



The Benefits of Ecology to Human Health

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4th water sensitive cities conference

Accelerating the transition Brisbane — 26 to 28 March 2019





Ecology


def.... The **relationship** and interactions between organisms and their environment.

Indigenous People have known this for over 60,000 years.

All natural assets form traditional Aboriginal landscapes – the landscapes and environment **is** Indigenous cultural heritage.

Indigenous health and well being is intrinsically tied to Country.

Yet since colonization (globally) we are still trying to recognise and value the benefits' – is there something wrong here?



“Traditional society was founded on respect for the environment. Traditional people recognised their dependence on the ecosystem. Group behaviour and resource use were directed by elders who were guided by traditional knowledge. Long-term observation of their country and its many species gave traditional people detailed knowledge of numerous inter-relationships. This added to their resource management decisions. Their dependence on, respect for and awe of their environment governed their lifestyles when the environment changed. They survived Ice Ages and sea-level fluctuations of hundreds of metres. When resources were weak those resources were protected by ‘closures’ imposed by the elders. Other control measures were provided by the transient and cyclical use of camping places and by restrictions imposed by totem relationships. Eco-system services performed one function that might not now be appreciated — the traditional people related directly to the ‘country’, in its holistic complexity, and the people adapted when it changed.” (South East Queensland Traditional Owners Alliance 2008.)

Underpins Lifestyles

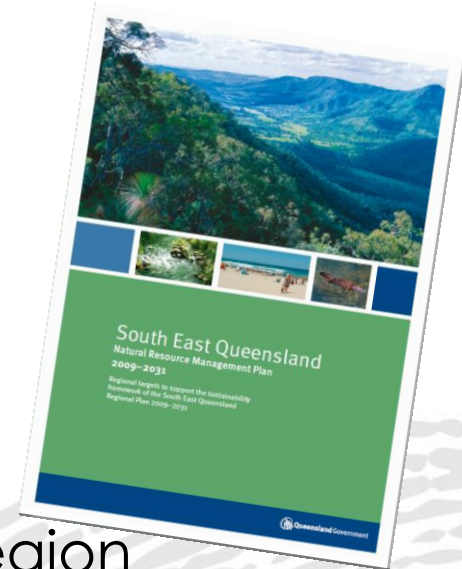


Social Connection

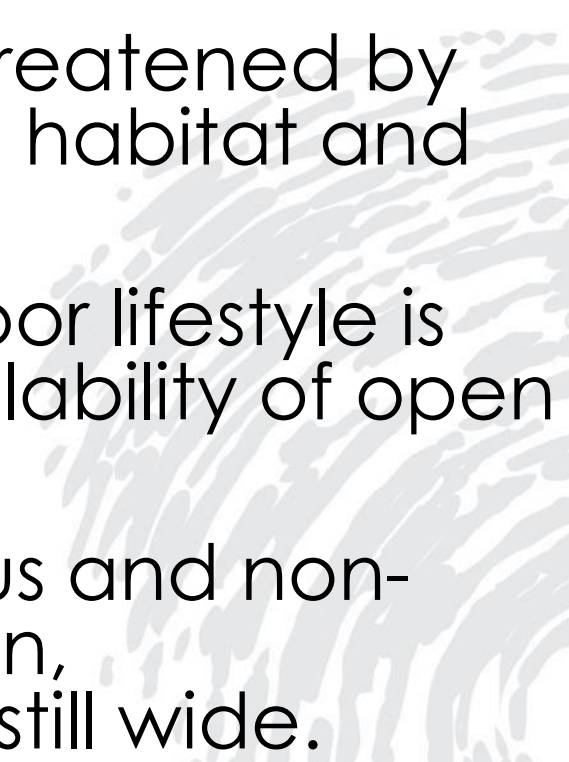


We even have a Plan!

- ❖ NRM Plan 2009-2031
- ❖ Whole-of-Community Plan
- ❖ Guiding Principles
 - Recognition that all natural assets in the region form traditional Aboriginal landscapes.
 - Natural resources supply a range of goods and services, or ecosystem services.
 - These services are essential for maintaining long-term economic, social, cultural and environmental sustainability and community well being.



