

Population in the IPCC's new mitigation report

Philip Cafaro

A new IPCC climate change mitigation report confirms that population increase and economic growth are the main drivers of today's historically high greenhouse gas emissions. But that scientific information has been censored and removed from the Summary for Policymakers distributed to the world's press and the public. Does a problem disappear if we don't mention it?

Last April, Working Group III's contribution to the IPCC's Sixth Assessment Report on Climate Change came out.¹ This "mitigation report" summarises the recent scientific literature on the causes of climate change and current emissions trends. It also assesses humanity's options to limit future climate change and the possible environmental impacts of different policies going forward.

A recent opinion piece in The Guardian titled "Scientists have just told us how to solve the climate crisis – will the world listen?"² calls the AR6 mitigation report "a major leap forward compared to previous reports." "Climate scientists have just pulled off a truly impressive achievement," Simon Lewis writes. "They have stood firm and persuaded the world's governments to agree to a common guide to solving the climate emergency." This might seem unduly optimistic, given that the report states clearly that humanity is on pace to increase average global temperatures by 3° to 4° C by the end of



chensiyuan, CC BY-SA 4.0 <<https://creativecommons.org/licenses/by-sa/4.0/>>, via Wikimedia Commons

¹ ↪ IPCC: [Climate Change 2022: Mitigation of Climate Change](#), April 2022.

² ↪ Simon Lewis: [Scientists have just told us how to solve the climate crisis – will the world listen?](#) – The Guardian, 6 April 2022.

the century. But those governments have signed off on this report, Lewis argues, so “their citizens can now hold them to account for the failures it details.”

c. Net anthropogenic GHG emissions per capita
and for total population, per region (2019)

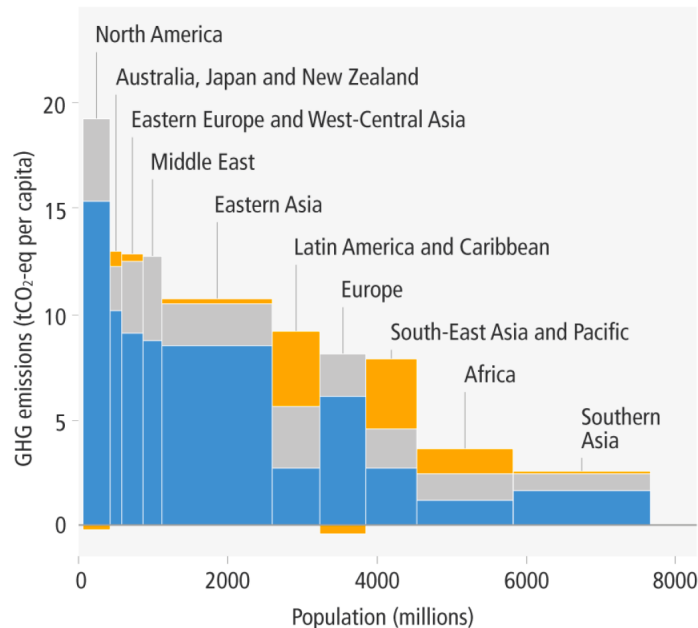


Figure SPM.2 c: Net anthropogenic greenhouse gas emissions per capita and for total population, per region (2019). The height of each rectangle shows per-capita emissions, the width shows the population of the region, so that the area of the rectangles refers to the total emissions for each region. The blue, orange, and gray bars represent emission contribution from fossil fuels and industry, land use, and other emissions respectively. Source: IPCC, Climate Change 2022: [Mitigation of Climate Change: Summary for Policymakers](#).

Lewis goes on to report that the new AR6 Summary for Policymakers³ breaks new ground by rejecting population growth as a driver of increased greenhouse gas emissions. He writes:

The last IPCC summary on solutions in 2014 labelled population growth as one of ‘the most important drivers of increases in CO₂ emissions from fossil fuel combustion.’ Such dangerous misunderstandings are now gone. Seven years on, these old ‘blame the poor’ arguments increasingly seem like a relic of a previous age.

