



The contribution the Maroochy River makes to our economy using ecosystem services methodology

Natural Assets Matter

- 28 per cent of tourism based on natural assets
- 475,000 plus people engage in recreational fishing in SEQ
- 90% believe that protecting the environment is equal to (61.3%) or more important (29.2%) than economic growth
- 68% said natural environment was what mattered to them and why they liked to live in SEQ.
- 54% considered that the condition of the environment was getting worse despite the efforts of government, industry and the community.

Source: Managing What Matters 2010

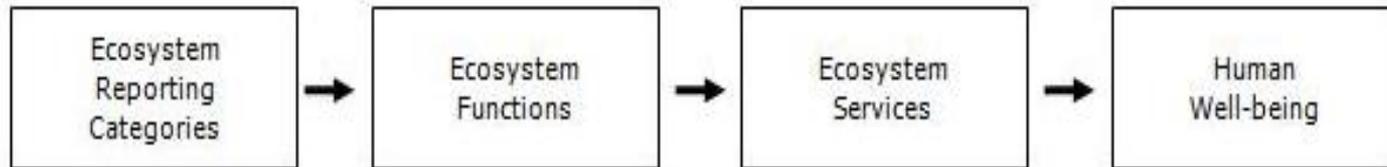
Natural Assets Matter

- Maroochy River provides many services: tourism, fisheries, recreation, wellbeing.....
- Ecosystem services: regulating; provisioning; cultural services
- SEQ Natural Resource Management Plan 2009-2031: targets based approach to taking care of our natural assets (worth \$7.1 Billion to the region over life of the plan if targets met according to a 2010 economic evaluation by Marsden Jacobs)

Ecosystem services

- The South East Queensland (SEQ) Ecosystem Services Project was initiated in 2005 and uses the Costanza methodology (2014)
- It involved SEQ Catchments, the Queensland Government and the University of Sunshine Coast. The main aim of the Project was to develop an 'agreed' framework for assessing the ecosystem services derived from the SEQ region, and to incorporate this information into natural resource management, policy and planning.
- The Australian National University supported the project through a funded PhD Scholarship.

What is the ecosystem services framework?



- Ecosystem service assessment in SEQ region results in services grouped by similarities in climatic conditions, geophysical condition, dominant use by humans, surface cover, species composition and resource management systems and institutions (32 categories). These are termed *Ecosystem Reporting Categories*.
- *Ecosystem functions* are defined as 'the biological, geochemical and physical processes and components that take place or occur within an ecosystem' (19 functions).
- Ecosystem services are defined in the Framework as 'the goods and services provided by ecosystems that benefit, sustain and support the well-being of people' (28 ecosystem services)
- Constituents of *Human Well-being* are described as 'aspects of human well-being that are improved through the use of ecosystem services or the knowledge that these services exist'. Fifteen (15) constituents of well-being have been incorporated into the Framework.