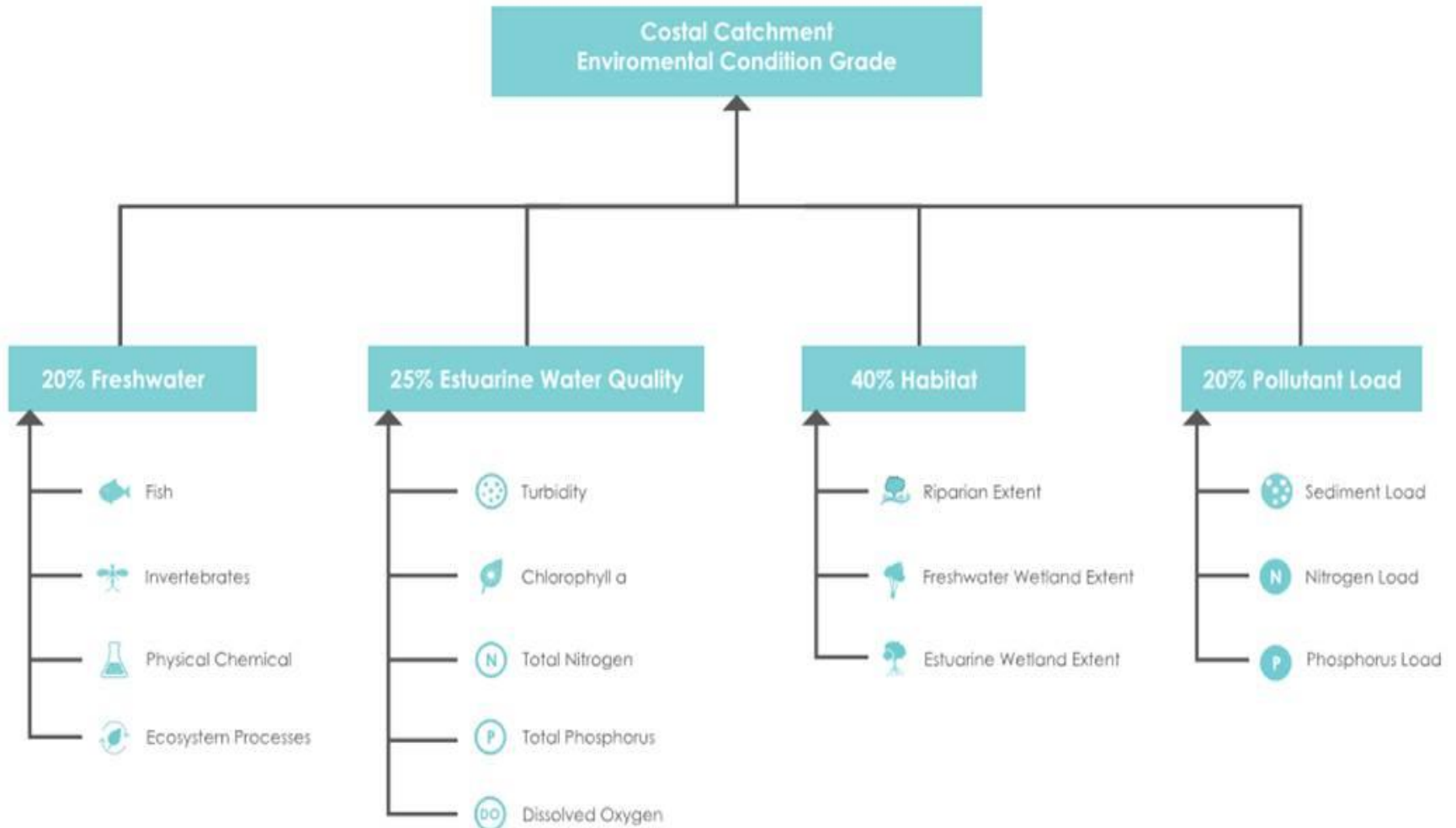
But there are challenges

- ❖ We continue to use more than our share of global resources.
 - ❖ The region's biodiversity is threatened by the continued loss of natural habitat and critical regional ecosystems.
 - ❖ Our ability to enjoy an outdoor lifestyle is limited by the declining availability of open space per capita.
 - ❖ The gap between Indigenous and non-Indigenous health, education, employment and housing is still wide.
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So what's the response?

- ❖ Traditional forms of planning and accommodating growth need to change.
- ❖ We need to plan our cities and towns with the environment in mind - not as an after thought or hindrance – much like the traditional custodians of this land did.
- ❖ We need to understand the pressures and the necessary management action to rectify.
- ❖ To do this we need to better understand the value & benefit of the environmental 'asset'.

