

**DISCOURSES**  
**ABOUT ECONOMIC VALUATION OF**  
**BIODIVERSITY IN EUROPE**  
**AN APPLICATION OF Q-METHODOLOGY**

BIOMOT

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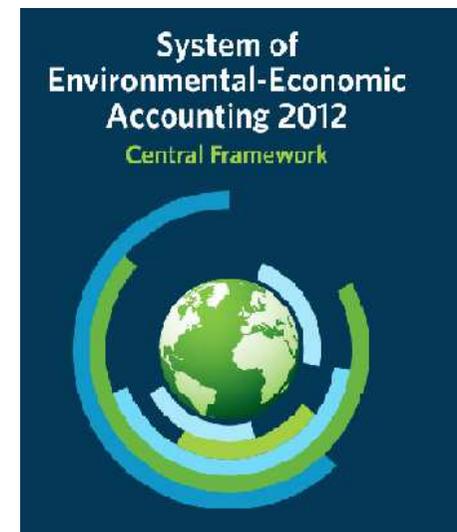
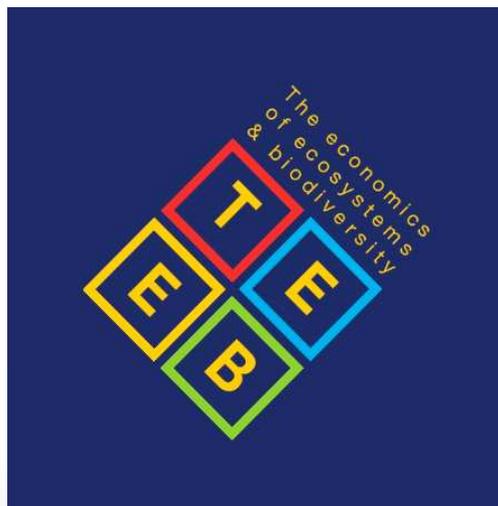
# Introduction

- Economic valuation of ecosystems and biodiversity in monetary terms plays a prominent role in policy making and the protection of biodiversity



# Introduction

- Only in the past few years that environmental accounting and ecosystem valuation has been widely institutionalised at the international level.
- Lead to stronger debate.



# Introduction

- Debate: Economic valuation of biodiversity:
- **Good**
  1. Makes nature visible in the world of economics
  2. Gives economic incentives to protect nature
  3. Aggregates values for decision making
- **Bad**
  1. Ignores non-economic values. Lose their importance.
  2. Not democratic.
  3. Ignores sustainable management of ecosystems.

# Introduction

- Limitations of economic valuation methods are seen in practice: protest bids.
- Alternative methods of valuation exist.
- Deliberative, participatory valuation methods
- Multi-criteria decision analysis
- Ethical, intrinsic and sustainability values may be expressed in such procedures

# Research question

- How do economic experts and practitioners in the EU regard monetary valuation relative to these alternative or complementary methods?
- Method: Q methodology to identify which aspects regarding monetary valuation are contested, which less so and why this is so.
- Q methodology generates specific kind of results.

# Methods

- Q methodology:
- Combination of a survey and statistical analysis.
- Serves to find the main ordered patterns in opinions, commonly referred to as '*discourses*'.
- Dryzek (2013): '*a shared way of apprehending the world. Embedded in language, it enables those who subscribe to it to interpret bits of information and put them into coherent stories or accounts.... Each discourse rests on assumptions, judgements, and contentions that provide the basic terms for analysis, debates, agreements, and disagreements*'

# Methods

1. Stage one involves developing a set of statements to be sorted;
2. Stage two requires participants to sort the statements along a continuum of preference;
3. and in stage three the data are analyzed and interpreted.



# Methods

1. Gathering the “concourse”: full set of 148 statements about economic valuation of biodiversity, from scientific literature, media etc.
2. From the full list, we derived the “Q-set”: 36 statements, representative of the whole. Matrix to encompass all dimensions. Statements were shortened and simplified.

