

Updated development of global greenhouse gas emissions 2018

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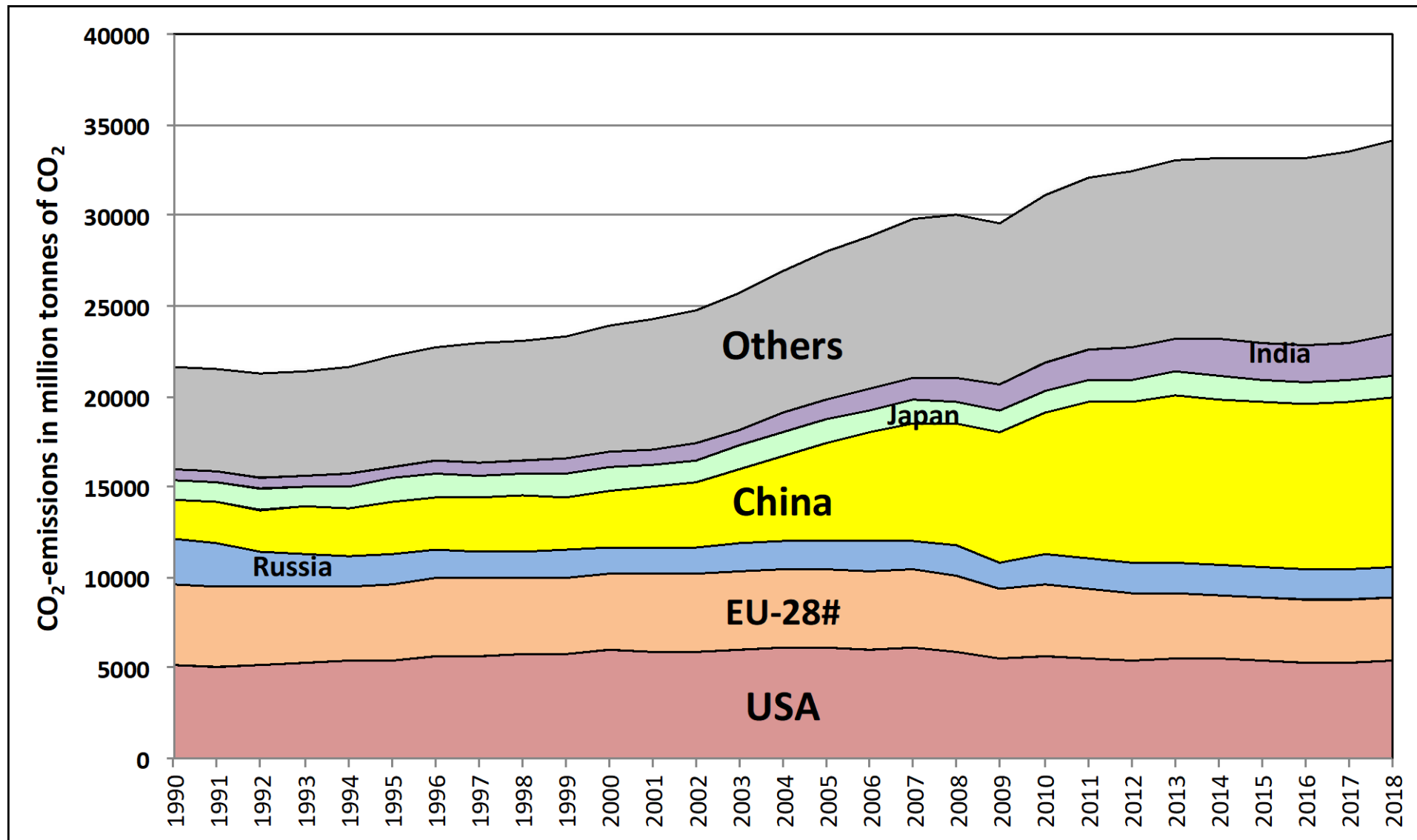
**23rd REFORM Group Meeting, Schloss Leopoldskron,
Salzburg, October 16, 2019**

Main data for estimating GHG emissions for 2018

- **UNFCCC: National Communications from Parties included in Annex I to the Convention; National Greenhouse Gas Inventory Data from Annex I Parties for 1990 to 2017**
- **International Energy Agency (IEA): CO₂ Emissions from Fuel Combustion, 2018 Edition, Paris 2018 and CO₂ Highlights 2018 (both data up to 2016)**
- **BP Statistical Review of World Energy 2018, June 2019**
- **The World Bank, World Development Indicators, Database July 2019**
- **Eurostat Database**

CO₂ emissions up to 2018 are extrapolated from the 2018 data on energy consumption published in the BP Statistics, June 2019, which are shown by country and energy source.

