Supplementary Materials

Table S1. Model Parameters and Variables (m regions, n sectors, t technologies, and k factors of production).

	Notation	Dimension	Definition
Exogenous Parameters and Variables	$\mathbf{A}_i$	$n \times t$	Inter-industry inputs per unit of output in region *i*
	$\mathbf{F}_i$	$k \times t$	Inputs of factors of production per unit of output in region *i*
	Φ	*Scalar (1x1)*	share of a certain sectoral production of a region needs to be produced domestically
	$\mathbf{W}$	$n \times t$	weights of goods for each of the transport mode
	$\boldsymbol{d}_{ji}$	$m \times m$	interregional distances
	$\boldsymbol{\theta}_{ji}$	$n \times m(m-1)$	"easiness of trade", extra/less barriers of trade for regional clusters and trade associations
	$\mathbf{y}_i$	$n \times 1$	Final demand in region *i*, including net exports
	$\boldsymbol{\pi}_i$	$k \times 1$	Factor prices in region *i*
	$\mathbf{f}_i$	$k \times 1$	Factor endowments in region *i*
Endogenous Variables	$\mathbf{x}_i$	$t \times 1$	Sectoral output in region *i*
	$\mathbf{p}$	$n \times 1$	Commodity prices from the WTM
	$\mathbf{p}_{nt}$	$n \times 1$	Commodity prices from the NTM ("No-trade model", in absence of trade in region i)
	$\mathbf{r}_i$	$k \times 1$	Factor scarcity rents in region *i*
	$\mathbf{e}_{ij}$	$n \times 1$	vector of goods exported from region *i* to region *j*
	e_{ij}	$n \times m(m-1)$	Exports of region *i* to region *j* by sector
	$\mathbf{T}_{ji}$	$n \times t$	Requirements of transporting a good from region *j* to *i*
Objective Functions	*Z,*	*Scalar (1x1)*	At optimum, assuring that total factor costs equal value of total final deliveries

Extension of the WTM with Bilateral Trade (WTMBT)

In addition to RCOT, another extension to the model is the WTM with Bilateral Trade (WTMBT). For each transportation partners, this extension integrates frictions to trade, which are either transportation costs or tariffs. In doing so, it modifies the trade flows, which are determined at a bilateral level, in addition to generating region specific prices. As illustrated in Equation 9, this is accomplished by adding a transportation matrix, and making sure the local production and the net exports meet the final demand in each region.

$$(\mathbf{I}-\mathbf{A_i})\mathbf{x}_i + \textstyle\sum_i(\mathbf{I}-\mathbf{T}_{ji})\mathbf{e}_{ji} - \sum_i \mathbf{e}_{ij} \geq \mathbf{y}_i, \qquad i \neq j, \forall i,j \tag{A1}$$

The RCOT then allows for the choice of/competition among technologies. Furthermore, multiregional input-output (MRIO) frameworks such as WTM integrate global supply chains in their entirety in an endogenous manner and can integrate key inter-linkages of the FEW nexus in addition to incorporating additional social and environmental aspects and pressures across them. For example, increased food demand in one region (as in this case) triggers the need of additional production and therefore transport and economic activity elsewhere in the world, which have different inputs, and direct and indirect water requirements, energy needs and technologies (e.g. the CO_2 emissions differences captured here can be due to different levels of energy use and/or technologies).

The dual model of the WTM/RCOT is explicit in the primal and can be written explicitly as:

$$Maximize\ Z = \mathbf{p}_i{}' \textstyle\sum_i \mathbf{y}_i - \sum_i \mathbf{r}_i' \mathbf{f}_i - \sum_i \alpha_i\,(\mathbf{p}_{nt}'\,\mathbf{y}_i) \tag{A2}$$

subject to

$$(\mathbf{I}-\mathbf{A}'_i)\mathbf{p}_i - \mathbf{F}'_i\,\mathbf{r}_i - \alpha_i\,(\mathbf{I}-\mathbf{A}'_i)\mathbf{p}_{nt,i} \leq \mathbf{F}'_i\,\boldsymbol{\pi}_i, \ \ \forall i \tag{A3}$$

$$\mathbf{p}, \mathbf{r}_i, \alpha_i \geq 0 \tag{A4}$$

The dual model shown in Equation A2, maximizes the value of final demand minus rents. Equation A3 is used to determine the price of each commodity that is produced and exported, while equation A4 makes sure the price, rent and the benefit of trade scalar indicating the shadow price are all non-negative. The WTMBT (i.e. the extension of Bilateral Trade) does not alter the equations above, but just adds the equation (A5) as constraint:

$$(\mathbf{I} - \mathbf{T'}_{\mathrm{ji}})\mathbf{p}_i - \mathbf{p}_j \leq 0, \ \ \forall i, j \in i \neq j \qquad \text{(A5)}$$

