

A Political Economy of Climate 'Action'

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EPRG-CEEPR Annual Conference

Berlin

2 July, 2018

[Industry Agenda](#)[Future of Energy](#)[Energy](#)[Decarbonizing Energy](#)

We're getting closer to completing the energy transition



Meeting the world's energy needs means ensuring universal access, mitigating climate change and cleaning up air pollution. Image: REUTERS/Ja

18 Jan 2018

Fatih Birol

Executive Director, International Energy Agency

This article is part of the [World Economic Forum Annual Meeting](#)



Some basic principles and harsh truths

- People don't really seem to care about the environment (or at least not any more than they have ever done)
- If someone pays, it should be 'industry'
- 'Climate action' covers a multitude of sins and countries as likely to credit for rhetoric as actually reducing emissions (cf Germany v UK)
- There is no evidence that we have done anything at all to reduce emissions that is distinguishable from the counterfactual ca. 1990
- IPCC scenarios do not account for political economy considerations and although modelers have slightly improved the logic of their scenarios, they don't seem to care (much) about history or inertia



More than nine in ten respondents (94%) say that the protection of the environment is important to them personally, and among these more than half (56%) say it is very important.

The findings have remained broadly consistent over the last ten years, although it can be observed some shifts in the proportions of those describing environmental protection as 'very' rather than

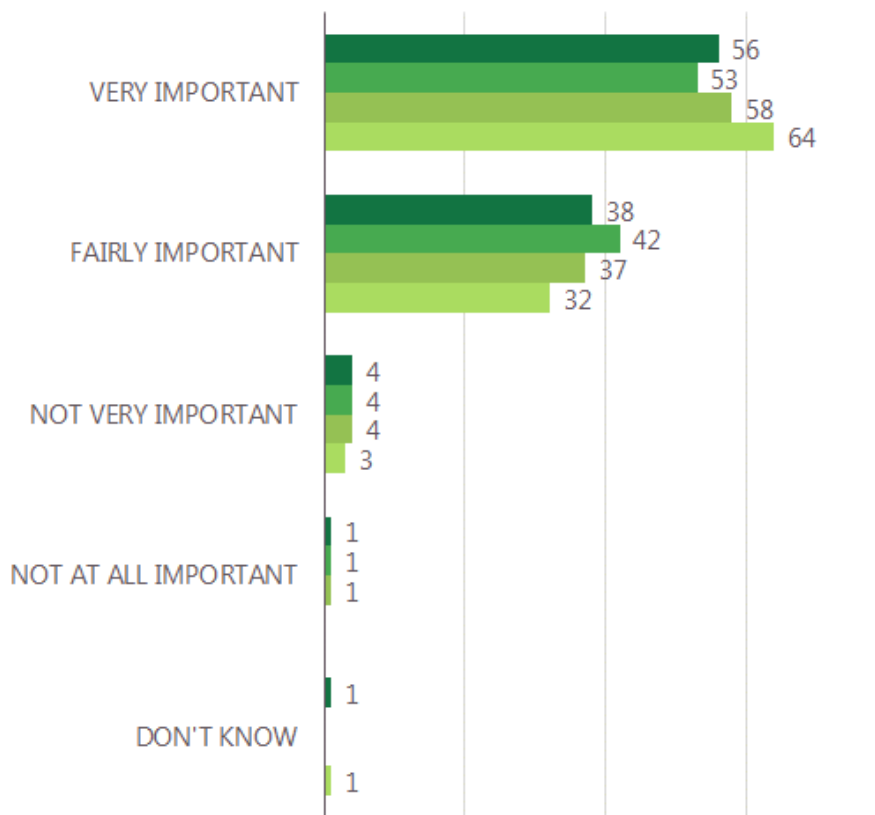
'fairly' important to them. Since the 2014 survey, there has been a slight increase in the proportion of respondents saying it is 'very important' (+3 percentage points) and an almost equal decrease in the proportion saying it is 'fairly important' (-4 pp). This reverses the trend seen between 2007 and 2014, in which the reverse shifts occurred.

Just 5% of respondents do not regard environmental protection as important to them, a proportion unchanged since 2014.

People will always say they care

How important is protecting the environment to you personally?
(% - EU)

■ Sept.-Oct. 2017 ■ Apr.-May 2014 ■ Apr.-May 2011 ■ Nov.-Dec. 2007

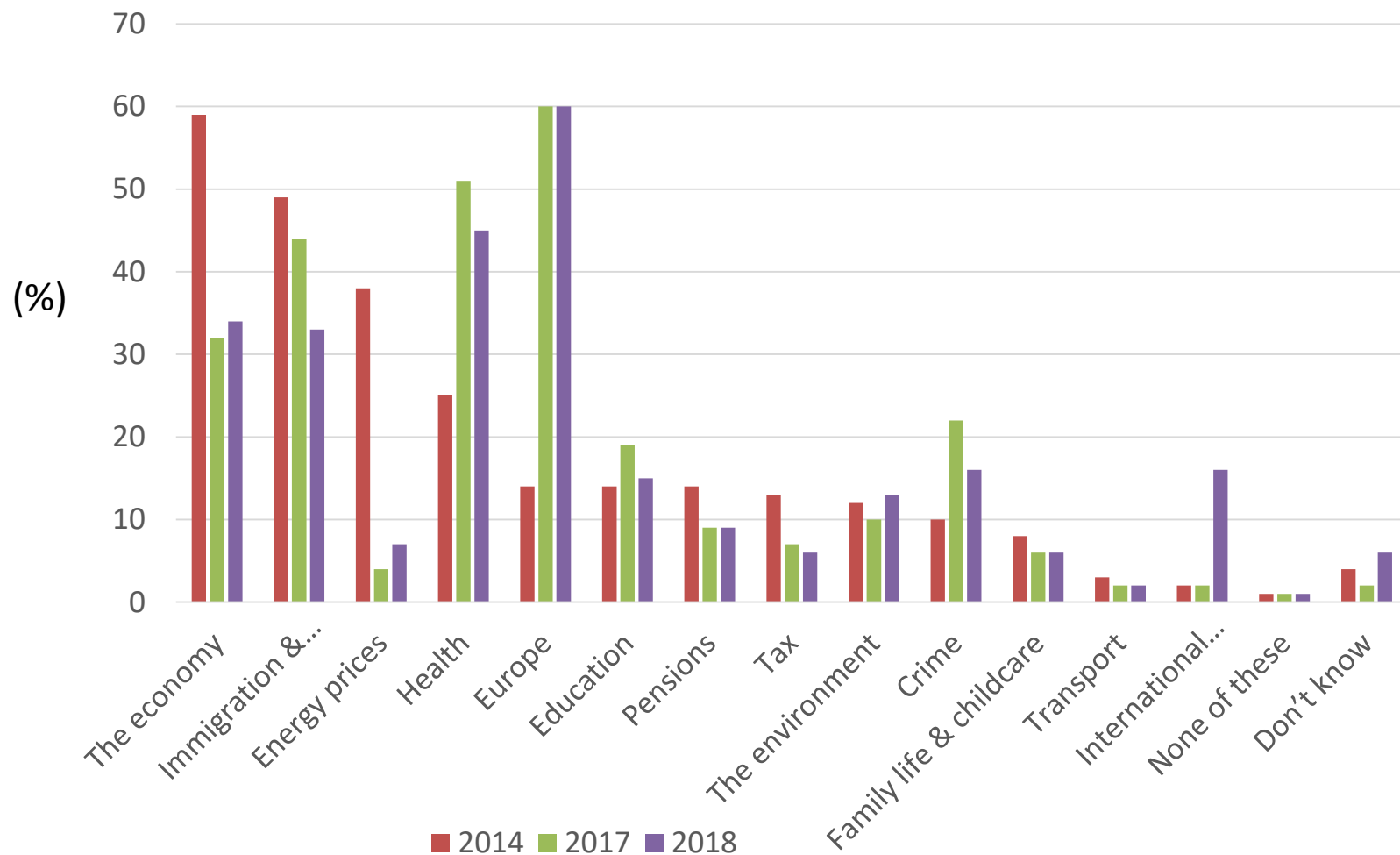


Base: all respondents (n=27,881)

Special Eurobarometer 468, Nov 2017

At national level, the view that protecting the environment is important ranges from 99% in Portugal, Sweden and Cyprus to 85% in Austria and 87% in Denmark and Croatia. There is greater

But environment is low on overall priority list



Most important issues facing the country (select up to three)

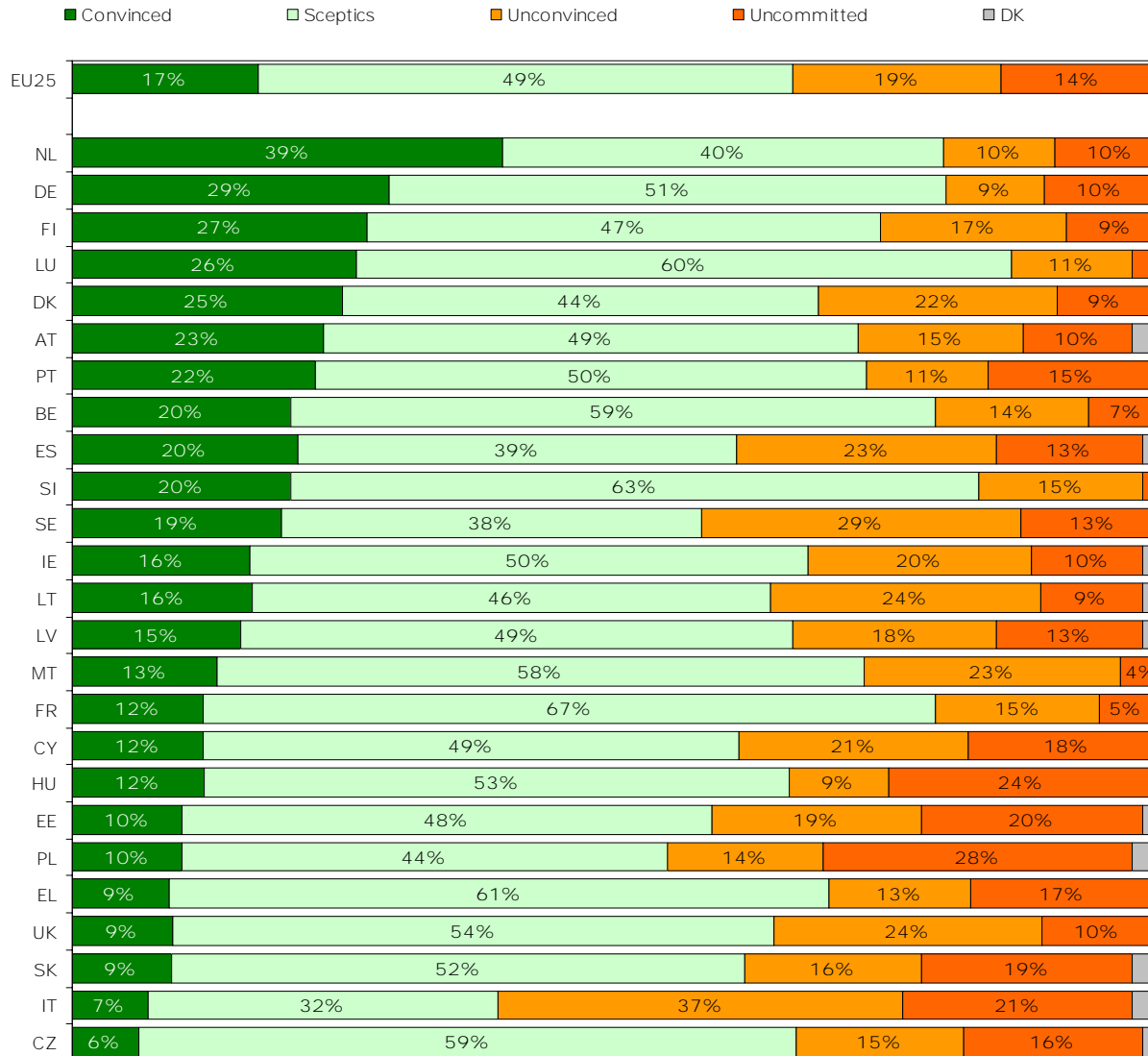


are not doing enough since it would bring them too many disadvantages or because they do not know what to do, will be called 'UNCONVINCED'.

