

A shared vision towards global climate justice

Adrien Fabre^{1,2}, Rabah Arezki^{1,3}, Dipak Dasgupta⁴, Bin Hu⁵,
Partha Sen^{6,7}, Rick van der Ploeg^{8,9,10}

5 After years of slow progress, international negotiations on climate and taxation issues could soon deliver a series of agreements that secure decarbonization, clamp down on tax evasion, and foster international cohesion. Such achievements may be possible by an emerging consensus on the solutions needed for climate neutrality and sustainable development.

10 A broad set of countries are actively cooperating to develop a transformative agenda for all the people. Under the presidencies of India and Brazil, the G20 has already delivered substantial progress. First, the African Union has joined the G20. Second, the lending headroom by Multilateral Development Banks (MDB) has increased by \$400 billion over the past 18 months, with the MDBs committing that 95% of loans should have a climate-positive element. Third, the
15 G20 is now studying a recent proposal for a minimum tax on ultra-high-net-worth individuals,¹ which could raise up to €600 billion per year and provide resources to address climate change and poverty reduction.

Recent successes can be reproduced on neighboring issues. We would like to offer a shared vision to address climate change, which translates into commonly agreed principles and instruments.

20 **The principles**

While decisions at the UNFCCC require unanimity, we believe that a subset of countries can work productively to propose ambitious and inclusive solutions. We further take stock that unanimity is often out of reach, despite agreement between most countries. To break the deadlocks in such situations, ambitious countries should seek non-universal agreements, provided that they are fair
25 and open to all countries.

We stress the necessity of an equitable climate outcome and acknowledge the responsibility of developed countries, whose current income level stems from a historical accumulation of capital that benefited from their past emissions. Meanwhile, it is time to move beyond the simple dichotomy between developing and developed countries. Considering the huge difference of development stage compared to 30 years ago, some countries are no longer developing countries. For example, Slovenia, South Korea, Saudi Arabia, and Singapore are classified with developing countries by the UNFCCC though they are richer than Greece, which is considered developed. Instead of static, binary categories, we should use a simple yet continuous, harmonized, and up-to-date measure of development, such as GNI per capita, to define countries' contributions and entitlements. This is already used as the basis of a range of international arrangements from eligibility to IDA loan terms to allocation of SDRs. As a benchmark (from which some adjustments can be made to account for specific cases), we believe that contributions should be proportional to
35 a country's GNI while transfers should be proportional to the size of its population. Of course, one

could do more by asking developed countries that have emitted more since the beginning of the Industrial Revolution to contribute more but it would be less politically feasible.

We need to act *now* as any delay comes with deadly costs, disproportionately borne by low-income countries. Furthermore, such delays are inefficient from an economic point of view and they may provoke fossil fuel producers to boost extraction while the going is good (the so-called “Green Paradox”). Ensuring flows of, and access to, adequate climate finance is key to the implementation and delivery of the Paris Agreement, as well as to achieving the transition required to address the climate crisis. Developed countries should fulfill their financial commitments set out in the UNFCCC and Paris Agreement. In fact, it is in their best interest to go much further. Only by providing adequate financial conditions to developing countries can we address climate change and avoid its daunting costs.

Climate change requires responses of three types: mitigation, adaptation, and funding of losses and damages. Climate finance should be broken down accordingly. Indeed, market loans from the private sector plays a major role in mitigation and adaptation but none in losses and damages. Soft loans from development banks play a capital-heavy role in adaptation, but less so for mitigation and not at all for losses and damages. And, grants from donors play a critical role in losses and damages. The policy responses should be tailored to the specific response type. For mitigation, the key is to address capital market imperfections and lower the cost of capital in the Global South through multilateral guarantees. Adaptation is largely addressed by the recapitalization of MDBs. Lastly, increased grants are needed for adaptation and losses and damages.

The high cost of capital in developing countries remains a great challenge for mitigation and adaptation. Public finance is an indispensable lever for private finance, to swiftly mobilize private sector investment on a large scale. Public guarantees and soft loans are needed to protect investors from foreign exchange and sovereign risks. To align private incentives with the climate adaptation target, a multilateral guarantee fund could go one step further, and cut the interest rate by half for projects that reach a resilience target, as certified upon the project’s completion.

Beyond making low-carbon investments more profitable, we must also shift the current system away from fossil fuels. We should make polluters pay and progressively develop the international pricing of greenhouse gas emissions. Representative surveys from 20 countries show very strong support for climate policies that are at the global level. These surveys indicate strong majority support for a global carbon price and a consensus in favor of an equal per capita allocation of its revenue.²

While previous attempts of international carbon pricing have failed, this time may be different, for three reasons. First, we now know that the public at large supports a global carbon price. Second, the world population shares a common norm on how to share the revenues from a global carbon price. Third, rather than seeking universal agreement among all countries, a climate union can be formed by a broad set of ambitious countries.

