

# HOT AIR, GUILT AND ARBITRATION

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## KEY POINTS:

- Developing countries demand financial compensation for the effects of climate change, insisting that developed countries bear the guilt for climate change.
- In the last 10 years, developing countries' emissions have exceeded those of rich countries, and by 2030, responsibility for cumulative CO<sub>2</sub> emissions will be equal.
- A fair arbitrator could very well reject the claim for financial transfers.
- Negotiators should concentrate on reducing emissions and take compensation off the agenda.

## INTRODUCTION

*Although the most acute judges of the witches and even the witches themselves were convinced of the guilt of witchery, the guilt nevertheless was non-existent. It is thus with all guilt.*

—Friedrich Nietzsche

The United Nations Framework Convention on Climate Change (UNFCCC) divides countries into two groups. "Annex 1"<sup>1</sup> includes the rich industrialized countries as well as economies in transition.<sup>2</sup> "Non-Annex 1" members include the poorer and developing countries, as well as China and India. In the negotiations on action to respond to global warming, the Non-Annex 1 countries assert that developed countries are the guilty party. They are guilty of causing climate change based on their historical cumulative CO<sub>2</sub> emissions. The threat of global warming prevents Non-Annex 1 countries of similarly basing

1 Annex 1 parties to the UNFCCC include 42 countries plus the European Union. See [http://unfccc.int/parties\\_and\\_observers/items/2704.php](http://unfccc.int/parties_and_observers/items/2704.php).

2 Including the Russian Federation, the Baltic states and several central and eastern European states.

their development on cheap fossil fuel. Thus, they insist that they should be financially compensated by the rich Annex 1 countries that have been responsible for the bulk of cumulative CO<sub>2</sub> emissions. For Non-Annex 1 countries, financial compensation is a prerequisite for discussing their own post-2020 emissions reduction plan. This brief, addressed to the negotiators, argues that care should be taken in any bid for compensation. Annual emissions from Non-Annex 1 countries have been larger than those of developed countries since 2003. Depending on the time period chosen for determining compensation and other contentious assumptions, Non-Annex 1 countries may end up owing money to the wealthy countries.

The question of financial transfers and climate finance should be taken off the negotiation table. To prevent future communiqués from the UNFCCC process being filled with euphemisms for disagreement, the finance question should be moved to a different venue and focussed on humanitarian assistance for adaptation.

This brief offers a thought experiment on measuring responsibility for climate change and what an independent arbitrator might conclude. To begin, presume that all countries *will* agree to single final offer arbitration (FOA) regarding responsibility for climate change. In single offer arbitration, the parties agree to be bound by the decision of an arbitrator. The process differs fundamentally from conventional arbitration. In the conventional method, an arbitrator has the flexibility to impose any award he or she deems appropriate. In contrast, with FOA, the arbitrator *must* choose one party's final offer.<sup>3</sup> The theory is that, since the arbitrator cannot pick an intermediate outcome, he or she will select the more reasonable of the two offers. This factor

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<sup>3</sup> See <http://scholarship.law.marquette.edu/cgi/viewcontent.cgi?article=1011&context=sportslaw> for a description of its use in professional sports.

leads, in theory, to each party being more moderate in its settlement offer. The fact that the arbitrator must choose between the two offers leads each party to present its case for compensation founded on very defensible assumptions.



## HOT AIR

There are many assumptions necessary to devise a single final offer for the arbitrator; many relevant variables and numerical values need to be defined. Both parties will need to make many assumptions and choices, all of which are contentious. They are either arbitrary, normative choices or, for technical variables, the science is not settled. The parties will never agree on these assumptions, no matter how long and sophisticated the negotiation process. Let's make several initial simplifying presumptions for this experiment:

- The base year for measuring historical CO<sub>2</sub> emissions will be 1900. Both parties agree that the mainstream estimates of the atmospheric lifetime of CO<sub>2</sub> range between roughly 30 and 95 years. If the assumption is that the average lifetime of CO<sub>2</sub> in the atmosphere is 60 years, it can be presumed that pre-1950 emissions all dissipated by 2010. In addition, assume there will have been no dissipation at all

from 2015 onward, as the carbon sinks would be full.

- Impacts of land use change are included, but deforestation is not in determining relevant CO<sub>2</sub> emissions.<sup>4</sup>
- The time period used to account for future emissions is up to 2050.
- Both parties accept climate interactive forecasts of emissions, business-as-usual trajectories.
- Both parties agree that producers, not consumers, are deemed responsible for emissions.<sup>5</sup>
- The value of a ton of CO<sub>2</sub> is US\$10.<sup>6</sup>
- The parties agree to present offers selecting one of three rates of time preference to discount future streams and compute present values — either zero, three or seven percent.
- The negotiation “sides” will not alter. China and India will not join the list of Annex 1 countries before 2050.