4. Respondents who indicated that they rarely or never make efforts to protect the environment will be called 'UNCOMMITTED'

Few are convinced their own actions matter

Categorisation - % per country



Which statement best reflects your own situation in relation to your effort to take care of the environment

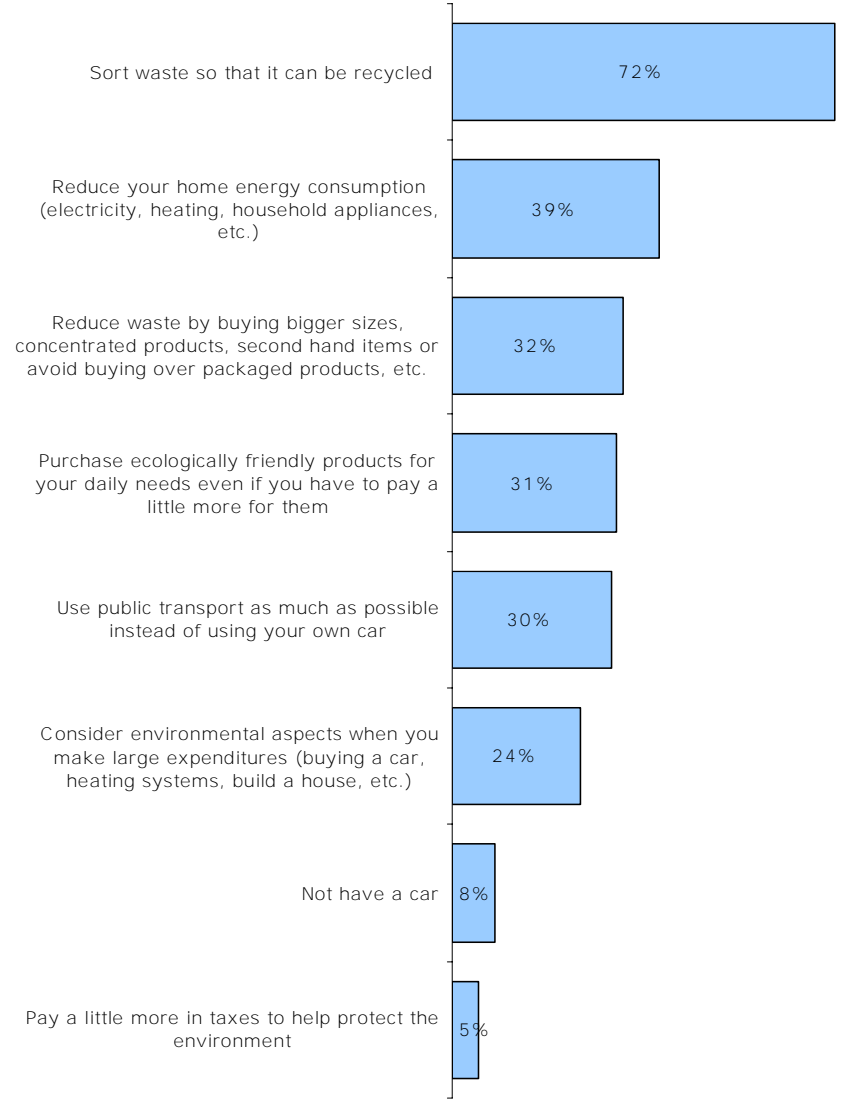
Eurobarometer EBS 217 (2005)



To contribute to the environment, a vast majority of the European citizens (72%) are ready to "sort their waste in order for it to be recycled"²⁹

and most are only willing to do 'easy' things

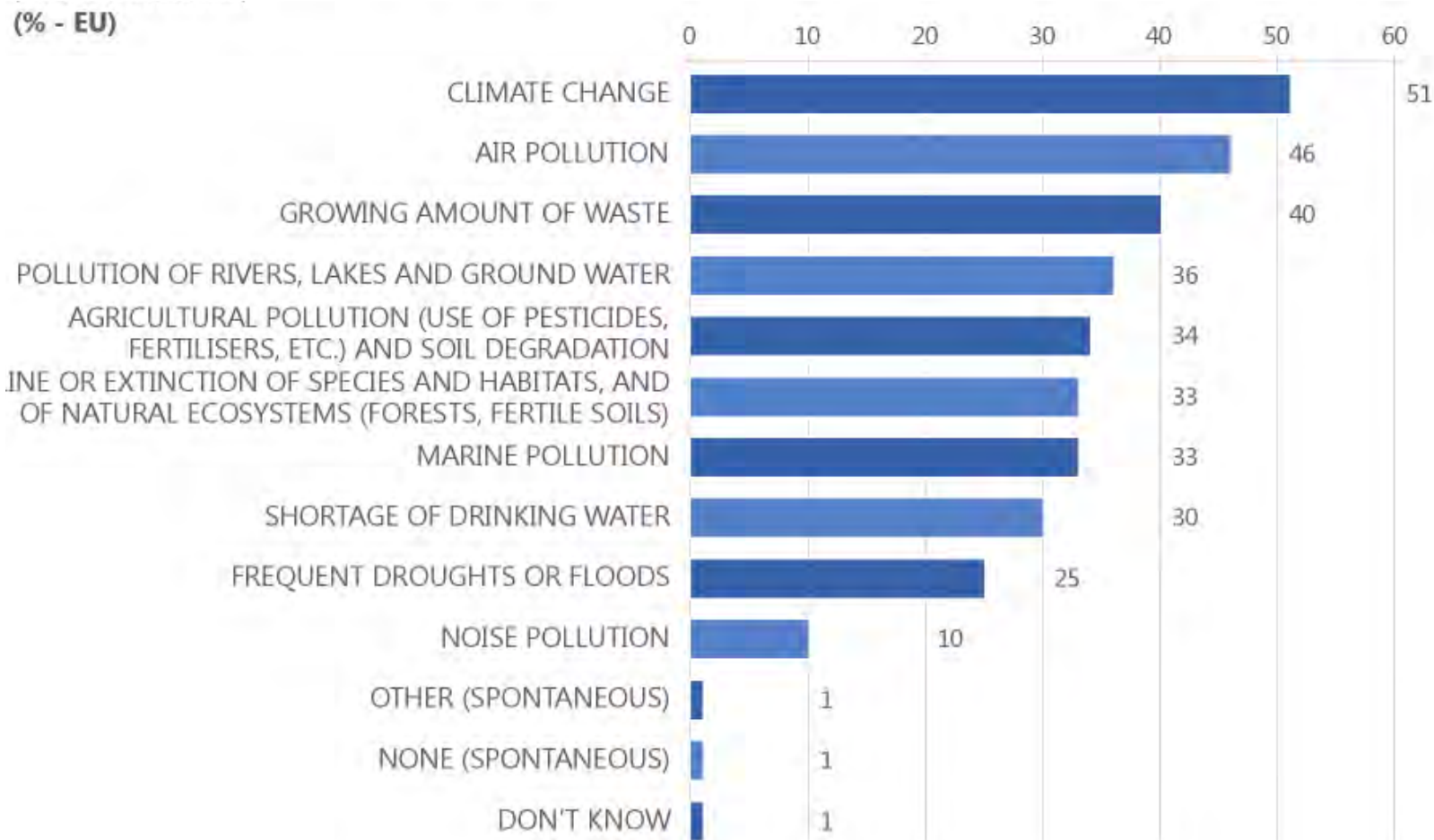
Q16. In order to contribute protecting the environment, which three would you be ready to do first? - UE25



²⁹ Q16. In order to contribute protecting the environment, which three would you be ready to do first?

Three in ten respondents (30%) say that the shortage of drinking water is one of the most important issues, while respondents are less likely to choose frequent droughts or floods (25%) or noise pollution (10%).

Climate is a top environmental priority

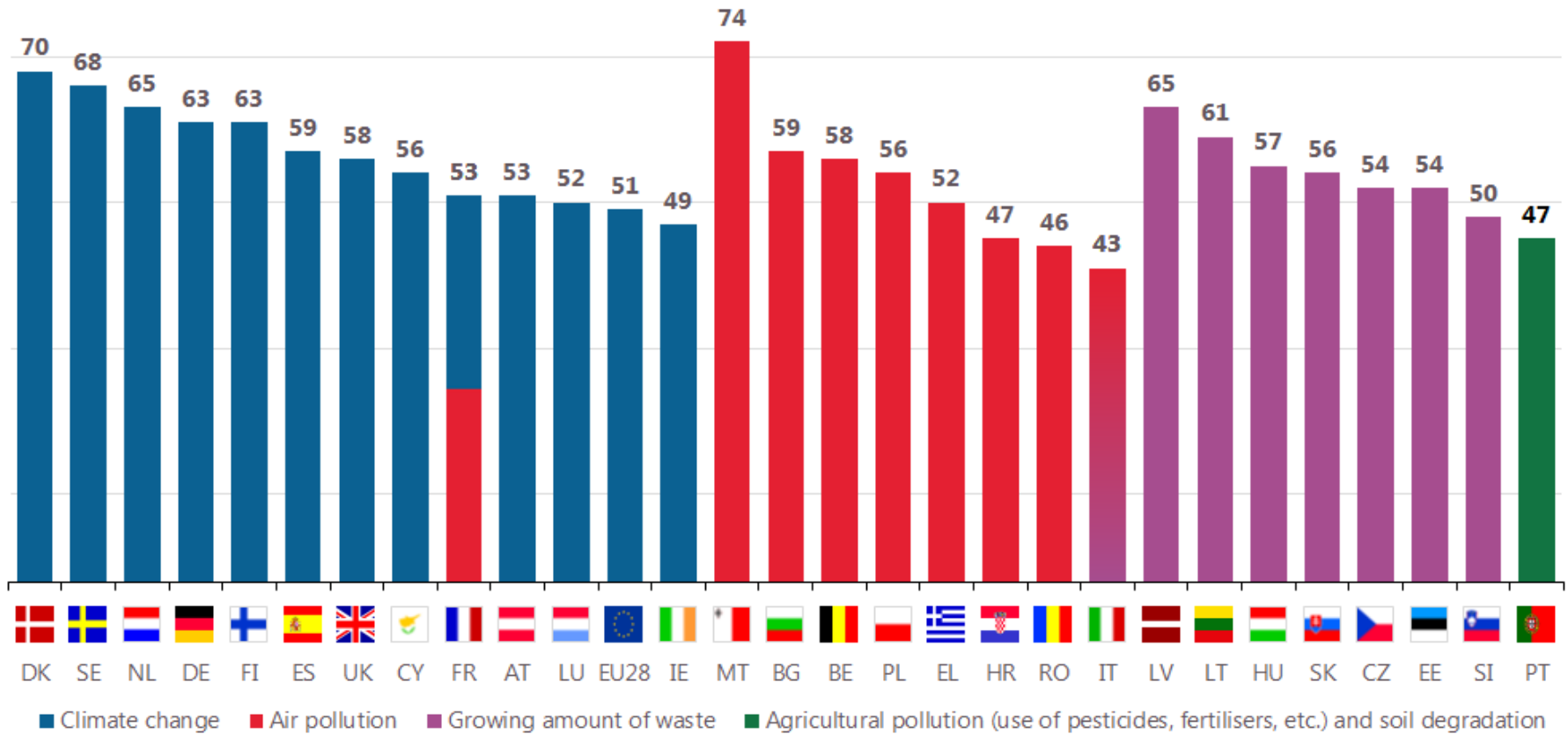


Base: all respondents (n=27,881)

Eurobarometer
EBS 468 (2017)

Top 4 most important environmental issues

But not everywhere...



