


# Pandemics, Existential and non-Existential Risks to Humanity

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**Abstract:** The pandemic caused by the SARS-Cov-2 virus has initiated an era of structural economic stagnation. With it, we have crossed a threshold in which the planet's so-called "ecosystemic services" have started becoming "ecosystemic disservices". Covid-19 is one of those disservices. In itself, it certainly does not constitute an existential risk to humanity. But what will be discussed here is the existence of a clear dividing line between existential and non-existential risks. Frequently, an existential risk results from a set of crises that, separately, do not existentially threaten humanity. Nevertheless, combined and acting in synergy, those crises have the potential to do so. The current pandemic points at the chance for a great civilizational shift, probably the last chance before environmental imbalances escape societies' control.

**Keywords:** Pandemic, global food system, deforestation, economic growth, existential risk

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*Debating ideas*

**The COVID-19 epoch: Interdisciplinary research towards a new just and sustainable ethics**

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This article develops the conclusions of a previous one, published in the *Jornal de Unicamp* on May 5 of this year (MARQUES, 2020), as well as in the journal *Cosmos e Contexto* (also with a translation into English<sup>1</sup>). We should, therefore, recap its final paragraph before continuing on to the heart of what will follow: once the pandemic has passed, it will no longer be plausible to expect a new cycle of economic growth. Some will certainly occur, but it will be conjunctural and soon be truncated by the climatic, ecological, and health chaos generated by the three systemic crises befalling contemporary societies with ever greater force: the climate emergency, decline in biodiversity, and industrial pollution. The varied developmentalist agendas typical of twentieth century ideological clashes are no longer current, even though, zombie-like, they have persisted into the twenty-first century. We can and should applaud the 17 Sustainable Development Goals, but it is increasingly clear that none of them will be achieved by 2030. Given that our wildlife habitat-destroying, globalized food system foments zoonoses, it is very possible that the coming decade will be marked by other pandemics. It certainly will be marked by a deepening of all the socioenvironmental crises that were already afflicting us before the current health crisis. The unavoidable reality is that the global post-pandemic political agenda will be defensive, adaptive, and will gravitate around the survival of societies, in a world hereafter ever more hostile, as it will be hotter, more economically dysfunctional, more unequal, more biologically impoverished, much more polluted, and, for all these reasons, sicker, even in the improbable absence of other pandemics. In this context, survival is not a minimal program. Survival today requires us to struggle for something more ambitious than the twentieth century's social democratic or revolutionary programs. It supposes redefining the very meaning and purpose of economic activity, which, in the final instance, is to say redefining our position as a society and as a species within the realm of the biosphere.

We must insist upon these crises' economic dimension: post-pandemic globalized capitalism will no longer grow – except briefly, locally, and always at lower rates –, impeded as it is by those growing imbalances in the Earth system caused precisely by that growth. An era of structural stagnation with crises of forced economic degrowth has begun. The 2007-2008 global financial crisis was its prelude and, since then, globalization's brutal mechanism has begun to jam. There are many symptoms of this: the final dissociation between financial markets and the real economy; the spread of poverty even in industrialized countries; the Greek and Brexit crises; the ascension of extreme rightwing movements and governments with clearly fascist characteristics throughout the world, spreading from India to the USA, Europe, and, obviously, Brazil; the Sino-American trade war, with the growing risk of a war that is not just economic. Taking stock of the global economic recovery a decade after the 2008 financial crisis, an IMF working paper (CHEN; MRKAIC; NABAR, 2019, p. 2) rightfully recognized that:

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1 - See L. Marques, *The Current Pandemic Occurs in the Most Important Year in Human History Will the Next Zoonoses Surface in Brazil?* (translated by William Shelton). Available at Academia.edu: <[https://www.academia.edu/43064538/\\_2020\\_The\\_Current\\_Pandemic\\_Occurs\\_in\\_the\\_Most\\_Important\\_Year\\_in\\_Human\\_History\\_Will\\_the\\_Next\\_Zoonoses\\_Surface\\_in\\_Brazil](https://www.academia.edu/43064538/_2020_The_Current_Pandemic_Occurs_in_the_Most_Important_Year_in_Human_History_Will_the_Next_Zoonoses_Surface_in_Brazil)>

Output losses after the crisis appear to be persistent, irrespective of whether a country suffered a banking crisis in 2007–08. Sluggish investment was a key channel through which these losses registered, accompanied by long-lasting capital and total factor productivity shortfalls relative to precrisis trends.

