Where do we stand?



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We are at a turning point

» We are speechless and do not know how to overcome it in order to make reality comprehensible, to adequately describe the seriousness of the situation.

George Marshall. Book: Don't Even Think About It - Why Our Brains Are Wired to Ignore Climate Change. 2014

» We can talk about other things, we can look away, we can refuse to look up, but we cannot escape climate change.

Jonathan Freedland. Climate sceptics cheering as they melt in record temperatures? This heatwave is where satire has come to die. The Guardian 26 Jun 2026

» An entire society is stuck between the feeling of impending catastrophe and the inability to admit this feeling.

Quote from Joanna Macy (1929 – 2025), Eco-philosopher, Activist and System Scientist.

» The human ability to act has far surpassed the ability to understand. As a result civilization is faced with a perfect storm of problems driven by overpopulation, overconsumption by the rich, the use of environmentally malign technologies, and gross inequalities.

*Blue Planet Prize Laureates, Gro Harlem Brundtland et al. Environment and Development Challenges: **The Imperative to Act**. 2012*

» We are facing a change that has nothing in common with the usual advances and transformations. This is due to the unintended side effects of technical progress. These have now become central risks that we are fundamentally unable to cope with.

Ulrich Beck, sociologist. Book: Risk Society - Towards a New Modernity. 1986

» The highly industrialised modern world has pretty much reached the end of its wisdom – be it the tangible climatic changes, the creeping increase in ecological destruction, the conflict between rich and poor, the collapsing social and healthcare systems, the empty state coffers, the seemingly unmanageable increase in unemployment, the rapid growth in mental and allergic illnesses.

We are at a turning point.

According to and translated from: Geseko von Lüpke. Book: Politik des Herzens. Nachhaltige Konzepte für das 21. Jahrhundert. Gespräche mit den Weisen unserer Zeit. 2015

» I cannot say whether things will improve when they change, but I can say this much: they must change if they are to be good.

Translated quote from: Georg C. Lichtenberg, Physicist and writer, 1742 – 1799

» The global economic system needs to be rewired. In particular, we need to rethink economic growth, so that economies that need to grow can grow and economies that are overconsuming can develop new operating systems.

It will require rethinking consumption of materials, which may double by 2060. It will require designing the global financial system from one that is crowdfunding catastrophe to one that crowdfunds long-term prosperity.

*Dixson-Declève S. et.al. 2022. Book - Executive Summary: **Earth for All. A Survival Guide for Humanity**. PDF*

The climate debate



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» We think of climate change as slow, but it is unnervingly fast. We think of the technological change necessary to avert it as fast-arriving, but unfortunately it is deceptively slow, especially judged by just how soon we need it.

David Wallace-Wells. Book: The Uninhabitable Earth. Life after Warming. 2019

All across the country, people argue that the costs of climate protection measures are

unaffordable, and that, if anything, measures to adapt to climate change are worthwhile. And this is despite the overwhelming evidence that inaction results in costs that are just as high – or even much higher.

This debate is further reinforced by the widespread, fundamental opposition to any measures aimed at reducing CO_2 emissions.

» In this context, climate research refers to «five stages of climate denial» to describe how the arguments *against reducing greenhouse gas emissions* have evolved over time.

Stage 1: Climate change does not exist
Stage 2: Climate change is not man-made
Stage 3: The consequences of climate change are not serious
Stage 4: The solutions are no good
Stage 5: All we can do is adapt

Source: Jacqueline Büchi. Früher leugnen, heute anpassen: Wie sich der Kampf gegen den Klimaschutz verändert hat. Tages-Anzeiger. 14.08.26

» Europe extreme summer heat 2026 is already imposing substantial human and economic cost, including elevated heat-related mortality, pressure on healthcare systems and severe wildfire damage.

The main ways in which heat affects EU GDP are lower agricultural output and higher food prices, constrained energy production and higher electricity prices, transport disruption and increased transportation costs, and reduced labour productivity.

The total EU-wide GDP impact in 2026 is estimated at around -1%, around € 180 billion.

Hans Stegeman, Joeri de Wilde and Ernst Hobma. Economic effects of the hot European summer of 2026. Triodos Bank. 8 August 2026

» Fossil fuels are expanding—and our media and politics are characterized by “climate hushing”—not because people don’t care about climate change, but because business interests and global elites want it that way.