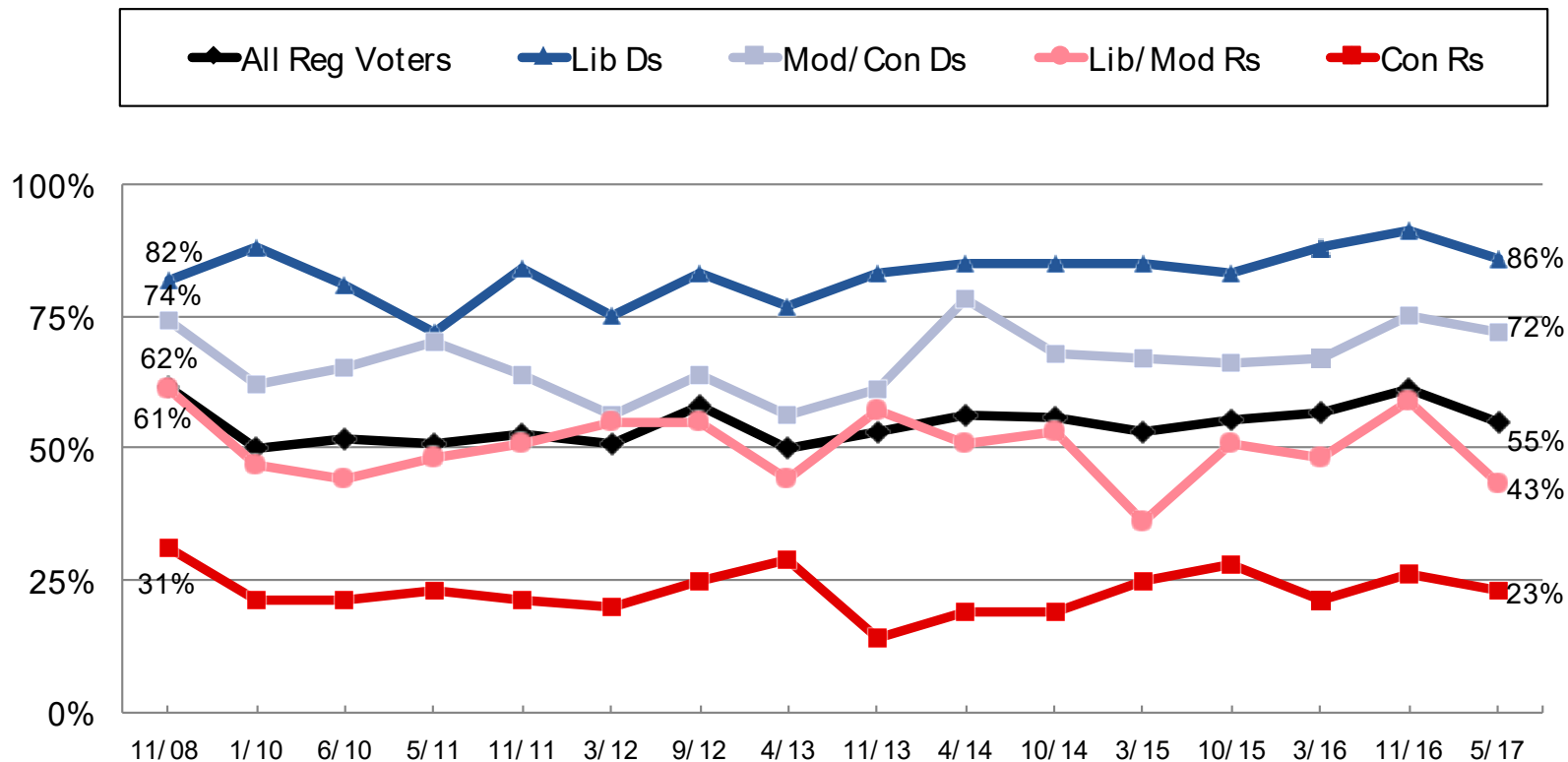
Base: all respondents (n=27,881)

Eurobarometer
EBS 468 (2017)

Most important environmental issue by member state

More Than Half of Registered Voters Are Worried About Global Warming

- % who say "very" or "somewhat" worried -



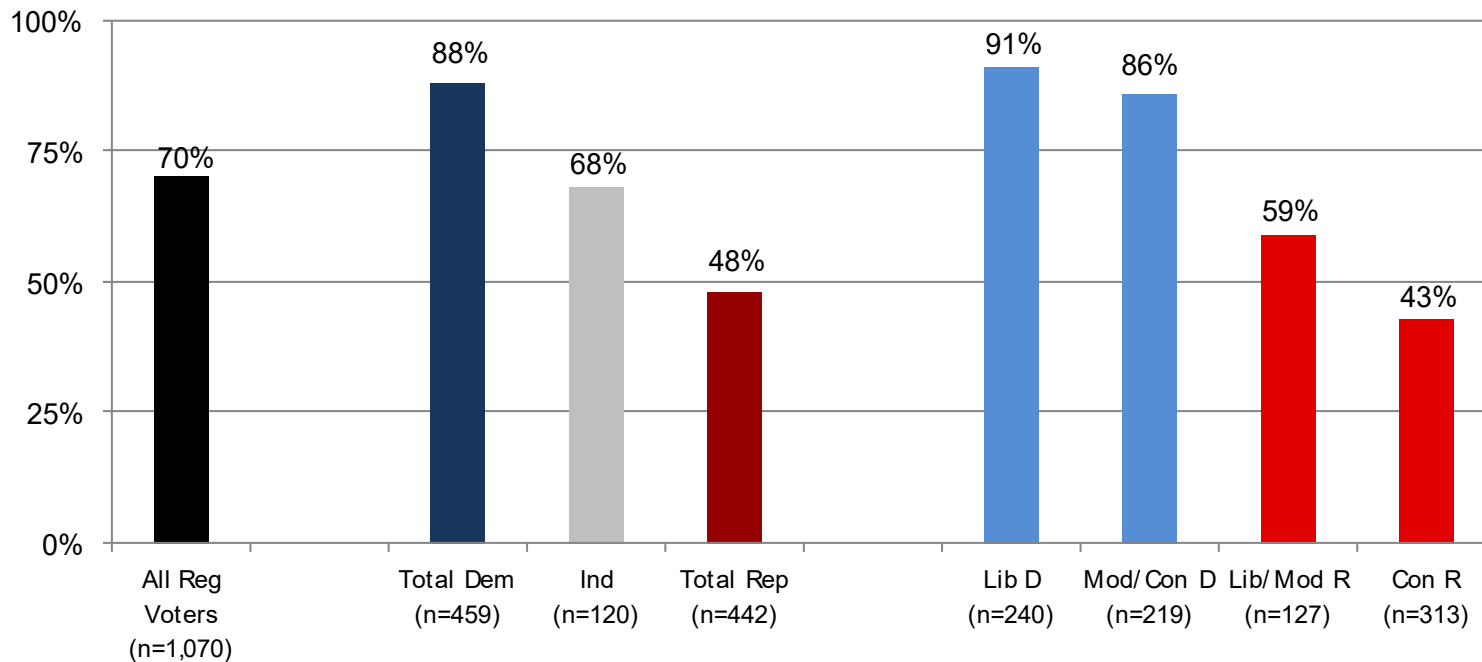
How worried are you about global warming?
 May 2017. Base: Registered American Voters.





Registered Voters, Except Conservative Republicans, Support Requiring Fossil Fuel Companies to Pay a Carbon Tax

- %who “strongly” or “somewhat support” -



How much do you support or oppose the following policy? Require fossil fuel companies to pay a carbon tax and use the money to reduce other taxes (such as income tax) by an equal amount.

May 2017. Base: Registered American Voters.



With some partisan swings

"Do you think the U.S. government is doing too much, too little, or about the right amount in terms of protecting the environment? (Gallup Poll, US n~1000)

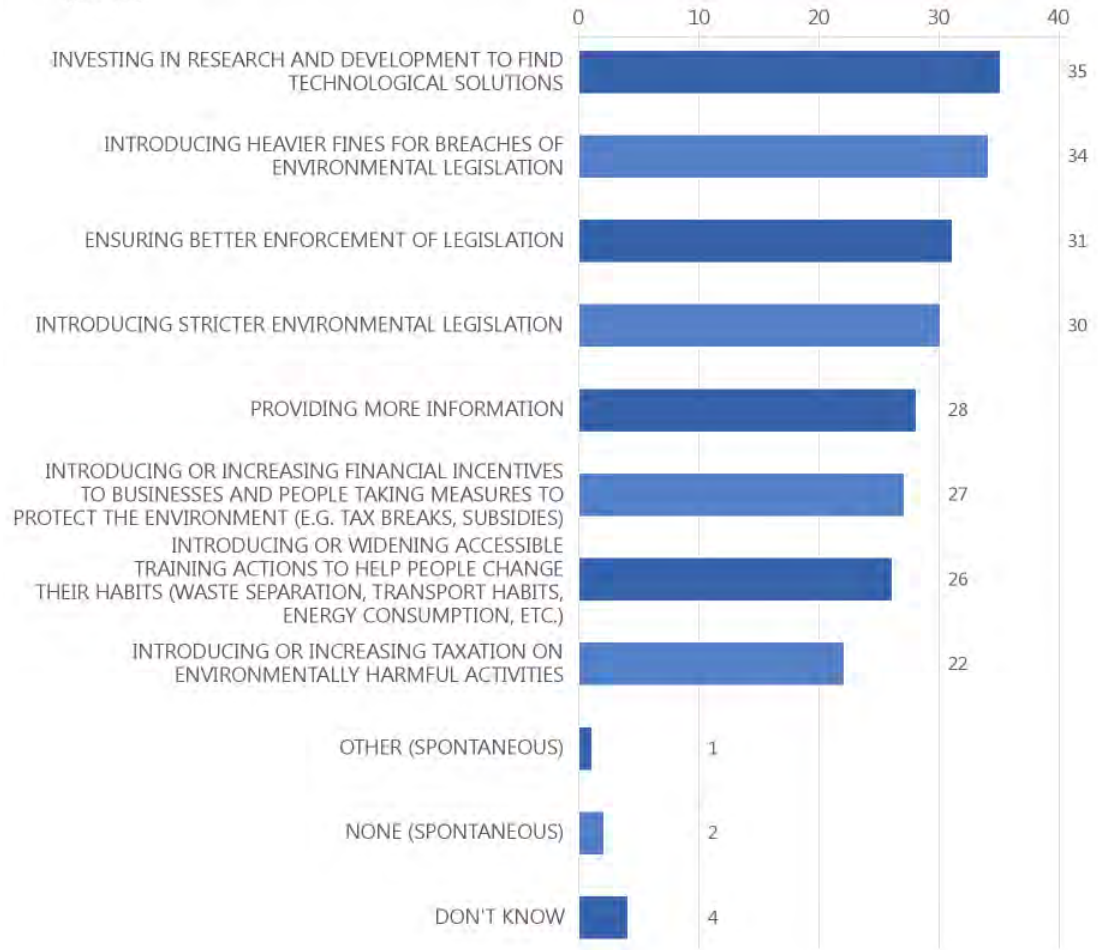
	Too much	Too little	About right	Unsure
Mar-18	9	62	28	1
Mar-13	16	47	35	2
Mar-12	17	51	30	2
Mar-11	16	49	33	2
Mar-10	15	46	35	4
Mar-06	4	62	33	1
Mar-05	5	58	34	3
Mar-04	5	55	37	3
Mar-03	7	51	37	5
Apr-00	10	58	30	2
Feb-92	4	68	26	2



The two most mentioned measures as potentially effective in tackling environmental problems are investing in research and development to find technological solutions (35%) and introducing heavier fines for breaches of environmental legislation (34%). These are closely followed by two other measures combined with legislation: ensuring better enforcement of legislation (31%) and introducing stricter environmental legislation (30%).