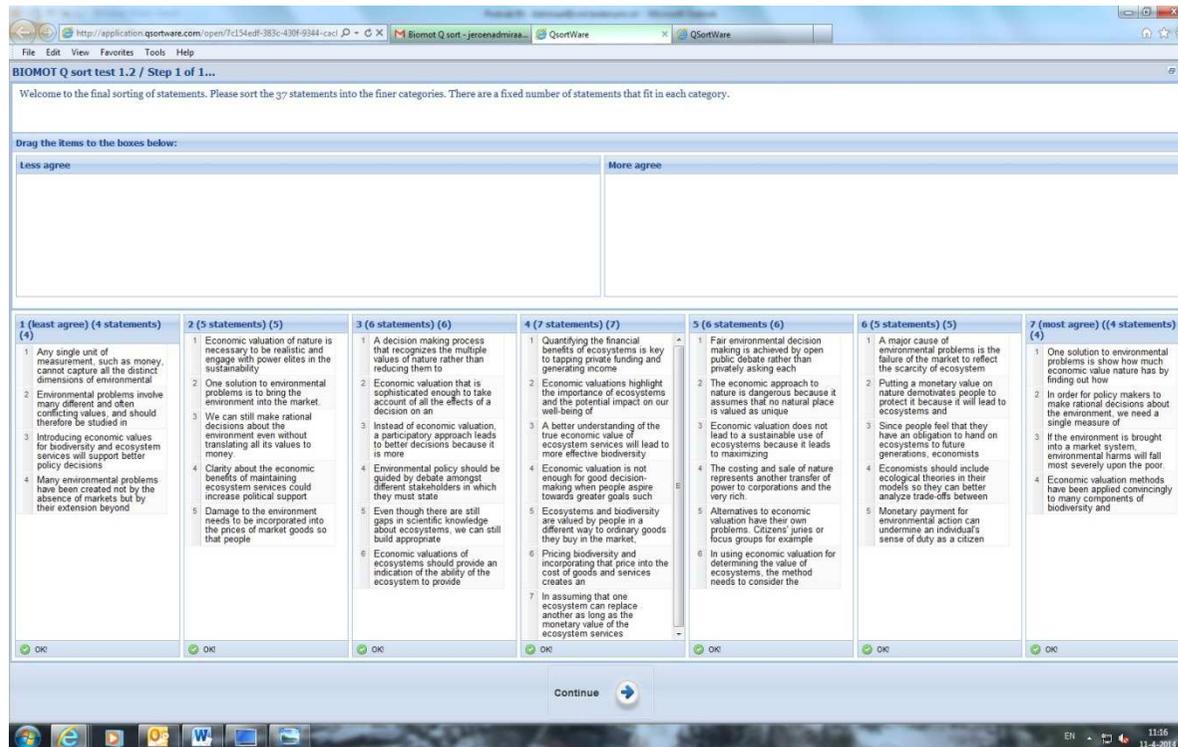
	Environmental valuation methods and their relations to the causes of and potential solutions to environmental problems	Environmental valuation methods: strengths and weaknesses	Environmental valuation methods and motivation: ethical and motivational concerns, and institutional capacity
<b>Broadly supportive of economic valuation</b>	REASONS WHY EV is fine and helps solve environmental problems Statements: 4	REASONS WHY the EV tool as such is a good way to value nature Statements: 2	REASONS WHY EV motivates people to use it Statements: 4
	REASONS WHY EV is flawed but could still be a solution with the right changes implemented Statements: 4	REASONS WHY the EV tool as such is flawed but could still be good with the right changes implemented Statements: 1	REASONS WHY alternative methods are not more motivating than EV Statements: 2
<b>Broadly critical of economic valuation</b>	REASONS WHY EV in general is just making things worse Statements: 5	REASONS WHY EV is in principle NOT a good tool for valuation Statements: 4	REASONS WHY EV does not motivate people Statements: 4
	REASONS WHY other decision making processes are better Statements: 3	REASONS WHY certain other tools might be better in a technical sense Statements: 2	REASONS WHY other tools are more motivating for people Statements: 1

# Methods

- We selected participants from 7 EU countries.
- Collaborating researchers selected and contacted possible participants on a national level, based on common selection criteria.
- Four categories:
  1. Environmental, behavioral and ecological economists based in universities;
  2. Economists based in organizations, including governmental agencies, other than universities;
  3. Representatives from NGOs and other groups critical of the economic valuation of nature; and
  4. Other individuals (e.g. policy makers, environmental philosophers, conservation biologists) prominently involved in the economic valuation of nature debate.
- 40 respondents participated.

