Supplementary Information for article:

Equity-Based Emissions Allocations in Multi-Level Governance

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Global level

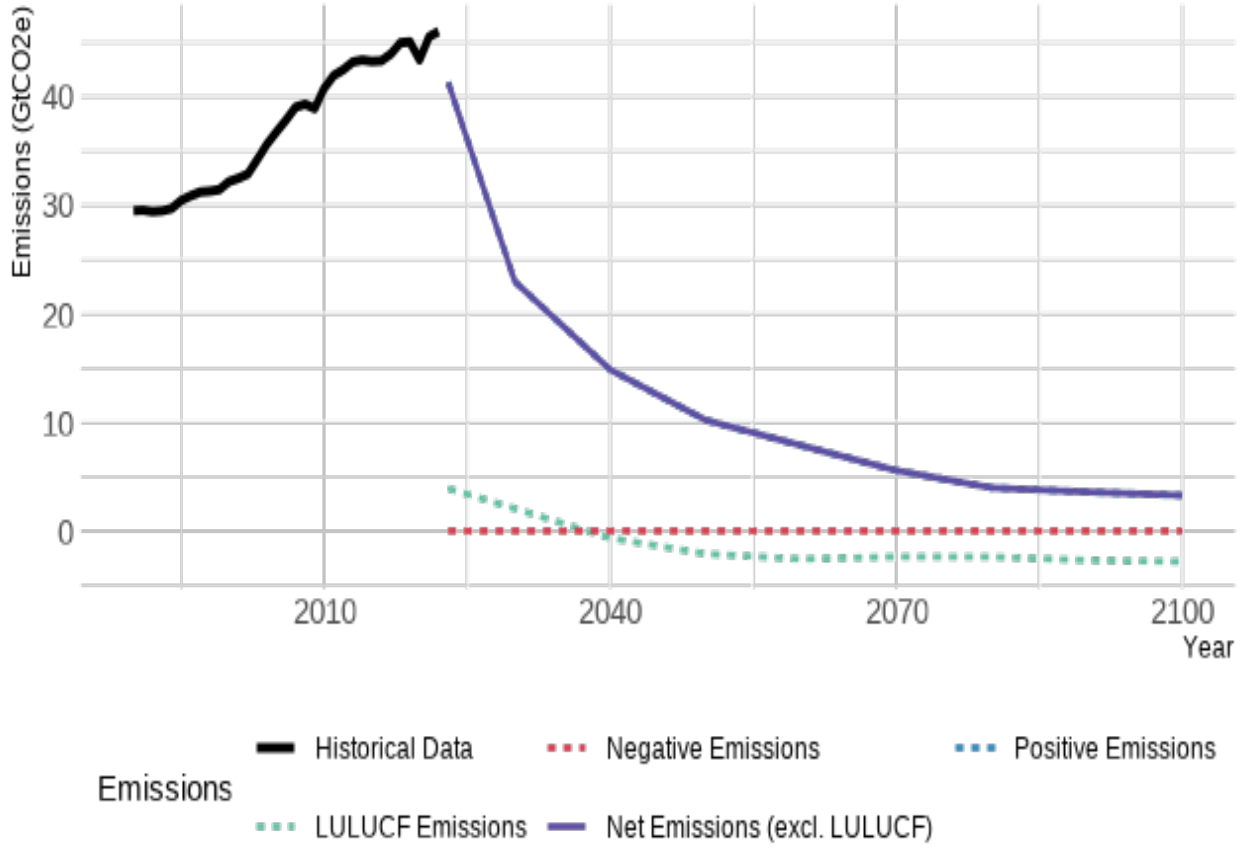

Figure S1 | Global scenario (IMP-LD - MESSAGEix-GLOBIOM 1.0 - LowEnergyDemand_1.3_IPCC) decomposition between positive and negative emissions, excluding LULUCF, before allocation.

Regional level

Figure S2 | Regional emissions timeseries as the aggregation of subnational responsibility allocations.

