

Decarbonization in fossil-fuel dependent countries: lessons for Russia

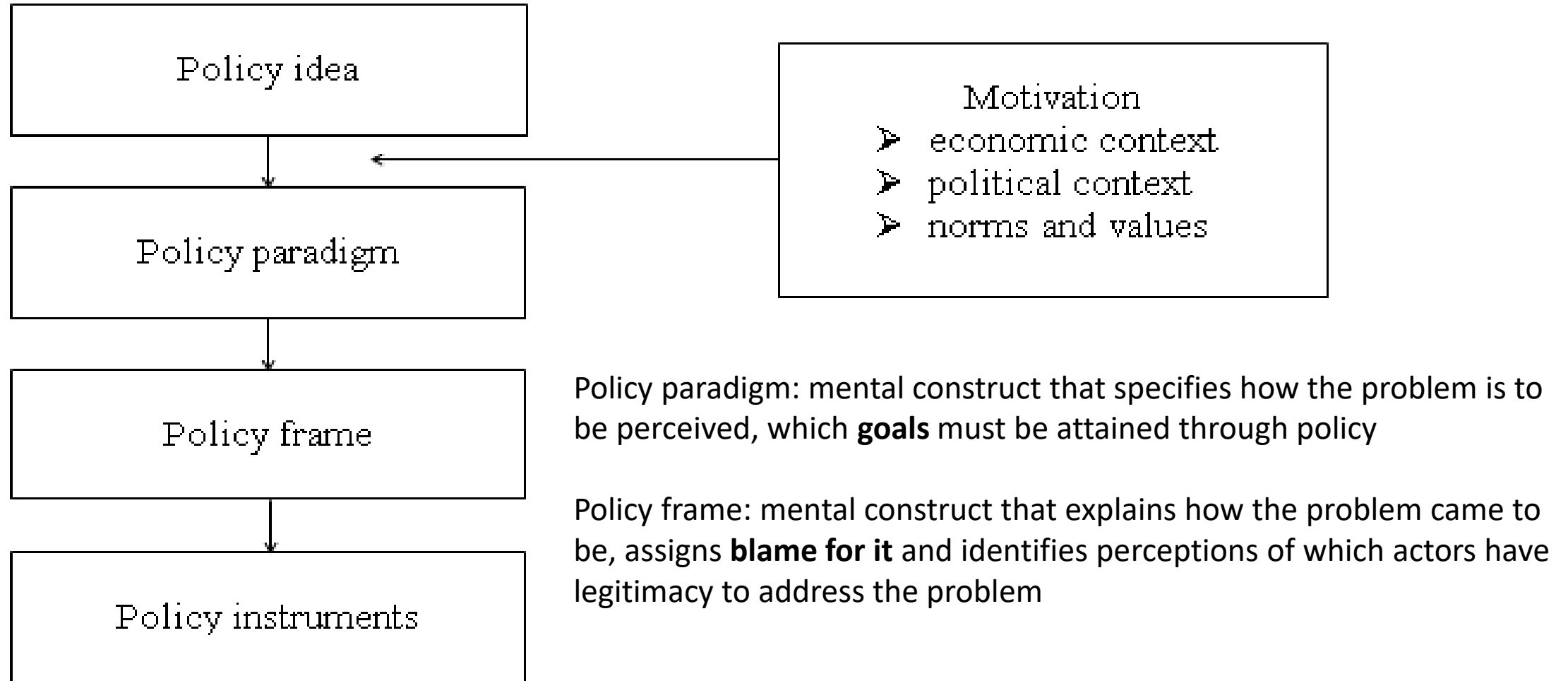


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A way from policy idea to policy instruments

