

# Supplementary Information

## Narrative and quantitative analysis of democratic principles in the Shared Socioeconomic Pathways

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## S.1. Available quantitative components of the SSPs

Table S1. Potential links between the available quantitative components of SSPs and core characteristics of democracy.

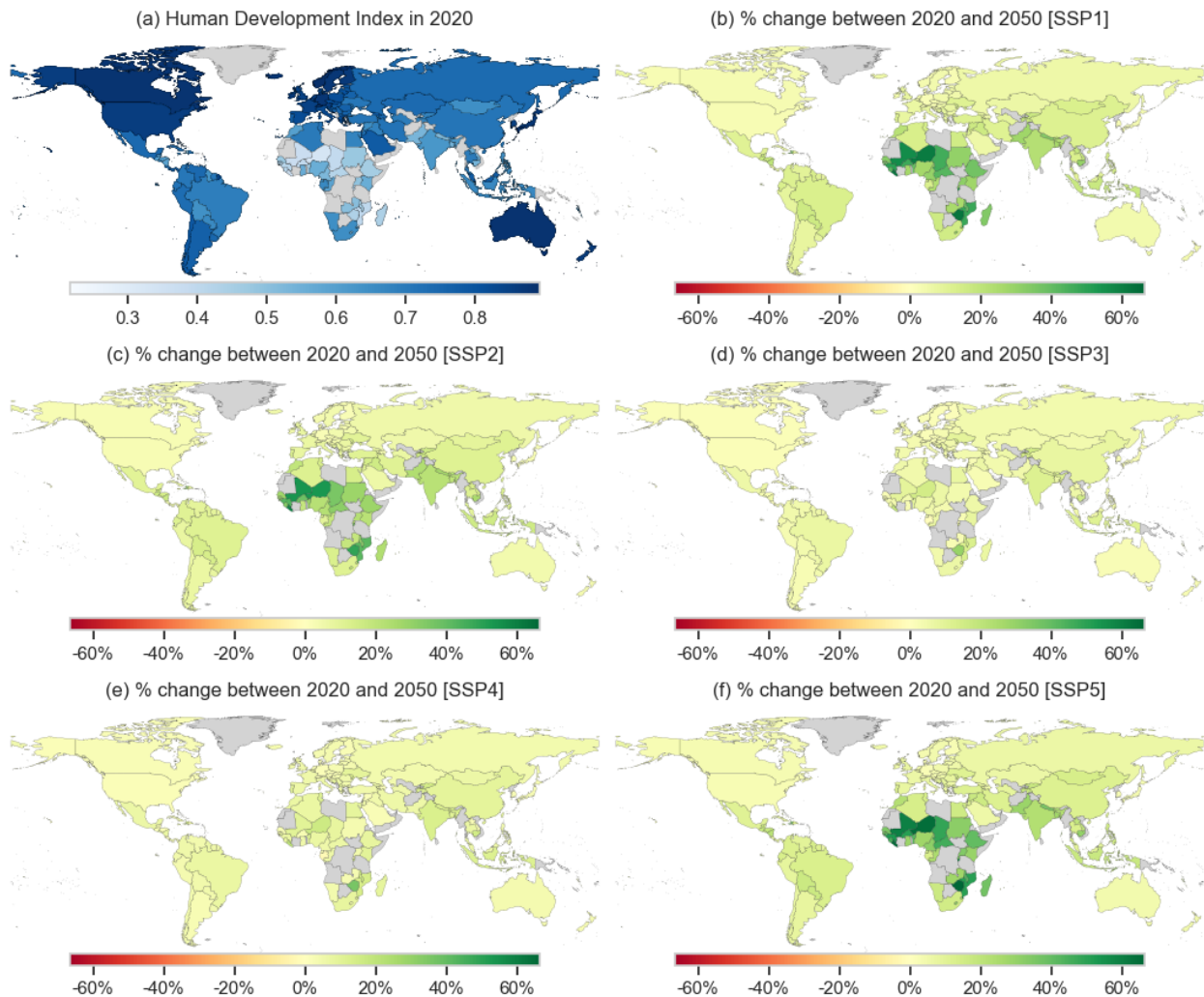
SSP variables	Core characteristics of democracy						
	Participation	Representation	Knowledge & Expertise	Accountability	Deliberativeness	Effectiveness	Justice
<b>SSP main variables v2024</b>							
GDP PPP							
Population							
Population Urban Share							
Population Sex Age							
Mean Years of Education Sex Age	+	+	+				
<b>SSP extensions</b>							
Human Development Index	+	+	+				+
Governance Index	+	+	+			+	
Government Effectiveness		+	+			+	
Control of Corruption		+		+		+	
Rule-of-Law Index		+		+			
Gender Inequality Index	–	–					–
Gini Income Inequality Coefficient	–	–					–
Income Distribution (in deciles)		+/-					+/-
Employment Agriculture [Share]							
Employment Industry [Share]							
Employment Services [Share]							
Value Added Agriculture [Share]							