Carbon pricing

In the short term, countries participating to the climate union would establish a carbon price floor at €10 per ton of CO₂ for each country. This floor roughly corresponds to the carbon price on China's national carbon market. A share of the carbon price revenues raised in any country would be pooled at the international level and rebated to participating countries in proportion to their population. The pooled amount would be proportional to the country's GNI, ensuring transfers from rich countries to poor countries. The farther above the world average GNI per capita, the more a country contributes; the farther below, the more it receives. In the medium term, the climate union would establish an international competitive market for carbon permits, auctioned to fossil fuel companies upstream.

The carbon market does not imply a uniform carbon price, because some countries may choose a higher carbon price than the international one. To avoid carbon leakage in a context of differentiated prices, carbon border tax adjustments are needed. However, such tariffs should be coordinated, and their implementation overseen by a multilateral institution, to assess the tax liability and arbitrate disputes impartially. Besides, participating countries would commit not to tax the carbon content of imports from one another or return the tax collected to the exporting country if they do so. This would neutralize the carbon tariff for participating countries. More than in the details of carbon tariffs, high stakes lie in the allocation of the carbon market's emissions rights.

As a benchmark, each country would be granted emissions rights proportional to its population. There would be some adjustments to the benchmark, in line with specific needs and ambition of certain regions. China and the EU would get emissions rights corresponding to their own, ambitious decarbonization pathway, while emissions rights of countries with very low emissions (less than 2 tCO₂ p.c.) would be adjusted to preserve the overall ambition of the union, making it on track to meet the objective of the Paris agreement. Importantly, integrating all countries' emissions in a common market guarantees that each country respects its target. For example, if the EU ends up emitting more than it aimed for, this will be compensated by other countries (e.g. in Africa) emitting less than the world average and selling unused emissions rights in the EU. Emissions reductions will take place where they are the least costly. To the extent that the price of carbon is higher than the price floor, additional transfers will flow from rich to poor countries, spurring much needed growth and poverty reduction in lower-income countries.

Other instruments

Yet, if all participating countries reduce their emissions according to their Nationally Determined Contributions (NDCs) and their long-term targets, the international carbon price will not exceed the price floor, since the climate targets of ambitious countries already align with the Paris agreement target. This situation with a non-binding quota is likely to occur in the first years of implementation. To meet the climate finance goals and provide enough financial resources to the Global South, other instruments are then needed.

Given the breadth of financing needs – climate finance should be scaled up from billions to trillions –, any innovative source is worth pursuing. A wealth tax, a financial transactions tax, a higher minimum rate on corporate income tax, an aviation or a maritime fuel levy are all good candidates. They are being studied by the Global Solidarity Levies Task Force led by Barbados, France, and

Kenya. Again, for each new tax, we propose that a share of revenues should be pooled at the international level and rebated to countries in need.

While allocating tax revenue in proportion to countries' population propels the sustainable development goals, it does not address the needs for adaptation nor loss and damage. Therefore, it is advisable that at least one instrument be used to finance the latter needs. The instrument could be chosen as one that only affects the wealthiest, to not overburden ordinary people with a contribution that might not be returned to their country. In this regard, the tax on ultra-high wealth proposed by Brazil seems fit for purpose. A share of this tax could finance the Loss and Damage Fund and multilateral guarantee funds.

Table 1 and Fig. 1 and 2 estimate in each country the revenue collected from the new taxes as well as the transfers between countries. One percent of each country's GNI is reallocated to each country in proportion to their population. Besides, half of the tax on ultra-high wealth is assumed to finance (through a fund) countries with per capita GNI below twice the world average, in proportion to their distance to this threshold. Finally, each country is assumed to complement the global tax on ultra-high wealth (a 3% tax above \$100 million) by a national wealth tax (a 2% tax above \$5 million, so that the marginal tax rate above \$100 million becomes 5%).

These mechanisms would entail \$766 billion in North-South transfers (Figure 1), mostly borne by the richest 5%, and up to \$1 trillion per year if one adds up existing Official Development Assistance. The new taxes would collect \$3.4 trillion globally (Table 1, see Supplementary Material for details). One third of the revenues collected in high-income countries would finance their net international contribution (Figure 2). This corresponds to the preferred share of a global wealth tax that the average American or Western European would allocate to low-income countries.² As 69% of Americans and 84% of Europeans support a global tax on all millionaires funding low-income countries,² global redistributive taxes are likely to be popular.

Although they still need to be amended and negotiated, we believe that the principles and instruments that we put forward can pave the way for fruitful international agreements. We hope that our proposals can contribute to a positive political tipping point where a much larger and growing group of nations work together to solve humanity's great challenges.

Table 1. Estimate of revenue collected by new global taxes (in \$ billion per year).

