

Presentation for the E3B Graduate Seminar

Ecological Foundations of Payment for Ecosystem Service Schemes

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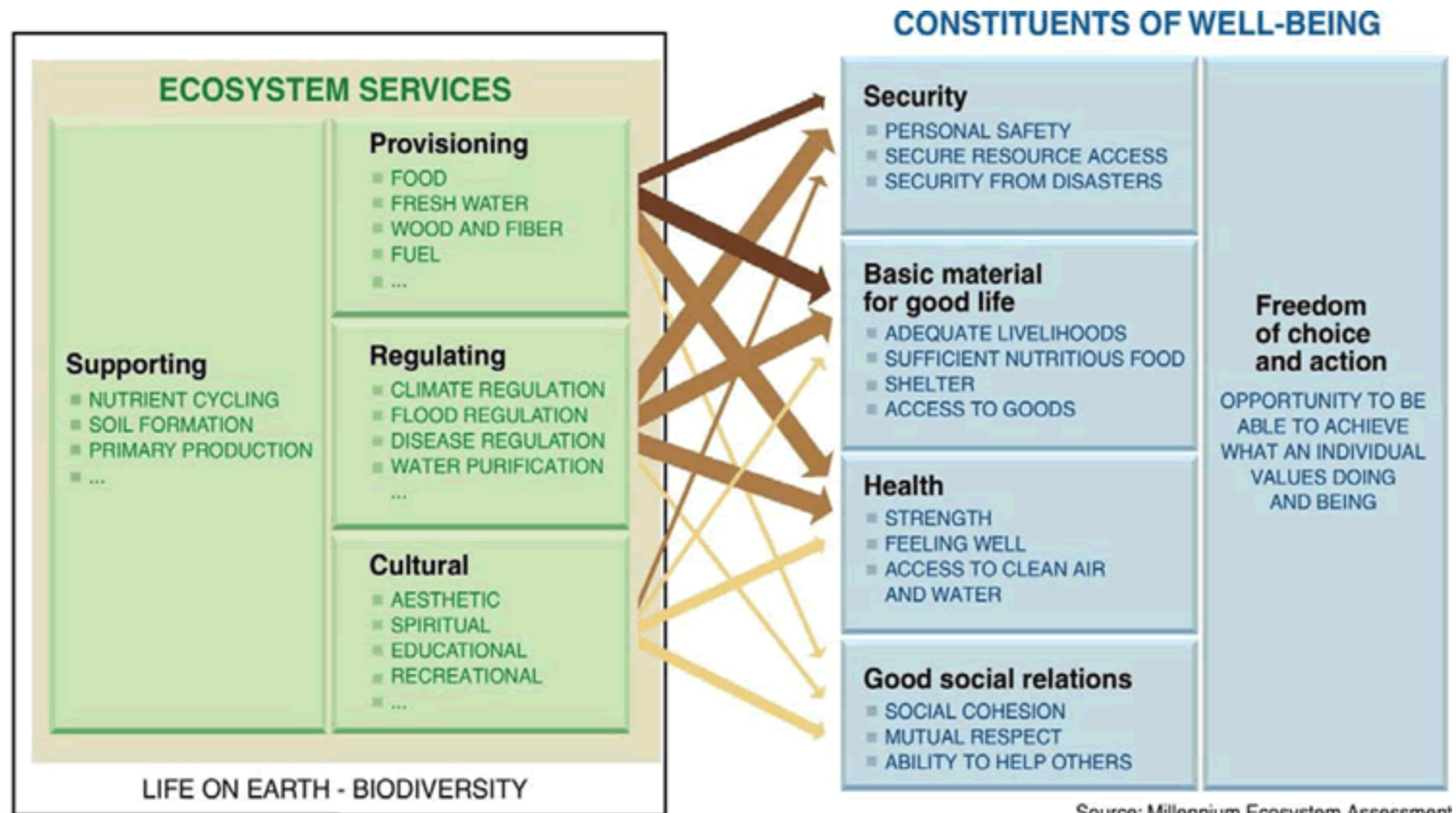


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Payments for Ecosystem Services

