

Non-monetary valuation of ecosystem services

Identification of Conservation and Ecological Restoration Priorities of Coastal Lagoons



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Overview of the main papers of the thesis



Paper 1

Consensus on Ecosystem Services (ESs)

Decision support tool

PHD : focus on high priority ESs + ↓ number of ESs



Paper 2

Non-monetary Valuation Based on a Theory of Ranking

Social Choice and Measurement theories



Paper 3

The Impact of Knowledge and Information Provision on Non-monetary Valuation of ESs

Identifying Consensus on Coastal Lagoons Ecosystem Services and Conservation Priorities for an Effective Decision Making : A Q Approach

Mariam Maki Sy, H el ene Rey-Valette, Monique Simier, Vanina Pasqualini, Charles Figui eres, Rutger De Wit



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Analysis

Identifying Consensus on Coastal Lagoons Ecosystem Services and Conservation Priorities for an Effective Decision Making: A Q Approach

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Study areas : Palavas and Biguglia lagoons + their peripheral riparian zones

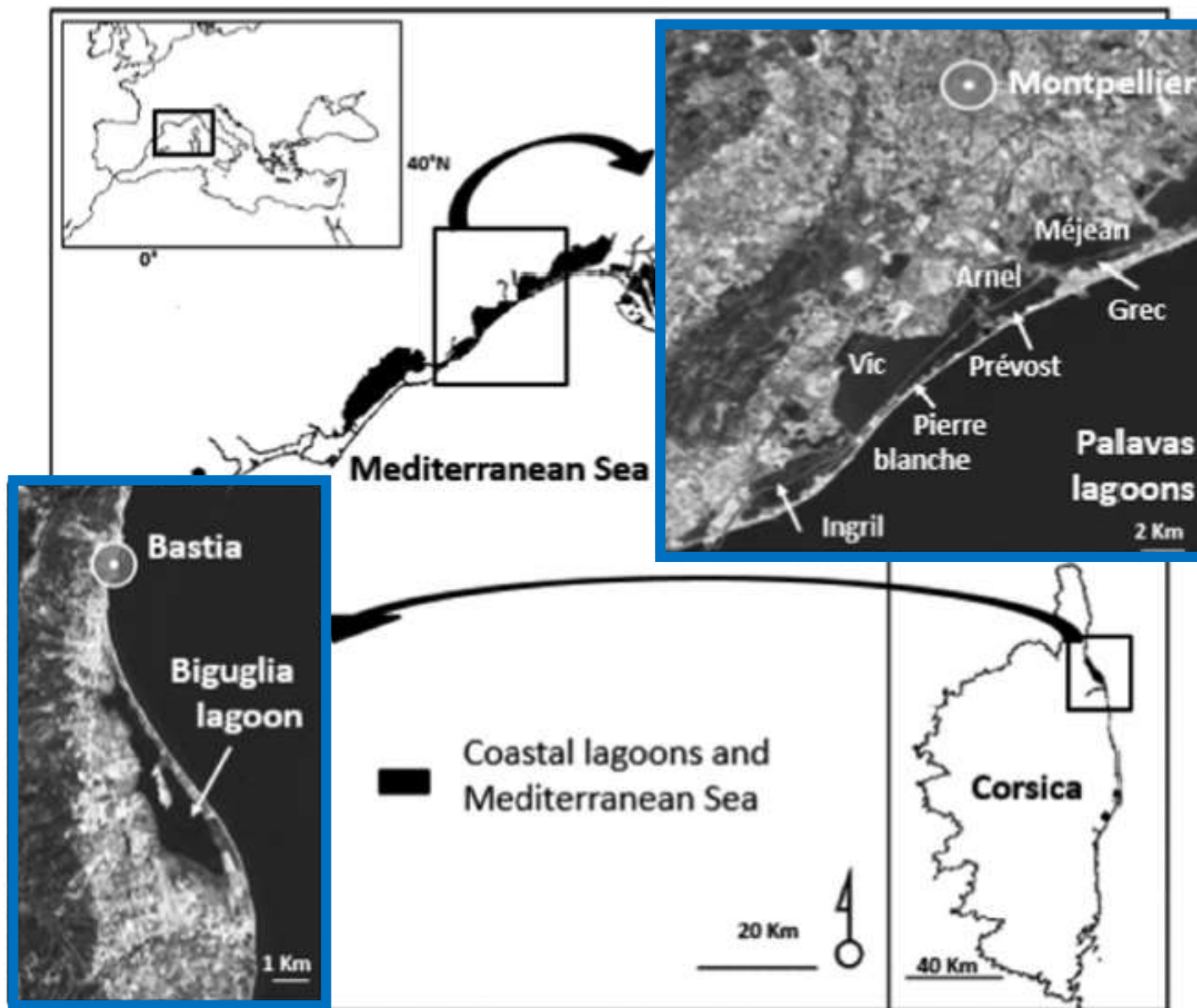
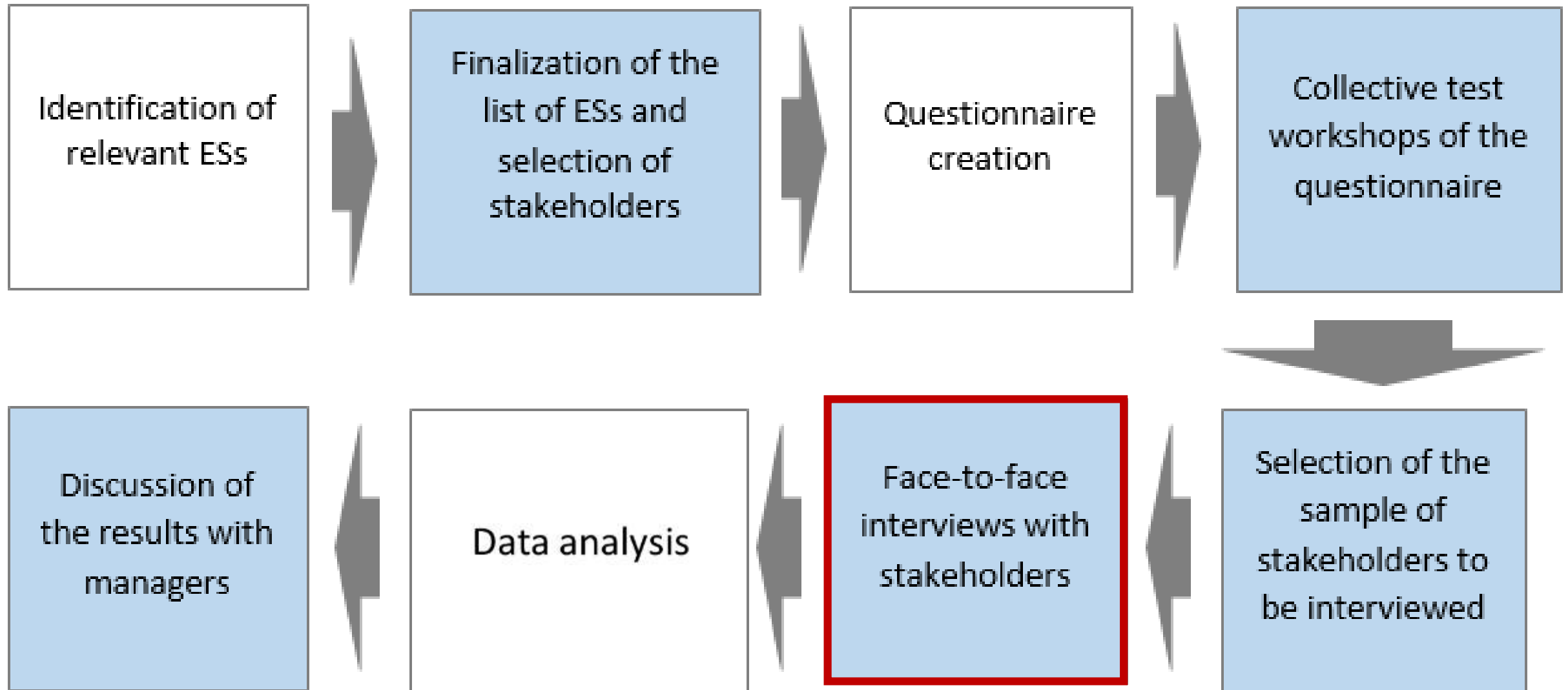


Fig. 1. Location of the Palavas and Biguglia lagoons in the Western Mediterranean Sea (satellite images obtained from IGN-Géoportail).

Research questions

1. What are the **conservation and ecological restoration priorities** of coastal lagoons (in terms of **ESs**) for which **stakeholders' points of view** converge and/or differ?
2. What are the different groups of **stakeholders with converging and divergent points of view**?

