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Science calls for "drastic changes" to keep Earth habitable

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Latest part of IPCC 6th report warns that time is running out to make the energy transition a reality.



The latest IPCC report focuses on solutions to reverse the current crisis situation / Unsplash.

The third part of the IPCC's sixth report, which focuses on mitigating the effects of climate change, was presented on 4th April. Our colleague **Carles Pelejero**, who has had the opportunity to review the report, said on the same day of its publication at a

waste".

However, this optimism should not hide the reality before us, which is that the planet is within striking distance of warming by 1.5 degrees -the global average temperature is already 1.1 degrees higher than in pre-industrial times- the limit defined by experts as the least risky scenario for humanity. Also, if current policies continue, a temperature increase of about 3 degrees is projected by the end of the century, leading to a higher frequency and intensity of, for example, droughts or marine heat waves, among other extreme weather events.

A range of solutions

The latest IPCC report focuses on solutions to reverse the current situation, emphasising that we have the infrastructure and technology to do so. According to the document, the key is to reduce the use of fossil fuels as much as possible over the next decade and to take refuge in electrification - especially of transport -, improved energy efficiency, the use of alternative fuels such as hydrogen and carbon storage.

According to this document, we should drastically reduce emissions immediately in order to bend the global CO2 emissions curve as soon as possible.

"If we do our homework and manage, in just three years, to reach the maximum of global greenhouse gas emissions, we will have to continue reducing them by up to 43% before 2030 if we want the Earth to remain habitable", points out Pelejero.

In fact, even in this *scenario* it would be possible to slightly exceed the 1.5-degree limit mentioned earlier, although we could be back below this point of no return before the end of the century.

All of this implies reducing, by 2050, 95% of coal consumption, 60% of oil, and of gas with respect to consumption in 2019. And we cannot forget about methane, whose emissions should be reduced by approximately 33% if we do not want the

These conclusions are supported by the 175 member countries of the IPCC, which have approved the content of the report published last April, in whose preparation 278 authors from 65 different countries and numerous experts who have acted as external reviewers have participated, contributing between them 59,212 comments to be taken into account. In total, the document includes the scientific production of more than 18,000 articles published in prestigious scientific journals over the last seven years.

The keys to change

What is probably most surprising is the optimism of this latest document. A text that shows not just one way, but many, to achieve the same objective: to reduce emissions as much as possible. According to the report, there are options in all sectors to reduce emissions by at least half by 2030.

On the other hand, the report notes that the costs of renewables, such as wind, solar and battery power, have fallen significantly in recent years. Therefore, although it warns that we are not moving in the right direction or fast enough, it assures that, today, it is possible to make this energy transition by investing less and, in this sense, it values those policies that are supporting this change.

However, the report points out some of the most glaring inequalities related to climate change, such as the fact that only the top 10% of households with the highest per capita emissions are responsible for between 36 and 45% of global emissions. Still, at the household level, the report notes that diets high in vegetable protein and low in meat and dairy products are associated with lower emissions.

The document also highlights the importance of walking or cycling, using public transport, engaging in circular economy initiatives, compacting cities and making them more walkable, or restricting land use, all of which would help to significantly reduce emissions.

It should be kept in mind that this sixth report has become particularly famous for the

message out as soon as possible and achieving the established objectives, milestones that require immediate action if we want to avoid the worst scenarios without having to allocate more resources than necessary.

This text has been produced in collaboration with **Ana Iglesias Mialaret**, from the CSIC - BBVA Foundation Science Communication Grants Programme, for the 'In depth' section of the ICM newsletter.

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