

Globalization leveraged pressure on contemporary society. Global systemic risks of climate change and overindebtedness in the aftermath of the 2008/09 World Financial Crisis and an aging Western population currently raise attention for intergenerational fairness. Behavioral socio-economists currently examine the human natural drive towards intergenerational equity – the fairness to provide an at least as favorable standard of living to future generations as enjoyed today. Outlining some of the causes of the current intergenerational imbalances regarding climate stability and overindebtedness prepares for recommendations on how to implement intergenerational transfers. As an implicit contract and transfer in-between living and future generations, intergenerational equity avoids discriminating against future generations and ensures future infrastructure, equal opportunities over time and constant access to social welfare for the youth. Intergenerational equity grants a favorable climate between generations and alleviates frictions arising from the negative impacts of intergenerational inequality. The impact of intergenerational transfers on societal well-being is discussed. Future research avenues comprise of investigating situational factors influencing intergenerational leadership in the international arena in order to advance the idea of the private sector aiding on intergenerational imbalances and tackling the most pressing challenges of the contemporary and future humankind.

Book Launch

Thursday, October 5, 2017

Noon-1:30pm

The New School, 6 East 16th Street, Room 908
New York, NY 10003

Global Responsible Intergenerational Leadership

A conceptual framework
and implementation guidance
for intergenerational fairness

Julia M. Puauschunder

In cooperation with oikos International New York City Chapter

~ Refreshments ~

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MODEL
OF
THE WORLD



Intergenerational Equity as Natural Behavioral Law

Intergenerational equity

- **Future** at least as **favorable standard of living** as today

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Intergenerational equity as **natural behavioral law**

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Intergenerational equity as **natural behavioral law**

Globalization: **Emergent risks**

Social representations of intergenerational equity

External shocks' impact on society

Social representations of intergenerational equity

External shocks' impact on society

Future conference: Justice: Responsibility for Future (2011)
(n=110 experts; 48,460 words)

Social representations of intergenerational equity

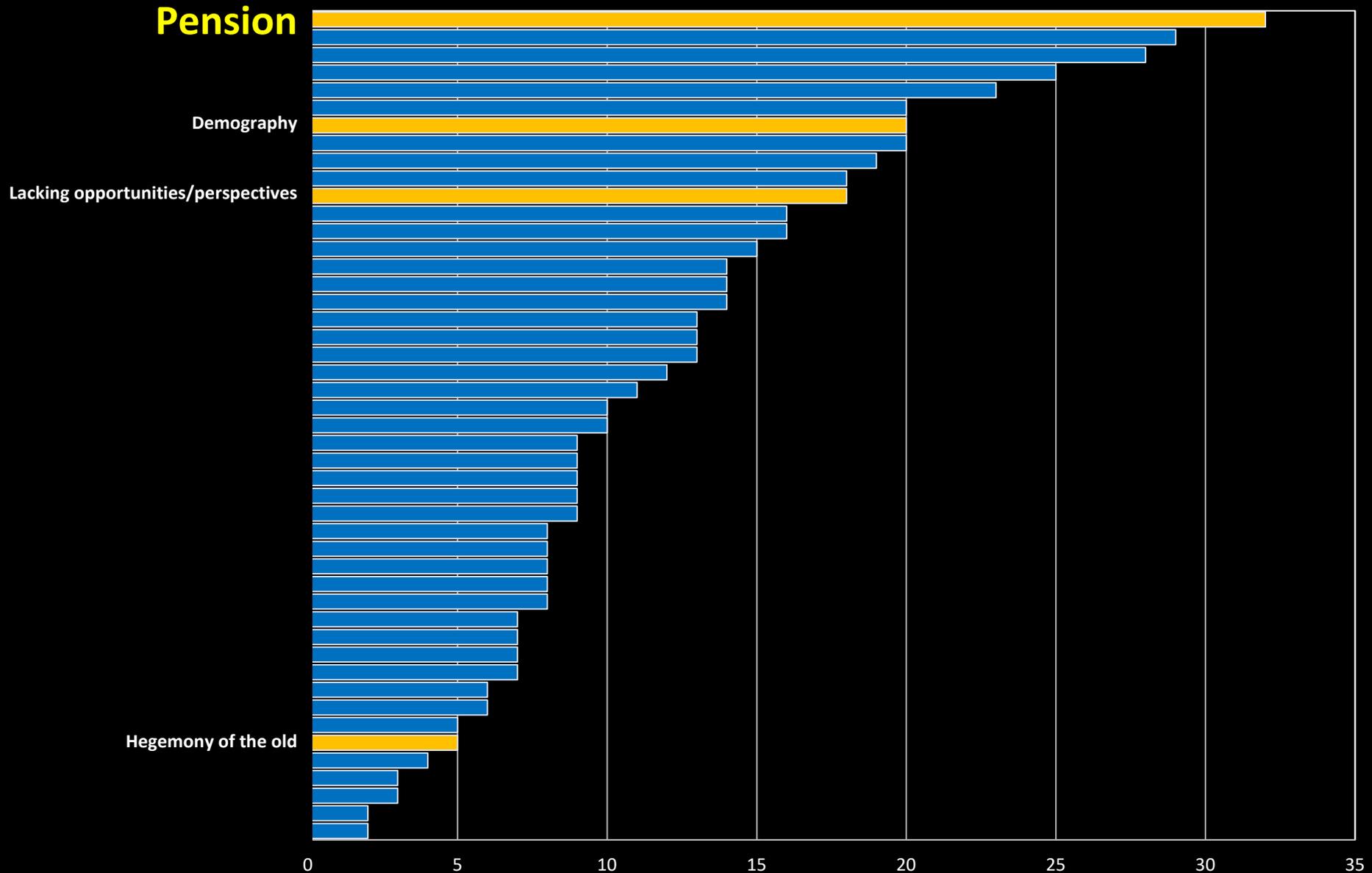
External shocks' impact on society

Future conference: Current intergenerational equity constraints (n=110 experts; 48,460 words)

What do you think about 'Intergenerational Equity'?