The New Regime



Bays Environmental Condition Grade

50% Bays Water Quality



Turbidity



Chlorophyll a



Total Nitrogen



Total Phosphorus



Dissolved Oxygen

50% Habitat



Coastal Wetland Extent



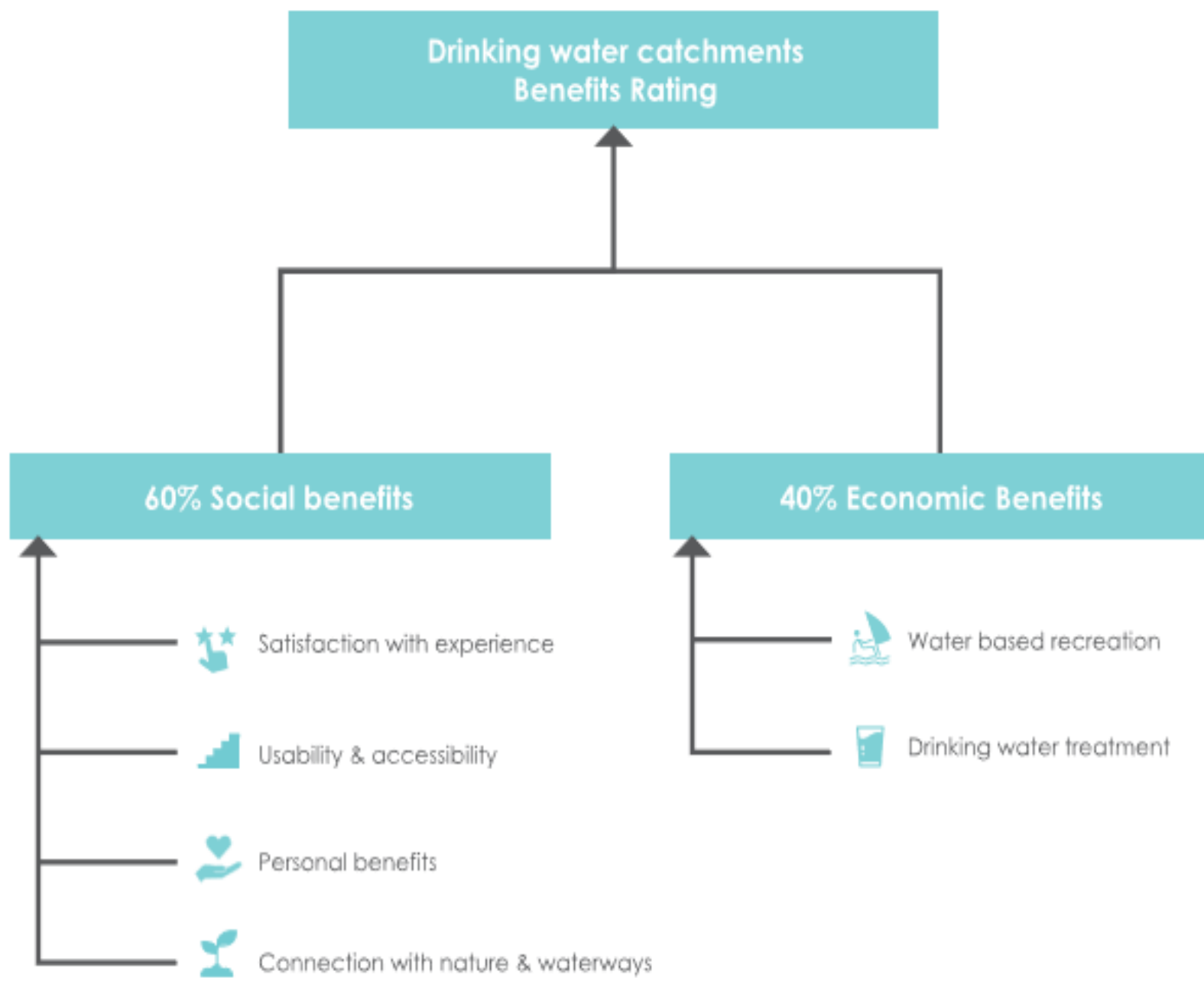
Seagrass Extent



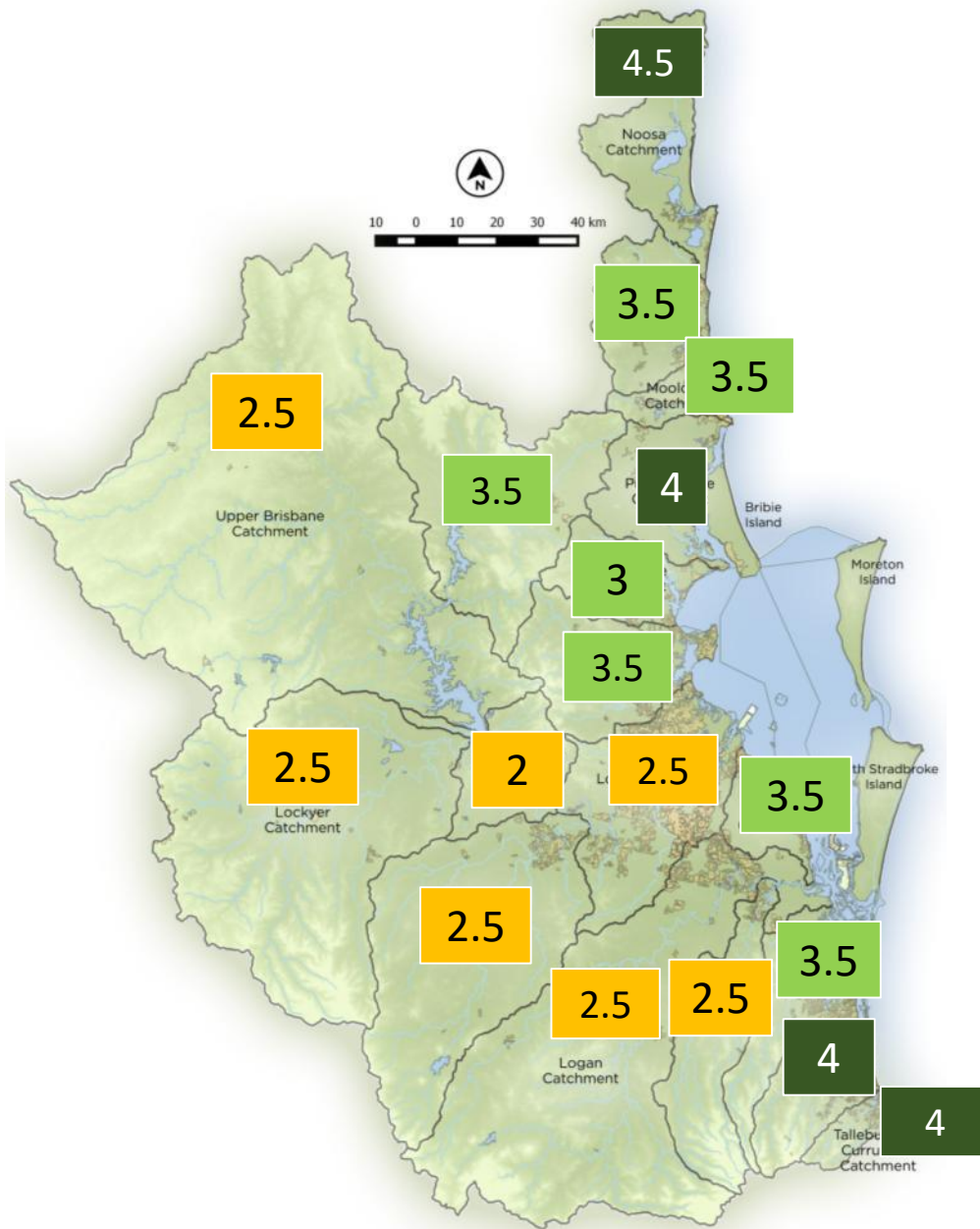