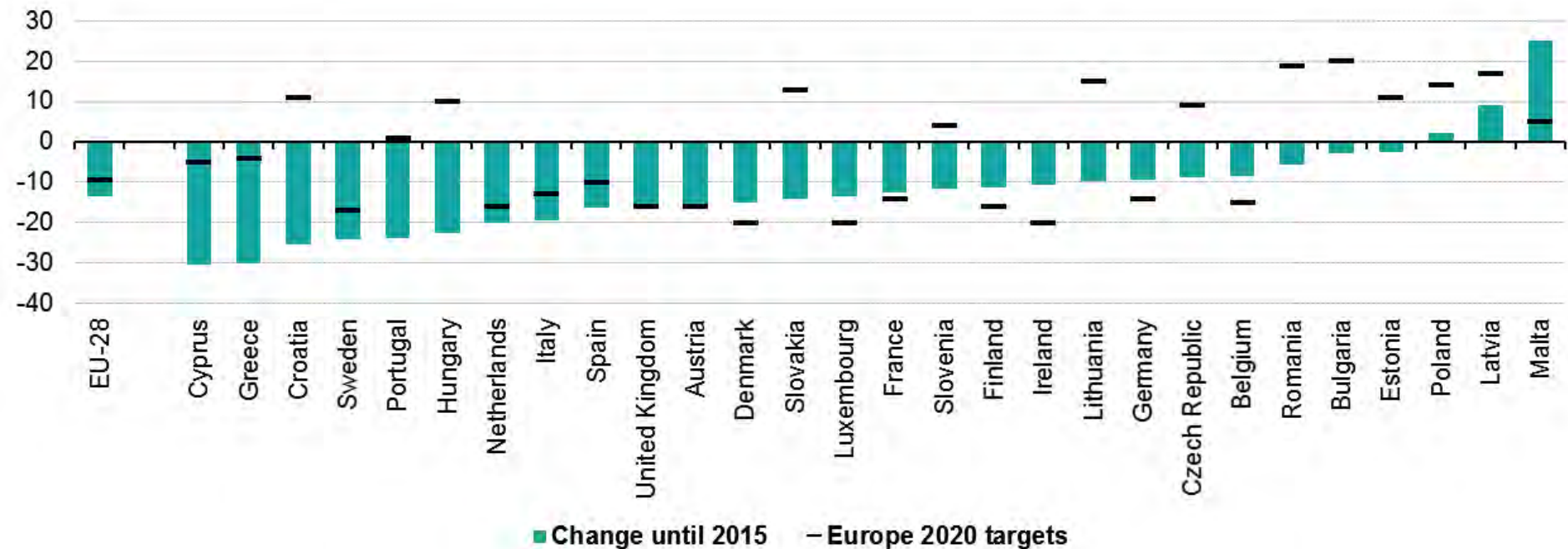
Strong preferences for R&D and action on industry

QD8 In your opinion, which of the following would be the most effective ways of tackling environmental problems? (MAX. 3 ANSWERS) (% - EU)



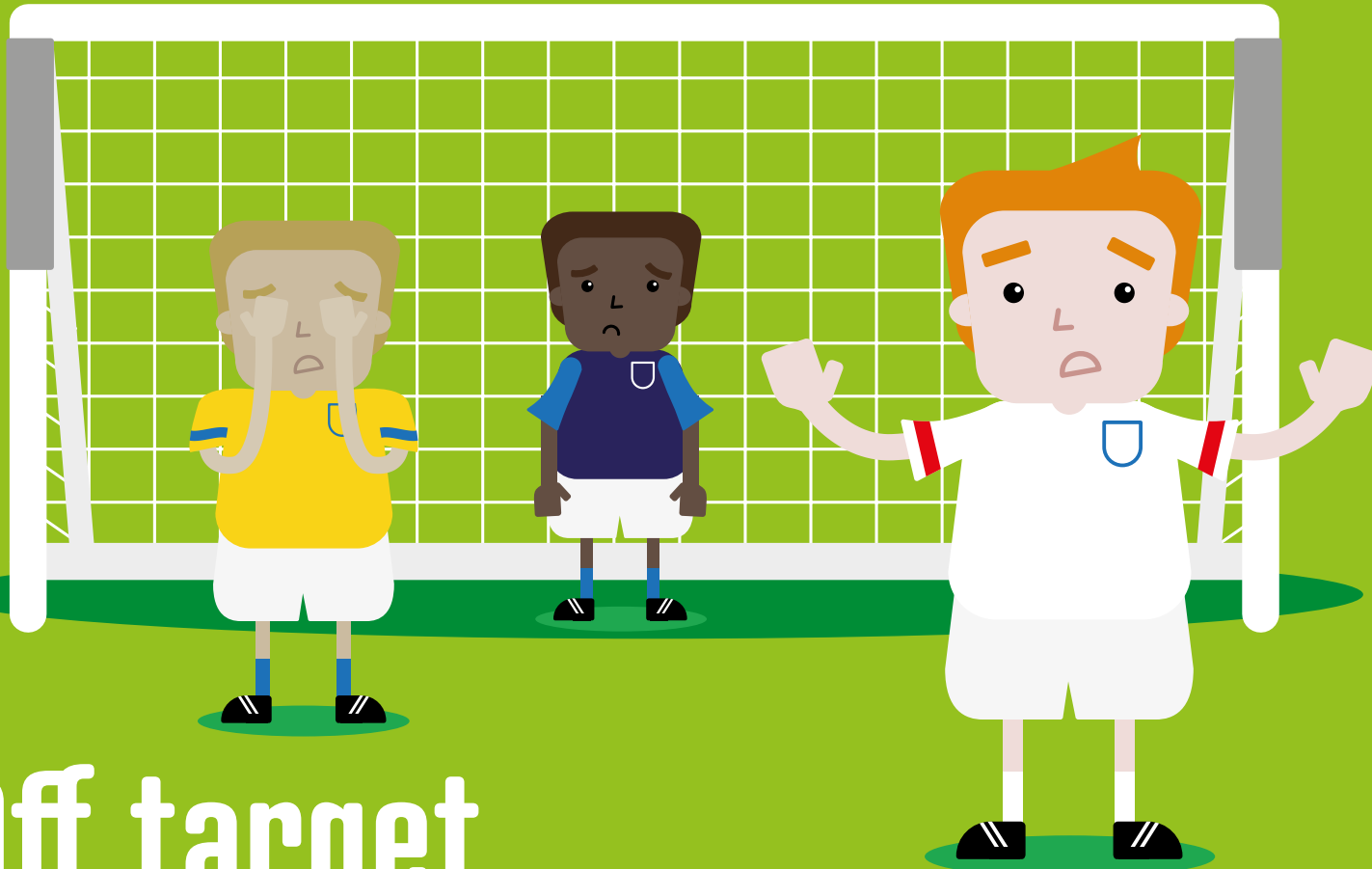
Base: all respondents (n=27,881)

Competing Views of 'Success'



Note: Total emissions, excluding emissions covered by the Emissions Trading Scheme (ETS).

CAN Europe, Off target: Ranking of EU countries' ambition and progress in fighting climate change, June 2018

