

A photograph of a desert landscape featuring unique, eroded rock formations. The scene is bathed in warm, golden light, likely from the setting or rising sun, highlighting the textures and colors of the sandstone. The sky is a clear, pale blue. The foreground shows a sandy, undulating terrain with some sparse, low-lying vegetation.

Addressing environmental, socio-economic & cultural values in managing a World Heritage Area:

- A case study

Nick Conner & Mal Ridges

CEESP & NSW Office of Environment & Heritage

Scope of presentation

1. Background to natural & cultural Outstanding Universal Value of WHA.

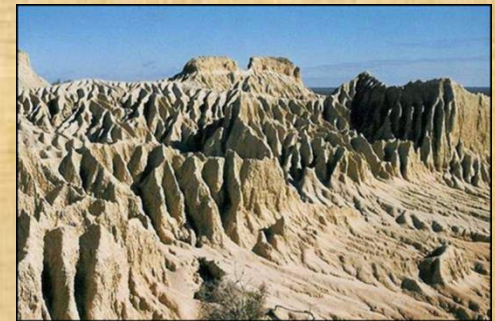
2. OUV mgmt. & socio-economic & cultural values of WHA stakeholders

3. Using a 5-capitals framework to help WHA managers show how improving stakeholder values also protects the OUV of the WHA



1.1. Background: Willandra Lakes Region

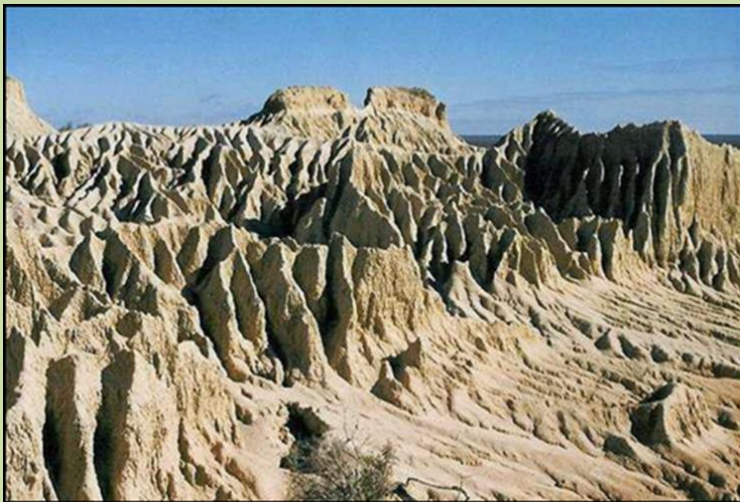
- WHA incl. relic lake system from >40K years ago; incl. grazing properties, Mungo National Park, wind-eroded 'Walls of China' tourist attraction (38K visitors p.a.)
- Bones of extinct megafauna from wetter period & record of human presence in landscape from >40K year ago
- Changing geo-electromagnetism.
- Now semi-arid fragile environment subject to droughts, overgrazing, erosion, rabbits, feral goats, weeds
- Depopulation, outback tourism.



1.2. Outstanding universal value of WHA:

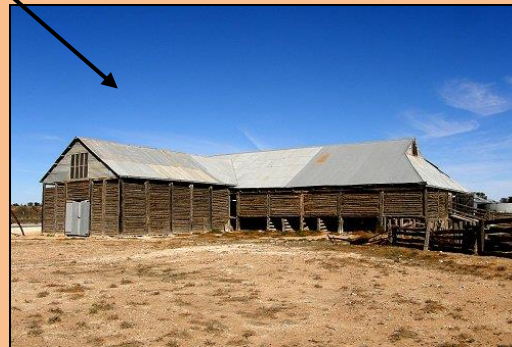
Natural values:

- (i) outstanding example of significant geomorphological processes over last 2M years
- (ii) Evidence of extinct marsupial megafauna spp.: giant kangaroo, giant wombat, emu, diprotodon



1.3. Outstanding universal value of WHA: Cultural values

- Exceptional record of human interaction with landscape over last 15K yrs; e.g. middens, fireplaces re hunting, fishing, changing geo-electromagnetism,
- Fossil footprints, 19-23K yrs old
- 40K yr old remains of 'Mungo Lady' (oldest cremation in World) & Man
- History of European exploration of interior & ag. expansion westward



2.1 Stakeholders in WHA

- Private landholders (70% of area): Economic & financial values relating to farm management in a semi-arid area.
- Parks Service (30% of area): Environmental values re biodiversity conservation & tourism.
- Land Management Agencies: Environmental values re conservation of soils subject to drought, flooding, erosion, loss of fertility.
- Traditional owners: Cultural values for 3 Indigenous groups, cultural connections to the landscape impose responsibility for protection of artefacts, cultural practices & landscape health.
- WHA managers: Archaeological values re Aboriginal heritage & European grazing industry > 1820.
- Local town businesses: Economic & social values assoc. with ag. industry, tourism services.

