

# Building Stakeholder Consensus Using Multi-Criteria Decision Tools

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# Challenges in Multi-Stakeholder Engagements

- Speak different languages
- Different objectives?
- Process is inconclusive
- Multiple alternatives
- Multiple criteria

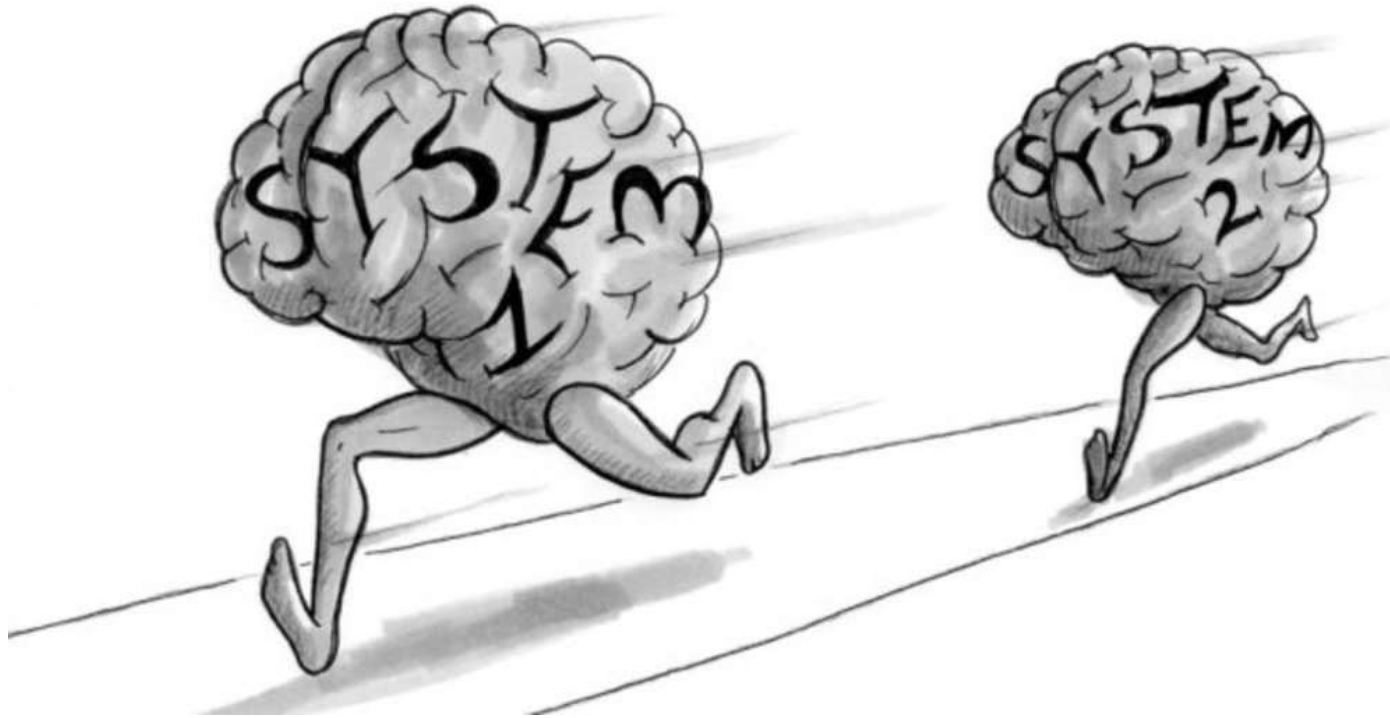


# MCDA Advantages

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- Through structured exercises it creates a common language and builds consensus among stakeholders
- Generates reliable “exchange rates” among different outcomes and can use qualitative, quantitative, or monetary data
- Scalable
- Help prioritize future data collection/analysis efforts
- Subjective, but organic and standardized

# MCDA Makes Stakeholders Think Slow



Fast, automatic, subconscious, intuitive

Relates new information to known patterns

Often wrong

Slow, effortful, logical, analytical

Seeks new patterns in new data

Lazy and defers to System 1

# Natural Capital/Ecosystem Service – Applications

Establish criteria for evaluating land management alternatives in Frenchman’s Bay, Maine

Prioritize water resource projects in Indian River, North Carolina

Environmental and social values for alternative capital projects, West Coast Port Authority Land

