

Testimony on Payment for Ecosystem Services in VT

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The University of Vermont

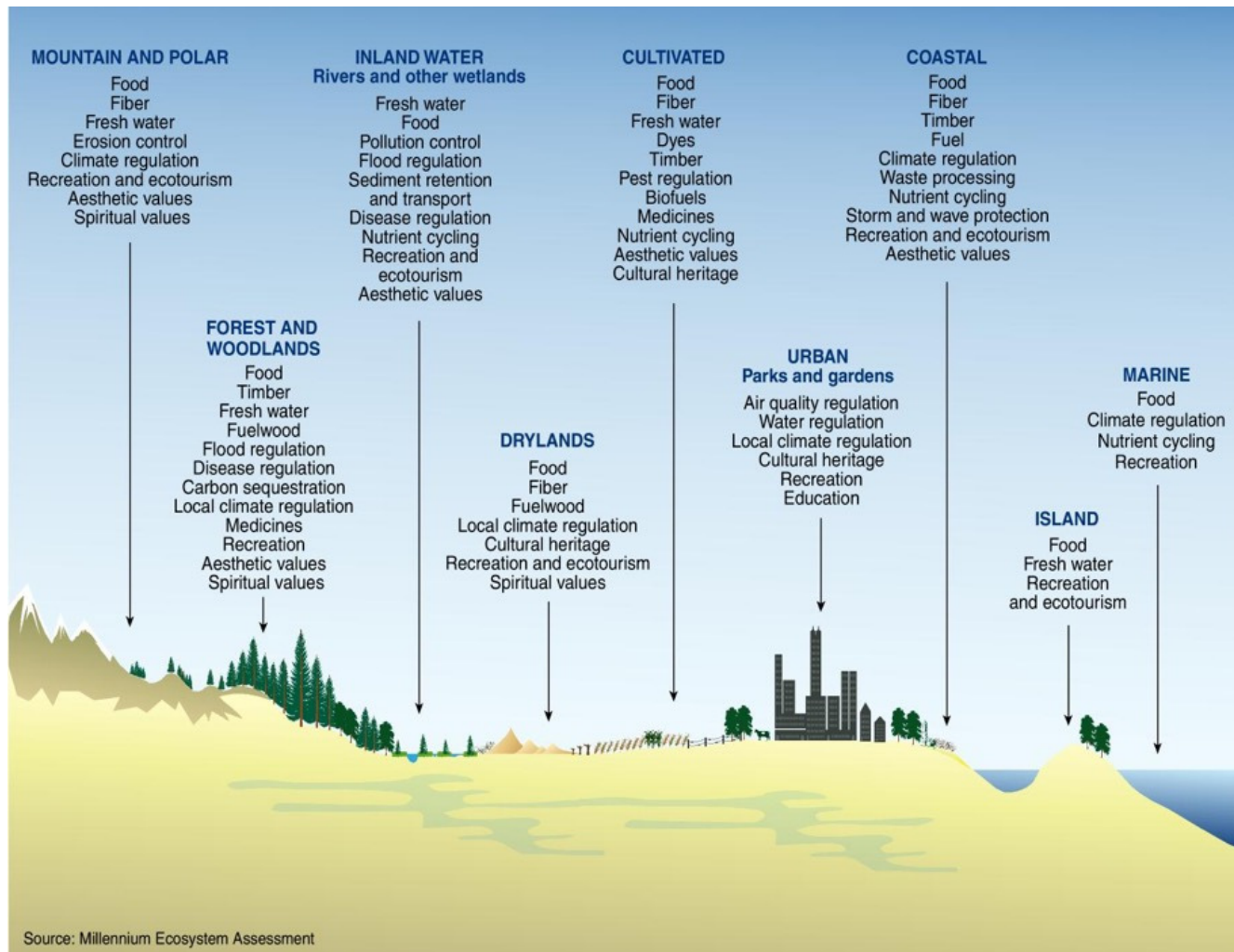