CO₂ emissions in the Top 6 countries/regions worldwide 1990 - 2018

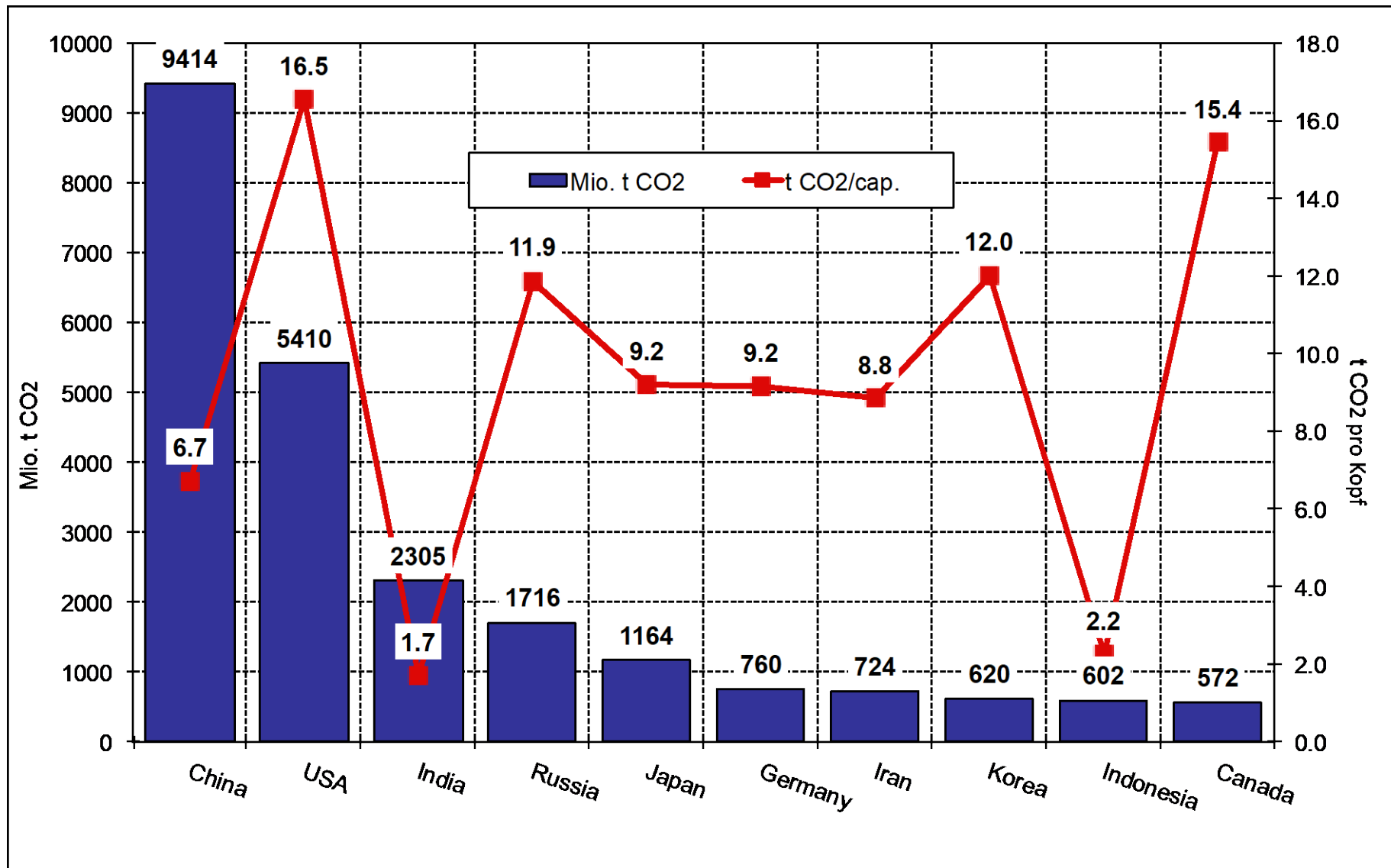


Source: BP Statistical Review of World Energy June 2019

World-wide CO₂ emissions 1990 – 2018 by regions

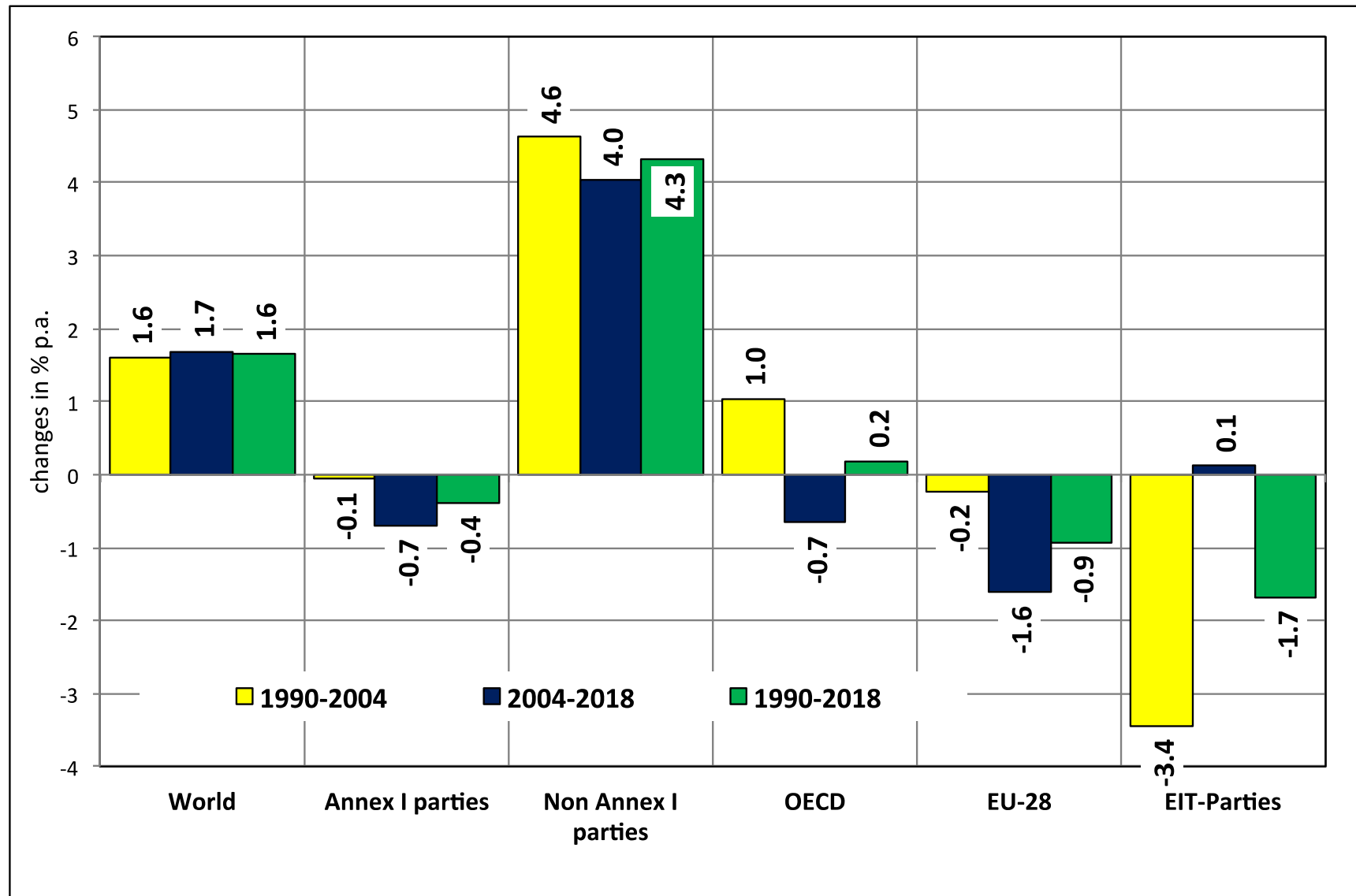
	1990	2000	2010	2015	2016	2017	2018	2018/2017	2018/1990
	Million tonnes of CO ₂							changes in %	
WORLD	21857	24058	31388	33399	33397	33784	34418	1.9	57.5
Annex I	15084	14527	14233	13554	13425	13444	13565	0.9	-10.1
Non-Annex I	5875	8544	15798	18388	18464	18778	19254	2.7	218.7
EIT	4388	2567	2724	2598	2616	2655	2734	3.0	-37.7
OECD	11975	13430	13215	12654	12536	12555	12612	0.5	5.3
EU-28	4476	4189	3951	3525	3508	3526	3454	-2.0	-22.8
EU-15	3416	3424	3188	2824	2796	2794	2718	-2.7	-20.4
EU-NMS	1060	765	763	701	712	732	736	0.6	-30.5