Environmental, Health and Safety enterprise risk management, Lockheed Martin

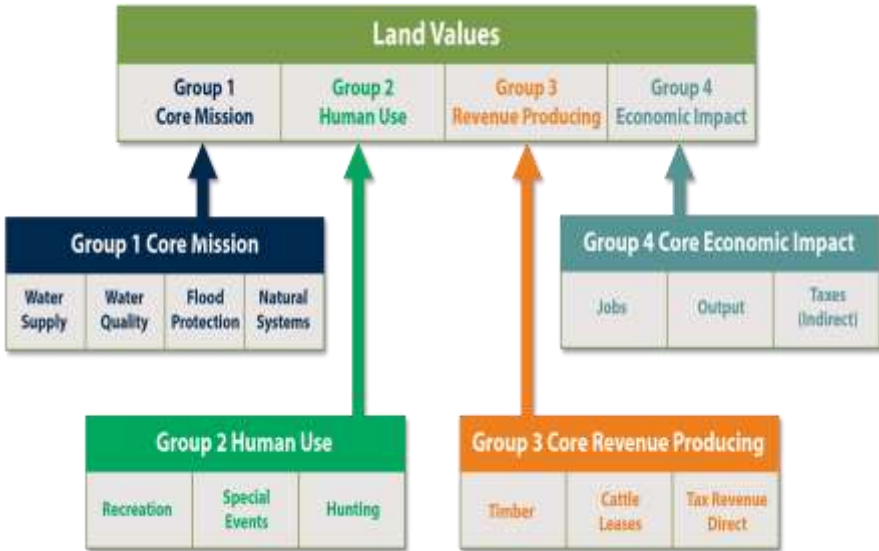
Spending priorities for a portfolio of remediation sites, Fortune 100 oil and gas company

Capital budgeting across unrelated projects

Enterprise risk management

Portfolio spend for remediation

Southwest Florida Water Management District



# Stylized Example – Strategic Analysis of Ecological Assets

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Wemakethings Inc. has a portfolio of land holding not actively used in their core business

Want to conduct an enterprise-wide assessment of the ecological value of the lands

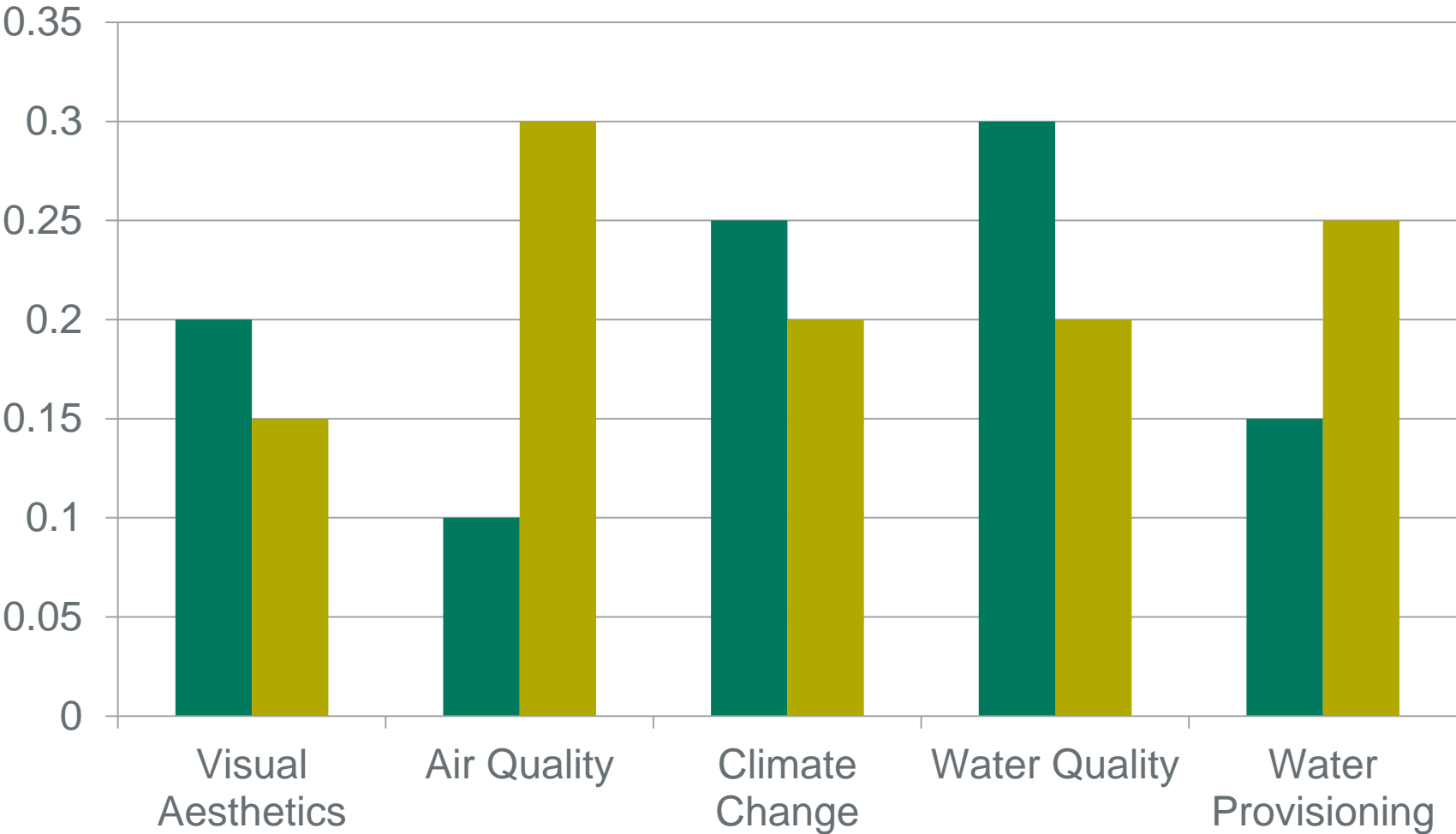
Results will be used for a variety of purposes