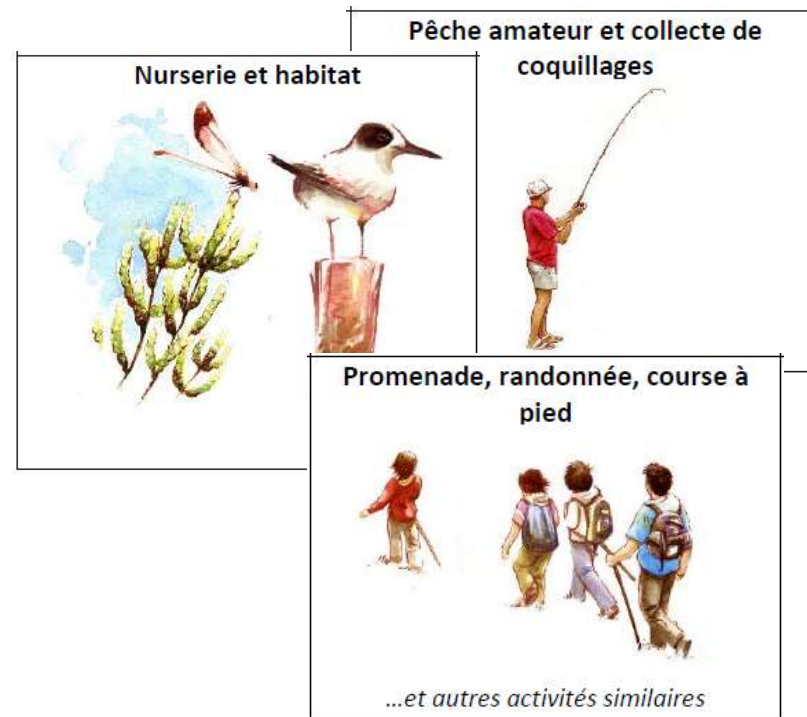
Methodology : Main steps



Methodology: Data collection

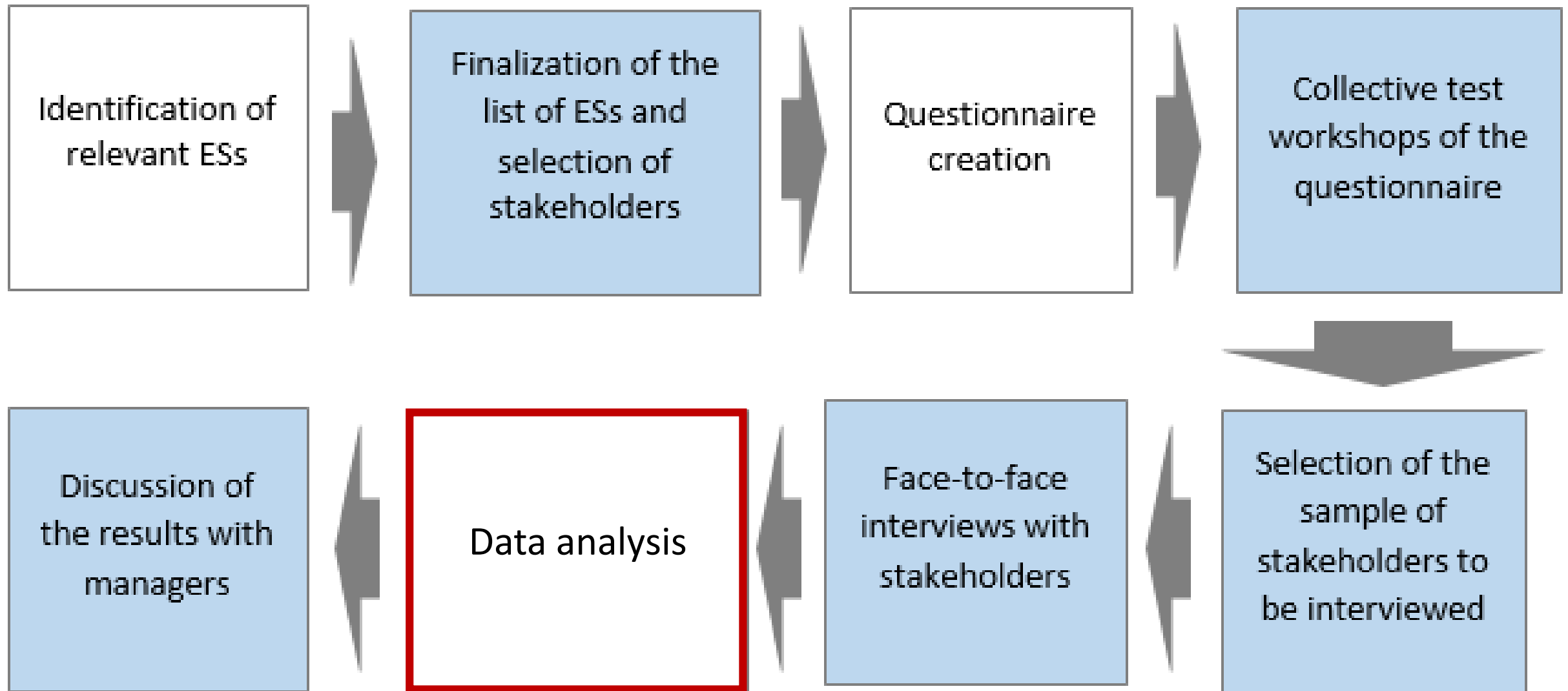
- What are the **roles of the lagoons** and their surrounding riparian areas that you would like to **prioritize in the future**?

