

THE ANTHROPOCENE: The era which the excesses of mankind created

↑
A fire on the
cerros orientales,
the mountains
on the eastern
border of Bogotá.

The impacts of humans on the planet have forced their leaders and societies to make joint, cooperative and radical decisions about ways to prevent future scenarios of great suffering. Researchers of the Universidad del Rosario and the Universidade de Brasília have joined the scientists who are urging mankind to enter a new geological stage and face up to all it entails.

By: Alejandro Ramírez Peña
Photos: Alberto Sierra, Ximena Serrano

A publication of the UNESCO states that “the term Anthropocene has been coined to designate the repercussions on the climate and biodiversity of both the rapid accumulation of greenhouse-gas effects and the irreversible harms caused by the excessive consumption of natural resources.”

The article likewise addresses the debate about whether that term can be used to define a new geological epoch that will succeed what is known as the Holocene era, an opinion held by a good many scientists. The researchers Matías Franchini, professor at the Faculty of Political Science, Government and International Relations of the Universidad del Rosario, and Eduardo Viola, professor at the Postgraduate Program on International Relations (IREL) of the Universidade de Brasília share this idea of going into a new stage of life on Earth.

In their study, entitled *The challenges of the Anthropocene; from an international environmental policy to global governance*, they underline that the planet is, in fact, entering a new geological era and that this change, which is so fundamental in terms of the physical and chemical functioning of the terrestrial system, obliges us to undertake a series of profound changes. It forces us to question how humanity should behave in the face of the challenges the new era poses.

“We are entering terrains which are very unknown, that is, where humans are starting to inhabit a planet which has only existed for a short time, the world which humanity has developed during the past 12 millennia. When we settled in it, we created agriculture, we began to raise animals, our culture solidified and after that, we created cities, States, etc.,” Franchini notes.

In his opinion, this situation shows that our political, domestic, economic and international institutions are not prepared to deal with these kinds of issues and problems, which are global to a large extent.

Along the same lines, professor Viola believes that the most important challenge for everyone is climate change. From the environmental point of view, he is convinced that this is a challenge which has repercussions on all of the other global environmental problems, like those to do with the preservation of ecosystems, biodiversity and pure potable water; the protection of the ozone layer; and soil loss, among others.

He equally underlines that in most countries, carbon emissions (from greenhouse gases) are related to pollution at a local level, that is, the same industries and means of transport which emit carbon also affect human health, unless they have sound filters or other mechanisms of control.

“There are other very big challenges which are not linked to environmental problems. They have to do with the governability of disruptive technologies, which fall into three large groups – artificial intelligence, synthetic biology (genetic engineering) and leading-edge nanotechnology – and are accelerating at an exponential rate: We must ensure that their handling and use do not go beyond our control,” Viola explains.

To that is added another alarming factor, characteristic of the history of evolution: Our custom of only reacting to immediate problems. According to these researchers, the idea of the Anthropocene era is to encourage humans to think about long-term problems which are cumulative and not immediate, with an additional aspect: The solutions must involve all of the inhabitants of Earth.

Francini singles out this situation as a major challenge in terms of social psychology, because it means that we must stop thinking in an individual and tribal way and do it in a collective one, on the understanding that, as members of humanity, we have a common destiny. And while this may seem utopian, it is becoming more and more necessary, since problems like climate change are “nourished” by the actions of everyone, as is the one of emissions.

“If there is no cooperation between countries, companies, non-governmental organizations and individuals, there will be no possibility of finding an optimal solution to such problems. The lower our level of cooperation, the weaker our capacity to respond to these new challenges and the corollary of that is, basically, more human suffering,” declares Matías Franchini.

