

# Theology and Climate Change

by Christiana Z. Peppard

Tales about discernment are embedded within Christian history and range from doubting Thomas, who wanted tangible proof of the resurrection, to St. John of the Cross with his dark night of the soul. The apostle Paul demonstrated that vigilant skeptics can sometimes become devout evangelists. In this tradition, uncertainty, doubt, and even skepticism are important for spiritual experience and also for theological inquiry and knowledge.

Since the scientific and industrial revolutions in Europe, the world described by science has not always mapped onto the world as understood by literal interpreters of the Hebrew Bible: God did not create the earth and all its creatures in six 24-hour days. Neither does contemporary knowledge of human biology affirm highly valued theological treatises: human embryology is not as Thomas Aquinas imagined in his *Summa Theologiae*. These texts are poor guides to natural history or biology. Such an observation does not invalidate theology, though it does raise the question of what sources of knowledge convey accurate information about the world that we human beings inhabit. Ongoing, rigorous scientific inquiry has helped us to understand the natural world in ways that could never have been imagined when Thomas wrote the *Summa* or when Genesis encapsulated the process of Creation. In the twenty-first century, theology can learn from science.

## Climate Change: A Succinct Primer

Biological and earth sciences have illustrated how human societies affect the earth's biodiversity, land, water, and air—perhaps permanently. Climate change is a prime example of such long-term impact. Scientific consensus indicates that climate change is anthropogenic (driven by human beings and linked largely to fossil fuel combustion), with lasting impacts on the planet's life support systems. Scientists have been calling attention to this dynamic problem for decades, with five separate reports of the Intergovernmental Panel on Climate Change that present an ever-growing body of scientific evidence about the causes, mechanisms, and effects of climate change worldwide. (The fifth and most recent report was released in September 2013 and can be found at [www.ipcc.ch](http://www.ipcc.ch).)

Climate change—known in some circles by its prior moniker, global warming—is a demonstrable trend proven by longitudinal assessments of atmospheric concentrations of carbon dioxide. To be sure, the planet's geological record shows signs of previous cycles of global temperature fluctuation. That does not mitigate the key insight that this period of warming is caused by humans and is occurring at an unprecedented rate, with alarming social and environmental consequences.

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According to the standard designation of the Geological Time Scale (which classifies periods in the earth's history, e.g., Cambrian, Triassic, Jurassic), human beings inhabit the late Holocene period. But scientists and scholars think that our era is more appropriately denoted as the *Anthropocene*: the time of fundamental and lasting human-driven changes to earth systems. Global climate change is a prime example; indeed, the term Anthropocene was coined by Nobel laureate Paul Crutzen, an atmospheric chemist.

Thus, while the effects of *Homo sapiens* on the planet's life support systems may not be as suddenly and dramatically destructive as an asteroid strike, our collective actions nonetheless have real, long-term, planetary consequences. This issue is not just an environmental and social problem but also a theological and ethical one.

### **Believe the Facts**

In the United States, there is a bizarre and dispiriting trend among some politicians and religious leaders to cast climate change—and climate science—as a matter of belief rather than fact. Climate change skeptics argue that environmental science is inconclusive and have sought to portray scientists as lying or fabricating data. These are serious, pernicious claims that reveal a problematic absence of critical scientific acumen. Climate change is not a hoax. It is happening: past and present data indicate that much. In fact, the changing climate is a datum for most people—from laboratory scientists in Europe to people who live in places like Bangladesh, where sea level rise is already impacting lands and livelihoods; for communities affected by ever-more powerful tropical storms; and for those farmers whose already dry fields have undergone several years of drought with little reprieve in sight.

Of course, there is uncertainty in climate science. There is uncertainty in all science. But it is not the kind of uncertainty that warrants skepticism about whether climate change is happening *per se*. Instead, the kind of uncertainty that applies to climate change applies to the future, which—by definition—has not yet arrived, and thus we cannot yet measure it. We do not yet know how precisely climate models can predict future scenarios of drought, deluge, or temperature fluctuation. There are many variables, and methods of analysis and prediction are always being refined. But this does not mean that the existing data is wrong, and it is no cause for skepticism or disbelief.

To punctuate this point, consider the global Catholic Church. The three most recent popes of the Roman Catholic Church—Francis, Benedict XVI, and John Paul II—have affirmed global climate change and its anthropogenic causes. (Longitudinal climate data was not readily available prior to the papacy of John Paul II.) As early as 1990, Pope John Paul II declared that the “greenhouse effect” has reached “crisis proportions as a consequence of industrial growth, massive urban concentrations, and vastly increased energy needs.”<sup>1</sup> Bishops’ conferences, papal statements, and promulgations from the Pontifical Council for Justice and Peace have emphasized the importance of grappling with the causes and consequences of climate change.