Value Added Industry [Share]							
Value Added Services [Share]							
Net Migration							
Net Remittances [per capita]							
Population Extreme Poverty	–	–				–	–
Population Risk of Hunger						–	–
Probability of Armed Conflict							
GDP PPP [Conflict-Adjusted Projections]							

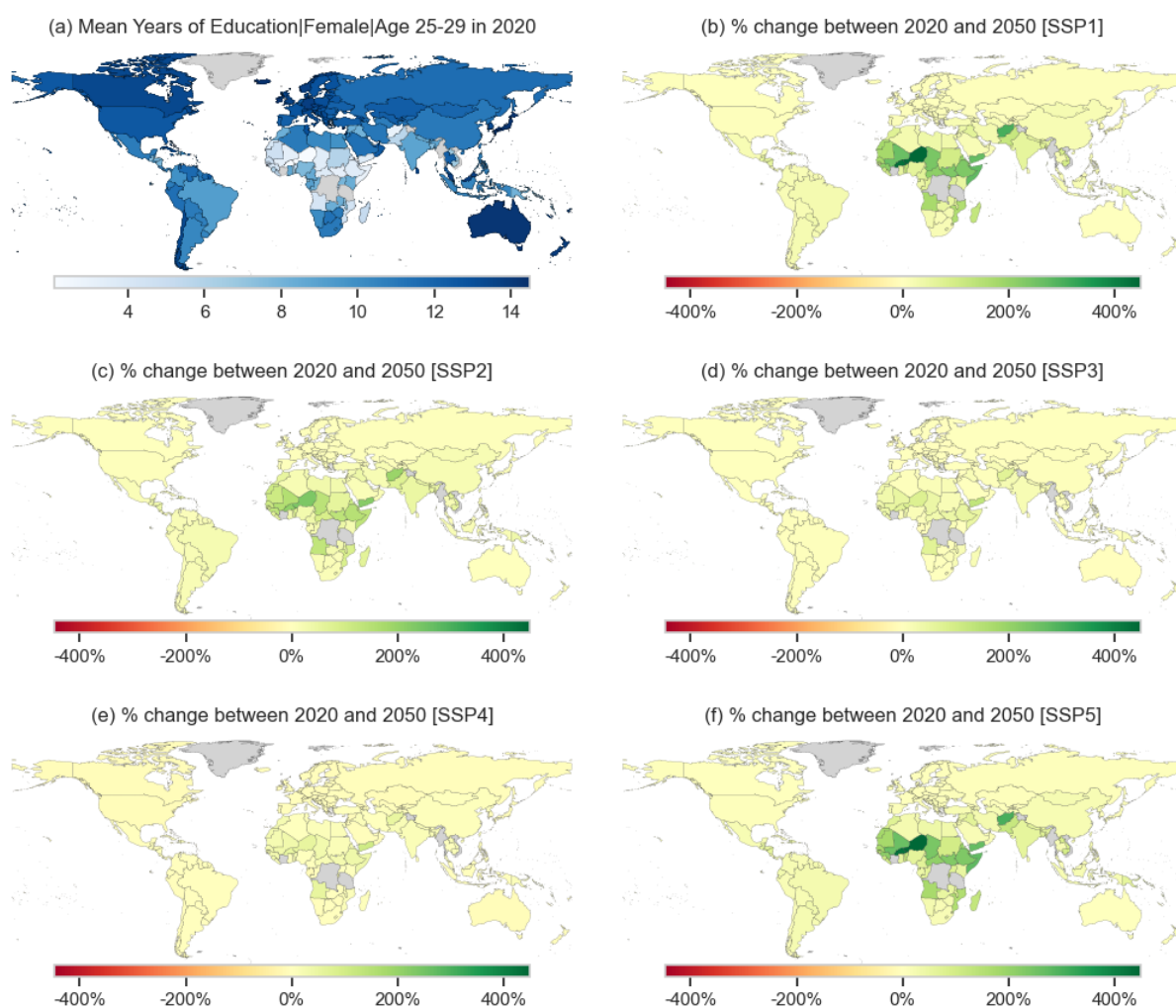
Legend: + = assumed positive correlation, – = assumed negative correlation, +/- = selected proxy variable for the analysis.