Table S2: World Trade Model 51 sectors (N) and 68 technologies. Minimum water quality type required.

N	Technolgoy	Q	N	Technolgoy	Q	N	Sector	Q
1	Paddy rice rainfed	L	15	Freshwater Fishing	L	37	Manufactures nec.	M
1	Paddy rice irrigated	L	16	Coal	L	38	Electricity_coal	M
2	Wheat_rainfed	L	17	Oil	L	38	Electricity_gas	M
2	Wheat_irrigated	L	18	Gas	L	38	Electricity_nuclear	M
3	Cereal grains nec. rainfed	L	19	Minerals nec.	L	38	Electricity_hydro	M
3	Cereal grains nec. irrigated	L	20	Bovine, Meat products	H	38	Electricity_wind	M
4	Vegetables, fruit, nuts rainfed	L	21	Vegetable oils and fats	H	38	Electricity_solar	M
4	Vegetables, fruit, nuts irrigated	L	22	Dairy products	H	38	Electricity_nec_biomass_waste	M
5	Oil seeds rainfed	L	23	Processed rice	H	38	Electricity_Steam_hot_water_supply	M
5	Oil seeds irrigated	L	24	Sugar	H	39	Water distribution	H
6	Sugar cane, sugar beet rainfed	L	25	Fish products	H	40	Water treatment 1	L
6	Sugar cane, sugar beet irrigated	L	26	Food products nec.	H	41	Water treatment 2	M
7	Plant-based fibers rainfed	L	27	Beverages and tobacco products	H	42	Construction	L
7	Plant-based fibers irrigated	L	28	Textiles, Clothes, Leather	M	43	Trade	M
8	Crops nec. rainfed	L	29	Wood products	M	44	Transport nec.	M
8	Crops nec. irrigated	L	30	Paper products, publishing	M	45	Communication	H
9	Bovine cattle, sheep, goats, horses	L	31	Petroleum and Chemicals	M	46	Financial services nec.	H
10	Animal products nec.	L	32	Mineral products nec.	M	47	Insurance	H
11	Raw milk	L	33	Ferrous metals nec.	M	48	Business services nec.	H
12	Wool, silk-worm cocoons	L	34	Motor Vehicles, transport Equipment	M	49	Recreational and other services	H
13	Forestry	M	34	Motor Vehicles, electric car	M	50	Public Administration organizations	H
14	Marine Fishing	M	35	Electronic equipment	H	51	Dwellings	H
14	Aquaculture	M	36	Machinery and equipment nec.	M			

Notes: H =High, M = Medium; L =Low; nec.= not elsewhere classified.
Source: Own elaboration, adapted from (Ignacio Cazcarro, López-Morales, & Duchin, 2019a; Dilekli & Cazcarro, 2019).