The ten major CO₂ emitters world-wide 2018



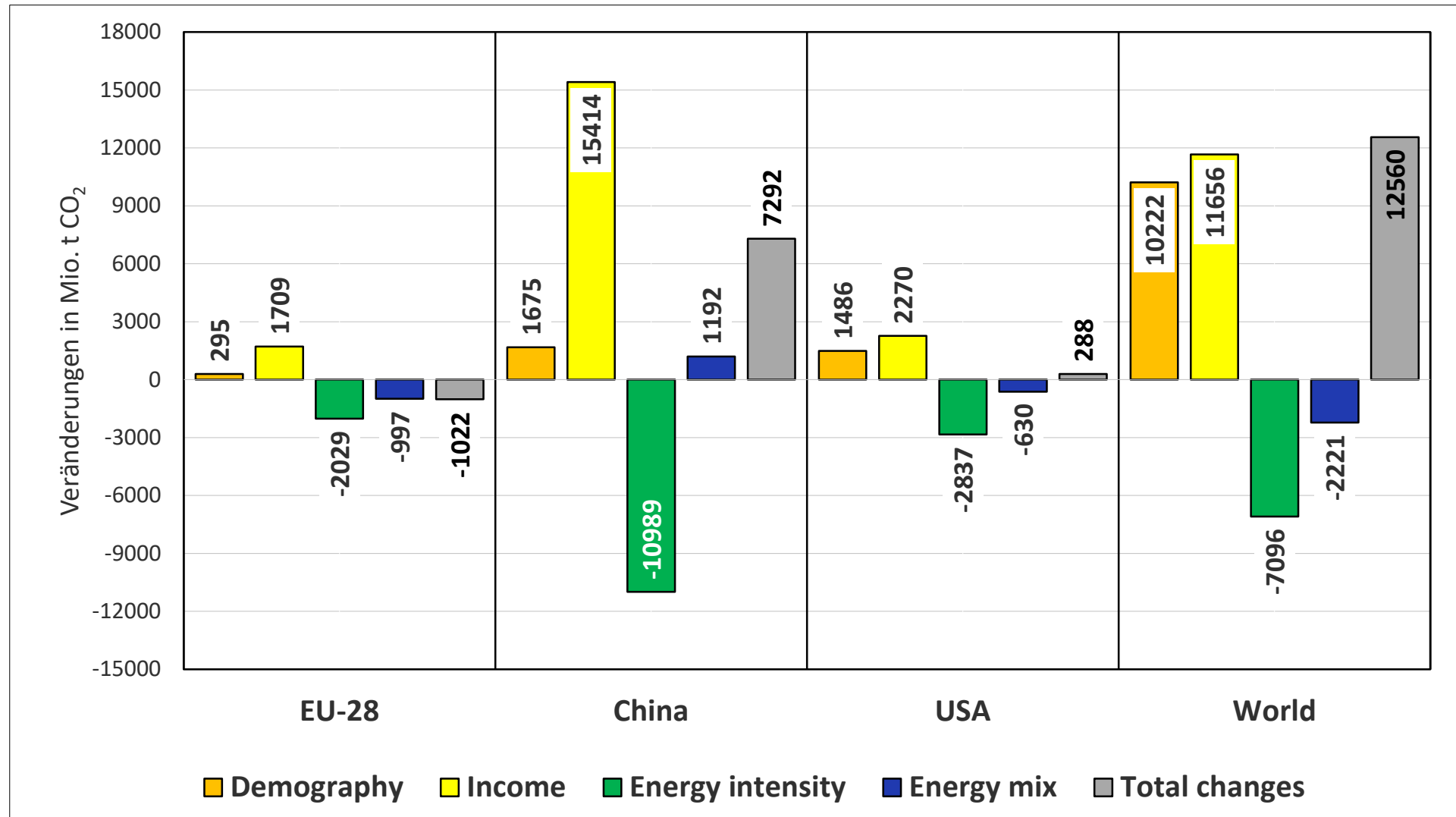
Sources: World Bank; International Monetary Fund (IMF); OECD, Eurostat.

