more different framework data and corresponding results at: http://results-espm.save-the-climate.info

framework data (input values here: yellow fields)

		Gt		
global CO2 budget 2018 - 2100		**570**		
land-use change **(LUC)** emissions from 2018 on	**10%**	-57		global
international shipping and aviation (ISA) emissions from 2018 on	3%	-17		budget
global CO2 emissions 2018 - 2019 without LUC and ISA		-73		
global CO2 budget 2020 - 2100 to distribute here		423		
weighting population key in the weighted key		**85%**		national budget
scenario type used for the reference values		**RM-3-lin**		reference
minimum annual **emissions** as a percentage of the country's current emissions		**-5%**		values

> **global budget** to distribute here:
>
> **LUC** and ISA emissions are subtracted from the global budget because no reliable data are available at the country level. The emissions for countries used and the country budgets determined here also do not include LUC and ISA emissions.

reference values for the countries with the highest emissions					emissions 2019 in Gt	per capita 2019 in t	share in global emissions 2019	accu-mulated share	temporary overshoot in Gt	reduction rate used 2020
target year:	2030		2050							
reference year:	1990	2010	1990	2010						
China	109%	-45%	-118%	-92%	11.5	8	31%	31%	30	-2.3%
United States	-73%	-76%	-105%	-101%	5.1	16	14%	45%	15	-3.0%
EU27	-62%	-57%	-101%	-91%	2.9	7	8%	53%	7	-2.1%
India	261%	23%	59%	-12%	2.6	2	7%	61%	1	-0.9%
Russia	-76%	-67%	-104%	-98%	1.8	12	5%	65%	5	-2.7%
Japan	-60%	-62%	-105%	-95%	1.2	9	3%	69%	3	-2.9%

largest national budgets 2020 - 2100	national budget	weighted key	emissions 2019	scope years
	Gt		Gt	
China	86.8	20.5%	11.5	7.5
India	68.2	16.1%	2.6	26.2
EU28	29.6	7.0%	3.3	9.0
EU27	25.8	6.1%	2.9	8.8
United States	24.2	5.7%	5.1	4.7
Indonesia	13.7	3.2%	0.6	21.9
Brazil	10.7	2.5%	0.5	22.3
Pakistan	10.5	2.5%	0.2	46.9
Russia	9.9	2.3%	1.8	5.5
Nigeria	9.5	2.3%	0.1	95.2
Japan	7.9	1.9%	1.2	6.9
Bangladesh	7.8	1.8%	0.1	70.7
Mexico	6.8	1.6%	0.5	14.0
Philippines	5.3	1.3%	0.2	35.2
Ethiopia	5.3	1.2%	0.0	287.9
Egypt	5.1	1.2%	0.3	20.0
Germany	5.1	1.2%	0.7	7.3
Iran	5.1	1.2%	0.7	7.2
Vietnam	5.0	1.2%	0.3	16.5
Turkey	4.6	1.1%	0.4	11.1
Democratic Republic of the Congo	4.0	1.0%	0.0	1,357.1
United Kingdom	3.8	0.9%	0.4	10.4
Thailand	3.7	0.9%	0.3	13.5
South Africa	3.6	0.8%	0.5	7.2
France and Monaco	3.6	0.8%	0.3	11.4
South Korea	3.5	0.8%	0.7	5.4
sum without EU	314		29	
sum across all countries	423		37	11.5

Basic idea behind the ESPM

The ESPM consists of two steps:

(1) **National budgets**: A predefined global CO2 budget is distributed to countries. The ESPM tool offers the use of a **weighted distribution key** that includes the **'population'** and the **'emissions'** in a base year (here: 2019).

(2) **National paths**: The ESPM tool offers the scenario types **RM 1 - 6** to derive plausible national paths that adhere to a national budget.

The **weighting of the population distribution key** is therefore an important parameter when determining national budgets.

An important parameter for determining the national paths is the potential for **net negative emissions** that is assumed. This is given here by the minimum value of annual emissions up to 2100 as a percentage of the country's current emissions. A negative percentage stands for net negative emissions. If net negative emissions are taken into account, the budget is temporarily exceeded (overshoot). Please note: The potential of negative emissions is controversial. In addition, a resulting **overshoot** can be problematic with regard to the **tipping points** in the climate system.

Basic idea behind the RM Scenario Types 1 - 6

With the help of the RM Scenario Types, emission paths can be determined that meet a given budget. The scenario types differ in the **assumption** about the **property** of the **annual reductions**. This approach is particularly useful when it comes to making **political decisions** about emission **paths**.

Here is a brief description of the RM Scenario Types:
https://www.klima-retten.info/Downloads/RM-Scenario-Types_short.pdf