

“FRANCISCO CONNECTED THE CLIMATE WITH THE SUFFERING HUMAN”

ADVISOR TO THE ENCYCLICAL
LAUDATO SI', RAMANATHAN
VEERABHADRAN TRUSTS IN
THAT THERE WILL BE A WAY OUT
TO CLIMATE CHANGE

— text by Martín De Ambrosio —



"I am infinitely grateful to Pope Francis," says Veerabhadran, Professor Emeritus at the prestigious Scripps Insitution of Oceanography.

The outlook for climate change is bleak, but there are people who manage to remain optimistic. Ramanathan Veerabhadran is one of those people: he believes things are bad, that they will get worse in the coming years, but that in a short time people will finally realize the seriousness of the matter and act accordingly.

A. Veerabhadran, who prefers to be called “Ram,” is an Indian-born climatologist of vast experience and professor emeritus at the prestigious Scripps Institution of Oceanography at the University of California, San Diego. He was one of the scientists who studied in the 1970s that there were other gases besides carbon dioxide that trapped heat in the atmosphere and influenced climate change. His prestige led him to be one of the scientists who worked with Francis on the encyclical on the environment, published in 2015 (Ram was already a member of the Vatican Academy of Sciences).

Although he has never visited the country, Ram, 80, has a connection with Argentina through his acquaintance with Francis. A few weeks ago, he participated in the inaugural conference of the diploma in climate litigation in Latin America and the Caribbean, organized by the Fray Bartolomé de las Casas Institute for Legal Research (created by the Pope in 2023).. This growing space for fighting climate change from the courtroom is something that also adds to his hope, as he will say at the end of the nearly hour-long dialogue that was interrupted: in the middle of the interview, Ram asked for permission because someone was calling him. He was at home, talking to La Nación via Zoom, but had to get up for a few minutes. Upon returning, he explained: "My house is now free of fossil fuels. It started six years ago. I asked them not to send me gas, and today is the last day of work for the workers making

the modifications. I have everything renewable now: of course, with solar energy and electricity for cooking, bathing, and heating," he says. However, he feels compelled to add: "I have to tell you something: I used to ask everyone to use renewables, to buy electric cars..."but the truth is, it cost me many thousands of dollars. Who has that money? It's very expensive, I think of young people... So I stopped asking people to do it, I realized."

"It's ridiculous. The media says solar energy is cheap; it's true that it's cheaper than before, but it's still expensive. It takes 15 years to pay for it after the high investment."

–How do you see the current situation? How bad are we?
The situation right now is bad. In the sense that we are not reducing greenhouse gas emissions.



Dero, we're not managing to bend that famous curve, which continues upward. I'm not saying that no one is lowering it; some are, in fact, the United States is doing so, but not in the necessary quantity, nor with the necessary speed. That's the first bad news. The second is that climate change is already here: the extreme events, such as floods, landslides, or fires that we see today are what we expected for 2030 or 2040, in fifteen or twenty years. The impacts are accelerating.

–Why does this acceleration occur?

It's not clear what causes this acceleration, which is worse in some places and not so much in others. We first became aware of this five years ago at the Vatican, at a meeting with members of the Pontifical Academy of Sciences.

There I raised the need for a new approach to the issue, which we called MAST, an acronym for Mitigation, Adaptation, and Social Transformation. There are three pillars. Mitigation means bending the curve, reducing

emissions. Adaptation requires investment in resources and brainpower, and money too, because people are already suffering, especially the poor who live in rural areas, or who work hard in cities, under extreme heat or the risk of flooding or landslides. But neither of these first two pillars will work fast enough without social transformation. Until now, scientists haven't realized this: we went to talk to social leaders, people who could donate, but we forgot about the public, about mass communication. That's why I'm so grateful to Pope Francis, infinitely; he contributed and helped us a lot.

–Do you think there is enough political will to generate this social transformation?

Look, it's interesting. We had a meeting two years ago with Francisco, with mayors, governors. And we concluded that the main fight against climate change must take place at the local level, in municipalities or provinces. There's a lack of national support, of course, but the

important thing is that the movement comes from the bottom up. Then we had another one this February in California and Boston, and two weeks ago in Nairobi, Kenya, and at the end of the year there's another one in Brazil. And everywhere we found enormous support from governors and mayors, because they see it, they suffer it, and they're the ones who have to fight.

