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7. Study sites

4.1. Lautaret

4.2. Mértola

5. Social survey methods

6. The five matrices

Site	Stakeholder	Value
Lautaret	Farmers	...
Lautaret	Hikers	...
Mértola	Farmers	...
Mértola	Hunters	...

Service	Descriptor	Value
...
...

6.1. Ecosystem Services matrix

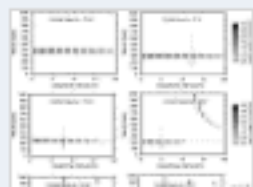
6.2. Descriptors matrix

6.3. Ecosystem Properties matrix

6.4. Land-use Attributes matrix

6.5. Plant Functional Trait matrix

7. From exposure to vulnerability



Abstract

A method is proposed for assessing the vulnerability of socio-ecological systems that is explicitly linked to multiple stakeholder values enabling multiple assessments of vulnerability in the same or different locations. Three key features distinguish this method. Firstly, multiple ecosystem services are each identified and valued by multiple stakeholders. Secondly, a series of matrices are used to quantitatively and sequentially link social and ecological information from an initial, scenario-based ecosystem change stimulus through to judgements about changes in ecosystem services. Thirdly, ecosystem properties that underlie the delivery of the ecosystem services are incorporated into the scenario projections. The framework is illustrated using data from two study sites in France and Portugal examining vulnerability of selected stakeholders to prospective land-use changes for 2030. Assessment results show stakeholders such as farmers and conservation agency groups (groups common to the two sites) or hunters in Portugal and hikers in France differ in their vulnerability to land-use change. Our explanation for this reflects our overall proposal that assessments of vulnerability are inescapably contextual and usually multiple, being mediated at the very least by the values and particular relationships that are assigned between people and their environment in a given location.

Keywords

Vulnerability assessment; Ecosystem services; Traditional European agricultural landscapes; Stakeholder values; Plant functional traits; Land-use change; Global change scenarios

Figures and tables from this article: