

# Economic Methods for Water Ecosystem Services in the SEEA EA

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# Context & Objectives



SEEA EA “pyramid” of valuation methods



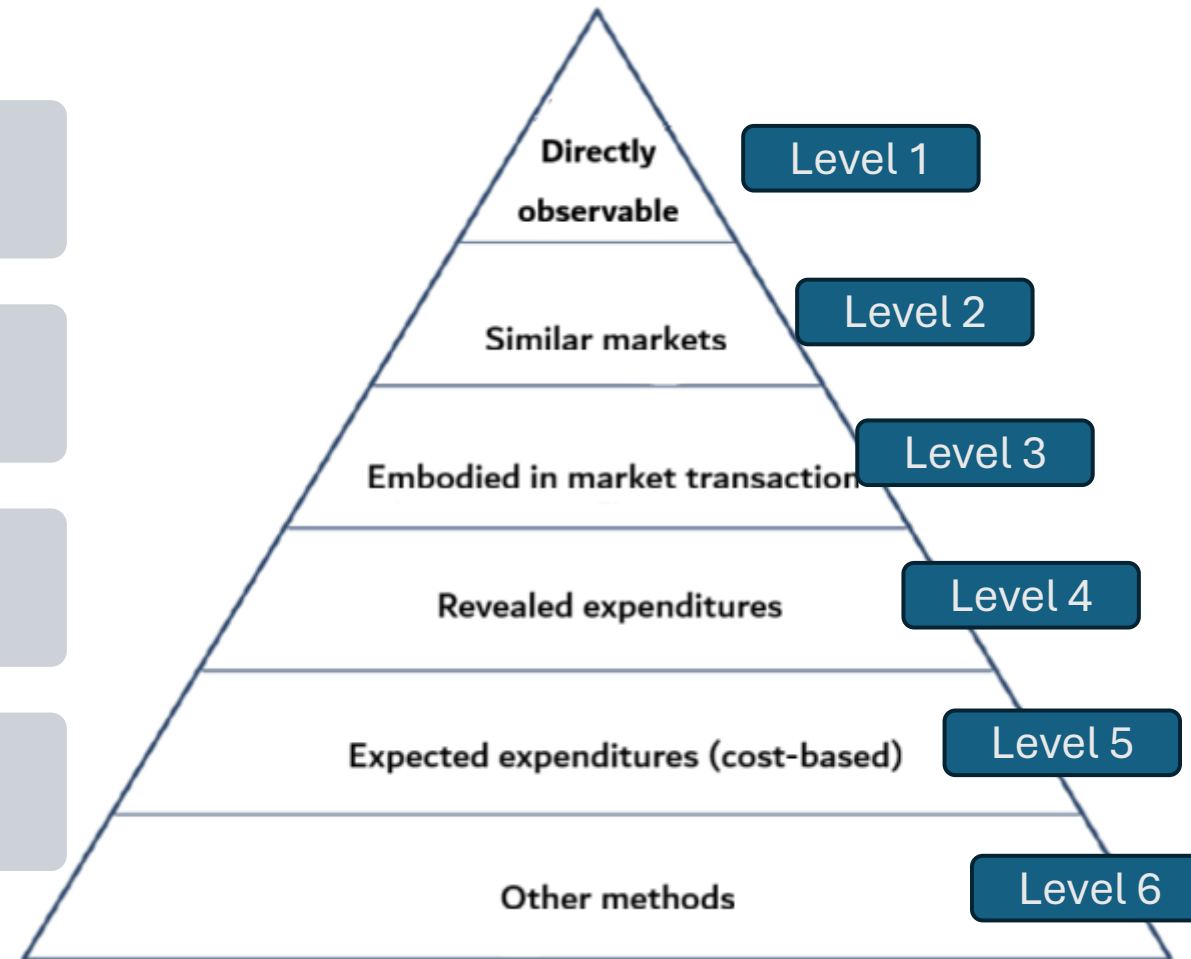
Applicability issues to specific ES and biomes