Some brief background and resource materials

Millennium Assessment



Source: Millennium Ecosystem Assessment

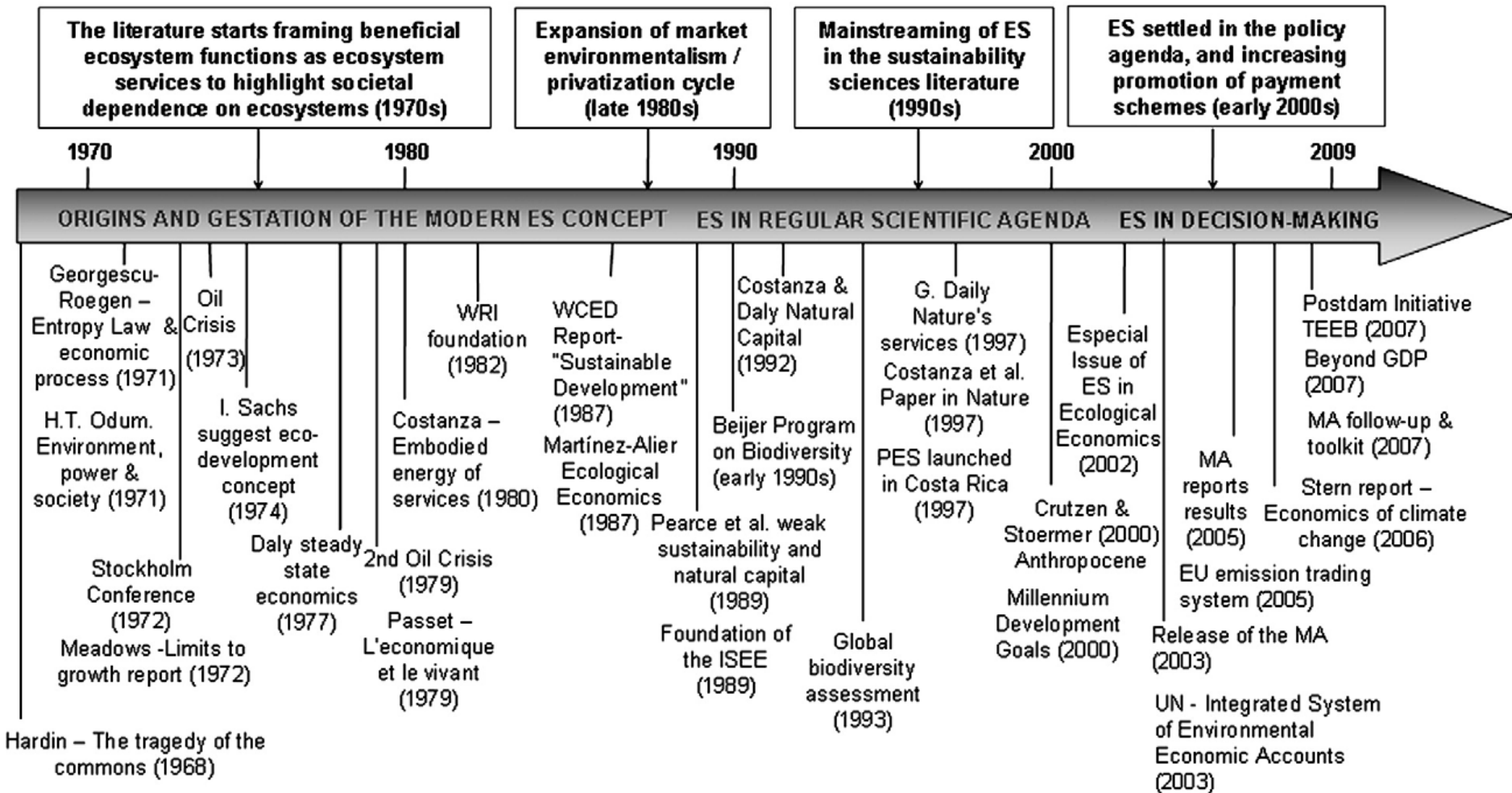
ARROW'S COLOR
Potential for mediation by socioeconomic factors

