

# Opportunities and Constraints for Use of Cultural Ecosystem Services Knowledge in Federal Agency Decision-Making

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## Background

A 2015 Memorandum<sup>1</sup> directs U.S. Federal agencies to integrate ecosystem services (ES) information in decision-making, including information about cultural benefits arising from cultural ecosystem services (CES). This requires consideration of both monetary and non-monetary representations of value.

The Memorandum reflects growing recognition of the potential of ES knowledge – including **CES knowledge** – to enhance natural resource management.

## Study Objectives

- **Improve conceptual clarity** around definitions of CES knowledge and CES knowledge products;
- **Improve understanding of opportunities & constraints** for representation, transmission, and use of CES knowledge products in Federal decision-making;
- **Develop tools** to assist Federal managers in identifying and integrating CES knowledge products.

## Knowledge Cycle<sup>2</sup>

**Representation:** Moving knowledge of CES value into knowledge products;

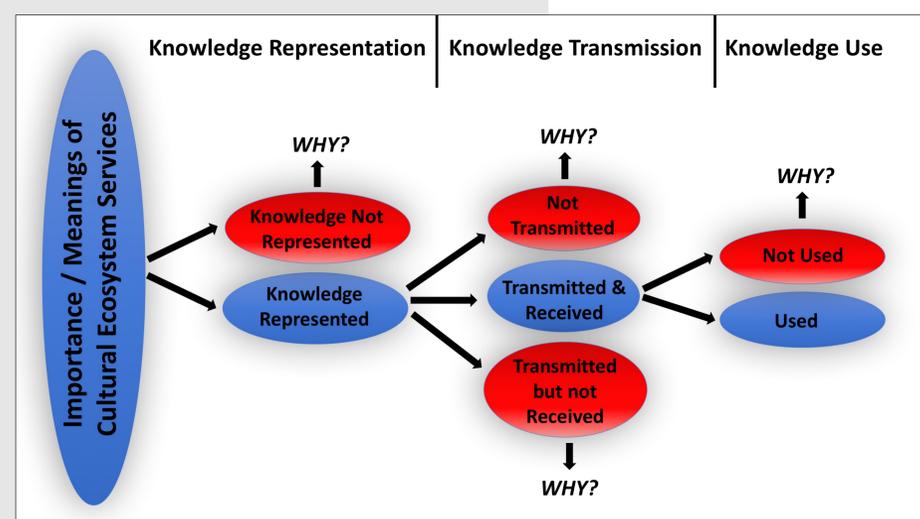
**Transmission:** Transferring knowledge to decision-makers;

**Use:** Knowledge product directly informs decision, leads to conceptual shifts, and/or is used strategically to influence decision outcomes.

Representation

Transmission

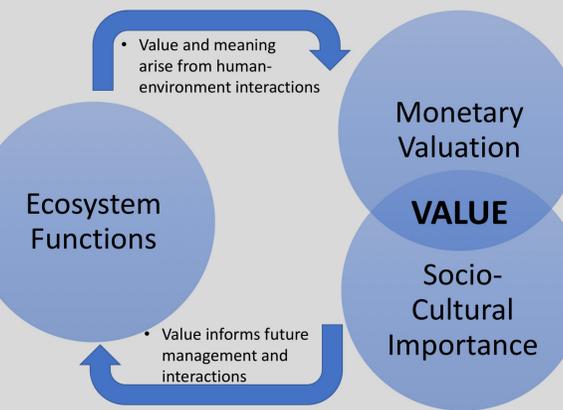
Utilization



## Ecosystem Services and Ecosystem Service Value Domains



Source: Susanne Moser Research & Consulting, 2013<sup>3</sup>



## Study Methods

### ❖ Scoping:

- **Decision Context Assessment** (Statutes; data requirements; venues for deliberation; decision timeline)
- **Stakeholder Analysis** (Decision-making participants; stakeholders, CES knowledge holders)

### ❖ Retrospective Case Studies:

- **Participatory Identification of CES Knowledge Products** (Workshops/interviews)
- **Key Informant Interviews to Trace Transmission and Use of CES Knowledge Products** (Modes of knowledge use may include instrumental, conceptual, and/or strategic uses)

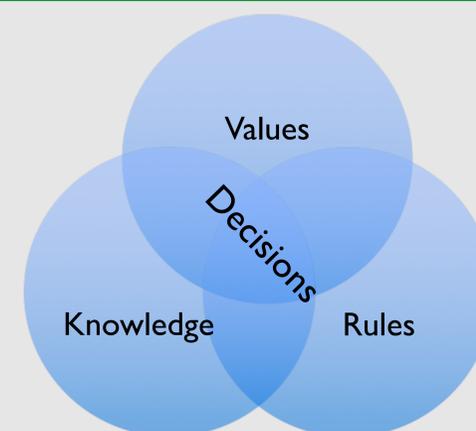
## Glossary of Key Terms

- **Ecosystem Services (ES):** "Ecosystem processes underpinning benefits" to humans.<sup>5</sup>
- **Cultural Ecosystem Services (CES):** "Contributions ecosystems make to human well-being in terms of the identities they help frame, the experiences they help enable, and the capabilities they help equip."<sup>6</sup>
- **CES Knowledge:** "The values and meanings arising from individual and collective human relationship to the natural world, and the capabilities to enact and honor that relationship."<sup>7</sup>
- **CES Knowledge Product:** "A representation or expression of the benefits, meanings, and valued relationships experienced by individuals who interact with one or more components of an ecosystem."<sup>7</sup>
- **Modes of Knowledge Use:**
  - *Instrumental:* "Knowledge flows from scientists to rational decision makers who make observable decisions on technical grounds."<sup>8</sup>
  - *Conceptual:* "Knowledge broadens and deepens understanding, shapes thinking, and enables people to develop new beliefs and values."<sup>8</sup>
  - *Strategic:* "Knowledge is used to support and promote a specific intervention or policy option, or justify previously held beliefs and values."<sup>8</sup>

## Decision Context

### Decision Context:

"The circumstances that form the setting of the decision process; specifically the interconnected system of values, rules and knowledge that form the ways of viewing and framing the decision process."<sup>4</sup>



## References

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