The table on page 4 presents the results, given the assumptions listed above. As of 2010, the cumulative historical emissions of Annex 1 countries exceeded Non-Annex 1 countries by 279 GtCO<sub>2</sub> (billion tons of carbon dioxide). This is what the climate finance debate has been about. At US\$10 a ton, that would amount to US\$2.79 trillion. This figure makes the Copenhagen number of US\$100 billion per year seem positively

4 See [www.ccap.org/docs/resources/234/Baumert\\_CAIT-Nov04.pdf](http://www.ccap.org/docs/resources/234/Baumert_CAIT-Nov04.pdf).

5 See [www.theguardian.com/environment/2011/apr/21/countries-responsible-climate-change](http://www.theguardian.com/environment/2011/apr/21/countries-responsible-climate-change).

6 Of course carbon pricing is all over the map — see [http://files.eesi.org/FactSheet\\_Carbon\\_Pricing\\_101712.pdf](http://files.eesi.org/FactSheet_Carbon_Pricing_101712.pdf).

Emissions GtCO <sub>2</sub>				
		Annex 1	Non-Annex 1	Cumulative Responsibility (Since 1950)
Cumulative emissions	1950–2010	980	701	Annex I historic responsibility: 279
	2011–2030	430	742	Non-Annex 1 liability: 33
	2031–2050	571	1269	Non-Annex 1 liability: 731
Time discount rate 2011–2030	3%	315	536	Annex 1 liability: 58
	7%	228	380	Annex 1 liability: 127
Time discount rate 2011–2050	3%	734	1458	Non-Annex 1 liability: 445
	7%	531	1038	Non-Annex 1 liability: 228

Source: Authors' calculation Climate Interactive's, *Climate Scorecard*, April 19, 2013 Release Data and References.

reasonable.<sup>7</sup> If the date is changed to 2030 for cumulative emissions, the responsibility is reversed.

The introduction of time discounting shifts responsibility back to Annex 1 countries; however, if the time period is extended to 2050, the responsibility swings back to Non-Annex 1 countries.

### THE ANNEX 1 SINGLE FINAL OFFER

Fairness demands considering the impact of future emissions. From 2011 to 2030, Non-Annex 1 emissions exceed Annex 1 by 312 GtCO<sub>2</sub> (742 minus 430). In 2030, cumulative historical emissions from Non-Annex 1 countries will exceed those of Annex 1 countries by 33 GtCO<sub>2</sub> (312 minus 279). In other words, as of 2030, cumulative historical responsibility is more or less equal. If the time period is limited to 2030, no compensation would be owed by either party.

<sup>7</sup> In December 2009, at the UNFCCC conference in Copenhagen, Hillary Clinton announced that "... in the context of a strong accord in which all major economies stand behind meaningful mitigation actions and provide full transparency as to their implementation, the United States is prepared to work with other countries toward a goal of jointly mobilizing \$100 billion a year by 2020 to address the climate change needs of developing countries. We expect this funding will come from a wide variety of sources, public and private, bilateral and multilateral, including alternative sources of finance."

It is true that discounting to reflect time preferences shifts the responsibility for emissions to 2030 back to Annex 1 countries. A fair arbitrator, however, might set the basis for compensation as cumulative historical emissions from 1950 to 2050. The reason is that the global community has settled on the year 2050 for the climate change target limit of a 2 degree Celsius temperature increase. In 2050, the cumulative historical responsibility will fall squarely on the Non-Annex 1 countries: their cumulative emissions will exceed those of Annex 1 countries by 731 GtCO<sub>2</sub>. Even if we apply discounting to emissions between 2010 and 2030, responsibility shifts back to Non-Annex 1 countries by virtue of their growing emissions in the period from 2030 to 2050.

However, post-2030 forecasts are undependable. Annex 1 countries would presume that, in any case, an arbitral order for Non-Annex 1 countries to pay compensation could never be enforced. So they would curry favour with the arbitrator by stating the fact that they are being very reasonable by ignoring the 2030–2050 period.

Noting that it is in the global interest to come to a quick final agreement, the Annex 1 offer will be zero compensation. Their offer would be based on business-as-usual forecasting of cumulative undiscounted

emissions to 2030. The proposition that Non-Annex 1 countries should be compensated for developed countries' historical contribution to climate change should be taken off the table.