Seagrass Depth Range



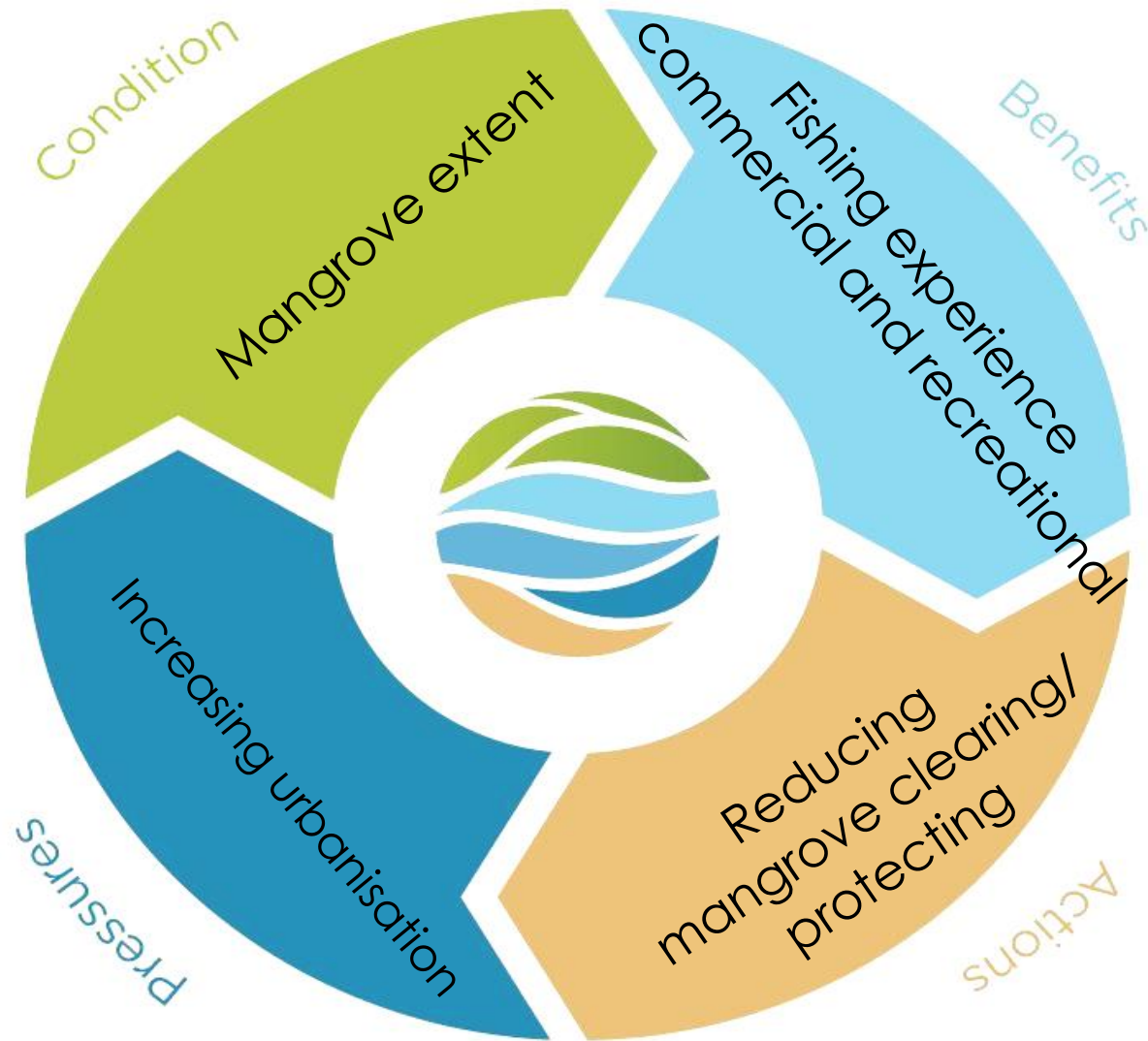
Mud Content



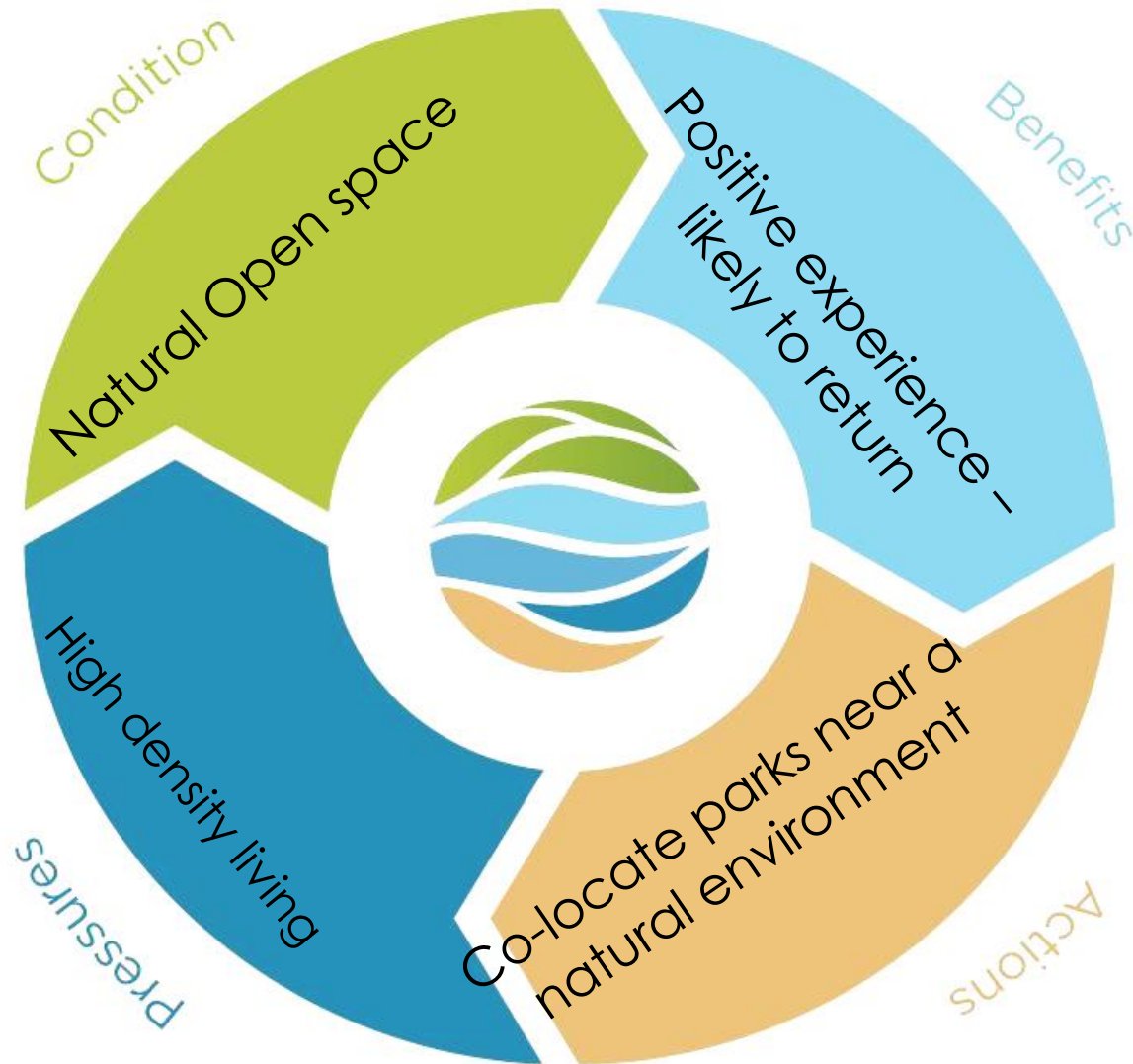
Satisfaction and Use (Benefits Rating)



