

# Updated development of global greenhouse gas emissions 2014

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*“Low Carbon Markets and the Legacy of Nuclear Power”*

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Schloss Leopoldskron,

Salzburg, August 31, 2015

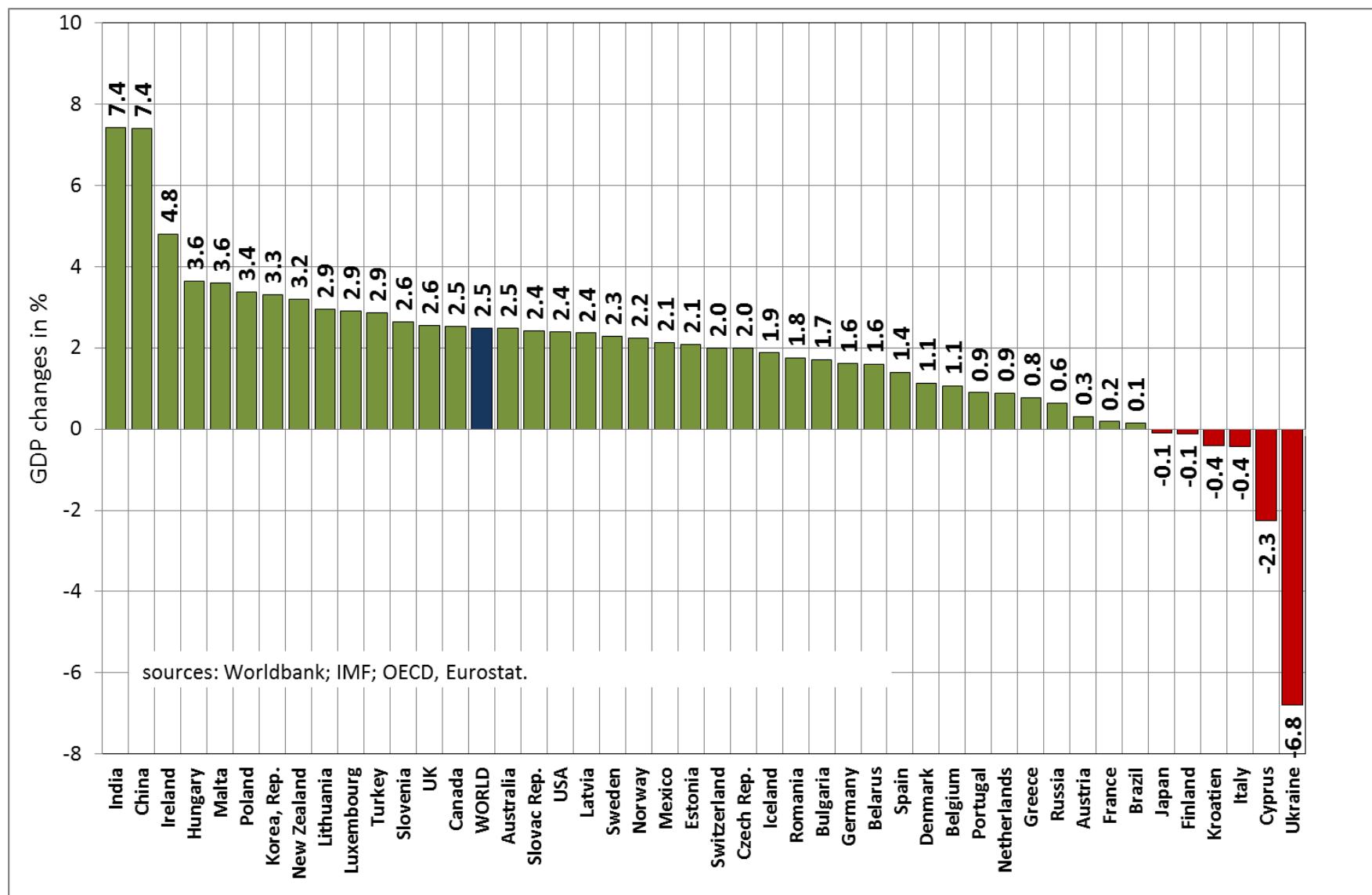
## Main data for estimating GHG emissions for 2014

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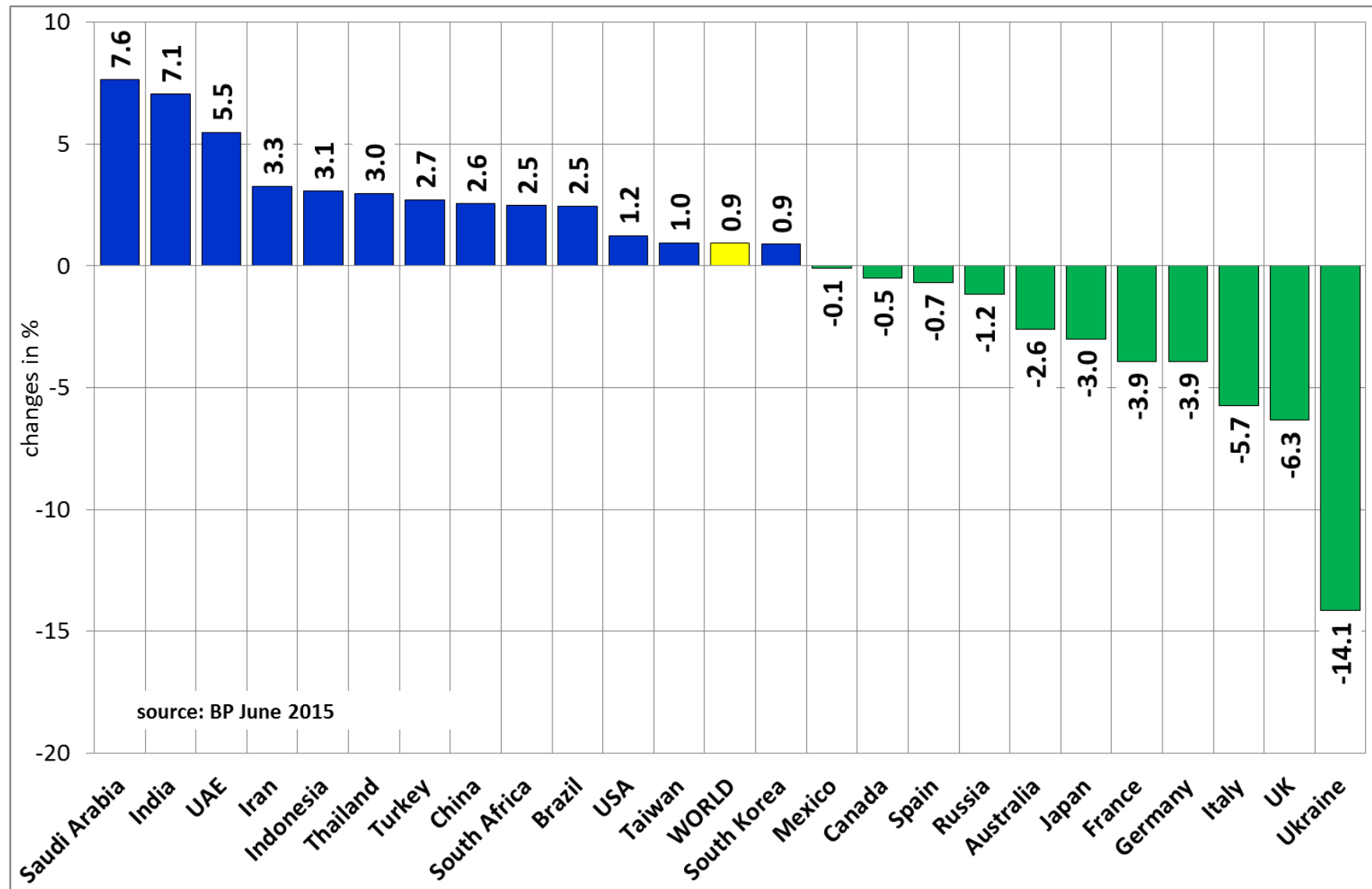
- **UNFCCC: National Communications from Parties included in Annex I to the Convention; National Greenhouse Gas Inventory Data from Annex I Parties for 1990 to 2012**
- **International Energy Agency (IEA): CO<sub>2</sub> Emissions from Fuel Combustion, 2014 Edition, Paris 2014; (up to 2012)**
- **BP Statistical Review of World Energy 2014, June 2015**
- **The World Bank, World Development Indicators, Database July 2015**
- **Eurostat Database**

**CO<sub>2</sub> emissions up to 2014 are extrapolated from the 2014 data on energy consumption published in the BP Statistics, June 2015, which are shown by country and energy source.**

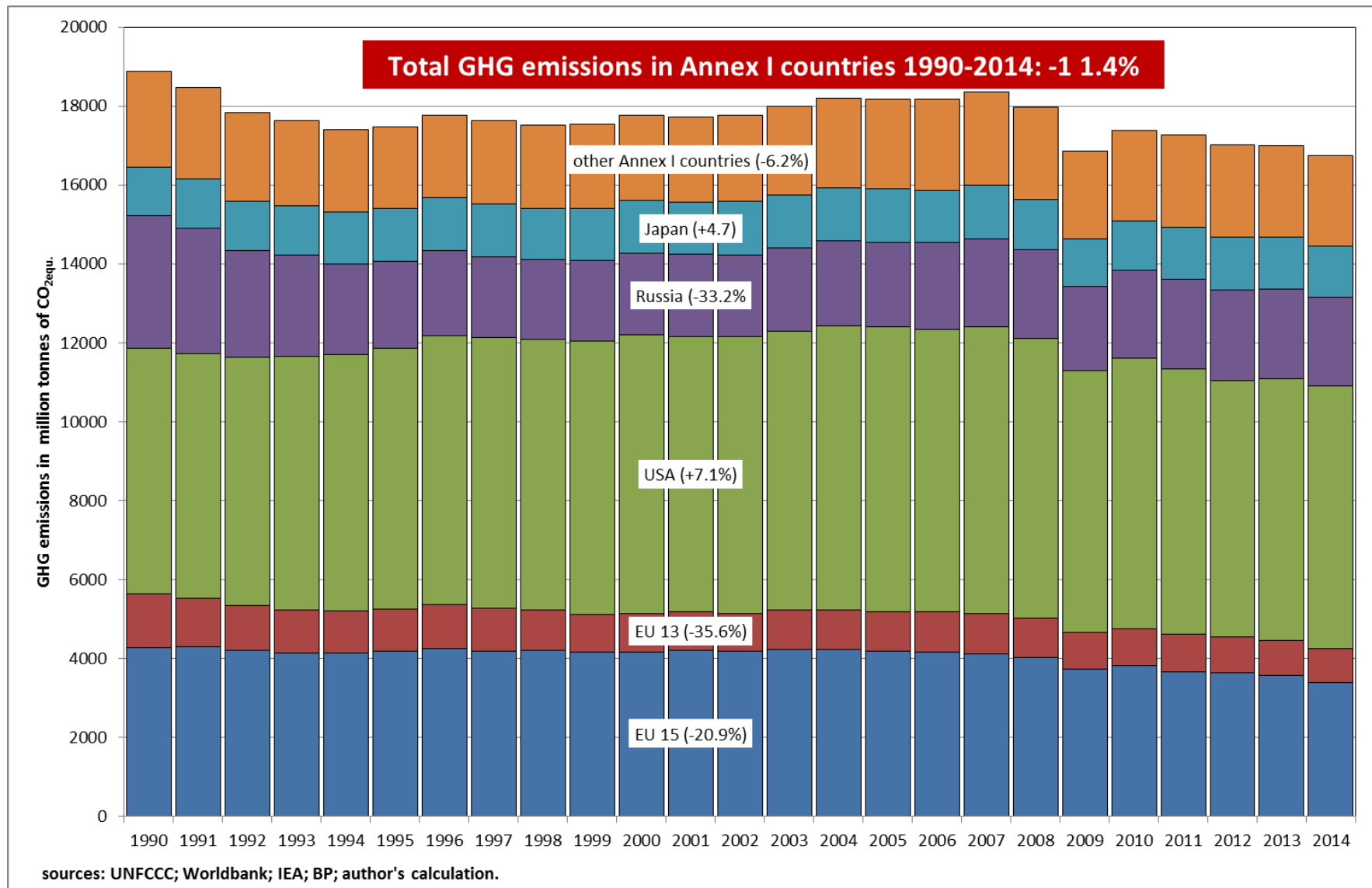
# Changes of real GDP 2014 versus 2013 in Annex I countries and others



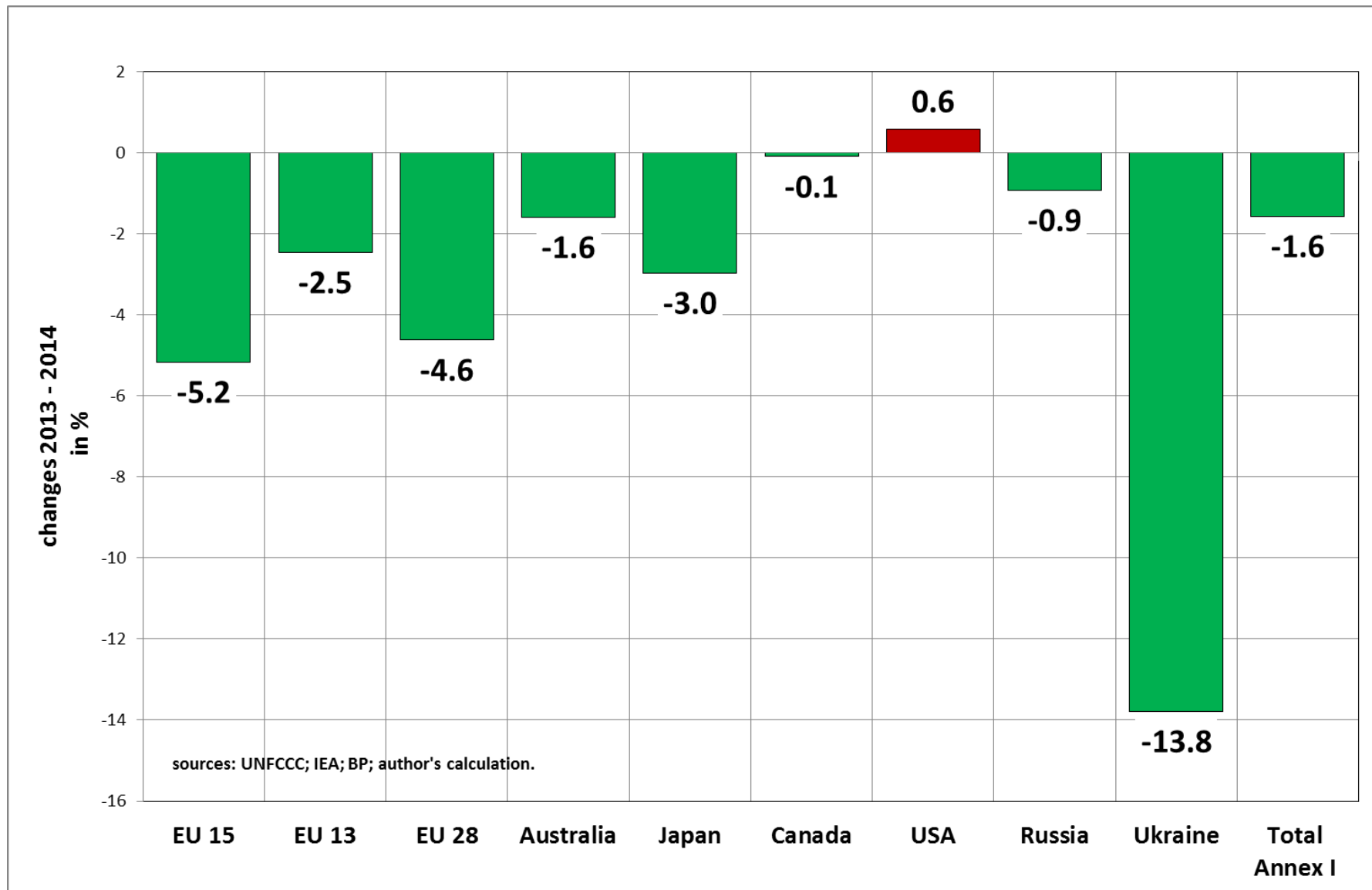
# Changes of primary energy 2014 vs 2013 in countries with $\geq 100$ Gtoe



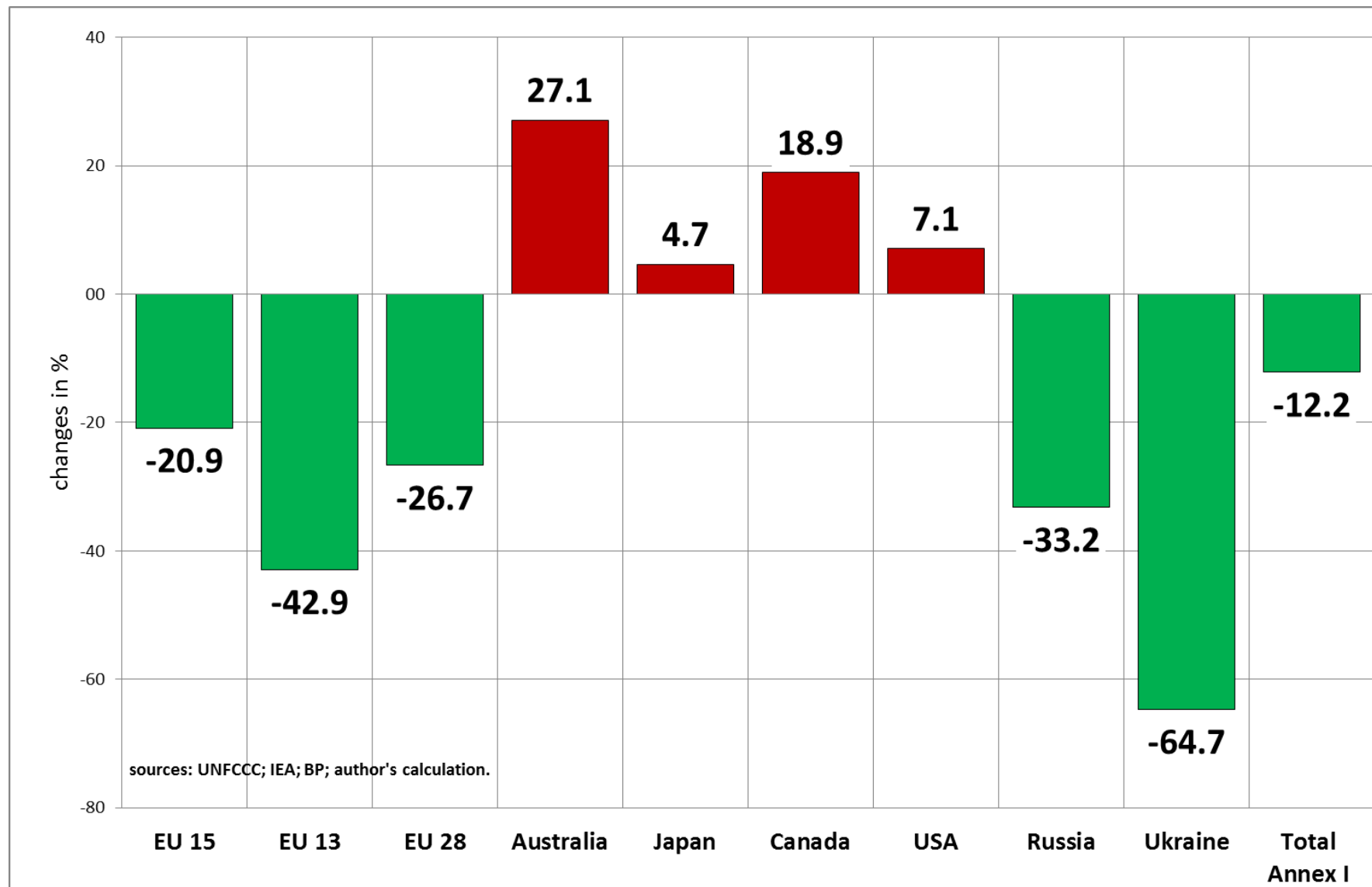
# GHG emissions in Annex-I countries 1990 – 2014



# GHG emissions in Annex I countries: 2013 - 2014



# GHG emissions in Annex I countries: base year - 2014

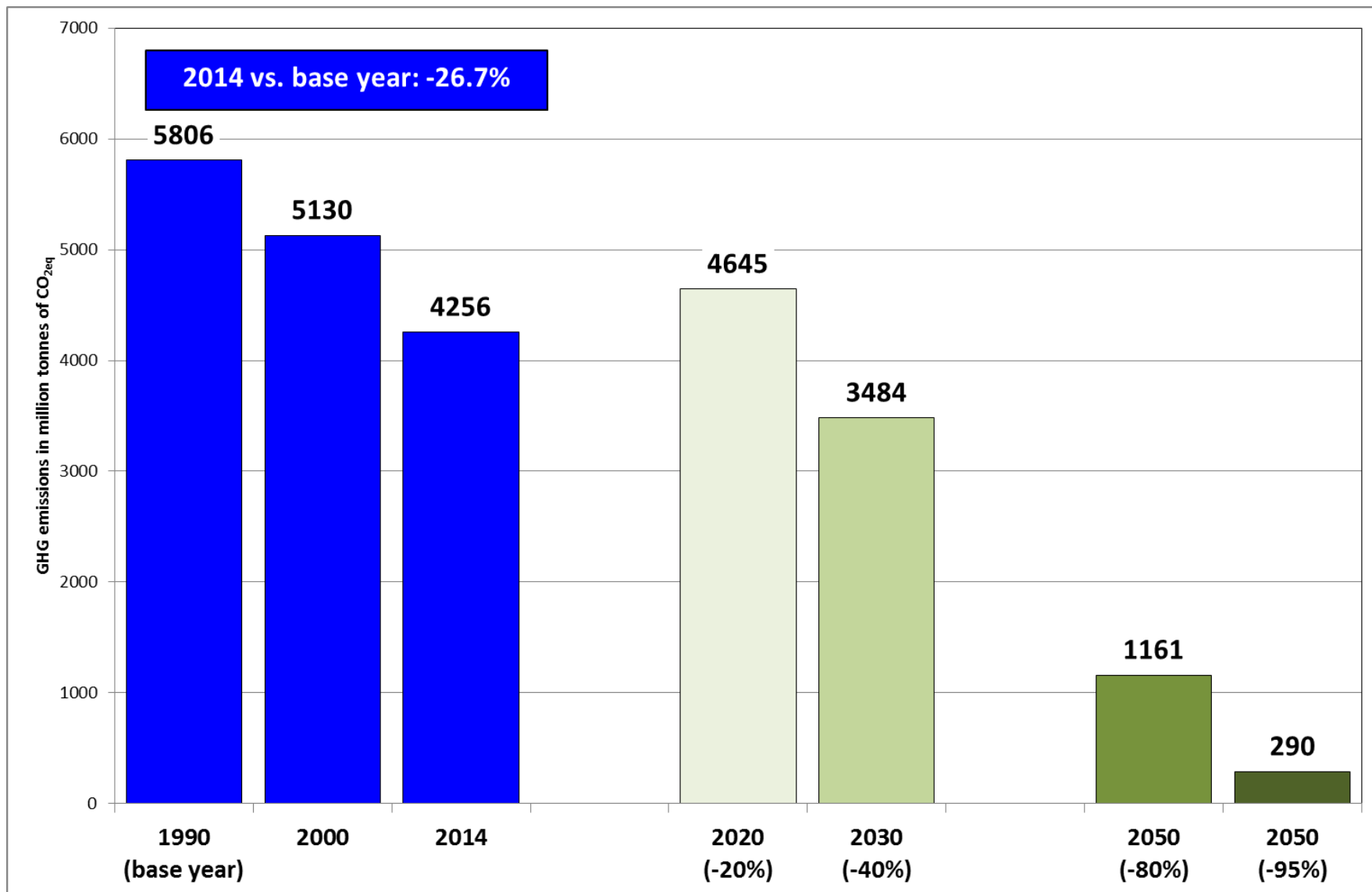


# GHG emissions in Annex I countries 1990 – 2014 targets ↔ reality

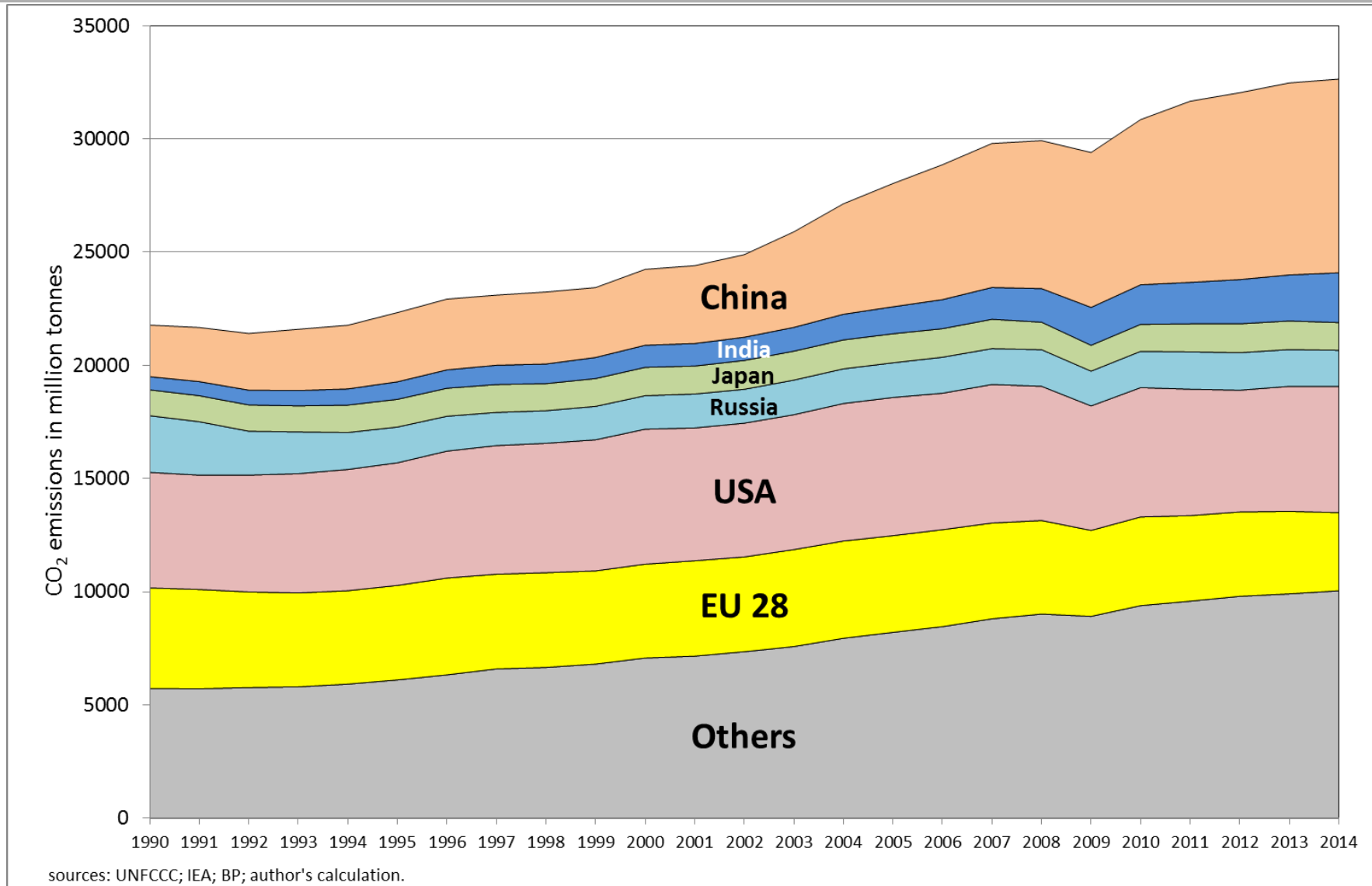
	Base year 1990 (1995)	2013	2014	2013 to 2014	Base year 1990 (1995) to 2014	Emissions targets 2008-2012 vs. base year	Emissions targets averaged over 2008-2012	Actual emissions averaged over 2008-2012	Differences between targets and reality
	GHG emissions in Gt CO <sub>2eq</sub>			changes in %			GHG emissions in Gt CO <sub>2eq</sub>		%
EU 15	4270	3563	3379	-5.2	-20.9	-8.2	3928.3	3770.9	-4.0
EU NMS	1536	899	877	-2.5	-42.9	-9.0	1427.2	950.3	-33.4
<b>EU 28</b>	<b>5806</b>	<b>4462</b>	<b>4256</b>	<b>-4.6</b>	<b>-26.7</b>	<b>-7.8</b>	<b>5355.5</b>	<b>4721.2</b>	<b>-11.8</b>
Japan	1234	1331	1292	-3.0	4.7	-6.0	1160.3	1278.5	10.2
Australia	415	536	527	-1.6	27.1	8.0	448.2	542.2	21.0
USA	6220	6621	6658	0.6	7.1	-7.0	5784.2	6758.5	16.8
Canada	591	703	703	-0.1	18.9	-6.0	555.5	703.9	26.7
<b>Total Annex II</b>	<b>12897</b>	<b>12942</b>	<b>12743</b>	<b>-1.5</b>	<b>-1.2</b>	<b>-6.7</b>	<b>12035.8</b>	<b>13239.2</b>	<b>10.0</b>
Russia	3362	2266	2245	-0.9	-33.2	0.0	3362.1	2235.3	-33.5
Ukraine	940	385	332	-13.8	-64.7	0.0	940.2	398.3	-57.6
<b>Total Annex I</b>	<b>19055</b>	<b>17000</b>	<b>16733</b>	<b>-1.6</b>	<b>-12.2</b>	<b>-6.1</b>	<b>17893.2</b>	<b>16911.9</b>	<b>-5.5</b>



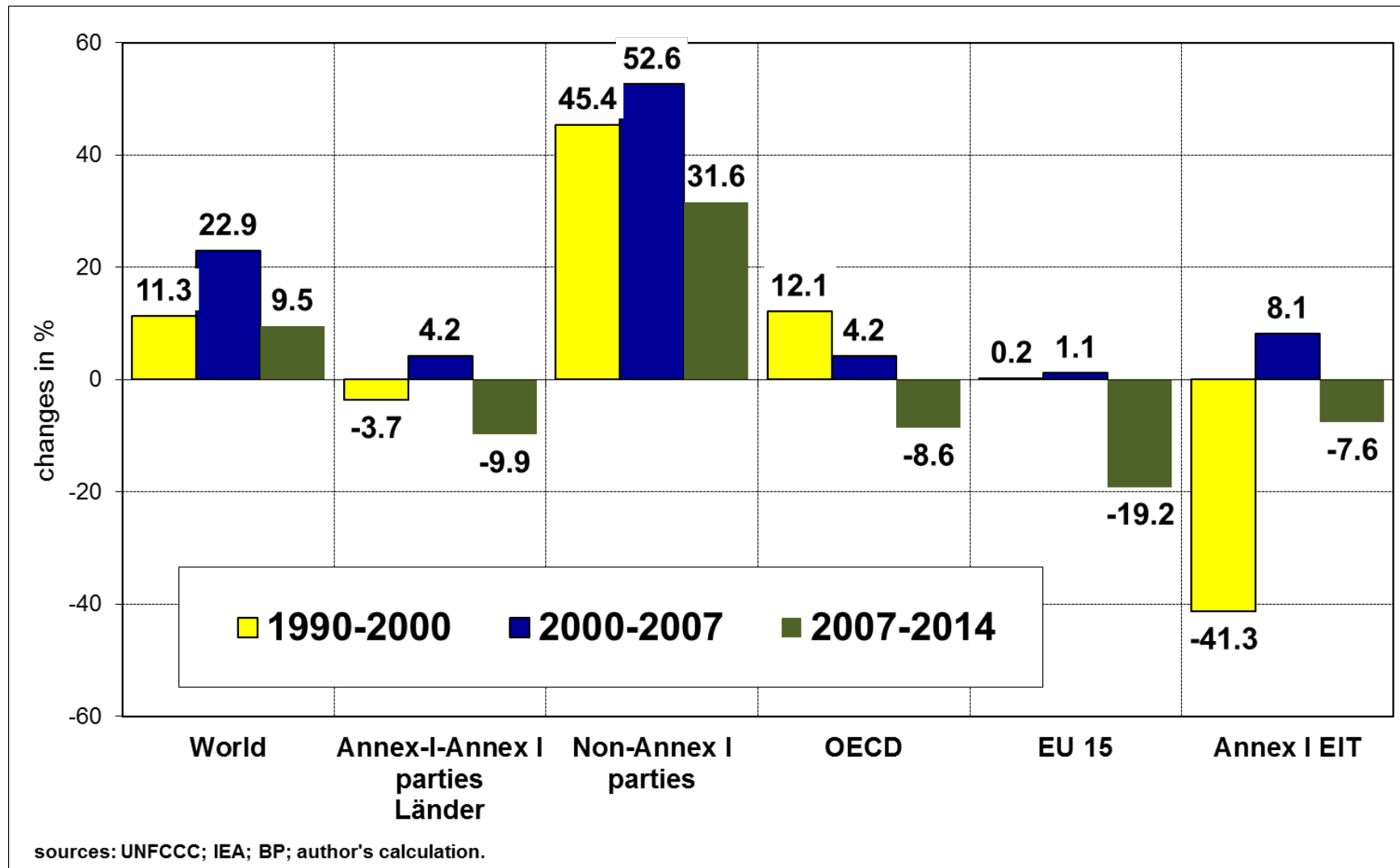
# EU 28: GHG emissions targets by 2020, 2030 and 2050



