

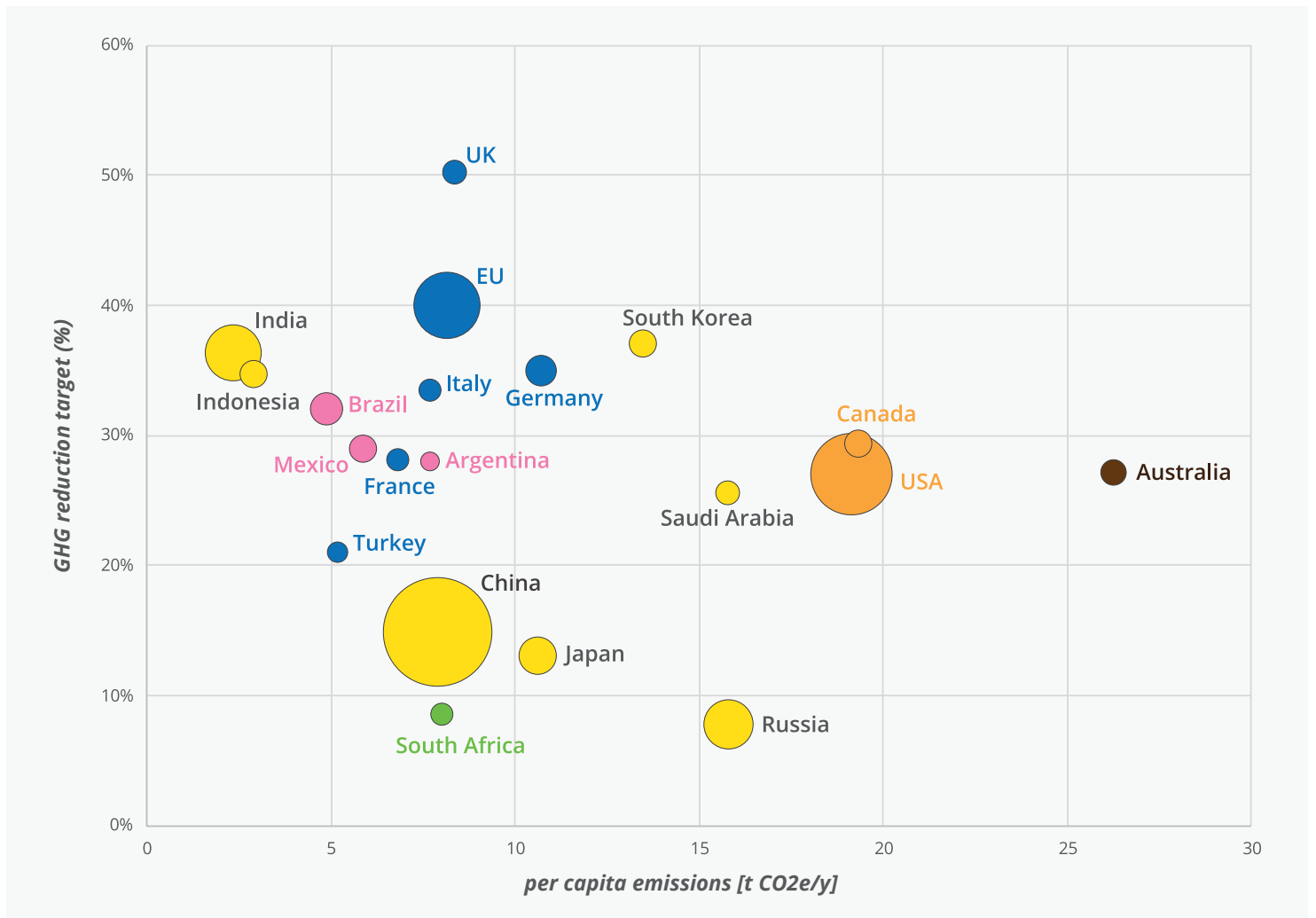
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THE EUROPEAN UNION AND INDIA ARE AMONG THE PARIS AGREEMENT'S TARGET-SETTING LEADERS

Carbon Delta has quantified every NDC available, totaling 189, submitted by all Parties to the Paris Agreement. Find out why the EU and India are among the target setting leaders.