## THE NON-ANNEX 1 SINGLE FINAL OFFER

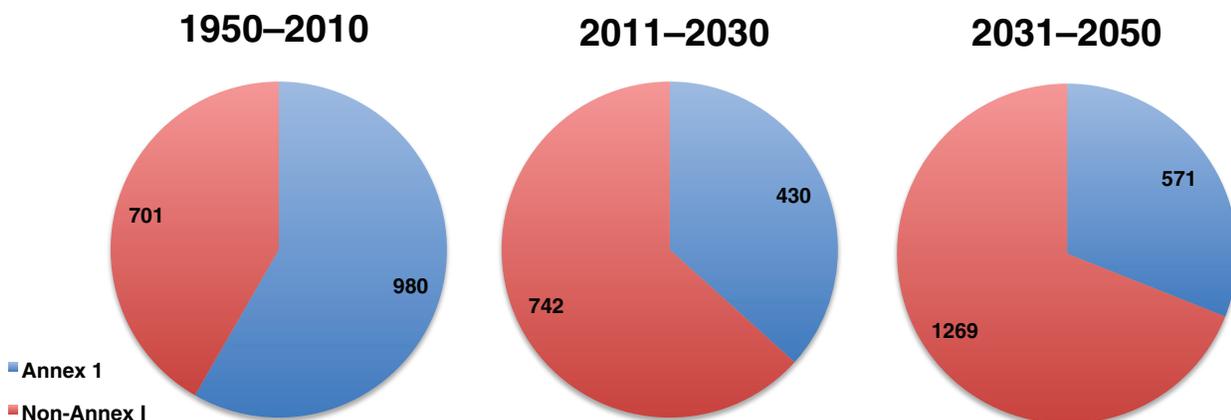
The deal should only cover the period from 1950 to 2030. Forecasting beyond 2030 is unreliable, if not irresponsible. In 2030, it would be necessary to take stock and renegotiate based on the actual figures. Non-Annex 1 countries have already made concessions and have not adjusted for total national population and per capita targets. Calculations should, arguably, have been adjusted for the carbon footprint of consumption, including imported goods. This offer has not compounded emissions in the period up to 2010 — to account for damage to date and to acknowledge that Non-Annex 1 countries are not afforded the same opportunity as Annex 1 countries to industrialize on the basis of cheap fossil fuel.

A discount rate of seven percent should be used to forecast emissions from 2011 up to 2030. This results in a present value of US\$1.27 trillion in compensation due. Coincidentally, this responsibility will be discharged if Annex 1 countries fulfill the Copenhagen commitment of US\$100 billion per year.

## WHAT WOULD A FAIR ARBITRATOR DECIDE?

The arbitrator will choose the more reasonable of the two single final offers, despite the imprecision in the measurement of the variables in question. Between the two offers of zero and US\$100 billion per year, what would an ingenious, fair arbitrator decide? After pondering the sins of a previous life that resulted in this impossible assignment, he or she would probably recuse himself or herself. In an ideal world, our arbitrator would knock heads together, goad the parties to forget financial compensation and focus instead on efforts to reduce future emissions and establish generous funding for adaptation on humanitarian grounds.

### TOTAL CO<sub>2</sub> EMISSIONS



## RECOMMENDATION

It is clear that there is not going to be consensus on any of the variables or estimates necessary to calculate responsibility. The time period, rates of CO<sub>2</sub> dissipation, how to account for deforestation, estimates of historical emissions, forecasts of future emissions, whether consumers or producers should be responsible, the value of a GtCO<sub>2</sub>, whether to apply compounding for past emissions or discounting for future emissions are all contentious.

There is no future in negotiations for climate-related financial compensation. The most likely outcome is a continued stalemate, until one day around 2029, negotiations end when it will become clear that both parties are responsible for the same volumes of cumulative emissions.

Climate negotiators should stop wasting time. Simply forget about assigning guilt. There is no prospect of ever coming to terms on financial compensation based on historical responsibility. Instead, work towards an outcome on which all parties can agree. The primary focus of negotiations should be on international cooperation on research, on standards, and trade and other measures that will reduce carbon emissions. Otherwise, future generations will find us guilty of causing the very hot air.

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The Centre for International Governance Innovation is an independent, non-partisan think tank on international governance. Led by experienced practitioners and distinguished academics, CIGI supports research, forms networks, advances policy debate and generates ideas for multilateral governance improvements. Conducting an active agenda of research, events and publications, CIGI's interdisciplinary work includes collaboration with policy, business and academic communities around the world.

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CIGI was founded in 2001 by Jim Balsillie, then co-CEO of Research In Motion (BlackBerry), and collaborates with and gratefully acknowledges support from a number of strategic partners, in particular the Government of Canada and the Government of Ontario.

Le CIGI a été fondé en 2001 par Jim Balsillie, qui était alors co-chef de la direction de Research In Motion (BlackBerry). Il collabore avec de nombreux partenaires stratégiques et exprime sa reconnaissance du soutien reçu de ceux-ci, notamment de l'appui reçu du gouvernement du Canada et de celui du gouvernement de l'Ontario.

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