2.2. Rethinking management of WHA OUVs

- Mgmt. of WH values supervised by mgmt. Committee with reps of national park, landholders, traditional owners, scientists et al. via Plan of Management (POM)
- WHA Managers focus on on-site direct physical measures to protect OUV.
- but want to better understand & how stakeholder interests stakeholder interests affect POM actions.
- Mgrs & researchers investigating new reporting framework that shows linkages between socio-economic, environmental, & cultural values of stakeholders & OUV
- Using 5 capitals...



3.1. Five capitals: definitions

- ***Social capital*** – social bonds, shared beliefs about way things should be. (esp, relevant to aboriginal community wellbeing & culture)
- ***Natural capital*** – nature, biodiversity, land & natural resources which community depends on (esp. relevant to land managers, biodiversity conservation)
- ***Human capital*** – skills, health, education of individuals (relevant to land managers, biodiversity conservation, local community, grazing & tourism industry; land managers)
- ***Financial capital*** – level, variability of income sources & access to credit/ savings, (relevant to graziers, tourism industry)
- ***Physical capital*** – capital items associated with economic activity e.g. infrastructure, equipment & biological resources e.g. crops, livestock (relevant to graziers, tourism)

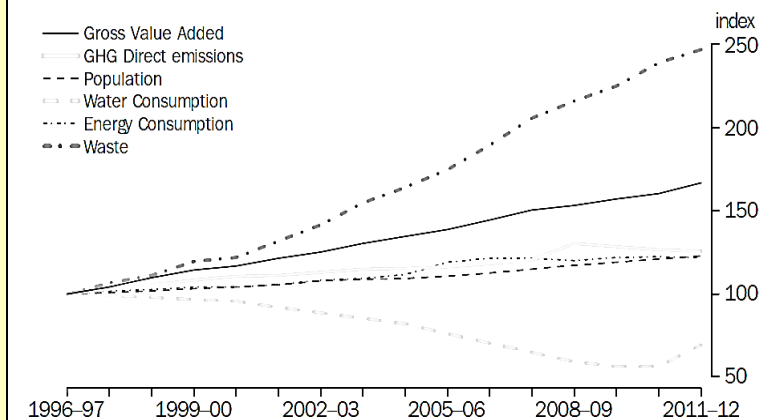
3.2. Measuring capitals & change in capitals in WLR WHA

Capital	Indicator	Data Source
Natural	Landscape stability	Soil quality data on wind/ water erosion, exposure etc.
Social	Volunteering	Census data, surveys
Financial	Farm income	Ag Stats
Produced	Local economy, farm assets incl. livestock	National Accounts, Ag Stats
Human	Diversity, age group, employment	Census data, surveys
Cultural?	Time on country, language spoken, participation in decision making & cultural activities	National Aboriginal & Torres Strait Islander Social Survey. <i>Community-defined cultural wellbeing reporting</i>

- NB. Need measurable indicators & metrics for base line & change

Table A1: European capital accounts: land cover (stocks and flows account)