Pension	Person 1: Pensions are much more national organized. Yeah, I mean, we clearly have a system of pensions that is not going to work for the future, that needs to be reformed and changed. And that does mean that some, like me, will not have an as good pension as I expected.
Demography	Person 1: Because older people are much more of the population, so in their world, they will be against the interests of the younger generation.
Overindebtedness	Person 2: Part of it is avoiding some of the debts that my generation has been responsible for.
Lacking opportunities and perspectives	Person 2: You look at so many countries now, where students have to pay for their university and tuition fees and before everyone was given free education. And it is a problem in terms of social mobility. In many ways, these sort of societally uninformed are in a bad situation as social mobility is going backwards in terms of people from lower educational advantages. You know the old saying, born poor, die poor. It means it is probably more powerful now than it has ever been before.
Pension	Person 3: But at the moment I see in England people are tackling the pension system issue.
...	...
Economic growth – fairness trade-off	Person 99: It also includes the costs of having to live the burden on our fossil fuel intensive life for typically poor communities and poor countries.

Intergenerational equity – Pension system



Intergenerational equity – Overindebtedness

Overindebtedness

Fairness

Market mechanisms

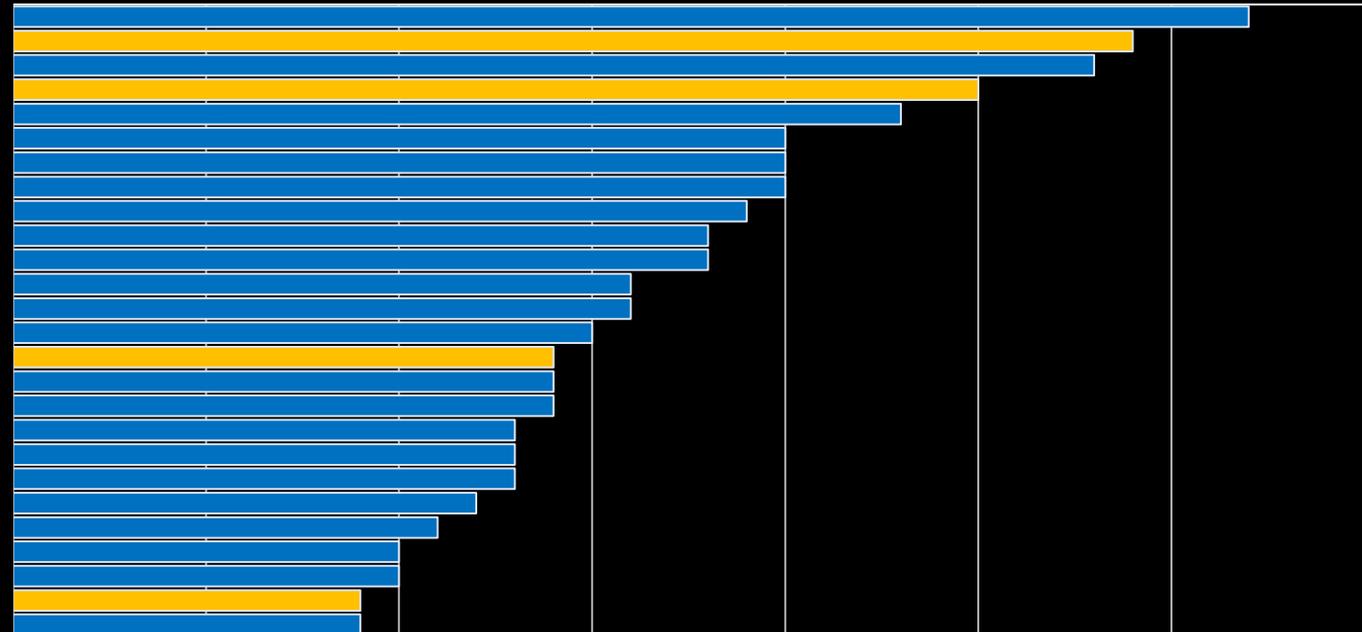
2008/09 World Financial Crisis

Wealth distribution

Financial market and real economy gap

Angst

Eurozone



0

US NATIONAL DEBT \$20,203,514,974,921		DEBT PER CITIZEN \$61,986		DEBT PER TAXPAYER \$167,510	
US FEDERAL TAX REVENUE † 68 % \$3,316,503,698,568		REVENUE PER CITIZEN \$10,175		REVENUE PER TAXPAYER \$27,500	
US FEDERAL SPENDING † 127 % \$4,008,598,694,801		US FEDERAL BUDGET DEFICIT \$692,094,996,232		INCOME TAX REVENUE \$1,575,044,235,117	
TOTAL STATE REVENUE \$1,738,553,444,612		LOCAL REVENUE \$1,357,499,347,400		PAYROLL TAX REVENUE \$1,164,215,808,591	
REVENUE PER CITIZEN \$9,499		REVENUE PER TAXPAYER \$14,416		CORPORATE TAX REVENUE \$310,097,461,944	
STATE DEBT \$1,166,912,777,393		LOCAL DEBT \$1,858,628,092,841			

US GROSS DOMESTIC PRODUCT † 101 % \$19,346,755,153,391		TOTAL FEDERAL/STATE/LOCAL SPENDING \$6,910,164,692,012	
GROSS DEBT TO GDP RATIO 104.42 %		REVENUE TO GDP RATIO 33.144 %	
SPENDING TO GDP RATIO 35.717 %			

US TOTAL INTEREST PAID \$2,585,856,431,680		INTEREST PER CITIZEN \$7,934		US TOTAL DEBT † 154 % \$67,893,588,213,919	
TOTAL DEBT PER CITIZEN \$208,303		TOTAL DEBT PER FAMILY \$817,911		SAVINGS PER FAMILY \$6,088	

TOTAL PERSONAL DEBT † 134 % \$18,534,223,766,386		MORTGAGE DEBT \$14,741,175,963,643		STUDENT LOAN DEBT \$1,472,827,794,310	
CREDIT CARD DEBT \$1,030,375,999,533		PERSONAL DEBT PER CIT. \$56,861			

MONETARY BASE 2017 † 553 % \$3,918,601,807,618		M2 MONEY SUPPLY 2017 † 180 % \$13,672,960,274,733		TREASURY SECURITIES 2017 † 124 % \$551,919,064,335	
CURRENCY AND CREDIT DERIVATIVES 2017 † 480 % \$536,621,760,784,759		MONETARY BASE 2000 \$599,574,272,122		M2 MONEY SUPPLY 2000 \$4,876,308,075,460	
TREASURY SECURITIES 2000 \$245,484,121,143		CURRENCY AND CREDIT DERIVATIVES 2000 \$92,622,624,968,078			