-4	-3	-2	-1	0	1	2	3	4
-4	-3	-2	-1	0	1	2	3	4
-4	-3	-2	-1	0	1	2	3	4
	-3	-2	-1	0	1	2	3	
		-2	-1	0	1	2		
			-1	0	1			



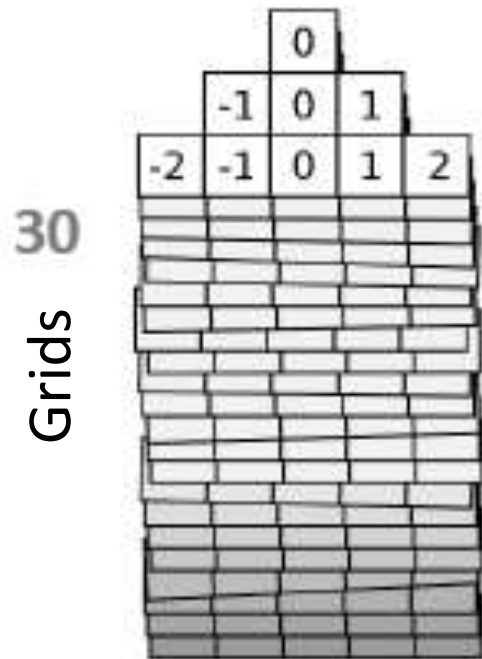
- Arguments justifying the choices

Methodology: Data analysis

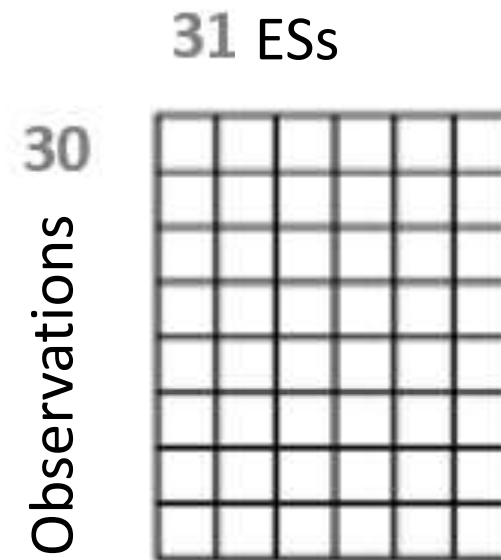


Step 1 : Principal Component Analysis

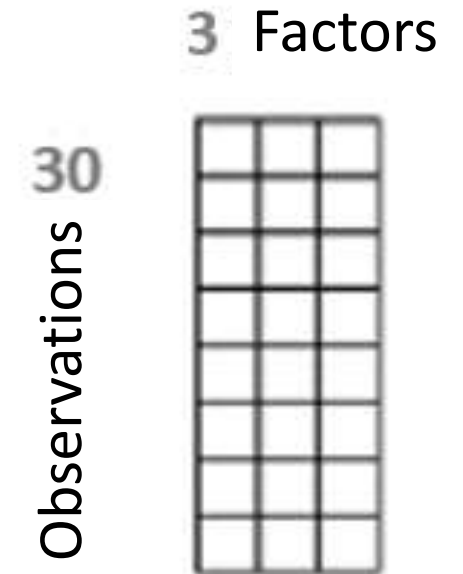
30 filled Grids
Values : from (-4) to (+4)