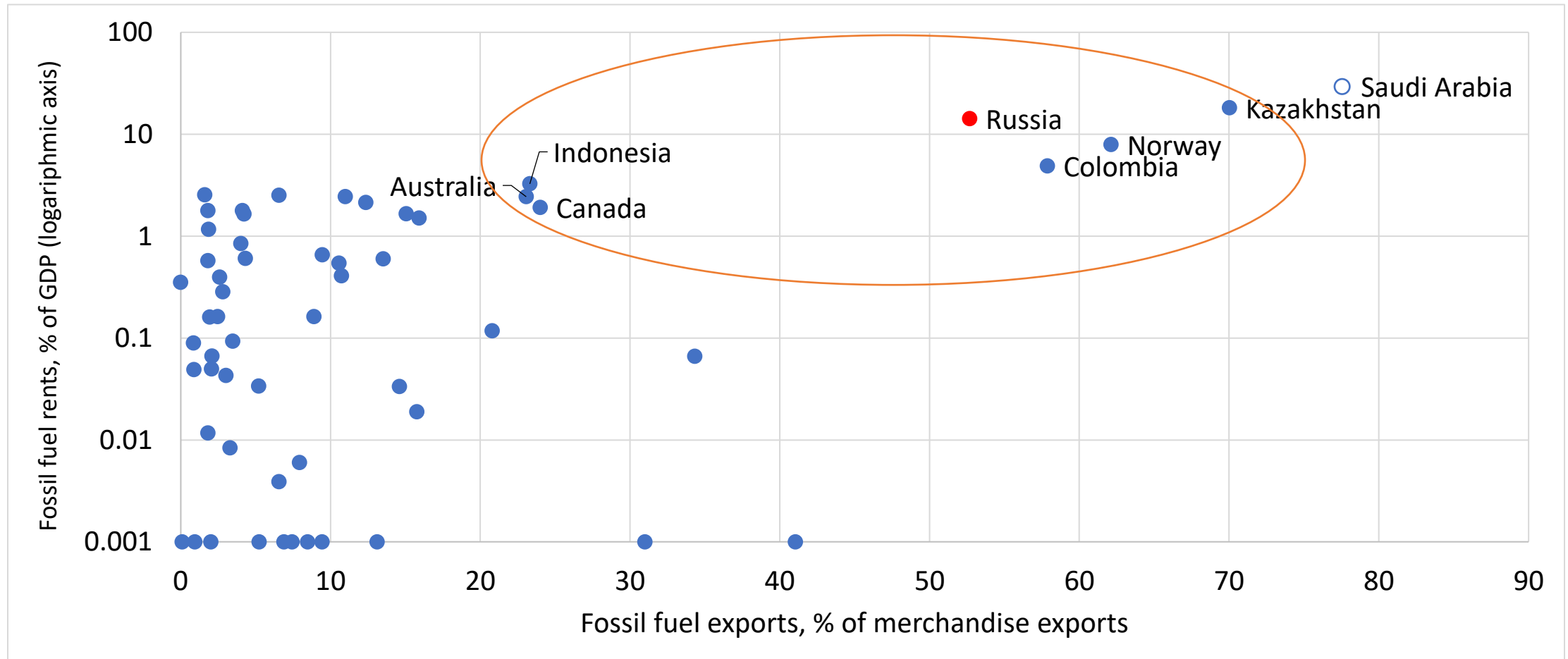


Motivation

	“Enthusiastic” countries	Russia
Economic context	High GDP per capita High share of services in the economy Low price of capital Net imports of fossil fuels and energy-intensive goods	Lower GDP per capita High share of energy-intensive industries in GDP and employment High price of capital Dependence on exports of fossil fuels and energy-intensive goods
Political context	Strong pro-green interest groups	Strong pro fossil-fuel interest groups
Norms and values	Strong awareness in climate change High priority of climate change	Climate skepticism Climate change isn't the major priority even among environmental problems
General motivation	Green transition as an opportunity	Green menace