The basic rules

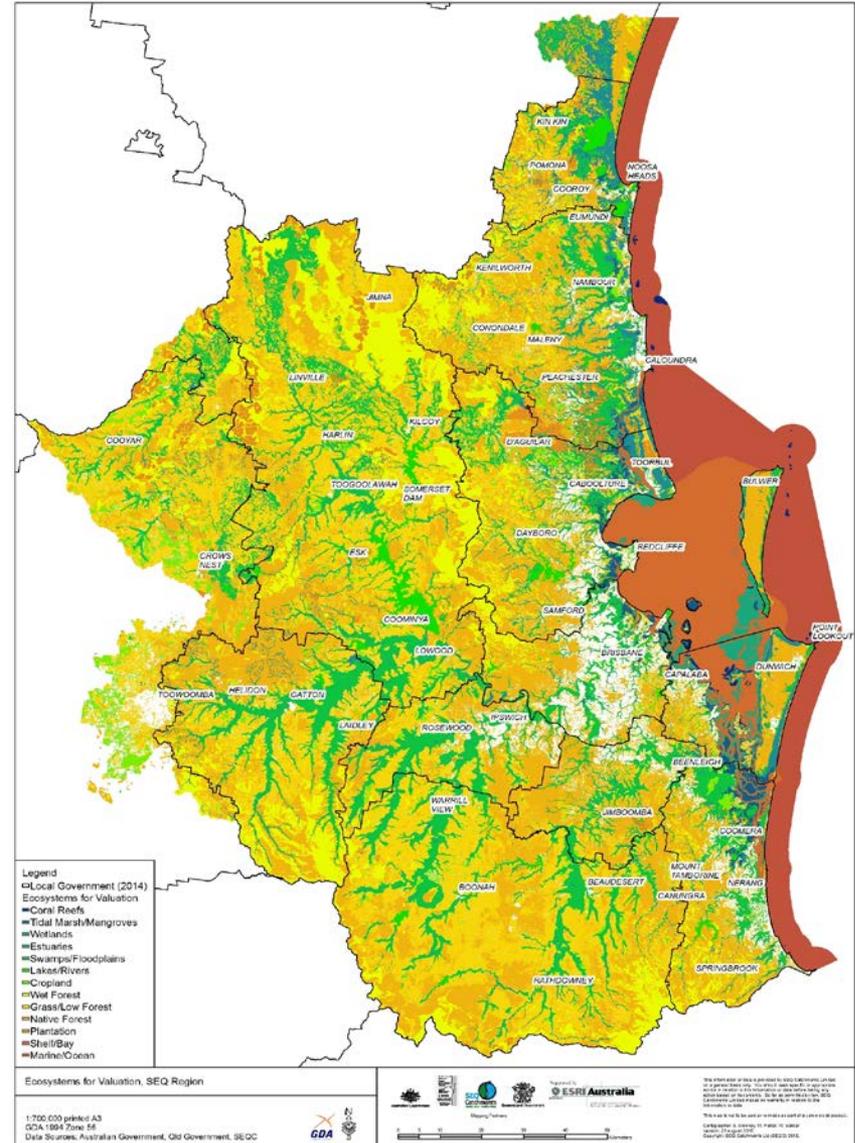
1. The bulk of the ecosystem services come from natural ecosystems
2. Ecosystem services is only one tool for nature conservation and understanding
3. The size, location and arrangement of ecosystem services is important
4. Ecosystems services is about landscapes and not species
5. Ecosystems services is a slowly growing knowledge set and should still be treated with caution

*THIS IS A COMPLEX JOB WHICH
HAS BEEN DISTILLED TO PER
HECTARE COSTS*

So what does it look like for the region once the services are spatially related and calculated out?

What natural assets give us

Biome/SEQ Class	Value (\$/ha)
Marine	1,368
Open Ocean	660
Coastal	8,944
Estuaries	28,916
Seagrass/Algae Beds	28,916
Coral Reefs	352,257
Shelf	2,222
Terrestrial	4,901
Forest	3,800
Tropical	5,382
Temperate/Boreal	3,137
Grass/Rangelands	4,166
Wetlands	140,174
Tidal Marsh/Mangroves	193,843
Swamps/Floodplains	25,681
Lakes/Rivers	12,512
Cropland	5,567