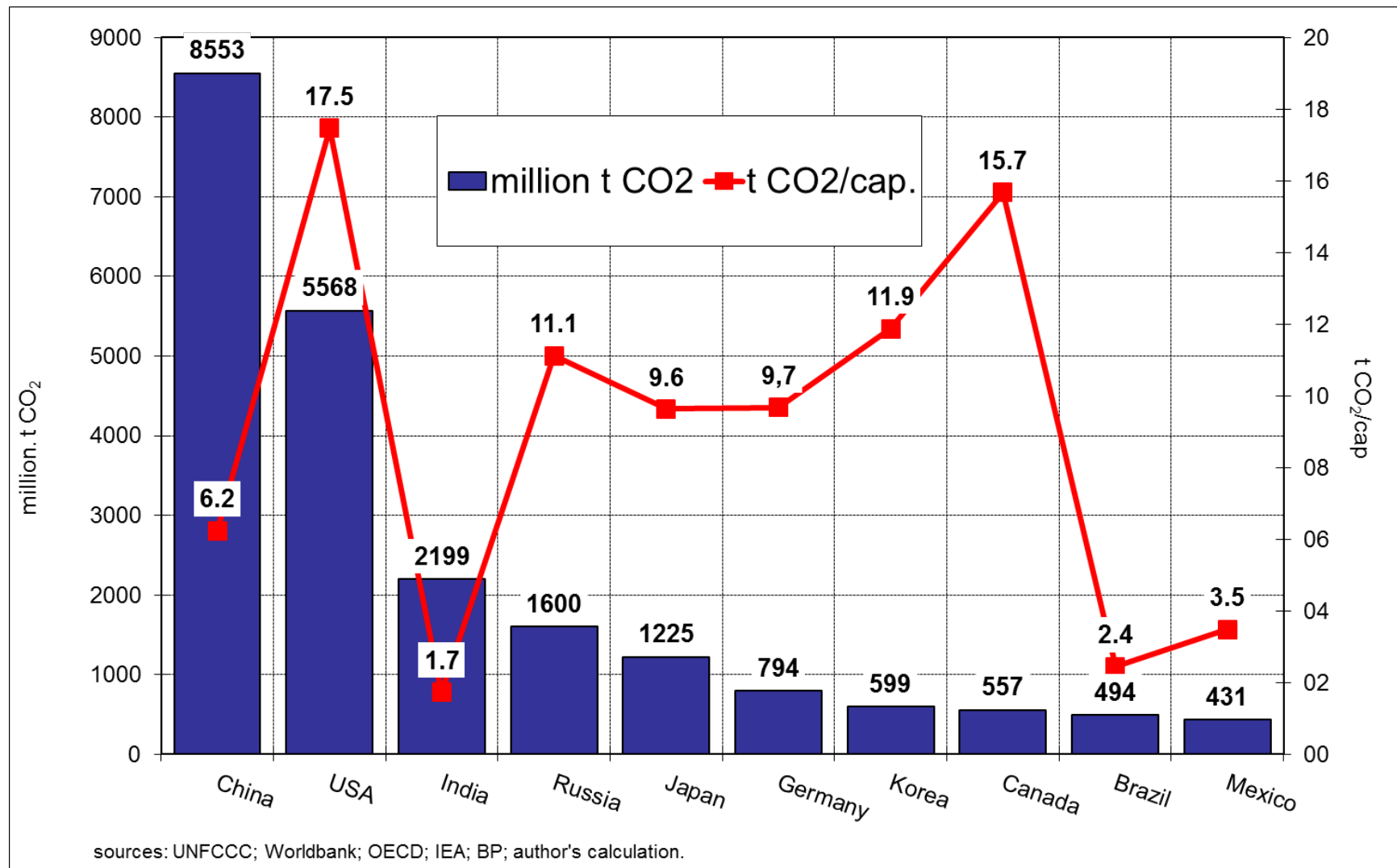
# World-wide CO<sub>2</sub> emissions 1990 - 2014



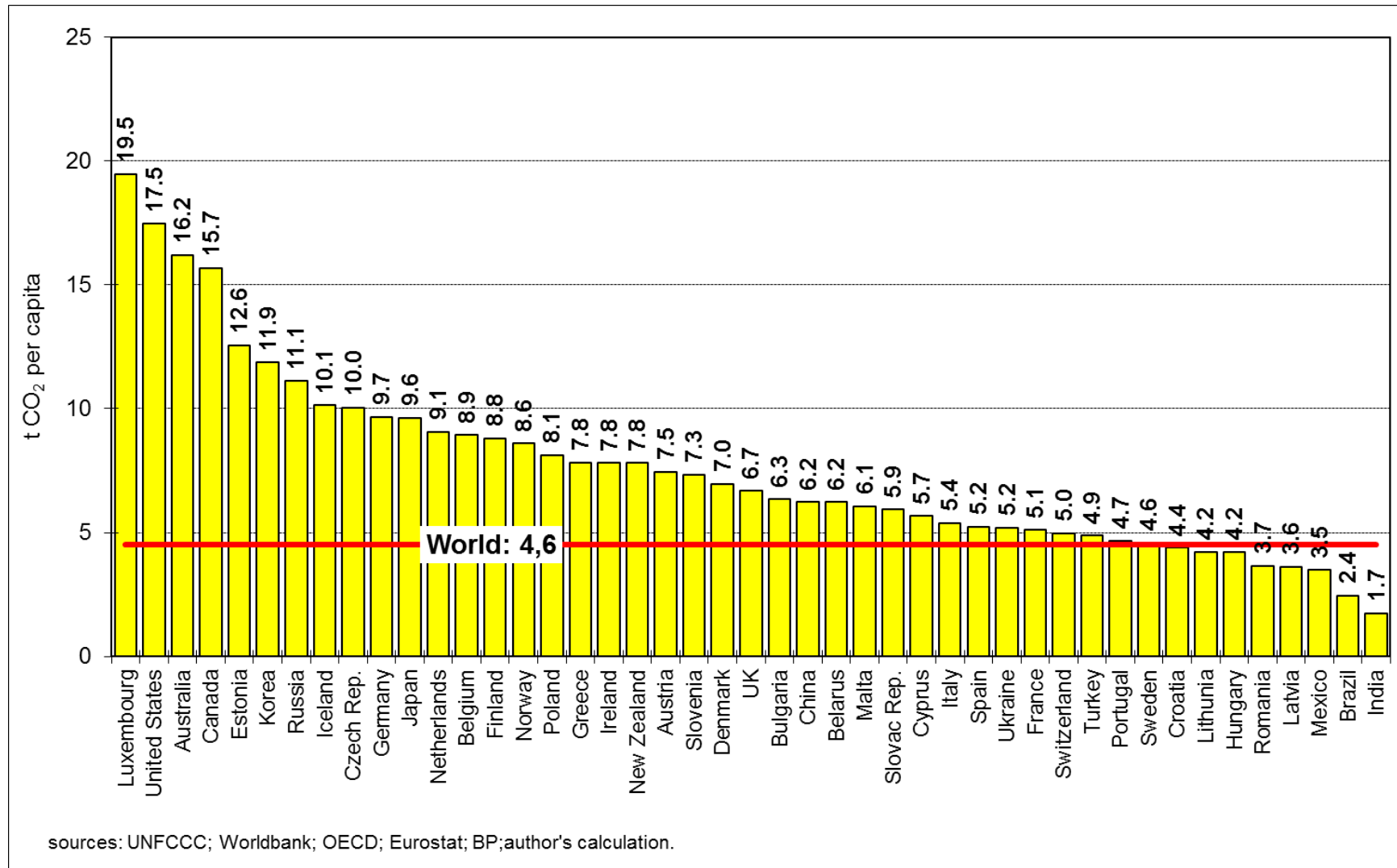
# World-wide CO<sub>2</sub> emissions by regions 1990 - 2014



# The ten major emitters world-wide 2014



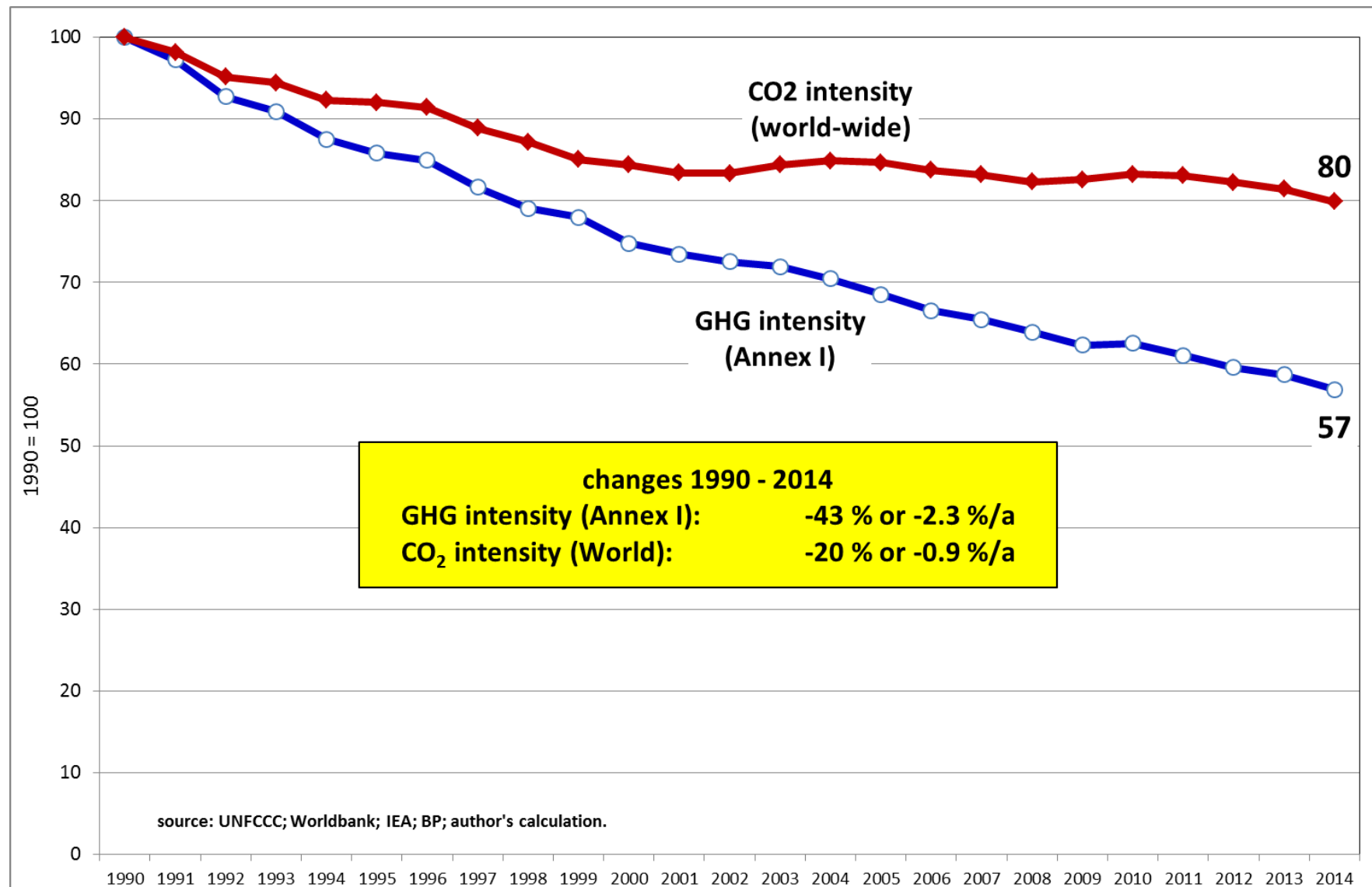
# Per capita CO<sub>2</sub> emissions: EU-27 and selected countries 2014