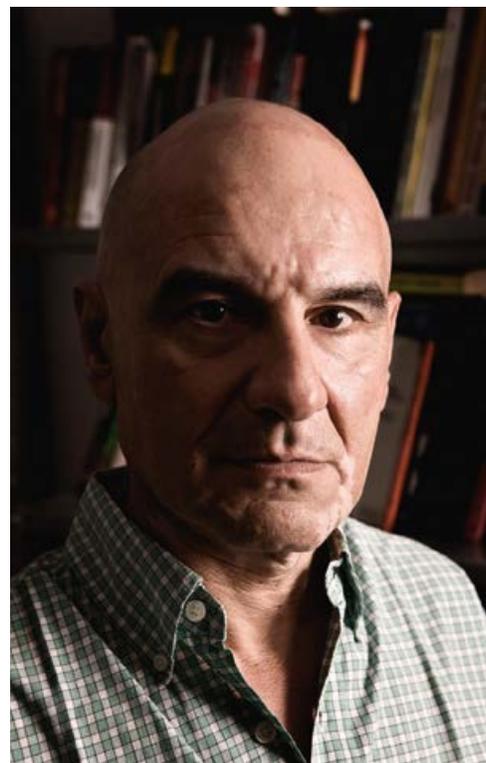
Global determination

These problems are even more worrying when we reflect on the true awareness and determination of our world to construct and maintain what the study defined as “a space where humanity can safely operate.”

The two professors are saddened by the fact that this possibility of cooperative efforts does not exist at the current time, as is shown by the different agreements and negotiations which have aimed at the mitigation of climate change. They began in 1992 with the Río Convention but since then, carbon emissions have



There are challenges which are linked to environmental problems and others which have to do with the governability of disruptive technologies: Artificial intelligence, synthetic biology and nanotechnology, Eduardo Viola explains.



continued to increase, year after year, and the problem has worsened. “Despite all of the scientific knowledge which we now have, the reality is that the large majority of countries in the world lack policies which really aim at the de-carbonization of the economy,” says the researcher Franchini.

As for the need for a global governance, the authors of the study believe that, despite developments of some importance in the 1990’s (after the end of the Cold War) and the following decade, things have gone backwards in recent years, since nationalism has increased in the countries of the democratic world, like the United States, and obviously in the authoritarian ones as well, as happens in China, Russia and Turkey.

That has been aggravated by the political tensions between those same actors, due to their commercial differences and radically different positions on situations like the one Venezuela is in, which makes it even more difficult to bring them together to work on joint issues that are as important as the one the Anthropocene era represents for mankind.

“That is why our proposal and the main message of our research has to do with ending what we think of as the exclusive focus of governments on sovereignty, which, at the current time, is more of a normative convention in the sense that if we want to deal with the common problems of cooperation or governance which humanity is clamoring for, and not only in the field of environmental change, but also that of the economy, human rights and all the other issues which are increasingly global ones, then the countries of the world should abandon their selfish interests,” remarks professor Franchini of the Universidad del Rosario.

He and his colleague likewise argue that we must gradually replace our short-term approach to such problems with a view



“If there is no cooperation between countries, companies, non-governmental organizations and individuals, there will be no possibility of finding an optimal solution to such problems. The lower our level of cooperation, the weaker our capacity to respond to these new challenges and there will be more human suffering,” declares Matías Franchini.

The authors of the study underline that the planet is, in fact, entering a new geological era and that this change, which is so fundamental in terms of the physical and chemical functioning of the terrestrial system, obliges us to undertake a series of profound changes. It forces us to question how humanity should behave in the face of the challenges the new era poses.

towards the future. Such problems are not only a feature of our present time, they are also long-term ones, which means renouncing the short-term logic which now governs the functioning of our political and economic systems.

But the difficulty is finding how to make that happen. If you want to be optimistic about it, Franchini would point to certain indications that we are already on the right path, like the growth of an individual, national and global awareness of the need to do something at once, plus the fact that the number of companies which are installing environment-friendly technologies is growing.

If, on the other hand, you want to be pessimistic, he would point out that these positive attitudes lag behind the rhythm of our environmental problems. Global environmental changes and all the problems they entail are growing at a much faster rate than the solutions. In that regard, we may need to wait for human suffering to reach a point where we have to react.

“If that is so, the worst that can happen is that we will reach the end of this century with a five or six degrees increase in temperature and a rise of several meters in sea levels, and that will lead to drastic changes in the cycles of rainfall and atmospheric cycles in general that will harm the production of food. We are already exposed to more frequent waves of extreme heat and cold, hurricanes and the extinction of many species: We are basically living in a world that is more and more hostile,” Franchini notes.