US DEBT HELD BY FOREIGN COUNTRIES \$6,250,317,682,458		US TRADE DEFICIT \$773,844,072,444		US TRADE DEFICIT - CHINA \$362,185,162,231	
US IMPORTED OIL \$204,605,238,699		IMPORTED OIL - OPEC \$71,578,817,545			

SMALL BUSINESS ASSETS \$12,079,563,600,971		CORPORATION ASSETS \$23,951,252,866,426		HOUSEHOLD ASSETS \$97,977,911,585,574	
TOTAL NATIONAL ASSETS \$134,008,728,052,970		ASSETS PER CITIZEN \$411,137			

US FEDERAL BUDGET DEFICIT (GAAP) \$5,498,059,741,299		SOCIAL SECURITY LIABILITY \$16,367,856,514,202		MEDICARE LIABILITY \$27,815,241,765,569	
US UNFUNDED LIABILITIES (GAAP) \$107,684,485,364,071		LIABILITY PER TAXPAYER \$892,764			

n=110 experts, European Forum Alpbach
<http://www.usdebtclock.org/>

Social representations of intergenerational equity

Intergenerational equity constraints per stakeholder group

Pension	Person 1: Pensions are much more national organized. Yeah, I mean, we clearly have a system of pensions that is not going to work for the future, that needs to be reformed and changed. And that does mean that some, like me, will not have an as good pension as I expected.
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...	...
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1	Respondent	Field	Pension	Demography	Overindebtedness	Lacking opportunities
2	1	Academia	1	1	0	0
3	2	Academia	0	0	1	1
4	3	Public official	1	0	0	0
5	4	Politics	0	1	0	0
6	5	Politics	1	0	0	0
7	6	Economics	1	0	0	0
8	7	Finance	0	1	1	0
9	8	Religion	0	0	0	0
10	9	Academia	0	0	1	1

Intergenerational imbalances – Solution

Voice unborn

Top-down institutionalism

Bottom-up democracy-in-action

Academic & legal writing

International solutions

→ global capitalism reform to form

Inclusive societies and stable economies

Mapping Climate Justice

Mapping Climate Justice - Maps

Fairness *within* country

- Progressive tax
- Should we tax former world inhabitants?
 - inheritance tax to reap wealth built on past pollution

Mapping Climate Justice

Fairness *within* country

- Progressive tax
- Should we tax former world inhabitants?
 - inheritance tax to reap wealth built on past pollution

Fairness *between* country

- Private property or common good
- Public access to stable climate trumps
- Corporate taxation justification
- Governments with better ability to protection and conservation have higher responsibility to carry burden

Mapping Climate Justice

Fairness *within* country

- Progressive tax
- Should we tax former world inhabitants?
 - inheritance tax to reap wealth built on past pollution

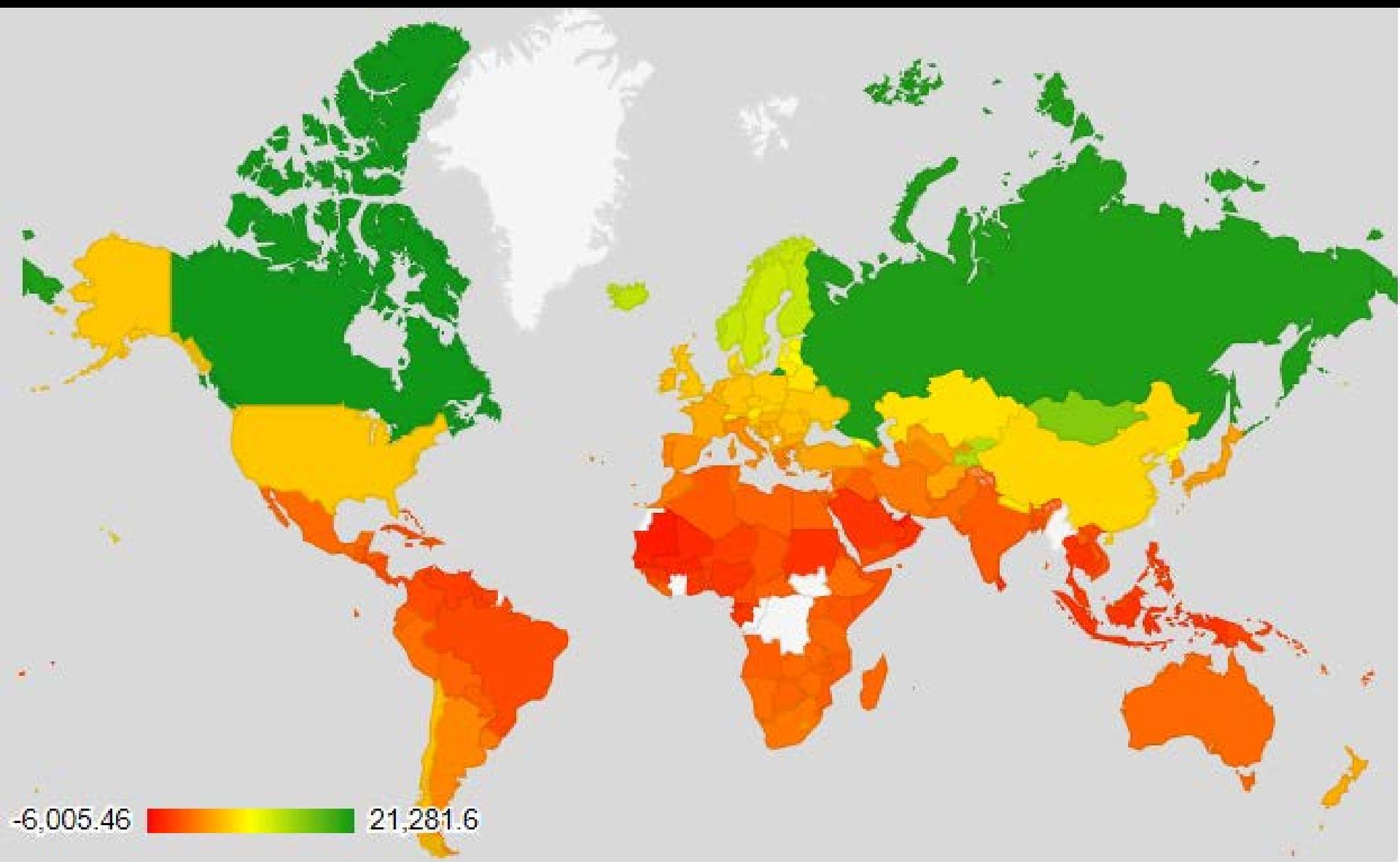
Fairness *between* country

- Private property or common good
- Public access to stable climate trumps
- Corporate taxation justification
- Governments with better ability to protection and conservation have higher responsibility to carry burden