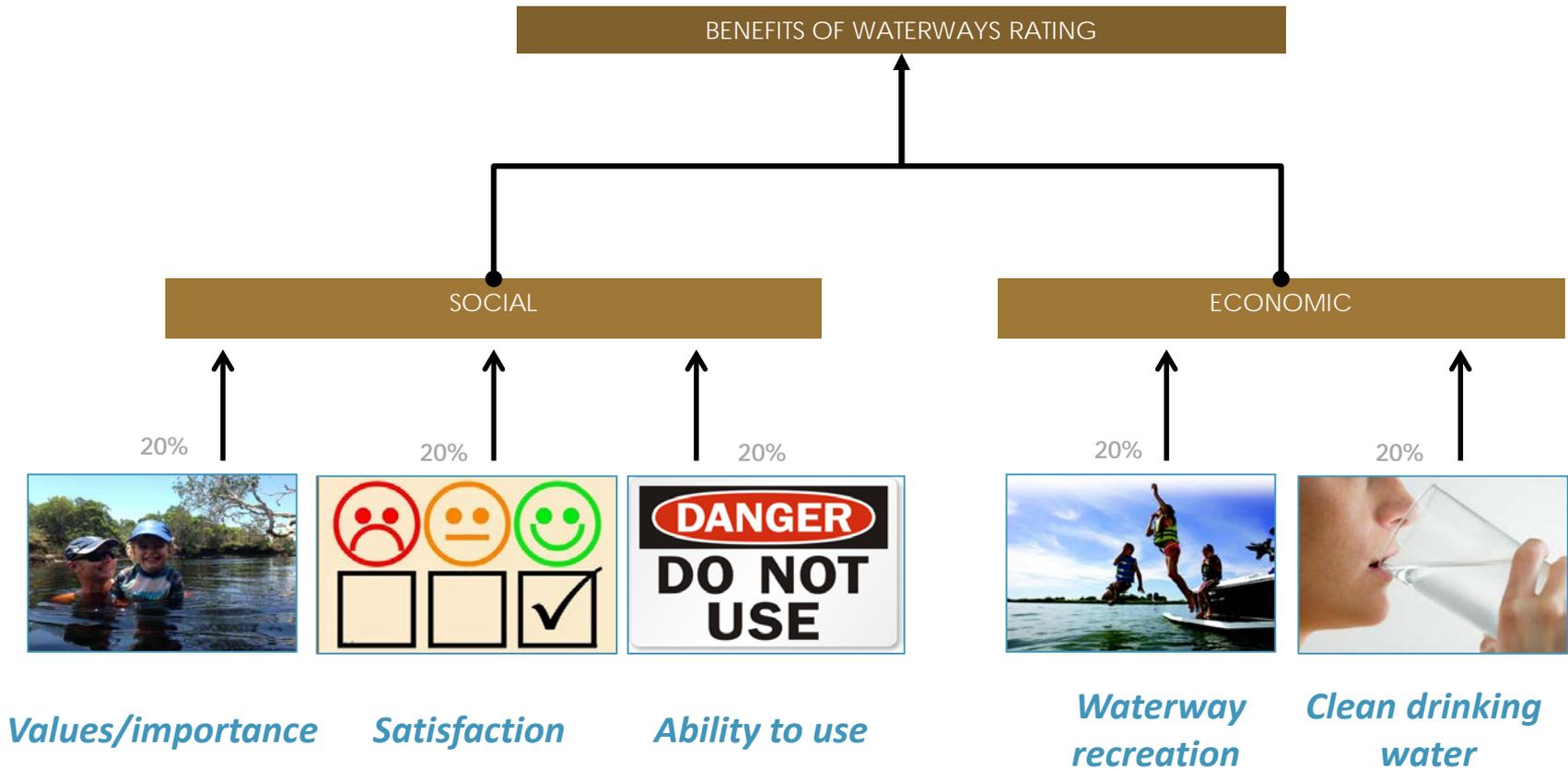
How much ecosystem service is offered by the Maroochy per annum?

Estuarine.....	4,130 ha	-	\$119.4 million per annum
Floodplain..	11,300 ha	-	\$290.2 million per annum
Wetlands....	17,060 ha	-	\$2,391.4 million per annum
Lakes.....	2,200 ha	-	\$27.5 million per annum
Mangrove...	41,100 ha	-	\$7,966.9 million per annum

