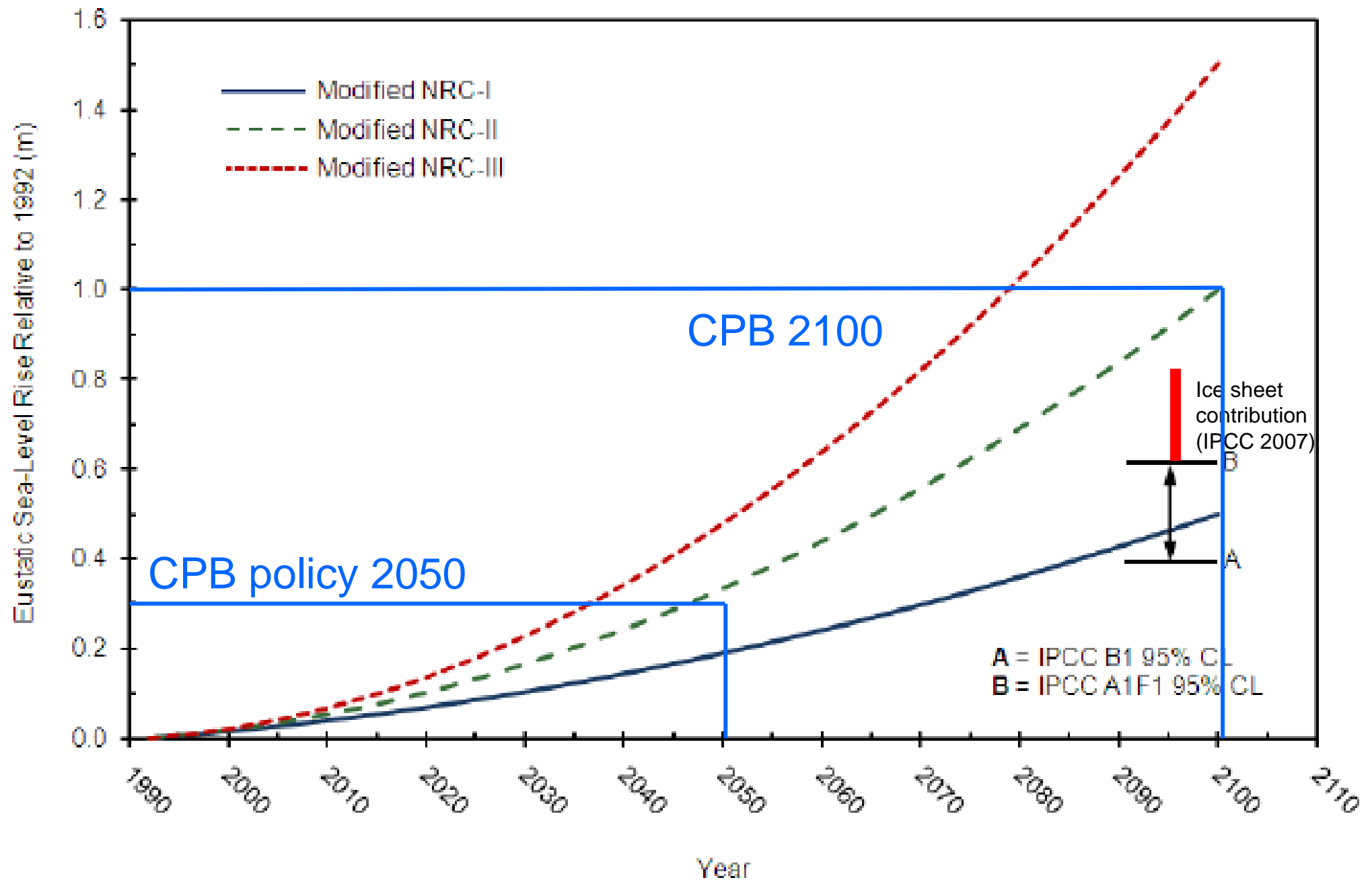
Measured SLR 1992 – 2011 (BoM)