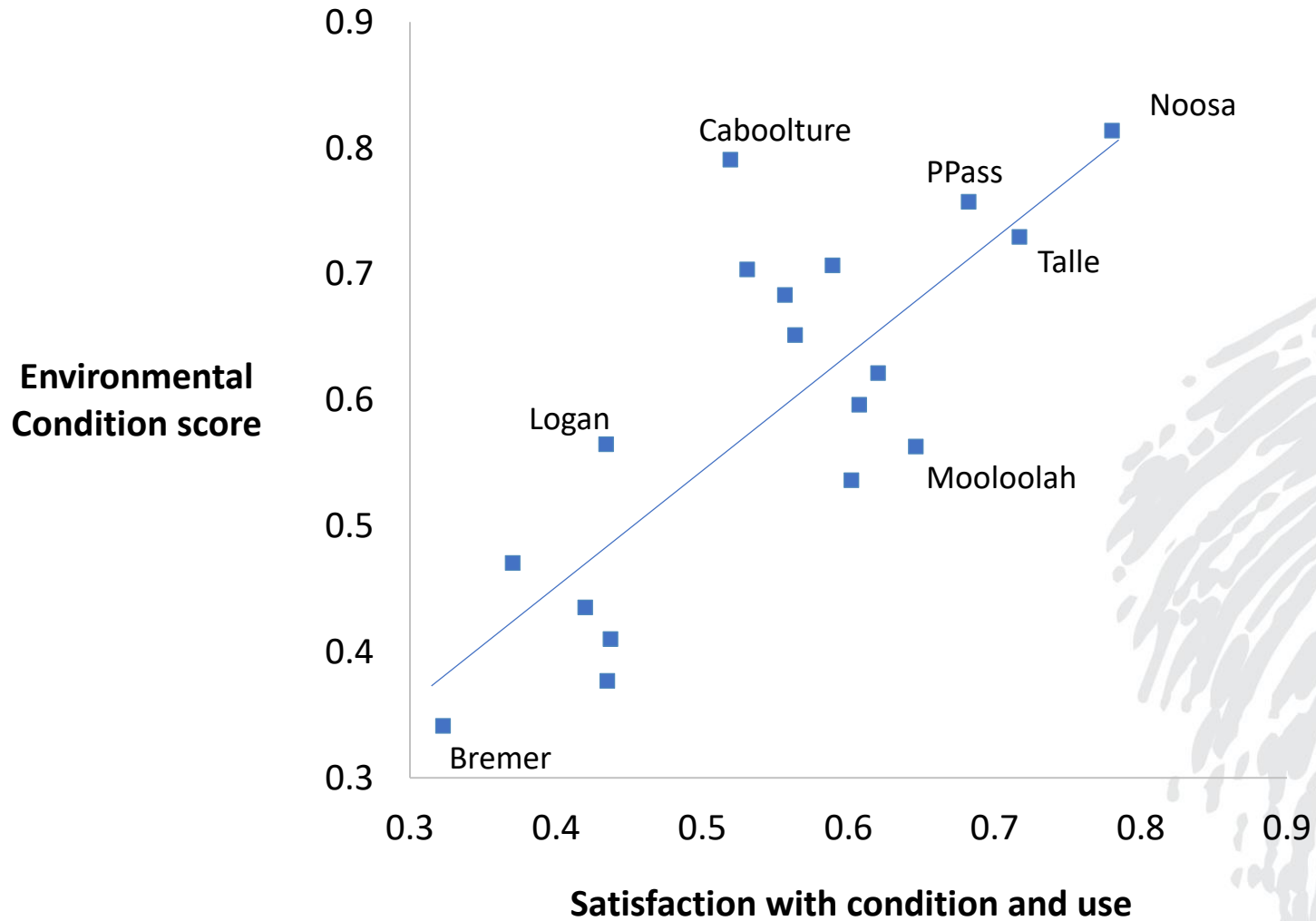
Linking Condition to Social and Economic Benefits



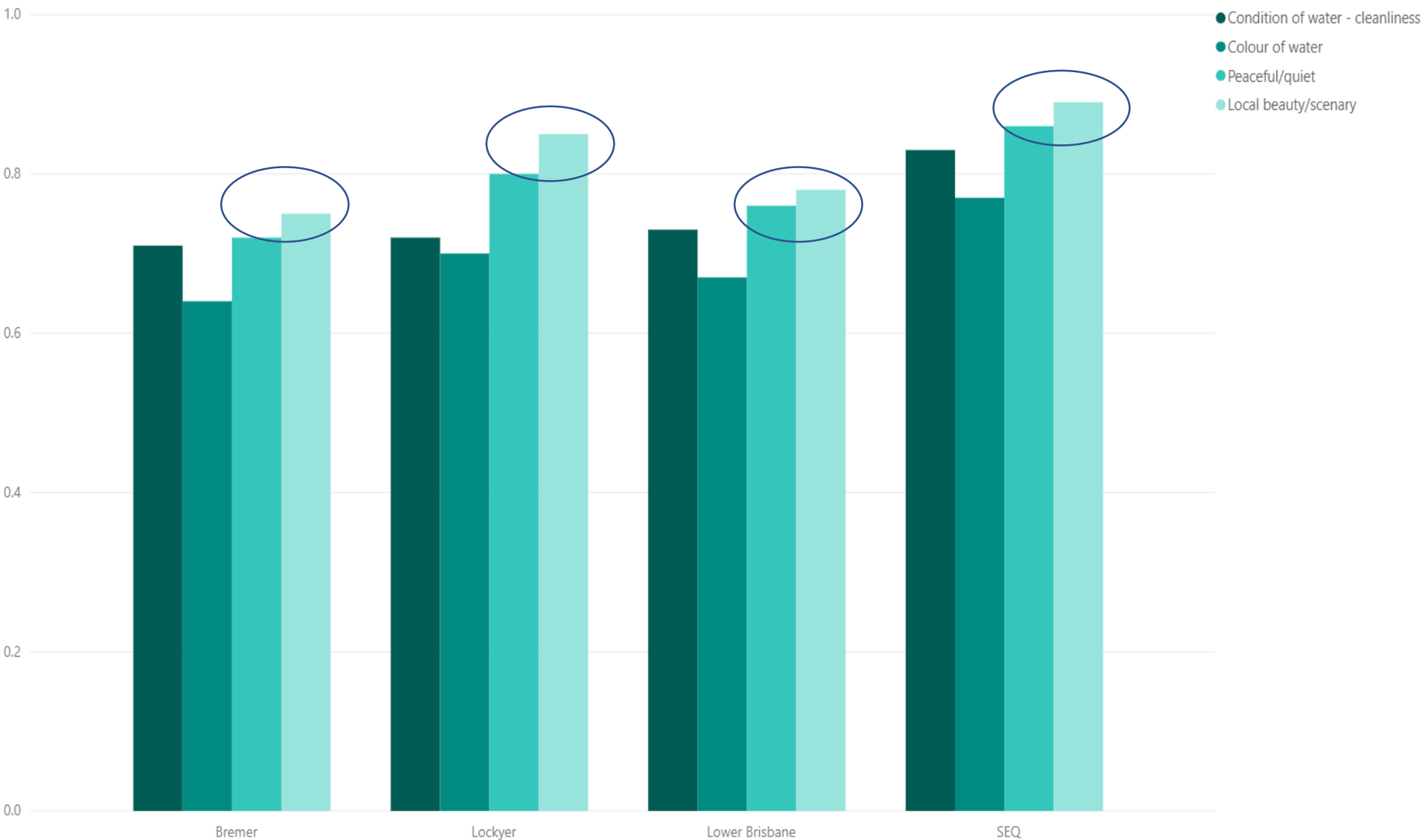
Linking Condition to Social and Economic Benefits