### 1. An era of ecosystemic disservices

That deceleration of the global economy is not only, nor above all, the result of internal dysfunctions of capitalism's *modus operandi*. Since the end of the twentieth century, and even more clearly through the second decade of this one, the perception that we were approaching a threshold beyond which the planet's so-called "ecosystemic services" will become "ecosystemic disservices" has forcefully emerged. The current pandemic is one of those disservices. That perception has shown itself, for example, in the 2013 manifesto, "Scientific Consensus on Maintaining Humanity's Life Support Systems in the 21st Century," proposed by Anthony Barnosky et al.<sup>2</sup> (2012), and signed by more than 1,300 scientists, researchers, members of NGOs, students, and the general public, in more than 60 countries:

Earth is rapidly approaching a tipping point. Human impacts are causing alarming levels of harm to our planet. As scientists who study the interaction of people with the rest of the biosphere using a wide range of approaches, we agree that the evidence that humans are damaging their ecological life-support systems is overwhelming.

The two manifestos promoted by William Ripple and colleagues in 2017 and 2019, with more than fifteen thousand signatures, as well as the "SOS of 700 Scientists," published in 2018 by the newspaper *Libération*, point toward a global socioeconomic system that has turned against itself as a result of its suicidal relationship with the environment. In an interview given in 2017 to the NGO *We Love Earth*, Dennis Meadows insisted on the fact that various socioenvironmental imbalances caused by economic growth were guiding globalized capitalism to a process of collapse:

We are in a period of collapse now, which will intensify. (...) When you have a physical growth in a finite planet, pressures are going to mount to stop the growth. And climate change is one of these pressures. (...) If we solved climate change, if we could somehow push a magic button and eliminate greenhouse gases, then, by continuing with our growth, we would just have to see bigger pressures in other sectors: water scarcity, or epidemics, or warfare...

At this moment, the most evident pressure is the pandemic, but it is not, in itself, the most threatening. Far more lethal pandemics have occurred in the past. The so-called Spanish Flu from 1918-1919, left nearly fifty million dead; the 1957-1958 influenza A virus

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2 - See also (Barnosky et al. 2012) and Barnosky and Hadly (2015), chapter 10: "End Game".

subtype H2N2, commonly referred to as the Asian flu pandemic, caused an estimated two million to four million deaths worldwide in a world with approximately one third of today's population (CLARK, 2008); the 1968 flu pandemic, the Influenza A virus subtype H3N2, also known as Hong-Kong flu, killed an estimated one million people all over the world; and the HIV/AIDS has claimed the lives of more than 32 million people since 1981. However, none of these worldwide health crises profoundly affected societies' resilience. There are three reasons why the current pandemic has struck the world more brutally and more enduringly than those previous ones. First, it is operating in a world in which extreme globalization of the economy, begun in the 1980s, has made its industrial, agricultural and livestock business, and service chains much more interdependent and, therefore, much more vulnerable to disruption. Second, the near real time global bombardment of information (and misinformation) via the internet about its impact and about the number of lives being cut short is a factor of emotional stress that is not irrelevant. Very few of today's seniors still remember either the 1957-1958 or the 1968 pandemics. But the trauma of the pandemic begun in 2020 will probably be forever imprinted on the memory of those who survive it. And, third, the current epidemic is occurring at a moment in which the growing malfunctioning of the global machine alluded to above forces societies to expend much more of their energy just to minimally remain functional in a now extremely grave framework of socioenvironmental, political, and psychological systemic crises.