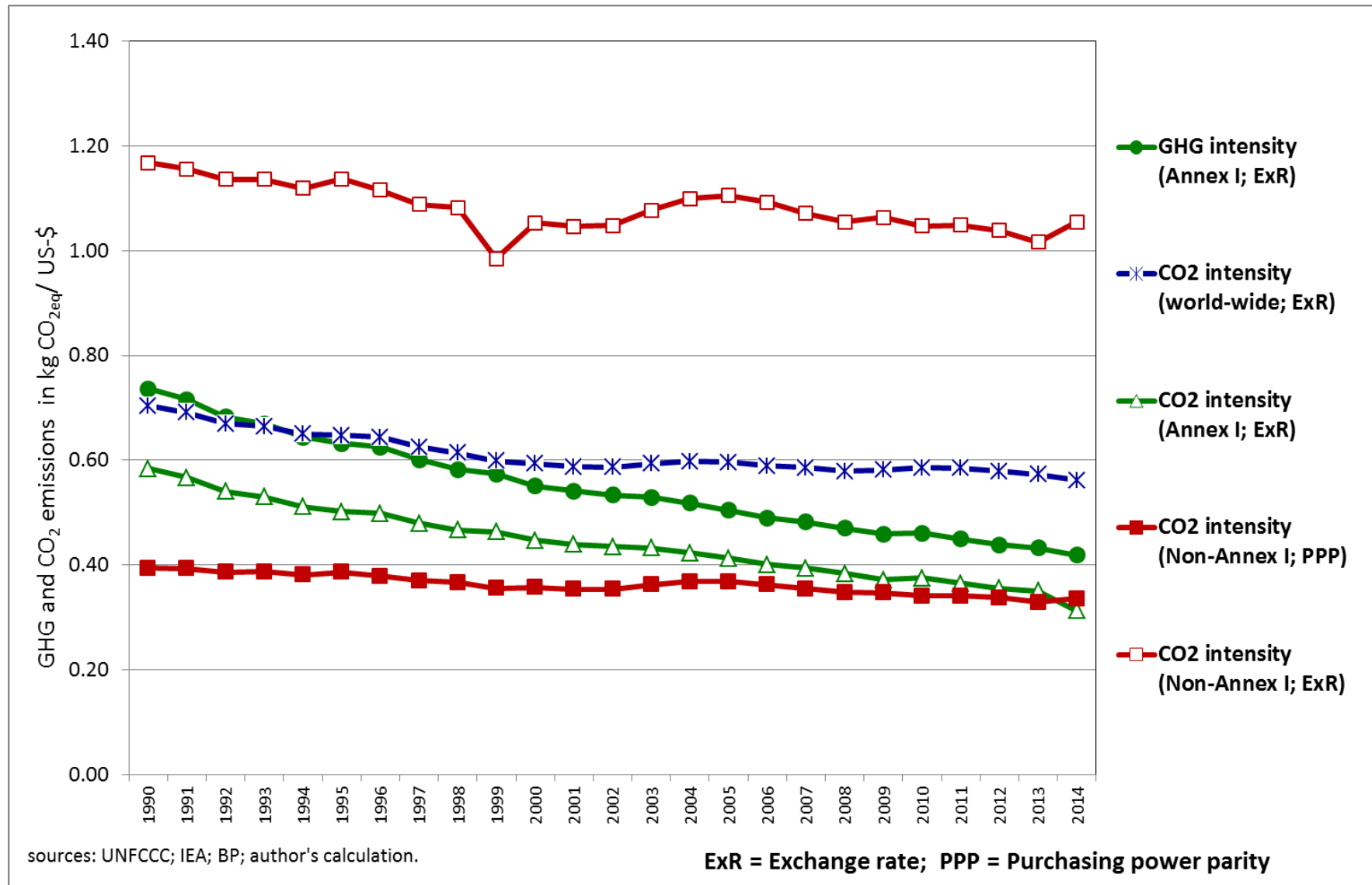
## World-wide CO<sub>2</sub> emissions 1990 – 2013 by regions

	1990	1995	2000	2005	2010	2013	2014	1990 - 2014	2013 - 2014
	CO <sub>2</sub> emissions in million tonnes							changes in %	
WORLD	21774.1	22326.7	24235.3	28026.2	30850.8	32469.1	32637.2	49.9	0.5
Annex I	14988.8	13884.4	14432.0	14900.2	14170.5	13808.5	13561.3	-9.5	-1.8
Non-Annex I	6165.7	7732.0	8963.4	12140.9	15569.1	17580.5	17995.5	191.9	2.4
EIT	4388.5	2851.3	2574.8	2682.9	2691.5	2666.2	2571.7	-41.4	-3.5
OECD	2305.6	67.7	-939.1	-961.8	-1120.7	-1277.0	-1608.7	-169.8	26.0
EU 28	4442.0	4175.2	4143.0	4270.5	3917.6	3645.6	3451.9	-22.3	-5.3