Fairness *over time*

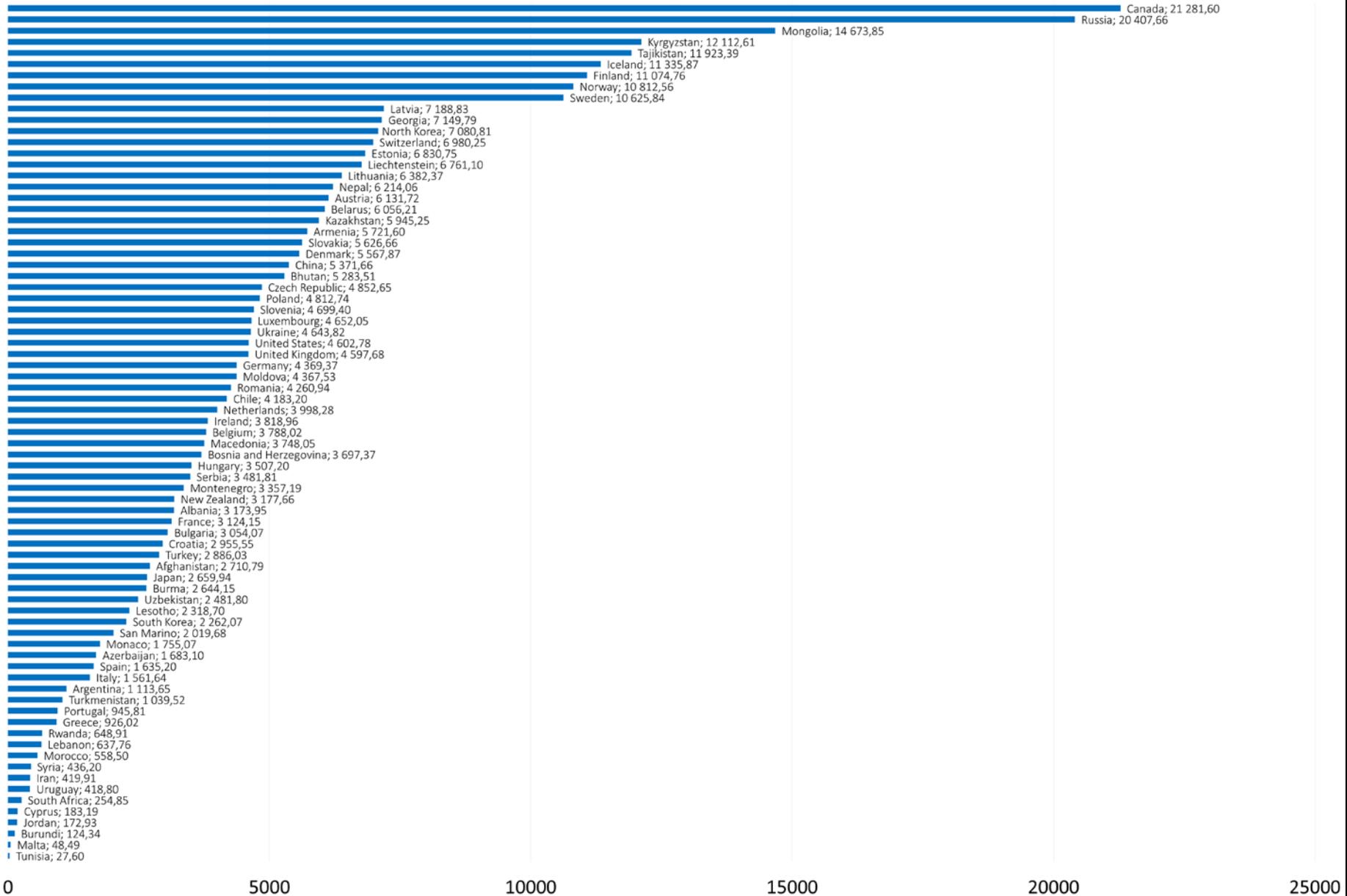
- Climate change burden sharing with bonds
- *Gestalt*: Whole > Σ parts *over time*: tipping points & irreversible lock-ins

Climate change winners and losers [web](#)