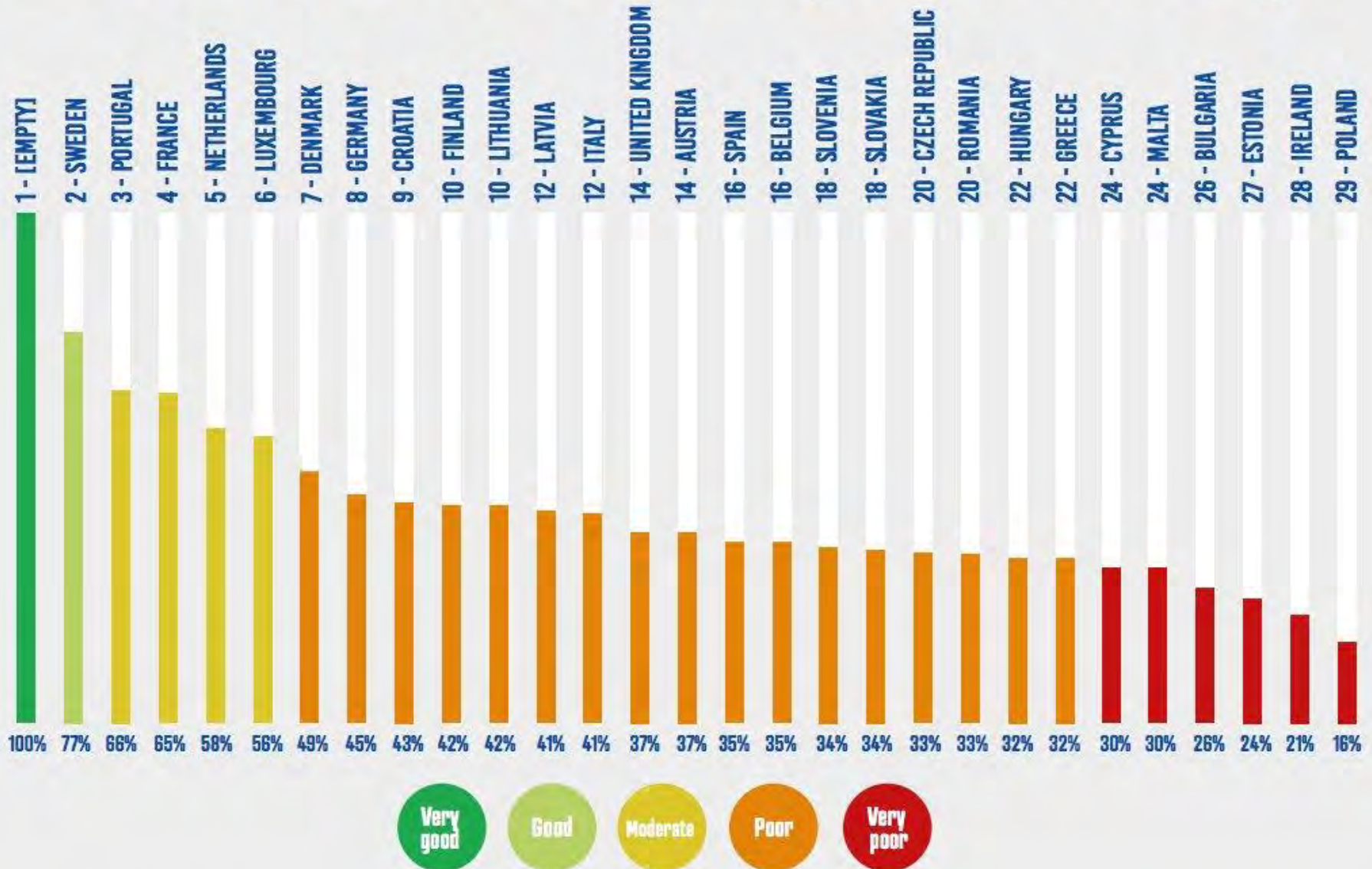


Off target

Ranking of EU countries' ambition and progress in fighting climate change



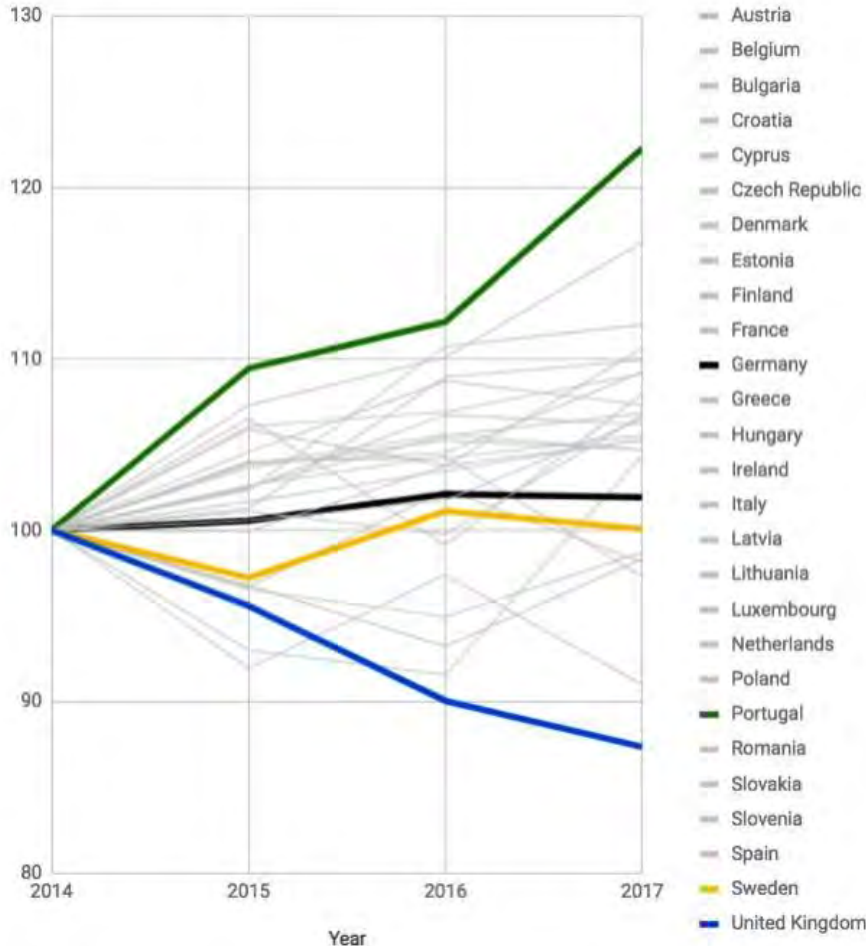
Where do EU countries stand on fighting climate change?



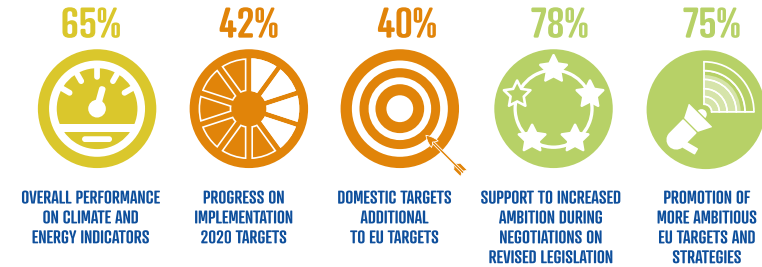
NGO view versus Atmosphere's View

EU CO2 emissions trends since 2014

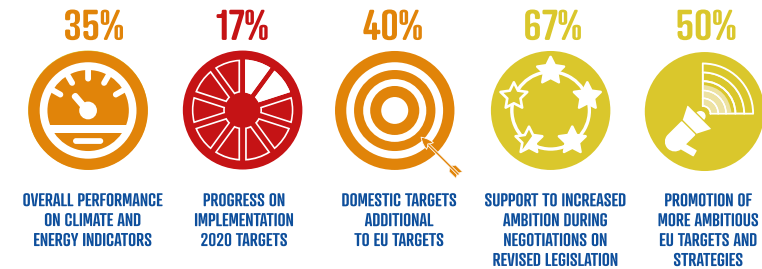
Source: BP statistical review



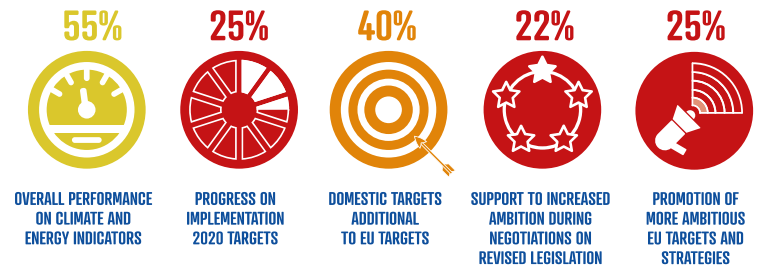
Portugal - 3rd



Germany - 8th



United Kingdom - 14th

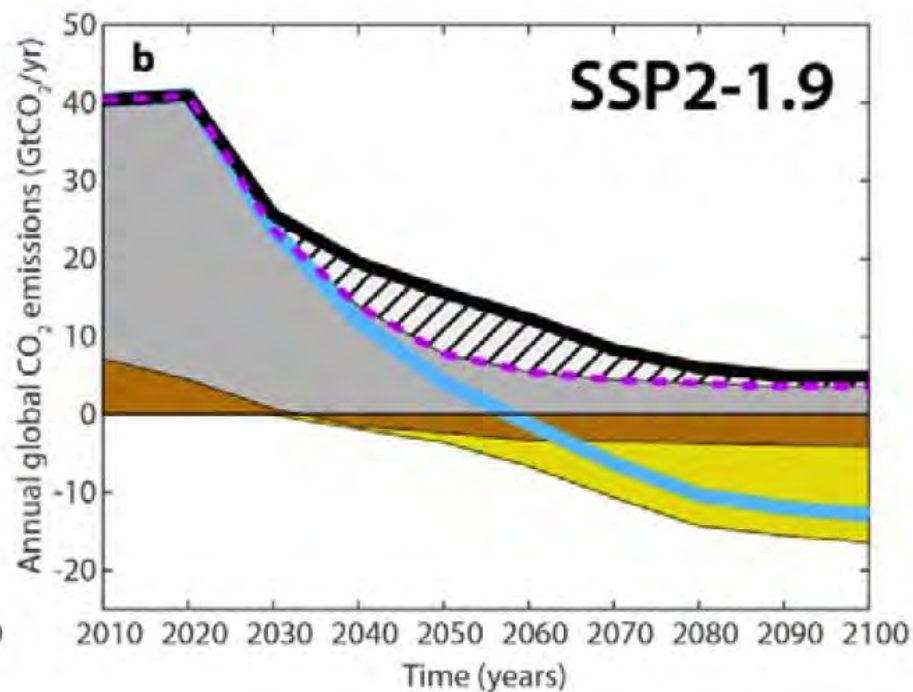
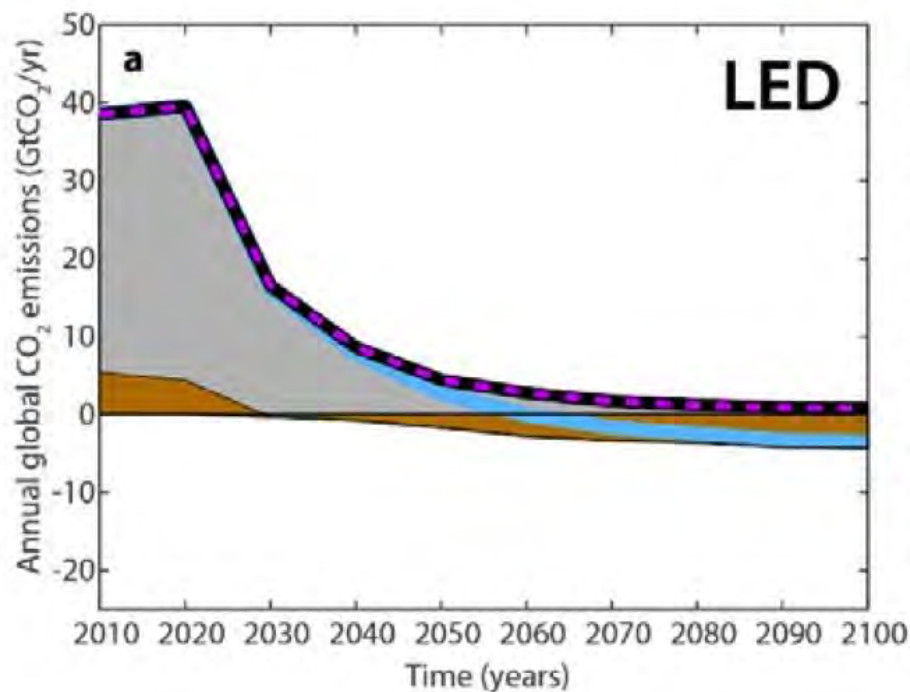
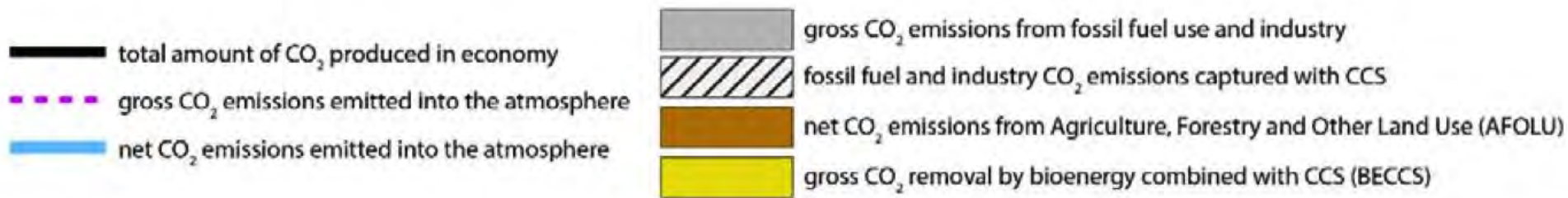