Ecosystem Services

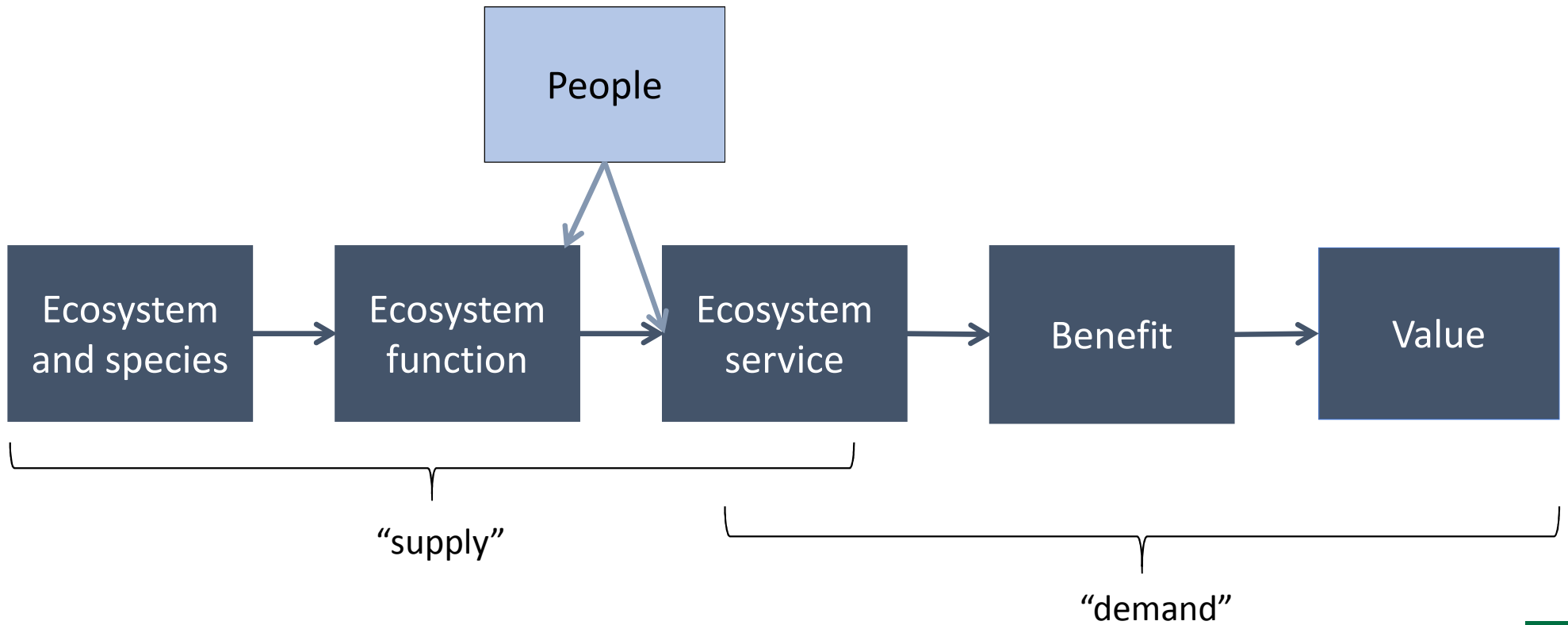


- Make public benefits of conservation clear
- Motivate decisions, policies