Empirical evidence of SEEA EA-compatible valuations of WES

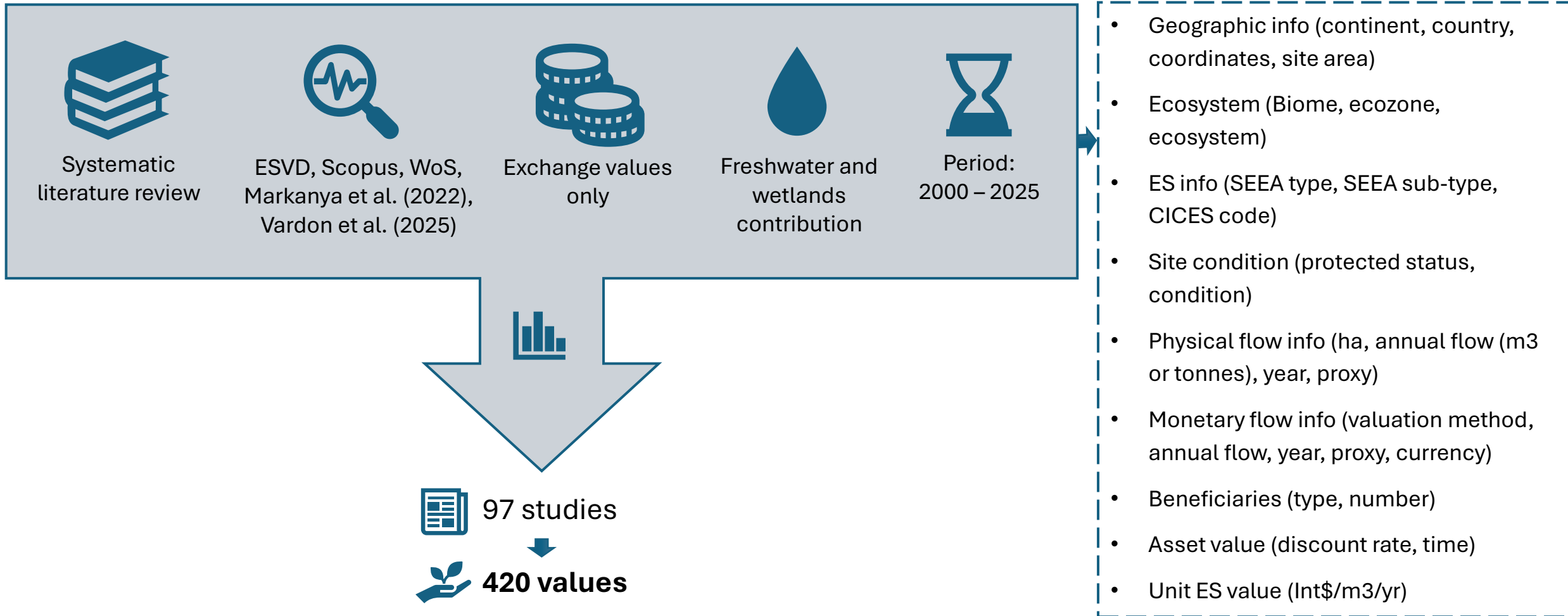


Summarize findings to discuss methodological challenges



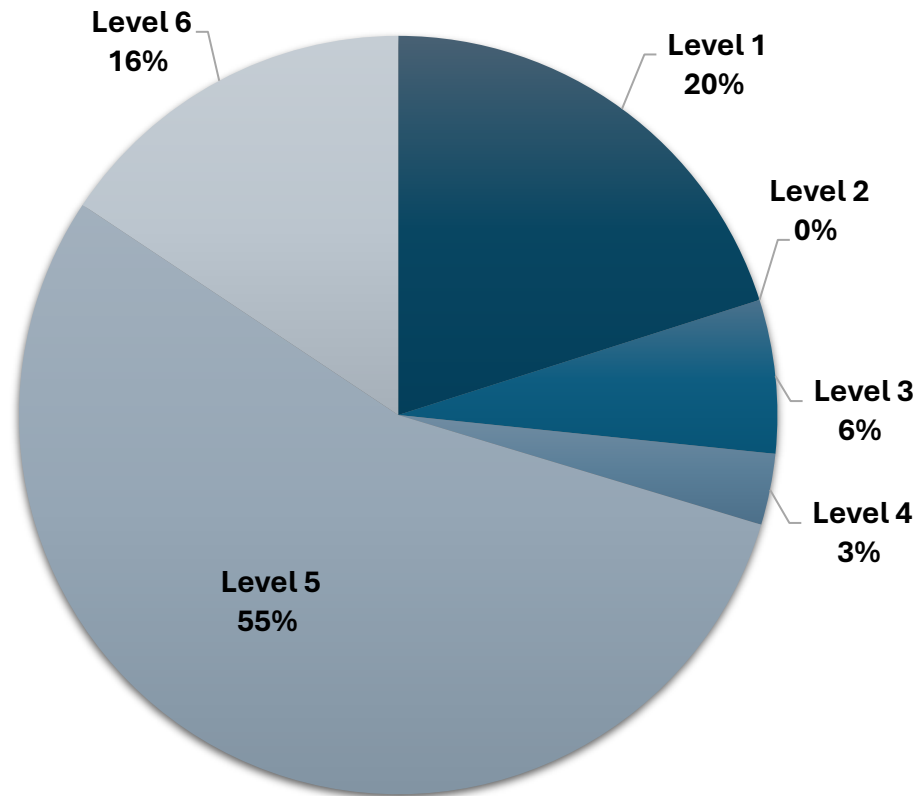
Modified from : [Ferrini et al. \(2025\)](#)

