

Article

Measurement of the Threatened Biodiversity Existence Value Output: Application of the Refined System of Environmental-Economic Accounting in the *Pinus pinea* Forests of Andalusia, Spain

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Presentation of selected issues regarding methodology and results

based on the above article

by Burkhard Schweppe-Kraft

at the International Online Workshop “Economic Valuation of Biodiversity Wealth and Debt in National Accounting (20/21 November 2023)”

**Good/product/output
in focus:**

Avoiding an increase in the number of endangered species

**Rationale for focussing
on endangered
species:**

“In the case of species where the number of individuals is maintained above the amount considered critical to reveal threat of species extinction, **there is no biodiversity output.**”

**Study object and
study area:**

Stone pine (*Pinus pinea*) forests (243,595 hectare) in protected and non-protected areas of Andalusia, Spain

**Output value
(value of above
mentioned
good) at the
definition of the
authors:**

Total cost to avoid
biodiversity loss
(government expenditures
for raw materials, services,
and labour as well as
depreciation of produced
capital)

+

Willingness to pay of the
Andalusian adult resident
population to avoid an
increase in endangered
species

← Individual
willingness to pay
mediated through
the political process

← Additional individual
willingness to pay
stated in a choice
experiment

Ecosystem service (“environmental benefit”) calculation of the authors formally in line within SEEA EA:

		Per hectare values in euros per year	
		Protected areas	Non-protected areas
Stated willingness to pay	Output value	8.8	8.1
	-		
	Total cost	12.2	5.9
	-	-	-
	Produced benefit of durable capital („investments in the management of biodiversity“, imputed 3% return)	0.7	0.1
	=	=	=
	Ecosystem service to prevent biodiversity loss	8.0	8.0

Range of per hectare values according to published classification depending on the number of endangered species: “0-2” to “>100” euros per year per hectare