



SUSTAINABILITY
QUEENSLAND



Economic Value of Green

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Defining Green Infrastructure

- There a multitude of definitions of green infrastructure that are related to scale, degree of naturalness, purpose, place and project.
- Planned and managed natural and semi natural systems that can provide, enhance or replace a functionality required for human well being.

Value of Green Infrastructure

- Ecosystem Services Approach
- Outline of Ecosystem Services
- Critique
- Functionality
 - Communication
 - Decision Making

Value of the National Reserve System

- Services Provided that were valued
 - Air quality
 - Climate moderation
 - Disturbance regulation
 - Water flow
 - Waste treatment
 - Erosion prevention
 - Nutrient cycling
 - Pollination
 - Biocontrol
 - Nursery habitat
 - Genetic Diversity

Valuing Green Infrastructure

Value of the National Reserve System

Ecosystems secured

Terrestrial regulatory and habitat services	\$38-204 billion per year
Marine regulatory and habitat services	\$197 – 441 billion per year
Wild nature tourism associated spending	\$23.60 billion per year
Investment by all Governments	
Growth	\$0.07 billion per year
Maintenance	\$1.21 billion per year

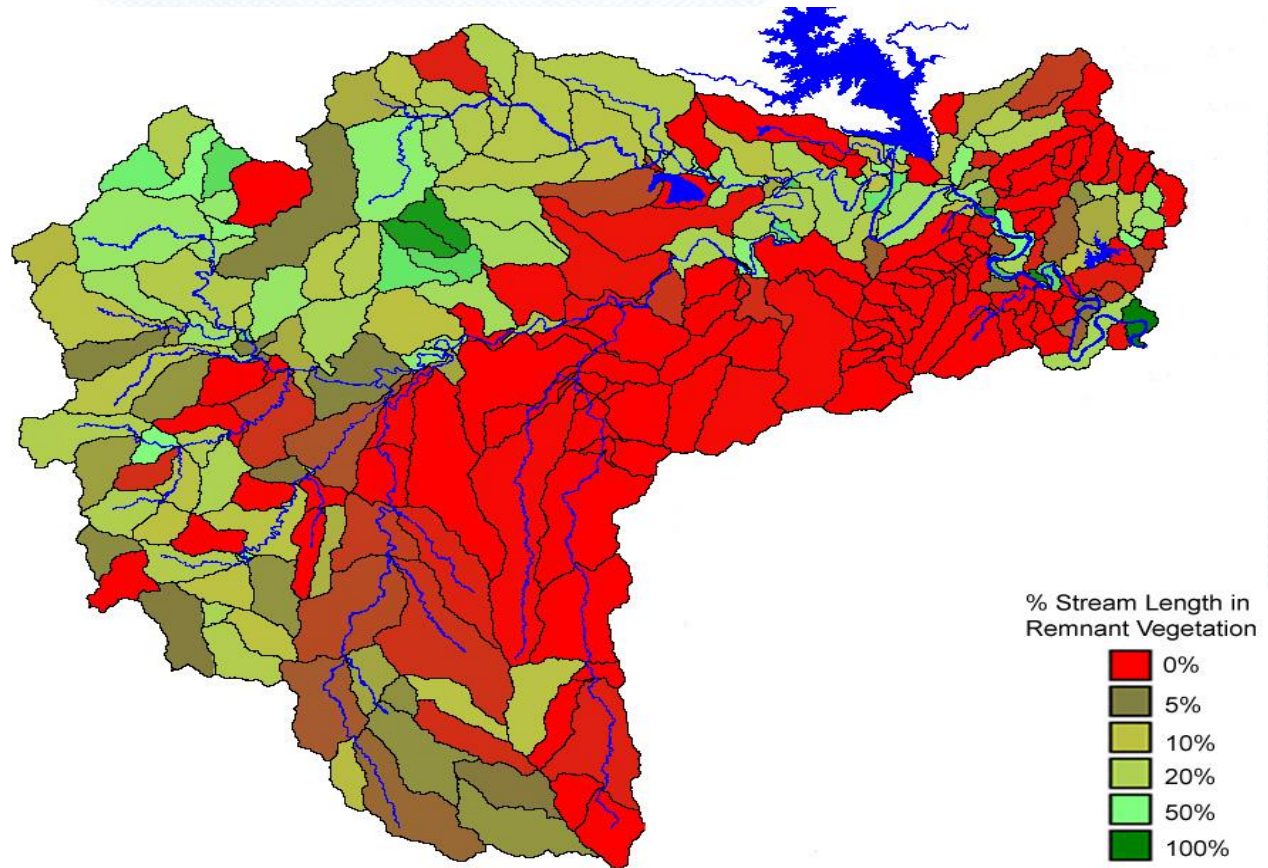
Valuing Green Infrastructure

Case Study

- Water Supply Catchment and Water Treatment in South East Queensland
 - Open source catchments
 - Significant degradation and modification
 - High sedimentation rates in events
 - Significant impacts on treatment costs (capex and opex)