Creation of the initial matrix

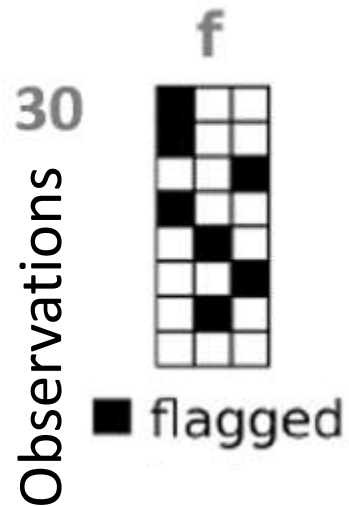


Factors extraction

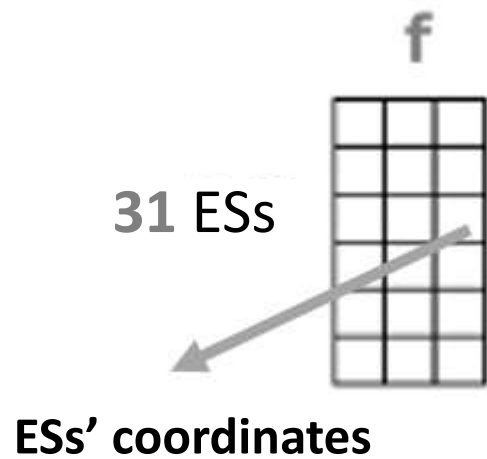


Step 2 : Analysis specific to the Q method

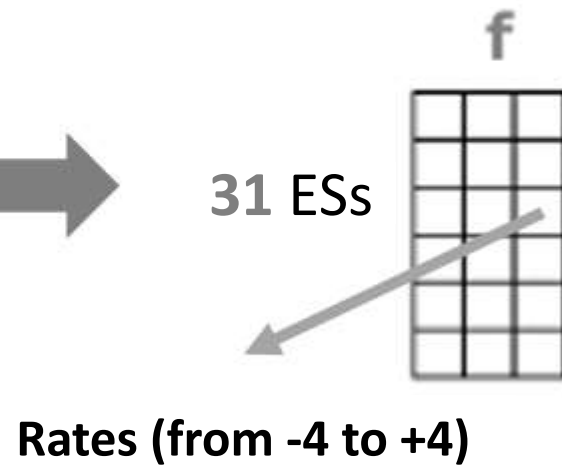
« Flagging »



