

Reaping the benefits of re-wilding in the concrete jungle:

The economic value of restoring and preserving urban creeks

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Source: <http://www.norman-creek-catchment.org.au>

What are the benefits of urban waterways

- Our cities are built around rivers – these rivers are key landmarks in all Australian major cities
- Urban waterway corridors have several important uses:
 - *Relaxing*
 - *Playing*
 - *Exercising*
 - *Entertaining*
 - *Travel (casual or commute trip pathways)*
- Urban waterways and riparian zones provides some key benefits
 - *Water quality regulation*
 - *Carbon sequestration*
 - *Temperature regulation*
 - *Aesthetic values*
 - *Habitat provisioning*
 - *Recreation amenity*

Valuing benefits of urban waterways

Why?

What gets measured, gets managed – Peter Drucker

- Limited budgets
- Informed decision-making process for spending limited public funds
- Better prioritising of naturalisation works
- Better understanding of the wholistic benefits of naturalisation works and how taxpayers value these benefits
- Input to business-case development
- Justification for spending public funds

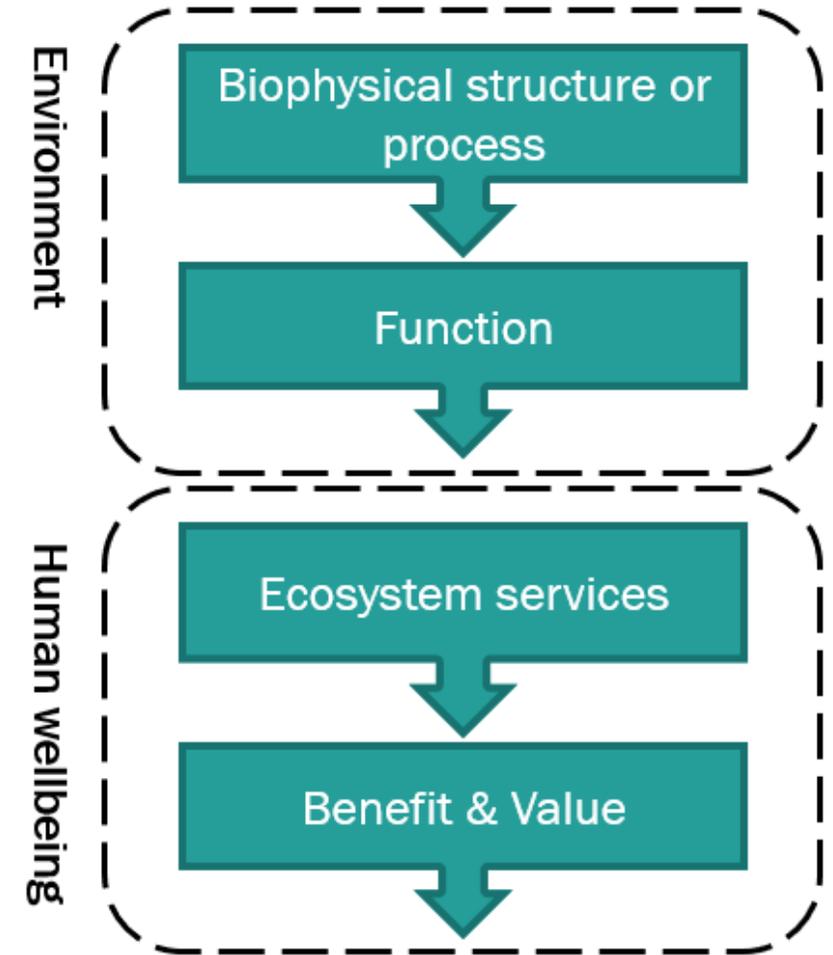
Valuing benefits of urban waterways

How?

- Ecosystem services valuation framework

The CICES ecosystem services are categorised into three broad types.