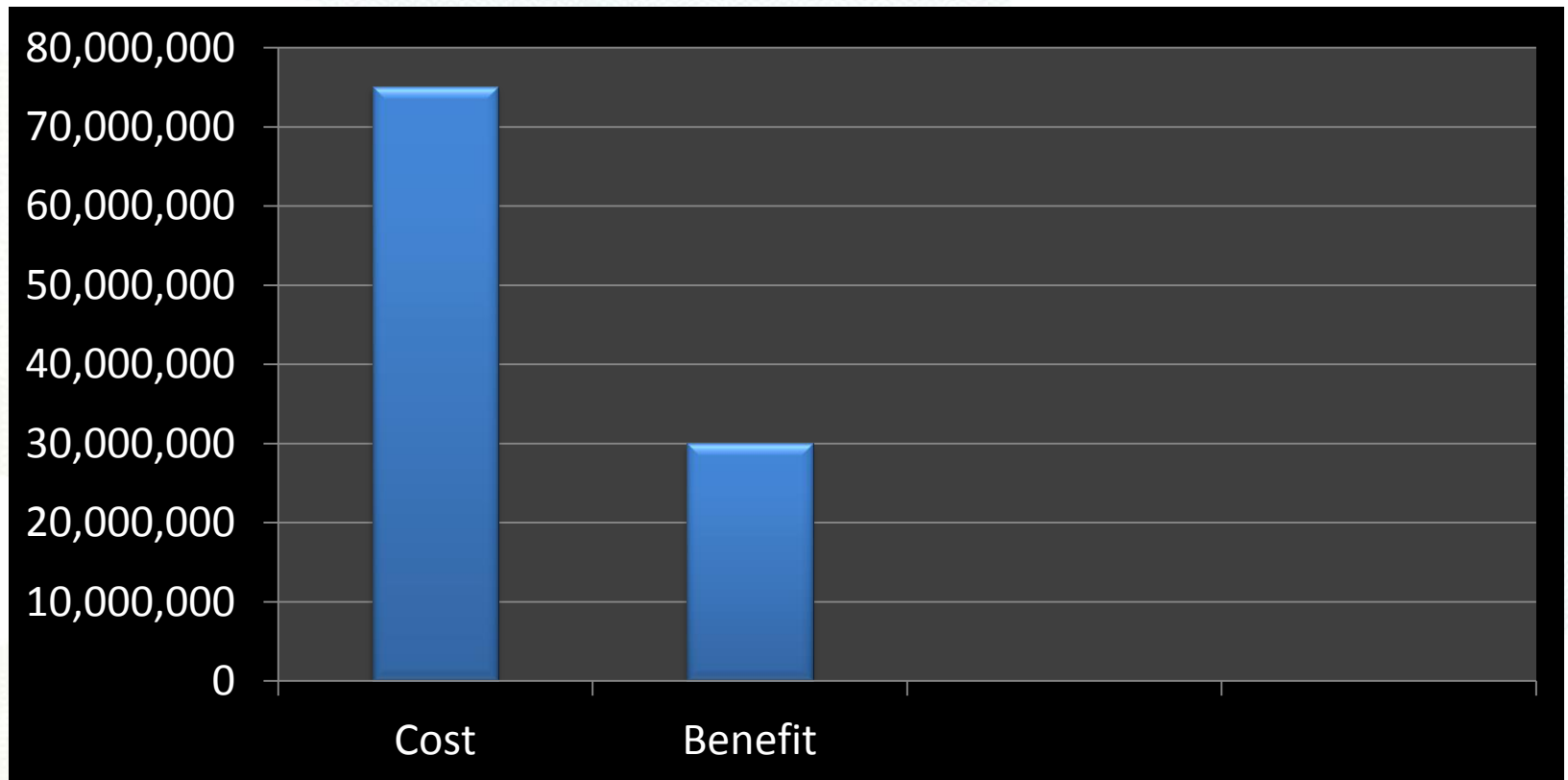
Valuing Green Infrastructure

Case Study



Valuing Green Infrastructure

Case Study



Valuing Green Infrastructure

Case Study

- Green Infrastructure has Multiple Benefits to Water Provider