SELECTED SOCIOECONOMIC AND ENVIRONMENTAL MEASURES, Australia, 1996-97 to 2011-12



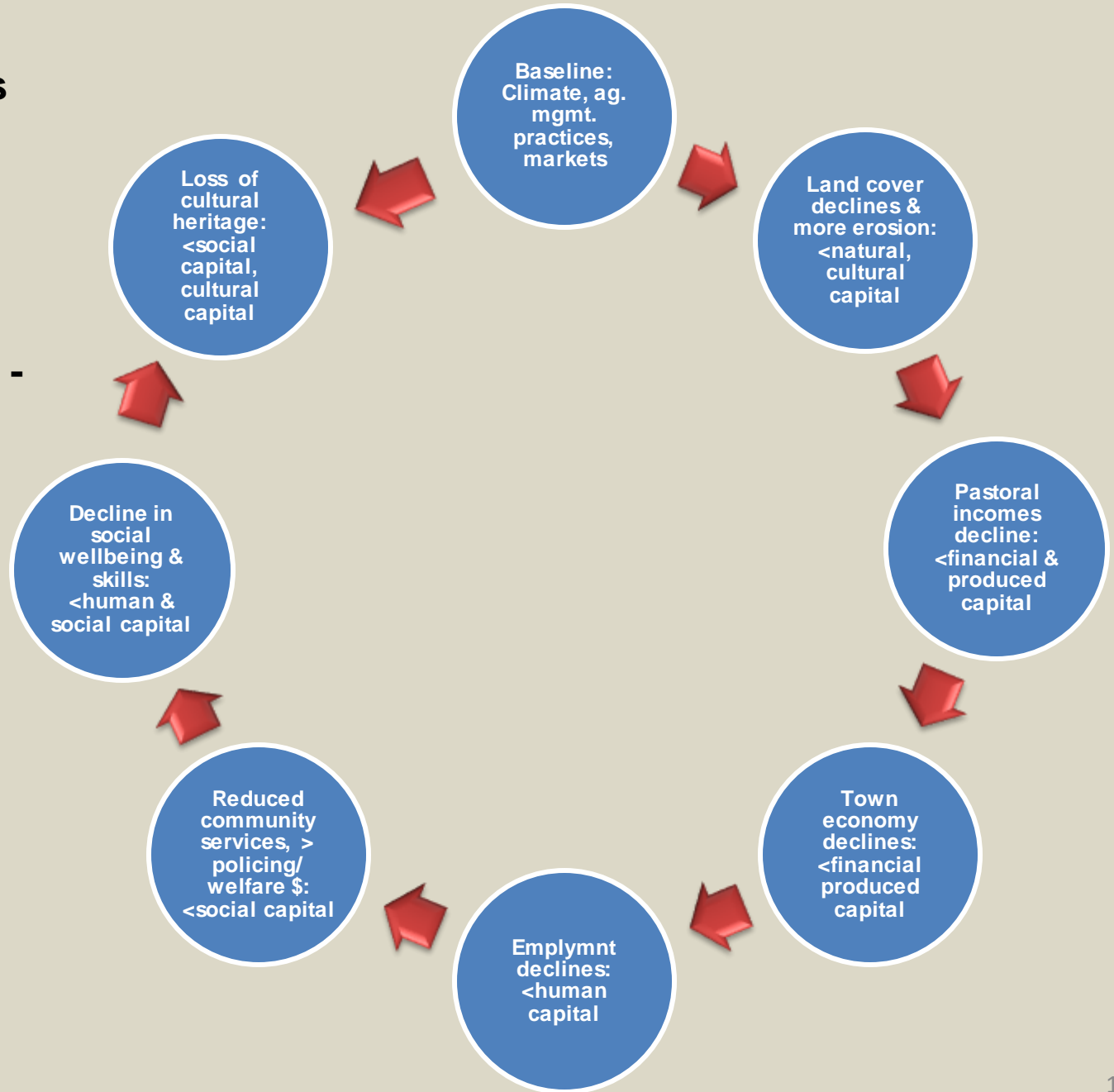
Note: Index: 1997 = 100

3.3. Community-defined cultural wellbeing indicators & actions

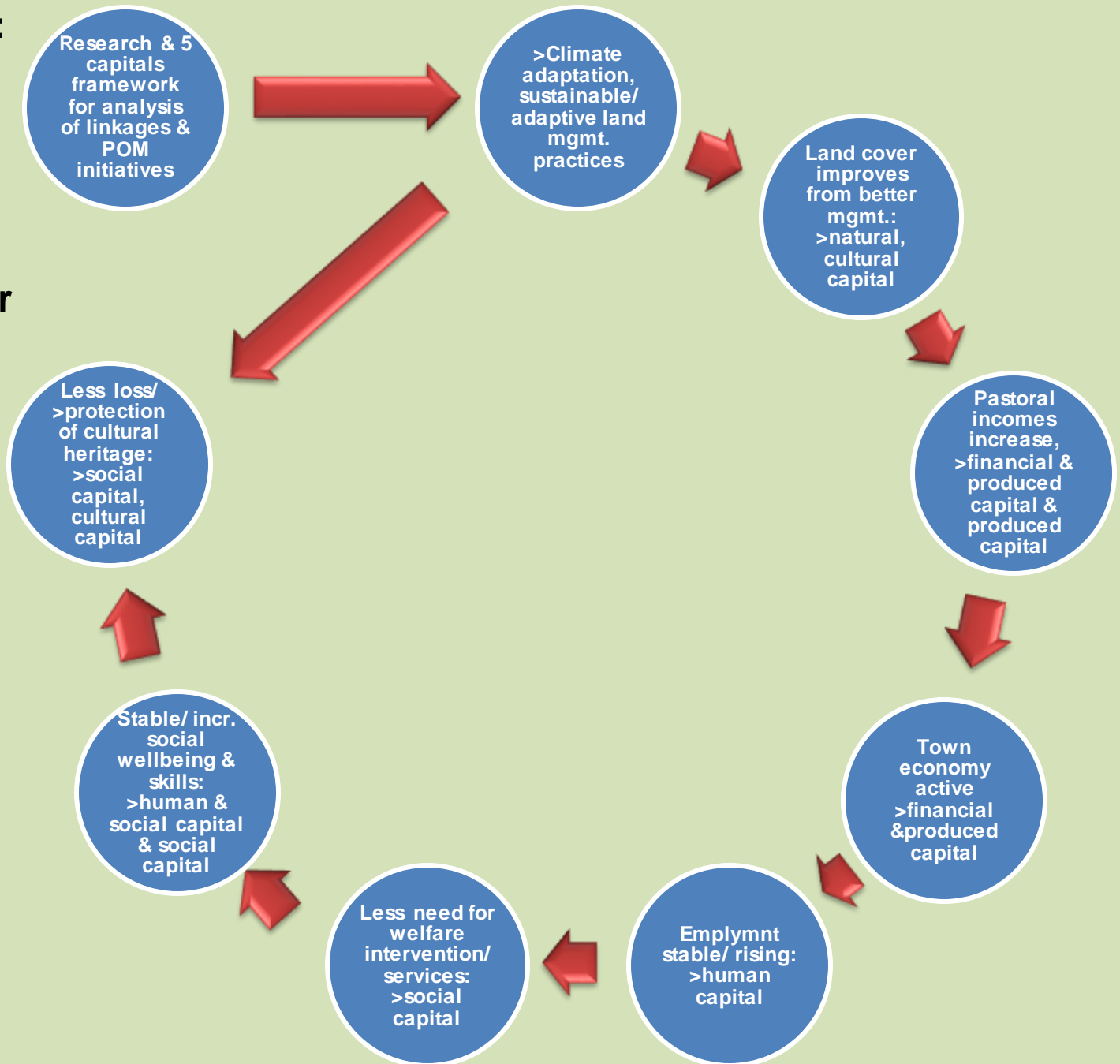
Indicator	How core value is enabled
Filling the gaps in cultural knowledge that kids have about Mungo	Telling stories out on Country, culture camps
Cultural knowledge about Mungo is strengthened	Bringing people back together again for camps, enable telling and sharing of stories
Knowledge is better linked to experience of Country	More direct involvement on on-ground management at Mungo
Knowledge coming from Country is strengthened	Walking Country, sitting in the bush round a fire
Wider respect of culture – especially researchers	Get researchers on Country, teach them in cultural setting

Youth showing more respect	Elders teaching about respect in a cultural setting, like culture camps
Being comfortable and confident on Country	Familiarity with Country, more time spent out in it
Stronger sense of identity in youth	Supporting them to speak their culture, instil a sense of pride in culture
Eagerness in youth to follow-up on cultural activities	Provide multiple opportunities for youth, don't try to achieve everything in one camp
Improved access to Country	Too hard at the river- speed boats, yobbos.
Kids learning more about Mungo	Taking Mungo knowledge to schools

**3.4. WLR WHA:
Approach shows
causal
relationships
between 5
capitals &
indicators:
current situation -
a vicious circle**



3.5. WLR WHA: Causal relationships between 5 capitals & indicators: possibilities for a virtuous circle



3.6. Hopeful next steps

- WHA managers understand connections between protecting multiple values & protecting OUV., & need for broader approach
- Get Mgmt. Committee/ stakeholder agreement to collect information for 5-capital accounts
- Collect data & track over time to see effect of plan of management actions & need for revision etc.
- *Can approach help other WHA managers understand relationship & synergies between stakeholder values & OUV in multiple use sites?*



Thanks for listening



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