Financial Transactions Tax	Carbon price floor (10 \$/tCO ₂)	Maritime fuel levy (100 \$/tCO ₂)	Aviation fuel levy (300 \$/tCO ₂)	Corporate income tax (at 21%)	Tax on ultra-high wealth (3% above \$100M)	National wealth Tax (2% above \$5M)	Total
327	356	104	223	299	765	1,364	3,438

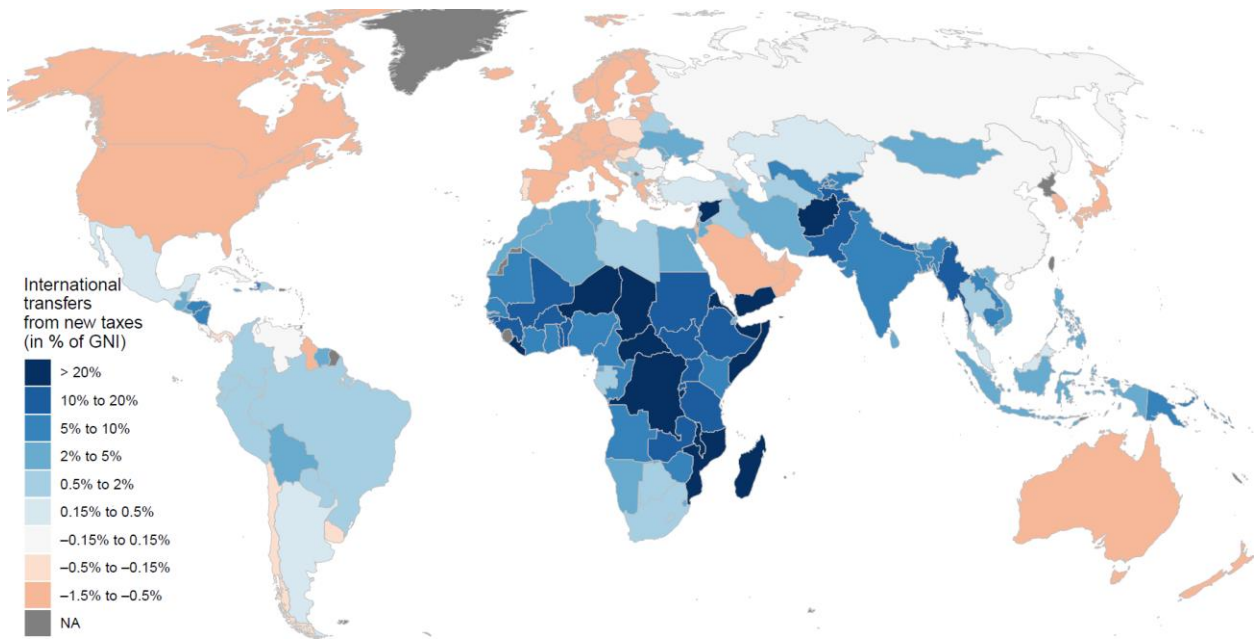


Fig. 1. International transfers to be financed by new global taxes.
The instruments proposed entail North-South transfers of \$766 billion per year.

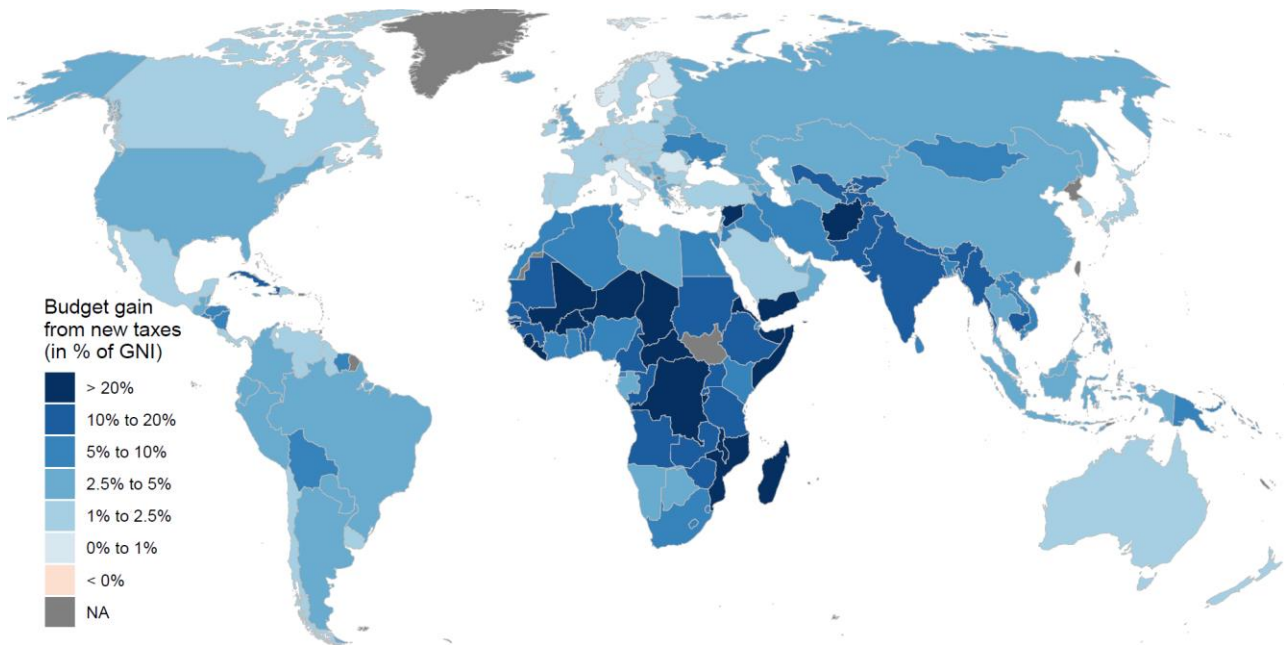


Fig. 2. Net gain for state budgets from new taxes and transfers (revenue + net transfer).
All countries' governments gain.