# GHG intensity in Annex I countries/world-wide CO<sub>2</sub> intensity 1990 - 2014

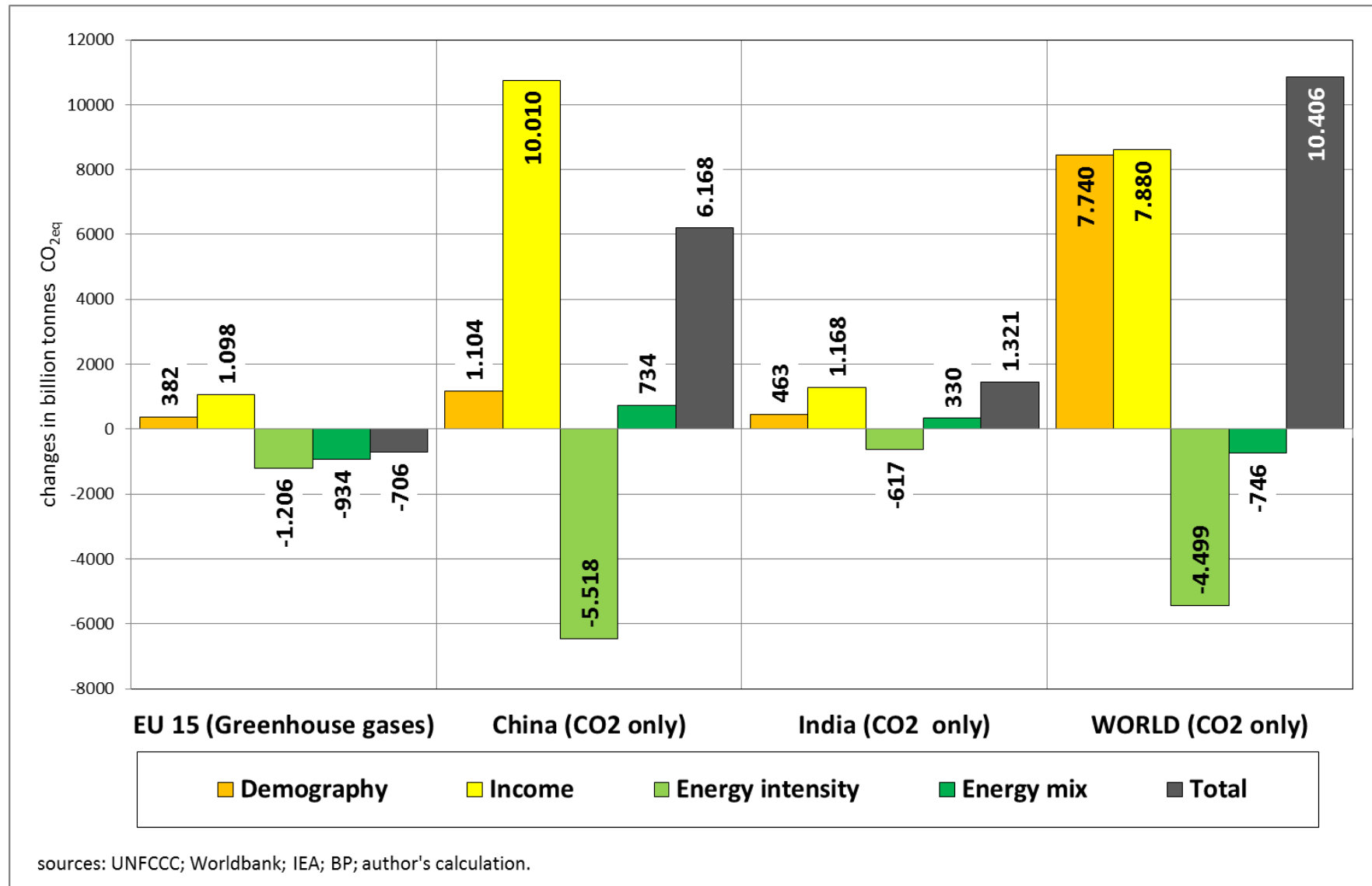


# GHG/CO<sub>2</sub> intensity in Annex I and Non-Annex I countries 1990 - 2014

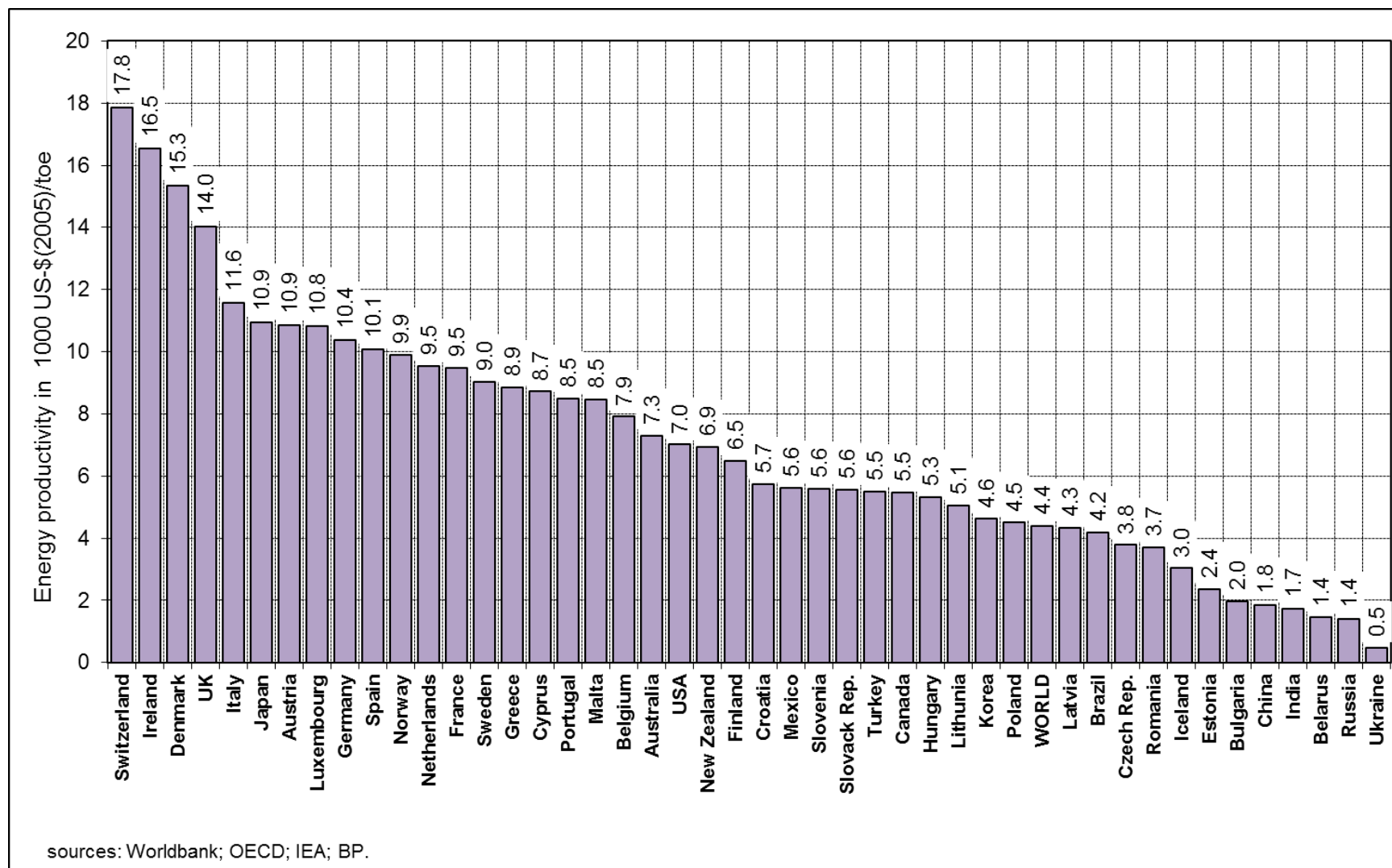




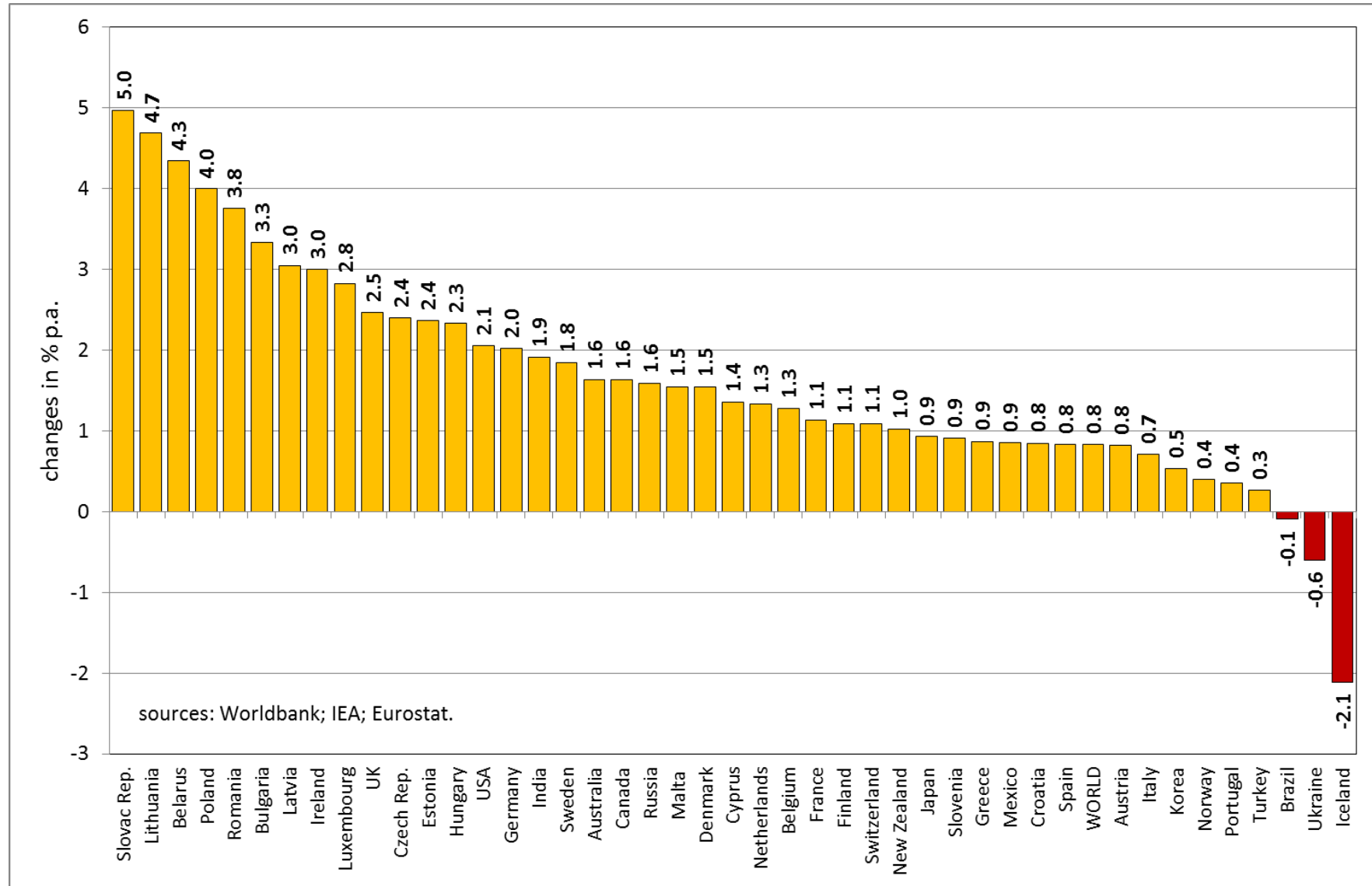
# Components influencing GHG emissions 2014 vs. base year (1990)