 - Sediment
 - Pathogen Risk
 - Algal Blooms
 - Weed Outbreaks
 - Storage Capacity

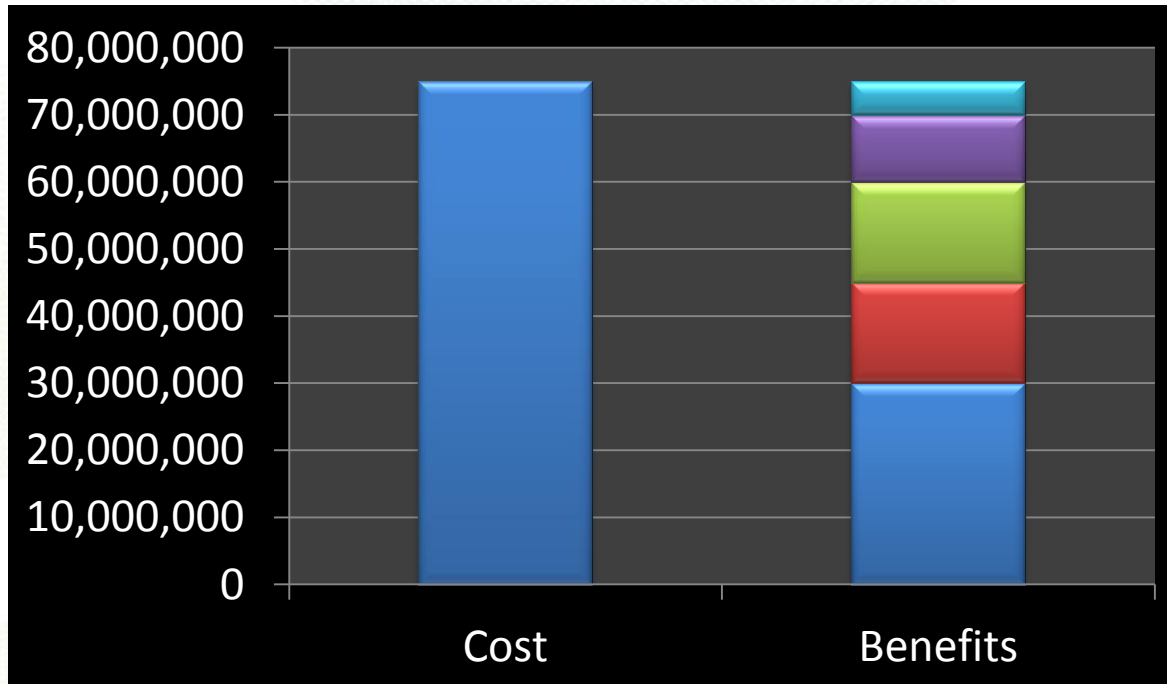
Valuing Green Infrastructure

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Valuing Green Infrastructure

