



IMPRESSIONS



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IBERIAN CASE STUDY

Aim: To improve scientific understanding of the implications of scenarios involving high levels of climate and socio-economic change in Iberia, and, by working jointly with decision-makers, explore the development of systemic transformative solutions to problems related to the integrated resource management of the Tagus and Guadiana transboundary river basins under these 'high-end' scenarios.

Main themes: Water resource management, land allocation and use, agriculture, forestry, energy (hydro and renewable).

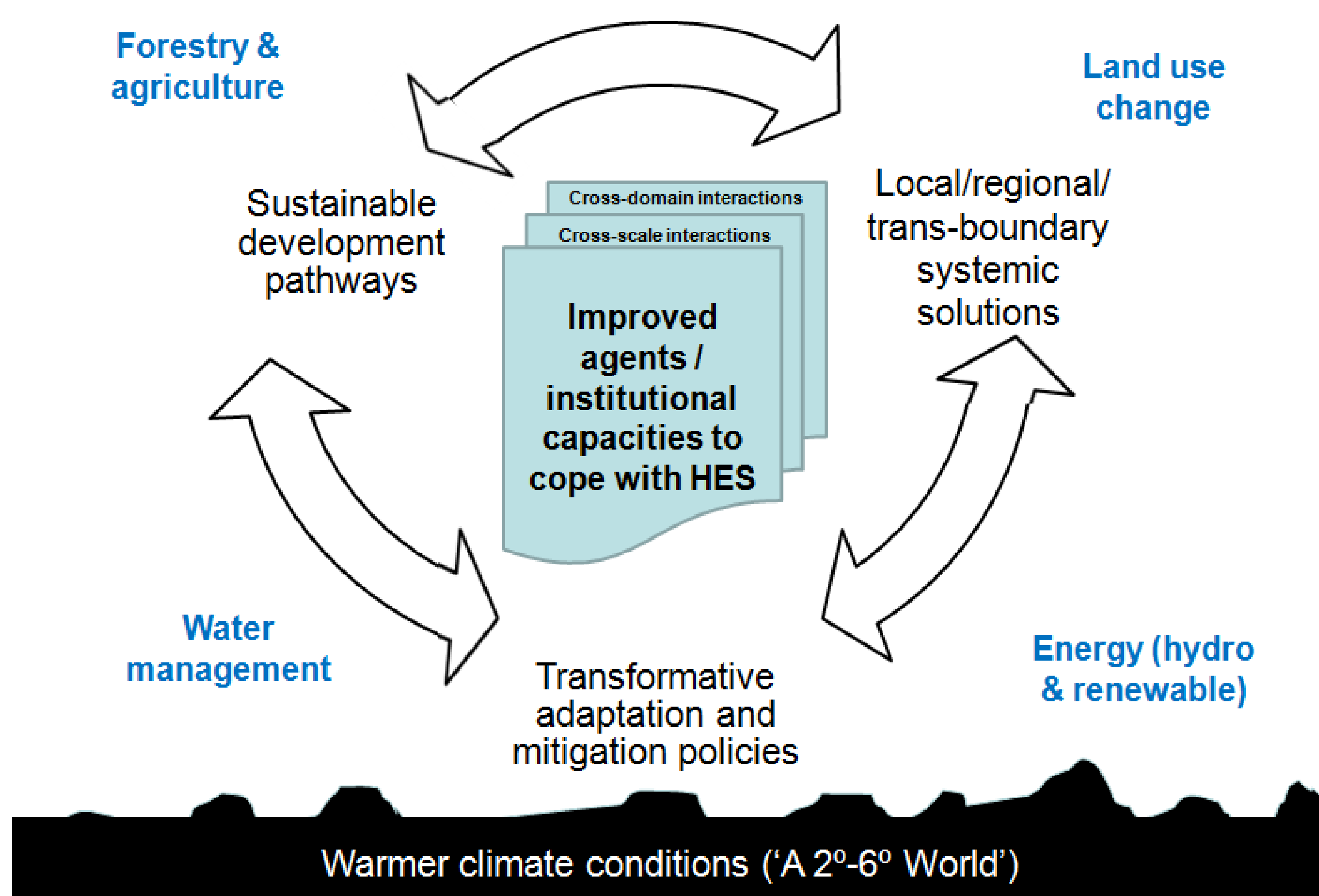
Methods

- Assessing illustrative examples of existing integrated solutions and initiatives that could be relevant to cope with high levels of climate and socio-economic change in the two river basins, such as Integrated River Basin Management and Ecosystem-based Adaptation;
- Exploring the effects of current policies under high-end scenarios as well as different policy options and sustainable development pathways, including the role of transformative institutional innovation and cooperation;
- Application of a detailed, process-based ecohydrological model (SWIM) to understand the impact of extreme events (especially droughts) and the potential of Integrated River Basin Management for the Tagus river basin under high-end scenarios;
- Application of a detailed, process-based model of forest resources (LandClim) to assess conditions for improving the resilience and productivity of the Dehesa /Montado oak-grassland agroforestry systems and other forestry ecosystems under high-end scenarios.

Main outcomes

- A set of integrated high-end climate and socio-economic scenarios for the Tagus and Guadiana river basins.
- A more thorough understanding of Iberian decision-makers' needs for increasing the robustness of decisions in response to these high-end scenarios.
- Quantification and mapping of the impacts, risks and vulnerabilities associated with these high-end scenarios, including interactions between different sectors (agriculture, forestry, water and energy) and the impact of population change and migration.
- A set of transition pathways for Iberia that offer options for harmonising sustainable development, adaptation and mitigation strategies to enable society to adapt effectively to potential impacts under high-end scenarios.
- Assessment of the robustness of current policies and the role of trans-boundary institutional arrangements and collaborative networks in enabling agents' capacities to cope with high-end scenarios.
- Contribution of this case study to the central IMPRESSIONS knowledge network and Information Hub.

Enabling agents' transformative capacities to cope with HES



The Tagus River Basin



The Guadiana River Basin

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