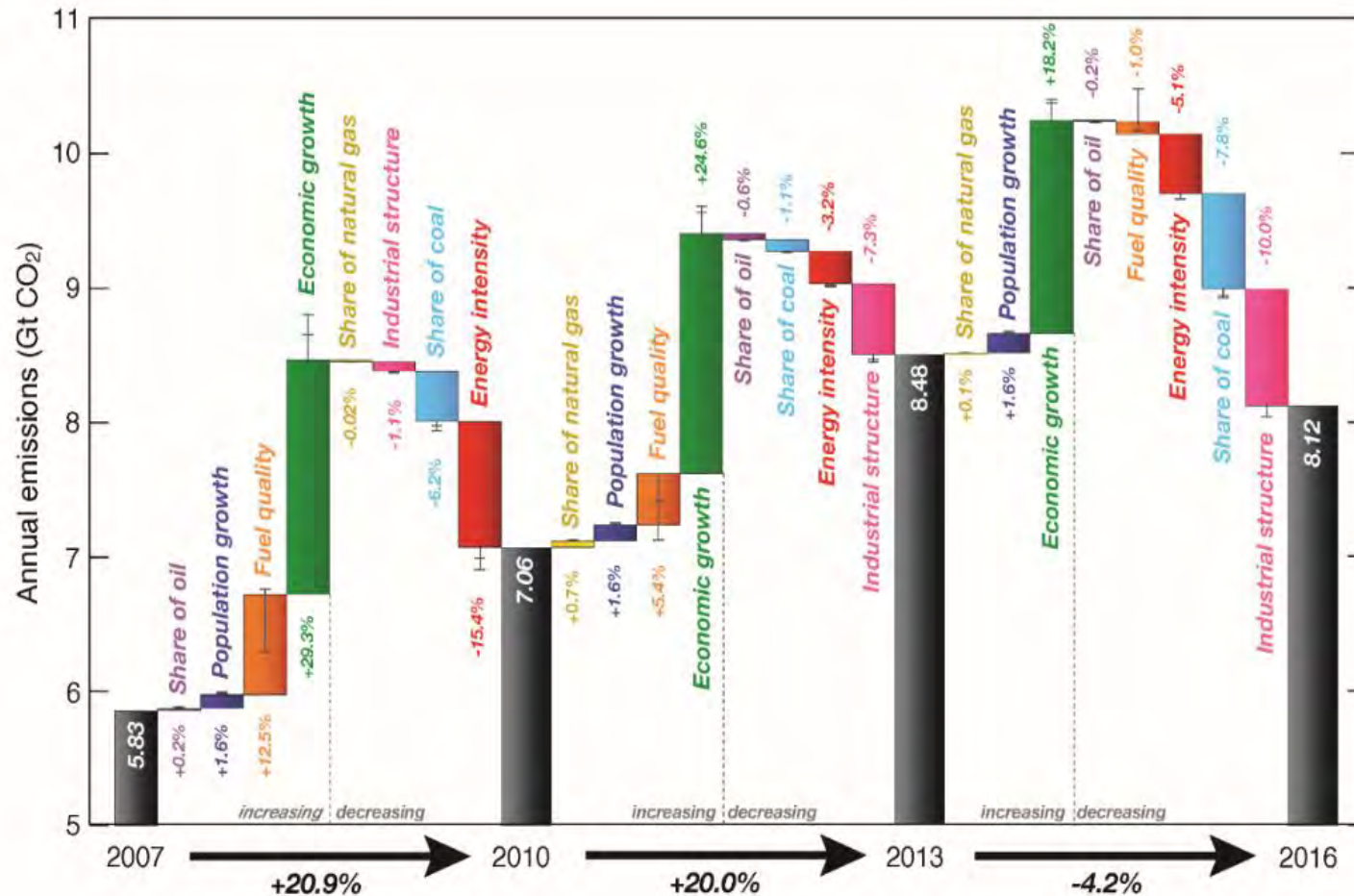
Historical Trends vs IPCC Scenarios

- Five new socio-economic pathways (SSPs) have been introduced by IPCC to try to reflect a slightly greater awareness of future pathways
- Much of the focus since the Paris Agreement have focused on the prospects for meeting a 1.5 °C target
- Increasingly historically disconnected exercises in trends:
 - CO2 emissions
 - Vegetarianism
 - Energy efficiency
 - Carbon pricing
 - Demand response
- There is a clear tension emerging between imaginary technologies and unimaginable changes in society

Examples of the dramatic changes envisioned



Versus Reality of Changing Emissions Trajectories



D. Guan et al (in press), Drivers of China's CO₂ emissions 2007-2016, *Nature Geoscience*

Shared Socio-Economic Pathways (SSPs)

- Update on previous set of socio-economic scenarios (SRES, 2000)

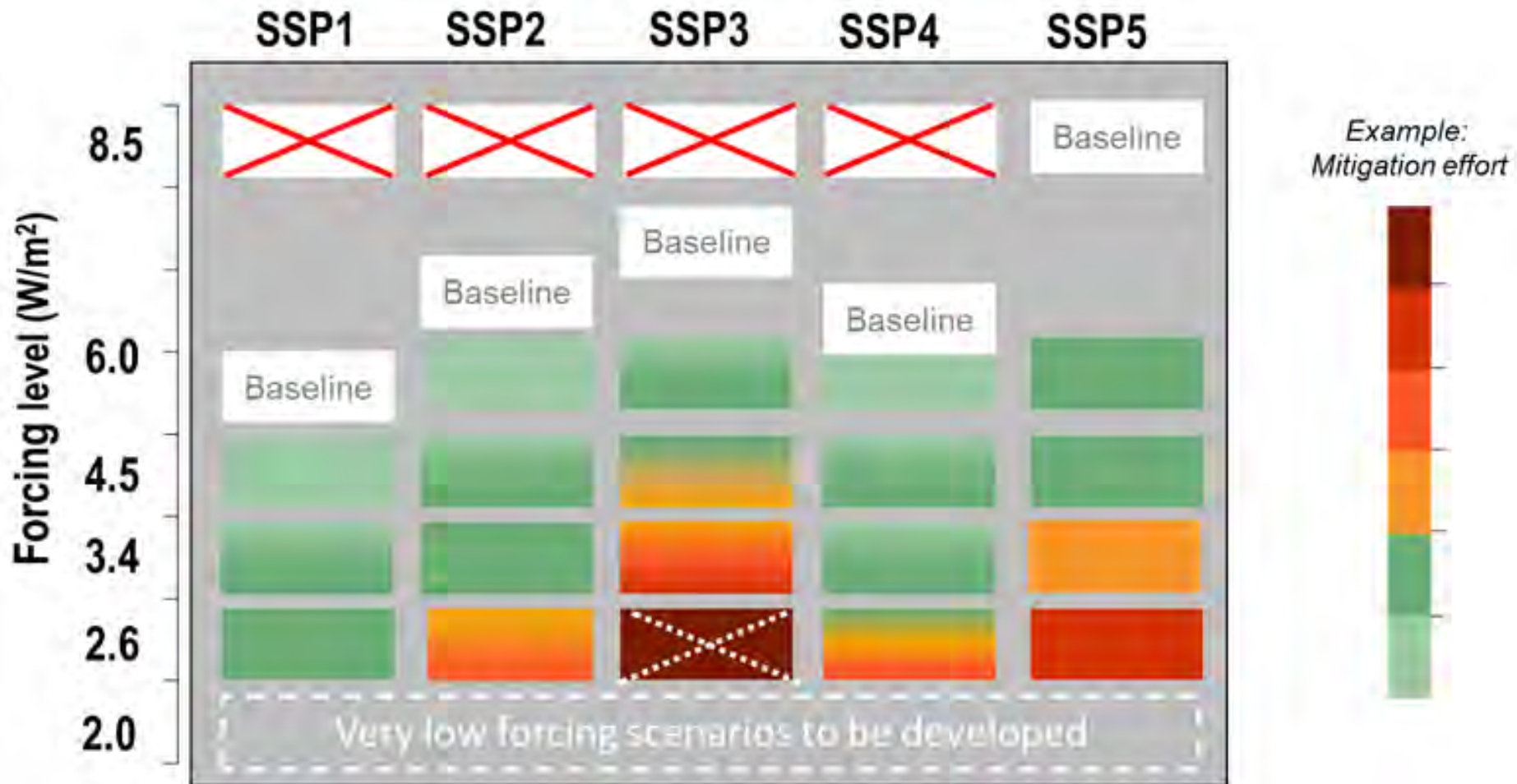
Seeks to set out more logically consistent scenarios (e.g., on air pollutants)

Still, the mitigation scenarios don't differentiate between plausibility of effort under different SSPs

Highest pop growth
Lowest GDP
Trade wars, etc



Relationship between SSP and RCP





Evidence of SSP5?

Newspaper of the Year

FINANCIAL TIMES

MONDAY 2 JULY 2018

WORLD BUSINESS NEWSPAPER

EUROPE

Nobel intentions

Prize-giving foundation on coping with controversy — HOW TO LEAD, PAGE 20

Crypto cowboys

How ranch owners are beefing up the supply chain — BIG READ, PAGE 7



Ghost candidates

Bad behaviour from fed-up job hunters — PILITA CLARK, PAGE 12

Frontrunner stirs up voters in Mexico polls

Andrés Manuel López Obrador, the presidential frontrunner, was among the first to vote yesterday at a polling station in Mexico City, where he used to be mayor.

The anti-establishment candidate, who has galvanised voters furious with graft scandals and terrified by a record murder rate, had signalled his confidence by flashing a victory sign.

Mexicans look set to deliver an unequivocal victory to the leftist nationalist — at least if polls prove correct.

With 18,299 federal, state and local posts being decided, including the presidency, these are the biggest elections in Mexican history. More than 100 candidates and politicians have been murdered during the campaign.



Alfredo Estrada/AP/Getty Images

Trump car tariffs threaten to spark full-scale trade war, warns Brussels

◆ President's threat spreads EU alarm ◆ Trade partners target \$300bn of US products

Briefing

► **German crisis deepens over migration**
Berlin's interior minister has rejected the migration deal Angela Merkel negotiated at last week's EU summit, increasing the likelihood of a break-up of Germany's governing conservative bloc. — PAGE 3

► **Renminbi fall sparks currency war fears**
China's currency suffered its largest monthly fall against the dollar in June, sparking concern that Beijing is prepared to use devaluation as a weapon in an escalating trade war with the US. — PAGE 12

► **Salvini seeks European populist alliance**
Matteo Salvini, Italy's deputy prime minister, has said next year's European elections are a chance to create an anti-elitist "international alliance of populists". — PAGE 3, WOLFGANG MÜNCHAU, PAGE 9

► **US presses Riyadh to lift oil production**
Donald Trump has urged Saudi Arabia to ramp up its crude output by up to 2m barrels a day in order to offset falling supplies from Venezuela and Iran, highlighting US concern over rising oil prices. — PAGE 2