That got me curious. For decades, climate scientists have used the Kaya identity⁴ to explain changes in global CO₂ emissions. In plain English, it reads: Emissions = Population x GDP per capita x Energy used per unit of GDP x CO₂ generated per unit of energy. Based on this framework, past IPCC assessment reports have identified demographic and economic growth as the main drivers of climate change. Had that really changed? I decided to have a look at the IPCC’s new report.

³ ↪ IPCC: [Climate Change 2022 – Mitigation of Climate Change Summary for Policymakers](#)

⁴ ↪ [Kaya Identity](#)

The Scientists' Report

The full AR6 Mitigation Report, the one written by the scientists, is 2707 pages long.⁵ I confess I didn't read the whole thing. But I did read the first two chapters (of seventeen total). There the fundamental role of growth in driving higher GHG emissions is clear, as it has been in past reports. Chapter 2 of the full report, "Emissions Trends and Drivers," notes (page 2-4):

Globally, GDP per capita and population growth remained the strongest drivers of CO2 emissions from fossil fuel combustion in the last decade (robust evidence, high agreement). Trends since 1990 continued in the years 2010 to 2019 with GDP per capita and population growth increasing emissions by 2.3% and 1.2% yr-1, respectively. This growth outpaced the reduction in the use of energy per unit of GDP (-2% yr-1, globally) as well as improvements in the carbon intensity of energy (-0.3%yr-1).

This paragraph is reiterated word for word in the 142-page Technical Summary⁶ to the main report (page TS-12), which was also written by the scientists.

The Technical Summary also notes that demographic and economic growth are likely to continue driving higher emissions going forward. It discusses this in relation to the so-called Shared Socioeconomic Pathways (SSPs) that model possible policy scenarios (page TS-41):

The main emissions drivers across the SSPs include growth in population reaching 8.5-9.7 billion by 2050, and an increase in global GDP of 2.7-4.1% per year between 2015 and 2050. Final energy demand in the absence of any new climate policies is projected to grow to around 480 to 750 EJ yr-1 in 2050 (compared to around 390 EJ in 2015) (medium confidence). The highest emissions scenarios in the literature result in global warming of >5°C by 2100, based on assumptions of rapid economic growth and pervasive climate policy failures (high confidence).

According to the scientists, then, population growth and economic growth are indeed the major drivers of increased greenhouse gas emissions. Population growth compounds the effects of increased wealth by the number of people enriched. Furthermore, human numbers will be a major influence on emissions going forward. To note just one more place in chapter 1 where the general point is made unambiguously (page 1-13):

Global GHG emissions have continued to rise since AR5, though the average rate of emissions growth slowed, from 2.4% (from 2000-2010) to 1.3% for 2010-2019. ... Important driving factors include population and GDP growth. The pause in emissions growth reflected interplay of strong energy efficiency improvements and low-carbon technology deployment, but these did not expand fast enough to offset the continued pressures for overall growth at [the] global level.

Expanding on this general theme, there are numerous places, just in the first two chapters, where the authors state that future population growth could undermine mitigation efforts in specific economic sectors, including the industrial sector (page 2-47) and the agricultural sector (page 2-53). There is also a reminder of the ubiquity of population's impacts on emissions, including in the developed world (page 2-42):

⁵ ↪ IPCC: Climate Change 2022: [Mitigation of Climate Change Working Group III contribution to the WGIII. Sixth Assessment Report of the Intergovernmental Panel on Climate Change.](#)

⁶ ↪ IPCC: WG III contribution to the Sixth Assessment Report – [List of corrigenda to be implemented, Technical Summary](#)

Population growth has also remained a strong and persistent upward driver in almost all regions (+1.2% yr-1 globally from 2010 to 2019), although per capita emission levels are very uneven across world regions. Therefore, modest population increases in wealthy countries may have a similar impact on emissions as high population increases in regions with low per capita emission levels.

This ubiquity is reinforced by figure 2-16 of the main report (below), which provides figures for regional changes in the four Kaya factors, showing their importance.