Fossil fuel dependence

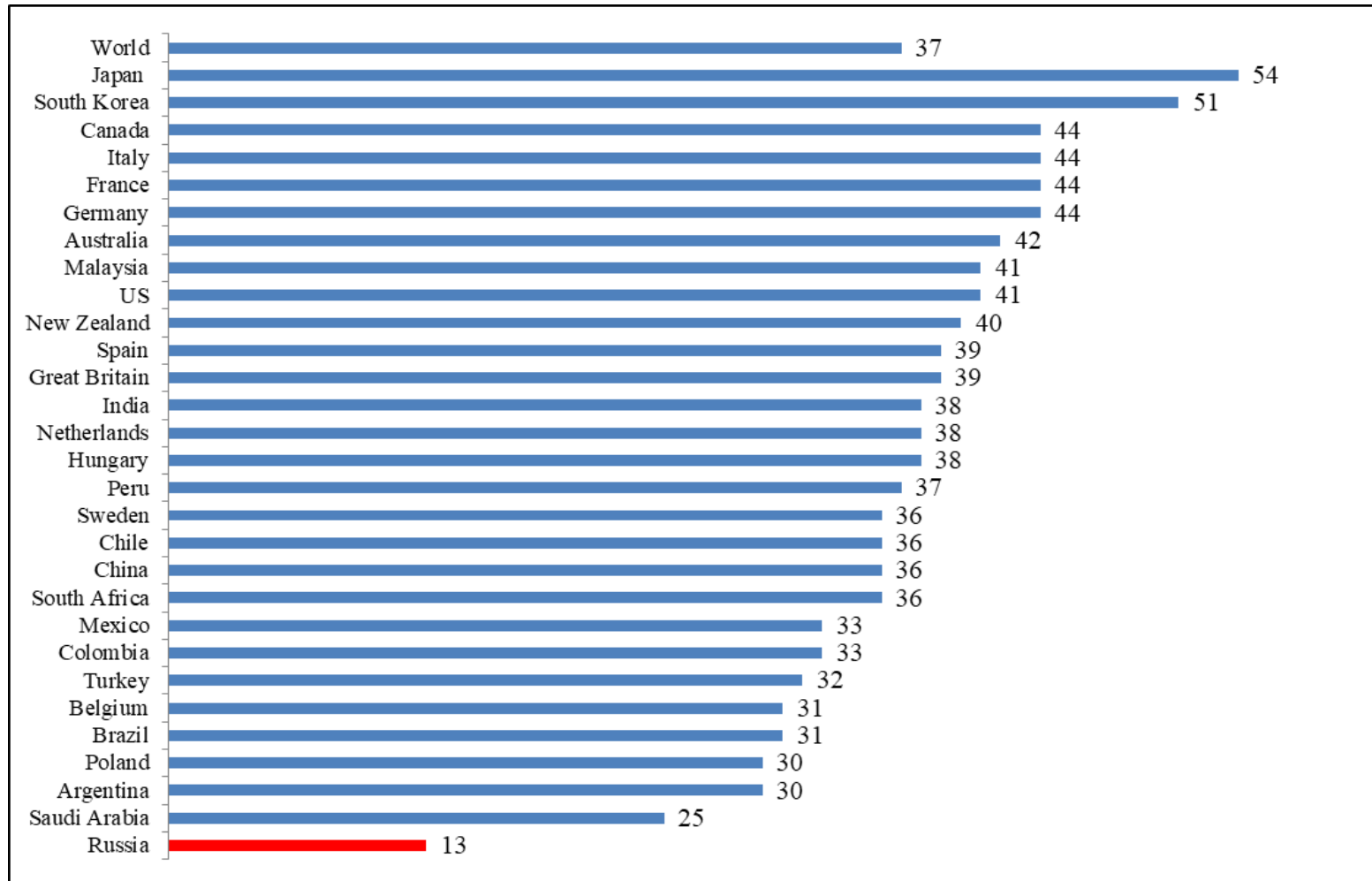
Fossil fuel rents (% of GDP) and fossil fuel exports (% of merchandise exports) in G20 countries and all the countries that have carbon pricing schemes implemented, scheduled for implementation or under consideration



Source: made by the author based on World Bank data

Climate change is not among environmental priorities in Russia

Percentage of respondents placing climate change in one of top-3 most important environmental issues in the country



Source: IPSOS, 2020

Other policy paradigm: in search of “win-win”