Case Study



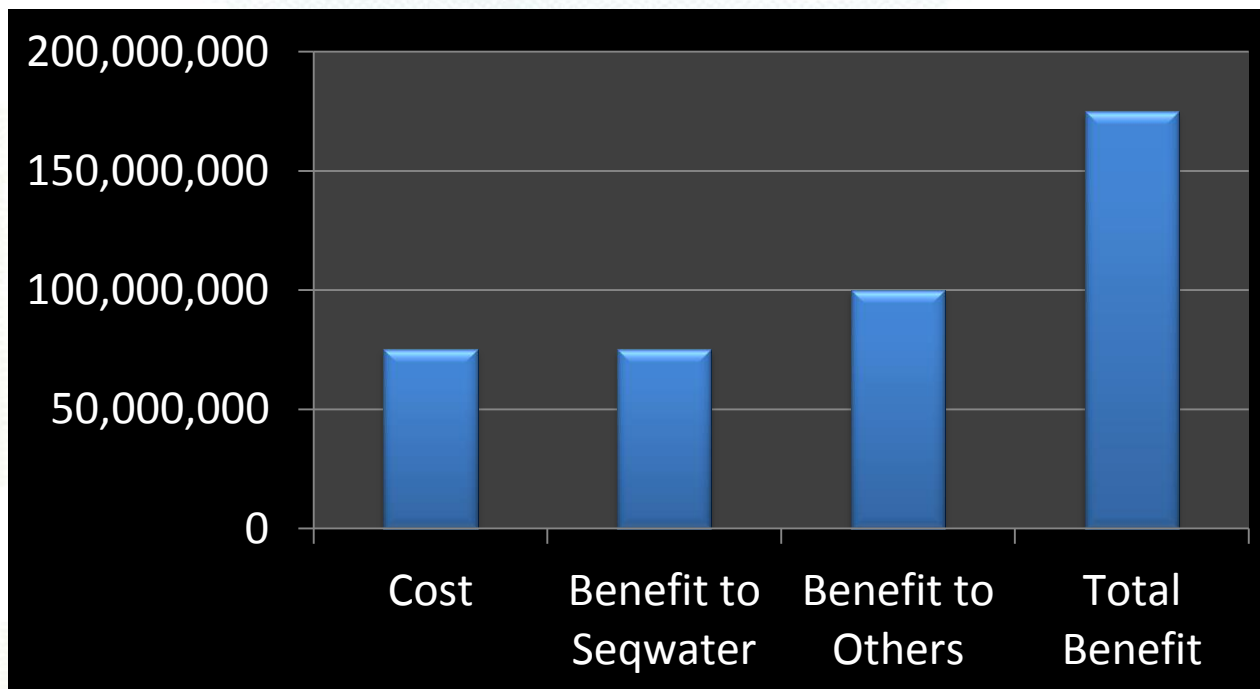
Valuing Green Infrastructure

Case Study

- Green Infrastructure has Multiple Benefits to Broader Region
 - Landholders
 - Agriculturalists
 - Waste Disposal
 - Amenity
 - Biodiversity
 - Air quality
 - Carbon Storage
 - Transport
 - Infrastructure

Valuing Green Infrastructure

Case Study



Valuing Green Infrastructure

Comparing Grey and Green Infrastructure

Criteria	Green Infrastructure	Grey Infrastructure
Stakeholders	Many	Few
Engineering Approach	Custom	Standardised
Speed to functionality	Decades	Months to Years
External factor susceptibility	High	Moderate
Life Span	Self Sustaining	Thirty Years

Barriers to Green Infrastructure

- Ownership
- Co-Investment
- Leadership
- Timeliness
- Culture
- Certainty
- Capex Bias
- Intergenerational Benefit

Valuing Green Infrastructure

Green Infrastructure – An Idea Whose Time is Coming?

- Rising Infrastructure Costs
- Option Identification
- Limited funding availability
- Less service mobility
- Growing environmental awareness
- Generational change

Thankyou

- Questions?



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Thank you