## S.2. Visualisations of quantitative indicators that relate to democratic principles

### S.2.1. Proxy indicators to participation

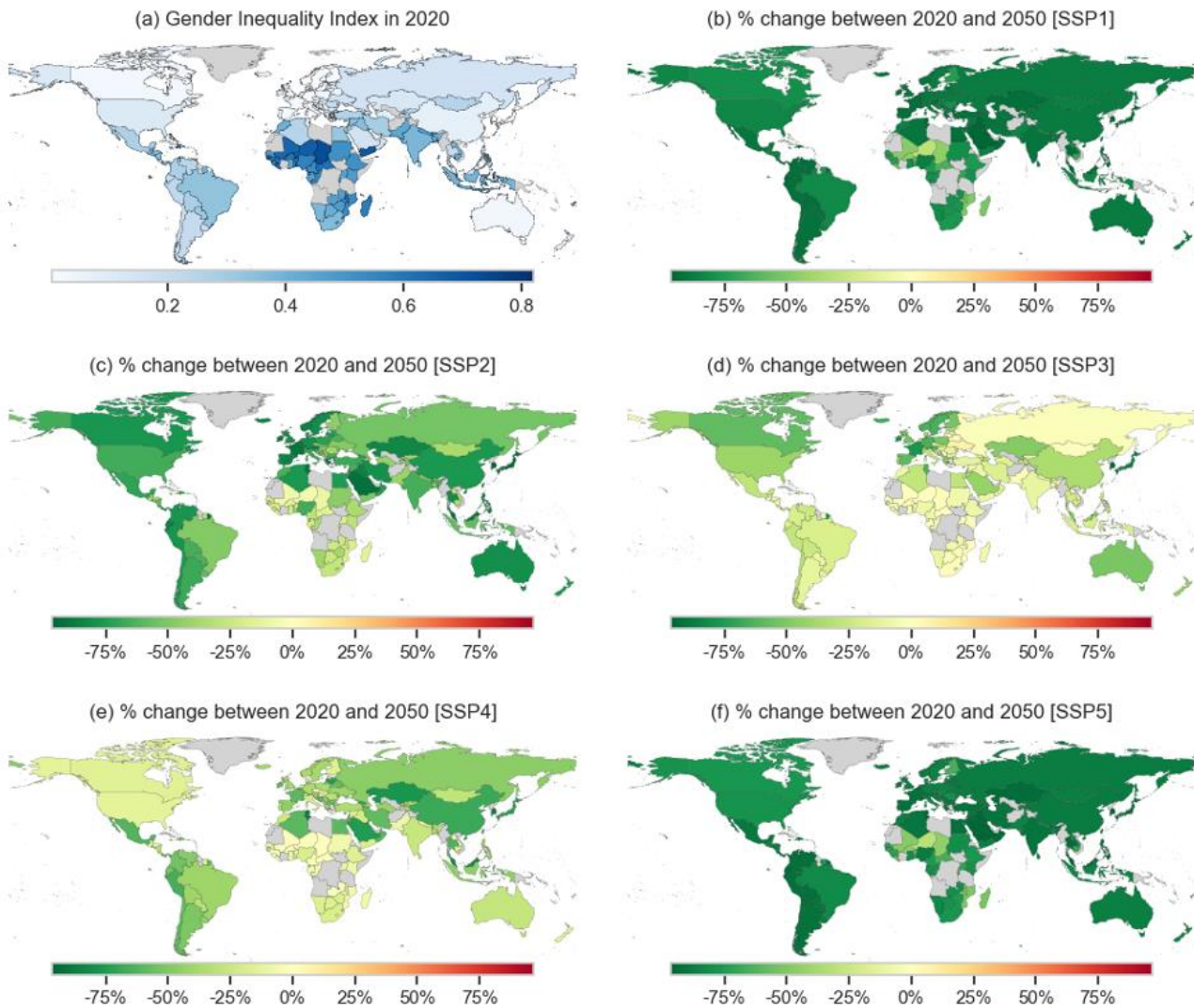


**Figure S1:** Projections of the Human Development Index per country based on the SSP Extensions Explorer (<https://ssp-extensions.apps.ecc.iiasa.ac.at>)



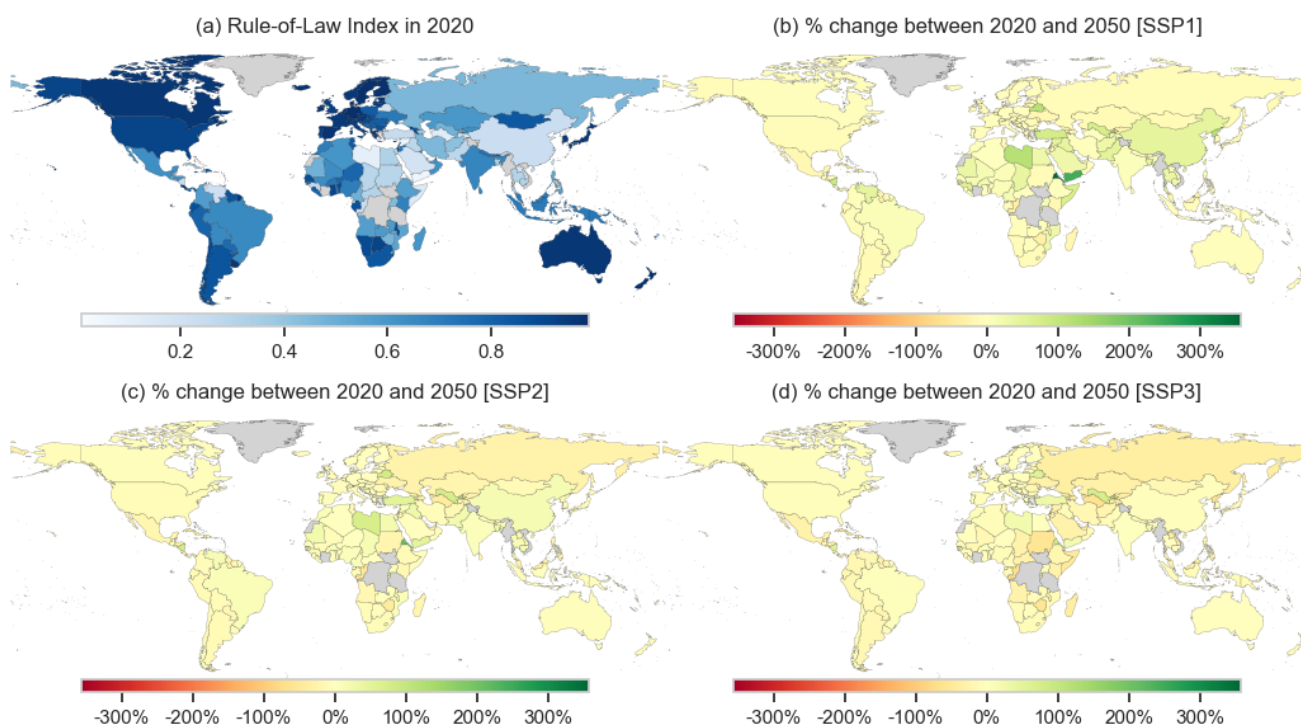
**Figure S2:** Projections of the Mean Years of Education per country based on the SSP Database (<https://data.ece.iiasa.ac.at/ssp>)