# Case study

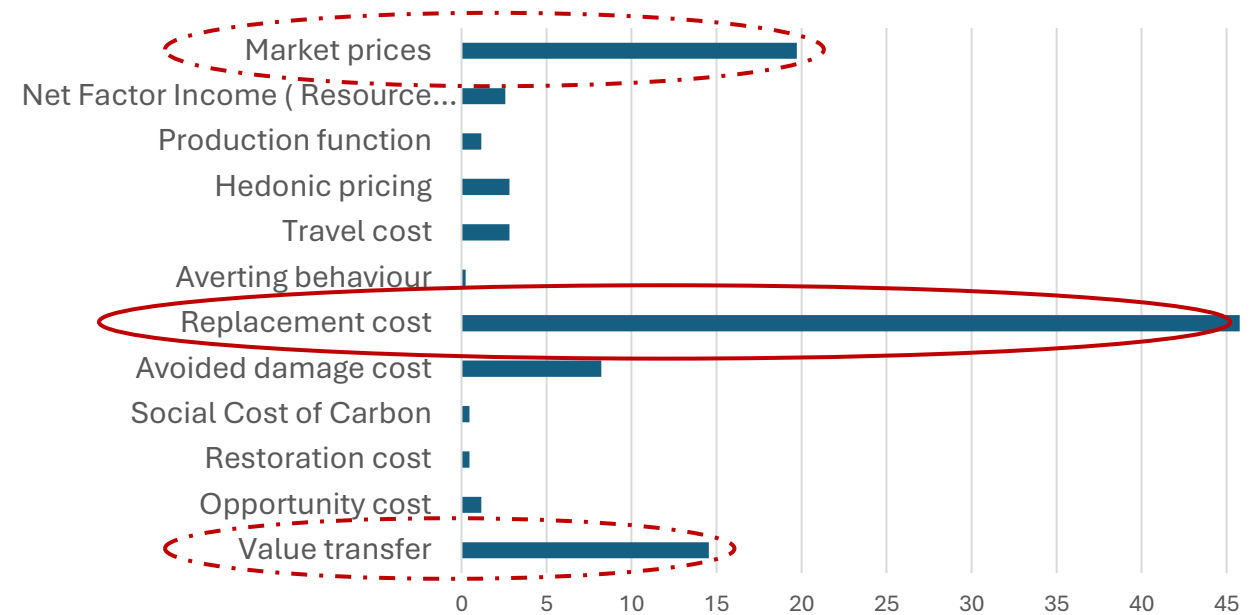


# Finding 1: Empirical incongruence

Application of “Pyramid Levels” for WES



Application of valuation techniques for WES



Practice → effectively **inverts** the SEEA pyramid  
→ large application of secondary valuations

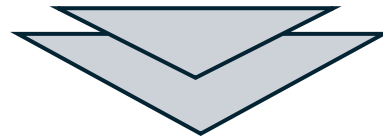
# Finding 2: Top pyramid limitations

**Market-based measures** (water tariffs & permits)

Hardly isolate ecosystem contribution from infrastructure, labour and other inputs

**Resource rent & residual value method**

Dependent on institutional context, variations across geographical areas



- **Caution in generalising methods:** taking into account ES functions and institutional setting
- **Market price limitations:** exchange prices for WES not directly observable or concessional
- **Feasibility concerns within SEEA EA:** bottom pyramid approaches to reconsider

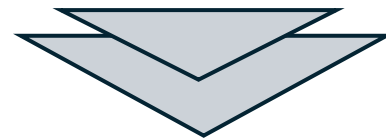
# Finding 3: Inconsistent Terminology

Confusion between **valuation techniques**

Hinders standardization and comparability

Mismatch between **ES classifications**

Increases complexity in interpreting ES values



- **Established valuation practices** vs. SEEA EA: risk of overlooking compatible methods
- **Different labelling:** makes integration more difficult and time-consuming
- **Challenges:** comparability, standardization, and integration

# Conclusions

- **Market-based methods** → conceptually ideal, but rarely feasible for water ES
- **Cost-based & simulated approaches dominate** → inversion of SEEA hierarchy
- Methods for **market & non-market ES** → potential to go beyond current applications
- **Future work** → empirical applications, data availability, methodological flexibility

# Discussion



How can we better adapt the SEEA EA valuation pyramid to specific biomes and ecosystem services (e.g., WES)?



Should non-market valuation methods be cautiously integrated when exchange values are not observable, calling for flexible and transparent approaches?

An aerial photograph of a vast, green landscape. In the foreground, there is a large, dark blue body of water, possibly a lake or a wide river. The surrounding land is covered in dense, lush green vegetation, likely a forest or a wetland. A winding river or stream flows through the middle ground, curving to the right. The background shows a flat expanse of land extending to the horizon under a clear sky.

Thank you for your attention!

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