

Time for Climate Justice

By Eloi Laurent

On September 18th 2019, 16 years old climate activist Greta Thunberg appeared before the United States House of Representatives. When asked to submit a formal version of her inaugural statement, she replied that she would be giving lawmakers a copy of the IPCC special report on the impacts of global warming of 1.5 °C, the so-called "[SR 1.5](#)". "I am submitting this report as my testimony because I don't want you to listen to me, I want you to listen to the scientists", she said eloquently.

By the same token, when asked what words she wanted to be printed on the sails of the boat carrying her across the Atlantic Ocean from Sweden to the US, she asked for a blunt message urging citizens and policymakers to act upon climate knowledge: "Unite behind Science". Greta Thunberg deserves considerable praise for her intelligence, courage and determination in the face of ignorance, skepticism and animosity. But she is wrong on one important point: nations and people around the world won't unite behind science. They will only unite behind justice.

Any meaningful conversation among humans about reform, change and progress starts with debating justice principles at play and imagining institutions able to embody these principles. This is especially true of the titanic shift in attitudes and behaviors required by the climate transition, which goal is nothing short of saving the hospitality of the planet for humans.

Climate injustice is obvious in our world. On the one hand, a

handful of countries, about ten percent (and a handful of people and industries within these countries) are responsible for 80% of human greenhouse gas emissions, causing climate change that is increasingly destroying the well-being of a considerable part of humanity around the world, but mostly in poor and developing nations. On the other hand, the vast majority of the people most affected by climate change (in Africa and Asia), numbering in the billions, live in countries that represent almost nothing in terms of responsibility but are highly vulnerable to the disastrous consequences of climate change (heat waves, hurricanes, flooding) triggered by the lifestyle of others, thousands of miles away.

Why is climate change still not mitigated and actually worsening before our eyes, while we have all the science, technology, economics, and policy tools we need to fix it? Largely because [the most responsible are not the most vulnerable, and vice-versa.](#)

And yet, the time may be ripe for climate justice to take center stage in international negotiations. Data compiled by the [Global Carbon Project](#) released last week show that top emitters are converging in terms of climate responsibility (table 1).

Table 1. Share in % for each country or region (responsibility in terms of emissions per capita is calculated in percentage of the world average)

	Emissions in 2018	Emissions per capita in 2018	Consumption emissions in 2017	Historical responsibility emissions (1870-2018)	Historical responsibility emissions (1990-2018)
United States	15	345	16	25	20
China	28	145	24	13	20
European Union	9	139	12	22	14
India	7	41	6	3	5
Russia	5	243	4	7	6
Japan	3	189	3	4	4

Source: Global Carbon Project.

Of course, China remains by far the first polluter: the country has emitted in 2018 roughly twice the volume of CO2 than the US, thrice the amount of the EU, four times the

amount of India, five times the amount of Russia. Consider the amount per capita, and the picture changes dramatically: a citizen of the United States emits more than twice CO₂ than a Chinese. And yet, for the first time, a European is (slightly) less responsible than a Chinese in terms of per capita emissions. Conversely, it is well established that historical responsibility for greenhouse gas emissions falls largely on the shoulders of Western countries, with the US and the EU jointly responsible for half of emissions since the industrial revolution, while China only accounts for less than 15%. And yet, for the first time, China is as responsible as the US when emissions are counted since 1990 onwards (both countries accounting for 20% each of emissions over the 1990-2018 period).

It is thus the right time to devise actionable equity criteria, commonly agreed upon top emitters, as to how distributing the remaining “carbon budget” (the overall amount of emissions remaining before the Earth’s climate reaches a catastrophic tipping point, approximately 1200 billion tons of carbon that remain to be emitted over the next three decades so as to limit the rise of ground temperatures to around 2 degrees by the end of the 21st century).