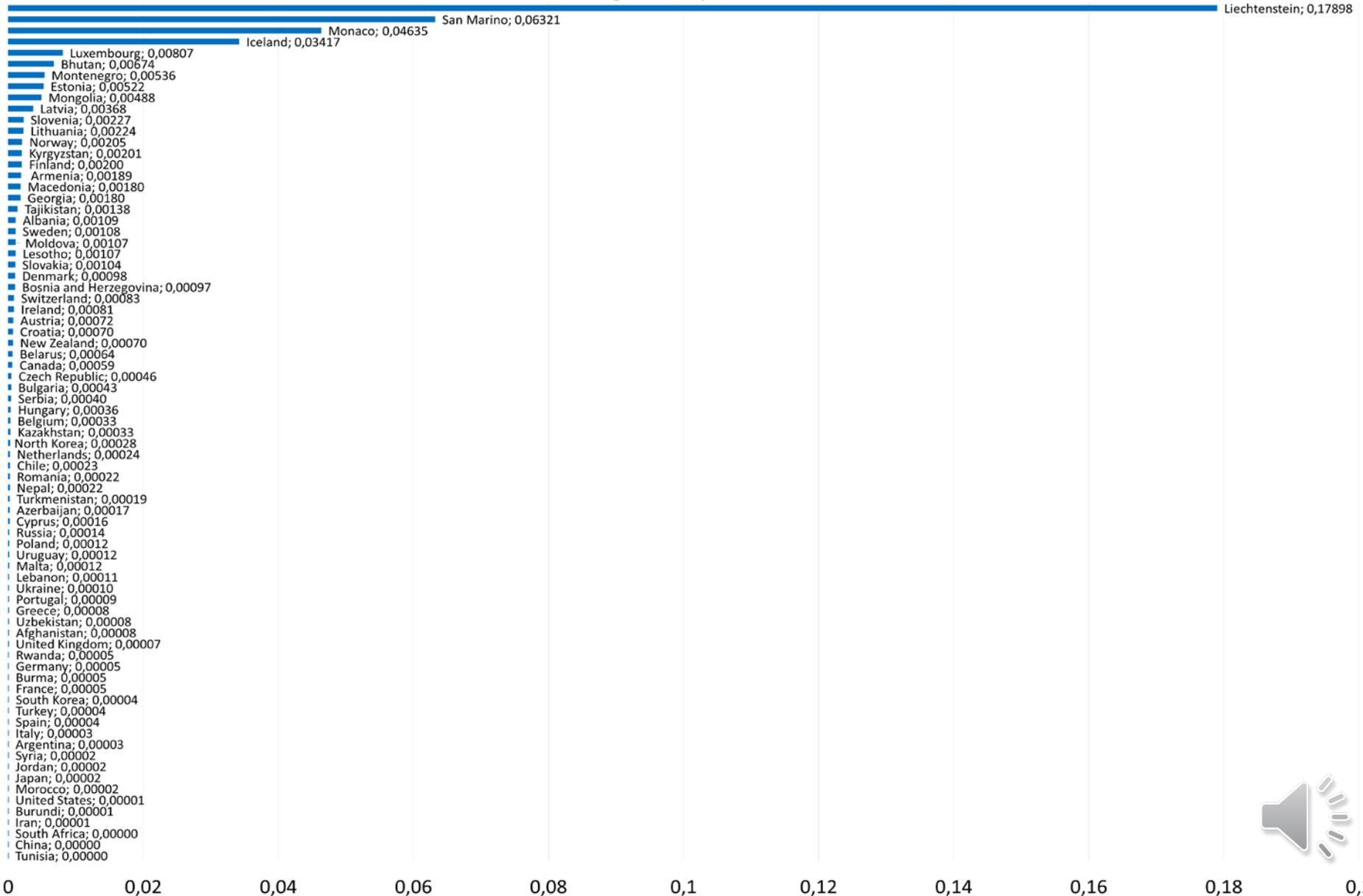
Climate change winners

Climate change winners



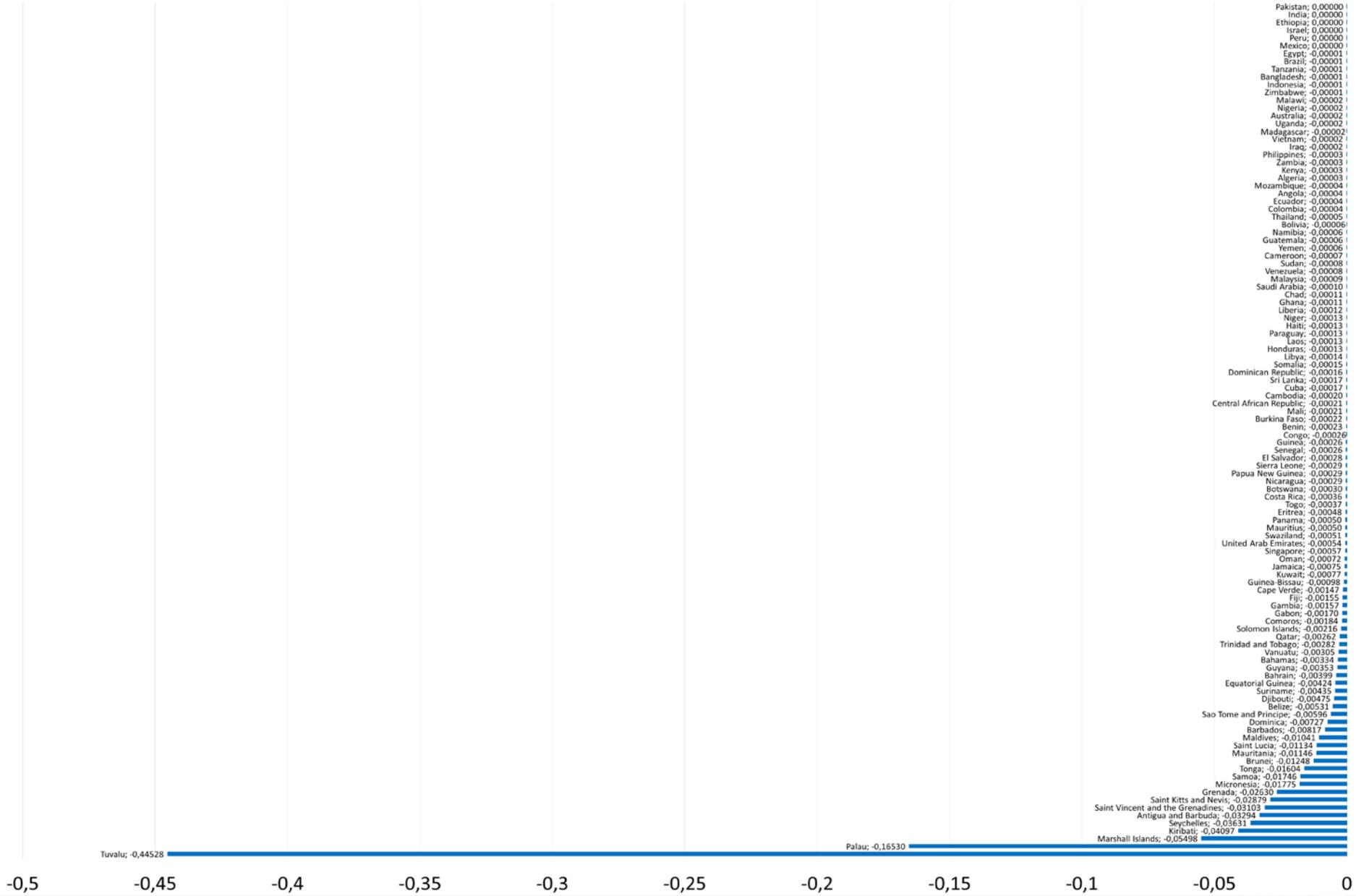
Climate change winners per capita

Climate change wins per inhabitant



Climate change losses per capita

Climate change losses per inhabitant



Climate gain loss perspective emission connection

Over a sample of 181 countries of the world, a highly significant correlation of $r_{Pearson(181)} = .215$, $p < .004$ between the *WL* index over all models and the self-reported percentage of GHG emissions for ratification was found. As a cross-validation check, the percentage of GHG emissions for ratification was significantly positively correlated $r_{Pearson(181)} = .178$, $p < .016$ with self-reported GHG emissions per country.