References and Notes

1. G. Zucman. A blueprint for a coordinated minimum effective taxation standard for ultra-high-net-worth individuals. 2024.
2. A. Fabre, T. Douenne, & L. Mattauch. International Attitudes Toward Global Policies. FAERE Working Paper. 2023.
3. V. Dequiedt, A.-A. De Ubada, & E. Mien. Navigating international taxation: The effects of a carbon levy on shipping. 2024.
4. B. Graver, K. Zhang, & D. Rutherford. CO2 emissions from commercial aviation, 2018. 2018.
5. J. Gütschow, M. L. Jeffery, A. Günther, & M. Meinshausen. Country-resolved combined emission and socio-economic pathways based on the Representative Concentration Pathway (RCP) and Shared Socio-Economic Pathway (SSP) scenarios. Earth System Science Data, 2021.
6. D. S. Lee, D. W. Fahey, A. Skowron, M. R. Allen, U. Burkhardt, Q. Chen, S. J. Doherty, S. Freeman, P. M. Forster, J. Fuglestedt, A. Gettelman, R. R. De León, L. L. Lim, M. T. Lund, R. J. Millar, B. Owen, J. E. Penner, G. Pitari, M. J. Prather, R. Sausen, & L. J. Wilcox. The contribution of global aviation to anthropogenic climate forcing for 2000 to 2018. Atmospheric Environment, 2021.
7. A. Pekanov & M. Schratzenstaller. A Global Financial Transaction Tax - Theory, Practice and Potential Revenues, 2019.
8. K. Rennert, F. Errickson, B. C. Prest, L. Rennels, R. G. Newell, W. Pizer, C. Kingdon, J. Wingenroth, R. Cooke, B. Parthum, D. Smith, K. Cromar, D. Diaz, F. C. Moore, U. K. Müller, R. J. Plevin, A. E. Raftery, H. Ševčíková, H. Sheets, J. H. Stock, T. Tan, M. Watson, T. E. Wong, & D. Anthoff. Comprehensive evidence implies a higher social cost of CO2. Nature, 2022

Affiliations:

¹CNRS; Paris, 75016, France. adrien.fabre@cnrs.fr

²CIREN; Nogent-sur-Marne, 94130, France.

³Harvard's Kennedy School of Government; Cambridge, 02138, USA.

⁴The Energy and Resources Institute; New Delhi, 110003, India.

⁵Institute of Climate Change and Sustainable Development, Tsinghua University; Beijing, 100190, China.

⁶Centre for Development Economics, Delhi School of Economics; Delhi, 110007, India.

⁷CESifo; Munich, 81679, Germany.

⁸Department of Economics, University of Oxford; Oxford, OX13UQ, UK.

⁹University of Amsterdam; Amsterdam, 1012, Netherlands.

¹⁰CEPR; London, EC1V0DX, UK.

Supplementary Material

For an international Sustainable Union

March 19, 2025

We estimate the revenues by country from six global taxes: a tax on wealth above \$100 million, a small carbon tax, a higher minimum corporate income tax, a financial transaction tax, a tax on maritime fuel and one on aviation fuel. \$2.1 trillion would be collected. We further estimate international transfers that could be financed. Namely, we reallocate 1% of each country's GNI to all countries in proportion to their population, and one half of the wealth tax to countries with a per capita GNI lower than twice the world average, in proportion to their distance to this threshold. The combination of these taxes and transfers entail \$766 billion in North–South transfers.

Figure 1: International transfers to be financed by new global taxes.

