

Final Ecosystem Goods and Services Classification System

Implications for Corporations

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Incredibly Brief Summary of FEES

Goal: provide a comprehensive classification system to facilitate future measurement and valuation of ecosystem services

Audience:

“...individuals, communities, or firms in the public sector, private sector, and non-profit organizations that wish to measure, quantify, map, model, and/or value a standard, but complete set of ecosystem services anywhere on earth....”

Boundary Conditions - What's in

Final ecosystem services - directly enjoyed, used, or consumed to provide value to people (beneficiaries)

Contribution of the natural, not built, environment to producing goods and services

Self-sustaining in the environment, minimally dependent on human inputs

Presence of the environment

Boundary Conditions -What's out

Intermediate ecological functions & not directly valued by beneficiaries (e.g. net primary production)

Policy endpoints

Stocked fish

Crops

Oil, coal and minerals

Biodiversity & carbon sequestration

21 Final Ecosystem Service Categories

1. Water
2. Land
3. Air
4. Flora
5. Fauna
6. Fiber
7. Fish
8. Soil
9. Timber
10. Fungi
11. Substrate
12. Weather
13. Wind
14. Atmospheric Phenomena
15. Pollinators
16. Natural Materials
17. Open Space
18. Sounds and Scents
19. Viewscapes
20. Predators
21. Presence of the Environment

3 Environmental Classes and 15 Subclasses

1. AQUATIC
 - a. *Rivers and Streams*
 - b. *Wetlands*
 - c. *Lakes and Ponds*
 - d. *Estuaries /Near Coastal/Marine*
 - e. *Open Oceans and Seas*
 - f. *Groundwater*
2. TERRESTRIAL
 - a. *Forests*
 - b. *Agroecosystems*
 - c. *Created Greenspace*
 - d. *Grasslands*
 - e. *Scrubland/ Shrubland*
 - f. *Barren / Rock and Sand*
 - g. *Tundra*
 - h. *Ice and Snow*
3. ATMOSPHERIC

10 Beneficiary Classes and 38 Subclasses

1. Agricultural
2. Commercial/Industrial
3. Government/Municipal/Residential
4. Commercial/Military Transportation
5. Subsistence
6. Recreational
7. Inspirational
8. Learning
9. Non-Use
10. Humanity

**358 Unique Codes in FECS
Classification System
FECS-CS**

Corporations are a Key Beneficiary Group

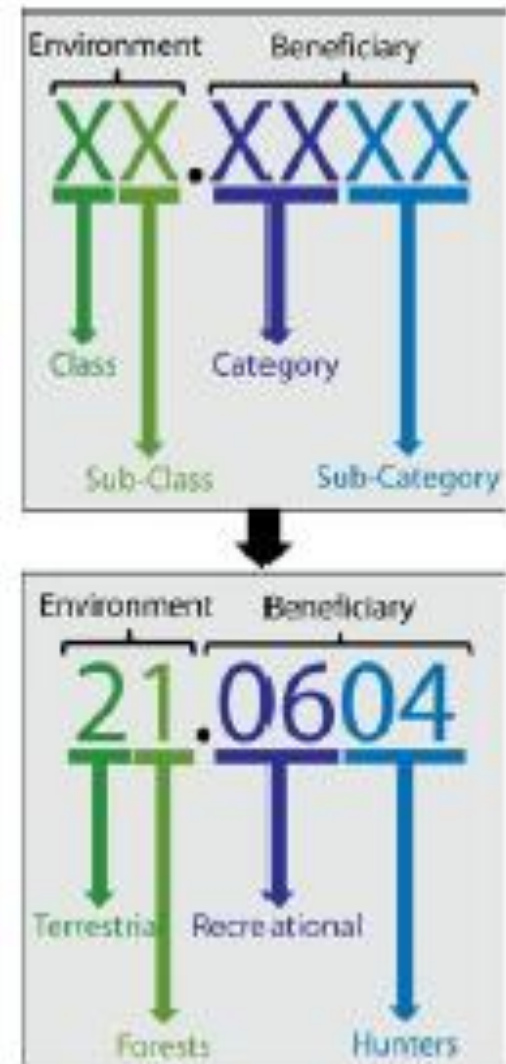
Dependencies

135 of the 358 FECS could involve a corporation as a beneficiary

- Industrial processor using water could show up as a beneficiary for 7 aquatic environmental sub-classes

Impacts

Since those 7 codes include other beneficiaries - a company could impact 190 beneficiaries



Opportunity

Increased clarity in defining & valuing services

- Reduce risks from:
 - Measuring a laundry-list of outcomes
 - Poorly constructed benefit-cost analyses
 - Confusion and ill-will generated during stakeholder engagements



