

Global economic policies driving toward a climate crisis

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International research into global climate models involving the Institute of Environmental Science and Technology of the Universitat Autònoma de Barcelona (ICTA-UAB) shows that current worldwide economic

policies are in danger of leading nations away from emission and global warming targets.

The study, carried out by leading international academics and published in *Nature Energy*, shows that existing growth-driven economic scenarios rely heavily on increased energy use in the future, and the use of carbon capture and storage technologies which are as-yet untested on a commercial scale.

The article calls instead for diversification in these existing models and highlights the need to consider alternative post-growth scenarios in order to meet climate and emissions obligations set by the Paris Agreement.

Growth-driven economic scenarios assume that nations must continue to raise their [gross domestic product](#) (GDP) by increasing the production of goods and services in order to progress economically and socially. Subsequently this creates an increase in the demand for energy and an inevitable rise in carbon emissions. Authors state that these increases will need to be offset if the goal of the Paris Agreement to limit global warming to 1.5 or 2 degrees Celsius, compared to pre-industrial levels, is to be achieved.

Existing scenarios of climate mitigation rely on unproven technologies and improved efficiency of our economies, but do not consider the need for societal and economic transformations. "Take for example the question of negative emissions. Most scenarios assume it is perfectly feasible to transform the land of the size of India into a bioenergy plantation yet find it impossible to assume that rich countries could at some point stop growing their economies, even though growth is proven to be a major driver of environmental impacts," says Giorgos Kallis, ICTA-UAB researcher and co-author of the study.

Other strategies—such as direct air carbon capture and

storage—consume massive amounts of electricity, creating difficulties in decarbonising energy supply.

New research shows that alternative scenarios need to be considered in order to deliver on existing targets. There is now a growing call for high-income nations to pursue post-growth economic models instead, which take away the focus on increasing GDP and look to prioritize human needs and an improved standard of living.

Researchers explain that post-growth policies maintain a stable economy and support the social and societal needs of the population without economic growth. As an example, Spain outperforms the U.S. in certain key social indicators such as life expectancy despite having 55% less GDP per capita.

They insist on the need for policy interventions in areas such as transportation, industry, agriculture, construction and city planning.

"These include extending product warranties, rights to repair, minimizing food waste, reducing reliance on industrial farming methods, promoting maintenance over new construction, and improving the energy efficiency of existing buildings," says Jason Hickel, researcher at the London School of Economics, who will join the ICTA-UAB next academic year.

"In the article, we propose an alternative approach to avoiding dangerous climate change which does not depend on the success of dystopian 'technofixes'", explains Aljoša Slameršak, researcher at the ICTA-UAB. He adds that "post-growth calls for [rich countries](#) to move away from economic growth and focus instead on provisioning for [human needs](#) and well-being, such as by reducing inequality, ensuring living wages, shortening the working week to maintain full employment, and guaranteeing universal access to public healthcare, education, transportation, energy, water and affordable housing."

Researchers consider that their findings are relevant for the ongoing debate on Spain's fair contribution in meeting the goals of the Paris Agreements. "Support for the plans of El Prat airport expansion, the bid for hosting the 2030 Winter Olympics in Barcelona-Pyrenees, and hostile reactions to the appeal of the Spanish Minister of Consumption to reduce the consumption of meat reveal the dangerous degree of denial and mismanagement of the climate emergency by the Catalan and Spanish authorities," states Slameršak. Researchers also point out that the ongoing forest fires in Catalonia are just one aspect of the climate emergency that is about to get much worse unless we face the uncomfortable reality that we must fundamentally transform our economy, our energy system and our lifestyles, to avoid dangerous climate change.

More information: Jason Hickel et al, Urgent need for post-growth climate mitigation scenarios, *Nature Energy* (2021). DOI: [10.1038/s41560-021-00884-9](https://doi.org/10.1038/s41560-021-00884-9)

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