

Supplementary Material

Table S1: Overview of criteria for matching governance archetypes and IAM scenarios with representation in IPCC's sixth assessment report (AR6)

	<i>Possible global climate policy future</i>	<i>Effectiveness of global climate policy</i>	<i>Effort sharing principle</i>	<i>Examples of existing set of IAM scenarios</i>	<i>IPCC AR6 Illustrative pathways and NGFS scenarios</i>	<i>Policy classification in IPCC AR6</i>
Governance Archetype 1	Top-down approach with strong legal and mandatory institutional characteristics	High	Explicit agreement among governments	<i>Optimal carbon price scenarios; differentiated carbon prices based on explicit effort-sharing or implicit coordination</i>	<i>IMP-Ren, IMP-Neg, IMP-LD NGFS Net Zero 2050 Net Zero Below 2°C NGFS divergent Net Zero</i>	<i>P2, P2a, P2b, P2c</i>
Governance Archetype 2	Hybrid approach with a strong joint commitment by governments	High to medium	Convergence of national commitments	<i>Bridge scenarios; delayed scenarios; climate club scenarios</i>	<i>IMP-GS NGFS Delayed transition</i>	<i>P3, P3a, P3b, P3c</i>
Governance Archetype 3	Hybrid approach with a weak joint commitment by governments	Medium to low	Divergence of national commitments	<i>NDC or NDC2100 scenarios</i>	<i>IP-Mod-Act NGFS NDC</i>	<i>P1, P1c, P1d</i>
Governance Archetype 4	Breakdown of global climate cooperation	Low	None	<i>No new policies scenarios</i>	<i>IP-Cur-Pol NGFS Current Policies</i>	<i>P4, P1, P1a, P1b</i>

Note: The table provides an overview of the different criteria used for the matching of the four governance archetypes with existing sets of Integrated Assessment Model (IAM) scenarios (see section 5). The last two columns additionally make a comparison with the NGFS (Bertram et al. 2021) scenarios and the database of the sixth assessment report (AR6) of the Intergovernmental Panel on Climate Change (IPCC) (Intergovernmental Panel on Climate Change [IPCC] 2022).

References

Bertram, C., Hilaire, J., Kriegler, E., Beck, T., Bresch, D., Clarke, L., Cui, R., Edmonds, J., Charles, M., Zhao, A., Kropf, C., Sauer, I., Lejeune, Q., Pfleiderer, P., Min, J., Piontek, F., Rogelj, J., Schleussner, C.-F., Serra, F., . . . Hurst, I. (2021). NGFS climate scenario database: Technical documentation V2.2. Network for Greening the Financial System.

Intergovernmental Panel on Climate Change. (2022). Climate change 2022: Mitigation of climate change—Contribution of Working Group III to the Sixth Assessment Report of the Intergovernmental Panel on Climate Change. Cambridge University Press.