–But at the same time, presidents of large nations and company leaders are a little more reluctant, right?

Yes, yes, I agree. What's needed is a huge amount of financing; the damage is in the trillions of dollars. At the national level, the only thing we can ask for is to pay more taxes; that's what we can ask of companies, that intergenerational responsibility. Cutting emissions today is for generations to come, in thirty or forty years.

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CONVERSATIONS

Adaptation is for now, which makes everything more complicated and difficult to prioritize. I'm equally optimistic, but we have to educate people; that's paramount to me.

-December marks the tenth anniversary of the Paris Agreement, where nations agreed on certain goals and actions to combat climate change. How do you view the process? Has progress been made this decade, and was it worth it?

We are all disillusioned with the UNFCCC (*the United Nations Framework Convention on Climate Change*) and the IPCC (*the Intergovernmental Panel on Climate Change, also part of the UN*).

-Because?

Because progress is slow. They meet every year, produce documents, but no one reads them. Nations may sign them, but then fail to implement them. At the same time, we can't abandon the mechanism and say goodbye to the UNFCCC, because they keep the issue alive. National leaders (shakes head), you know, the United States doesn't support the multilateral mechanism today. I'm an immigrant here, but I know the United States is key to making it work. The global nature of the cause is being lost, and that's a problem, as is the lack of global leaders. That's why, from the Vatican, what we're seeking is a bottom-up movement. Mayors, governors, the public, young people. We need a different way of approaching the issue. We can sit back and complain, but that doesn't change anything; we have to act. I think each of us individually must push for action.

-It's also been ten years since the encyclical Laudato si', in which Pope Francis addressed the environmental situation, including climate change. How do you think it influenced this idea of changing mentality?

First, I must say that I'm not Catholic. I'm not even Christian. Since I was born in India, my religion is Hinduism, but I'm not a good Hindu either because I don't practice it. I must tell you that I consider Pope Francis to be a true global spiritual leader, not just for Catholics.

I consider *Laudato si'* to be the first document that speaks to us about the human dimensions of climate change. We scientists talk about one aspect or another, very precisely, about the ecosystem, but we don't connect the dots with human suffering. He did.

The year before the encyclical (2014), we had a meeting on human and planetary sustainability. At the end of the meeting, I had to give him a summary. Supposedly, we were supposed to have an hour with him to tell him what we had discussed, but that very day, *Time* magazine had chosen him Personality of the Year, so the Vatican was filled with cameras and journalists. So the Pope only gave me two minutes. And thank goodness, because if I'd had an hour, I would have gotten bogged down with a ton of scientific data, this and that. So I simply told him that most of the polluting gases came from the richest billion people on the planet. We often think it's the poor who pollute. No. It's us, the rich, who pollute the planet. Those billion contribute 60% of the pollution. And the poorest three billion on the entire planet only contribute less than 5% of that pollution. In other words, nothing. But they bear 75% of the suffering from climate change. The Pope beautifully captured in *Laudato si'* that the Earth's complaint must be heard like the complaint of the poor. This is how he connected those details. This is how he promoted the issue of equity. And of intergenerational solidarity. Continue with the emissions, since they remain in the air for decades,

affect grandchildren and great-grandchildren of a generation that has not yet been born. I was surprised that in the United States, apparently only 10% of Catholics are familiar with the encyclical. I would think it's more popular in the rest of the world. I hope it's been read and understood more widely in Argentina, because it's a remarkable work.

-And there is a lot of very good science in the Encyclical. Do you know how the Pope acquired it?You worked on the draft.

No,no. The Secretariat (*of the Vatican*) wrote the scientific parts and sent them to me and some other scientists to look at and make sure the science was correct. So yes, I did a review of the science, I think it's chapters one and two.

-Is Leo XIV following the same path as Francis?

I think... I started praying that León would be like Francis on the climate front (*smiles*). I see he's made very positive statements during his papacy, and he also made them when he was in Peru. He's super committed to the poor. For me, climate change is about focusing on the poor and vulnerable on the planet, because it's one of the most dangerous things for them, one they have no control over. And the statements León made about the poor and vulnerable make me think he's going to speak out against the implications of climate change. We're planning an audience with him in October, as part of a meeting on education for children and the indigenous population that will be held at the Vatican.