We already have the technological and behavioral solutions we need to live affluent, modern lives without coal, oil, and gas. The core problem is that the phaseout of fossil fuels would catalyze a serious financial and lifestyle shock to the richest among us.

But as a trade-off it would also raise people’s real incomes, making the vast majority of us better off. In a decarbonized and electrified net-zero economy—quite aside from avoided costs of worse heat waves, droughts, floods, storms, diseases, and so on—we would be paying much less for electricity, heating, and transportation, currently a huge chunk of people’s monthly bills.

Genevieve Guenther. Liberals Can't Address the Climate Crisis Because It Means Confronting Capitalism. A Magazine of Politics and Culture, filed 11 October 2026 in Climate Change.

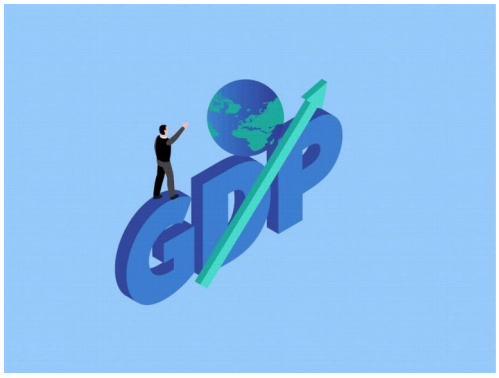
» What we do now is by no means unimportant. Even with very ambitious climate action, we will have to adapt to further changes. Conversely, however, adapting to climate change can never replace climate protection.

Every additional tonne of CO_2 contributes to further global warming. And every additional tenth of a degree increases the risks. However, the extent to which the situation worsens in the future will depend largely on our emissions and on how quickly we achieve net zero.

We know of many solutions for climate protection and climate adaptation. The crucial question, therefore, is no longer whether we can do something. It is how quickly we can achieve it.

According to: Marc Olefs. Die gefährliche Lücke zwischen Wissen und Handeln beim Klimawandel. DerStandard. 28.08.26

Growth – carry on as before?



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» Three per cent growth means doubling the size of the global economy every twenty-three years. This might be OK if Gross Domestic Product GDP were just plucked out of thin air. But it's not. It is coupled to energy and resource use.

Jason Hickel. Book: Less is More. How degrowth will save the world. 2020

» Increasing resource use is the main driver of the planetary crisis and could derail efforts to achieve not only global climate, biodiversity, and pollution targets but also economic prosperity and human well-being.

United Nations Environment Programme. Global Resources Outlook 2024 Summary. Bend the Trend - Press Release . March 2024

» It's a dilemma: it does not work without growth, there is no completely green growth, and normal growth inevitably leads to ecological disaster.

Translated from: Ulrike Herrmann. Book: Goodbye, Kapitalismus: So kann der Übergang zu einer neuen Wirtschaftsordnung gelingen. 2022

We urgently need a *clear vision*, a *bold policy*, and a truly *robust strategy* to find the way out of the growth dilemma.

Tim Jackson. Book: Prosperity without Growth - Foundations for the economy of tomorrow. 2016

» Continued growth isn't a fairy tale, it's a necessity. But *not just any* growth. The power of the market needs to be directed to achieving what society wants. That requires measures of income and welfare that reflect our values.

We need a world where we are no longer guided solely by measures like gross domestic product GDP.

Mark Carney. Book: Value(s) - Building a Better World for All. 2021

So the question is not whether growth is necessary. The question is rather: what sort of growth do we want?

And given that more than half of economic value creation – the newly generated wealth – goes to the richest 1 per cent of the world's population, we probably have less of a growth problem than a *genuine problem of distribution*.

What are the rich doing?



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The past decades have brought unprecedented prosperity to many people.

» This is the historic novelty of the current situation: As we run ever closer to the edge of the environmental envelope – the conditions within which our species can thrive – the development of the rich world systematically undercuts the conditions for survival of billions of people in the climate danger zone.

They are not so much exploited or bypassed as victimised by the climatic effects of *economic growth* taking place elsewhere. This violent and indirect entanglement is new in its quality and scale.

Adam Tooze. The climate emergency really is a new type of crisis – consider the 'triple inequality' at the heart of it. The Guardian 23.11.2023

» The pressure of the global middle and upper classes on our planet's vital ecological systems has now become so strong that a climatic and ecological destabilization of the Earth has begun. This destabilization endangers the ecological foundations of life, which include astable climate, a functioning biosphere, sufficient availability of clean water, healthy soil and clean air.