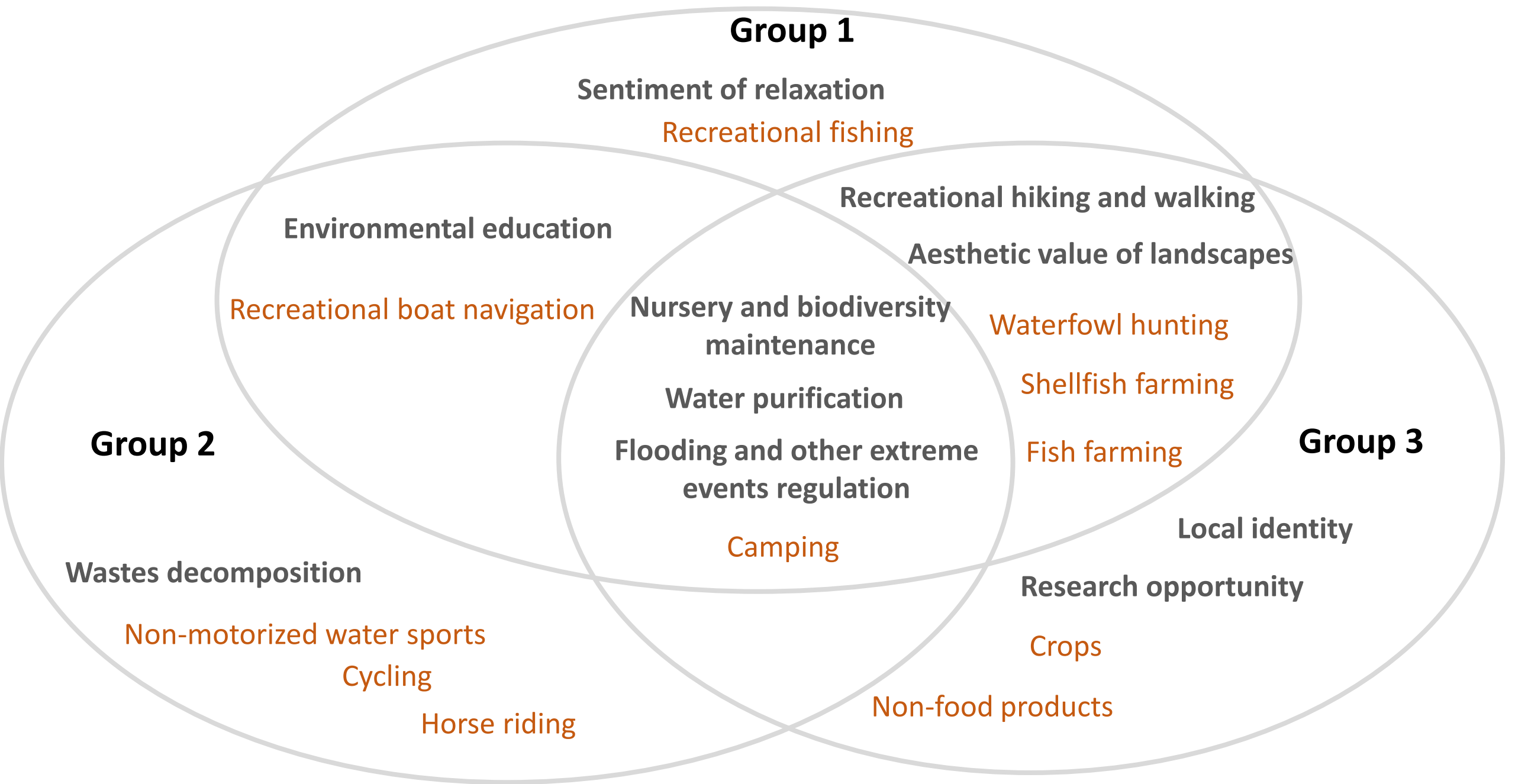
ESs' z-scores



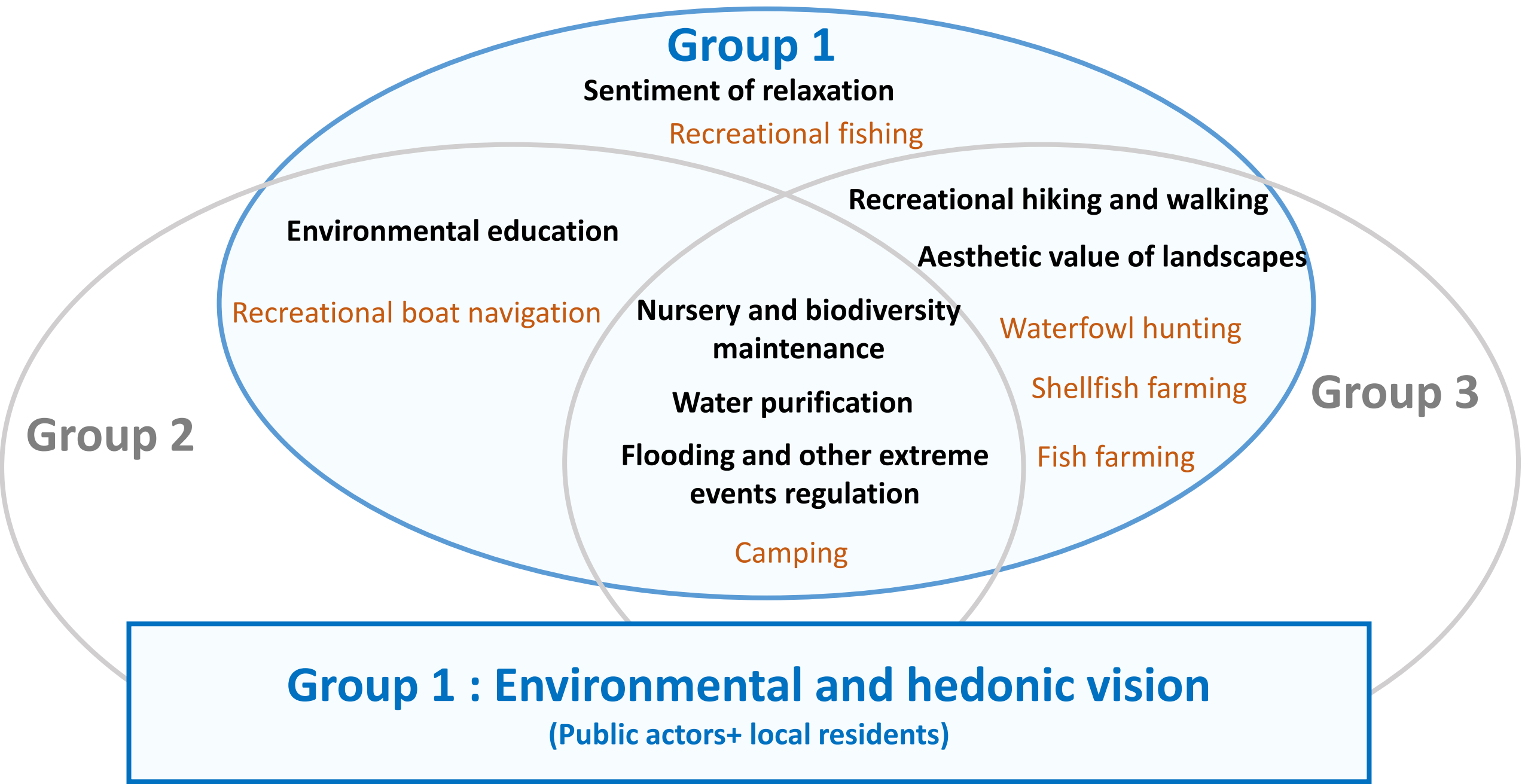