- *Provisioning services: consist of all the products obtained from ecosystems (e.g. raw water).*
 - *Regulating services: the benefits obtained from the regulation of ecosystem processes (e.g. and regulation of water quality, air quality, climate and erosion).*
 - *Cultural services: related to non-material benefits, for instance, recreation, aesthetic experiences, and spiritual enrichment.*
- Market and non-market valuation techniques



Two case studies

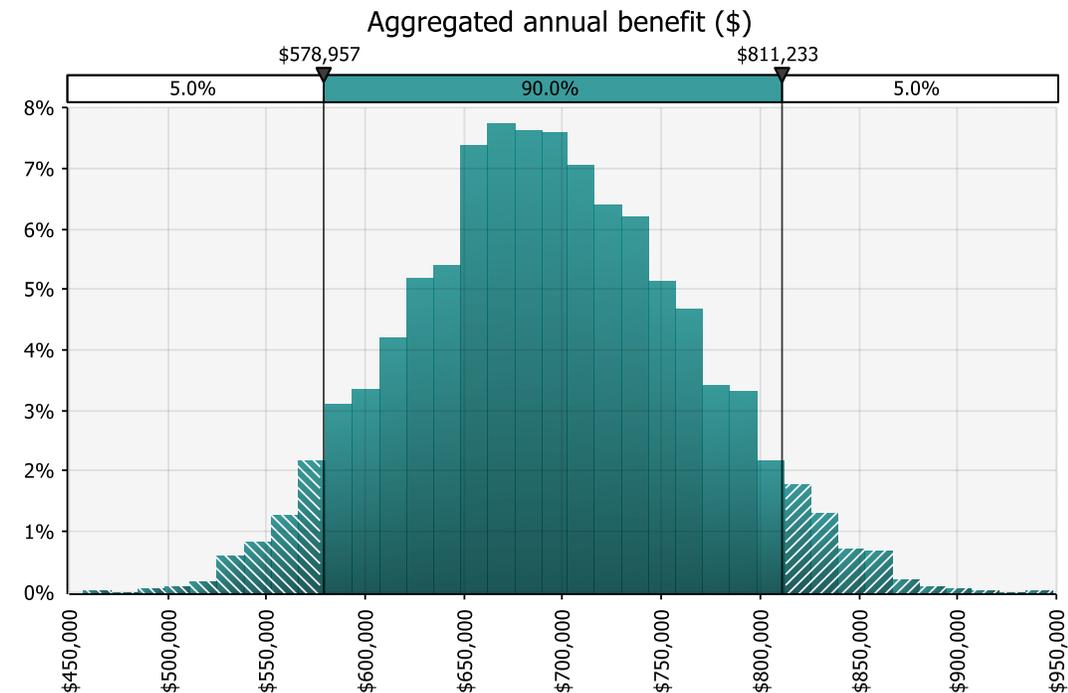
Hanlon Park in Brisbane



Hanlon Park

- Hanlon Park is a 5.2ha open space at the boundary of Greenslopes and Woolloongabba in Brisbane (Norman Ck catchment area).
- The open space and the waterway are highly modified with concrete channel and limited vegetation.
- The area around the park is undergoing rapid development with several recently built and proposed high-rise multi-residential dwellings in the area.
- Proposed works include improvements in vegetation, channel structure, recreation facilities and pathways.
- Estimated annual benefits range from \$58000 to \$810,000.

Benefit	Base estimate	90% confidence interval
Property values	\$335,700	[\$265,700; \$405,600]
Recreation	\$201,700	[\$134,000; \$285,300]
Avoided health costs	\$128,800	[\$95,700; \$202,500]
Reduced road congestion	\$6,800	[\$3,000; \$8,900]
Total quantified benefits	\$670,000	[\$580,000; \$810,000]