# Methods

1. Respondents ranked the statements from -3 to +3 via an online sorting program (QSortWare)



# Data analysis

- A free software package (PQMethod) was used for the analysis
- Each respondent's sort of statements is transformed into data.
- Respondent's array of data is then inter-correlated with the arrays of all the others.
- The correlation matrix is then subjected to factor analysis to obtain groupings of statements that correlated (factors).
- Extract factors that explain the most variance in the data.
- Factors form the descriptions of the discourses.

# Data analysis

- Generated 8 factors.
- 4 factors could be made working descriptions for.
- Factors 1 and 2 were highly salient in the data, with factors 3 and 4 inhabiting a boundary area of decreasing importance.
- Statements receive standardized scores per factor

No	Q set	F1	F2	F3	F4
1	The economic approach to nature fails to respect that people value the particular irreplaceable history of the places they know.	-1,04	1,56**	-0,22	-0,4
2	A better understanding of the total economic value of ecosystem services will lead to more effective biodiversity protection.	1,2**	-1,53**	-0,61	0,23
3	The economic approach to nature is dangerous because it assumes that no natural place is valued as unique or irreplaceable.	-1,79	0*	-0,82*	-1,77
4	The goals of sustainability and equity are not served by economic valuation methods.	-1,24**	0,86**	-0,15	-0,23
5	Economic valuations highlight the importance of ecosystems for human well-being.	1,61**	-0,08	-1,5	-0,8
6	A weakness of economic valuations of ecosystems is that they do not provide an indication of the ability of the ecosystem to provide services into the future.	-0,89	-0,59	-0,08	1,77**
7	If the environment is brought into a market system, environmental harms will fall most severely upon the poor.	-0,78	-0,3	1,5**	-0,8
8	A single, monetary measure of value is needed to weigh the value of the environment against other societal goals.	-0,25*	-2,23	-1,73	-0,97
9	We can still make rational decisions about the environment even without translating all its values to money.	0,56	1,01	2,03**	0
10	Environmental problems can be created not by the absence of markets but by the expansion of market institutions into the environmental domain.	-1,41**	-0,35	0,84*	-0,12
11	Placing an economic value on 'free' environmental goods will help justify their protection.	1,27*	0,43	-1,42**	0,4
12	No single unit of measurement, such as money, can capture all the distinct dimensions of environmental values.	0,81	2,13**	0,46	0,86
13	Fairer environmental decision making is achieved by open public debate, not economic valuation.	-0,56**	1,21	0,52	0,69
14	Decision makers should have the conflicting values involved in environmental problems made clear to them. rather than having them reduced to a single monetary figure.	0,53*	1,46	-0,45**	1,26

# Results

Enthusiasm for EV			
more effective biodiversity protection			
importance of ecosystems for human well-being			
will help solve environmental problems			
necessary to be realistic and engage in the decision making process			
environmental problems are not created by the expansion of market institutions			
offer money for environmental goods is not an act of bribery			

# Results

Enthusiasm for EV	Value pluralism		
more effective biodiversity protection	no single unit of measurement (money) can capture all the distinct dimensions of environmental values		
importance of ecosystems for human well-being	dangerous because it assumes that no natural place is valued as unique or irreplaceable		
will help solve environmental problems	goals of sustainability and equity are not served		
necessary to be realistic and engage in the decision making process	a participatory approach can lead to better decisions and more commitment		
environmental problems are not created by the expansion of market institutions	environmental decisions should be guided by debate		
offer money for environmental goods is not an act of bribery	financial benefits of ecosystems is not key to accessing private funding		