## 2. The concurrence of nine combined regressions

These crises demand undelayable, globally orchestrated political reactions of our societies that are, at the same time, being divided into two evermore hardened and incommunicative groups. On one hand, the state-corporative establishment, determined to maintain the machinery of business as usual at all costs, is advancing its pawns on the international chessboard to guarantee that nothing changes in post-pandemic energy and food systems. On the other, the perception of scientists and growing sectors of society that we have reached a limit beyond which we can no longer advance, given that the harmful effects of globalized capitalism increasingly supersede their benefits. Observation of the concurrence of combined regressions in human security contribute to that perception: (1) after decades of progress in the struggle against food insecurity, the number of people battling acute hunger and suffering from malnutrition has been on the rise over the last four years (FAO, 2019, p. 6). According to the fourth annual Global Report on Food Crises (GRFC, 2020), around 183 million people in 47 countries were classified as being in Stressed (IPC/CH Phase 2) conditions, at risk of slipping into Crisis or worse (IPC/CH Phase 3 or above) if confronted by an additional shock or stressor. The current pandemic is precisely this additional shock; (2) the six most recent years (2014-2019) and the current one have been the hottest of the last twelve millennia; (3) the globalized food system drove the loss of 3.61 million km<sup>2</sup> of tree cover between 2001 and 2018, according to Global Forest Watch; (4) the heavily subsidized industrial fishing system is now sacrificing the oceans' future (PAULY, 2019); (5) the catastrophic decline in Source: Organized by the authors based on EMPLASA (2019) data.

biodiversity is annihilating vertebrate populations (Living Planet Index, 2018) and may lead to the extinction of one million species over the next few decades (IPBES, 2019); (6) acidification and eutrophication of the oceans and of various bodies of fresh water is creating marine dead zones and threatening ruptures of trophic chains in the aquatic environment; (7) industrial pollution poisons, sickens, and kills tens of millions of people worldwide each year (WHO Report on Cancer, 2020, for instance); (8) growing geopolitical tensions are seen, with the intensification of endemic conflicts focused on water and energy resources and the anguishing resumption of the nuclear arms race. The International Campaign to Abolish Nuclear Weapons (ICAN) estimates that the nine nuclear armed countries spent US\$ 72.9 billion (US\$ 35.4 billion was spent by the U.S. alone) on their 13,000+ nuclear weapons in 2019, an increase of US\$ 7.1 billion compared to 2018 (ICAN, 2019); (9) democracy and tolerance are increasingly threatened by waves of more or less orchestrated fake and hate news, by flareups of fascism, irrationality, and physical and psychic violence.

### 3. Existential and non-existential risks

These crises are interlinked and act in synergy, that is, they reciprocally strengthen one another. And precisely because they are interdependent and reciprocally strengthening each other, it is senseless to deal with them separately. It makes no sense, for example, to understand the current pandemic as simply a health emergency, isolated from other ongoing crises. Most of all, we should not classify these crises in an hierarchical order according to the greater or lesser risk they represent for humanity, as proposed by the University of Cambridge's Centre for the Study of Existential Risk, or by Toby Ord, from the University of Oxford's Future of Humanity Institute, in his recent book, *The Precipice. Existential Risk and the Future of Humanity* (2020).