-Climate change is linked to poverty and injustice, but at the same time, we must convince rich countries to provide money and invest. How do you think it can be done?

Correct. I constantly emphasize in my talks that if one maintains that it's only a problem for the poor, the fortunate, people like me, can say, "It's not my problem, nothing will happen to my children." That's why I also insist that it's a catastrophe for everyone, not just the poor. We need the beneficiaries of the system to be there. It's not a question of pointing fingers at them because that might scare them away, but rather convincing them, finding a common language; that's why we talk about the necessary social transformation. We need everyone to be there, and I'm not just talking about billionaires but about everyone in the upper income bracket. We have to persuade them that it's their problem too.

-There's talk of tipping points, that is, thresholds beyond which there's no point of return in the climate system. Which of these are of most concern to you in the coming years?

They worry me, yes. We discussed at the Vatican about low-probability but high-impact events, like a black swan, with the potential to cause a lot of damage. There are also some like ocean circulation, the rapid melting of glaciers... but I'm more concerned about extreme weather events, like heat waves that harm many people *en masse*; droughts; and floods from intense rains. It happened in July in Texas [where more than 100 people died] and it happens often in Latin America. My focus is on these extreme events that keep getting worse. How can we protect people from this? People who lost their homes to fire, like the wealthy Californians not so long ago, even a couple of friends of mine. There are reactions to this, but no coherent responses; this is what we need. We react, the police arrive, civil defense, but there is no response.

In other words, knowing how to protect homes and people fromFlooding, putting up barriers, fences, that kind of infrastructure. You have to focus on that response, not just react. That requires long-term thinking.

-Something that is precisely a major problem throughout Latin America: the lack of neighborhood and city planning.

That's why I return to something I said before. We mustn't rely on central national power; we must act from the local level, from cities, mayors, even associated governors, because it can be prevented. In other words, we can't know where the next event will occur; Argentina is a very large country, but we do know that it will happen somewhere, and we must start acting.

-You were also an advisor to the Dalai Lama. What was that experience like, and what differences do you see with the Vatican's Catholic leadership?

In 2013, I was at a public meeting with His Holiness the Dalai Lama and I said some things to him, more or less the same things I'm saying in this interview, and he stopped me and said, "Professor Ramanathan, I want to point something out to you. You're trying to change the external environment, but without changing people's internal environment." That's when I realized the need for social change and working to educate the public. He later invited me to his 80th birthday party, which was held in the Hollywood area [in Los Angeles]. I spoke with him again, and he showed me that he was very concerned about climate change, just like Francis. We are fortunate to have spiritual leaders of your stature.

-In this social cocktail there is a technological ingredient, which is changing our minds, perhaps not in a positive way.

I think AI can have a huge impact. We have climate scenarios and forecasts that require a lot of computing power, and it can help us predict extreme events. If we can know not a year or six months before they happen, but a few weeks before they happen, it will help us a lot. For example, if we know that a certain area is going to experience severe flooding, many lives will be saved with evacuations or physical barriers. Again, it's about responding, not just reacting. Also, for example, to improve renewable energy, like solar... I know a lot of people are concerned about AI, but it can also benefit us.

-Another avenue for attacking climate change is legal action, through the Inter-American Court of Human Rights or various national Supreme Courts and even lower courts that have made sweeping decisions. Do you think this is a valid and reasonable option?

It's a very promising, excellent development. It would have to be seen on a case-by-case basis, but I certainly support the idea that the poor, low-emission people who suffer the impacts of climate change, with the help of South American or other lawyers, would join forces to pursue litigation and achieve success.

-In short, he is optimistic about the future of civilization.

Termenously. Simply because people may not be educated on the details, but nature speaks. By 2030, with a sustained rise in temperature, the effects will be felt everywhere. And people will unite to fight, and leaders will have more courage and stop being afraid... I don't blame them, because fighting is very expensive, and it requires a lot of taxes, which, if imposed without a clear reason, will make them no longer leaders [smiles]. We need to inform people about the reason. Maybe there will be more pain in five years, but everything will get better.