# Results

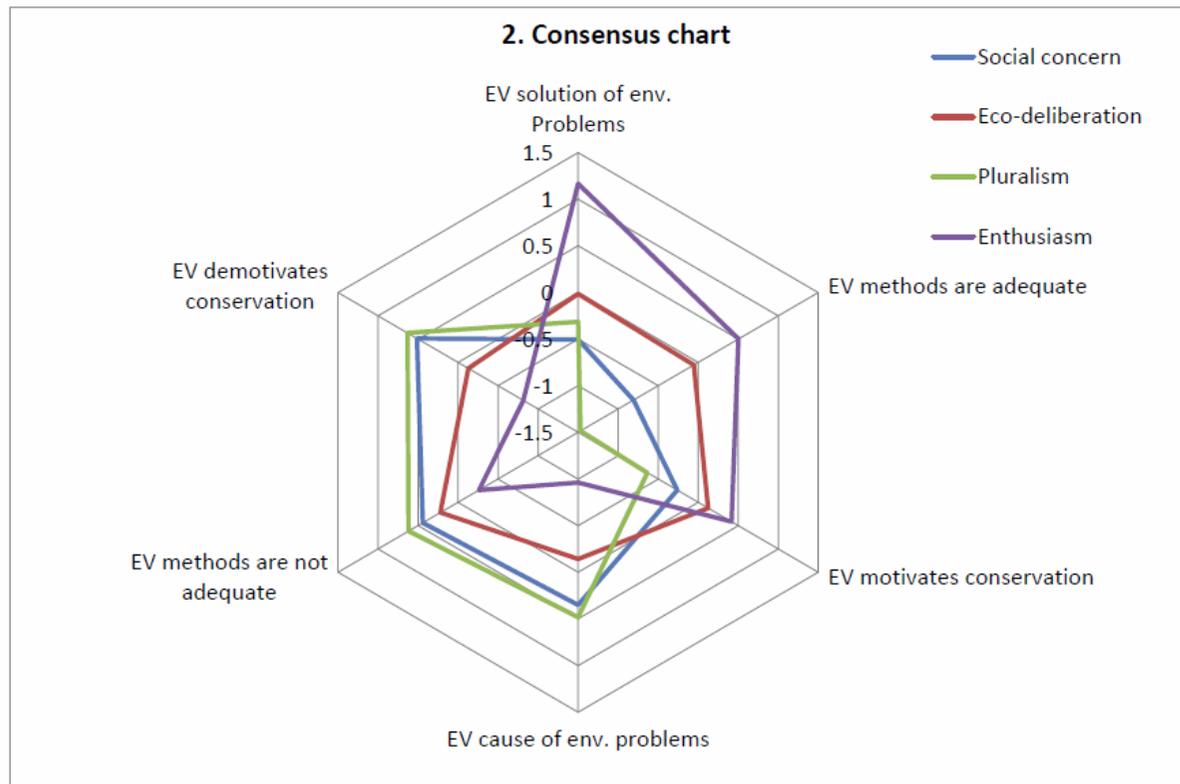
Enthusiasm for EV	Value pluralism	Social justice concerns	
more effective biodiversity protection	no single unit of measurement (money) can capture all the distinct dimensions of environmental values	into a market system, environmental harms will fall most severely upon the poor	
importance of ecosystems for human well-being	dangerous because it assumes that no natural place is valued as unique or irreplaceable	costing and sale of nature represents a transfer of power from poor to rich	
will help solve environmental problems	goals of sustainability and equity are not served	environmental problems are created by the expansion of market institutions	
necessary to be realistic and engage in the decision making process	a participatory approach can lead to better decisions and more commitment	maximizing the current value of an ecosystem at the expense of the future	
environmental problems are not created by the expansion of market institutions	environmental decisions should be guided by debate	economic valuation is not key to accessing private funding	
offer money for environmental goods is not an act of bribery	financial benefits of ecosystems is not key to accessing private funding	economic value on public environmental goods will not help to justify their protection	

# Results

Enthusiasm for EV	Value pluralism	Social justice concerns	Eco-deliberation
more effective biodiversity protection	no single unit of measurement (money) can capture all the distinct dimensions of environmental values	into a market system, environmental harms will fall most severely upon the poor	Lacks an indication of the ability of the ecosystem to provide services into the future
importance of ecosystems for human well-being	dangerous because it assumes that no natural place is valued as unique or irreplaceable	costing and sale of nature represents a transfer of power from poor to rich	environmental decisions should ideally be guided by debate
will help solve environmental problems	goals of sustainability and equity are not served	environmental problems are created by the expansion of market institutions	no concern that such debates are dominated by those who have the loudest voice
necessary to be realistic and engage in the decision making process	a participatory approach can lead to better decisions and more commitment	maximizing the current value of an ecosystem at the expense of the future	economic valuations do not betray unrecognized values
environmental problems are not created by the expansion of market institutions	environmental decisions should be guided by debate	economic valuation is not key to accessing private funding	market system may not necessarily help to solve environmental problems
offer money for environmental goods is not an act of bribery	financial benefits of ecosystems is not key to accessing private funding	economic value on public environmental goods will not help to justify their protection	is not necessary to be realistic and to engage in the decision making process