- Sale/disposition program
- CSR
- Mitigation
- Natural infrastructure projects

ESII Tool will be used for the baseline assessment

Not a financial assessment

# ESII Results for Two Strategies



# Process

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- Preliminary List of Attributes
- Institutional Issues



# TRADEOFF ANALYSIS – Question 1

Attributes	Management Strategy A	Management Strategy B
Visual Aesthetics	31%	53%
Air Quality – Particulate Removal	66%	71%
Climate Change – Carbon Uptake	14%	16%
Water Provisioning	13%	7%
Water Quality – Nitrogen Removal	19%	5%

**Which Strategy Best Meets Our Company’s Objectives ?**

**A is Much Better than B**



**A is Better than B**



**Neither**



**B is Better than A**

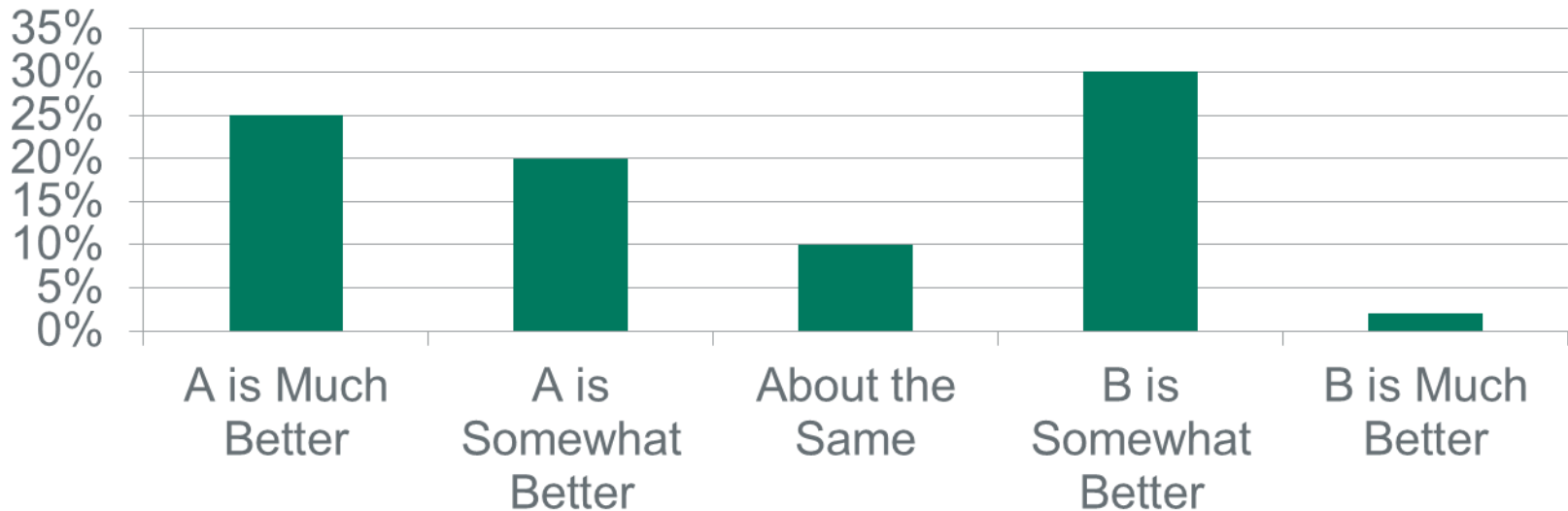


**B is Much Better than A**



Attributes	Strategy A	Strategy B
Visual Aesthetics	31%	53%
Air Quality – Particulate Removal	66%	71%
Climate Change – Carbon Uptake	14%	10%
Water Provisioning	3%	7%
Water Quality – Nitrogen Removal	9%	5%

### Results – Q1



# TRADEOFF ANALYSIS – Question 2

Attributes	Management Strategy A	Management Strategy B
Visual Aesthetics	55%	45%
Air Quality – Particulate Removal	66%	70%
Climate Change – Carbon Uptake	22%	21%
Water Provisioning	5%	7%
Water Quality – Nitrogen Removal	9%	15%

**Which Strategy Best Meets Our Company’s Objectives ?**

**A is Much Better than B**

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**Neither**

**B is Better than A**

**B is Much Better than A**



# TRADEOFF ANALYSIS – Question 2

Attributes	Management Strategy A	Management Strategy B
Visual Aesthetics	45%	45%
Air Quality – Particulate Removal	66%	70%
Climate Change – Carbon Uptake	22%	10%
Water Provisioning	3%	7%
Water Quality – Nitrogen Removal	9%	5%