- Low
- Medium
- High

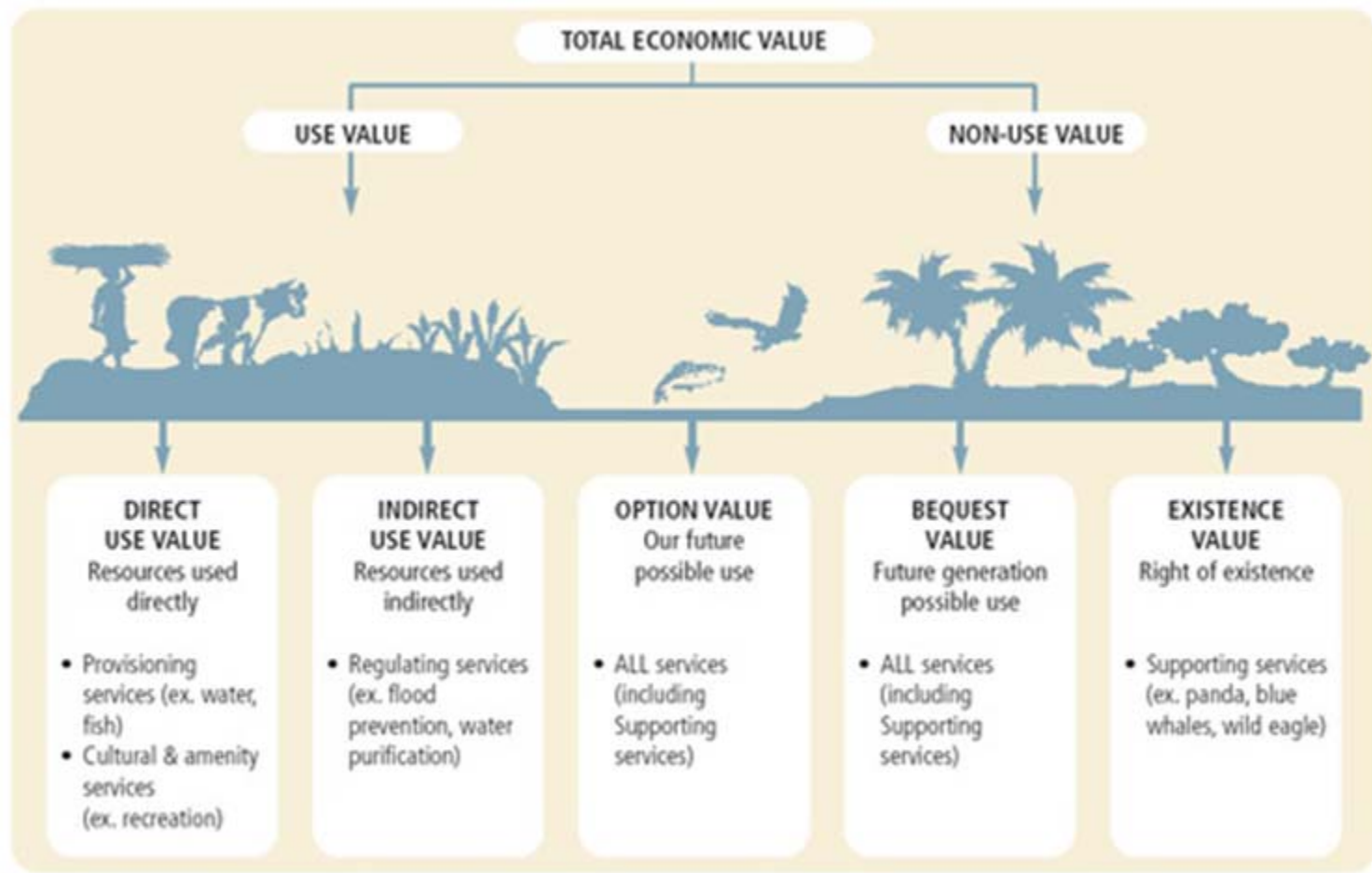
ARROW'S WIDTH
Intensity of linkages between ecosystem services and human well-being