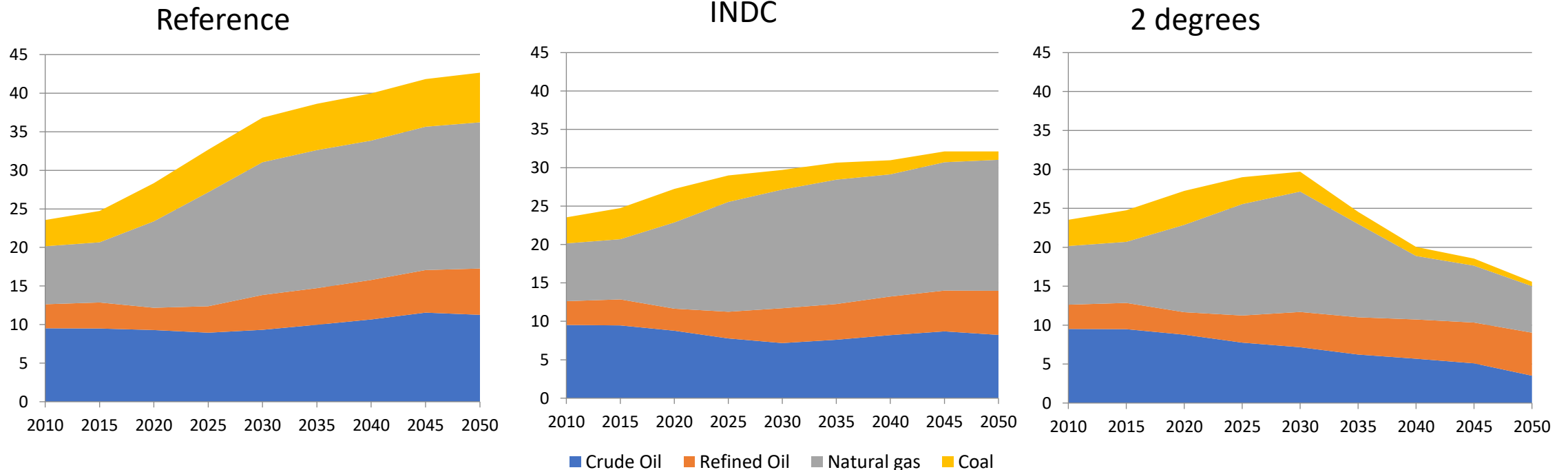
Major goals:

- Adaptation to the new global economic and energy landscape
- Diversification (through the development of non-fossil fuel sectors)
- Modernization (through energy efficiency and promoting green technologies)
- Balanced use of all types of clean technologies (nuclear, hydro-, CCS, new renewables, climate-smart forestry and land use)
- Solving other environmental problems (air pollution)

Global green transition and Russian exports of fossil fuels

In any scenario taking into account Paris Agreement, Russian energy exports in 2030 are 20% lower (in energy terms) relative to the *Reference* scenario. By 2050 the corresponding reduction reaches 25% for *INDC* and 64% for *2 degrees*