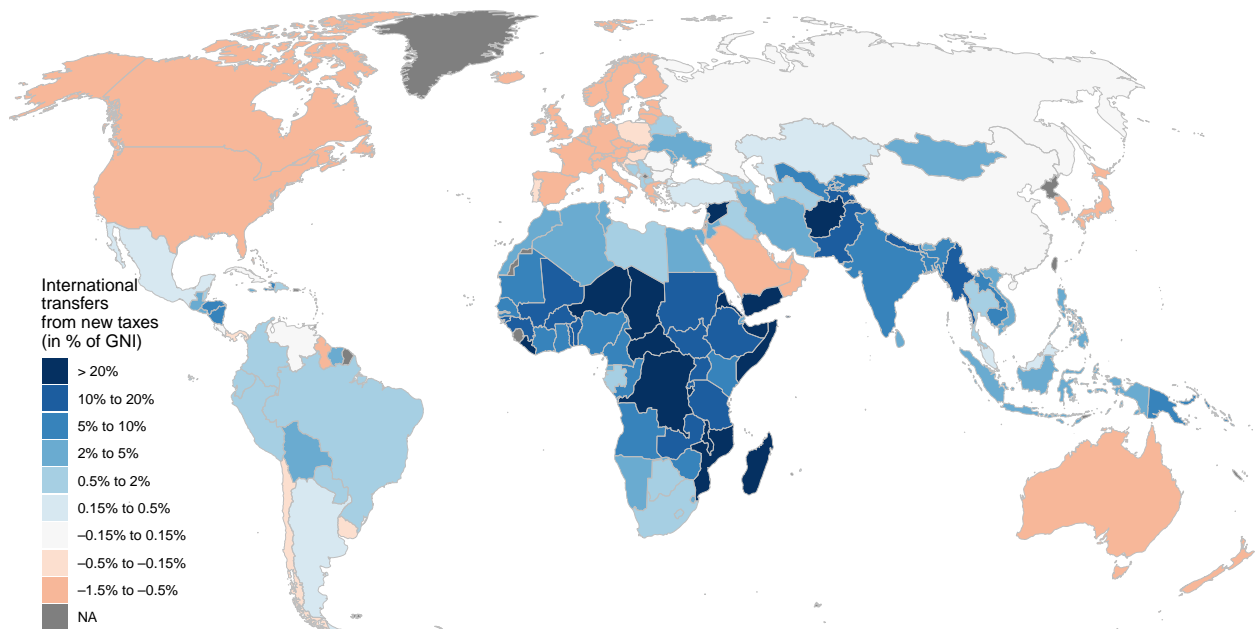


Table 1: Global taxes: international transfers, budget gain, revenues collected (% of GNI).

	Int'l transfers	Budget gain	Wealth Tax (3% >100M)	Wealth Tax (2% >5M)	Fin. Trans. Tax	Carbon Tax (10\$/t)	Maritime fuel tax (100\$/t)	Aviation fuel tax (300\$/t)	Corporate inc. tax (min 21%)
World	0.0	3.2	0.72	1.28	0.32	0.33	0.10	0.22	0.3
Afghanistan	47.6	50.3	0.29	0.49	0.58	0.88	0.01	0.42	0.0
DRC	24.4	25.7	0.32	0.55	0.13	0.10	0.11	0.10	0.0
Sudan	16.8	19.0	0.34	0.59	0.40	0.47	0.05	0.32	0.0
Uganda	16.3	17.9	0.34	0.59	0.20	0.15	0.01	0.33	0.0
Myanmar	15.8	18.0	0.36	0.61	0.51	0.35	0.04	0.25	0.0
Ethiopia	14.7	16.4	0.35	0.60	0.14	0.12	0.00	0.45	0.0
Tanzania	13.1	14.8	0.36	0.61	0.22	0.20	0.02	0.26	0.0
Pakistan	11.3	12.4	0.02	0.05	0.35	0.49	0.04	0.18	0.0
Nigeria	7.8	9.6	0.10	0.62	0.24	0.34	0.35	0.09	0.0
Kenya	7.3	9.2	0.39	0.67	0.15	0.18	0.02	0.42	0.0
India	6.3	10.2	1.26	1.51	0.26	0.61	0.05	0.17	0.0
Bangladesh	5.9	6.4	0.03	0.06	0.13	0.17	0.02	0.08	0.0
Morocco	4.1	6.6	0.44	0.74	0.23	0.49	0.18	0.46	0.0
Vietnam	3.8	5.6	0.01	0.56	0.17	0.50	0.11	0.41	0.0
Egypt	3.5	5.6	0.44	0.47	0.29	0.63	0.07	0.20	0.0
Philippines	3.3	4.9	0.28	0.49	0.19	0.22	0.03	0.37	0.0
Iran	3.0	6.9	0.45	0.77	0.37	1.63	0.39	0.22	0.0
Ukraine	3.0	5.9	0.46	0.78	0.21	0.98	0.30	0.19	0.0
Indonesia	2.9	4.8	0.25	0.41	0.23	0.45	0.23	0.32	0.0
Algeria	2.5	5.1	0.46	0.78	0.26	0.72	0.18	0.14	0.0
Iraq	1.8	5.9	0.47	0.80	0.33	1.00	1.34	0.09	0.0
Thailand	1.6	4.8	0.49	0.83	0.25	0.61	0.20	0.79	0.0
Colombia	1.6	4.0	0.49	0.83	0.20	0.24	0.36	0.30	0.0
South Africa	1.6	5.6	0.33	0.64	0.19	1.12	0.53	0.38	0.8
Brazil	0.8	3.7	0.60	0.78	0.17	0.29	0.57	0.23	0.2
Turkey	0.5	2.0	0.13	0.23	0.24	0.45	0.10	0.37	0.0
Mexico	0.2	2.2	0.59	0.73	0.17	0.30	0.05	0.22	0.0
Argentina	0.2	2.5	0.54	0.92	0.15	0.35	0.18	0.23	0.0
China	-0.1	3.4	1.06	1.51	0.10	0.58	0.05	0.15	0.1
Russia	-0.1	3.1	0.87	1.06	0.18	0.79	0.16	0.24	0.0
Poland	-0.2	1.5	0.11	0.19	0.16	0.44	0.07	0.10	0.6
Saudi Arabia	-0.6	1.4	0.11	0.40	0.15	0.59	0.52	0.25	0.0
Spain	-0.6	1.1	0.24	0.40	0.22	0.14	0.06	0.37	0.3
Japan	-0.7	1.2	0.22	0.54	0.40	0.23	0.05	0.14	0.3
South Korea	-0.7	1.3	0.31	0.53	0.11	0.30	0.16	0.20	0.4
Italy	-0.8	0.8	0.35	0.50	0.17	0.13	0.04	0.15	0.2
United Kingdom	-0.8	3.2	0.25	0.43	2.36	0.12	0.04	0.28	0.6
Germany	-1.0	1.6	0.50	1.00	0.22	0.16	0.06	0.15	0.4
Canada	-1.0	2.4	0.59	1.23	0.09	0.27	0.08	0.26	0.9
France	-1.1	2.3	0.80	1.57	0.33	0.10	0.02	0.20	0.4
United States	-1.3	2.6	0.90	1.92	0.27	0.19	0.03	0.21	0.3