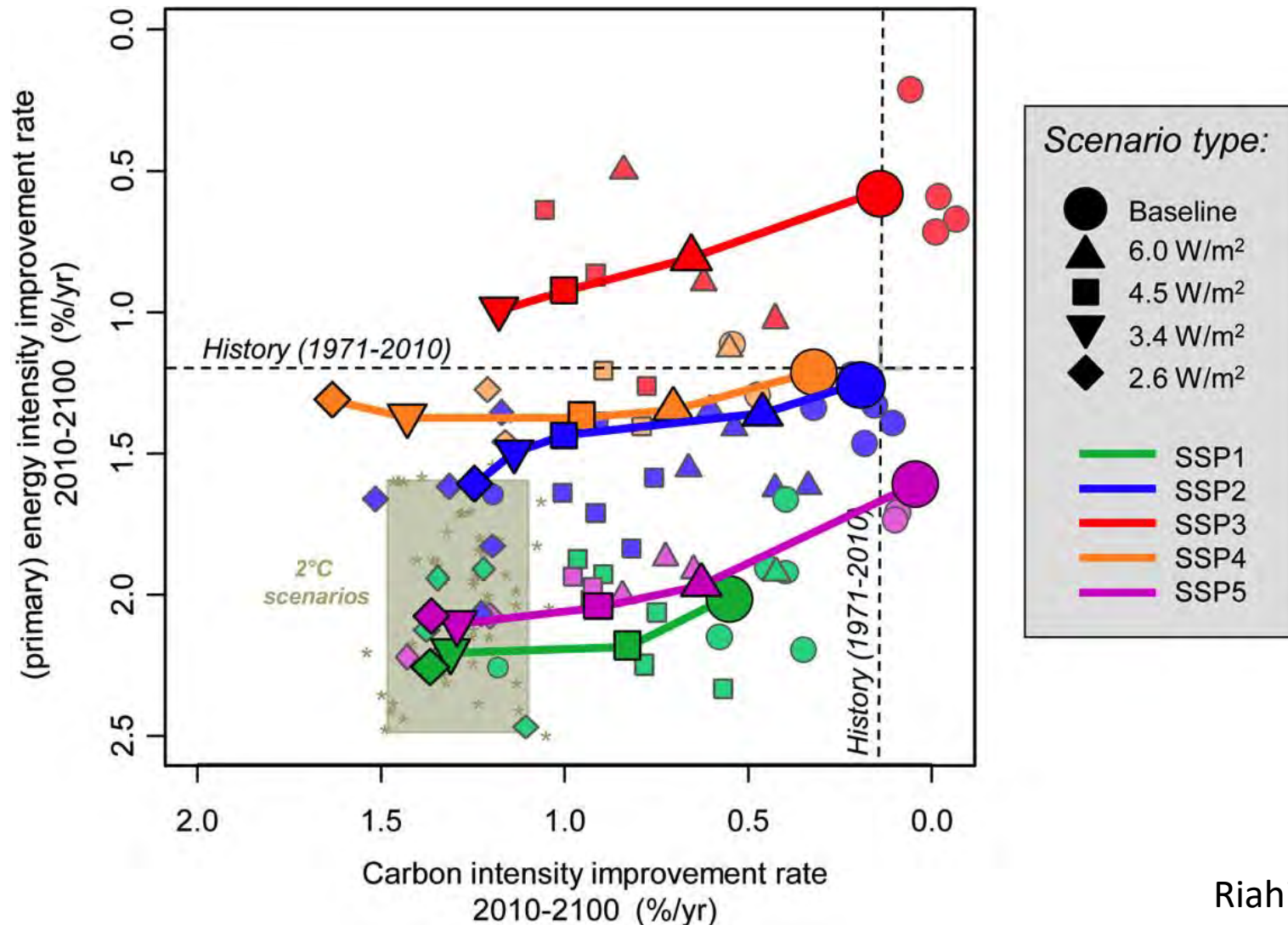


► **China's answer to SoftBank Vision Fund**
China Merchants Group is teaming up with a London-based firm to launch a Rmb100bn (\$15bn) technology investment fund, aiming to be China's answer to SoftBank's \$100bn Vision Fund. — PAGE 11

► **Buffett gains as banks sail through tests**
Warren Buffett's Berkshire Hathaway is set to net \$1.7bn in dividends after Wells Fargo and other banks sailed through the Fed's stress tests. — PAGE 11

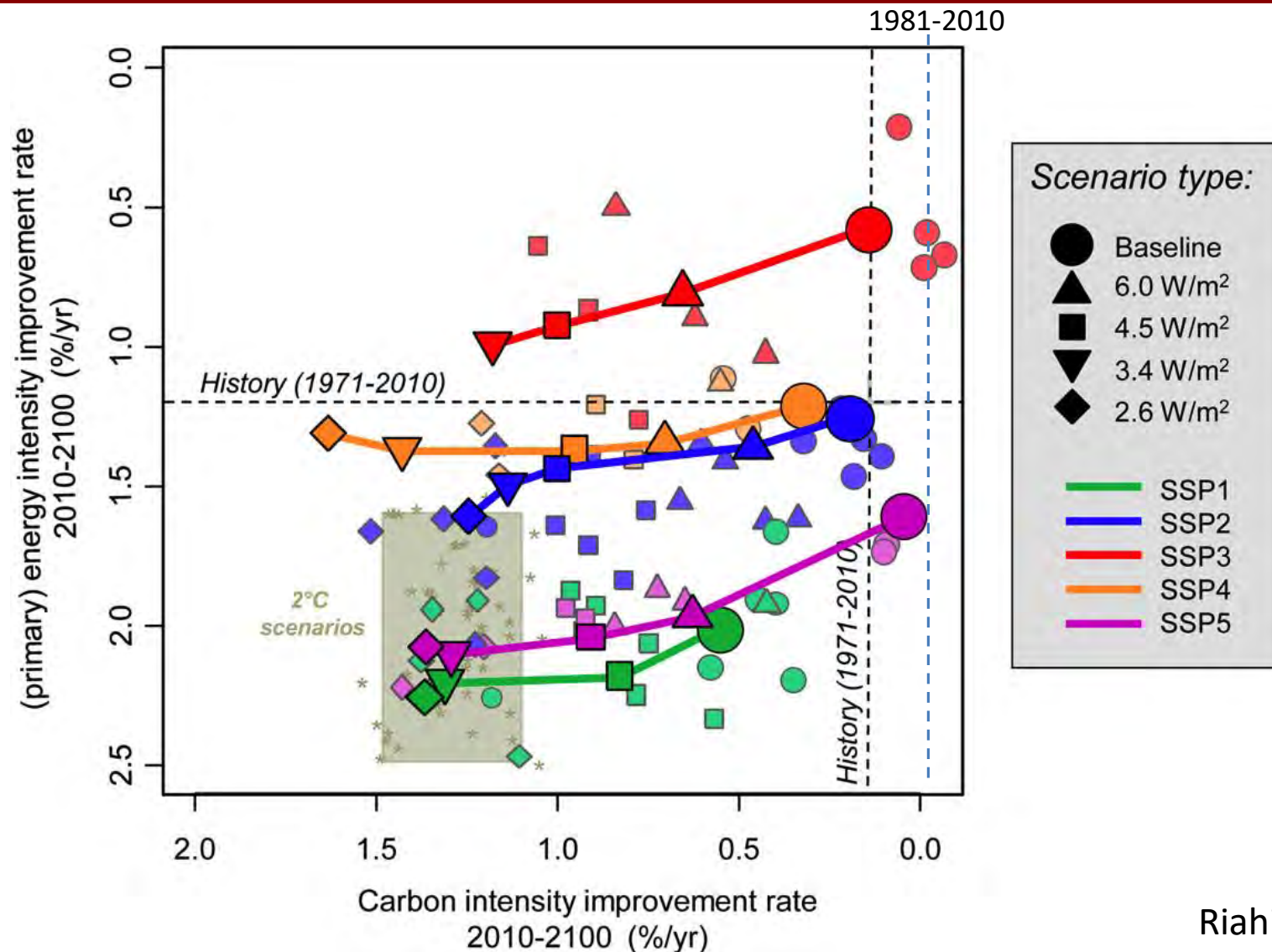
► **Beijing's Balkans push spurs EU anxiety**
China has lavished investment pledges on Balkan states as it prepares for a summit with 16 EU countries and critics warn of a "stakeout" in the region.

Energy and Carbon Intensity Improvements



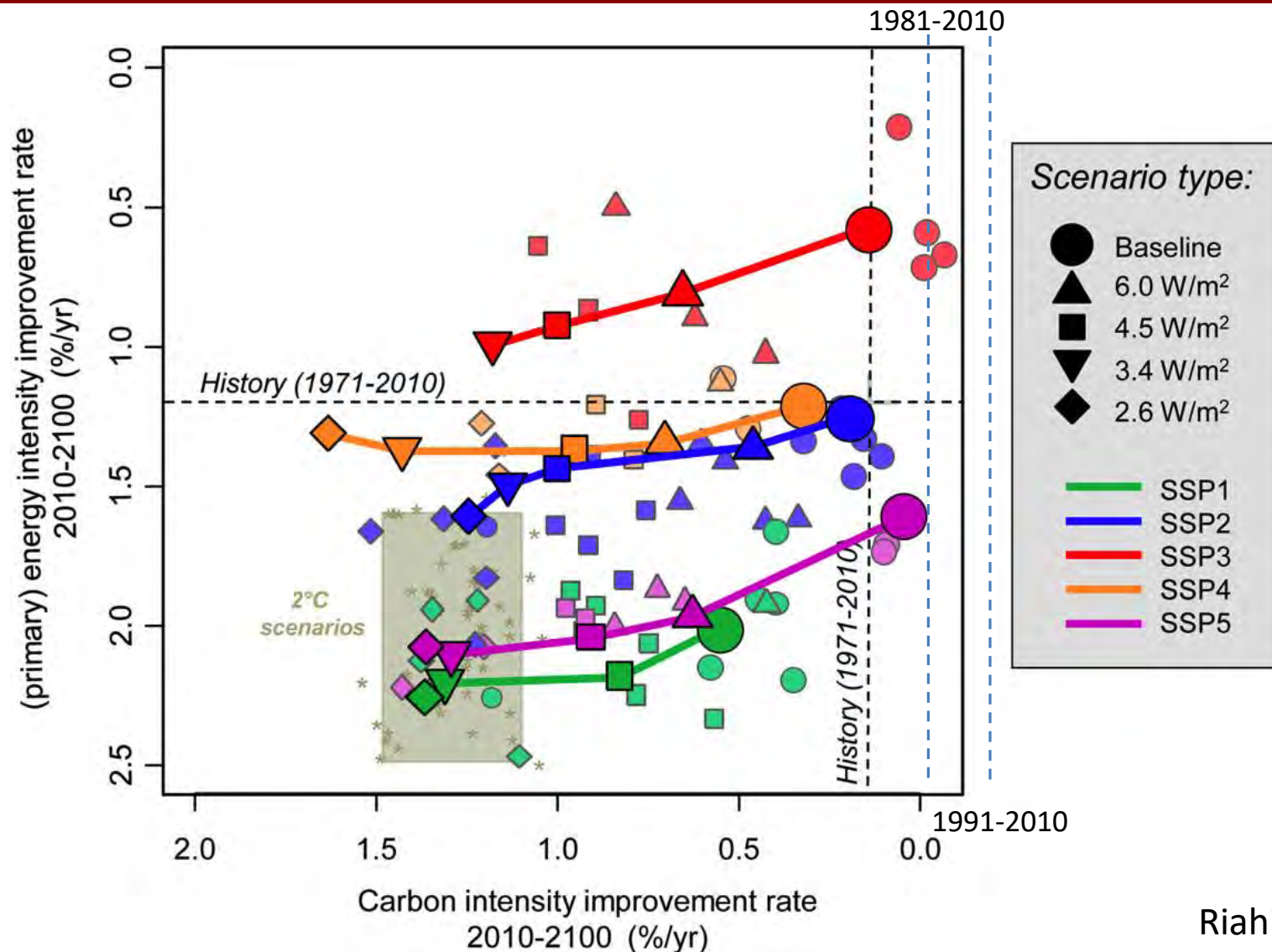
Riahi et al (2017)