### S.2.2. Proxy indicator to representation

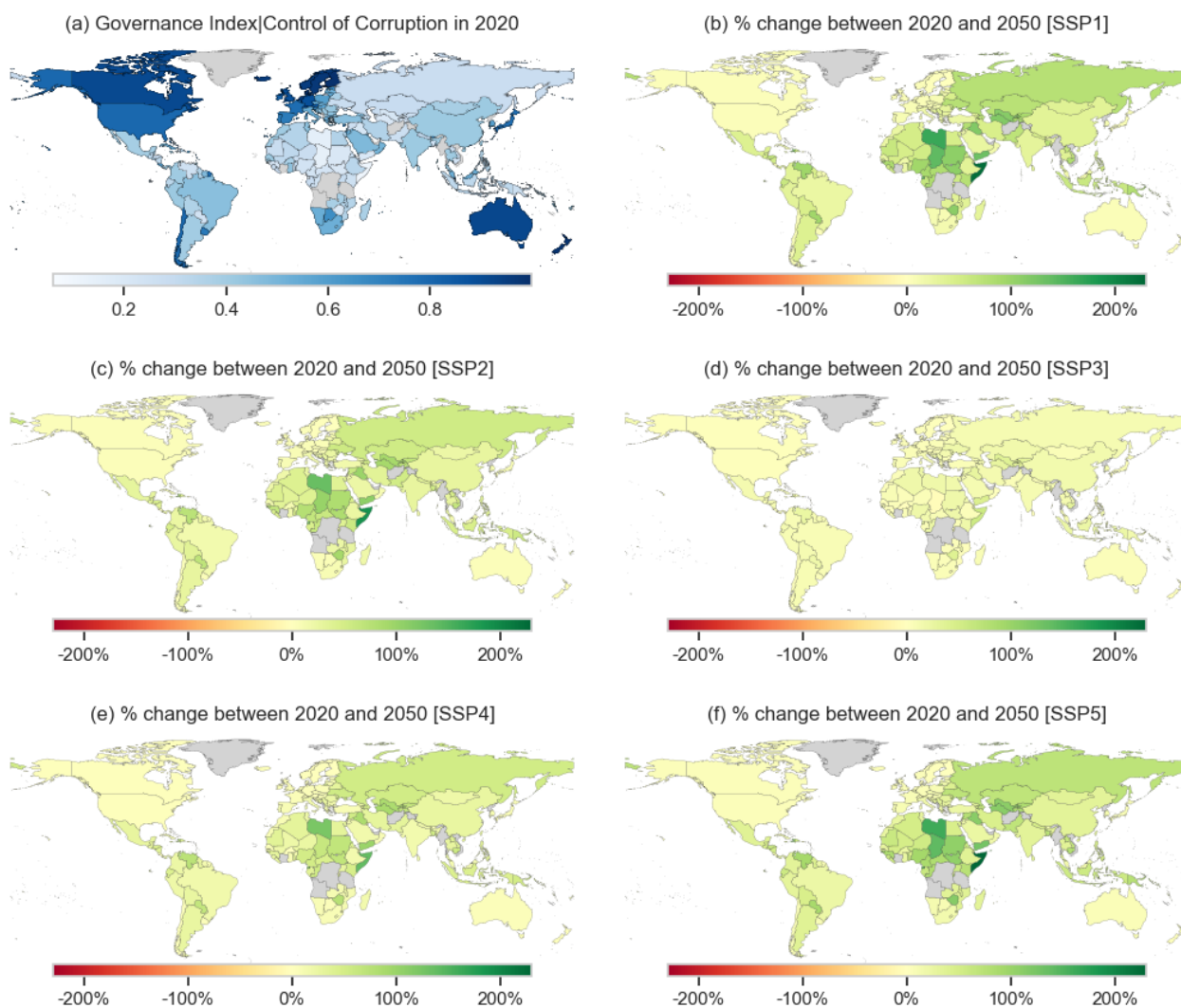


**Figure S3:** Projections of the Gender Inequality Index per country based on the SSP Extensions Explorer (<https://ssp-extensions.apps.ece.iiasa.ac.at>)