**Which Strategy Best Meets Our Company’s Objectives ?**

**A is Much Better than B**

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**Neither**

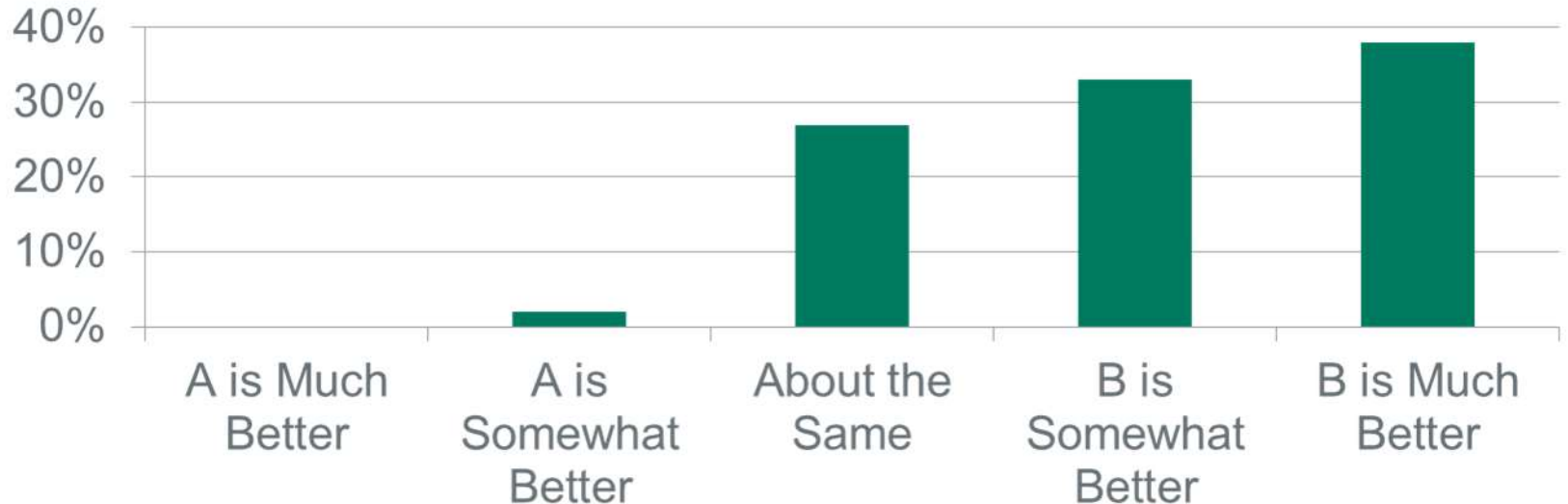