Given this scientifically affirming Catholicity, it is perhaps not surprising that Nobel laureate Paul Crutzen—the atmospheric chemist who coined the term Anthropocene—since the mid-1990s has been a member of the Pontifical Academy of Sciences. Here, at least, theology and contemporary science are very much aligned. Given this, what do theology and climate change have to do with one another?

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1 Pope John Paul II, “Peace with God the Creator, Peace with All Creation,” Message for the World Day of Peace (1990), no. 6, [http://www.vatican.va/holy\\_father/john\\_paul\\_ii/messages/peace/documents/hf\\_jp-ii\\_mes\\_19891208\\_xxiii-world-day-for-peace\\_en.html](http://www.vatican.va/holy_father/john_paul_ii/messages/peace/documents/hf_jp-ii_mes_19891208_xxiii-world-day-for-peace_en.html).

## Climate Change, Theology, and Ethics in the Catholic Tradition

Catholic theology and ethics increasingly emphasize several important insights about the environment.<sup>2</sup> First is a theological insight: the created world is good and points towards God. (This tradition is highly developed in the Greek Orthodox tradition and continues to be explored in Roman Catholic theology.) Second is an ethical insight: human beings should be responsible stewards of the earth and its creatures. Roots of these insights can be found within early sources of scripture and tradition, as well as from the Church's post-Vatican II turn to reading the "signs of the times."

Especially since Paul VI's 1967 encyclical *Populorum progressio*, the Church has paid attention to how environmental degradation impacts the poor and vulnerable. In the case of climate change, by a cruel irony those people living in situations of poverty are usually not the people who have caused global warming, and yet (because of their poverty) they are also least able to adapt to the negative changes foisted upon them. So it is that when water tables dry up under prolonged drought conditions, then subsistence farmers face the option to starve or migrate: they become, in effect, climate refugees.

This dynamic is unjust, as John Paul II pointed out in 1999 and Pope Benedict XVI affirmed in his 2009 encyclical *Caritas in veritate*.<sup>3</sup> Super-developed nations that bear the lion's share of responsibility for these environmental degradations must take responsibility for externalized costs; they must relieve the burdens. Each of the three recent popes has demonstrated that there are important economic structures that need to be reconfigured in pursuit of global justice.

### Conclusion and Further Resources

Climate change in the Anthropocene is anthropogenic. What right do humans have to enact such dramatic changes to earth systems, which we are called to steward but not deplete? If the natural world is a sign of God, then what obligations do we have to our global (human) neighbors—as well as planetary systems, bioregions, or the hundreds of species that go extinct daily because of human impact on the planet? These are complex questions. Considerable resources are available to help Catholics ponder and act on these issues. The Catholic Coalition on Climate Change ([www.climatecovenant.org](http://www.climatecovenant.org)) works at individual, parish, and institutional levels in partnership with the U.S.C.C.B.; documents from the Pontifical Council for Justice and Peace ([www.justpax.va](http://www.justpax.va)) contain many insights about climate change, economic development, and justice; and books like *God, Creation, and Climate Change*, edited by Richard Miller, offer scholarly perspectives on this crucial topic.<sup>4</sup>

Ecology will be a major theological and ethical issue for the Church in the twenty-first century. As recent popes have pointed out, climate change is a fact worth believing. The real adventure is to link theology, ethics, and science as ways of reading the signs of the times. Material reality and scientific knowledge rightly inform theology; it is vital to our ability to live wisely and justly on a finite planet.

<sup>2</sup> For a fuller account of these connections, see Christiana Z. Peppard, *Just Water: Theology, Ethics, and the Global Water Crisis* (Maryknoll: Orbis Books, 2014), chapter 4.

<sup>3</sup> John Paul II, "Respect for Human Rights: The Secret of True Peace," Message for the World Day of Peace (1999), no. 10, [http://www.vatican.va/holy\\_father/john\\_paul\\_ii/messages/peace/documents/hf\\_jp-ii\\_mes\\_14121998\\_xxxii-world-day-for-peace\\_en.html](http://www.vatican.va/holy_father/john_paul_ii/messages/peace/documents/hf_jp-ii_mes_14121998_xxxii-world-day-for-peace_en.html).

<sup>4</sup> Richard Miller, ed., *God, Creation, and Climate Change: A Response to the Environmental Crisis* (Maryknoll: Orbis Books, 2010).