### S.2.3. Proxy indicator to accountability



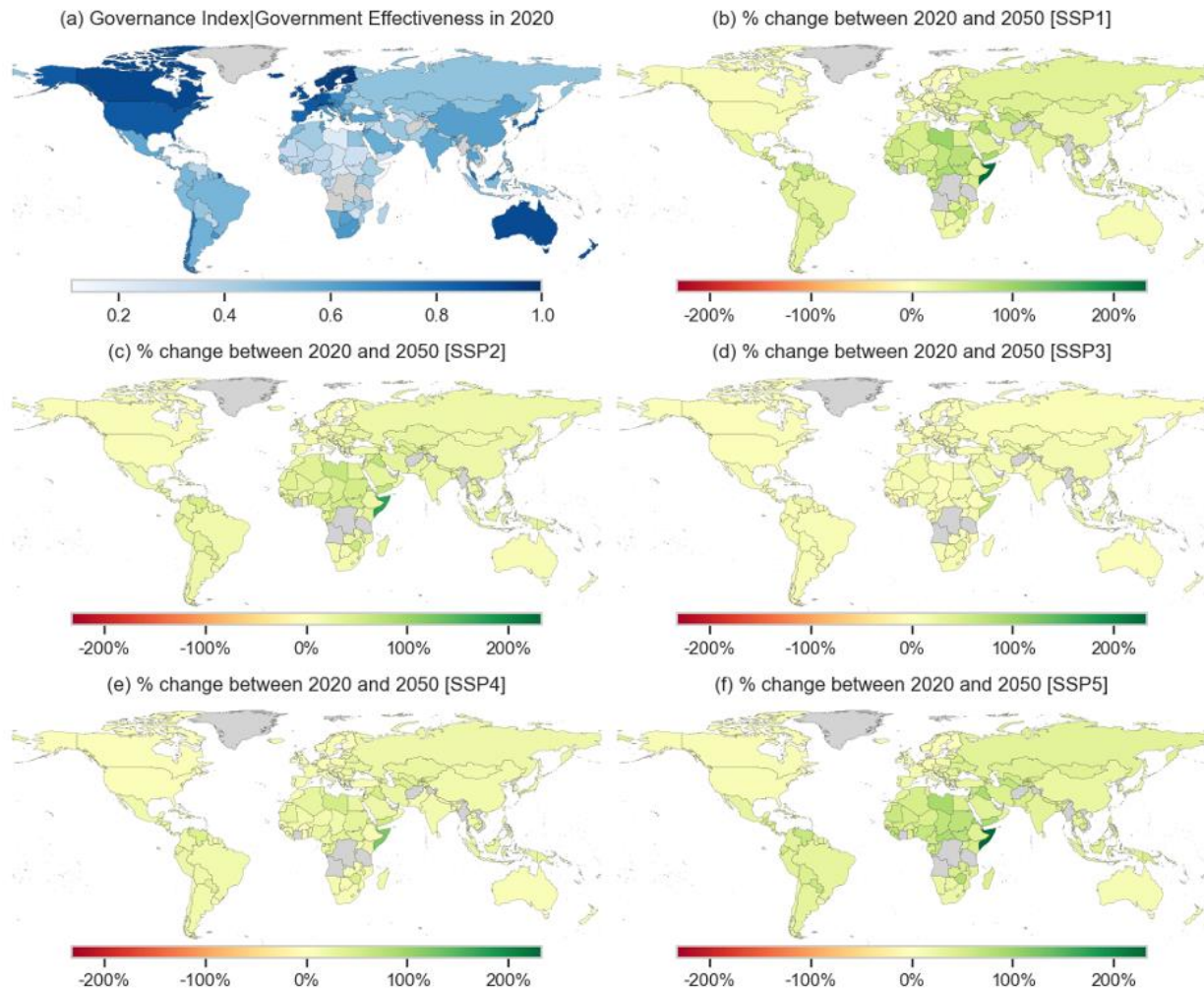
**Figure S4:** Projections of the Rule-of-Law Index per country based on the SSP Extensions (<https://ssp-extensions.apps.ece.iiasa.ac.at>)



**Figure S5:** Projections of the Control of Corruption Index per country based on the SSP Extensions  
<https://ssp-extensions.apps.ece.iiasa.ac.at>