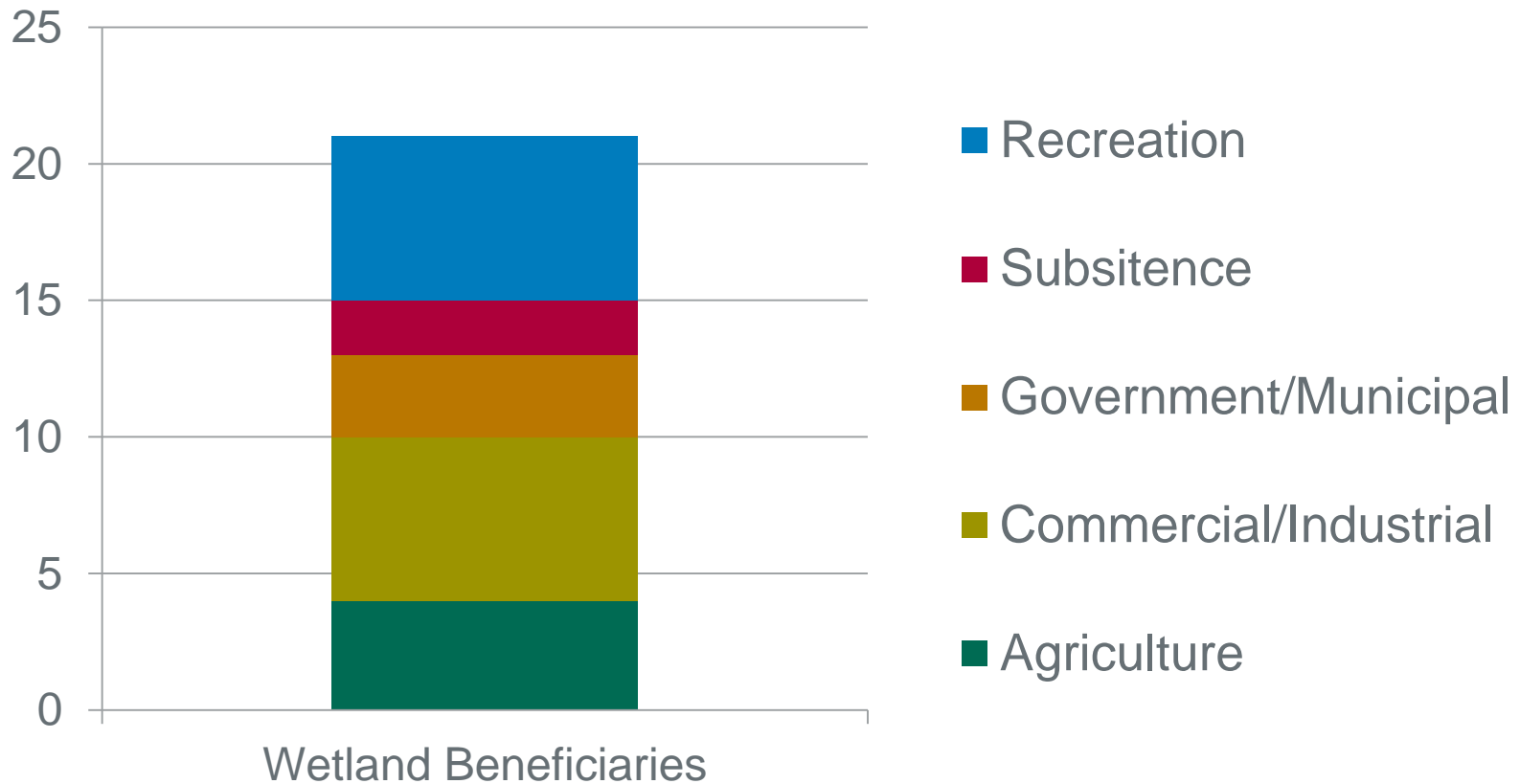
Opportunity

Improve internal corporate decision making

- Provides a reasonable framework for measuring the “Business Case”
- Can show the impact of corporate activities on other beneficiaries
 - Could affect the license-to-operate
 - Trace positive impacts in communities
 - One indicator of sustainability of corporation

Opportunity

FEGS provides a framework for Total Valuation in Credit Stacking



Challenge

FEGS as another reporting/compliance standard

- Greenhouse gases and biodiversity are important topics to companies, but not in FEGS
- How does FEGS relate to measurement/monitoring and enforcement points in system?
- How does FEGS relate to options to achieve compliance?

Data requirements are potentially enormous

- When data are unavailable, rely on benefits transfer?
 - Inaccurate
 - Irrelevant for internal decision making

Challenge: Inclusion of Non-market values

Concerns over liability have kept many companies on the sidelines in ecosystem service valuations

Including non-use values might keep them there

Controversy:

- Reliability of monetizing non-use values
- Double counting in FEGS framework
- Framework exposes fatal flaws with monetizing ?

Conclusion

- Valuable first step in developing a framework with a common language
- Focus on final values is a significant contribution over other frameworks
- Future focus on using the framework for project level analysis, not income accounting will provide more value
- Inclusion of non-use will limit its appeal to corporations