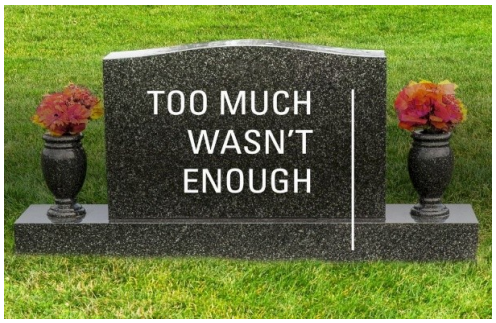
We need a discussion about sufficiency as a *«Strategy of the Enough»* - the hitherto neglected dimension of future policy.

Sufficiency as a «Strategy of the Enough» *- A Necessary Debate. German Advisory Council on the Environment. 2024. PDF*

» Energy use by the wealthiest 1% produces more than twice the CO_2 emissions of the poorest 50% of the world population combined.

The top 1.7% of energy users consume 33% of global energy, by contrast almost 3 billion people together use only 9% of global energy.

N.Bento etal. ***New demand goals for energy and climate resilience.*** *Science 392/6796 April 2026. PDF*



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» The question arises: What philosophy of life is behind the *insatiability* of us wealthy people who live so stubbornly and so dispassionately and morosely at the expense of others and the environment?

Translated from: Gabriela Simon: Mehr Genuss! Mehr Faulheit! Mehr Schlendrian! Die Zeit Nr. 42/1992

People in wealthy societies tend to turn a blind eye to the fact that our cherished way of life is recklessly jeopardising our descendants' chances of a good life.

» For too long, climate policy has not been treated as the issue of social distribution and justice that it is. The greatest shortcoming, however, is that both the political sphere and sustainability research have failed to acknowledge – both to themselves and to society – just how much change and adaptation will be required of the *affluent* and the *wealthy*.

Instead, the focus has been on technocratic solutions and the hope that climate protection can be achieved without any noticeable changes to lifestyles or the distribution of wealth.

Translated from: Eversberg D. Und Schmelzer M. Warum es mit der Klimapolitik hakt, und wie sich die Blockade überwinden liesse.Ökologisches Wirtschaften 2.2025 (40)

What are the major risks?



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The global economic system, with its momentum that we humans can hardly control, is endangering our natural foundations of life and coexistence on Earth.

Even in the Global Risk Report 2022 of the World Economic Forum WEF, five of the six biggest global risks are ecological - *climate crisis, loss of biodiversity, water scarcity, environmental pollution, natural disasters* - and the sixth is weapons of mass destruction.

- Extreme weather events with great damage to property, infrastructure and human life.
- Governments and businesses fail to mitigate and adapt to climate change.
- Great loss of biodiversity and collapse of ecosystems with irreversible consequences for the environment, which leads to a severe depletion of resources for humanity and industry.

» We don’t know how much carbon will be in the future atmosphere, we don’t know what the tipping points will be or when the thresholds will be crossed. The biggest reason we don’t know the future is simple: We have no idea what humans will do. If we continue to put greenhouse gases in the atmosphere, the risks increase. If we don’t, the world will be safer.

It doesn’t look likely that we will ever stop. But the science is clear: human beings are responsible for climate change, and human beings can choose to stop it. We’re the firstspecies in the history of Earth to be faced with this decision.

Kate Marvel. Book: Human Nature. Nine ways to feel about our changing planet. 2025

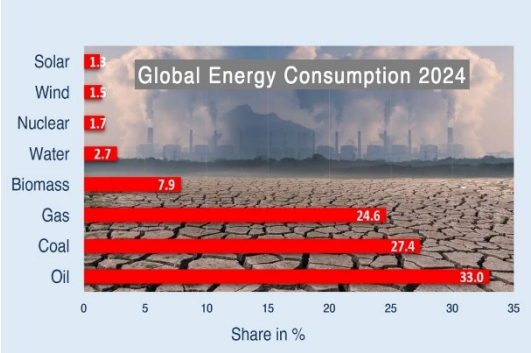
» The irreversibility*) of change in ecological systems in terms of restoration has simply not yet been understood:

If we reach these tipping points where the climate tips, where biodiversity tips, where the oceans tip, then we will have completely changed living conditions for humanity, for future generations.

According to and translated from: Maja Göpel. Pressekonferenz Scientists for Future zu den Protesten für mehr Klimaschutz. 12. März 2019

**) Irreversibility: The change cannot simply be reversed, even if the original cause is remedied.Tipping point: A system, e.g. the climate, abruptly tips into a new state at a certain point.*

Where's the energy transition?