Climate change benefits transfers

In order to account for country differences in offsetting global warming through GDP growth (especially on the winners' side) and the country differences in their ability to transfer into renewable energy, the overall GDP per inhabitant was factored into the transfer equation as outlined in formula 2.28:

$$R^W = \left(\frac{P_W}{WL_G} \right) * \left(\frac{GDP_C}{I_C} \right) \quad (2.28)$$

whereby R^W denotes the total transfer of climate change wins obligation per winning country, P_W is the percentage fraction of all wins $WL_G=354039,6345$ from a warming earth for the year 2100 business-as-usual projection. GDP_C equals the per country GDP estimate per inhabitant I_C per country for the year 2016 as outlined by formula 2.29:

$$R^L = \left(\frac{P_L}{PLT} \right) * \left(\frac{GDP_C}{I_C} \right) \quad (2.29)$$

whereby R^L denotes the total transfer of climate change compensation, P_L is the percentage fraction equivalent of all losses $WL_L=-232613,188$ from climate change for the year 2100 business-as-usual projection. GDP_C equals the per country GDP estimate per inhabitant I_C per country for the year 2016.

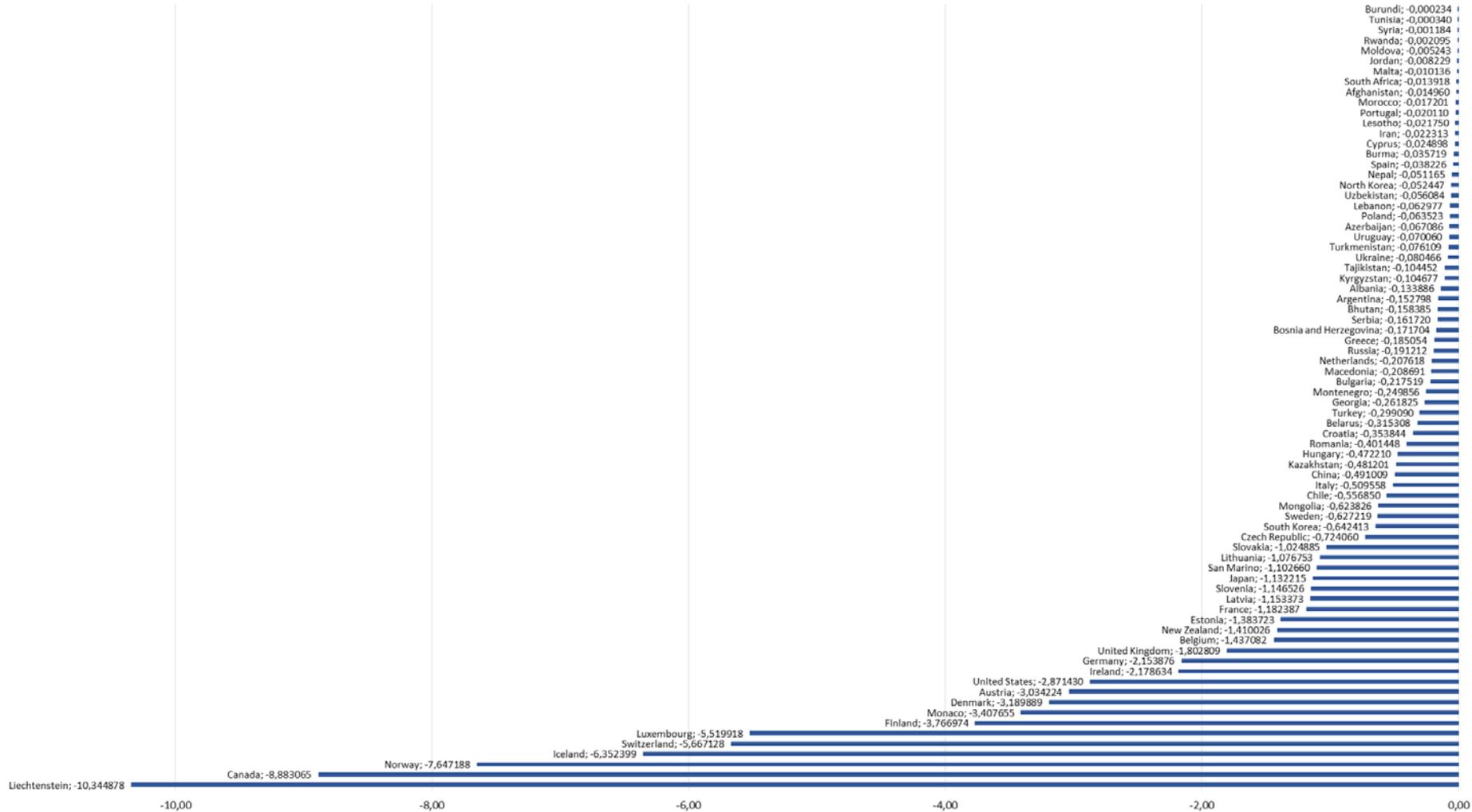
Overall all transfers R^T derive from R^L and R^L , which must be equal based on the following formula 2.30:

$$R^T = R^W + R^L \quad (2.30)$$

whereby R^T denotes the total transfer of wins for compensation of losses.