Table S3: World Trade Model Regions

N	Region	Countries/Regions from GTAP included	Region (4) diet scenario	EIA
1	Oceania	Australia, New Zealand, Rest of Oceania.	OECD_FSU	Australia & New Zealand
2	East Asia	Mongolia, Rest of East Asia.	ASIA	Other Asia
3	China	China, Hong Kong.	ASIA	China
4	Japan and Koreas	Japan, South Korea, North Korea	ASIA	Japan
5	Rest of South East Asia	Brunei Darassalam, Cambodia, Laos, Burma, Philippines, Singapore, Thailand, Vietnam, Bangladesh Rest of Southeast Asia.	ASIA	Other Asia
6	Malaysia & Indonesia	Malaysia, Indonesia.	ASIA	Other Asia
7	South Asia	Pakistan, Sri Lanka, Rest of South Asia.	ASIA	Other Asia
8	India	India	ASIA	India
9	Canada	Canada	OECD_FSU	Canada
10	USA	United States of America	OECD_FSU	United States
11	Central America	Dominican Republic, Jamaica, Puerto Rico, Trinidad and Tobago, Mexico, Rest of North America, Costa Rica, Guatemala, Honduras, Nicaragua, El Salvador, Panama, Rest of Central America, Rest of the Caribbean.	LAM	Mexico and Chile
12	South America	Argentina, Bolivia, Chile, Colombia, Ecuador, Paraguay, Peru, Uruguay, Venezuela, Rest of South America.	LAM	Other Non-OECD Americas
13	Brazil	Brazil	LAM	Brazil
14	European Union 28	Austria, Belgium, Croatia, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Poland, Portugal, Slovakia, Slovenia, Spain, Sweden, United Kingdom, Bulgaria, Romania.	OECD_FSU	OECD Europe
15	Rest of Europe	Switzerland, Norway, Rest of EFTA, Albania, Rest of Europe.	OECD_FSU	Other Europe/Eurasia
16	Middle East & North Africa	Iran, Israel, Jordan, Kuwait, Oman, Qatar, Saudi Arabia, United Arab Emirates, Rest of Western Asia, Egypt, Morocco, Tunisia, Rest of North Africa.	AFR_ME	Middle East + Africa
17	South and Central Africa	Benin, Burkina Faso, Guinea, Nigeria, Senegal, Togo, Rest of Western Africa, Central Africa, South Central Africa, Ethiopia, Madagascar, Malawi, Mauritius, Mozambique, Rwanda, Tanzania, Uganda, Zambia, Zimbabwe, Rest of Eastern Africa, Botswana, South Africa, Rest of SACU.	AFR_ME	Africa
18	Other, Eastern Europe and West Asia	Ukraine, Rest of Eastern Europe, Kazakhstan, Kyrgyzstan, Rest of Former Soviet Union, Armenia, Azerbaijan, Georgia, Bahrain. Turkey.	ASIA	Non-OECD Europe & Eurasia
19	Russia	Russia	OECD_FSU	Russia
	Total	**Total**	**WLD**	**Total**

Source: Aggregated from GTAP 9

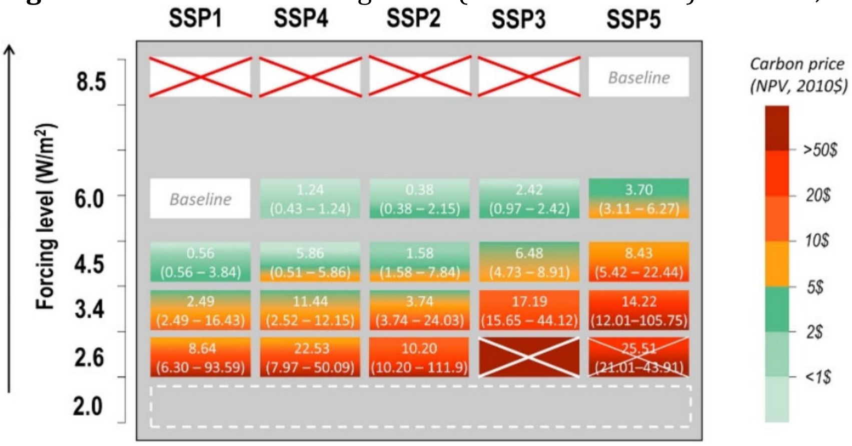
Table S4. Correspondence of the agricultural sectors in the database with the food demand in Valin et al. (2014). Example of 2030/2015 ratio for SSP3 "inequality".

Sector	**Prod8**	**LAM**	**ASIA**	**OECD_FSU**	**AFR_ME**
S_Paddy_rice	RIC	1.013882	1.053844	1.080746	1.037587
S_Wheat	WHT	1.040523	1.041683	1.01778	0.981394
S_Cereal_grains_nec	CGR	1.038524	1.076268	1.018343	1.072259
S_Vegetables_fruit_nuts	**CR5**	1.036884	1.063141	1.037094	1.045868
S_Oil_seeds	OSD	1.040012	1.113881	1.045948	1.106077
S_Sugar_cane_sugar_beet	SUG	1.033948	1.146977	1.017471	1.05191
S_Plant-based_fibers	**CR5**	1.036884	1.063141	1.037094	1.045868
S_Crops_nec	**CR5**	1.036884	1.063141	1.037094	1.045868
S_Bovine_cattle_sheep_and_goats_horses	RUM	1.101782	1.254135	1.035826	1.164044
S_Animal_products_nec	NRM	1.127029	1.192659	1.041246	1.145658
S_Raw_milk	DRY	1.110423	1.296472	1.03726	1.097254
S_Wool_silk-worm_cocoons	**PAS**	1.115723	1.244049	1.041132	1.125468