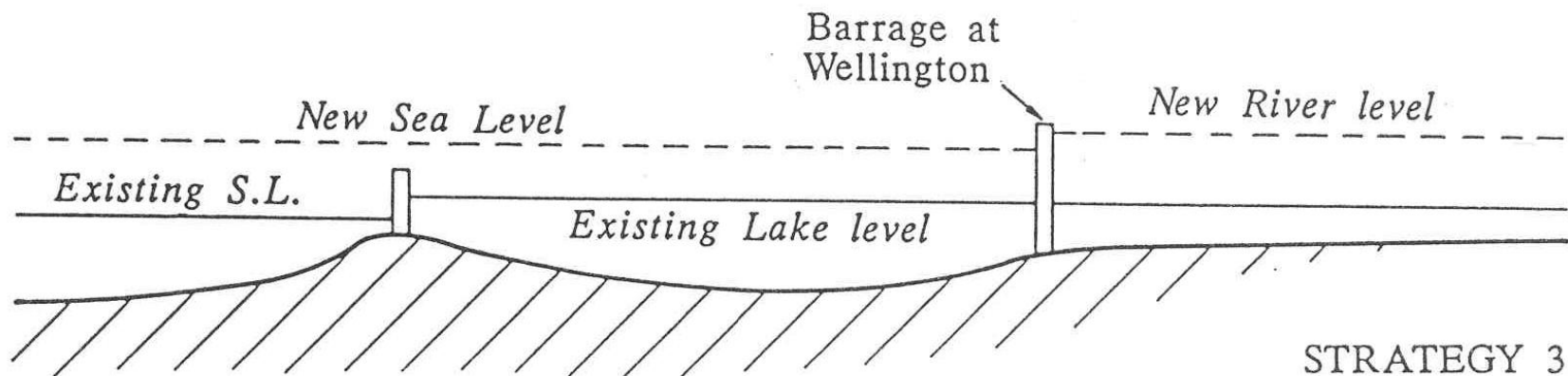
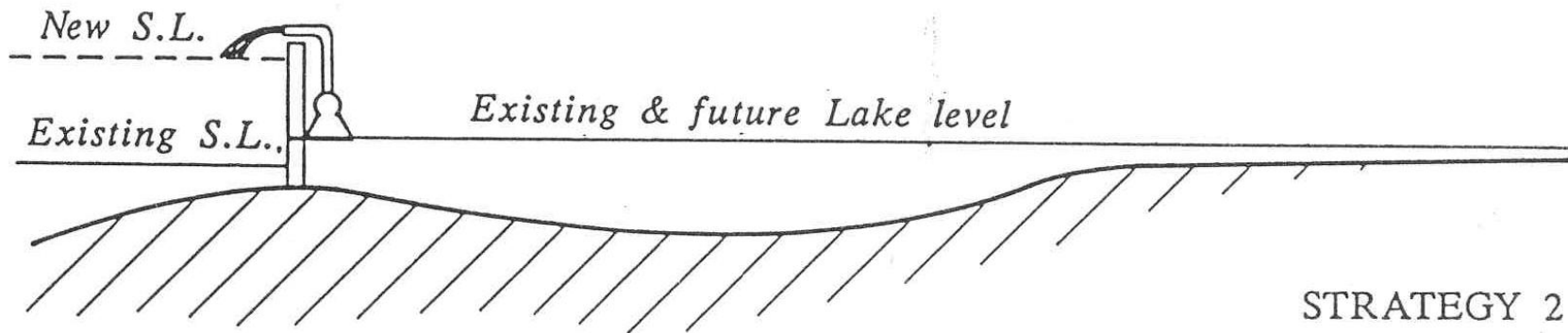
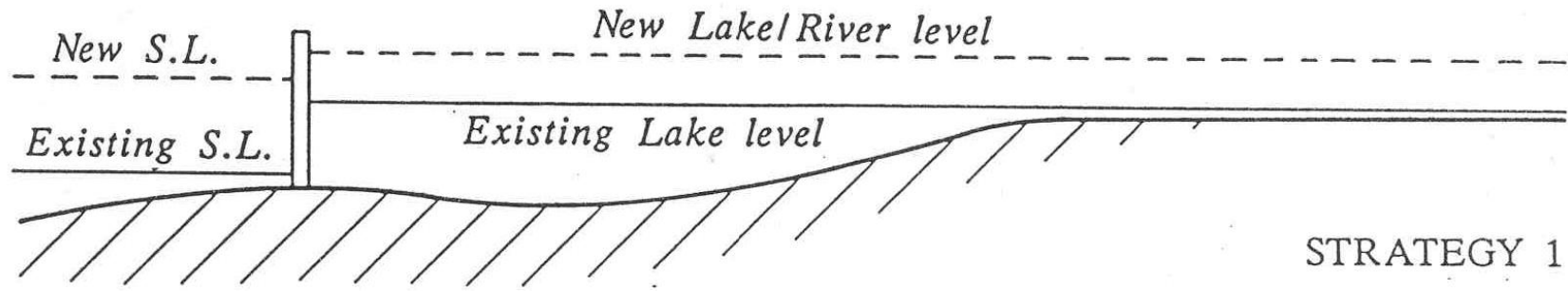
Sea level rise projections (USACE 2011)



US curves for coastal design



Adaptation scenarios (1.5m SLR)



Government
of South Australia

Costs (1988)

Table 4.5.3

Preliminary costs of strategies for coping with 1.5 m sea level rise at River Murray terminal lakes

ITEM	STRATEGY		
	1	2	3
BARRAGE	\$28M	\$27M	\$ 50M+
PUMPS	-	\$51M	-
PUMP OPERATION (discounted present value)	-	\$77M	-
DYKES TO PROTECT LAKE & RIVER TOWNS	\$22M	-	\$ 22M
ROAD RECONSTRUCTION	\$ 4M	-	\$4M
WATER SUPPLY DOMESTIC & IRRIGATION	-	-	\$180M
LEVEES TO PROTECT DAIRY SWAMPS	\$20M	-	\$ 20M
TOTALS	\$74M	\$155M	\$276M+

References

- Rolls J (1988), *The Murray under climatic change*, Proc. *Greenhouse '88: Planning for climate change*, Department of Environment and Planning, pp. 51-58.
- Murray-Darling Basin Commission (2002), *The Murray Mouth, exploring the implications of closure or restricted flow*, ISBN: 0 9581614 0 2.
- McInnes KL, Suppiah R, Whetton PH, Hennessy KJ and Jones RN (2003), *Climate change in South Australia*, Report on: Assessment of climate change, impacts and possible adaptation strategies relevant to South Australia, CSIRO.
- Matthews C (2005), *Sea level rise and climate change: implications for the Coorong and Lakes Alexandrina and Albert RAMSAR site. A preliminary investigation*. Conservation Programs South East, Regional Conservation, Department for Environment and Heritage.
- Suppiah R, Prestion B, Whetton PH, McInnes KL, Jones RN, Macadam I, Bathols J and Kirono D (2006), *Climate change under enhanced greenhouse conditions in South Australia*, An updated report on: Assessment of climate change, impacts and risk management strategies relevant to South Australia, CSIRO.
- Webster IT (2009), *A preliminary assessment of the impacts of sea level rise on water levels in the Coorong*, CSIRO, ISSN: 1835-095X.
- Short A and Cowell P (2009), *Coorong sea level rise vulnerability study*, Report No. CS 0902 for the SA Department for Environment and Heritage.

Questions



Government
of South Australia