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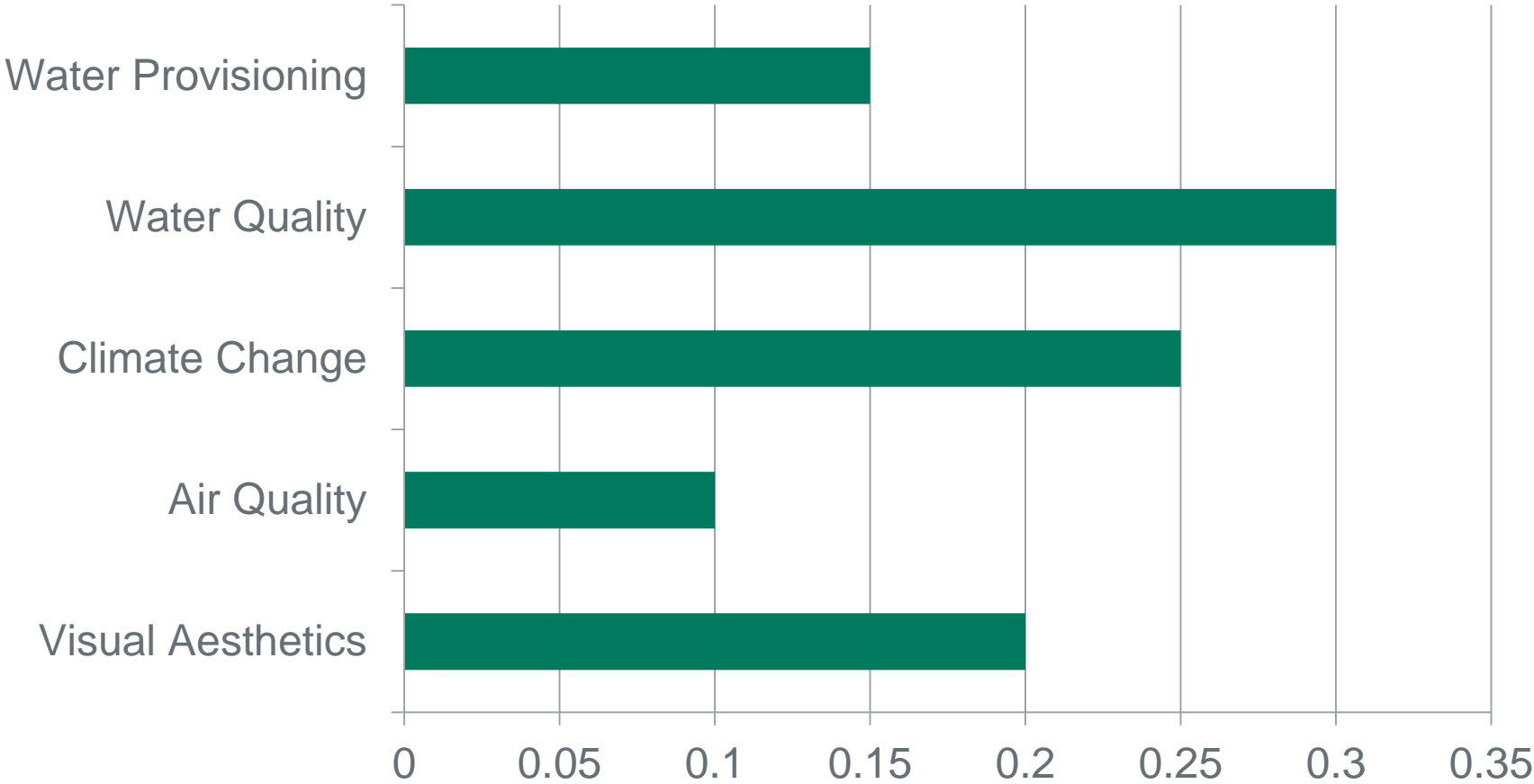
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Visual Aesthetics	55%	45%
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### Results Q-2