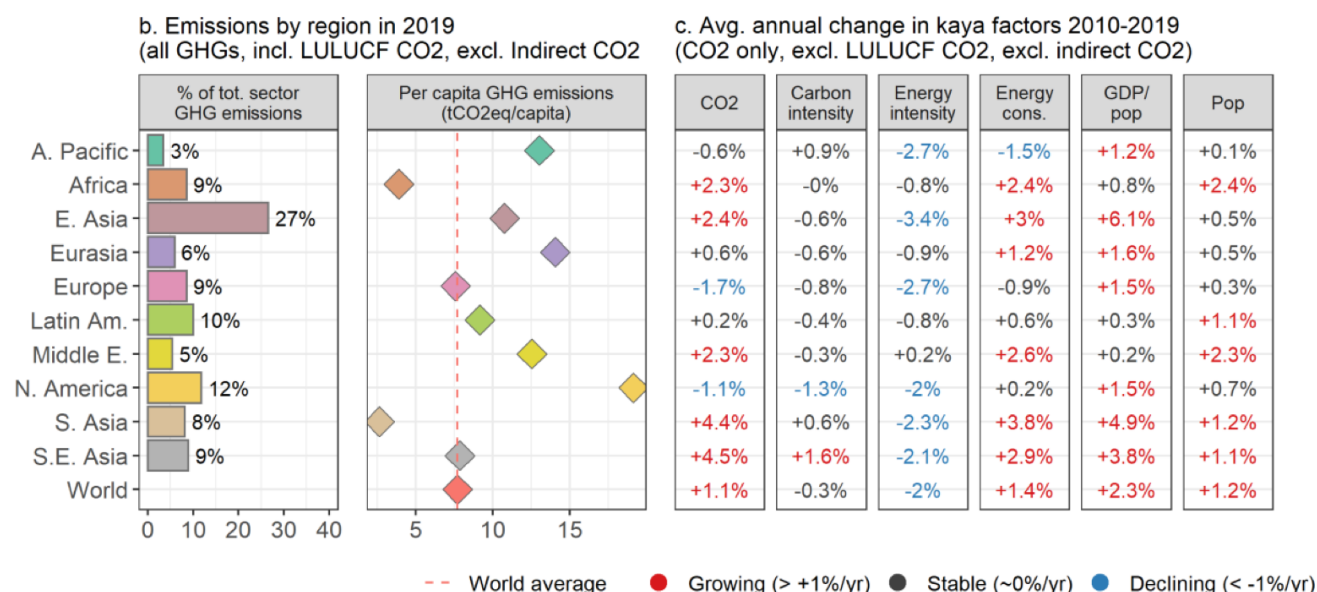


Figure 2.16 Trends and drivers of global GHG emissions, including b) share of total and per capita GHG emissions by world region in 2019, and c) Kaya decomposition of CO₂ emissions drivers. The Kaya decomposition is based on the equation $F = P(G/P)(E/G)(F/E)$, where F is CO₂ emissions, P is population, G/P is GDP per capita, E/G is the energy intensity of GDP and F/E is the carbon intensity of energy. Source: IPCC, Climate Change 2022: [Mitigation of Climate Change](#).

The Politicians' Report

Given all this, how can Simon Lewis claim that the IPCC's new mitigation report avoids the "dangerous misunderstanding" that population growth is an important driver of increased greenhouse gas emissions? The answer is

As the Summary for Policymakers proceeds to consider policies to limit climate change, the two factors of the Kaya identity that are moving in the wrong direction vis-à-vis greenhouse gas emissions (population and affluence) are simply excluded from consideration.

simple: none of this discussion of population and economic growth made it into the 62-page Summary for Policymakers, which is all most people (including reporters) read. Unlike the full report, this document is vetted by political appointees. They apparently decided to censor anything that might call into

question the goodness of continued growth.

For example, on page 2-4 of the full report, in the chapter on emissions trends and drivers, we are given three bold-faced statements laying out the general situation:

Global net anthropogenic Greenhouse Gas (GHG) emissions during the last decade (2010-2019) were higher than at any previous time in human history (high confidence).

Emissions growth has varied, but persisted across all groups of greenhouse gases (high confidence).

Globally, GDP per capita and population growth remained the strongest drivers of CO2 emissions from fossil fuel combustion in the last decade (robust evidence, high agreement).