Note: Budget gain denotes the sum of all other columns: international transfer and revenues collected.

Table 2: Comparison of population vs. adult pop. entitlement; carbon balance (% of GNI).

	Int'l transfers (population)	Int'l transfers (adult)	Budget gain (population)	Budget gain (adult)	Annualized carbon balance 1850-2024	Annualized carbon balance 1990-2024
Afghanistan	47.6	43.4	50.3	46.1	264.9	166.2
DRC	24.4	21.7	25.7	23.0	139.5	95.2
Sudan	16.8	15.6	19.0	17.7	96.2	65.3
Uganda	16.3	14.6	17.9	16.2	87.0	61.4
Myanmar	15.8	16.2	18.0	18.3	130.2	69.9
Ethiopia	14.7	13.7	16.4	15.4	88.0	58.1
Tanzania	13.1	11.9	14.8	13.5	75.1	52.0
Pakistan	11.3	10.7	12.4	11.9	60.9	39.3
Nigeria	7.8	7.1	9.6	8.8	47.4	30.1
Kenya	7.3	6.9	9.2	8.7	42.3	30.1
India	6.3	6.4	10.2	10.3	43.3	22.7
Bangladesh	5.9	6.0	6.4	6.5	44.5	26.2
Morocco	4.1	4.1	6.6	6.7	30.0	15.2
Vietnam	3.8	4.0	5.6	5.7	27.6	14.0
Egypt	3.5	3.4	5.6	5.5	19.1	10.0
Philippines	3.3	3.3	4.9	4.8	22.5	14.2
Iran	3.0	3.1	6.9	7.0	-6.0	-9.6
Ukraine	3.0	3.2	5.9	6.1	-47.4	-13.9
Indonesia	2.9	2.9	4.8	4.9	20.0	9.9
Algeria	2.5	2.5	5.1	5.1	10.3	3.9
Iraq	1.8	1.7	5.9	5.7	2.5	0.1
Thailand	1.6	1.8	4.8	4.9	10.1	1.9
Colombia	1.6	1.7	4.0	4.1	13.2	7.7
South Africa	1.6	1.6	5.6	5.6	-17.3	-10.3
Brazil	0.8	0.9	3.7	3.8	9.4	4.7
Turkey	0.5	0.5	2.0	2.0	3.6	0.3
Mexico	0.2	0.2	2.2	2.3	1.2	0.5
Argentina	0.2	0.2	2.5	2.6	1.9	0.3
China	-0.1	-0.1	3.4	3.5	3.8	-1.3
Russia	-0.1	-0.1	3.1	3.2	-22.9	-11.5
Poland	-0.2	-0.2	1.5	1.5	-13.7	-5.2
Saudi Arabia	-0.6	-0.6	1.4	1.4	-6.2	-5.6
Spain	-0.6	-0.6	1.1	1.1	-0.5	-1.2
Japan	-0.7	-0.7	1.2	1.2	-3.9	-3.1
South Korea	-0.7	-0.7	1.3	1.3	-2.5	-3.7
Italy	-0.8	-0.8	0.8	0.8	-1.3	-1.5
United Kingdom	-0.8	-0.8	3.2	3.2	-10.5	-1.6
Germany	-1.0	-1.0	1.6	1.6	-9.6	-2.6
Canada	-1.0	-1.0	2.4	2.4	-7.9	-4.3
France	-1.1	-1.1	2.3	2.3	-3.5	-0.7
United States	-1.3	-1.3	2.6	2.6	-9.2	-3.5

Note: Budget gain denotes the country net entitlements, i.e. the revenue it collects plus the net international transfer. International transfers denotes the country net entitlements minus taxes paid in the country. The carbon balance is separated from the tax proposals, it corresponds to the carbon credit or debt over 1850–2024 (or 1990–2024), priced at \$185/tCO₂ and annualized at 3.5%. For example, a country with excess emissions compared to the world average accumulates a carbon debt.