3.1. General scenario framework. SSPs

As shown in the RCP-SSP scenario matrix below, SSP5 relates to the highest levels of forcing level and temperature increase.

Figure S1: Relation of forcing levels (climate scenarios) and SSPs, including carbon prices

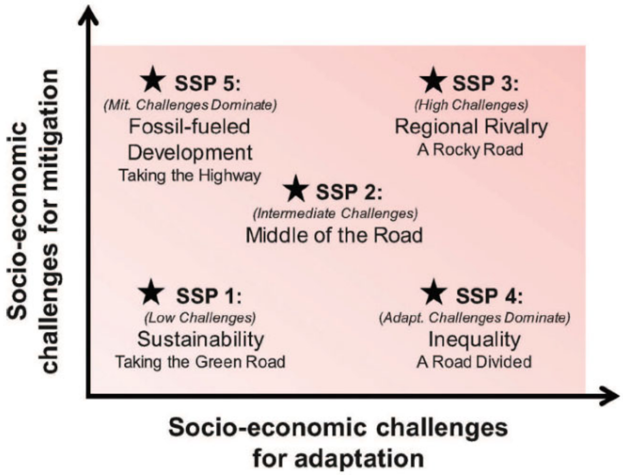


Source: (Riahi et al., 2017). Carbon prices and the attainability of alternative forcing targets across the SSPs. Cell colors are indicative of the carbon price. The numbers in the boxes denote the carbon price of the marker scenarios with the full range of non-marker scenarios in parenthesis. White cells locate the respective baseline scenarios.

Narrative storylines were developed for the SSPs, focusing more on three of them. In SSP1, environmentally friendly economic growth and lifestyles lead to sustainable development. Successful population policy and economic development decreases the birth rate in developing countries in addition to expected sustainable economic growth and shrinkage of income. Furthermore, technological developments are expected to help decoupling growth in production levels from the material inputs to production. Hence this is the rapid low-carbon technology development scenario leading to sustainable economic development.

- 1) SSP1 "Sustainability", taking the green road, the only one which, in principle, does not pose challenges for mitigation and adaptation.
- 2) SSP2 is the "middle of the road" scenario (often reference scenario).
- 3) SSP3, which assumes an aging society, increased income "inequality" between classes and regions, the resource-intensive industrial structure, and slow economic development resulting in environmental degradation.
- 4) SSP4, "Regional rivalry", with large socio-economic challenges for adaptation.
- 5) SSP5, "Fossil-fuel development", assumes very high GDP and urbanization growth, with a clear inverted-U shaped curve for population growth, revealing a demographic transition.

Figure S2: SSPs situation in terms of challenges for adaptation and mitigation.



Source: Overview of Shared socioeconomic pathways (SSPs) representing combinations of challenges to mitigation and adaptation (from (O'Neill et al., 2017).

<u>Practical implementation in the model of changes: demographics and income</u>

Given how the model and variables have been defined, there are several crucial elements where and how this information is filled into the Input-Output database. Understanding that the supply is constrained due to production needs of inputs and factors, but that WTM is mostly a demand driven model, we start pointing that the changes in final demand is one of the key drivers. Modelled changes are both projected estimates from the literature or models, or targets. Among the first we find specific paths which then affect typically specific sectors (a specific path of final energy demand, of diet changes, etc.). In the case of achieving targets (e.g. 2030 or 2050) an increase in final demand in every step is simply interpolated. For example, the SDG targets on the water sectors (WSS) or on energy sectors (E) ($\text{targ\_gr}^{SDG}_{i,t,WSS/E}$), final demand of the specific sectors increase as: $\text{targ\_gr}^{SDG}_{i,t,WSS/E} = \left(1 + \frac{\text{targ}^{SDG}_{i,2030,WSS/E}}{\text{targ}^{SDG}_{i2015,WSS/E}}\right)^{1/15}$

When we want to illustrate finer steps (i.e., 10 runs per year), analogously the roots of the equation change from 15 to 150.