The considerations proposed by these centers and researchers are very momentous. But they start from the false premise of dividing the risks to which humanity and other species are increasingly exposed into existential and non-existential ones. That dividing line does not exist. An existential risk is, frequently, made from a conjunction of crises that, separately, do not existentially threaten humanity but that, together, have the potential to do so. Will Steffen and colleagues (2018), for example, explored the possibility that "a 2°C warming could activate important tipping elements, raising the temperature further to activate other tipping elements in a domino-like cascade that could take the Earth System to even higher temperatures". That domino effect can lead us to what the authors called a Hothouse Earth, that is, a largely uninhabitable planet. And, once again, there is no clear dividing line between a planet that is largely uninhabitable and one that is completely uninhabitable for humans and innumerable other species. A chapter written for the English edition of my book, *Capitalism and Environmental Collapse* (2020), titled "Climate Feedbacks and Tipping Points", shows how devoid of meaning we find the question, frequently debated in the scientific community and taken up again by Toby Ord, of the probabilities of a warming capable of generating what is called runaway climate change. Let us remember what is truly at stake here for the destiny of humanity. The

runaway global warming conjecture, feared by a growing number of scientists (but still rejected by the IPCC<sup>3</sup>), would be able to lead the Earth toward conditions that prevail today on Venus. This conjecture may be interesting from a strictly scientific point of view, but it is totally useless from the point of view of the fate of animals and forests, because both would cease to exist under conditions that are much less extreme. Yangyang Xu and Veerabhadran Ramanathan (2017) have thus categorized the risks implicated at three levels of global warming: “>1.5°C as dangerous; >3°C as catastrophic; and >5°C as unknown, implying beyond catastrophic, including existential threats”. As established by a host of the next-generation climate models, a global warming of 5°C or even more above the pre-industrial period can be reached by 2100, because “even if coal use doesn’t rise in a catastrophic way, 5°C of warming could occur by other means, including thawing permafrost” (TOLLEFSON, 2020, p. 446).

Understanding this, one can ask if the current pandemic represents an existential or a non-existential risk for humanity. Having now, through the month of June, infected more than eight x million people and reaped more than 450 thousand officially confirmed fatalities (according to preliminary estimates, the real numbers are much higher), the current pandemic has not yet shown signs of cooling off. Nothing lets us state that the worst is over. In fact, it continues accelerating in the southern hemisphere, and can still affect a quarter billion people in Africa alone, according to a recent model (McVEIGH, 2020). Beyond this, new waves of contagion are taking place in the north where it had begun to weaken, and new outbreaks can continue occurring in 2021. That said, as bad as it may be, we know that, in and of itself, Covid-19 obviously does not represent an existential threat for humanity. But if the pandemic can turn society’s attention away from what is in play, society will be paralyzed to the point of keeping it from reacting to the above-mentioned socioenvironmental crises. Most importantly, if the post-pandemic economy gives way to even more desperate and destructive attempts at economic recovery, it may become a decisive link in the chain of factors that are already leading us to cross tipping points conducive to a world largely or completely uninhabitable by humans and numerous other species.

#### 4. Overcoming the vicious cycle that imprisons globalized capitalism

Even though at this moment it is the most apparent aspect, the pandemic is, in short, only one facet of the great existential threat represented by globalized capitalism. The mother of all threats is the vicious cycle of destructive intensification that imprisons globalized capitalism: the more that system struggles to reverse the decline in rates of growth, the more environmentally destructive it becomes, and the more destructive it becomes, the more the impacts of that destruction will impede its growth. Covid-19 is, in large part, one of the results of that trap, since global warming, deforestation, the destruction of wildlife habitats, the domestication and raising of poultry and mammals

3 - See IPCC 31st Session, Bali 26-29 October 2009, p. 90: “Some thresholds that all would consider dangerous have no support in the literature as having a non-negligible chance of occurring. For instance, a ‘runaway greenhouse effect’ — analogous to Venus — appears to have virtually no chance of being induced by anthropogenic activities”.

on an industrial scale destroy the evolutionary balance among species, facilitating the conditions for numerous viruses to jump from one species to another, including our own.