The above graph illustrates per capita emissions compared with the GHG reduction target as a percentage of the 2030 emissions in comparison to a business-as-usual scenario. The reduction amount is calculated using each country's Nationally Determined Contributions submitted to the Paris Agreement. In this graph the most ambitious countries appear can be found in the upper left hand section and the least ambitious countries in the lower right hand corner.

Introduction to Nationally Determined Contributions (NDCs)

As of today, 189 countries have prepared and submitted a Nationally Determined Contribution (NDC) to the United Nations Framework Convention on Climate Change (UNFCCC) Secretariat, whereby each country pledged a contribution to the Agreement's goal of limiting global warming to "below 2°C" by 2100. Together, the NDCs represent the largest body of international climate policies to be assembled under any single agreement to-date. Never before has a "bottom-up" collection of climate policies (i.e. policies determined by national governments) been so clearly defined for researchers, civil society and/or any climate enthusiast.

NDCs are required to be updated and re-submitted to the UNFCCC Secretariat every five years, with the first round of updates due in 2020, during which time a global stock-taking of policy progress will be documented, under a process known as the "Talanoa Dialogue". In fact, although it is only March 2019, the Marshall Islands has already submitted their second NDC, in a sign of leadership and commitment to the UNFCCC process. The Paris Agreement is intended to be strengthened and enhanced through a "ratcheting" mechanism, whereby a country's updated NDC is required to be more ambitious than its previous NDC. The design of this mechanism was inspired by the World Trade Organisation's (WTO) successful ratcheting mechanism relating to subsidies removal. With varying degrees of detail included, each NDC reflects a country's individual climate change-related circumstances, including climate mitigation and adaptation objectives, climate vulnerability, level of development, resource needs and availability, institutional framework, etc. All NDCs have been published and can be found in a public registry maintained by the UNFCCC Secretariat.

Carbon Delta thinks that the information contained in NDCs is the most helpful dataset to quantify climate change mitigation requirements in all countries. This comprehensive dataset of reduction targets is an important building block for any climate policy model. However, Carbon Delta goes a few steps further by quantifying each country's pledge and translating it into reduction requirements for more than thirty economic sectors. Afterwards, we break down sectoral targets to 20,000 companies to determine their individual greenhouse gas (GHG) reduction requirement per year.

How Carbon Delta quantifies NDCs

There is no prescribed format or structure for NDCs, therefore one country's submission can be vastly different to another. However, NDCs typically contain some common mitigation elements that are relevant to Carbon Delta's Policy Risk model:

- A baseline "business-as-usual" (BAU) emissions pathway that underpins a country's expected future,
- A commitment to reduce GHG emissions by a certain quantity; and
- Details about the pathway to achieving the mitigation commitment, such as specific policies to be implemented, technology needs, financing needs and – in some cases – explicit sectoral breakdowns of planned emission reduction policies.

Some countries have ascribed conditions to the full realisation of their NDCs, so that an NDC can be seen as having a base case, known as an "unconditional target" as well as a supplementary level of ambition, referred to as a "conditional target", which would become embedded in the base case if defined financial needs are met. The conditions attached to supplemental ambition typically relate to financial cooperation between countries on climate action, referred to as "International Climate Finance". International Climate Finance often relates to significant mitigation or adaptation efforts in the fields of land use, Intellectual Property Rights, energy efficiency and other technological needs.

Country-level GHG Mitigation Targets

While the NDCs provide a wealth of information about a country's GHG mitigation pledge, they are not always directly comparable across countries. Some NDCs are expressed in terms of absolute emission reductions, but others are expressed in terms of GHG-intensity, which must be put in relation to the country's future Gross Domestic Product (GDP). The base year and the target year also can differ across countries. For example, Morocco has an unconditional target to reduce its absolute GHG emissions by 17% by 2030 compared to its 2030 BAU emissions. However, Morocco has an impressive conditional target set at a 42% reduction, though substantial financial aid would be required to reach it. On the other hand, India has a target to reduce the emissions intensity of its GDP by 33-35% by 2030 compared to the country's 2005 emission levels.

It is therefore necessary to perform some further normalization in order to arrive at consistent country-level reduction targets that can be used in Carbon Delta's model.

Finally, there is a level of uncertainty associated with the conditional targets included in some NDCs, as it is currently impossible to know whether countries will limit themselves to their unconditional targets or also enforce their conditional commitments. Only until after the stock-taking session within the Talanoa Dialogue is complete will we be able to infer whether a conditional target is likely to be enforced. Therefore, Carbon Del-

ta infers an implementation rate of 50% for the conditional target, meaning that the midpoint between the conditional and unconditional targets are taken into Carbon Delta's Policy Risk model at this time. The logic behind this approach is straightforward: International Climate Finance will flow between Parties within the scope of the Paris Agreement until 2030, although not all that is asked for will be made readily available.

Comparing NDCs for the G20 countries

In the above figure we compare total emissions, per capita emissions and relative mitigation targets in 2030 of the G20 countries, based on information obtained from within their NDCs. As G20 countries are responsible for around 75% of annual GHG emissions, it is an extremely relevant set of countries to perform some comparative analysis on. We have identified that the countries to the left have relatively low per capita emissions. Additionally, the higher the sit on the y-axis, the stronger the relative reduction target. This shows that the countries in the upper left-hand corner are the target-setting leaders, based on their NDC mitigation pledge.

We see in the graph that the EU and India have led the G20 group of nations in setting GHG reduction targets under the Paris Agreement. The UK has been a climate change stalwart for decades though India's emergence as a climate leader is an important move, which no doubt stems from the country's expected population growth, a relatively low amount of domestic fossil fuel resources, thereby creating a dependency on energy commodity imports. Another notable observation in the lower right-hand corner of the graph is Australia, the US, and Canada. It is also apparent that Russia has, in comparison, a very low climate mitigation ambitions. We can also observe that China, even with its

huge total emissions, is positioned in the middle of the country grouping.

Outlook on Climate Policy Risk

The ratification of the Paris Agreement was the culmination of a long and tiring negotiating process that lasted for more than ten years. Some of the most challenging aspects of those negotiations focused on target-setting and maintaining an agreeable level of burden-sharing between Parties to the UNFCCC, often referred to as "equity between the Parties". The Paris Agreement is a glorious example of the burden-sharing necessary to move negotiations forward in 2015 in Paris as well as in the future.

While the overall achievement of the Paris Agreement deserves celebration, clear challenges lie ahead. The biggest foreseen problems relate to the mediocre efforts currently undertaken by the world's largest emitters, China and the United States of America. Any progress on international climate policy requires leadership from these two economic behemoths. While on the one hand one country's President has declared that his country will formally withdraw from the Paris Agreement, the other country is experiencing an economic slowdown not seen for the past twenty years. Climate change requires urgently, cohesive action at a time when these world leaders are backing away. A revival of commitment and determination is necessary. There is no better time to galvanize climate change action than through a scale up of the NDC pledges via the Talanoa Dialogue. This process needs to be a strong success or else the entire Paris Agreement may crumble beneath its own weight.

References

[1] at <https://www4.unfccc.int/sites/NDCStaging/Pages/All.aspx>



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David Lunsford works as Head of Development for Carbon Delta, where he designs the regulatory and other aspects of the research tool, manages client feedback on the research and represents Carbon Delta at events. He previously worked for several years as a consultant on greenhouse gas trading issues in Europe and China. He also worked as Policy Director for the International Emissions Trading Association (IETA) in Geneva. David possesses several years of experience bringing diverse stakeholders together on varying levels, encouraging new climate change strategies that make sense for business, investors and policymakers alike.

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