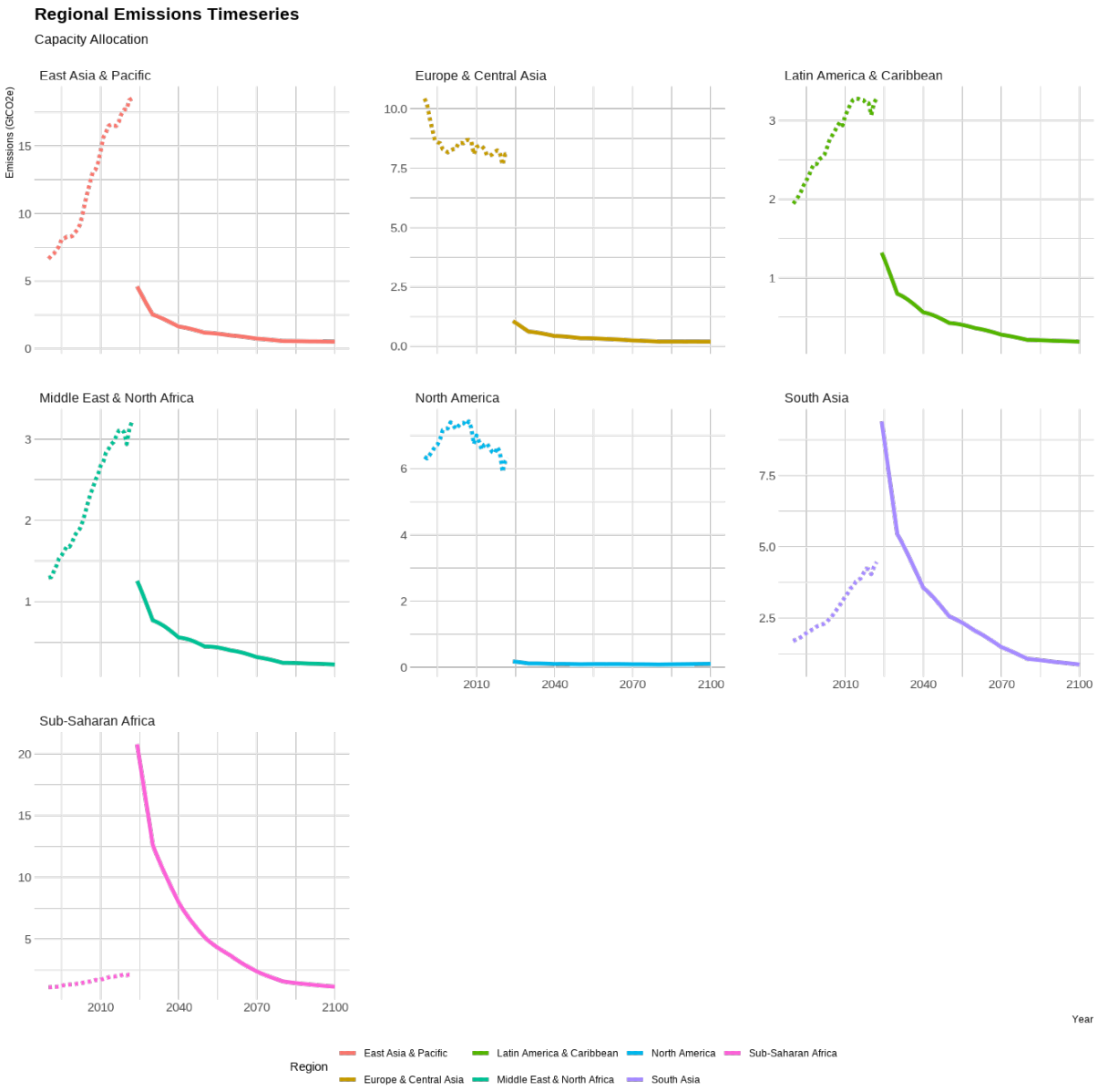

Figure S3 | Regional emissions timeseries as the aggregation of subnational capability allocations.

Table S1: Summary of data availability by types of entities.

Entity Type	# with emissions allocations	# with emissions target
Region	3318	160
City	160	70

Table S2: Summary of warming alignment of various entities' emissions targets.

Entity type	Alignment	Count	Percent of entities
Country	1.5 °C	73	39.9%
	2.0 °C	20	10.9%
	> 2.0 °C	90	49.2%
Region	1.5 °C	32	20.0%
	2.0 °C	14	8.7%
	> 2.0 °C	114	71.3%
City	1.5 °C	34	48.6%
	2.0 °C	6	8.6%
	> 2.0 °C	30	42.8%

Table S3: Comparison of ambition, based on warming alignments, between subnational governments and their respective national governments.

Entity	Ambition compared to national level	Count	Percent of entities
City	As Ambitious	32	45.7%
City	More Ambitious	38	54.3%
Region	As Ambitious	119	74.4%
Region	More Ambitious	41	25.6%