CO₂ emissions in Annex I and Non Annex I parties

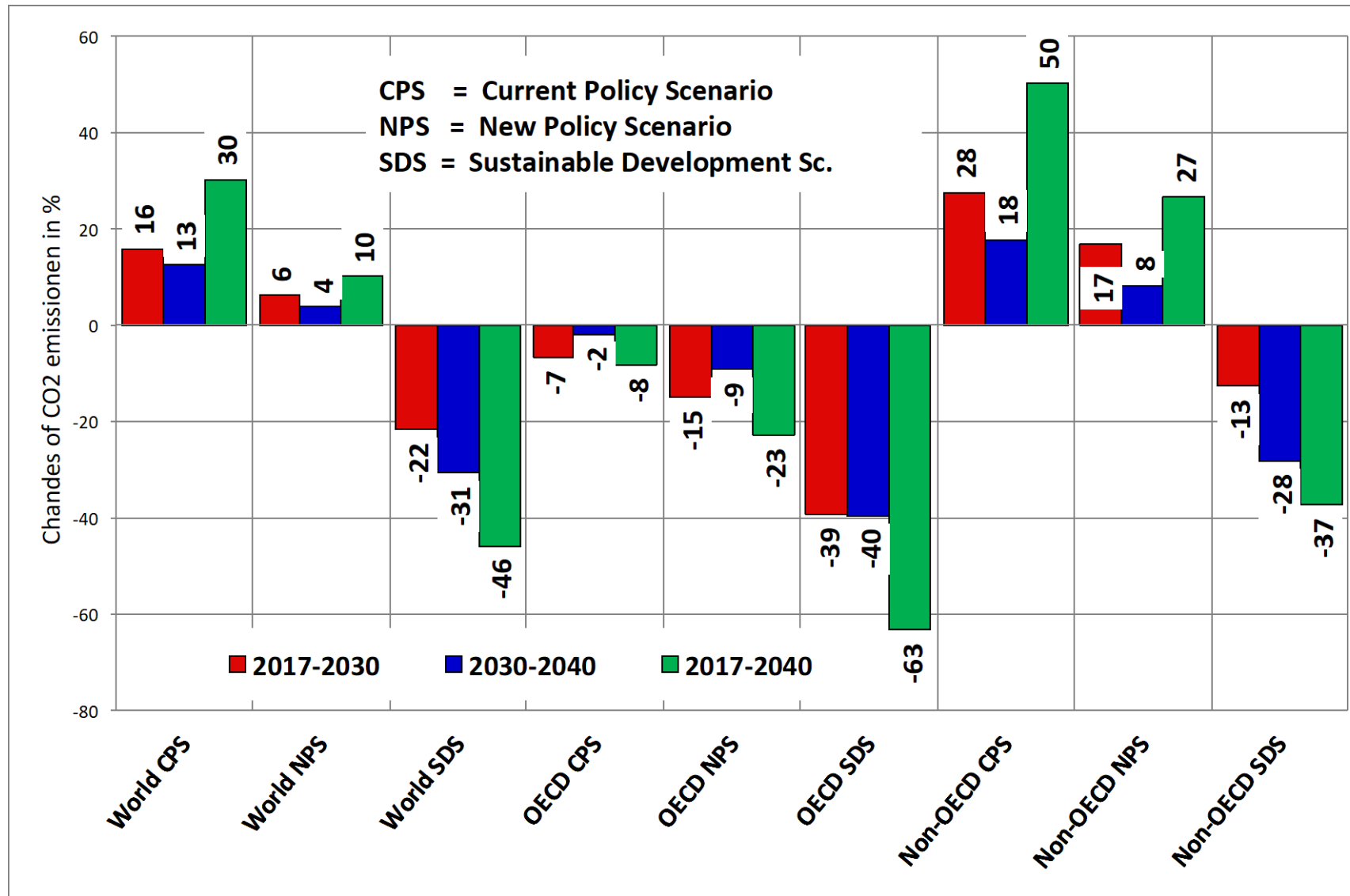


Sources: World Bank; International Monetary Fund (IMF); OECD, Eurostat.

