



Milurteko Ekosistemen Ebaluazioa **Bizkaian**
Evaluación de los Ecosistemas
del Milenio en **Bizkaia**



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Linking Millennium Ecosystem Assessment global scenarios to local scenario planning; a participatory approach from the Millennium Ecosystem Assessment in Biscay SGA (Basque country, Northern Spain)



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Study area

Biscay (Province scale): Indicators, Forest ES, Scenario planning

01

Metropolitan Bilbao
Greenbelt cultural services



04

Urkiola
Regulation services (forest and karst)



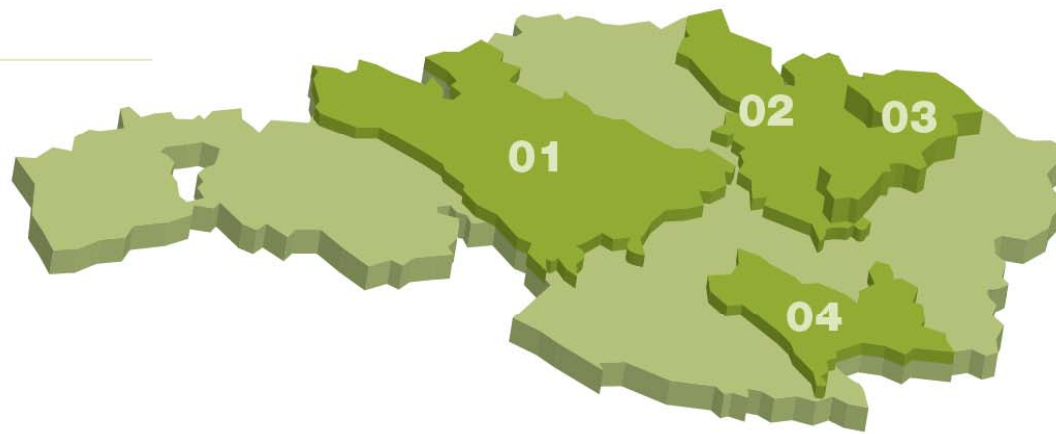
02

Urdaibai
Regulation service (coastal)



03

Lea
Provisioning services (Atlantic landscape and river ecosystem)



2.216 km²
1.2 M inhabitants
(520 inhab/km²)

Introduction

We developed scenarios for Biscay through **2050** in an integrated and participatory way by **downscaling MA global scenarios**, analyzed how ecosystem services and human well-being might change in a range of plausible futures and **identified management strategies** for the territory.



Fig. 1. Scenario workshops held in Bilbao on June 2010

Aim:

1. Develop scenarios at local scale as a process and tool for landscape planning, create buy-in to the assessment process and explore possible responses options.
2. Provide more insights on how large-scale scenario developments can be translated to the local level.

Methodology

Six phases:

1. Identification of key stakeholders;
2. Definition of the importance of ecosystem services and the potential for successful intervention;
3. Identification of key drivers of change;
4. Development of local participatory scenarios for Biscay by downscaling MA global scenarios;
5. Characterization of scenarios in terms of the provision of ecosystem services and human well-being;
6. Description of the target scenario and definition of management strategies for Biscay.

Results

Fig. 3. Provision of ecosystem services and indicators of human well-being under each scenario, compared to the current conditions (substantial increase = 2; increase = 1; constant or increases in some aspects and decreases in other aspects = 0; decrease = 1, large decrease = 2).