But in this section, we deal with how the final demand of other sectors other than water and energy, we modify according to specific paths or targets. This is done by the generic increases of demographics and income. To increase the final demand, we utilize population growth (pop_gr, accounting for the difference between urban and rural expansion for the targets), and the Gross Regional Product per capita growth ($GDPpc\_gr$), obtaining a general growth rate of demand. We include a few compositional changes of final demand (e.g. changes in the health sector based on the age of the population, etc.), so these changes affect equally all goods and sectors. For the different periods, the population data is obtained from the same SSP database provided by IIASA (Samir & Lutz, 2017), but we alternatively also explore scenarios from the projections (2015-2030) of the World Population Prospects 2019 (UN, 2019) and the 2018 Revision of World Urbanization Prospects (UN, 2018).

The Gross Regional Product (GRP) per capita growth projections are obtained from the SSP Public Database Version 2.0 (Riahi et al., 2017), in particular 3 (the Shared Socioeconomic Pathways SSP2, SSP3 and SSP5, to represent the low, medium and high variant respectively) of the set of five SSP storylines/narratives (Kriegler et al., 2012; B. C. O'Neill et al., 2014; B. O'Neill et al., 2011) and (OECD, 2018b)(both with GRP projections in real terms, measured respectively in USD at 2005 Purchasing Power Parities, PPP, and in USD at 2010 PPP). There are regional differences, and the scenario we will focus on more, SSP3, in general shows a world with low GRP per capita growth, with high population increase, while SSP5 shows a world with high GRP per capita growth, implying important demographic transitions in many countries which lead to lower population increases.

3.2.1. Food demand

As indicated in the main text, apart from the used scenarios from Valin et al. (2014), alternatives exist[1]. We initially explored additional scenarios based on other works. Using the GRAFS model, which models the food systems with high resolution, Billen et al. (2015) estimated that it is possible to feed the projected global population of 2050 with equitable diets whose animal protein content cannot exceed 40%. This helps in modelling SSP1, while in the opposite direction for SSP3 expanding protein demand (basically from meat and fish, but also dairy, vegetables and pulses) on countries/regions below that share, and increasing them in countries/regions where this is exceeded. Keating et al. (2014) approach the food challenge by food wedges that consist of pathways based on the literature. They include 14 trajectories that are tested by 86 food security researchers and that are based on reducing the food demands, increasing food supply and sustaining the productive capacities. They also survey the literature regarding the food demand between 2010 and 2050. This survey ranges between 7 and 8.9 kcal yr−1×1015 for 2010, and 10.3 and 15.3 kcal yr−1×1015 for 2050, representing an upwards change between 45% and 71% between the two dates (Alexandratos & Bruinsma, 2012; B. Keating & Carberry, 2010; Pardey, Beddow, Hurley, Beatty, & Eidman, 2014; Valin et al., 2014). Since some of these scenarios would represent scenarios of lower food demands than Valin et al. (2014), we do not focus further on these and decide to better analyse the upper bound cases, seeing the potential limits, constraints, rents generated, needed changes in production, trade, resources (e.g. water), etc.