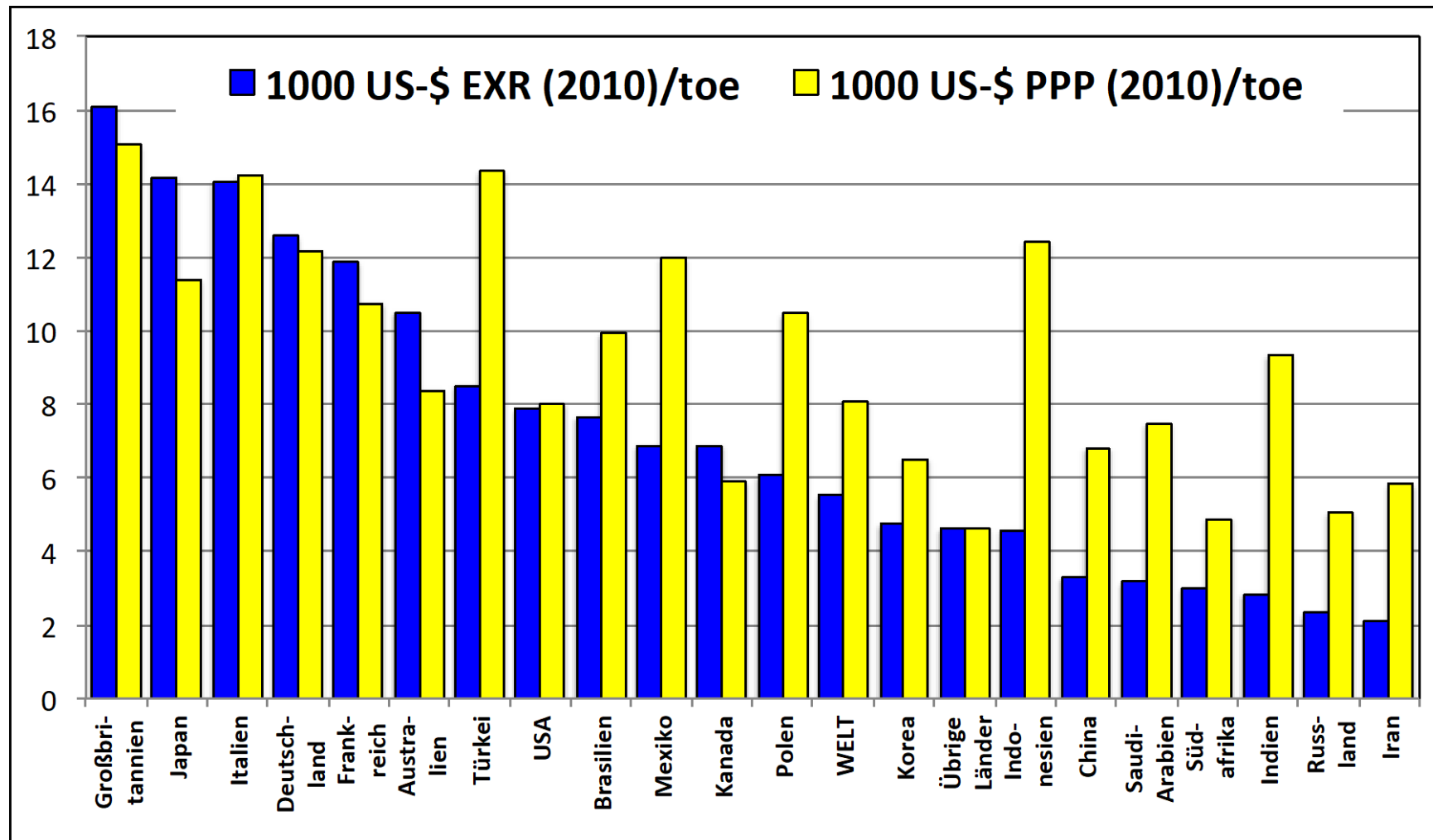
Components influencing CO₂ emissions 2018 vs. 1990