Environmental Condition Drives Satisfaction

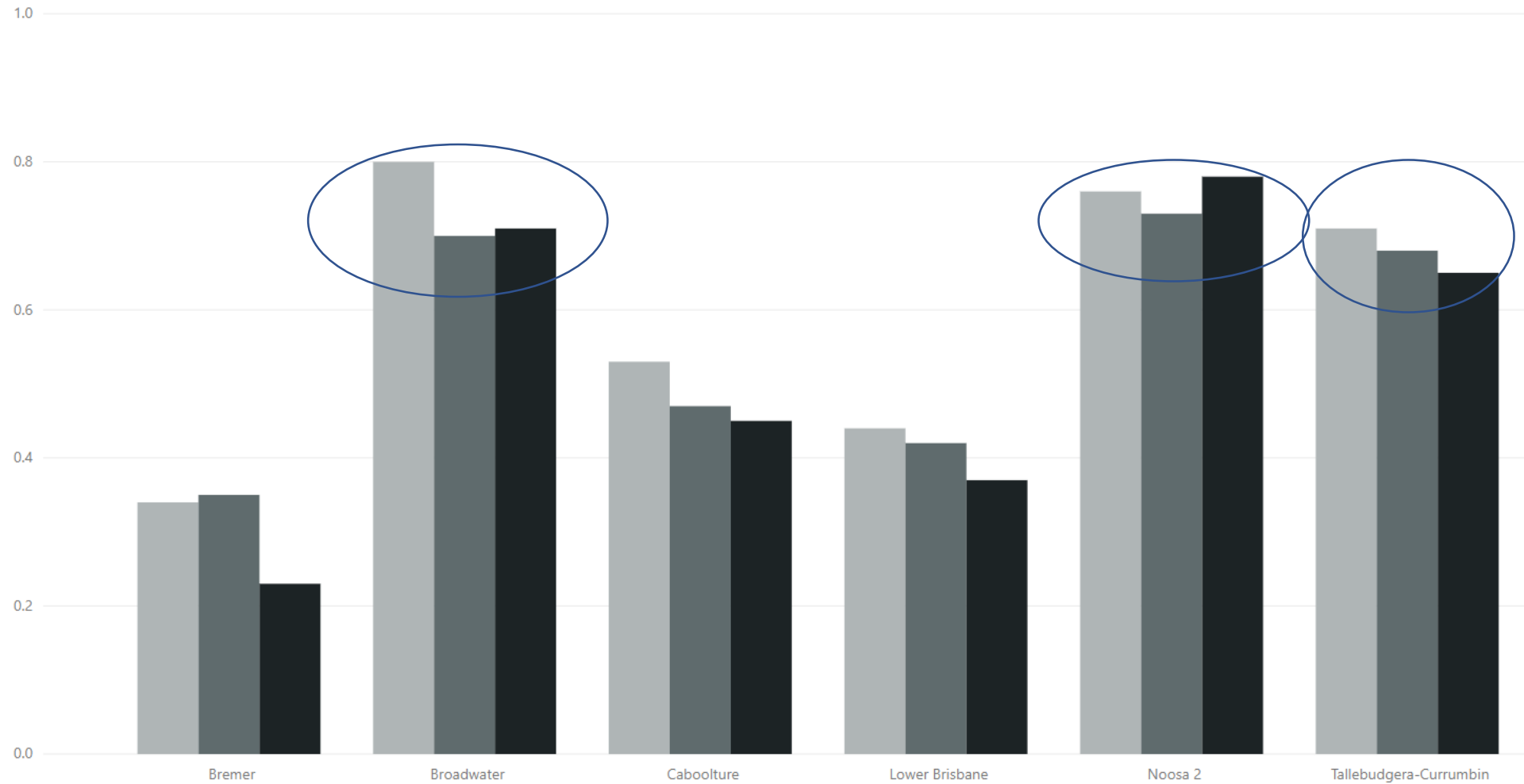


What Community Looks For When Choosing Recreational Sites



Benefits Community Gets From Waterways

● Rest & relaxation ● Social interaction ● Emotional benefit



Benefits – Social



63% people target waterways for recreation

80% of them target areas, good natural amenity

58% people think their local waterways are polluted

Benefits – Economic