Rounded values of ESs' z-scores



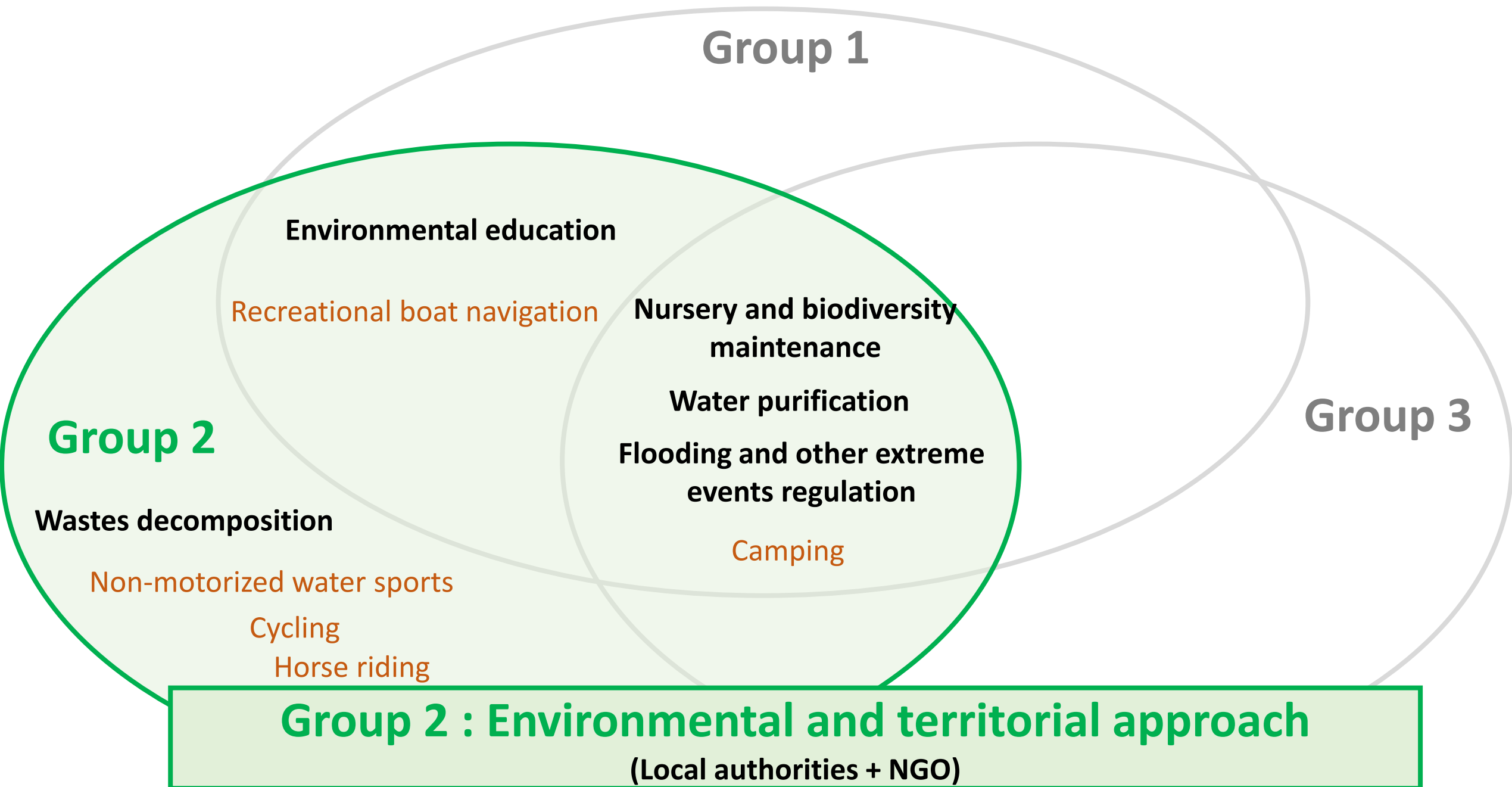
Main results (Palavas)



