

# Give the planet a chance if we want our patients to have a future

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## Abstract

Climate changes have never been as dramatically apparent in our everyday life as now.

It is urgent to reduce greenhouse gas emissions and mitigate the consequences of climate changes both on the planet and on human health.

The indiscriminate exploitation of natural resources and the lack of shared rules are among the major causes. Recently, some economists have called for a radical change in the present economic model towards a 'social solidarity economy' model. G. Giraud, a French economist, called for an ecological and social transition in order to reduce the ecological footprint and deal concretely with the problem of global warming. The good news is that the solutions are there and do not have to be punitive. Health consequences of climate changes have already caused serious drawbacks on public health. Doctors and scientific institutions can and must contribute to help mitigate the effects of climate change through increasing commitment and support to good environmental policies. Climate emergency requires the extension of ethics and medical practice beyond their traditional mission to involve the relationship between patients, doctors and society. We propose that medical scientific institutions quickly promote the birth of task forces dedicated to addressing this problem.

**Keywords:** Anthropocene, Climate change, Ecological transition, Medical ethics

## Introduction

It is evident that we are now living in a climate emergency and it is equally evident that its solution or even its mitigation depends on the strong political will of all governments.

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In the last few years climate changes became increasingly evident in concurrence with the increase of global warming, whose origin beyond any reasonable doubt mostly depends on human activity.

Unfortunately, the results on the reduction of greenhouse gas emission, as reported in the last conferences on climate change organized by the UN, were unsatisfactory and demonstrated a hesitant and weak attitude by most governments.

At the same time, the dramatic consequences of climate change, of which hurricanes and increasingly violent rains, soil desertification etc. are common expressions, have never been as dramatically apparent in our everyday life as now.

Such changes concern us every day more and more directly and do not allow us to delegate any longer these problems only to government institutions, but call for a direct

involvement particularly from the academic world and scientific institutions, two highly representative components of our society.

### **An ailing planet**

The indiscriminate exploitation of resources and the lack of shared rules are two major causes of climate changes as pointed out by many sources including the encyclical “*Laudato Si*” by Pope Francis (2015) (1).

Moreover, the annual report by the IPCC (Intergovernmental Panel on Climate Change), a UN body and the most important research group on climate changes, pointed out that climate change is taking on a dimension of extreme gravity.

It can be compared to a war bulletin where it is stressed the need and urgency to reduce greenhouse gas emissions and mitigate the consequences of climate change. It is striking to observe that global warming had an exponential increase beginning in the eighties of last century to present times. Such a devastating impact on our planet contributed to create the term “*anthropocene*” that well compares human age to a geological era.

The reasons for the exasperated exploitation of natural resources are in the present economic model characterized by the accumulation of great fortunes in the hands of the few and by the impoverishment and exploitation of an increasing number of people. This model is the main cause of the current social and economic inequalities and for the indiscriminate exploitation of natural resources, as it was pointed out by well-known economists, such as Amartya Sen, Joseph Stiglitz and Jean Paul Fitoussi. Others, such as W.D. Nordhaus and P. Romer, have tried to integrate technological innovation and the environment problem with economic growth suggesting the possibility of creating a sustainable economic growth (2). Taxation of CO<sub>2</sub> emissions as an effective tool for contrasting the global warming, as proposed by Nordhaus, still remains a most debated issue.

By contrast, other economists, S. Zamagni, G. Bruni and J. Sachs, previous director of the Earth’s Institute at Columbia University of New York, have called for a radical change in the present economic model towards a ‘*Social Solidarity Economy*’ model where common welfare (well-being) comes before individual profit (3,4).

### **The Ecological transition, a step in the right direction**

G. Giraud, French Jesuit and economist called for an ecological and social transition in order to give birth to an ecological culture able to direct the flow of public money to reduce the ecological footprint and deal concretely with the problem of greenhouse gas emission, the main cause of climate change (5). Ecological transition does not simply mean “*greening*” the current system but rather adopting a new economic and social model which will definitely break

with the dictatorship of GDP (Gross Domestic Product). Such a model must change the way we consume, work, produce, in a nutshell “*live together*”, allowing for and promoting civic participation.

If we do not act quickly, the climate change and the depletion of natural resources will trigger increasingly dramatic changes. The good news is that the solutions are there and do not have to be punitive.