1 Wealth tax

We simulate two wealth taxes. First, a global tax on ultra-high wealth: a 3% tax on all individual wealth in excess of \$100 million. Second, a national wealth tax: a 2% tax on wealth in excess of \$5 million. These taxes add up,¹ so the highest marginal tax rate is 5%.

The World Inequality Lab offers an [online simulator](#) to estimate the revenue collected by a custom wealth tax in each world region. Building on this work, we disaggregate the revenue estimates at the country level. Courtesy of Félix Bajard, we obtained the simulator's underlying data for 50 countries covering 95% of global wealth tax revenue. To impute missing data, we predict the taxable base from a linear regression of the log of taxable base on the log of nominal GDP per capita, weighted by country population.

Following [Zucman \(2024\)](#), we assume 20% of tax evasion. We also conservatively assume that asset prices would decline by 10%. Half of the revenue from the global tax on ultra-high wealth would not be retained domestically but channeled into a fund to finance sustainable development. This fund would return revenues to countries with a per capita GNI below a threshold. We fix this eligibility threshold at twice the world average per capita GNI, or \$26,885 per year (in nominal terms). Finally, eligible countries receive a transfer per person proportional to the difference between the threshold and their GNI per capita.

2 Financial Transactions Tax

[Pekanov & Schratzenstaller \(2019\)](#) estimate the revenues from a Financial Transactions Tax (FTT). Following the proposal by the European Commission (2011), they use a rate of 0.1% of bonds and stocks and a rate of 0.01% on derivatives. We use their baseline scenario, which assumes evasion rates of 15% on bonds and stocks and 70% on derivatives, together with an elasticity of trading volumes of -1 .²

[Pekanov & Schratzenstaller \(2019\)](#) provide estimates at the global level and for 18 high-income countries. We allocate the global revenue that does not originate from these 18 countries to remaining countries, in proportion to their GDP. 22% of world revenues would be collected in these remaining countries, with a revenue amounting to 0.1% of their GDP (vs. 0.56% of GDP for the 18 high-income countries).

3 Carbon price

We model simulate the international transfers a \$100/tCO₂ carbon price applied to all non-LULUCF CO₂ emissions. At the global level, and neglecting behavioral responses, 0.33% of the world nominal GDP would be collected.

¹For example, with a wealth of \$150 million, someone would pay each year a tax of 2.9% on their wealth: 1% from the tax on ultra-high wealth ($3\% \cdot (150 - 100) = 1.5M$) and 1.9% from the national wealth tax.

²The formula is: Revenue = tax rate · volume · evasion · $(1 + \text{tax rate}/\text{transaction cost})^{\text{elasticity}}$.

4 Maritime fuel levy

We simulate the revenues of a \$100/tCO₂ levy on maritime fuel. The emissions from shipping by country are given by the simple average between the minimum and maximum estimates of [Dequiedt et al. \(2024\)](#), who graciously provided the data.

5 Aviation fuel levy

Using data from [Graver et al. \(2018\)](#),³ we estimate the revenues from a tax on all flights (domestic and international). Due to complex climate effects such as contrails, aviation the global warming potential of aviation (GWP*₁₀₀) is 3 times the warming caused by its CO₂ emissions ([Lee et al. 2021](#)). To fully account for all effects on global warming, the carbon levy on aviation should be multiplied by that factor. Therefore, we simulate a \$300/tCO₂ tax on aviation fuel, comparable to the \$100/tCO₂ tax on maritime fuel. We use the 2018 data without adjusting for the expected increase in air traffic, and without adjusting for the decrease in traffic that would follow the tax.⁴

6 Higher minimum corporate income tax

We estimate extra revenue by country if the internationally agreed minimum rate on corporate income tax was raised from 15% to 21%, with no carve-out. We use data from the [tax deficit simulator](#) from the EU Tax Observatory. These estimates are available for 45 countries (from OECD and the G20). We impute missing data only for three high-income countries (Iceland, Israel, New Zealand) and conservatively assume no extra revenue for other (developing) countries with missing data.