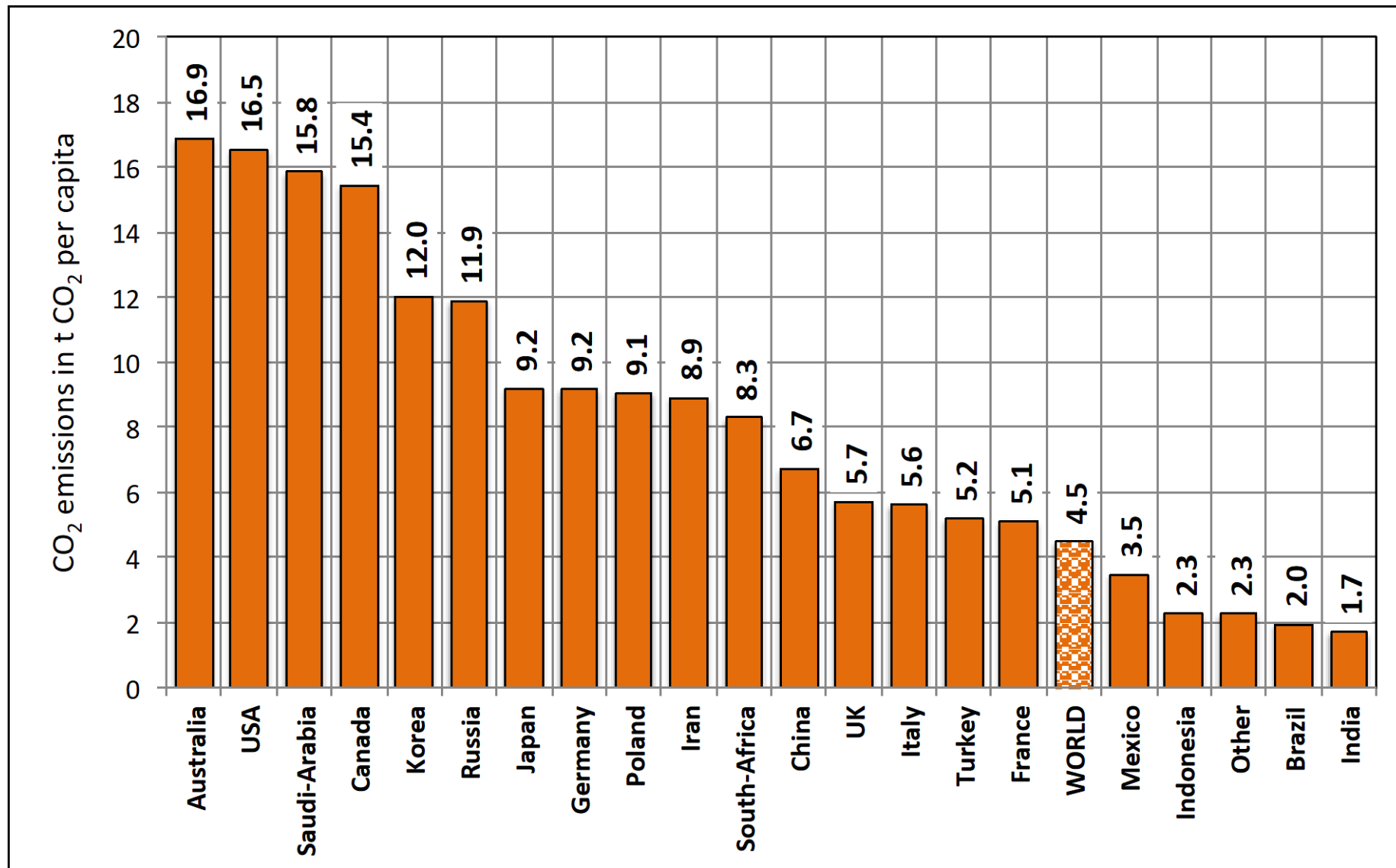
World-wide CO₂ emissions by regions 2017-2040 (IEA scenarios 2018)



Energy productivity 1990 – 2018 with different base of calculation: Exchange Rate (EXR) or Purchase Power Parity (PPP)



Per capita CO₂ emissions in the 20 major emitters worldwide 2018



Sources: UNFCCC; World Bank; IEA; Eurostat; BP; author's calculation.

Summary

- *According to preliminary calculations, global CO₂ emissions in 2018 have risen significantly again, with an increase of 1.9% for the first time since 2013.*
- *This even slightly exceeded the long-term growth of 1.6% on average for the year (from 1990 to 2017).*
- *As a result, CO₂ emissions reached a new peak of 34.4 billion t in 2018.*
- *Compared to the targets agreed at the climate conferences, this means a noticeable setback.*



The paper is published in October in:
„Energiewirtschaftliche Tagesfragen“,
10/2019 (in German only)

Thanks for listening
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