

Markets and Other Institutional Structures that Incorporate Ecosystem Services for Decision Making: Opportunities and Challenges

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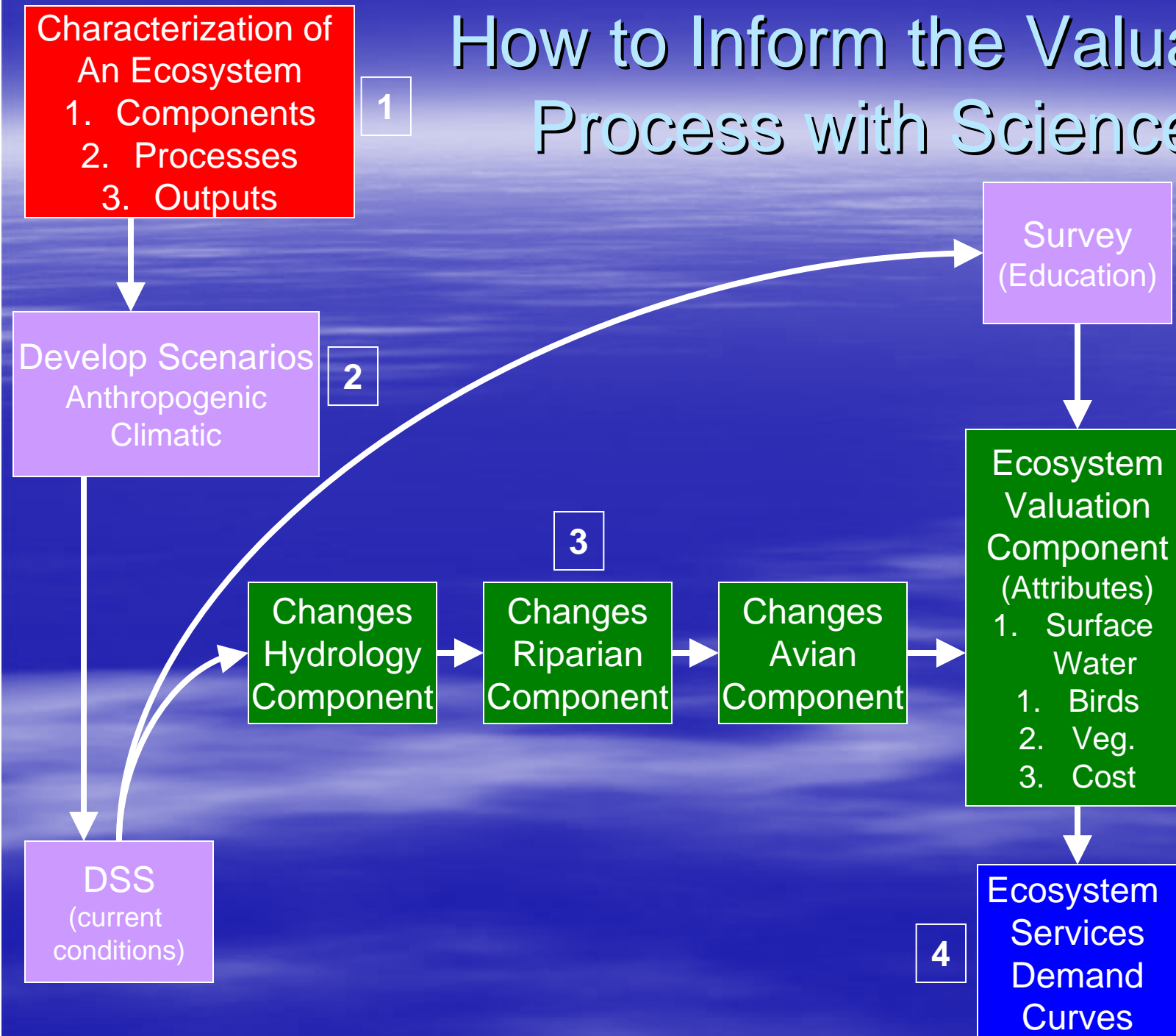
Consider Three Frameworks

- 1) Benefit Cost Analysis (BC)
 - 2) Decision Support System (DSS)
 - 3) Markets
- What do we need to know about ecosystem services for these three frameworks?
 - Note: ecosystem services are not assumed to be of infinite value
 - There are competing social needs
 - Simply put, ecosystem services (changes therein) need monetary values where possible
 - Values need to be based on the best possible scientific information

Ecosystem Service Valuation Methods

- Revealed Preference Methods
 - Travel Cost
 - Hedonic Pricing
- Stated Preference Methods
 - Contingent Valuation
 - Choice Questions
- Both Non-market Methods monetize ecosystem services

How to Inform the Valuation Process with Science?



Suppose you have Ecosystem Values and Changes Thereof?

- Benefit Cost (BC)
 - Informs traditional with/without decision making

- Decision Support System (DSS)
 - Incorporates scientific information and can analytically search across a more robust set of choices than BC

- DSS coupled to a Market
 - 2 issues – How to represent ecosystem services
 - Ecosystem services are constraints in the market
 - Allocate property rights and allow an environmental trustee to engage in the market

- Conclusion:
 - A coupled framework of:
 - Physical process / Engineering modeling
 - Institutional representation
 - Market trading framework



Would fully integrate ecosystem values into the decision making process

Thank You