

**Socio-economic assessment and valuation of ecosystems for
sustainable development**

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[International Centre for Research on the Environment and the
Economy](#)



Project co-funded by the European Union and
National Funds of the participating countries



Balkan-Mediterranean Programme

RECONNECT

International Centre for Research on the Environment and the Economy- ICRE8

Website: www.icre8.eu



Co-hosting institution of SDSN Greece www.unsdsn.gr



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Founder and Scientific Director:

Prof. Phoebe Koundouri

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Strategic Management Board: Prof. Bateman, Prof.

Chichilnisky, Prof. Dasgupta, Prof. Gollier, Prof. Hasapis,
Prof. Koundouri, Prof. Markandya, Dr. Tschritzis.

<http://www.icre8.eu/strategic-planning-board>

Scientific Collaborators: 100 researchers at ICRE8 in
Greece, Europe, USA, Asia, Australia

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DEPARTMENTS

[Sustainable Development Solutions Network \(SDSN-Greece\)](#)

Head: Prof. [Andreas Papandreou](#)

Academic Manager: Dr. [Achilleas Vassilopoulos](#)

Administrative Manager: [Klea Morianou](#)

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Head: Prof. [Nikitas Pittis](#)

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ICRE8 is working in close collaboration with ReSEES laboratory of Athens University of Economics and Business, directed by Prof. Phoebe Koundouri.

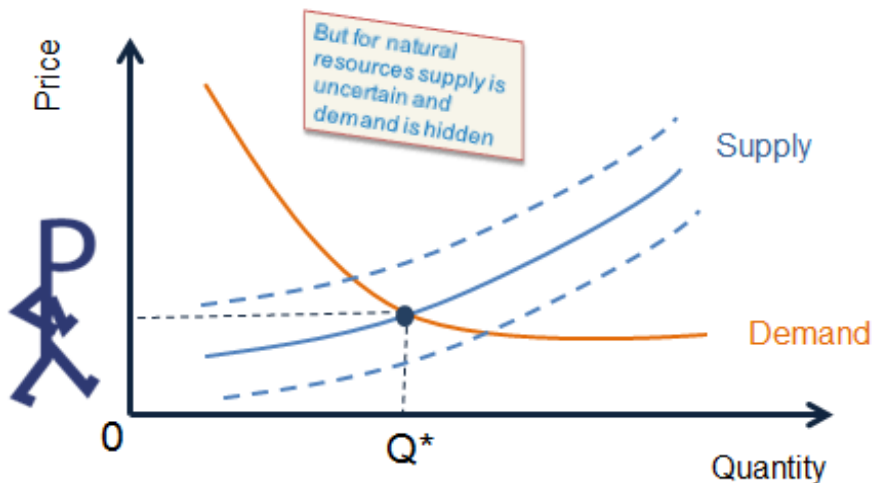
ReSEES: Research team on **Socio-Economic & Environmental Sustainability** is an umbrella for all the Research Projects, Scientific Publications, and Scientific, Policy and Social Impact, produced by an interdisciplinary and international research team led by Prof. Phoebe Koundouri over the last 20 years.

Website: <http://www.aueb.gr/users/koundouri/resees/resees.html>

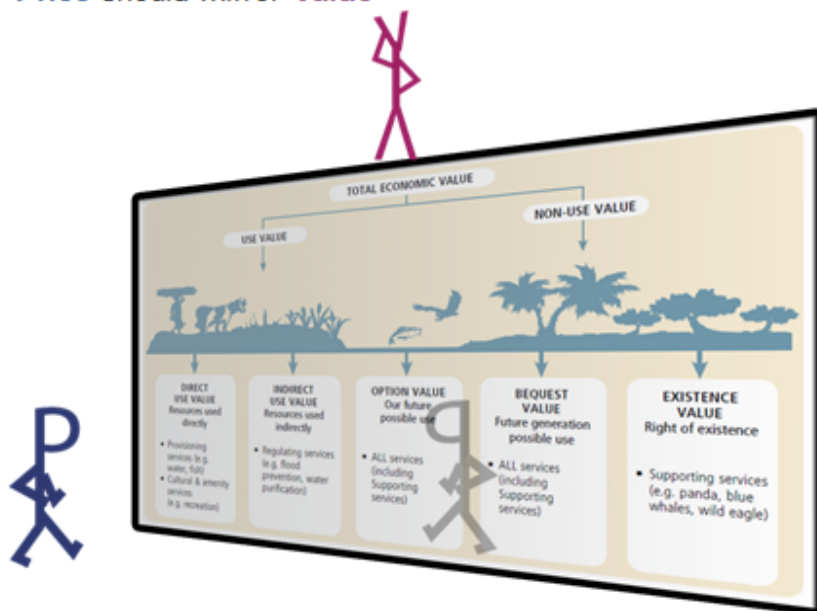
Since 1996 [ReSEES](#) achieved:

- 20 million euros of research funding
- Collaborators: 150 Universities/Research Institutions & 500 researchers
- 200 published peer-reviewed research papers and books
- Geographical distribution: Europe, US, Latin America, Africa, Asia, Australia
- **ReSEES** influenced policy & attracted mass media coverage all over the world

Market Interaction Makes Value Explicit

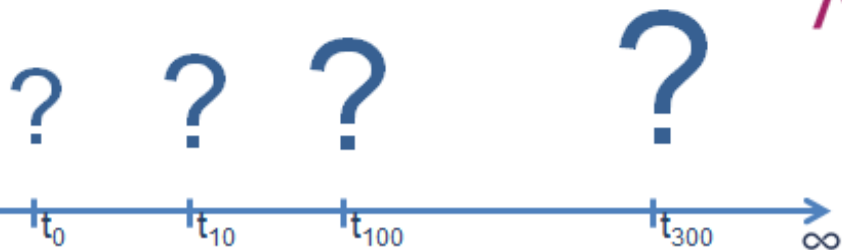


Price should mirror Value



We need ~~?~~ for EACH

- Resource _(r)
- Individual _(i)
- Space _(s)
- Time _(t) from today till ∞



If you can't measure it, you can't improve it

(William Thomson, Lord Kelvin)



ICRE8 Project Tasks

- Identification and analysis of essential socio-economic variables
 - Cost-benefit analysis (WP6 Handbook of Management)
 - Core variables to enter the DSS
- Valuation of ecosystem services
 - Market methods
 - Non-market methods (Choice Modelling, Benefit Transfer)
- Questionnaires on hypothetical changes in the evaluated ecosystems



ICRE8 Deliverables

WP	Deliverable No	Deliverable title	Duration
WP1	D1.7.2	Project Meeting Reports	24
	D1.7.4	Final Project Report	24
	D1.7.5	Audit Reports	24
WP2	D2.7.3	Workshops on the Decision Support System	24
	D2.7.5	Publications in scientific journals, participation in conferences	24
WP3	D3.7.2	Questionnaires quantifying Essential Socio-economic and Cultural Variables	24
WP6	D6.7.2	Handbook of Management Practices	12



Study sites and data

Sites

1. Greece: Karpathos Saria and Astakidonision
2. Cyprus: Kavo Gkreko
3. Albania: Ksamil Bay and islands
4. Bulgaria: Gradina-Zlatna Ribka

Data collection

- ✓ Primary data collection via social surveys and questionnaires
- ✓ Secondary data collection (World Bank database, National Statistical Offices, Eurostat, European Bank for Reconstruction and Development-EBRD, etc.)



Work in progress

1. Review of the literature (identify studies of interest for Benefit Transfer)
2. Collection of essential socio-economic data
 1. Gross Domestic Product
 2. Employment
 3. Population figures
 4. Economic activity by sector
 5. ...
3. Set up of the social survey questionnaire and choice experiment