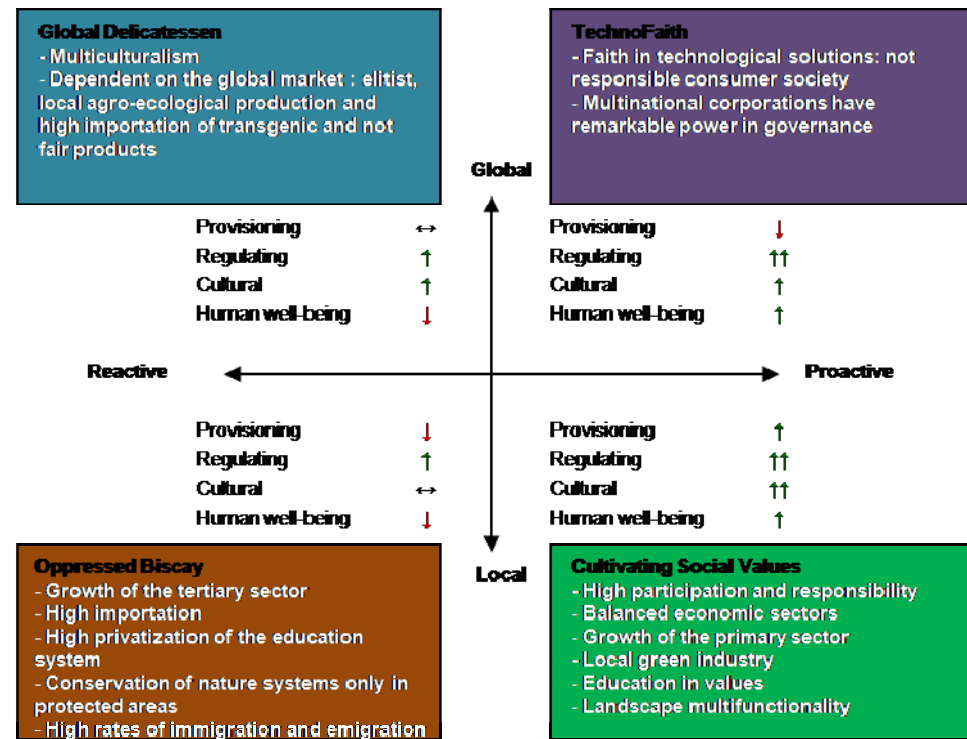
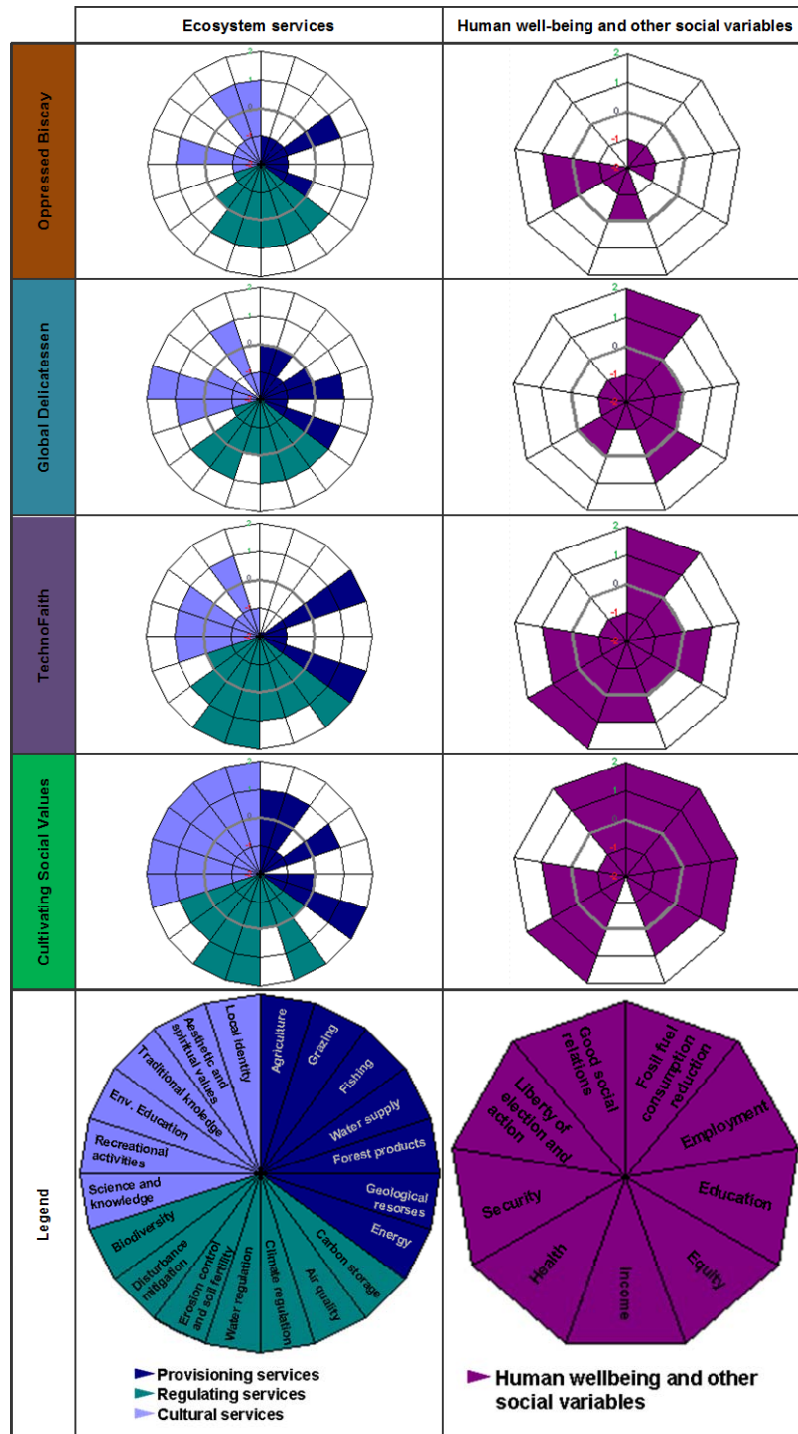


Fig. 4. Summary of the evolution of ecosystem services and human well-being under each of the four scenarios.

Key discussion points

- Biscay scenarios: forest management relevance and population density constrains
 - Multifunctional forest management seems to be an appropriate solution for Biscay social ecological system.
 - For the Target scenario to be possible, the population would have to be smaller than it currently is.
 - A core aspect of the target scenario is that a real change in social values is proposed.
- Linking sub-global scenarios to MA global scenarios:
the scale issue

Downscaling global MA scenarios in a consecutive scenario development process using a coherent linkage across scales, allowed both, using MA previous work to prevent much work that otherwise would have had to be redone; and allowed stakeholders' creativity and local variability, while maintaining a scientific credible global context.

The outcome scenarios, therefore, have local management relevance and at the same time, they can be compared to other assessments.

- **Lessons learned from the applied methodology**
 - Administering a survey before the workshop enabled saving time during the workshops.
 - In Biscay SGA, stakeholder engagement process key from the outset -> ensured a widespread buy-in of the scenarios exercises.
 - For the applied methodology to be successful, workshops must be designed carefully.



Fig. 5. Several core team meetings were organized for the design of the workshops, including those with experienced scenario practitioners

Conclusion

- A core aspect of the target scenario is that a real change in social values is proposed
- The applied methodology can be considered a useful tool for consensus building in socio-ecological systems towards a sustainable future, while maintaining consistency across scales
- Workshops must be designed carefully, with clear goals and a coordinated team that counts on experienced scenario practitioners

Thank you!!

*A sustainable future is possible
working from local to global and vice-versa*

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