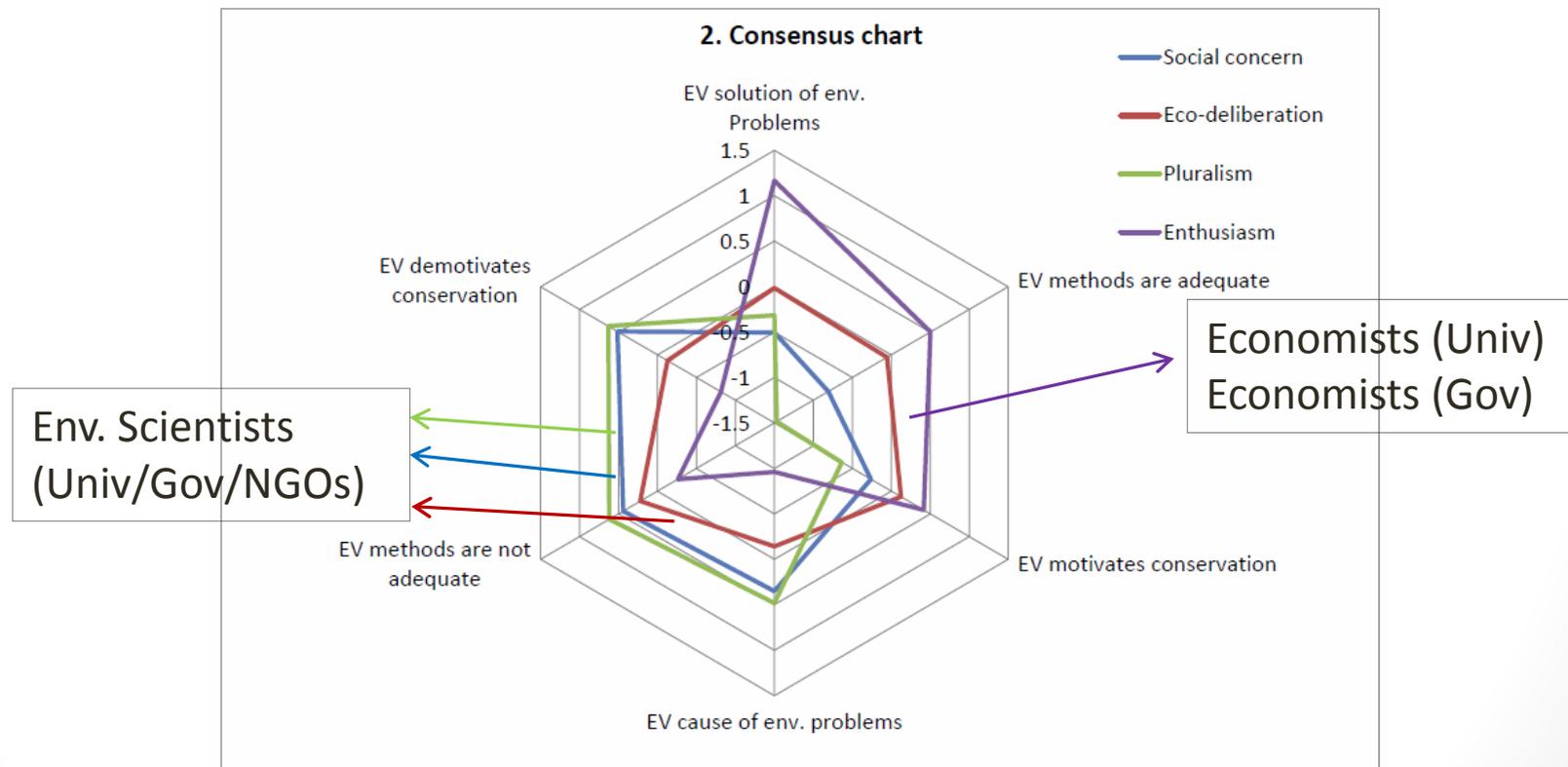
# Results

- Consensus and conflicts
- Polarization of opinion



# Results

- Polarization comes from difference in groups of defining sorts.



# Discussion

- The discourses show, the same arguments may be marshalled for different collections of ideas and the identified discourses can provide clarification in such moments.
- Can be to show how groups of people align themselves with different collections of ideas and arguments.
- Helps to differentiate between understandings of sustainable development.
- Can inform the improvement of representation for deliberative methods in economic decision-making.

Thank you