Energy and Carbon Intensity Improvements



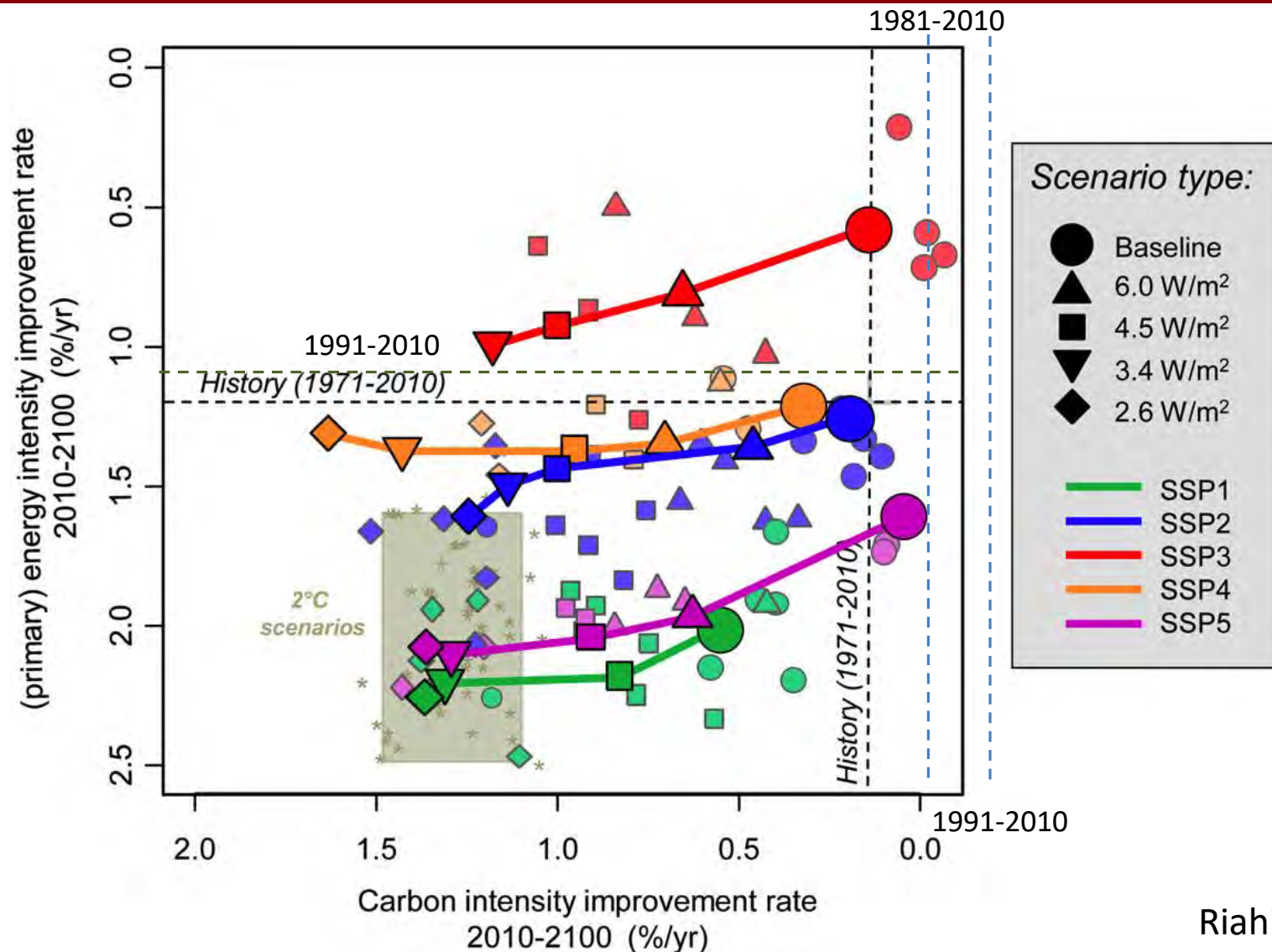
Riahi et al (2017)

Energy and Carbon Intensity Improvements



Riahi et al (2017)

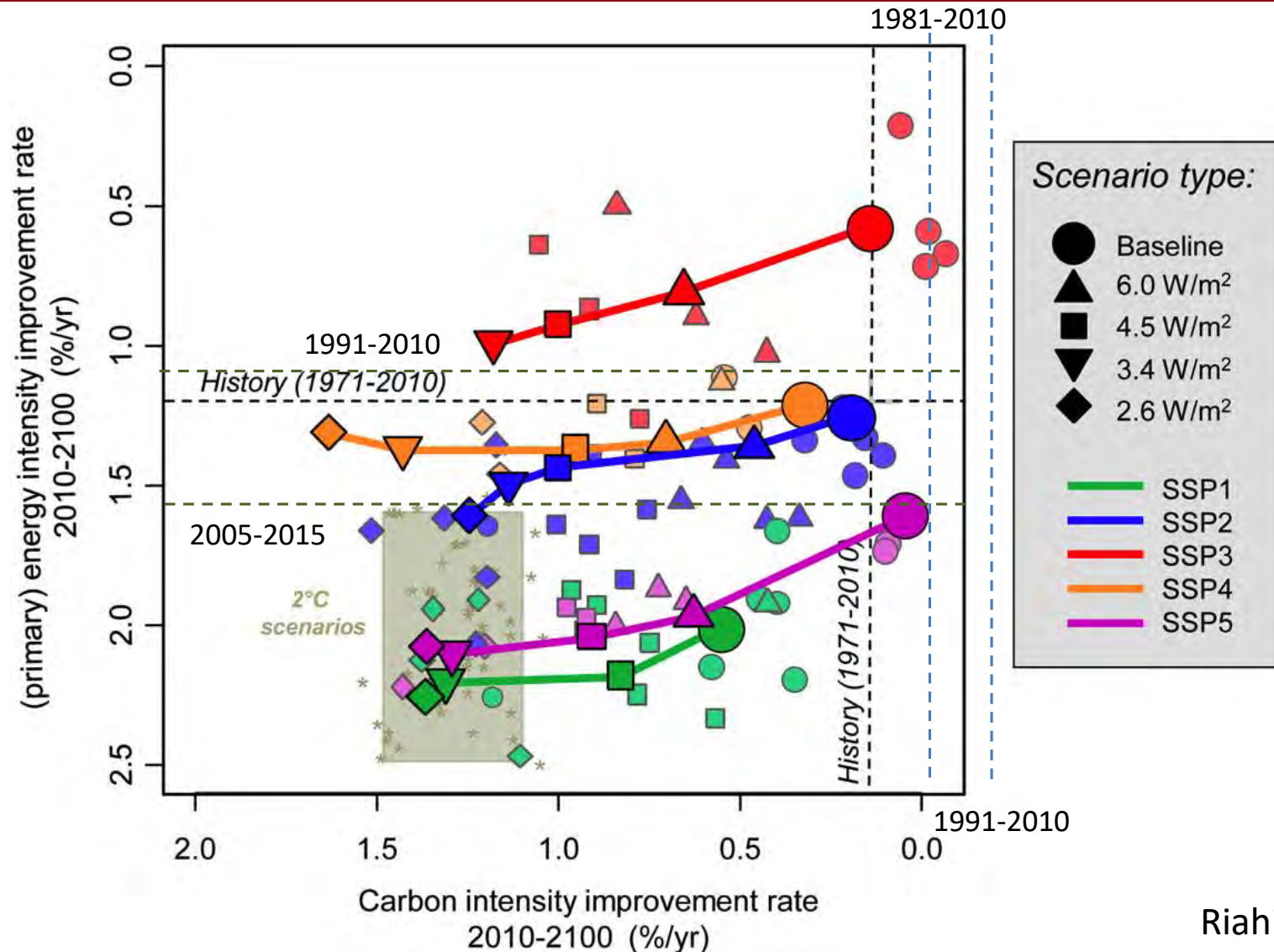
Energy and Carbon Intensity Improvements



Riahi et al (2017)



Energy and Carbon Intensity Improvements

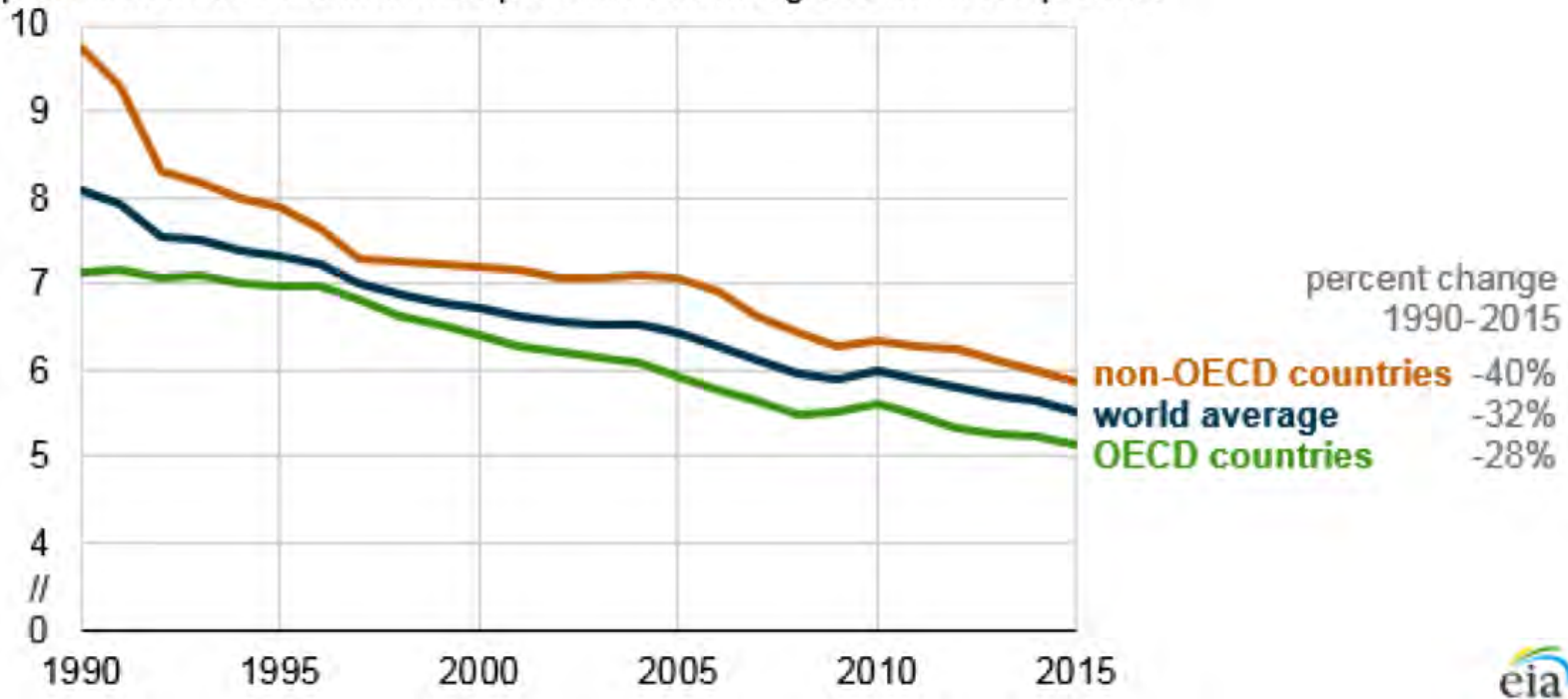


Riahi et al (2017)

Actual changes in energy intensity

World energy intensity, 1990-2015

quadrillion British thermal units per trillion dollars gross domestic product



EIA (2016)

<https://www.eia.gov/todayinenergy/detail.php?id=27032>

If improvement *had been* 2% over 1990-2015 then world energy intensity would be almost half current levels!



Final Thoughts

- Climate action and the energy transition mean very different things to different people and is not simply a question of GHG trajectories
- In response to the diversity of pressures and the lack of accountability, politicians have behaved quite rationally
- There are, of course, many possible unknown unknowns or potential gamechangers but little evidence of abrupt change
- We will hopefully hold forces seeking to undermine the international order at bay, but that is hardly a given
- There is a deep-seated optimism that pervades most modeling efforts that underplays the magnitude of the challenges we face in achieving deep decarbonisation

Thanks!

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