That is why the two scientists recommend that we do not sit around and wait for such a drastic scenario to happen. The world must prepare itself and fight to ensure that the future of humanity does not reach those extremes of suffering: We should abandon the selfish positions of the world leaders of nations and States. ■

MAIN INTERNATIONAL ENVIRONMENTAL REGIMES

CLIMATE CHANGE

AGREEMENT	YEAR	OBJECTIVE	RESULTS
United Nations Framework Convention on Climate Change	1992	The stabilization of concentrations of greenhouse-gas effects in the atmosphere to a level which prevents dangerous anthropogenic interferences in the climatic system	Failure: Global emissions rose at a high enough rate to surpass the limit, making a dangerous climate change nearly inevitable
Kyoto Protocol	1997	The countries set a goal of reducing emissions by 5.2% on average by 2010, compared to the level in 1990	Most countries reached the goal
2 nd Commitment Period of Kyoto Protocol	2012	Average 18% reduction of emissions in 2020, compared with 1990	Minimum attainment of the goal: The participating countries are barely responsible for approximately 12% of global emissions
The Paris Agreement	2015	Reduce global greenhouse gas-effect emissions, with the participation of all countries, but without a specific mitigation target	Each country has committed itself to mitigation goals for 2030, but they are not enough to stabilize the system. There are no mechanisms for monitoring or enforcing the national goals

OZONE LAYER

AGREEMENT	YEAR	OBJECTIVE	RESULTS
Vienna Convention for the Protection of the Ozone Layer	1985	Protect human health and the environment from the adverse effects which result or may result from human activities that modify or may modify the ozone layer (Art. 2)	Successful: A gradual reduction of chlorofluorocarbon emissions
Montreal Protocol on Substances that Deplete the Ozone Layer	1987	Control the emissions of substances which destroy the ozone layer	Successful: A gradual reduction of chlorofluorocarbon emissions



BIODIVERSITY

AGREEMENT	YEAR	OBJECTIVE	RESULTS
Convention on the International Trade in Endangered Species of Wild Fauna and Flora (CITES Convention)	1973	Regulation of the trade in endangered species to avoid an exploitation incompatible with their survival (Art. 2)	A varied impact, depending on the particular region in the world, and a significant increase in the visibility of the problem
Convention on Biological Diversity	1992	Conservation of biological diversity, the sustainable use of its components and the fair and equitable distribution of the benefits derived from the use of genetic resources	Failure: The frontier of biodiversity has been surpassed to the point where humankind is creating the sixth mass extinction in the history of the Earth
Nagoya Protocol on Access to Genetic Resources and the Fair and Equitable Sharing of Benefits Arising from their Utilization	2010	Regulate access to genetic resources and the distribution of the benefits deriving from their use	It came into force in October, 2014. The limited information available so far shows no progress in its implementation

CHANGES IN USE

AGREEMENT	YEAR	OBJECTIVE	RESULTS
United Nations Convention to Combat Desertification	1994	Combat desertification and mitigate the effects of drought in countries affected by grave droughts and/or desertification, especially in Africa	Ambivalent effects: In general, the process of desertification has continued but there was a positive change in some regions

CHEMICAL CONTAMINATION

AGREEMENT	YEAR	OBJECTIVE	RESULTS
Stockholm Convention on Persistent Organic Pollutants	2001	Eliminate and restrict the production and trade of persistent organic pollutants	In force since 2004. The problem is determining the results in view of the extreme geographical complexity and heterogeneity of the effects
Basel Convention on the Control of Transboundary Movements of Hazardous Wastes and Their Disposal	1989	Control the movement of hazardous wastes following the principles of a prior and informed consent to their import, export and transportation	Successful: The international trade in hazardous wastes was gradually reduced and became more regulated and transparent

Source: *Los desafíos del Antropoceno: de la política ambiental internacional hacia la gobernanza global* (The challenges of the Anthropocene era: From international environmental policy to global governance).