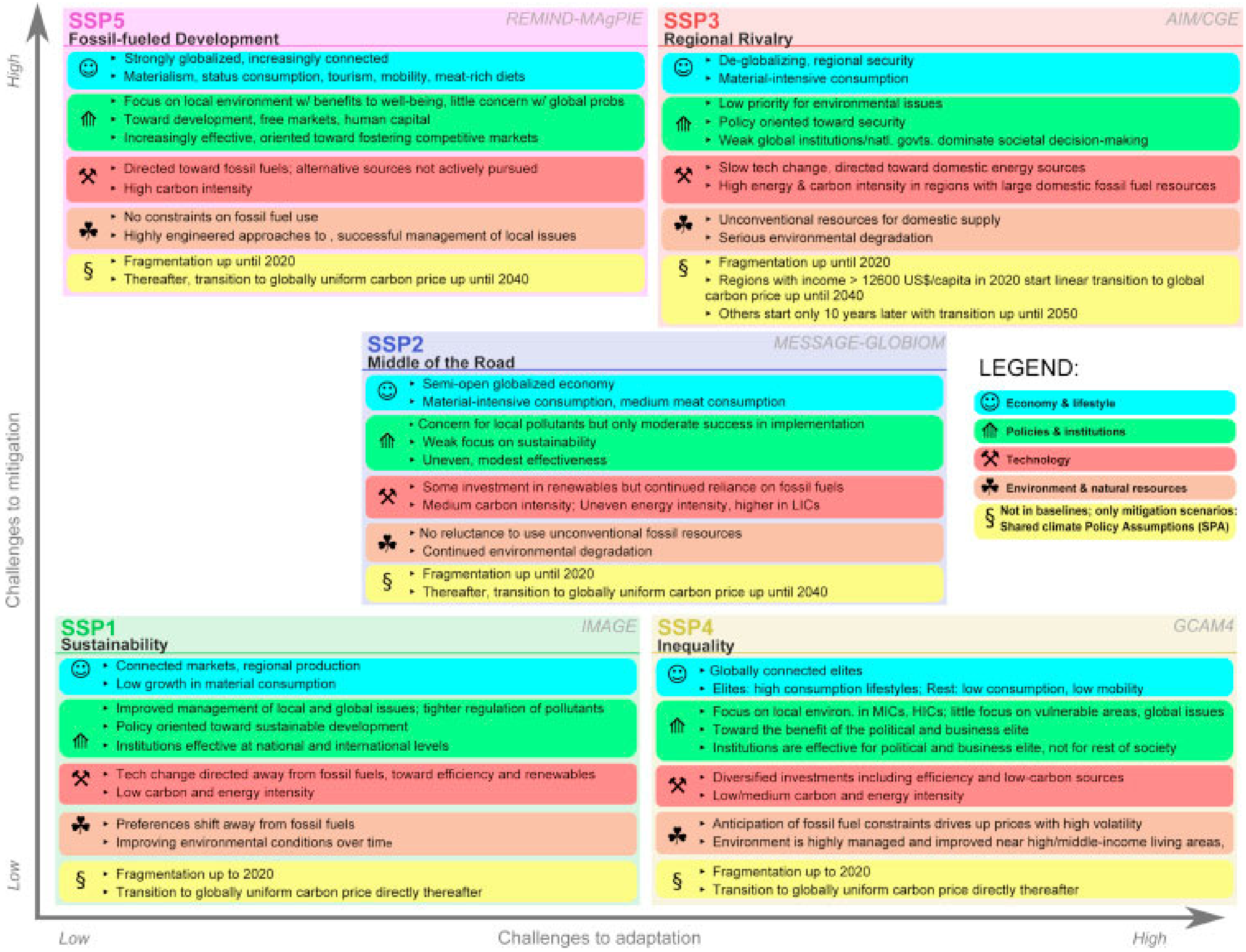
3.2.3. Energy

As introduced in the main text, in (Bauer et al., 2017), Figure 2 shows the final energy demand by SSP. SSP2 features a moderate modernization of final energy use. The use of liquids increases by two thirds up to 2050 and remains roughly constant thereafter. The picture is mixed when looking at traditional and modern energy carriers. On the one hand, electricity consumption more than doubles from 2010 to 2050. The direct use of coal doubles by 2050 to fuel industrial development in Asia, Middle East and Africa.

SSP1 and SSP5 show similarities in the trends in energy modernization, although the scale of total final energy consumption is different. Electrification is rapid, particularly in developing countries, and demand for gaseous fuels grows substantially. A stronger focus on a transformation towards public transport and electric or hydrogen cars is found in SSP1 compared to a more conventional transport system with high demand for transportation services in SSP5, in which the decarbonization of this sector is the main bottleneck (addressed by decreasing demand and increasing the use of electric and hydrogen vehicles and bio-fuels). The low transport energy demand in the SSP1 baseline notably eases the mitigation challenge.