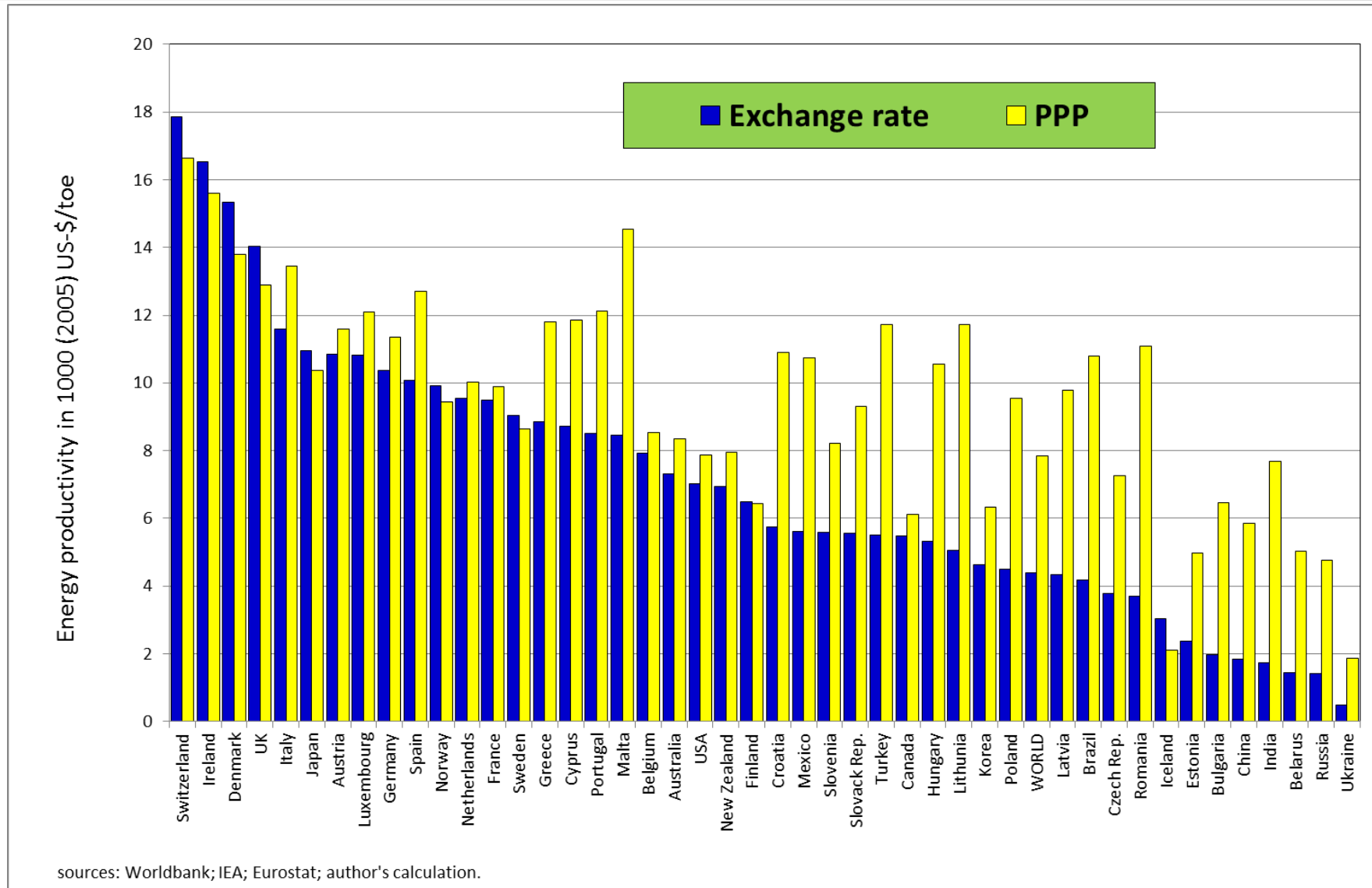
# Energy productivity in selected countries 2014



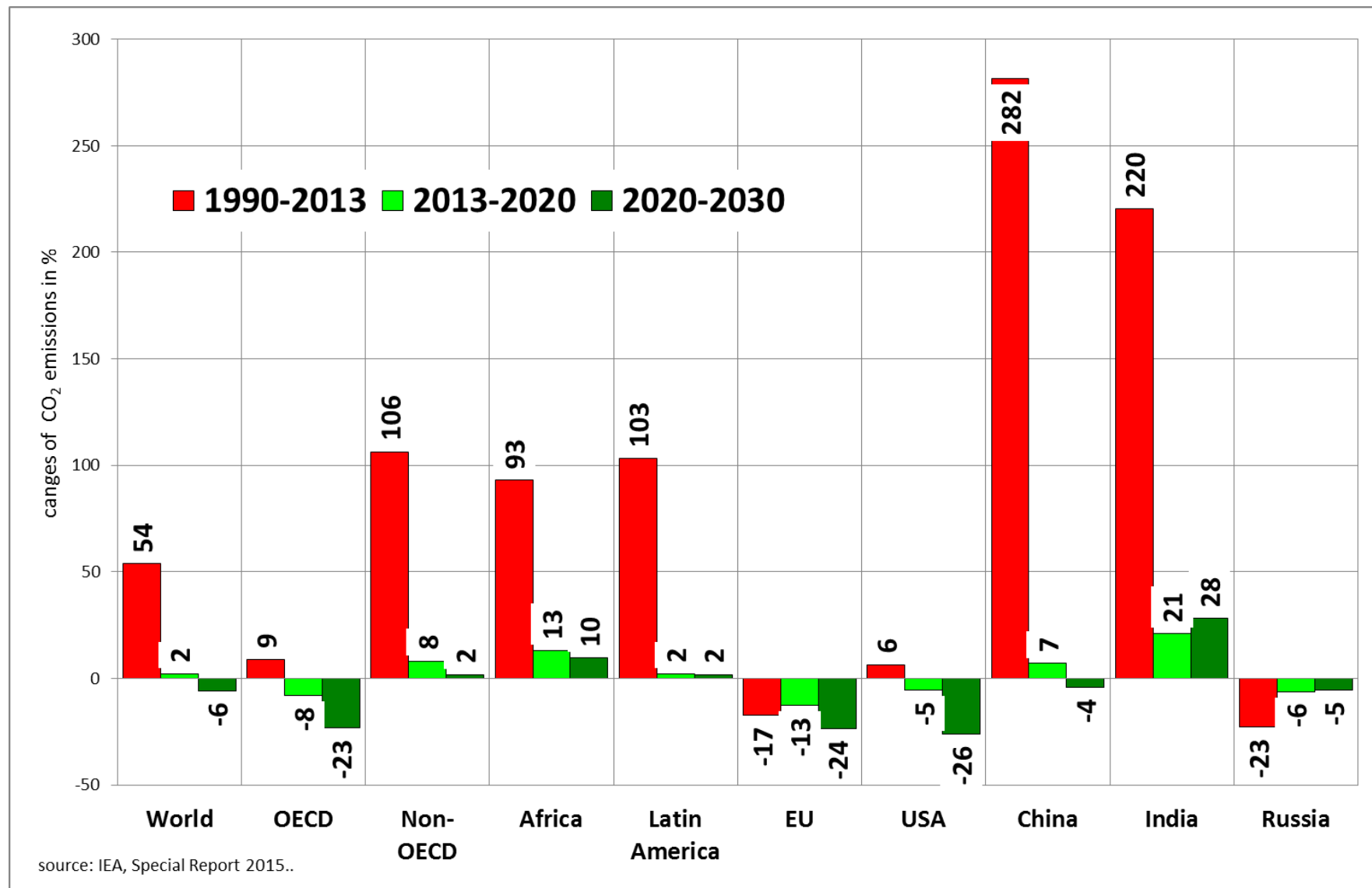
# Changes of energy productivity in selected countries 1990 - 2014



# Energy productivity 1990 – 2014 with different base of calculation :




# Perspective: World-wide CO<sub>2</sub> emissions by countries/regions 2013-2030



## Conclusions – almost the same as all the previous years

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- The discussion mostly concentrates on emissions targets. This is necessary and has to be pursued in the future - **but**
- The real emission's development and their business-as-usual-perspectives should not be neglected.
- The gap between the desired targets and the expected real development can only be filled with an appropriate policy and effective measures for more energy efficiency and renewable energies.
- Targets are necessary but not sufficient: It needs policies and measures. That's the proof for an effective climate protection policy and not only the target setting!



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9/2015 (in German only)

**Thanks for listening**  
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