Pages 4-8 of the Summary for Policymakers repeat and elaborate on the first two sentences. But the third one is excised; instead, it skips ahead to the more congenial topic of regional disparities in greenhouse gas emissions.

We are thus left in the strange situation where the chief public-facing document from the IPCC's new mitigation report, the one that most people will see, does not clearly identify the fundamental drivers of global climate change. This despite the fact that this important information is contained in the full report the summary is supposed to be summarising.

As the Summary for Policymakers proceeds to consider policies to limit climate change, the two factors of the Kaya

Let's be clear. Addressing overpopulation or the dangers of continued economic growth are not on the table, not because the scientists don't discuss them in the full report. They do. They aren't there because the politicians who censored the public-facing Summary for Policymakers don't want to address them, or have their constituents discuss them.

identity that are moving in the wrong direction vis-à-vis greenhouse gas emissions (population and affluence) are simply excluded from consideration. So it is not surprising that the words 'contraception,' 'family planning,' 'overconsumption' and 'limits to growth' do not appear. Meanwhile, measures that address the two technology factors (energy used per unit of GDP and carbon emissions per unit of energy) are discussed at length. They hold the

field as the sole contenders for addressing climate change, not because they have been shown to be easier, cheaper, or more equitable to address, but by default.

Let's be clear. Addressing overpopulation or the dangers of continued economic growth are not on the table, not because the scientists don't discuss them in the full report. They do. They aren't there because the politicians who censored the public-facing Summary for Policymakers don't want to address them, or have their constituents discuss them. Is this, as Simon Lewis claims, progress? Or just the latest example of our inability to address climate change honestly and with all the tools at our disposal?

Aborting a wider debate about growth

Several other valuable discussions in the full mitigation report seem to have left no trace on the Summary for Policymakers.⁷ Section 1.6 in chapter 1, "Achieving mitigation in the context of sustainable development," primarily discusses this in mainstream economic terms (pages 1-38ff.). But it does note the inherent tension between economic

⁷ ↪ IPCC: Climate Change 2022 — [Mitigation of Climate Change Summary for Policymakers](#) — Working Group III contribution to the WGIII Sixth Assessment Report of the Intergovernmental Panel on Climate Change.

development and increased greenhouse emissions. More broadly, it raises the question of whether mainstream economic approaches are fit for purpose in guiding the world to sustainability. For example (page 1-41):

The ‘green economy’ and green growth – growth without undermining ecological systems, partly by gaining economic value from cleaner technologies and systems and [that] is inclusive and equitable in its outcomes – has gained popularity in both developed and developing countries as an approach for harnessing economic growth to address environmental issues. Critics however argue that [the] green economy ultimately emphasises economic growth to the detriment of other important aspects of human welfare such as social justice, and challenge the central idea that it is possible to decouple economic activity and growth (measured as GDP increment) from increasing use of biophysical resources (raw materials, energy). ... Literature on degrowth, post growth, and post development questions the sustainability and imperative of more growth especially in already industrialised countries and argues that prosperity and the ‘Good Life’ are not immutably tied to economic growth.

A similar discussion in chapter 1 of the full report,⁸ regarding climate ethics, questions the sufficiency of mainstream economic and techno-managerial approaches to mitigation (1-48):

A large body of literature examines the critical role of values, ethics, attitudes, and behaviours as foundational frames for understanding and assessing climate action, sustainable development and societal transformation. Most of this work is offered as a counterpoint or critique to mainstream literature’s focus on safe-guarding of economic growth of nations, corporations and individuals. These perspectives highlight the dominance of economic utilitarianism in western philosophical thought as a key driver for unsustainable consumption and global environmental change. ... While acknowledging the role of policy, technology, and finance, the ‘managerialist’ approaches that emphasise ‘technical governance’ and fail to challenge the deeper values that underpin societies may not secure the deep change required to avert dangerous climate change and other environmental challenges.

None of these fundamental economic and ethical debates make it into the Summary for Policymakers. Instead, we find numerous cheery claims that technological innovations and managerial reforms can, by themselves, successfully limit climate change to acceptable levels.