- Weak
- Medium
- Strong

Historical Perspective



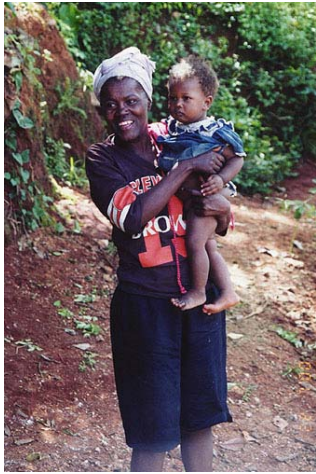
Valuing Ecosystem Services



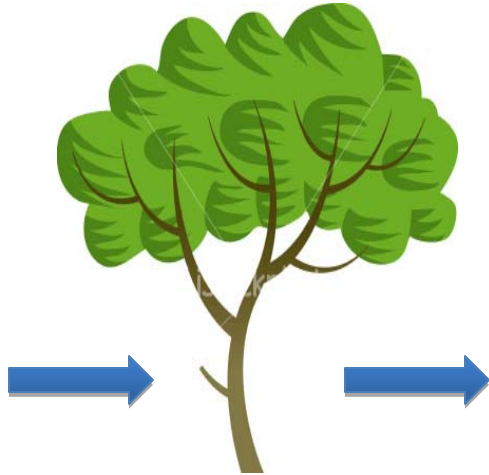
Early examples of PES

- SO_x emissions in North Eastern US (acid rain)
- Wetland Mitigation Banking
- Pago por Servicios Ambientales (Costa Rica), which aimed to reverse the severe deforestation rates existing at that time
- What about entry fees to a National Park?

Payments for Ecosystem Services



Seller:
Farmer/Landowner



Service: Erosion
Control



Resource: Clean
water



Buyer: Water
Company

\$

Potential benefits for Seller:

- Increased cash income
- Expanded experience with external business activities
- Improved resilience of local ecosystems

Potential benefits for Buyer:

- Cheaper production of goods
- Increased sustainability of resource

Current Divisions of ES

Ecosystem services included most in market schemes so far include:

- i) carbon sequestration in biomass or soils;
- ii) provision of habitat for endangered species;
- iii) protection of landscapes; and
- iv) various hydrological functions related to the quality, quantity, or timing of freshwater flows from upstream areas to downstream users.

Nature Evaluation: www.fsd.nl

Case Study Database on Ecosystem Services & Sustainable Management



This database provides a list of ongoing and completed case studies, initiatives and projects linking valuation and financing of ecosystem services to sustainable management.

We also added a number of new features we hope will make this database more user friendly, consistent and informative. For example, we have included information about the functionality of the database. Furthermore, a manual is now also available, which guides you through the database, what it is and how you can easily find the information you are looking for. Since the search function plays a key role in finding the appropriate information, we have included a special feature about that too.

This database is being updated regularly. We encourage you to have a look for newly updated cases on a regular basis.



[DOWNLOAD CASE STUDY DATABASE](#)

- [Functionality](#)
- [Database manual](#)
- [Search function](#)
 - [Country](#)
 - [Region](#)
 - [Ecosystem typology / land use](#)
 - [Type of ecosystem service](#)
 - [Methodology](#)

Case Study Database: Ecosystem Services & Sustainable Management


Ecosystem			Project description and data source		Valuation & Financing				
Ecosystem Typology	Type of Ecosystem Services	Primary Methodology	Project description / objectives	Data Source / Reference	Estimated value (economic, ecological, cultural)	Valuation method	Finance mechanism / type of reward	Supplier of services	Buyer of services
Agriculture	Various	Payments for Environmental Services	1.Total water yield for hydroelectricity generation via run-off from the river; 2.General watershed rehabilitation and erosion control. Land tenure rights have been an issue in Sumberjaya for the past 100 years. Watershed issues triggered four military campaigns from 1991 to 1996.	Getting started before you begin: Experiences from environmental service benefit transfer schemes in Indonesia	N.A.	N.A.	1. Land concession (local government) - operational; 2. Best management practices contract (state owned company) - under implementation	N.A.	N.A.
Forest: Tropical	Climate regulation - R	Payments for Environmental Services	The RUPES program is financing the development and testing of reward mechanisms for communities that protect rubber agroforests and the biodiversity and carbon storage they provide. Potential buyers are the Critical Ecosystem Partnership Fund, the Global Environmental	Getting started before you begin: Experiences from environmental service benefit transfer schemes in Indonesia	N.A.	N.A.	Best management practice contract (not yet determined) - planned	Local landowners	Potential buyers concern: Critical Ecosystem Partnership Fund, the Global Environmental Facility, the Government of
Forest: Tropical	Water regulation - R	Payments for Environmental Services	1. Regular water supply for hydroelectricity via storage lake; 2. General watershed rehabilitation and erosion control; 3. Carbon restocking on degraded landscape	Getting started before you begin: Experiences from environmental service benefit transfer schemes in Indonesia	N.A.	N.A.	Best management practice contract (stated owned company) - under implementation	N.A.	N.A.
Forest: Tropical	Various	Payments for Environmental Services	1. General watershed rehabilitation and erosion control; 2. Regular water supply for industrial and domestic uses via river run-off	Getting started before you begin: Experiences from environmental service benefit transfer schemes in Indonesia	N.A.	N.A.	Best management practice contract (private company) - operational	N.A.	N.A.
Agriculture	Various	Payments for Environmental Services	1. General watershed rehabilitation and water quality; 2. Regular water supply for industrial and domestic uses via river run-off	Getting started before you begin: Experiences from environmental service benefit transfer schemes in Indonesia	N.A.	N.A.	1. Best management practice contract (state owned company) - under implementation; 2. land concession (local government) - planned	N.A.	N.A.
Agriculture	Various	Payments for Environmental Services	The Ikalahan watershed is 70% forest, and provides water for the cities and irrigation systems. The RUPES program will study the Domain's carbon sequestration, and biodiversity and watershed protection, and test payments for these services. Potential buyers of	Rupes: A step forward	N.A.	N.A.	N.A.	N.A.	N.A.