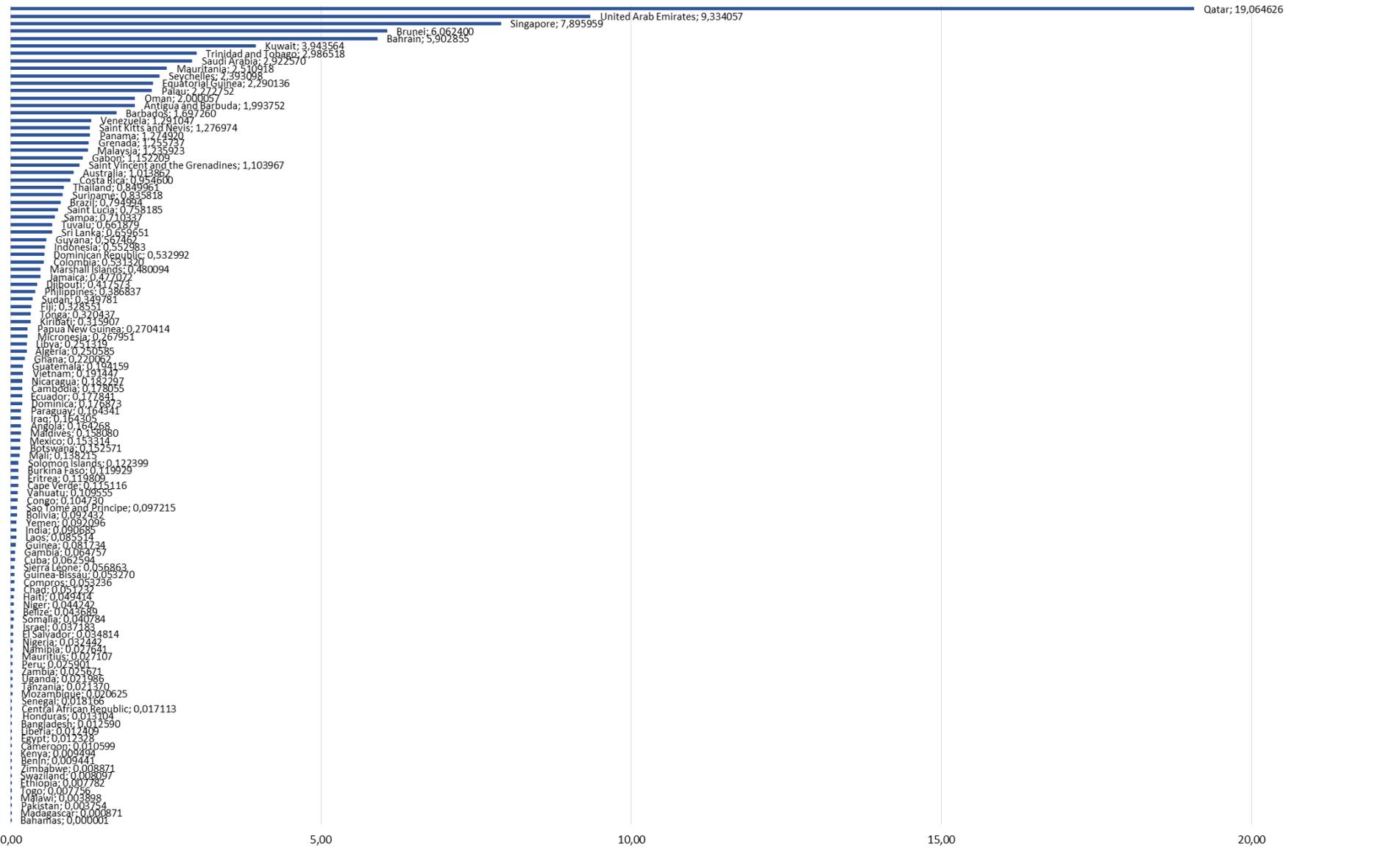
Transfer grantors weighted per GDP/inhabitant