Of course, technical solutions have their place. But so does “moving upstream”⁹ and directly addressing the main drivers

The IPCC’s Sixth Assessment Report makes clear that the poor will bear the brunt of humanity’s failure to adequately mitigate climate change.

of climate change: excessive human numbers and overlarge human economies. The science in the Technical Summary¹⁰ and the full AR6 mitigation report fully support doing so. The scientists are calling¹¹ for a more robust discussion of such fundamental matters and a wider consideration of our mitigation options. But the political apparatchiks

who neutered the Summary for Policymakers apparently had other ideas.

⁸ ↪ IPCC: Climate Change 2022: [Mitigation of Climate Change](#) Working Group III contribution to the WGIII. Sixth Assessment Report of the Intergovernmental Panel on Climate Change.

⁹ ↪ The Overpopulation Project: [Moving Upstream](#), 19 October 2021.

¹⁰ ↪ IPCC: WG III contribution to the Sixth Assessment Report – [List of corrigenda to be implemented, Technical Summary](#)

¹¹ ↪ William J Ripple et al: [World Scientists’ Warning of a Climate Emergency 2021](#) - BioScience – Oxford Academic, September 2021.

It is sad that columnists and editors at The Guardian support such political censorship and wilful blindness. And it is ironic, given their supposed sensitivity toward the global poor. For the IPCC's Sixth Assessment Report makes clear that the poor will bear the brunt of humanity's failure to adequately mitigate climate change.

Perhaps in the circle of hell reserved for those who undermined effective climate action, Simon Lewis and George Monbiot¹² will rub elbows with Charles Koch and former ExxonMobil CEO Lee Raymond. I know, the very idea is inconceivable to many of my fellow Guardian readers. Just like the idea that there can be too many people.

Related links:

- The Jus Semper Global Alliance
- [Overpopulation Project](#)
- Álvaro J. de Regil: [Is Population Crucial for Degrowth?](#)
- Álvaro J. de Regil: [Transitioning to Geocratia the People and Planet and Not the Market Paradigm — First Steps](#)
- Álvaro J. de Regil: [Marketocracy and the Capture of People and Planet](#)
- Álvaro J. de Regil: [The Deceptive Delusions of Green Capitalism](#)
- The Editors of Monthly Review: [Leaked IPCC Reports](#)
- Juan Bordera and Ferran Puig Vilar: [Lights and Shadows of the IPCC](#)

¹² ↩ George Monbiot: [Population panic lets rich people off the hook for the climate crisis they are fuelling](#) – The Guardian, 26 August 2020.

❖ **About Jus Semper:** The Jus Semper Global Alliance aims to contribute to achieving a sustainable ethos of social justice in the world, where all communities live in truly democratic environments that provide full enjoyment of human rights and sustainable living standards in accordance with human dignity. To accomplish this, it contributes to the liberalisation of the democratic institutions of society that have been captured by the owners of the market. With that purpose, it is devoted to research and analysis to provoke the awareness and critical thinking to generate ideas for a transformative vision to materialise the truly democratic and sustainable paradigm of People and Planet and NOT of the market.

❖ **About the author:** Philip Camaro is a member of the Overpopulation Project and a Senior researcher, Author; Philosophy professor at Colorado State University in Fort Collins, Colorado. <http://www.philipcafaro.com/>



❖ **About this paper:** This paper was originally published in English by the Overpopulation Project in April 2022.

❖ **Quote this paper as:** Philip Cafaro: Population in the IPCC's new mitigation report – The Jus Semper Global Alliance, December 2022. This paper has been published under Creative Commons, CC-BY-NC-ND 4.0. You are welcome to reproduce the material for non-commercial use, crediting the author and providing a link to the original publisher.

❖ **Tags:** Capitalism, Democracy, Social Justice, IPCC, Population, Growth, GHG, Degrowth, Sustainability, Climate Change.

❖ The responsibility for opinions expressed in this work rests only with the author(s), and its publication does not necessarily constitute an endorsement by The Jus Semper Global Alliance.



Under Creative Commons Attribution 4.0 License
<https://creativecommons.org/licenses/by-nc-nd/4.0/>

© 2022. The Jus Semper Global Alliance
Portal on the net: <https://www.jussemper.org/>
e-mail: informa@jussemper.org