But as incredible as it may seem, the formal global conversation has not yet started on climate justice: as the COP 25 ends in Madrid and all eyes turn to COP 26 for a renewed climate ambition, countries are still negotiating at the UN on volumes of emissions that do not take into account current and projected population, human development level, geographic basis (production vs. consumption emissions), historical responsibility, etc. By the same token, [The Paris Agreement](#) (2015) mentions the term “justice” only a single time, to affirm that signatories recognize “the importance for some of the concept of ‘climate justice’”. This is clearly a misinterpretation. The whole point of climate justice is precisely that it is not confined to a few nations or

important for a few people: it should be the concern of all involved in climate negotiations.

It can be shown that the application of a hybrid but relatively simple model of climate justice based on five criteria would lead to substantially cutting global emissions in addition to the carbon budget (by 36%) over the next three decades which would ensure meeting the goal of 2 degrees, and even targeting 1.5 degrees, thereby enhancing the fairness of this common rule with respect to the most vulnerable countries and social groups (see table 2).

Table 2. A simple model of fair and efficient climate justice

Top 20 CO2 emitters: 76% of global emissions	% of the global average of consumption emissions per capita, averaged over 1990-2012	% of the global average of HDI, averaged over 1990-2012	Average distance to 100 of (1) and (2)	Projected population increase until 2050	Equal distribution of 75% of 1200bn tons of CO2	Carbon budget per country : = (5) + or - (3) + or - (4)
			(in %)	(in %)	(in bn tons)	(in bn of tons)
	(1)	(2)	(3)	(4)	(5)	
India	27	75	49	24	45	78
Indonesia	30	95	38	22	45	72
Brazil	43	106	26	12	45	62
Thailand	70	102	14	-5	45	49
China	85	97	9	-2	45	48
Mexico	83	108	5	27	45	59
Turkey	96	104	0	20	45	54
Iran	123	103	-13	17	45	47
South Africa	137	94	-15	28	45	51
France	187	122	-55	9	45	24
Italy	210	121	-65	-8	45	12
UK	232	123	-78	14	45	16
South Korea	233	121	-77	0	45	10
Russia	253	112	-82	-8	45	5
Japan	249	123	-86	-16	45	-1
Germany	280	124	-102	-3	45	-2
Saudi Arabia	296	114	-105	36	45	14
Australia	319	127	-123	33	45	5
Canada	361	125	-143	22	45	-9
US	391	125	-158	20	45	-17
Total					900	576

Reading: The 1990-2012 average of per capita consumption emissions can be compared with the average level of the human development index for this period, relying on the idea of the carbon budget as a development budget. Two global average deviations are calculated for each of the twenty largest emitters: the emissions gap and the human development gap, the average of which determines the national carbon budget (either positive or negative) to be used until 2050 (countries with a negative carbon budget may have to pay by investing in carbon sinks or by transferring technology and / or financing to accelerate emission reductions in carbon positive carbon budget countries). Countries receive the same carbon endowment up to 2050 regardless of population size, this equal endowment corresponding to an equal sovereign right to develop. But this initial equal endowment is adjusted by the projected increase of population until 2050 for each country (notice that population size has already been taken into account with per capita emissions in column 1). India for instance has emitted 27% of the world average from 1990 to 2012 and reached 75% of the world average level of human development over the same period. Its population will increase by 24% until 2050, it is therefore allocated 78 billion tons of CO2 to be emitted by 2050. In contrast, the United States owes 17 billion tons of CO2 to the rest of the world. Applying these criteria (and justice principles) makes it possible to determine the carbon budget of each state, and leads to a reduction of 36% global emissions, from 900 billion tons to 576 billion tons.

Source: Laurent 2019.

As available data make clear, we are collectively missing the wrong targets on climate. Even if all countries fulfilled their pledges and reach their targets, the increase in temperatures would [still be of 3 degrees by the end of the 21st century](#) (or twice the target agreed upon at the Paris Agreement in 2015). In other words, what is lacking is not just the political will but also the imagination. Climate justice is the way out of this impasse. Climate justice is the key to understanding and eventually solving the urgent climate crisis. Climate justice is the solution to climate change.