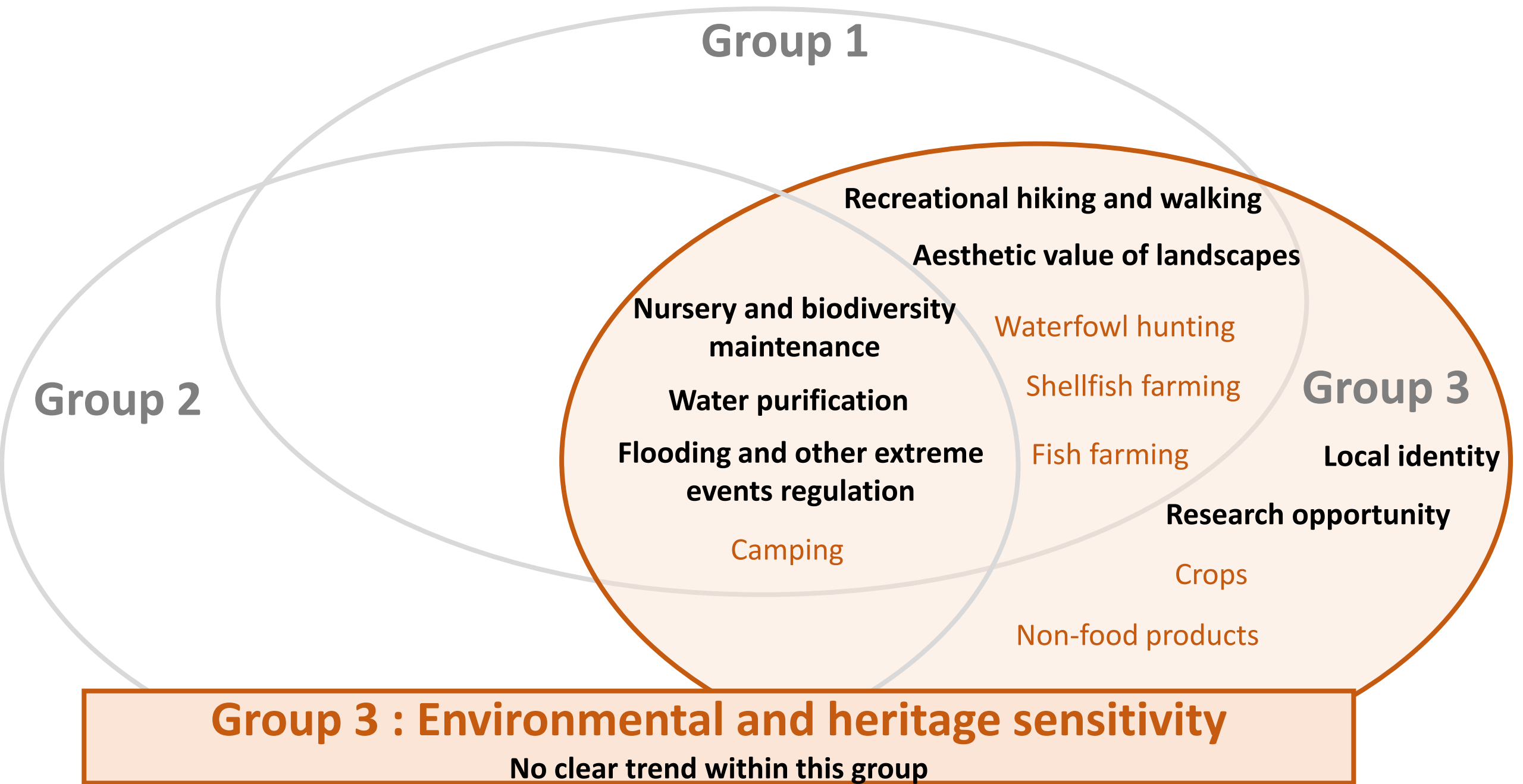
Main results (Palavas)



Main results (Palavas)



Main results (Palavas)



Conclusions

- Palavas - Biguglia (nature reserve): strong similarities in terms of points of view
- Regulation and maintenance services judged as a priority for both sites
- Tolerance of less impacting activities for some, while others are strongly opposed to all types of recreational services

Conclusions

- Approach that significantly alleviates the exercise of ES assessment
- Inexpensive because it concerns small samples
- Arguments behind the choices

- Negative scores were presented as relatively "less important" but sometimes used by stakeholders to express rejection



Crédit photo : EID Villeneuve



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Crédit photo : Jean Francois Brumbt



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Thank you for your attention