

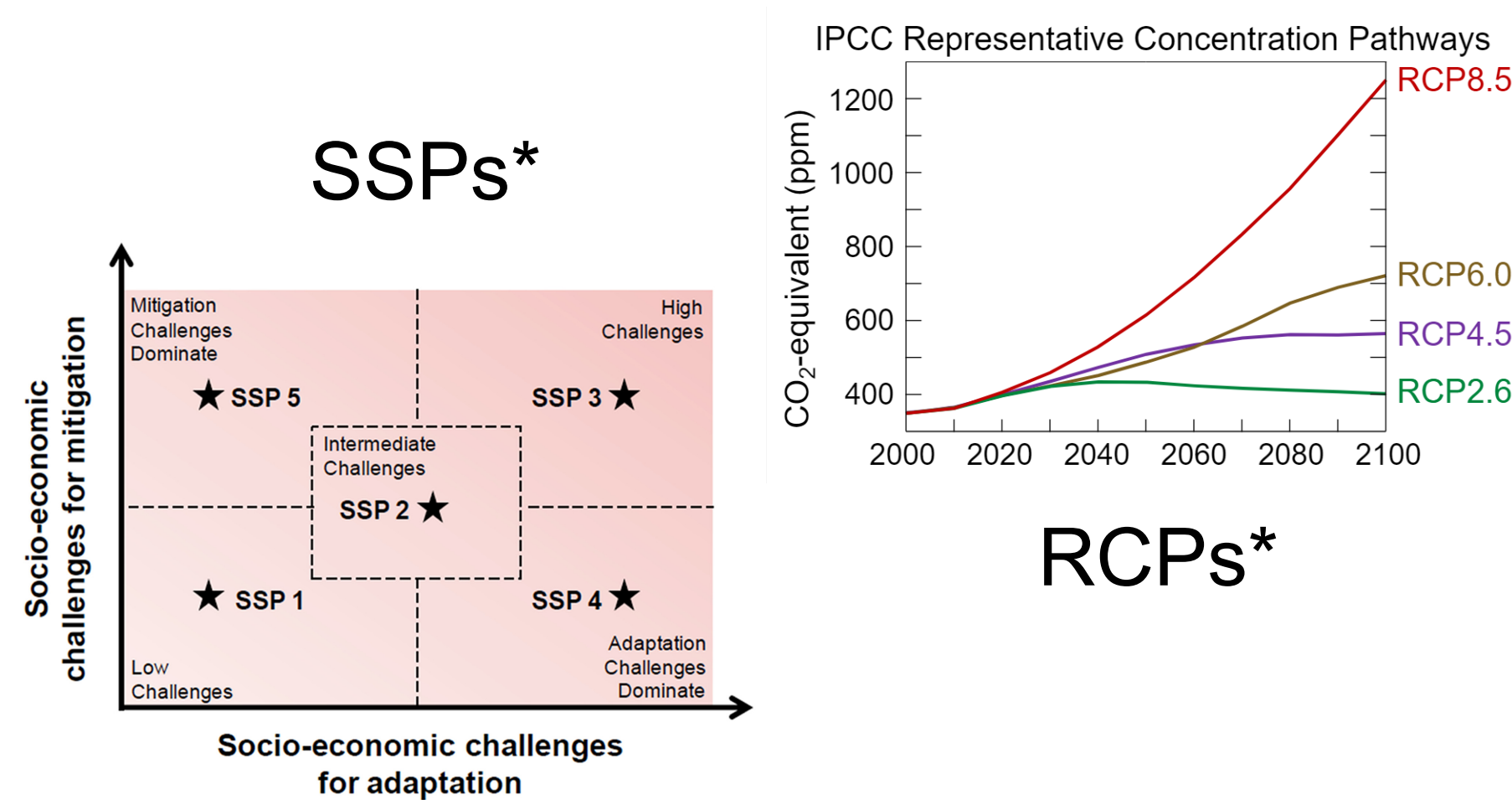
Downscaling global socio-political scenarios for the Western Mediterranean Sea to test nature-based solutions within an ecosystem-based approach

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Poster ID: 16212

Socio-political scenarios for 2030



- A. Global Sustainability**
- B. National Enterprise**
- C. World Markets**

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Marine Nature-based Solutions

- Area-based management
- Nature-inclusive harvesting



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Ecosystems models



Narratives and indicators to drive ecosystem models

Scenario	Climate change	Policy	Protection and restoration targets	Fishing effort	Discards	Fuel costs	Fish price
A. GLOBAL SUSTAINABILITY	RCP2.6 and SSP1	European and national priorities 2030 biodiversity targets Full implementation of Common Fisheries Policy and marine directives	<ul style="list-style-type: none"> 20% Highly protected areas 10% No-take 30% of the degraded area (within MPAs) 	<ul style="list-style-type: none"> Sustainable levels of exploitation to 90% stocks. Prohibit mobile bottom fishing in the Natura 2000 sites that protect the seabed and marine species. 	<ul style="list-style-type: none"> Landing obligation with max discards allowed to 9% of total catches. Bycatch reduction to 1% of the group biomass. 	+ 2.59% p.a.	+ 0.60% p.a.
B. NATIONAL ENTERPRISE	RCP8.5 and SSP3	National priorities Limited transnational cooperation Partial failure of Common Fisheries Policy and marine directives	<ul style="list-style-type: none"> 5% Highly protected areas 5% No-take National targets 	<ul style="list-style-type: none"> + fishing effort. Small scale fisheries: + 3% annually to support national economies. Only fishing within own EEZ. 	<ul style="list-style-type: none"> Discards reduction to 12% of total catches. Bycatch reduction not considered. 	+ 2.41% p.a.	+ 4.47% p.a.
C. WORLD MARKETS	RCP8.5 and SSP5	EU as a green global economic actor Economic growth priority Maximum Economic Yield	<ul style="list-style-type: none"> 5% Highly protected areas 5% No-take Focus on essential fish habitats of highly commercial species. 	<ul style="list-style-type: none"> + effort of fleets with high value or volume (industrial) by 1% annually in addition to the tech creep. 	<ul style="list-style-type: none"> Discards reduction to 15% of total catches. Highly commercial species with reductions of 5%. Bycatch reduction not considered. 	+ 1.57% p.a.	+ 1.04% p.a.

- Hamon KG, et al., (2021). doi: 10.3389/fmars.2021.578516.
 - EU Action Plan: Protecting and restoring marine ecosystems for sustainable and resilient fisheries, COM(2023) 102.
 - Regulation of the European Parliament and of the Council on nature restoration, COM(2022) 304.
 - Pinnegar JK, et al., (2021).doi: 10.3389/fmars.2020.568219.

*SSPs: Shared Socioeconomic Pathways; *RCPs: Representative Concentration Pathways

