

# THE EMISSION

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## CLIMATE CHANGE: A GROWING LIABILITY FOR COMPANIES AND INVESTORS

As the consequences of anthropogenic climate change continue to manifest in social, economic and environmental spheres an increasing number of individuals, organizations and even countries will begin to seek redress through legal channels. Indeed the number of climate related litigation cases has dramatically surged since 2005. Carbon Delta has assembled the largest climate change lawsuit database available today with over 1,200 cases including material aspects such as geography, plaintiff and defendant. Visualising the frequency of such cases over time has demonstrated an almost inexorable rise in the prominence and severity of legal cases related to climate change. It seems clear that in the near future this topic will become a major global legal battleground in the question of who is liable for the damages caused by greenhouse gas emissions?

Climate Change Litigation Cases Worldwide

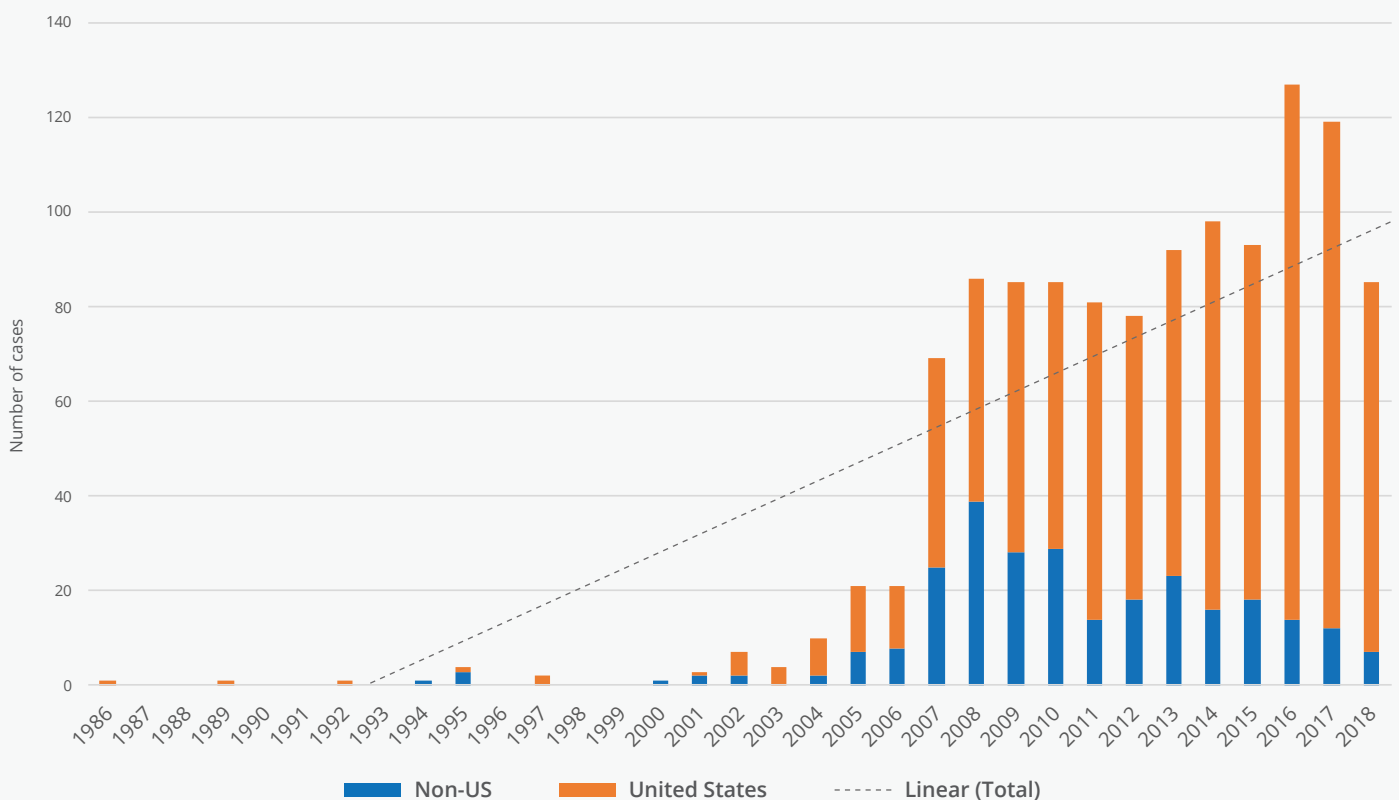


Figure 1: Number of litigation cases divided between US and non-US countries

## Introduction to climate change litigation

Many countries have enacted legislation against polluting activities in their attempt to protect shared commons such as clean air and clean waterways over the past 20 years. Such laws have gradually expanded their remit towards the protection of the climate through mechanisms such as the Kyoto Protocol (United Nations, 1998)<sup>[1]</sup>, from the UK Environment Act (1995)<sup>[2]</sup> and even earlier the US Clean Air Act (1970)<sup>[3]</sup>. Consequently, as the scope of the law has increased so has litigation against sovereign entities and corporations alike. Between the years 1994 to 2016, the number of litigation cases amounted to a total of 250<sup>[4]</sup>. Carbon Delta believes climate change will become the next preeminent major litigation topic alike to that of tobacco and asbestos.

To better inform investors and incorporate a further pillar of transition risk into its offering (aligned with the FSB's final TCFD recommendations), Carbon Delta has begun to collect statistical data on such cases to extrapolate trends and build risk models. The principle sources of legal exposure to today's corporations and therefore to those who invest in them are as follows:

1. A company's contribution to anthropogenic climate change (historical or present)
2. The failure to adequately manage the physical and transition risks associated with climate change
3. Reporting inaccurate, misleading, or fraudulent information on climate change risks as stipulated in corporate disclosure laws

## Carbon Delta litigation database

In collaboration with Zurich University of Applied Science (ZHAW) two databases from the London School of Economics and Political Science (LSE)<sup>[5]</sup> and Climate Case Chart<sup>[6]</sup> were integrated together and complemented by manual classification with additional metadata such as plaintiff, defendant, intervenor, geography, law, general category, status and when available the resulting fine. When aggregated these mappings provide interesting insights into the state of climate litigation today and where it may be tomorrow.

Table 1 introduces a sample of seven notable litigation cases from the database and the costs brought with the claim. Evident is the large range in terms of the cost of the case, but

also the breadth of the infractions of environmental and climate change litigations. For instance, disobeying emissions reporting has proven penalties (*see Table 1, row 6*); likewise, measures to comply with existing legislations may be re-paid (*see Table 1, row 2*). Although penalties are often out of scope for significant emitters under existing legislation it is important to have a grasp of how legislation may develop that could cause corporations to transform their business model but also demand economical compensation.

Notable current cases can be found in Table 2. Germany's largest coal producer RWE is fighting the challenges posed by peruvian Saúl Luciano Lliuya. He alleges that RWE is partially responsible for making his home in a glacier region inhabitable. He also claims that RWE knew about the impact and threat of climate change. The Hague Court of Appeal decided that the Netherlands is breaching its duty of care by "failing to pursue a more ambitious reduction" of greenhouse gas emissions and enforced strong CO2 reduction targets of 25% by the end of 2020. The latest case against notorious climate target Exxon Mobile Corp in the US, highlights how associated environmental laws – like the Clean Water Act – play into important climate change cases today. Corporations are starting to disclose environmental impact and risk data – but are they doing it fast enough and with enough rigor? The Bank of Australia was forced to by shareholders and the court's decision to acknowledge the risk of climate change and pledged to undertake climate change scenario analysis to estimate the risks to CBA's business.

These few sample cases highlight two very important points:

1. The diversity of cases is just staggering, making it hard for business to grapple with finding the most relevant sources for litigation risks and possible litigation mitigation strategies.
- 2) Any of these cases can set "economically disastrous" legal precedence for whole sectors.

## Cases in the US dominate the statistics since 2007

Figure 1 illustrates the number of climate change litigation cases in Carbon Delta's dataset; a total of approximately 1'250 (as of Dec. 2018). The trend over the last 10 years indicates that climate change litigation cases could soon reach the order of thousand per year globally. The dataset also denotes US, and non-US cases and a trend is clearly visible; cases in the US are increasing significantly. If one were to look at the share of

	Region	Plaintiff(s) v. Defendant(s)	Case	Cost (mUSD)
1	North America	Unites States vs. Hyundai Motor Co.	Violations of Clean Air Act certification requirements	94.0
2	North America	FortisBC Energy Utilities v. British Columbia Utilities Commission	Expenditures in Energy Efficiency and Conservation	64.5
3	Europe	CFP LLP v. Barclays Bank PLC	Compensation for breach of equitable duties	13.0
4	Europe	Deutsche Bank AG v. Total Global Steel Ltd.	Breach of contracts within Certified Emissions Reductions	5.0
5	North America	People of the State of California v. Southern California Gas Co.	Damages due to leakage of natural gas	4.3
6	Europe	Billerud Karlsborg AB v. Swedish Environmental Protection Agency	Penalty due to failure to surrender to the emissions allowances	2.5
7	North America	California Air Resource Board v. Chevron U.S.A et al	Penalties for not obeying the GHG emission reporting requirements	1.0

Table 1: Selected past climate change litigation cases to showcase associated costs due to e.g. penalties and damages related with their activities

	Region	Plaintiff(s) v. Defendant(s)	Case
1	Europe	Saúl Luciano Lliuya v. RWE	company's contribution to anthropogenic climate change
2	Europe	Urgenda Foundation v. the Netherlands	national government in breach of protecting citizens from the risks of climate change
3	Northern America	Conservation Law Foundation v. ExxonMobil Corp	failure to manage physical and transition risks of climate change
4	Australia	Abrahams v Commonwealth Bank of Australia	did not meet corporate disclosure law requirements on climate change risks

Table 2: Notable current climate change litigation cases

defendants and plaintiffs, the data shows significant dominance of government in the former, and a more equal share, yet dominance of NPO's, in the latter. However, as intervenor, corporates dominate the data.

### Investors beware!

The results presented here make compelling evidence that the fallout from climate change is leading to increased liability and investors must factor this into their decision-making processes. Corporations, governments and investors are increasingly aware of the physical and policy risk impacts but legal risk is becoming more material year on year. That being said, many cases asking the question of who is at fault are held back by a lack of accurate data of historical emissions and how this should be attributed. As statistical approaches to attribution analysis improve it is not inconceivable that a landmark case will pave the way for reparations based on historical emissions.

### How can investors mitigate and manage liability risks?

The creation of a risk model would be the next step in predicting several things; first - how large a potential fine, payout, or defense cost could be, and second - the probability of litigation based on a company's historical and current activities and sector. Carbon Delta will continue to work in this direction to provide investors insights to understand future impacts on their investments.

Corporations can reduce risks today through transparently identifying and assessing climate change risks and by integrating climate change into risk management functions. It will be more difficult to bring a case against investors who has aligned their investments and long-term interests in a climate sensitive approach. Furthermore, adequately disclosing any climate risks i.e. through alignment of disclosures to TCFD and by engaging with policymakers are also excellent steps to reduce legal risk.

**Please contact Oliver Marchand** if you are interested in the details of the litigation database.

### References

- [1] United Nations, 1998. Kyoto Protocol to the United Nations Framework on Climate Change. United Nations Framework Convention on Climate Change. Available at: <https://unfccc.int/resource/docs/convkp/kpeng.pdf>
- [2] Environment Act, 1995, Chapter 25
- [3] Clean Air Act, Title 42 U.S.C., Chapter 85, §7401 et seq
- [4] Nachmany, M., Fankhauser, S., Setzer, J., & Averchenkova, A. (2017). Global trends in climate change legislation and litigation. Available at: <http://archive.ipu.org/pdf/publications/global.pdf>
- [5] Climate Change Laws of the World, Grantham Research Institute on Climate Change and the Environment, London School of Economics, <http://www.lse.ac.uk/GranthamInstitute/climate-change-laws-of-the-world/>
- [6] Climate Change Litigation Databases, Sabin Center for Climate Change Law · U.S. Litigation Chart made in collaboration with Arnold & Porter Kaye Scholer LLP, <http://climatecasechart.com/>



### Dr. Oliver Marchand

CEO & Co-Founder, Carbon Delta

Oliver Marchand, Ph.D. is a Co-Founder and CEO of Carbon Delta. Prior to this, he spent 9 years with Fisch Asset Management as Head of IT. In that position, he led a team that was responsible for all IT operations and development of the in-house portfolio management system. Moreover, Oliver worked as a researcher in weather forecasting for almost a decade at various weather services. This included exciting research projects such as the development of thunderstorm warning systems and wind profiling data integration, and required a high-performance computing cluster operation. Oliver holds a Ph.D. in Computer Science from ETH Zürich.

Questions? Ideas? Talk directly to Oliver

+41 44 552 77 62 | [o.marchand@carbon-delta.com](mailto:o.marchand@carbon-delta.com)



For more information, visit [www.carbon-delta.com](http://www.carbon-delta.com) or contact us at +41 44 552 7760 or [contact@carbon-delta.com](mailto:contact@carbon-delta.com).