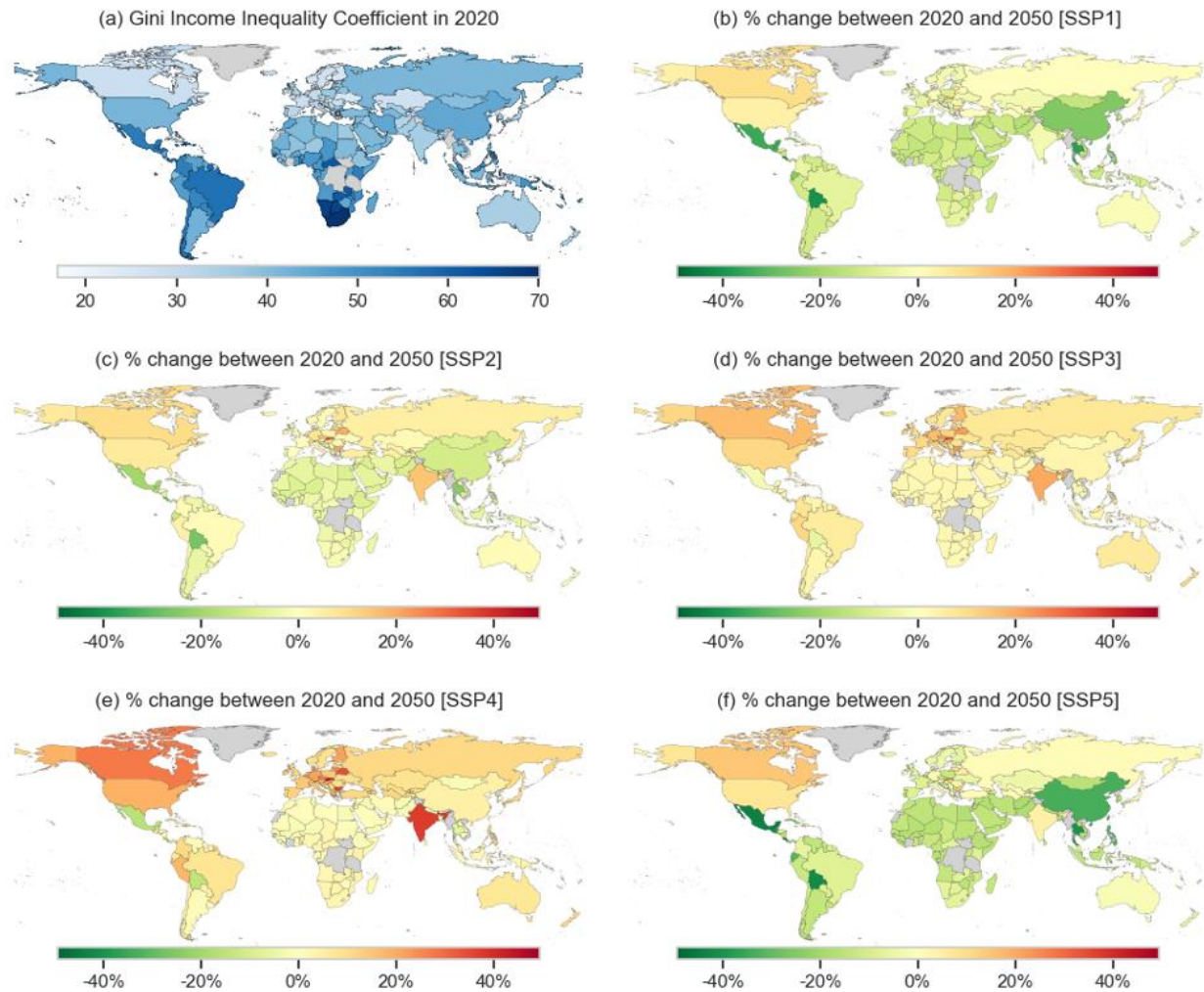


## S.2.4. Proxy indicator to effectiveness

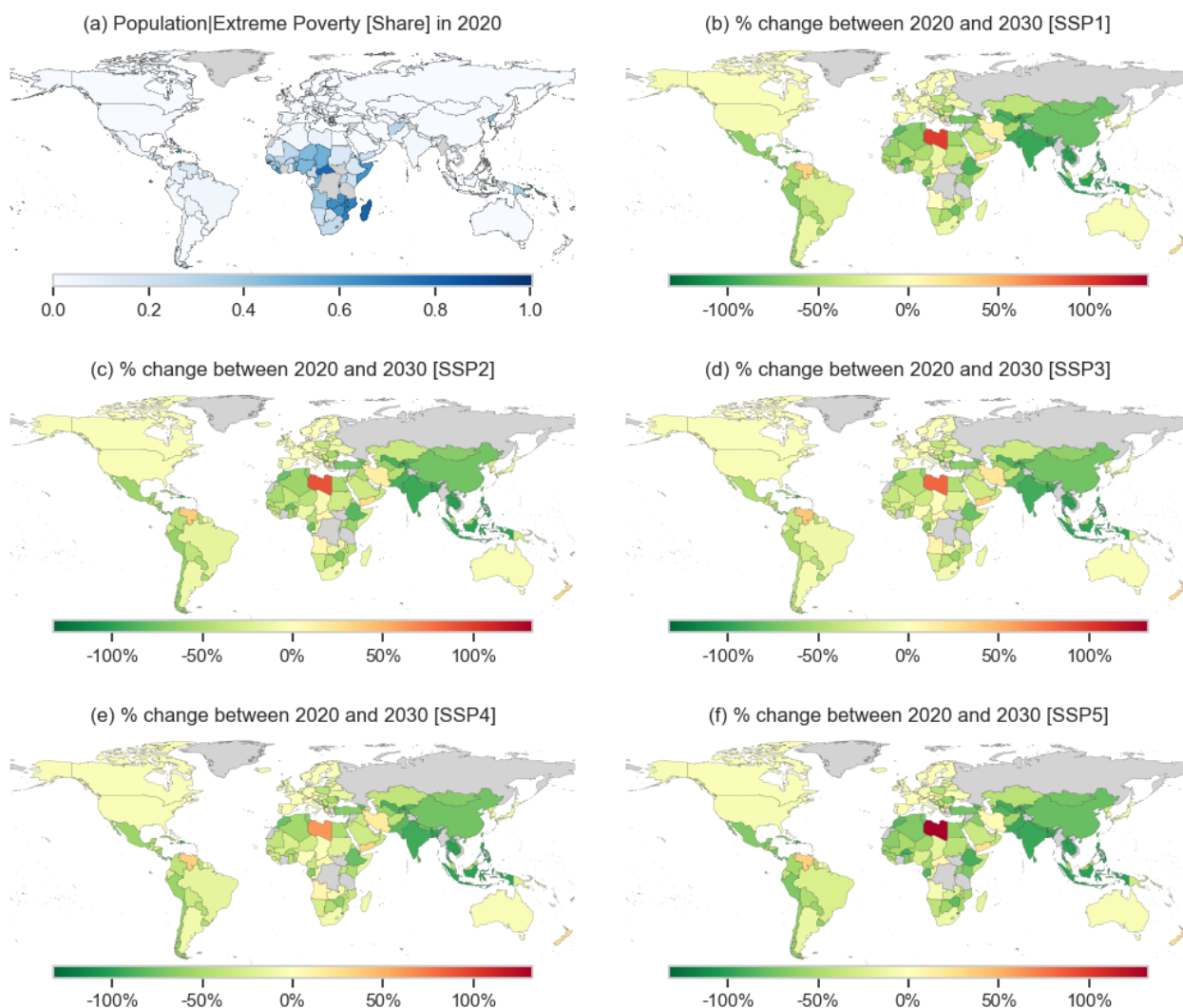


**Figure S6:** Projections of the Government Effectiveness Index per country based on the SSP Extensions (<https://ssp-extensions.apps.ecc.iiasa.ac.at>)