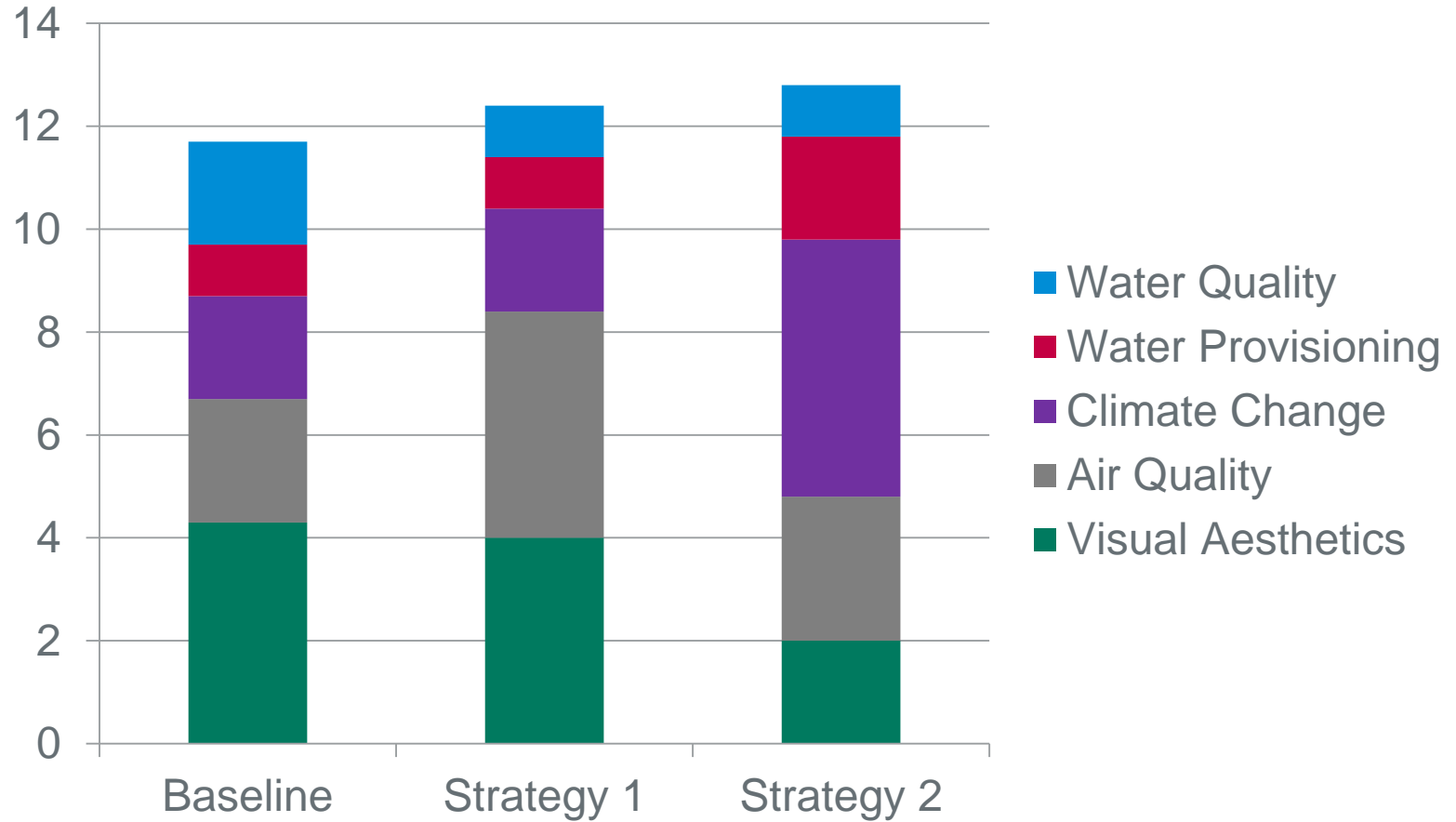


# Statistical Model Results

## Weights



# Output – Impact of Management Strategies



# Summary

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- Much of the value comes from the process – creating a common language and vision
- Provides an internally consistent, structured process for aggregating/integrating different ecosystem services
  - With or without monetization
- Rapid, cost-effective assessment approach for providing reliable localized and enterprise wide values