Paul Hawken, a well-known leading environmentalist, has collected at least one hundred ideas from different professionals in various fields: such as collection and distribution of energy, food production, building construction etc., which were published in “*Drawdown*” (2019) (6). This book aims at being the most exhaustive plan for reverting global warming by active world-wide cooperation between scientists and institutions (7).

### **The health effects of climate change**

Climate changes are already causing serious draw-backs on public health like the increase in lung diseases and the increase in renal failure of unknown aetiology like Mesoamerican nephropathy, especially in Central America.

The expansion of ethical consciousness must lead doctors, the scientific institutions and the whole academic world to a strong commitment not only related to their professional field (relationship doctor-patient-disease) but also to the environmental and social causes underlying the diseases, the so-called “*health determinants*”, together with strategies to eradicate them.

The worst effects will be felt by poorer people in poorer countries. High temperatures increase the ozone levels and tend to compromise lung function increasing hospitalization for respiratory and cardiovascular conditions. Hurricanes and flooding will become more common causing direct harm to human health. Warmer water temperatures will facilitate the growth of pathogens such as coliform and vibrio species and might cause a different and wider distribution of vector borne diseases such as Lyme disease, Dengue etc. The adaptation and mitigation of such effects is urgent and is accomplished through secondary prevention.

At the same time primary prevention strategies are needed in order to remove the underlying causes of climate change. This problem has recently been addressed by a NEJM issue, where not only the health consequences of climate change but even environmental ethics have been brought into the domain of medical practice in a sort of extended ethical consciousness (8,9).

### **Which role for Physicians and Scientific Institutions?**

Doctors, scientific institutions and the whole academic world can and must contribute to help mitigate the effects of climate change in two possible ways.

The first one directly, not merely treating diseases (a traditional task), but indicating possible solutions to mitigate or correct specific health problems related to climate change, for example asthma due to air pollution or allergies that do not depend only on pollutants but also on climate change which makes seasons and blooming different and modify allergens expansion. Naturally each institution contributes in its own field of competence.

Another possible direct approach might concern reducing the materials employed for packaging, selecting less polluting materials and/or easier to recycle and avoiding the waste of resources in our clinics and hospitals. On the other hand, other non-medical institutions, such as physics and chemistry institutions, could help facing the problem of renewable energies and using less toxic and polluting substances in industry and agriculture.

The second possible way is indirect, through an increasing support and commitment to environmental policies, pushing governments and institutions to act responsibly for really sustainable policies. This is exactly what was done by over three hundred academics who signed in Pisa last July the S. Anna's paper, addressed to the main representatives of Italian institutions, in which they ask "that Italy follows the example of many European countries and decides to act on production processes and transport, transforming the economy so as to reach the goal of zero net greenhouse gas emissions by 2050".

On the other hand, the mission of all scientific societies should be to promote and improve the wellness of human beings through their own specific competence.

In particular, for medical institutions, the mission should be not only to improve disease treatment and possibly do it by sustainable ways, but also to care for the underlying socio-economic and environmental conditions.

This seemingly odd outlook of physicians and scientific institutions is not surprising since back in 1961 some health professionals founded "Physicians for Social Responsibility". Indeed, physician advocacy has a long history. Commitment to improving population health has often driven physicians to support radical political and ethical programs. "Medicine is a social science", wrote Rudolf Virchow in 1848, "and politics is nothing else but medicine on a large scale".

## Conclusions and proposals

Doctors and scientific institutions must understand that people's health depends on the planet's health. Climate emergency calls for the extension of ethics and medical practice beyond their traditional mission to involve the relationship between patients, doctors and society. Global warming is a problem of today, but its consequences will be even more so in the future. Current policies are far behind what science indicates as the way to follow in order to avoid a future apocalypse. However, much progress has been made from the point of view of public awareness of the problem as demonstrated by the strength and spontaneity of Greta Thunberg's movement "Fridays for Future".

Such a movement shows the importance of active involvement of people belonging to the civil society to press governments to concretely face the problem. In this context we must become increasingly aware that our patients' health depends on the health of our planet. It is up to us to find the most suitable and effective tools.

**We propose that the medical scientific institutions adhere to the chart of S. Anna Institute in Pisa and promote and encourage the creation of real task forces dedicated to these aspects as soon as possible.**

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