

Value Concept - ESVD

- **Valued_Change_Text**
- **Value_Change:** Indicate whether the value estimate is for the total flow of the ecosystem service or for some change in the flow (e.g. due to a change in area, condition, use etc.). Caution that both could be expressed as mean values (e.g. mean value per visit across all visitors to a park (Total); mean value per visitor for an increase in biodiversity (Marginal)). The key point is to record whether the valuation is for a change or not.
 - Total (flow) - Example Scenario: The annual economic value of flood protection offered by the entire wetland.
 - Positive (change in flow) - Example Scenario: Restoring one more hectare of wetland increases the flood protection value by \$50,000.
 - Negative (change in flow) - Example Scenario: If expanding the wetland by one more hectare leads to a situation where it becomes less effective (e.g., due to over-saturation or inefficiencies in ecosystem function) and the economic value of flood protection decreases by \$10,000.
- **Value_Measure:** Indicate the measure that is reported in the study

Value Measure	Acronym	Approach
Exchange Value	EV	Market price, simulated market price
Consumer Surplus	CS	Max WTP or WTA minus price paid. Note price is often zero so max WTP and WTA measure consumer surplus
Producer Surplus	PS	Revenue minus costs
CS+PS	CP	Consumer and producer surplus reported jointly
Replacement cost	RC	Cost of replacing an ES with a man-made service
Damage cost avoided	DC	Cost of damage avoided due to the ES
Protection cost	PC	Cost of protecting the ecosystem
Opportunity cost	OC	Value of next highest value use of land/resources
Unidentified	UN	Unidentified value measure

Correspondence between valuation methods and value measures

Valuation method	Acronym	Approach	Value Measure
Choice Modelling (Discrete Choice Experiment; Conjoint Analysis)	CE	Ask people to make trade-offs between ES and other goods or income to elicit willingness to pay	CS
Contingent Valuation	CV	Ask people to state their willingness to pay for an ES through surveys	CS

Damage Cost Avoided	DC	Estimate damage avoided due to ecosystem service	DC
Defensive Expenditure	DE	Expenditure on protection of ES	PC
Group Valuation (Participatory Valuation)	GV	Ask groups of stakeholders to state their willingness to pay for an ES through group discussion	CS
Hedonic Pricing	HP	Estimate influence of environmental characteristics on price of marketed goods	EV (if implicit price is estimated) CS (if demand curve is estimated)
Input-Output Modelling	IO	Quantifies the interdependencies between economic sectors in order to measure the impacts of changes in one sector to other sectors in the economy. Ecosystems can be incorporated as distinct sectors.	EV PS (if added value is estimated)
Market Prices (Gross Revenue)	MP	Prices for ES that are directly observed in markets	EV
Net Factor Income (Residual Value; Resource Rent)	FI	Revenue from sales of ecosystem-related good minus cost of other inputs	PS
Opportunity Cost	OC	The next highest valued use of the resources used to produce an ecosystem service	OC
Production Function	PF	Statistical estimation of production function for a marketed good including an ES input	PS
Public Pricing	PP	Public expenditure or monetary incentives (taxes/subsidies) for ES as an indicator of value	UN
Replacement Cost	RC	Estimate the cost of replacing an ES with a man-made service	RC
Restoration Cost	RT	Estimate cost of restoring degraded ecosystems to ensure provision of ES	RC
Social Cost of Carbon	SC	The monetary value of damages caused by emitting one tonne of CO ₂ in a given year. The social cost of carbon (SCC) therefore also	DC

		represents the value of damages avoided for a one tonne reduction in emissions.	
Travel Cost	TC	Estimate demand for ecosystem recreation sites using data on travel costs and visit rates	EV (if cost of visiting is estimated only) CS (if cost of visiting is used to estimate a demand curve)
Value Transfer (Benefits Transfer)	VT	Estimate the ES value for a "policy site" using existing information from a different "study site(s)".	UN
Other	OT		UN