Climate change transfer grantors

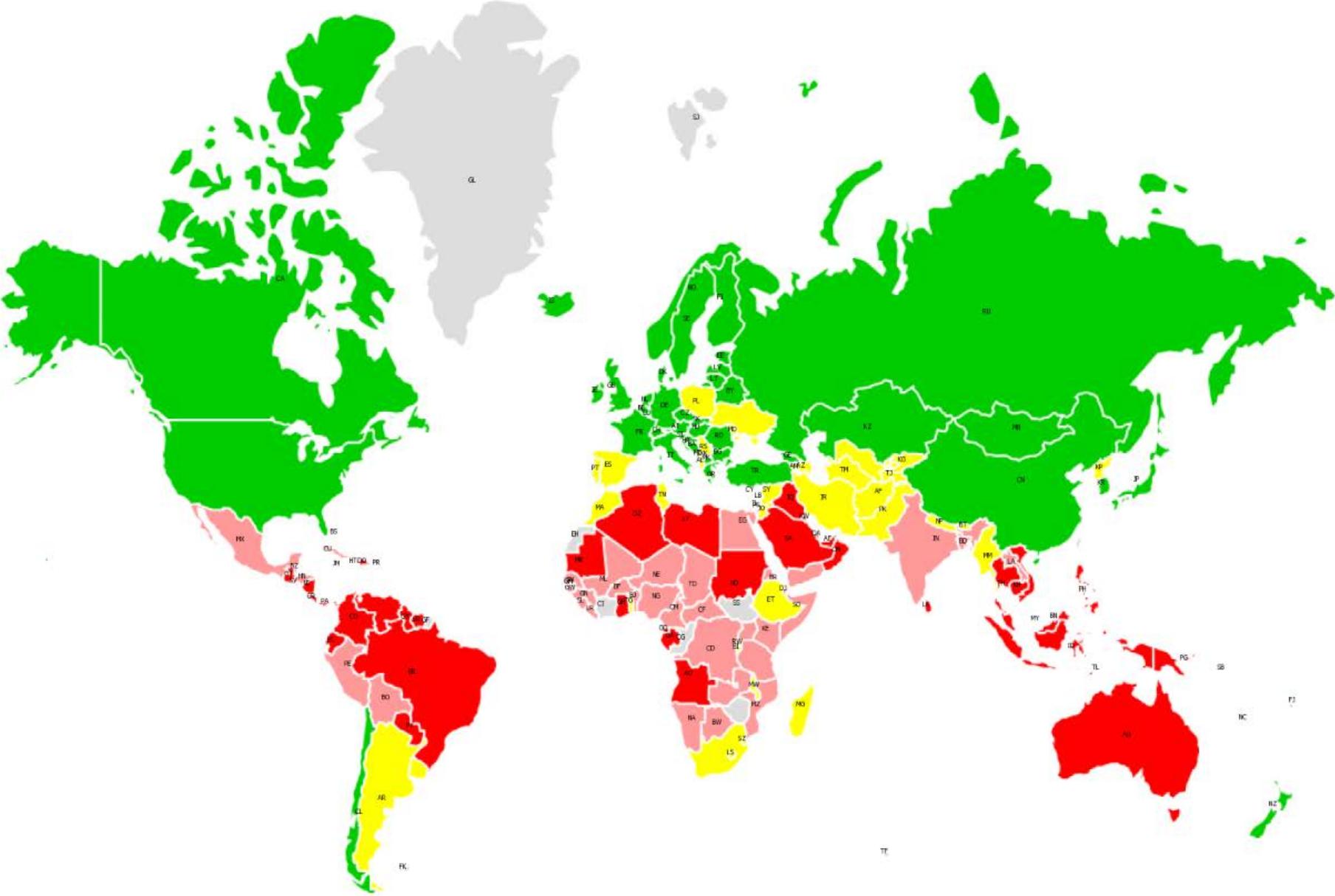


Transfer beneficiaries weighted per GDP/inhabitant

Climate change transfer beneficiaries



Climate change grantors and beneficiaries



Human capital & Finance streams: Migration

Climate induced migration

- When investigating the relation of human migration and climate change winners and losers in 187 countries of the world, a highly **significant correlation** ($r_{\text{Pearson}}(187)=.184, p < .006$), is found between being **climate change winner** and **human migration inflows**.
- A highly significant independent t-test with $t_{(185)}=-2.401, p=0.017$ of 110 climate change loser and 77 winner countries consolidates the finding.

Human capital & Finance streams: Foreign Direct Investment

Financial inflows

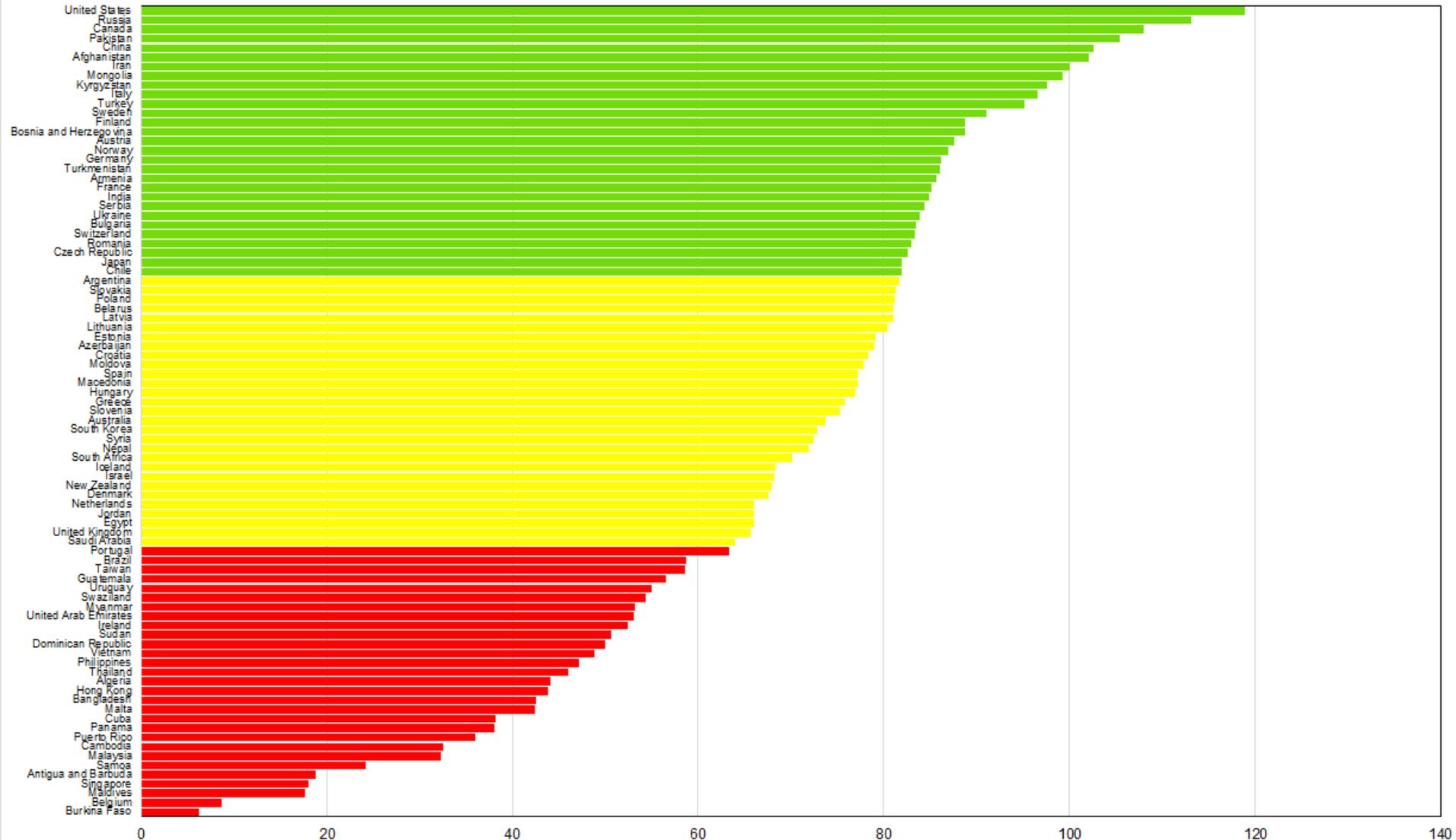
- When investigating the relation of financial inflows and climate change winners and losers including 181 countries of the world, a **significant correlation** ($r_{\text{Pearson}}(181)=.180, p < .016$), is found between being **climate change winner** and **FDI inflows**.
- A highly significant independent t-test with $t_{(179)}=2.680, p=0.008$ of 110 climate change loser and 77 winner countries consolidates the finding.
- As a **cross validation** of **lasting financial inflows** into climate change winner countries, a non-significant correlation and non-significant independent t-tests are reported.

An inquiry into the nature and causes of Climate Wealth of Nations

Climate flexibility

Climate Wealth of Nations: Climate Flexibility

Temperature Range determining Climate Flexibility



An inquiry into the nature and causes of Climate Wealth of Nations

Climate change induced market flows

Human capital & Finance streams: Migration

Climate induced migration

- When investigating the relation of human migration and climate change flexibility in 86 countries of the world, a highly significant correlation ($r_{\text{Pearson}}(86) = .307, p < .002$), is found between being climate flexibility and human migration inflows.

Mapping Climate Justice

Fairness *within* country

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Intergenerational equity 08-09/11