[1] We also initially explored additional scenarios based on other works. Using the GRAFS model, which models the food systems with high resolution, Billen et al. (2015) estimated that it is possible to feed the projected global population of 2050 with equitable diets whose animal protein content cannot exceed 40%. This helps in modelling SSP1, while in the opposite direction for SSP3 expanding protein demand (basically from meat and fish, but also dairy, vegetables and pulses) on countries/regions below that share, and increasing them in countries/regions where this is exceeded. Keating et al. (2014) approach the food challenge by food wedges that consist of pathways based on the literature. They include 14 trajectories that are tested by 86 food security researchers and that are based on reducing the food demands, increasing food supply and sustaining the productive capacities. They also survey the literature regarding the food demand between 2010 and 2050. This survey ranges between 7 and 8.9 kcal $yr^{-1}\times10^{15}$ for 2010, and 10.3 and 15.3 kcal $yr^{-1}\times10^{15}$ for 2050, representing an upwards change between 45% and 71% between the two dates (Alexandratos & Bruinsma, 2012; B. Keating & Carberry, 2010; Pardey et al., 2014; Valin et al., 2014). Since some of these scenarios would represent scenarios of lower food demands than Valin et al. (2014), we do not focus further on these and decide to better analyse the upper bound cases, seeing the potential limits, constraints, rents generated, needed changes in production, trade, resources (e.g. water), etc.

Figure S3: Overview of *basic* SSPs, the energy sector elements of the narratives and the Shared Climate Policy Assumptions (SPAs)



Source: (Bauer et al., 2017).

SSP3 and SSP4 are the two scenarios with slow growth and convergence, with slower modernization in the global final energy mix. The electrification in developing regions is slow and does not catch-up with that of developed regions. There is a slow modernization of SSP3 in the climate change mitigation cases with relatively stagnant technologies. To achieve the climate change stabilization targets, in SSP3 non-electric energy demand is reduced; electricity demand is only reduced in Asia and the Middle East and Africa region. In SSP4 there is stronger electrification due to the technology development in the end-use sector, helping reducing non-electric energy use in climate change stabilization scenarios. However, large parts of the population in poor economies find no modernization, relying on traditional biomass use.

Energy for scenarios assumptions

- The efficiencies of solar panels are projected (see van de Ven et al., 2020)[2], to move from current efficiencies of about 16% to ranges of 20 to 28% cell efficiency through 2050. The changes in the projected efficiency are in line with the levelized cost improvements based on the EIA figures.
- We extracted the predicted costs for all the electricity generation technologies in the most techno-optimistic scenarios (SSP5) up to the years 2030 and 2050 (EIA, 2019; NREL, 2020). Because of the optimistic nature of SSP5, we used the minimum predicted costs rather than the maximum costs. We interpolated intermediate changes from our base year, 2015 through 2050.
- We used those cost changes to scale the A and F columns of the respective technologies to scale them in order to depict their comparative advantages against each other as was done in a previous study (Dilekli et al., 2018).
- There are three alternative technologies for both coal and NG power plants in the EIA figures. Since our database only contains a single technology column for both power generation technologies, and we used the average costs in our interpolations.
- Coal, natural gas, nuclear and biopower plants have associated fuel costs that we calculated by dividing those with the total levelized cost. For the remaining technologies such as solar and wind, there are zero fuel costs.
- These are US based studies without any differentiation across the world. We used the efficiency coefficients for all the regions in our database as end points in the cases in which convergence exists.

Using EIA's projections (EIA, 2019; NREL, 2020), we develop Table S5, which contains a set of coefficients that we use to scale existing technology coefficients in our A and F tables that describe the intermediate and factor inputs for each good. In making the standardization, we use the technology with the highest cost as the reference. In the calculation, we use the 2015 costs as benchmark costs, and divide the 2030 and 2050 costs by this number to generate these coefficients which are then used to scale corresponding technology columns. A striking observation in this table is that the costs of electricity from natural gas plants go up progressively as opposed to the rest of the technologies. This is due to the fact that EIA forecasts the natural gas prices to go up, while the rest of the costs are kept the same through 2050.