### S.2.5. Proxy indicators to justice

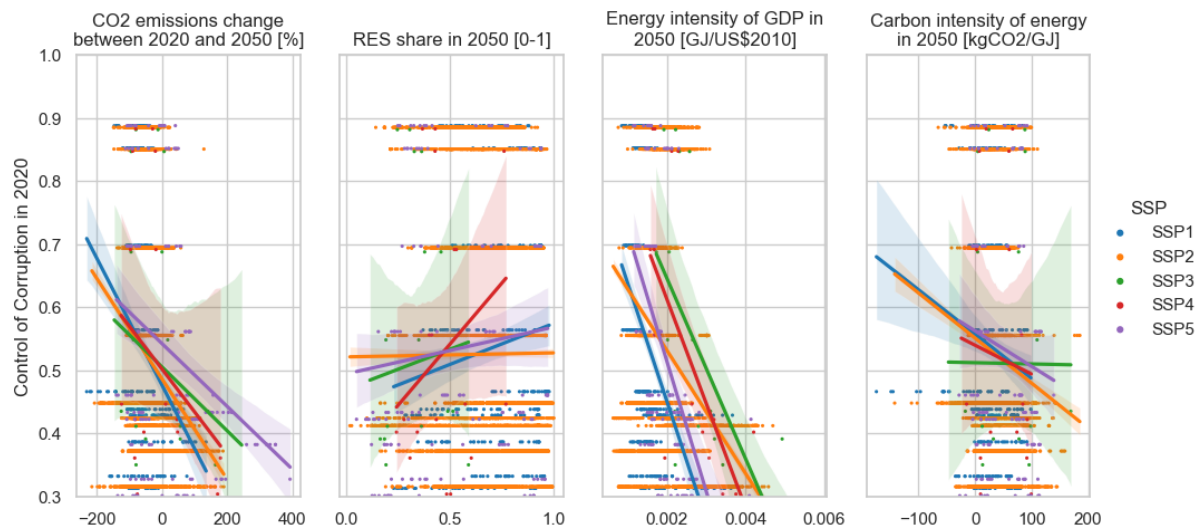


**Figure S7:** Projections of the Gini Income Inequality Coefficient per country based on the SSP extensions (<https://ssp-extensions.apps.ece.iiasa.ac.at>)