© Ulrich Brunner / Data Source: Energy Institute. Statistical Review of World Energy 2025

Even in retrospect, the narrative of the energy transition is told as if we were switching from one energy system to another, but in fact the 'new' energy productions have not replaced the 'old' ones, but rather complemented them.

» After two centuries of 'energy transition' from wood to coal, from coal to oil, from oil to gas, and now to renewables, humanity has never burned so much oil and gas, so much coal and so much wood. Wood e.g. currently provides twice as much energy as nuclear fission, twice as much as hydroelectricity, and twice as much as solar and wind power combined.

According to: Jean-Baptiste Fressoz. Book. More and More and More. An All-Consuming History. 2025.

So when we seek solutions to the climate crisis and want to reduce CO_2 emissions, we must urgently address the consumption of raw materials, which is increasing despite all technological innovations.

What is the state of our basis of life?



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Regardless of all our achievements, we owe our existence to a fertile soil layer of just 10 to 30 centimetres and the fact that it rains.

» Around one fifth of the Earth's surface is covered by forests, meadows, pastures and farmland. 8% is desert, mountains, glaciers, wasteland and urban areas, and a little over 70% is covered by water.

We are constantly losing fertile agricultural land through overuse, conversion, erosion, salinisation, compaction, acidification and contamination with heavy metals and pesticides. Over the past 150 years, almost half of the Earth's fertile soil has disappeared.
Source: UN - World Prospects: The 2015 Revision

» Agriculture and forestry produce around 25% of greenhouse gas emissions. This makes agriculture one of the most important sectors that needs to change if we want to emerge from the current environmental and climate crisis.

Another unsustainable feature is the increase in meat production.
According to: Ernst Ulrich von Weizsäcker et al. Book: Come on! Capitalism, Short-termism, Population and the Destruction of the Planet. 2017

» The production of meat and dairy products already takes up 70 - 80 per cent of global agricultural land *), although it only covers 18 per cent of humanity's calorie requirements and 37 per cent of its protein needs.
Poore et al., Reducing food's environmental impacts through producers and consumers. Science 360, 987-992 (2018)

**) Cultivation of animal feed and grazing land for animals*

» It is estimated that the productive capacity of about 4 million ha of rainfed agriculture, and 35 million ha of rangeland is reduced each year, and 12 million ha per year are lost due to land degradation.

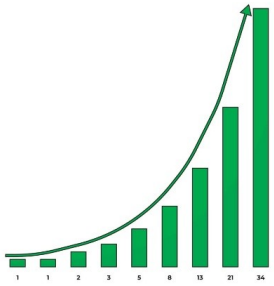
It is well established that a fundamental paradigm shift towards ecologically sustainable agricultural production and healthy food system is required worldwide to reverse

environmental degradation and climate extremes while regeneratively managing agricultural production within planetary boundaries.

*Rockström J, Kassam A, Friedrich T, et al. **Conservation agriculture: helping to return to within planetary boundaries**. 2025. Global Sustainability, 9, e11, 1–27. https://doi.org/10.1017/sus.2025.10045*

To achieve this, at least one third of the world's land and marine areas and inland waters are to be placed under protection by 2030. This was agreed by 188 countries at the 15th UN Biodiversity Conference in 2022 in a groundbreaking final declaration.

What are the consequences of exponential growth?



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Exponential growth in key areas of society *) is triggering multiple crises in our time. We are clearly reaching our limits, because exponential growth also has a downside: sudden collapse and crash.

**) e.g. primary energy consumption, global economic power, world population, carbon dioxide, water consumption, fertiliser consumption, ocean acidification, plastic production, urban population, international tourism and many more.*

Our planet has capacity limits for air pollution, biodiversity, the extent of climate change, and other factors. These are boundaries that must be respected if we are to preserve the basis for human life. We have already crossed seven out of nine planetary boundaries.

***Seven of nine planetary boundaries now breached** - ocean acidification joins the danger zone. Potsdam Institute for Climate Impact Research. 24.09.2025.*

We are at a crossroads: can we stabilise today's exponential trends and manage to continue developing well on a sustainable path, or will we carry on as before and accept increasing instability and accelerated decline?