The global trade structure

Going a bit further in the usual interpretations of these narratives, we may fine-tune in our model in several ways the openness of regions in the way they interact with each other in terms of trade. Growth in interconnection among geographic regions at different stages of economic development and material standards of living connect to the material base that is composed of

[2] The uncertainties with relation to future technological improvements are included considering three levels of PV module efficiency (of capacity installed) by the end of the simulation (the year 2050): 20, 24 and 28%. This is based on the progress of PV efficiencies, setting the change equally at the end of the period for all regions (hence, convergence in these technologies is assumed) since the current PV market is considered to be global. At the lower bound (20%), simpler, cheaper and more flexible technologies such as thin-film (e.g. amorphous silicon or organic cells), all using more abundant minerals, would dominate the market (De Castro, Mediavilla, Miguel, & Frechoso, 2013; Kaltenbrunner et al., 2012; Nathan S. Lewis, 2016; Shukla, Sudhakar, & Baredar, 2016). The middle path (24%) corresponds to a scenario where single-junction technologies reach their maximum practical potential efficiency reachable at industrial production-level (Mayer, Philipps, Hussein, Schlegl, & Senkpiel, 2015; Swanson, 2005). The 28% reflects more complex and expensive technologies such as multi-junction technologies or perovskite solar would take a significant share of the market by 2050 (Mayer et al., 2015; Philipps, Bett, Nozik, Conibeer, & Beard, 2014).

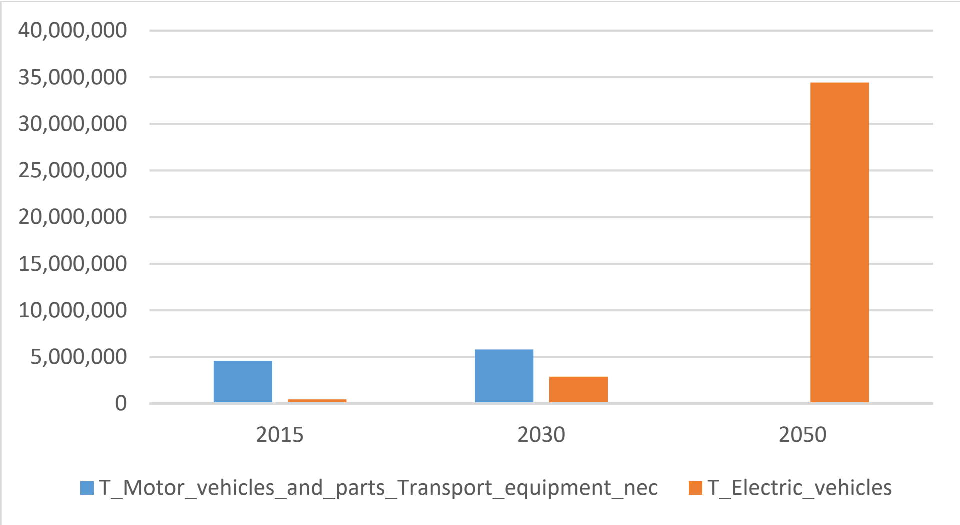
factors of production which includes water, land, labor, mineral resources, etc. (see the whole Special Issue of [81]). Around some of the SSP storylines, there might not be abundant explanations on this issue (although increasing interconnection, trade, etc. could be implicitly assumed under SSP2 and SSP5). However, it is explicit in SSP3, the scenario projecting international fragmentation. This may relate to higher protectionism, due to several economic, social, environmental or health reasons. Food, energy and water “security” concerns among others are increasingly placed in the governments’ agendas, and phenomena such as the COVID19 crisis is also making imports substitution (at least temporal) a reality, progressively considered.

Table S5. Relative cost estimates in 2030 and 2050 with respect to 2050.

Technology		2030 Coefficient	2050 Coefficient
Coal	PC	0.983315	0.954394
	IGCC	0.912281	0.874269
	CCS-30%	0.95122	0.898374
	CCS-90%	0.915493	0.860563
Coal Average		0.937705	0.89224
Natural Gas	CT	1.054479	1.196126
	CC	1.106383	1.321513
	CC-CCS	1.064655	1.176724
NG Average		1.069409	1.216452
Nuclear		0.948689	0.874572
Biopower		0.959964	0.936833
Geothermal		0.912281	0.848928
Wind	Land-based	0.669118	0.541667
	Offshore	0.508786	0.249201
Photovoltaic	Utility	0.634146	0.518847
	Commercial	0.618363	0.488938
	Residential	0.447925	0.335944
Hydropower		1	1

Additional results/figures

Figure S4: Evolution of the output by technology of vehicle production (million $) in SSP3



Source: Own elaboration based on the WTM/RCOT results.