Conservation International: consvalmap.org



Organization of American States: www.oas.org

Data Base of Projects of Payments for Ecosystem Services in Latin America and the Caribbean



Search

Market Category

- All -

Programs

- All -

Payment Type

- All -

Go
New Search

Countries

- All -
Antigua and Barbuda
Argentina
Bahamas
Barbados
Belize

Export to Excel
Print

Change page:
1 2 3 4 5 6 7 8

Displaying page 1 of 8, items 1 to 50 of 364.

Project Name	Description	Amount(USD\$)	Units	Area Protected(ha)	Year
Adopt A Pothole Program	In order to protect waterfowl breeding habitat, Delta Waterfowl began the Adopt A Pothole Program to protect wetlands on prairie grain farms. Those interested in participating in the program sign perpetual leases protecting their wetlands. Currently, the program is focusing on the waterfowl habitat in Canada. The program has signed 22,000 acres of wetlands as of 2006				1991
Agroforestry Systems and Organic Shade Coffee in the Quitirrisi Indigenous Territory, Costa Rica	The Association for the Integral Development of the Quitirrisi de Mora Indigenous Reserve (Asociación de Desarrollo Integral de la Reserva Indígena de Quitirrisí de Mora - ADIRI Quitirrisí) works to restore degraded areas in the Quitirrisi indigenous territory, in San José, Costa Rica, by promoting the use of agroforestry systems, particularly for coffee cultivation.	\$43,100	Total	3,200	2005
Amoyá Project	Construction and operation of a hydrological central with environmental and social programs for the river basin	\$101,400,000	Total		
Andean River Basins	Change of the land use. Forest Maintenance				
Andean river basins (Cuencas Andinas)	The objective of the project is to improve the use of existing possibilities for the sustainable development in 9 chosen river basins of the Andean region: in Colombia: Laguna de Fuquene, La Miel, Afluentes del Cauca; in Ecuador: Ambato and "El Angel" river; and in Peru: Piura, Jequetepeque, Arequipa and Alto Mayo.				
Anderson Tract	This bank services the Atlanta, Lufkin, Paris and Tyler Districts in areas that fall in the Sabine, Neches, Sulphur or Cypress River basins. The mitigation bank was the result of an agreement between six federal and state agencies. It preserves bottomland hardwoods, for both wildlife habitat and recreation.			908	1994
Asociación Civil Mexicana Servicios Ambientales de Oaxaca (SAO)	The Asociación Civil Mexicana Servicios Ambientales de Oaxaca – SAO is comprised of representatives of various organizations that work with poor, indigenous farming communities to promote sustainable land management practices which can qualify for environmental services payments, including carbon sequestration, watershed protection, and biodiversity	\$54,652	Total	2,896	2000

Other Online Sources

- www.biodiversityeconomics.org/
- www.diversitas-international.org/
- www.ebmtools.org
- www.ecosystemmarketplace.com/
- www.ecosystemvaluation.org/
- www.epa.gov
- www.fs.fed.us/ecosystems/services/resources.shtml
- www.iucn.org/about/union/commissions/cem/cem_work/cem_services/index.cfm
- www.millenniumassessment.org
- www.naturalcapitalproject.org/about.html
- www.natureserve.org
- www.nj.gov/dep/dsr/naturalcap/
- www.wri.org/ecosystems
- www.undp.org/biodiversity/crosscutting/mdgandbiodiversity.html
- www.unep-wcmc.org/
- www.usda.gov
- www.uvm.edu/giee/
- go.worldbank.org/4BX4FB5IY0
- 13 valuation case studies at the end of CBD reading for this week