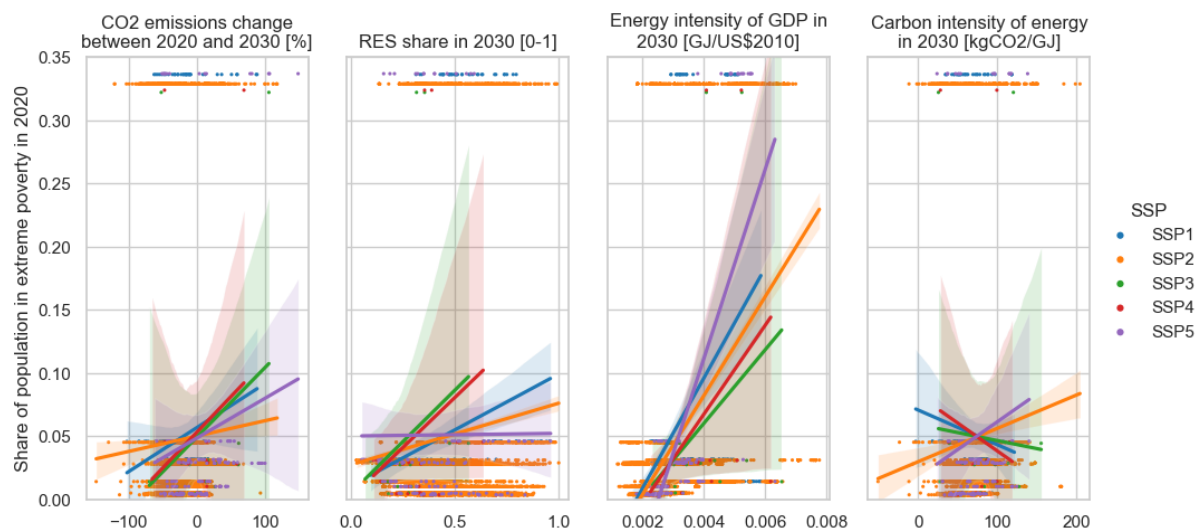


**Figure S8:** Projections of the population share in extreme poverty per country based on the SSP extensions (<https://ssp-extensions.apps.ecc.iiasa.ac.at>)

### S.3. Additional indicators for studying the co-evolution of democracy and mitigation in IPCC AR6 scenarios

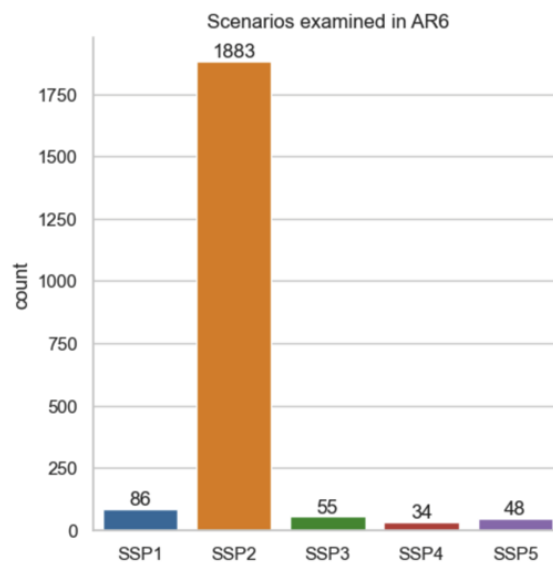


**Figure S9:** Relationship between the Control of Corruption Index and mitigation indicators from the IPCC AR6 scenario ensemble (per R10 region and SSP).

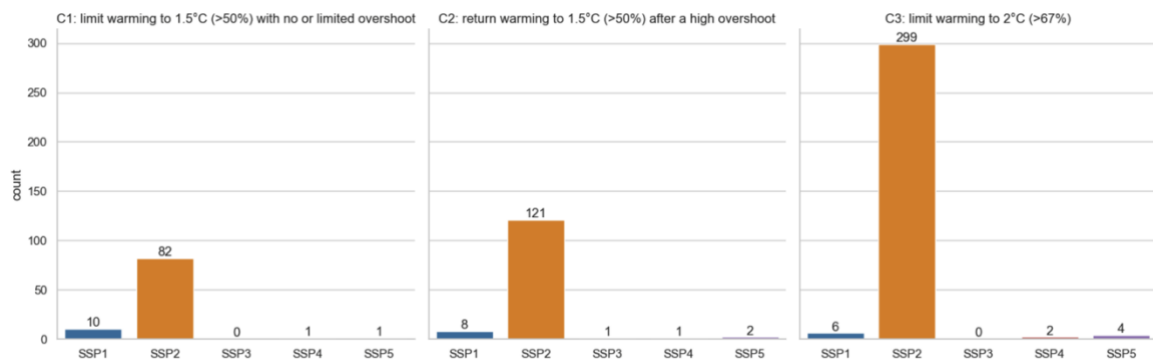


**Figure S10:** Relationship between the share of population in extreme poverty and mitigation indicators from the IPCC AR6 scenario ensemble (per R10 region and SSP).

## S.4. Use of SSPs in the IPCC AR6 scenario ensemble



**Figure S11:** Count of IPCC AR6 scenarios per SSP



**Figure S12:** Use of SSPs across different policy categories in the IPCC AR6 scenario database