» The more humans cross planetary boundaries and override natural regulatory mechanisms due to exponential growth processes, the more urgent it becomes to halt and stabilise these

processes in a timely manner by means of political action and collective control.
Translated from: Emanuel Deutschmann. Buch. Die Exponentialgesellschaft. Vom Ende des Wachstums zur Stabilisierung der Welt. 2025.

» Today, the principle of responsibility must first and foremost be used to slow down, protect, preserve and thus prevent developments that could lead to the demise of humanity.
Hans Jonas, philosopher. The Imperative of Responsibility. In Search of an Ethics for the Technological Age.1979

Are we ignoring the problems?



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No coming catastrophe has ever been studied as thoroughly as global warming. And none has ever been so thoroughly *ignored*.

The first World Climate Conference was held in Geneva back in 1979. World Climate Conferences have been held annually since 1995 and nonetheless global greenhouse gas emissions are still increasing every year. Never since modern measurements began in 1957 has the increase in global CO_2 concentrations been as great as from 2023 to 2024.

» At the 2021 climate summit in Glasgow, the states agreed to reduce greenhouse gas emissions by 45% by 2030, compared to 2010 levels. The aim was to limit global warming below 2°C.

However, studies on the effectiveness of the *existing* nationally determined contributions to reduce their emissions have now revealed: if they were implemented to this extent,global emissions in 2030 would not be lower, but around 9 % higher than in 2010.
According to United Nations – Climate Change. New Analysis of National Climate Plans: Insufficient Progress Made, COP28 Must Set Stage for Immediate Action. 14 November 2023

» The gap between the climate challenge and climate action, between ambition and commitment, is growing rapidly. This development justifies speaking of a *planetary emergency*.

Translated from: Hans Joachim Schellnhuber - Founding director and long-standing head of Potsdam Institute for Climate Impact Research PIK. Kurze wissenschaftliche Stellungnahme zur sich verschärfenden Klimakrise. WissenLeben 14.02.25

» For the young people who show up in the statistics as concerned or extremely concerned, the reports about the climate crisis are not nearly as depressing as the fact that these reports are *ignored*.

Translated from: Daniel Graf. Ja, Zukunftslust, verdammt! REPUBLIK 14.02.2023

» In a major international survey in 2021, 10,000 young people between the ages of 16 and 25 around the world were asked about their attitudes to climate change:

- More than half of young people believe that humanity is doomed due to climate change.
- More than a third of young people are reluctant to have children because of climate change.
- Climate anxiety and distress correlate with perceived inadequate government response and associated feelings of betrayal.

  *Caroline Hickman et al. 2021. The Lancet Planetary Health. **Climate anxiety in children and young people and their beliefs about government responses to climate change:** a global survey.*

What are the effects of extreme inequality?



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The inequality in income, resource use, CO_2 emissions, etc. between countries and also within societies is enormous.

Over 600 economists and scientists call in an open letter for a new «International Panel on Inequality», the creation of a body akin to the UN's Intergovernmental Panel on Climate Change (IPCC) to coordinate action against what it saw as disastrous effects on modern society.

*Open letter. Economists and inequality experts support call for new **International Panel on Inequality**. November 2025*

» The imbalances in the global division of labour lead to an outrageous level of dishonesty in the climate debate: the countries of the global South are held responsible for the overexploitation of their natural resources, even though the benefits largely accrue to the global North, which also makes the extractions possible in the first place with its technology and financial capital.

Beckert Jens. Book: How We Sold Our Future. The Failure to Fight Climate Change. 2025

» No matter how you look at it: of the wealth generated by economic growth since globalisation, the poor have received a little, the very few rich have received an unimaginable amount, and the vast middle class has received little to nothing.

Translated from: Maja Göpel. 2022. Book: Unsere Welt neu denken. Ein Einladung.

» The richest 1% of humanity is responsible for more carbon emissions than the poorest 66%, with dire consequences for vulnerable communities and global efforts to tackle the climate emergency.

*Jonathan Watts: Richest 1% account for more carbon emissions than poorest 66%, report says. The Guardian, 20.11.2023. Data based on the report of Oxfam International. **Climate Equality: A planet for the 99%**. PDF*

Billions of poorer people and the world's poorest people, who have contributed little or nothing to climate change and global warming, are exposed without any protection to the effects of climate change through drought, flooding and heat and are under existential threat.

» Without decisive action to drastically reduce socio-economic inequalities, there is no solution to the environmental and climate crisis.

Piketty Thomas. Book: Brief history of equality. 2022