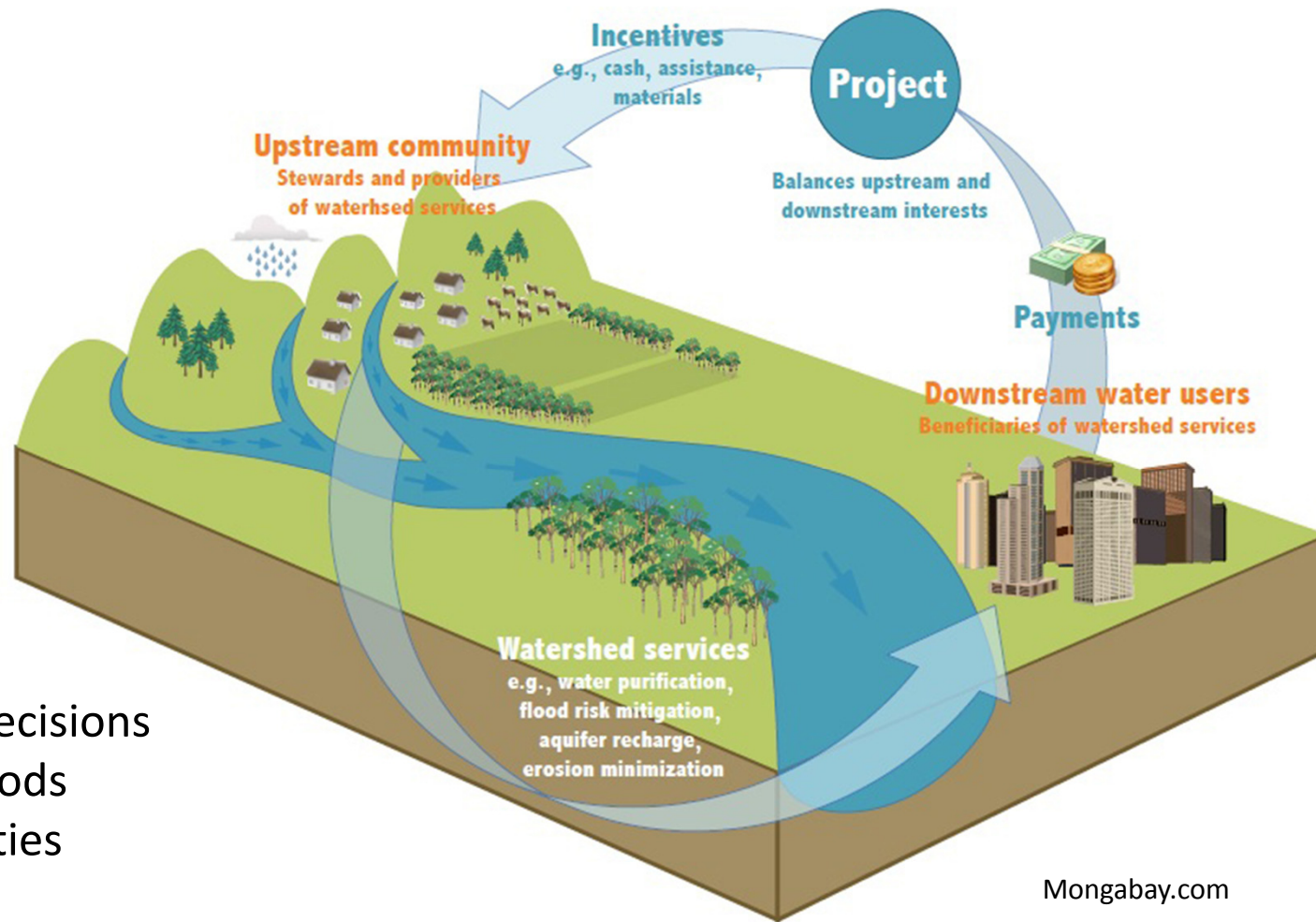
Ecosystem services supplied by...



Ecosystems, Ecosystem Services, Benefits & Value



Payments for Ecosystem Services (PES)



