

Ecosystem Services approach in regional planning in the Basque Country

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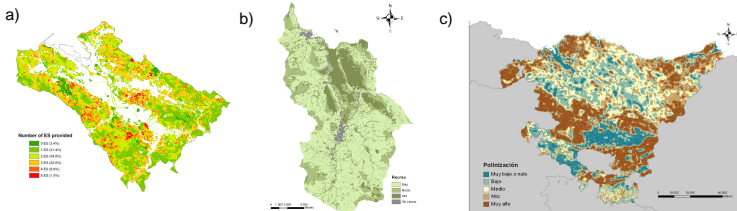
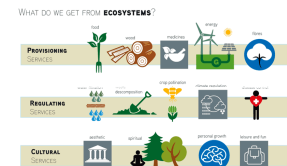
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The project “Ecosystem Services Assessment of the Basque Country” conducted by UNESCO Chair on Sustainable Development and Environmental Education of the University of the Basque Country (UPV / EHU) and UNESCO Etxea (UNESCO Center of the Basque Country), with the financial support of the Basque Government and the County Council of Biscay emerges as a regional integrative approach that **enhances the link between research, decision making and society**, as both local and regional authorities have shown **interest in implementing the ecosystem services (ES) approach in territorial planning**.

Its **main objective** is to provide tools to managers for the implementation of ES frameworks at multiple scales into the environmental and land use management of the Basque Country and to make society aware of the importance of preserving our natural heritage through the local, national and international dissemination of the results, following the next research lines:

1. Identification of ES and their direct drivers of change and assessment of their current status using indicators:

- Catalogue of ES
- Change or trend of ES and their direct drivers of change in the last quarter century



a) Multiple ES in Bilbao Metropolitan ; b) Recreation service in Urdaibai Biosphere Reserve; c) Pollination service in the Basque Country

2. Assessment and mapping ES at different scales (regional, local and urban scales):

- Methodological guide to map ES
- Analysis of synergies and trade offs among ES
- Identify priority areas for multiple ES (Green Infrastructure)

3. Social perception and demand at different scales (regional, local and urban scales):

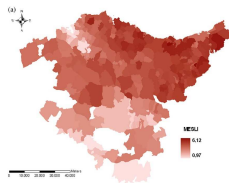
- Interviews to know which ES people perceive and how they value them
- Visual survey to value environmental units to know social demand

Table 2: Percentages of people who indicate each ES when they were asked about the benefits supplied by the BMC, when they had to choose the five most important services from those presented in the photo-questionnaire, and the percentage of people who would contribute to the maintenance of particular ES (García).

| Ecosystem services | Open question (%) | Photo-questionnaire | Desired (%) | | | |
|--------------------------------|-------------------|---------------------|----------------|-------|-------------------|-------------|
| | | Mean score | Standard error | n | 5. Most important | Desired (%) |
| Cultural services | 75.2 | 2.28 | 0.068 | 31.6 | 8.08 | 2.1 |
| Tourism and recreation | 71.8 | 2.58 | 0.084 | 49.2 | 12.2 | 21.2 |
| Aesthetic value | 3.6 | 0.006 | 0.008 | 2.1 | 4.4 | 15.8 |
| Economic value of biodiversity | 9 | 2.305 | 0.084 | 71.8 | 18 | 44.6 |
| Environmental education | 2.2 | 0.002 | 0.003 | 46.4 | 0.8 | 33.2 |
| Cultural heritage | 2 | 0.850 | 0.032 | 32.8 | 2.6 | 14.4 |
| Scientific value | 0.2 | 0.001 | 0.001 | 1.2 | 0.2 | 0.4 |
| Regulating services | 31.4 | 1.385 | 0.058 | 106.9 | 39 | 45 |
| Air purification | 36.4 | 2.750 | 0.089 | 63.2 | 18.6 | 23.6 |
| Climate regulation | 0.8 | 0.011 | 0.011 | 44.8 | 10.4 | 22.6 |
| Water regulation | 0.4 | 0.002 | 0.002 | 52.2 | 0.2 | 18.6 |
| Soil formation | 0.2 | 0.001 | 0.001 | 20.4 | 3.8 | 14.8 |
| Prevention services | 1.8 | 0.003 | 0.003 | 52.2 | 18.4 | 24.8 |
| Flood and erosion prevention | 1.4 | 0.002 | 0.002 | 39.2 | 0 | 15.2 |
| Water resources | 0.4 | 0.002 | 0.002 | 20.2 | 8.4 | 24.2 |

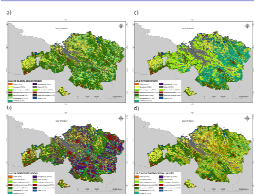
4. Index of multifunctionality at municipality scale (MESLI) to develop a system of compensation for the provision of ES

Map represents MESLI index value for each municipality



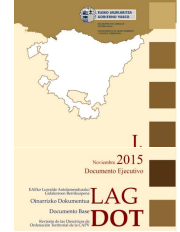
5. Applicability and implementation of ES in management strategies:

- Use and Management Plan of Urdaibai Biosphere Reserve (PRUG)
- Bilbao Metropolitan Partial Territorial Plan (PTP)
- Regional Planning Guidelines for the Basque Country (DOT)

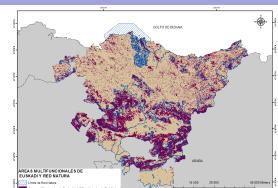


6. Generate scenarios to assess the consequences of decisions affecting ES:

- Participatory workshops
- Structure questionnaires
- Maps



7. Analysis of the contribution to the ES supply of Natura 2000 Network of the Basque Country



8. Dissemination of results:

- Scientific publications, books, outreach material
- Attend and host conferences, workshops, courses
- International networks (SGA, ESP, IPBES)
- Videos, interviews in mass media, social networks, web