

# The Double Injustice of Climate Change

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**Launch of the “Appeal to COP21 Negotiating Parties” issued by Cardinals, Patriarchs, and Bishops, at a press conference held at the Vatican Rome, 26 October 2015**

Excellences, ladies and gentlemen,

Climate change is one of the most global problems humanity has to face in the coming decades. As I often explain in my lectures, one tonne of CO<sub>2</sub> emitted by an European in Rome, by a North American citizen in New York, or by a Burkinabe in a small village near Ouagadougou have the same effect on global climate: a warming effect. It is a tonne of CO<sub>2</sub> that is added to the total amount humanity has already emitted in the atmosphere since the Industrial Revolution in the 18<sup>th</sup> century: about two trillion tonnes of CO<sub>2</sub>, or 2000 billion tonnes. *Where* that tonne comes from does not matter, but each one thickens the insulating layer around the Earth, and warms the surface.

Because of those past emissions, two-thirds of which came from industrialised countries, the average temperature of the planet has already increased by approximately one degree Celsius, average sea level has increased by 20 cm, which has aggravated the damages done by intense tropical storms, heat waves and extreme precipitation have become more frequent since 1950, and agriculture and food security are threatened in several regions.

These changes in climate have already started to affect the living conditions of people, ecosystems, and the economy on all continents, and over the oceans. A common rule is that **the poor are more vulnerable, while they are the least responsible** for the greenhouse gas emissions: this is what I call the **double injustice of climate change**. The rich should not believe too long they will escape from the impacts of climate change: we all share the same planet, the same boat. If we sink to the bottom of the ocean, we sink together.

You know that the UN Framework Convention on Climate Change has an ultimate goal, which is to avoid, I quote, “a dangerous anthropogenic interference with the climate system”. The Copenhagen and Cancún conferences have decided in 2009 and 2010, having read the IPCC (Intergovernmental Panel on Climate Change) report, that this meant keeping the warming under 2°C, or even 1.5°C.

[Sometimes people do not understand why a warming of the Earth’s climate of more than a few degrees really matters. To illustrate why, think about how the planet looked like 20000 years ago, at the peak of the Last Glacial Maximum. North America and Europe were covered by an ice sheet up to 3 km thick... Sealevel was 120 METERS lower than today because of all this frozen water stored on land.

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The temperature difference between this planet and the situation we know today is only 4 to 5°C, and it took 3 to 4000 years to gain those few degrees. After that huge change in the habitability of the planet, the global temperature has remained stable for about the last 10000 years, plus or minus 1°C. This is the period during which agriculture and civilisations developed.]

Thanks to the IPCC we know that climate change is a problem mostly caused by human action, at the century time scale, which means that **humans can also provide the solutions**. We know now that the combined **emissions of all greenhouse gases have to be reduced to zero well before the end of the century** to avoid a warming higher than the dangerous limit agreed 5 years ago.

International **cooperation** to address this challenge is absolutely necessary. Those who have emitted more historically have a larger share of the responsibility to provide solutions, to lead by example in their behaviour and their economy, to help developing countries to adapt to the part of CC we will not be able to avoid anymore, and to reduce emissions that would warm the climate beyond the 1.5 or 2°C limit.

One should note that **it would make a difference for the most vulnerable** to keep the warming under **1.5°C or under 2°C** in the long term. This is particularly true for sea level. The latest IPCC report mentioned for example that the Greenland ice sheet, which contains enough frozen water to increase average sea level by up to 7 metres (not taking into account the other contributions, by water expansion, by glaciers, and by the Antarctic ice sheet), would probably melt completely in the coming millennium for a warming above a threshold comprised between 1 and 4°C above the pre-industrial temperature. Everybody can understand that the probability to be above that threshold is significantly higher if the warming reaches 2°C than if it stays below 1.5°C. The choice between the 1.5 and the 2°C long-term objective therefore requires **value judgements**: for example, **are the lives of those who would drown under such a long-term sea-level increase worth saving, or not?**

These are some of the challenges the COP21 and the UN are facing: how to agree on an **ambitious and fair agreement** to protect climate for future generations, while addressing other societal goals like the **Sustainable Development Goals** agreed at the UN a month ago, and **keeping science in sight**, because nobody at the COP21 will represent the Party with whom nobody can negotiate: nature, and its laws.

The Laudato Si' Encyclical by pope Francis, and the Appeal presented today go beyond what scientists alone, or even the IPCC can do, because the IPCC mandate is to avoid making any value judgement, and to avoid being prescriptive. **Both the Encyclical and the Appeal rely on values** and ethical considerations, like the need for **equity and justice**, and for **empathy** towards those who suffer today from the first consequences of climate change. The IPCC has shown these would suffer much more tomorrow, if much more action does not take place.

I hope this appeal will be heard.

Thank you for your attention.