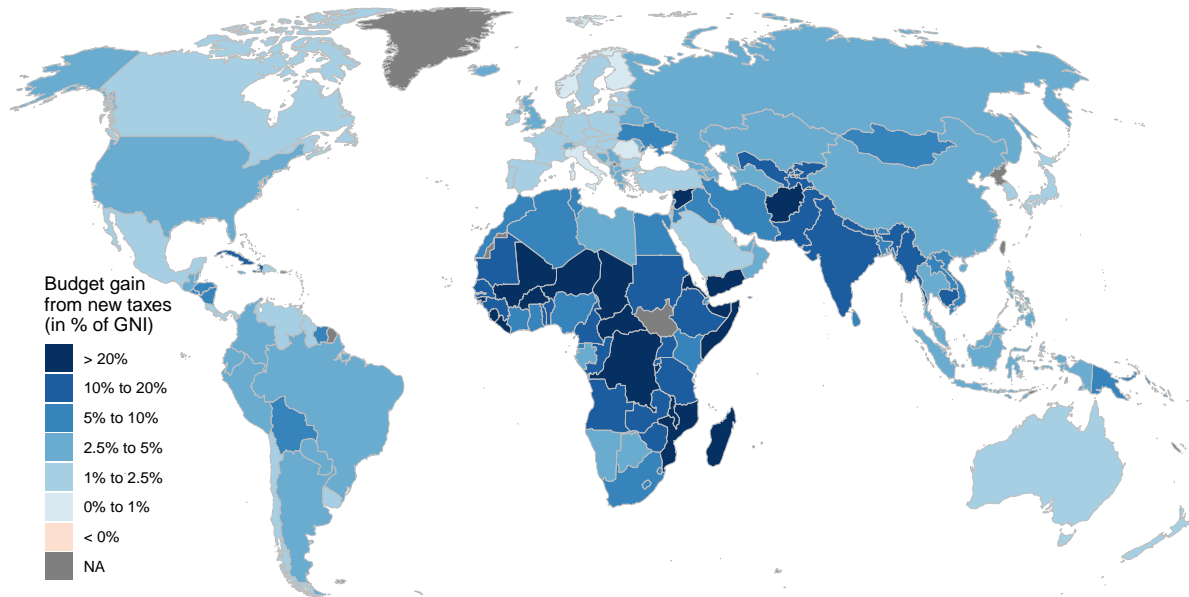
7 Carbon balance

On top of the proposed new taxes, we compute historical responsibilities for climate change. We define a carbon balance as the sum of a country's excess emissions compared to the world average, each year between 1850 and 2024, priced at $p = \$185/\text{tCO}_2$ (which corresponds to the social cost of carbon according to [Rennert et al. 2022](#)). In [Table 2](#), we report the carbon balance annualized at a risk-adjusted discount rate of $r = 3.5\%$. Denoting e_t^c the emissions of country c in year t , and π_t^c its share of the world population at t , its annualized carbon balance over nominal GNI, B_c , is: $B_c = r \cdot p \cdot \sum_{t=1850}^{2024} e_t^c - \pi_t^c \cdot \sum_c e_t^c / \text{GNI}_c^{2023}$. Our computations are based on historical CO₂ emissions excluding LULUCF sector ([Gütschow et al. 2021](#)).

³We use the data unadjusted for tourism.

⁴More generally, we do not adjust for inflation or changes in volumes throughout this technical note. Figures are only provided to get ballpark estimates and cannot be very precise.

Figure 2: Net gain for state budgets from new taxes and international transfers (revenue plus net transfer).



Bibliography

- V. Dequiedt, A.-A. De Ubeda, & É. Mien. Navigating international taxation: The effects of a carbon levy on shipping. 2024. [Link. 5](#)
- B. Graver, K. Zhang, & D. Rutherford. CO2 emissions from commercial aviation, 2018. 2018. [5](#)
- J. Gütschow, M. L. Jeffery, A. Günther, & M. Meinshausen. Country-resolved combined emission and socio-economic pathways based on the Representative Concentration Pathway (RCP) and Shared Socio-Economic Pathway (SSP) scenarios. *Earth System Science Data*, 2021. [Link. 5](#)
- D. S. Lee, D. W. Fahey, A. Skowron, M. R. Allen, U. Burkhardt, Q. Chen, S. J. Doherty, S. Freeman, P. M. Forster, J. Fuglestedt, A. Gettelman, R. R. De León, L. L. Lim, M. T. Lund, R. J. Millar, B. Owen, J. E. Penner, G. Pitari, M. J. Prather, R. Sausen, & L. J. Wilcox. The contribution of global aviation to anthropogenic climate forcing for 2000 to 2018. *Atmospheric Environment*, 2021. [Link. 5](#)
- A. Pekanov & M. Schratzenstaller. A Global Financial Transaction Tax - Theory, Practice and Potential Revenues, 2019. [Link. 4](#)
- K. Rennert, F. Errickson, B. C. Prest, L. Rennels, R. G. Newell, W. Pizer, C. Kingdon, J. Wingenroth, R. Cooke, B. Parthum, D. Smith, K. Cromar, D. Diaz, F. C. Moore, U. K. Müller, R. J. Plevin, A. E. Raftery, H. Ševčíková, H. Sheets, J. H. Stock, T. Tan, M. Watson, T. E. Wong, & D. Anthoff. Comprehensive evidence implies a higher social cost of CO2. *Nature*, 2022. [Link. 5](#)
- G. Zucman. A blueprint for a coordinated minimum effective taxation standard for ultra-high-net-worth individuals. 2024. [Link. 4](#)