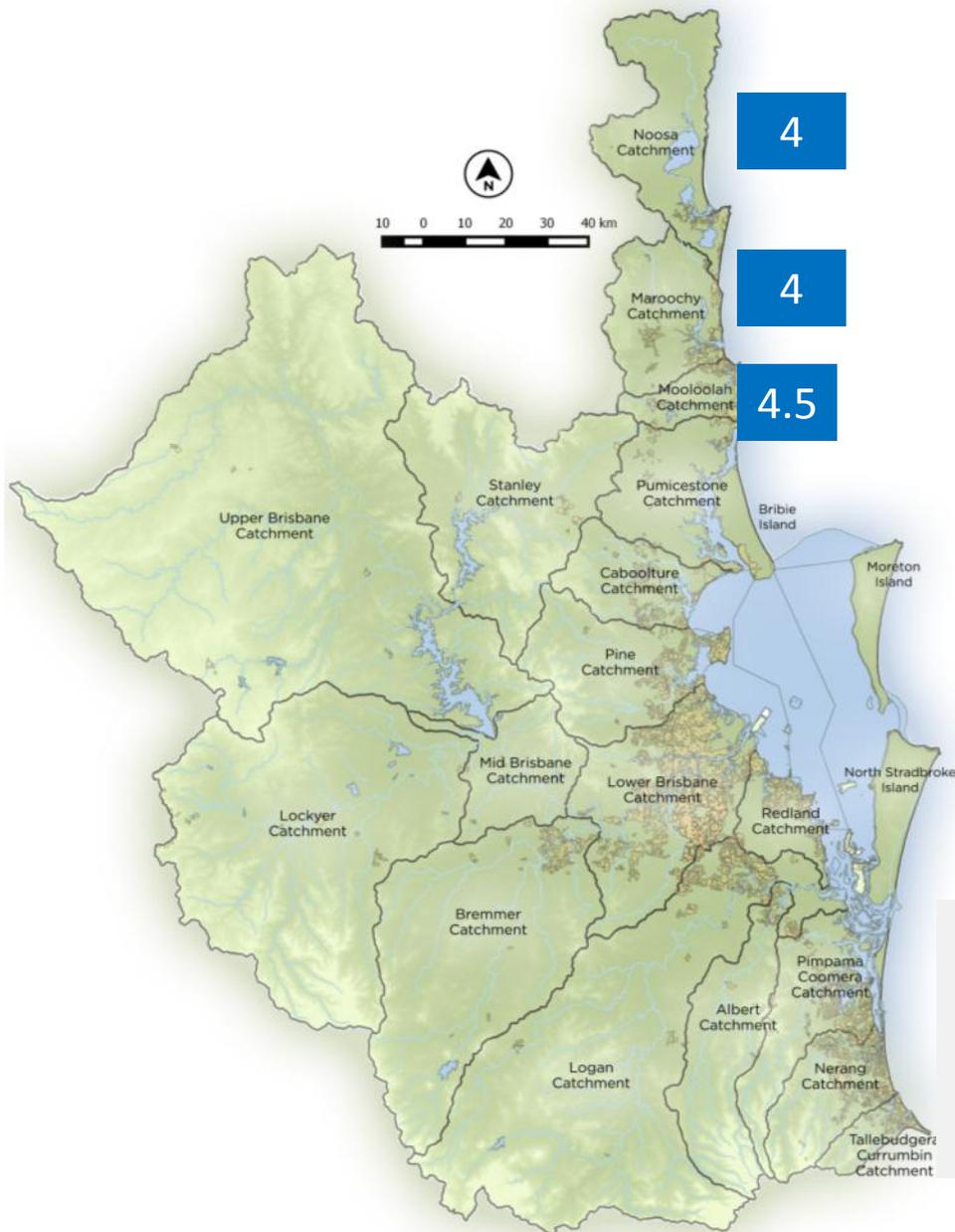
Source of area data: WetlandInfo - DEHP

So our Maroochy River (without all the other assets and forgetting coastal and marine assets) is worth around \$10,795.4 million per year to us.

