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.

  o **Provisioning services**: consist of all the products obtained from ecosystems (e.g. raw water).

  o **Regulating services**: the benefits obtained from the regulation of ecosystem processes (e.g. and regulation of water quality, air quality, climate and erosion).

  o **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.

<table>
<thead>
<tr>
<th>Benefit</th>
<th>Base estimate</th>
<th>90% confidence interval</th>
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<tbody>
<tr>
<td>Property values</td>
<td>$335,700</td>
<td>[$265,700; $405,600]</td>
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<tr>
<td>Recreation</td>
<td>$201,700</td>
<td>[$134,000; $285,300]</td>
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<tr>
<td>Avoided health costs</td>
<td>$128,800</td>
<td>[$95,700; $202,500]</td>
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<tr>
<td>Reduced road congestion</td>
<td>$6,800</td>
<td>[$3,000; $8,900]</td>
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<tr>
<td><strong>Total quantified benefits</strong></td>
<td><strong>$670,000</strong></td>
<td><strong>[$580,000; $810,000]</strong></td>
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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.

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<tr>
<td>Property values</td>
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<tr>
<td>Total quantified benefits</td>
<td>$51.8</td>
<td>[$44.8; $59.2]</td>
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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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