Mt Crosby WTP – Unforested catchment



North Pine WTP – Forested catchment



Sludge removed

Flood year 2013 - 303 kg/ML

Non- Flood 2016 – 166 kg/ML

Flood year 2013 - 130 kg/ML

Non- Flood 2017 – 101 kg/ML

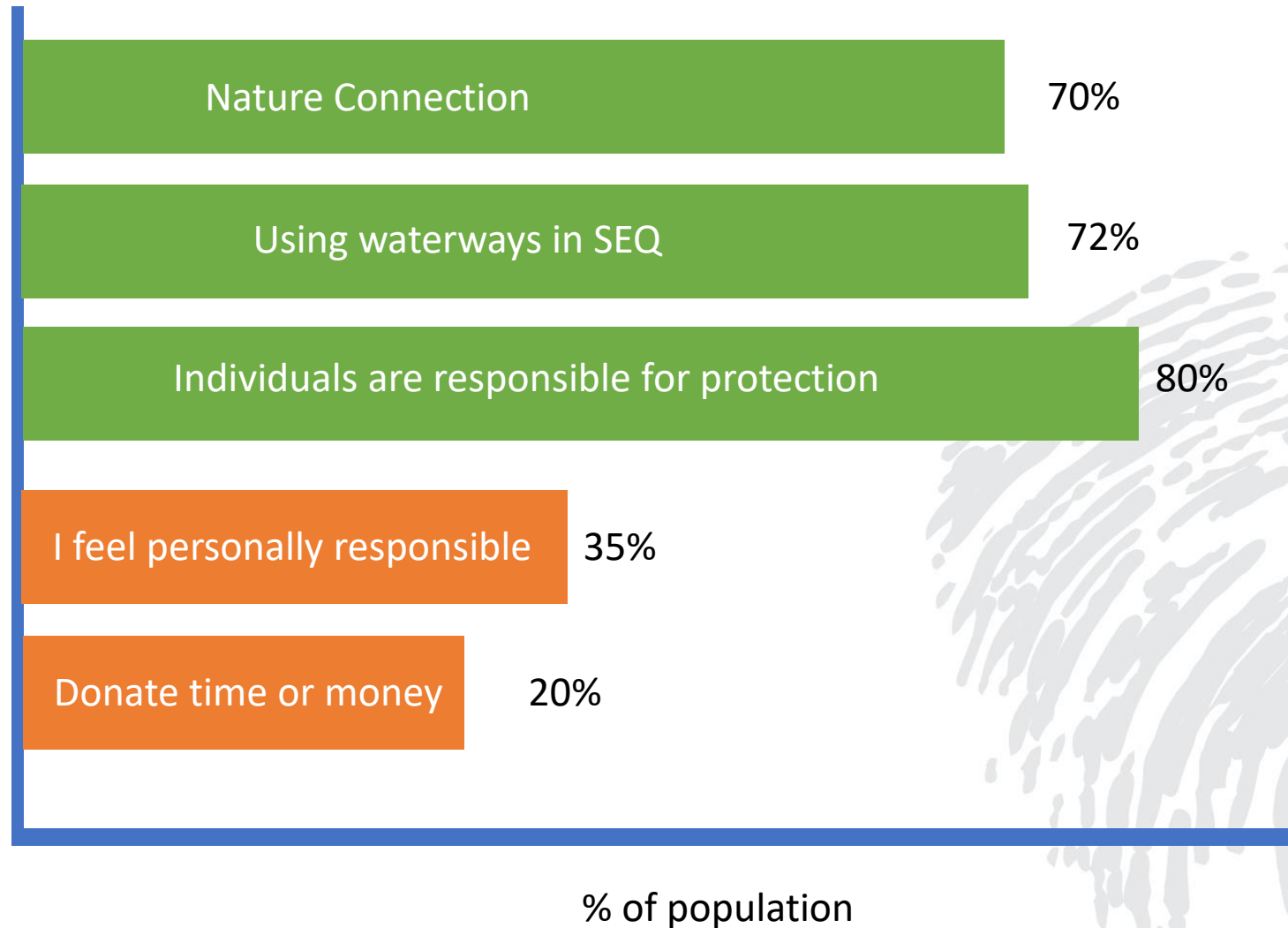
Benefits – Env improvement



5% improvement in
Riverside vegetation/wetlands
Estuarine habitat

= C- Bremer

Yet The SEQ Community Is Apathetic



Spot The Difference!

Level: Advanced