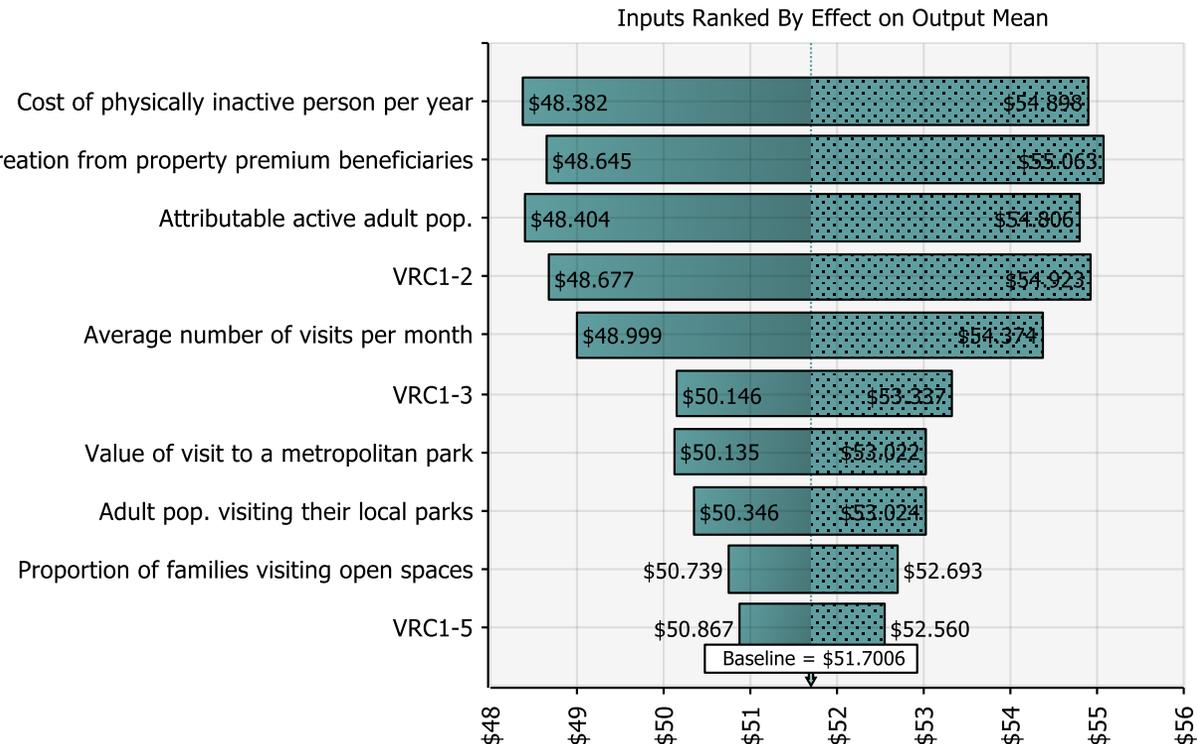
Moreland LGA in Victoria - cycling pathways



Moreland City Council

- Approximately 20% of the 5,000ha study area is open space.
- Two key waterways at the edge of the LGA, flowing towards the Melbourne CBD.
- The riparian zones function as nature corridors, pathways and sports field.
- Highest bicycle commute rate in Greater Melbourne region (5.6 vs 1.4%).
- About 48,000 houses and 25,000 units located within half a kilometre of a waterway.
- Estimated annual benefits range from \$44.8 mil. to \$59.2.

Benefit	Base estimate	90% confidence interval
Property values	\$28.4	[\$25.0; \$31.2]
Recreation	\$9.1	[\$5.1; \$14.0]
Avoided health costs	\$13.6	[\$9.3; \$18.5]
Reduced road congestion	\$0.7	[\$0.3; \$1.0]
Total quantified benefits	\$51.8	[\$44.8; \$59.2]



Conclusions

- Use of a globally relevant framework to assess natural capital benefits
- Use of robust and current innovation in the literature to inform economic evaluation
- Provisioning of important data to decision-makers to support the investment in the restoration and preservation of natural capital in our cities
- Valuable information for cost-sharing, business case development, priority setting and evidence of prudent investment in natural capital

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alluvium