1. A review of the literature

Action surveyed, year and country of reference	Methodology	Willingness to pay (in 2013 US dollars)	Payment frequency	Unit	References
Improved status, Harbor seal, 2006, Canada	Hybrid Contingent Valuation / Choice Experiment	78.84–201.61	Annual	Household	Boxall et al. (2012)
Protection program, 2003, Greece	Contingent Valuation	21.74–29.95	One-time	Individual	Stithou and Scarpa (2012)
Protection program, Hake, 2006, Spain	Contingent Valuation	35.63	One-time	Household	Ojea and Loureiro (2010)
Protection program, Manatee, 2001, USA	Contingent Valuation	13.48–28.20	Annual	Household	Solomon et al. (2004)
Protection program, Loggerhead sea turtle, 2003, Greece	Contingent Valuation	22.46–32.12	One-time	Individual	Stithou and Scarpa (2012)
Improved status, USA	Choice Experiment	47.47	Annual	Household	Wallmo and Lew (2012)



2. Preliminary socio-economic data

	Greece (Karpathos, Saria, Astakidonision)	Cyprus (Cape Greco)	Albania (Ksamil Bay Islands)	Bulgaria (Gradina - Zlatna Ribka)
Population (in million)	10.7	1.2	2.9	7.1
Regional Population	2.752	-	2.994	n.a.
Country GDP per capita (in US \$, 2016)	18,104	23,324	4,146	7,350
Employment (in million, 2017)	3.8	0.4	1.1	3.2
Gross Domestic Product-GDP (in US billion, 2016)	194.6	19.8	11.93	52.4
Services, as % of GDP	80	87	53	68
Industry, as % of GDP	16	11	24	28
Agriculture, as % of GDP	4	2	23	4





3. Social survey: Aim and merits

- Aim
 - Assess the value of ecosystem services in the case studies of interest
- Merits
 - Provide further useful insights for the formulation of policy recommendations
 - Employ advanced methodologies to provide quantified estimations on the value of ecosystem services that can be transferable to other areas of interest
 - Provide results that can have wider policy/research implications



3. Social survey: Methodology

- Questionnaires to be completed via face to face interviews and/or to be distributed in online social survey
- Choice experiment survey



3. Social survey: Structure

- Questions proposed regard:
 - ✓ General attitudes and activities of the respondents
 - ✓ Choices on the following ecosystem services: provision, regulation, recreation, supporting (subject to refining)
 - ✓ Follow-up questions for robustness checks
 - ✓ Questions on socioeconomic characteristics of the respondents



3. Social survey: Content

- Indicative questions provided next
- Final questionnaire structure and content subject to changes- work in progress

Gender	Male/Female
Age	
Country of Origin	
Number of Household members	
Number of Children	
Educational level	Without a school degree
	Primary School
	High School
	University degree
	Post-graduate
	Other



3. Social survey: Content

Question	Answer
Do you ever visit the site of...?	Yes /No
If yes, how many times per year?	
If yes, which activities do you usually undertake when you visit the site?	Swimming, fishing, etc...
How would you describe today, the general environmental condition in the area?	Very Good
	Good
	Moderate
	Bad
	Very Bad
Are you aware of the ecosystem services?	Yes
	No



3. Social survey: Choice experiment

Attribute (subject to specification)	Level	Choice A	Choice Z	Current Status
Regulation	1,2,3...			
Provisioning	1,2,3...			
Recreational	1,2,3...			
Supporting	1,2,3...			
Price	X1, X2, X3....			

- Number of choices to be statistically determined
- Need to agree on the ecosystem services/attributes valued
- Need to agree on level
- Need to agree on whether or not to include current status and if so need to agree on definition
- Regarding price need to agree on the payment method (tax, lump sum payment, frequency, etc.)



3. Social survey: Extensions and other technicalities

Which of the alternatives do you prefer the most?

Which of the alternatives do you prefer the least?

Which of the remaining alternatives do you prefer the most?

- Other questions to include?
- Might be better to ask participants to rank from most to least preferred?
- Translation of the questionnaires and time of face-to-face interviews
- Online set-up and access of respondents
- Follow up and ensure adequate number of questionnaires will be completed



Short/medium term actions (M1-M10)

- Completion of literature survey (January 2018)
- Questionnaire-first draft (March 2018)
- Communication with project partners and finalization of questionnaire (May 2018)
- Translation of questionnaire and online set up (June 2018)
- Social survey start (June 2018)
- First draft of socio-economic and cultural database and preliminary assessment (July 2018)