The current pandemic offers the chance for a civilizational turn, probably the last chance before environmental imbalances spin beyond societies' control. The project of globalized capitalism, the only possible one for it, is to continue advancing blindly in its logic of destruction. Pollution and greenhouse gas emissions are already nearly within normal ranges in China again and James Temple (2020, p. 56) analyzed how:

the threat of rapidly accelerating climate change will remain. And we'll be living in a much poorer world, with fewer job opportunities, less money to invest in cleaner systems, and deeper fears about our health, our financial futures, and other lurking dangers. These are ripe conditions to further inflame nationalist instincts, making our global challenges even harder to solve.

But it is still possible to choose another path and to abandon the ecocidal and suicidal logic upon which we have built our societies and our world views. Even though much more improbable, that choice is the only one possible if we wish to significantly increase our chances of adapting to a global warming of at least 1°C above the current level of warming, which will occur in the next quarter century. For that, we will need to redefine the objectives and the elementary way economic activities function, a redefinition based on three fundamental principles:

- (1) A low-carbon energy and food system, based principally on vegetable nutrients, produced by a varied organic agriculture, respectful of wildlife habitats. That new agriculture centered on food self-sufficiency for territories will reduce the recurrence of plagues and epidemics, as well as limiting their impact;
- (2) A new international juridical-political order, overcoming the retrograde and militaristic notion of absolute national sovereignty in favor of global governance, the only way to coordinate our struggle against the principal global emergencies: climate, destruction of biodiversity, pollution, and unsanitary conditions;
- (3) And, finally, a redefinition – of a philosophical and spiritual character – of humankind's position in the biosphere, abandoning anthropocentrism in favor of biocentrism.

(Translation by William Shelton)

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# Pandemias, riscos existenciais e não existenciais à humanidade

Luiz Marques

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*Ideias em debate*

**A época CO-  
VID-19: Pesquisa  
interdisciplinar e  
uma nova ética sus-  
tentável e justa**

**Resumo:** A pandemia causada pelo vírus SARS-Cov-2 deu início a uma era de estagnação econômica estrutural. Com ela, cruza-se o limiar em que os chamados “serviços ecossistêmicos” do planeta começam a se converter em “desserviços ecossistêmicos”. A Covid-19 é um desses desserviços. Em si mesma, ela não constitui, por certo, um risco existencial à humanidade. Mas o que aqui se discute é a existência de uma linha divisória clara entre riscos existenciais e não existenciais. Frequentemente, um risco existencial resulta de um conjunto de crises, que, isoladamente, não ameaçam existencialmente a humanidade. Contudo, combinadas e agindo em sinergia, essas crises têm potencial para tanto. A atual pandemia acena com uma chance de uma grande virada civilizacional, provavelmente a última chance antes que os desequilíbrios ambientais saiam do controle das sociedades.

**Palavras-chave:** COVID-19, aspectos locais/regionais, Brasil, infraestrutura de saúde

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# Pandemias, riesgos existenciales y no existenciales para la humanidad

Luiz Marques

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*Ideas en debate*

**La época CO-VID-19: investigación interdisciplinaria y una nueva ética sostenible y justa**

**Resumen:** La pandemia causada por el virus SARS-Cov-2 ha iniciado una era de estancamiento económico estructural. Con él, hemos cruzado un umbral en el que los llamados “servicios ecosistémicos” del planeta han comenzado a convertirse en “deservicios ecosistémicos”. Covid-19 es uno de esos deservicios. En sí mismo, ciertamente no constituye un riesgo existencial para la humanidad. Pero lo que se discutirá aquí es la existencia de una línea divisoria clara entre los riesgos existenciales y los no existenciales. Con frecuencia, un riesgo existencial resulta de un conjunto de crisis que, de forma aislada, no amenazan existencialmente a la humanidad. Sin embargo, combinadas y actuando en sinergia, esas crisis tienen el potencial de hacerlo. La pandemia actual apunta a la posibilidad de un gran cambio civilizatorio, probablemente la última oportunidad antes de que los desequilibrios ambientales escapen al control de las sociedades.

**Palabras clave:** Pandemia, sistema alimentario global, deforestación, crecimiento económico, riesgo existencial.

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