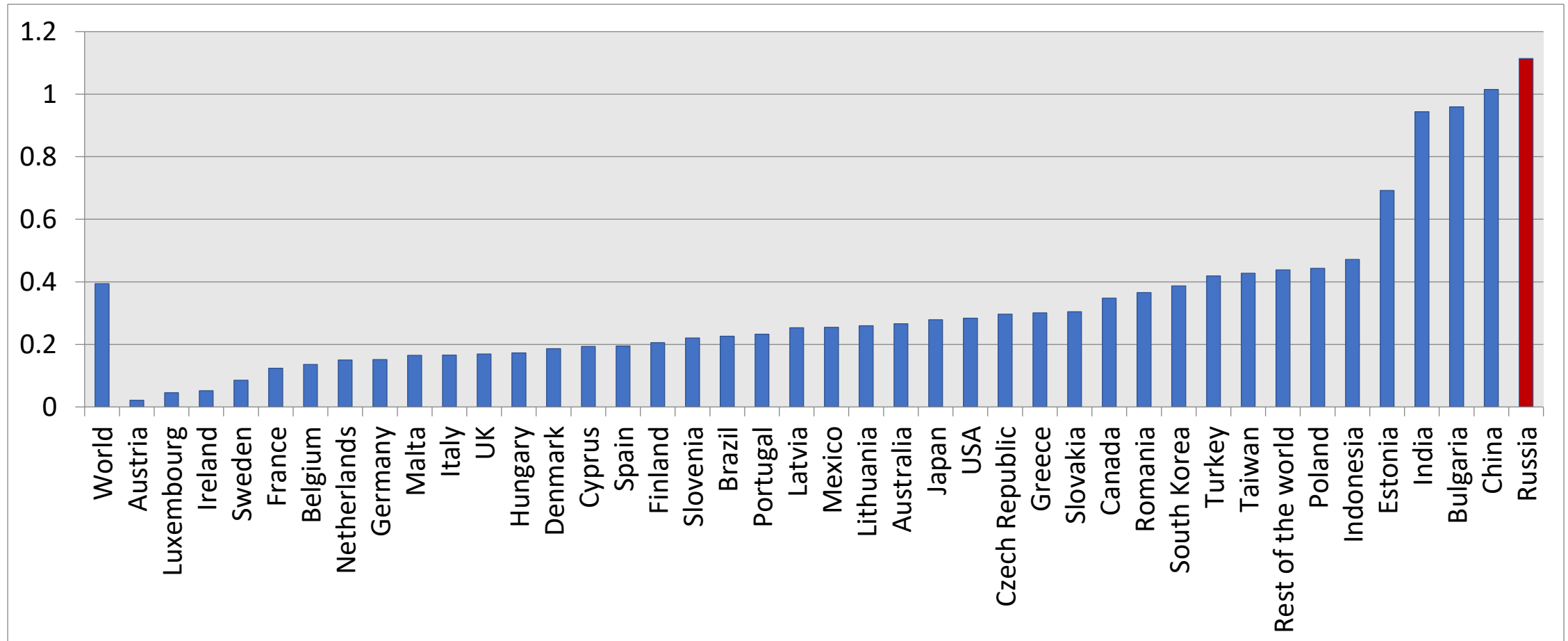
Russia's exports of fossil fuels, EJ



Source: Makarov et al., 2020

Vulnerability of Russia to climate-related trade barriers

Carbon intensity of exports, kg CO₂ per USD



Other policy frame

- Larger attention to emissions from consumption
- Wider use of demand-side policy instruments directed at consumer behavior, infrastructure, construction etc.
- Linking climate agenda with inequality (regulation of over-consumption)
- Special accent on consumption-based emissions in the international negotiations (together with BRICS)

OECD vs BRICS: importers and exporters of emissions embodied in trade

Consumption- and production-based emissions in OECD and BRICS countries in 2018

Country	Production-based emissions		Consumption-based emissions		Net exports of emissions	
	Mt	% of world	Mt	% of world	Mt	% of national emissions
OECD, total	12 602	34.6%	13 865	38.1%	-1 264	-10.0%
Canada	587	1.6%	588	1.6%	-2	-0.3%
France	332	0.9%	442	1.2%	-110	-33.3%
Germany	755	2.1%	862	2.4%	-106	-14.1%
Italy	348	1.0%	466	1.3%	-118	-33.8%
Japan	1 136	3.1%	1 312	3.6%	-177	-15.6%
Spain	270	0.7%	288	0.8%	-18	-6.6%
Sweden	42	0.1%	71	0.2%	-29	-69.5%
United Kingdom	380	1.0%	540	1.5%	-160	-42.1%
United States	5 425	14.9%	5 767	15.8%	-343	-6.3%

Country	Production-based emissions		Consumption-based emissions		Net exports of emissions	
	Mt	% of world	Mt	% of world	Mt	% of national emissions
BRICS, total	15 178	41.7%	13 554	37.2%	1 624	10.7%
Brazil	467	1.3%	489	1.3%	-22	-4.8%
China	9 957	27.3%	8 960	24.6%	997	10.0%
India	2 591	7.1%	2 355	6.5%	237	9.1%
Russia	1 691	4.6%	1 415	3.9%	277	16.4%
South Africa	472	1.3%	335	0.9%	137	29.0%

Source: OECD

Policy instruments: specifics of carbon pricing in fossil fuel dependent economies

- Balanced emission coverage
- Gradual tightening of carbon price
- Gradual elimination of fossil fuel subsidies
- Additional supportive measures for vulnerable industries and social groups
- Integration of the carbon price into the system of existing taxes in the energy sector
- Fiscal neutrality
- Applying carbon offsets

Thanks for your attention!

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