Private decisions
Public goods
Externalities

Mongabay.com



Logic of PES

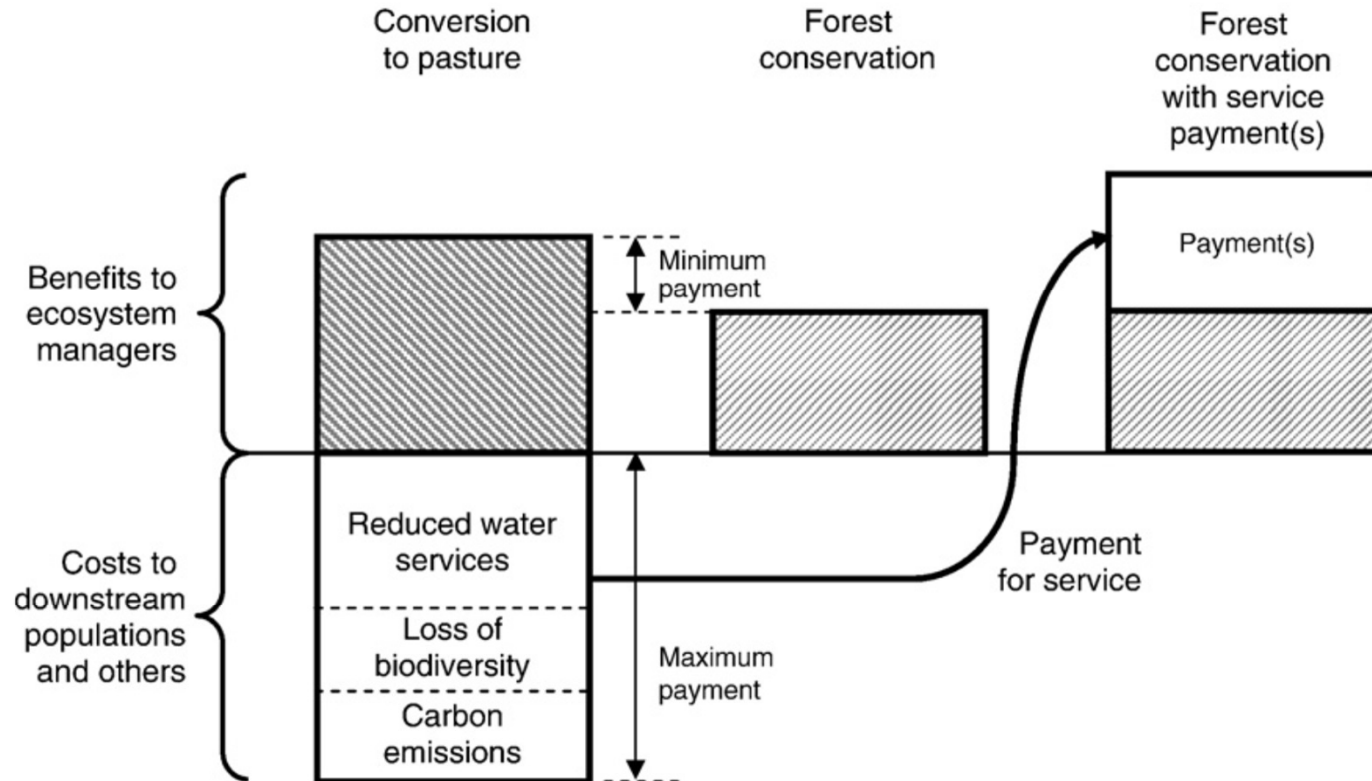


Fig. 1 – The logic of payments for environmental services. Source: Adapted from [Pagiola and Platais \(2007\)](#).

Ecosystem Services on VT Farms

- **Farmers can potentially provide multiple ecosystem services (beyond food) by mimicking and including natural system benefits**
 - Water storage, nutrient retention & removal to benefit water quality, carbon sequestration & storage, pollination



- Farm systems can, e.g., generate ecosystem services by:**
- Improving efficiency of **phosphorus** use & reducing runoff risk
 - Increasing **carbon** sequestration and/or storage in soils & biomass

Ecosystem Services on VT Farms

- **PES is a promising option**
 - Externality that needs fixing
 - Pay landowners to produce measurable environmental outcomes/benefits
- **Doesn't work everywhere**
 - Careful design is needed



PES requires careful design

- **General characteristics**
 - Which ecosystem services?
 - What, exactly, will be paid for?
 - Who buys?
 - Who else benefits?
 - Who sells?
 - Timeline?
 - Spatial scale?

PES requires careful design

- **Design features**
 - Intermediaries?
 - External donor support?
 - How are sellers selected?
 - Monitoring?
 - Sanctions?
 - Conditionality?
 - Linked to other policy tools?

PES requires careful design

- **Payments to providers**
 - Mode of payment?
 - Payment amount, cash equivalent?
 - Timing of payment?
 - Differentiation (spatial, other)?
 - Contract duration?

PES requires careful design

- **Factors affecting effectiveness & efficiency**
 - Baselines and scenarios?
 - Opportunity costs?
 - Additionality?
 - Land use – ecosystem service link?
 - Leakage?
 - Permanence?
 - Transaction costs?

My thoughts on PES design in VT

- **Land use – ecosystem service link is key**
 - PES needs to be tied to measurable environmental outcomes/benefits
 - Scientifically robust field measurements, models, or (ideally) a combination
 - Use of existing programs/tools will likely decrease cost
- **Monitoring should...**
 - Provide reliable information about primary intended outcome (e.g., reduced P loading)
 - Inform farm management, avoiding potential pitfalls (cost, noise, slow variables)
- **Additionality should be a goal**
 - If PES recipients would have undertaken the exact same land uses even without payments, no additional ES will be generated



PES project at Gund Institute

- **Gund Institute Grad Course underway**

- co-led by Taylor Ricketts, Eric Roy, & Courtney Hammond-Wagner
- builds on VT Dairy & Water Collaborative effort
- PES design for VT that addresses dual challenges of water quality & agricultural sustainability
- have received input from numerous stakeholders in VT
- focused on phosphorus & carbon

- **Presentation of preliminary design:**

- Thursday, May 2, 2:30-3:30, UVM's Davis Center, Chittenden Bank Room #413. Additional hour for conversation 3:30-4:30.