Benefits Ratings



Benefits of waterways – Star rating



Noosa Catchment

- Very high recreation value
- Slightly lower satisfaction
- Not as happy with use
- 76% use waterways regularly
- 76% wants laws to be enforced

Maroochy Catchment

- Very high recreation value
- Very high satisfaction
- 55% believe shortages in clean drinking water will occur (nearly lowest)

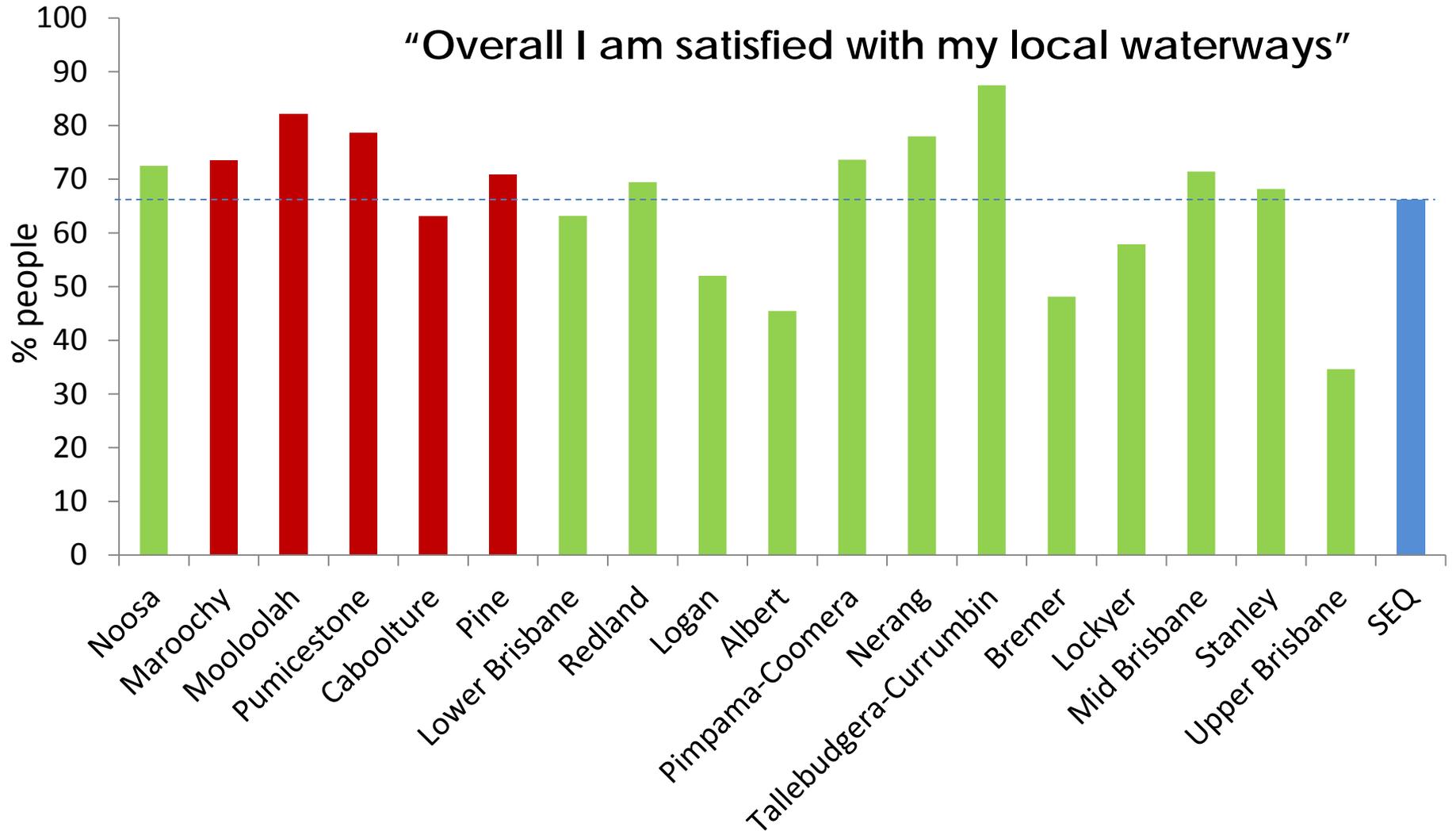
Mooloolah Catchment

- Slightly higher recreational use value
- Very high satisfaction
- 52% believe drinking water will (lowest)
- 84% of respondents use waterways to relax

Very high satisfaction with local waterways

(3,300 people surveyed)

"Overall I am satisfied with my local waterways"







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