

IMPERATIVE TO ABANDON FOSSIL FUELS CALLED OPPORTUNITY 'TOO GOOD TO BE MISSED'

If dramatic action is not taken in Paris later this year, the planet faces a high risk of reaching a 6°C rise and potentially catastrophic climate scenarios



The demands that rapid global warming has placed on human civilization should be seen as an opportunity, not a burden. "This trajectory is not one of economic pain, but of economic opportunity, progress and inclusiveness. It is a chance too good to be missed," reads a statement by top scientists and economists. (Photograph: Les Stone/Corbis)

Calling 2015 a "critical year for humanity" and setting out what must be achieved at UN climate talks scheduled for Paris in December, a group of scientists and economists from some of the world's top research institutions is marking Earth Day by saying a commitment to "leaving at least three quarters of all known fossil fuel reserves in the ground" must be met in order to save the world from the most devastating impacts of climate change.

"It's the choice of moving down a business-as-usual route with devastating outcomes for humanity and, at the same time, we have this almost unprecedented opportunity, we can transform the world economy to a fossil fuel-free one and moreover do it in a way that is security and health-wise more attractive." —Johan Rockström, Stockholm Resilience Center

In a joint statement articulating eight essential elements that need to be included in the agreement that comes out of the next Convention of the Parties (COP21) summit, prominent members of the Earth League say that the planet's carbon budget is already overloaded and that world governments must take action if they intend to keep global temperatures from rising more than 2°C by the end of this century.

Under current global emission rates, the statement warns, the world is "currently on a path to around 4°C warming by 2100, which would create unmanageable environmental challenges." And if dramatic action is not taken, it continues, there exists a 10% chance of reaching a 6°C rise in which tipping points could hurl the planet towards catastrophic climate scenarios. "As a comparison," the signatories warn, "such a 1 in 10 probability is the equivalent of tolerating about 10,000 airplane crashes every day worldwide."

Demanding an end to fossil fuel subsidies and placing a price on carbon, the 8-point plan—called the Earth Statement—argues that unleashing "a wave of climate innovation for the global good" and "phasing out greenhouse gas emissions completely" by 2050 is essential if the world wants to avoid the risk of further climate chaos while creating a more sustainable and harmonious future.

"Deep decarbonization, starting immediately and leading to a zero-carbon society by 2050 or shortly thereafter, is key to future prosperity," the statement asserts.

"This long-term goal, paired with strong national commitments, including a price on carbon, and a possibility to ramp up ambition via regular reviews, are essential elements of the Paris agreement. Fossil fuel subsidies should be removed urgently, and investment should be redirected to spark a global renewable energy revolution, warranting energy access for all and particularly for those most in need."

Moreover, the group of scientists and economists say, the demands that rapid global warming has placed on human civilization should be seen as an opportunity, not a burden. "This trajectory is not one of economic pain, but of economic opportunity, progress and inclusiveness. It is a chance too good to be missed," the statement reads.

Ahead of us, they say, is "a journey of innovation, which can create a new generation of jobs and industries, whilst enhancing the resilience of communities and people around the world."

Speaking with the *Guardian*, Johan Rockström, director of the Stockholm Resilience Center and the statement's lead author, said: "From a scientific perspective, 2015 is a decisive moment. The window to navigate ourselves free from a 'beyond 2C future' is barely open. It's the last chance to navigate ourselves towards a desired future."

He continued: "It's so frustrating, because it's the choice of moving down a business-as-usual route with devastating outcomes for humanity and, at the same time, we have this almost unprecedented opportunity, we can transform the world economy to a fossil fuel-free one and moreover do it in a way that is security and health-wise more attractive."

Forming the theoretical basis of the global divestment movement and as numerous experts have noted, the ability to keep global temperatures from rising more than 2°C simply cannot be met if the fossil fuel companies of the world are allowed to extract and burn their currently held reserves of coal, oil, and natural gas.

The idea that these reserves remain unexploited has become a rallying cry of the climate justice movement which has transformed variations of the "Keep It In the Ground" slogan into mantra for a planetary transition that seeks to usher in a renewable energy revolution and create the basis for more sustainable, and ultimately more livable, societies.

The complete 8-point plan of the Earth Statement, which anyone can endorse, reads as follows:

1. **Governments must put into practice their commitment to limit global warming to below 2°C. We should aim to stay as far below it as possible, since even 2°C warming will cause significant damage and disruption.**

However, we are currently on a path to around 4°C warming by 2100, which would create unmanageable environmental challenges. If we do not act now, there is even a 1 in 10 risk of going beyond 6°C by 2100. We would surely not accept such a high risk of disaster in other realms of society. As a comparison, such a 1 in 10 probability is the equivalent of tolerating about 10,000 airplane crashes every day worldwide!

2. **The remaining global carbon budget – the limit of what we can still emit in the future – must be well below 1000 Gt CO₂ to have a reasonable chance to hold the 2°C line.**

3. Humankind has already emitted around 2000 Gt CO₂ since the beginning of industrialization. Respecting the global carbon budget means leaving at least three quarters of all known fossil fuel reserves in the ground. With current emissions trends, the remaining 1000 Gt CO₂ would be used up within the next 25 years.
4. **We need to fundamentally transform the economy and adopt a global goal to phase out greenhouse gases completely by mid-century.** Deep decarbonization, starting immediately and leading to a zero-carbon society by 2050 or shortly thereafter, is key to future prosperity. This long-term goal, paired with strong national commitments, including a price on carbon, and a possibility to ramp up ambition via regular reviews, are essential elements of the Paris agreement. Fossil fuel subsidies should be removed urgently, and investment should be redirected to spark a global renewable energy revolution, warranting energy access for all and particularly for those most in need.
5. **Equity is critical for a successful global agreement in Paris. Every country must formulate an emissions pathway consistent with deep decarbonization.** For the sake of fairness, rich countries and progressive industries can and should take the lead and decarbonize well before mid-century. Developing countries should formulate plans far beyond what they

can be expected to pursue on their own, reaping benefits from leapfrogging into a sustainable economy, well supported by international climate finance and technology access. Safeguarding the right to development of the Least Developed Countries (LDCs) is fundamental.

6. **We must unleash a wave of climate innovation for the global good, and enable universal access to the solutions we already have.** The unprecedented challenge of climate change requires unprecedented technological advances. We need targeted research, development, demonstration and diffusion (RDD&D) of low-carbon energy systems and sustainable land use, and capacity building to enhance access for those most in need. International cooperation, stringent laws and standards, public and private investments and clear economic incentives are all crucial steps in the global transition.
7. **We need a global strategy to reduce vulnerability, build resilience and deal with loss and damage of communities from climate impacts, including collective action and scaled-up support.** With 1°C of warming already having taken place, many societies are challenged by water scarcity, shifting rain patterns and other impacts. This poses a threat to human development in all countries, particularly among the poorest and most vulnerable. A 2°C or more warming of the planet would impose huge social

and economic burdens that need to be shouldered through international solidarity.

8. **We must safeguard carbon sinks and vital ecosystems, which is as important for climate protection as the reduction of emissions.** Cutting down forests and degrading grasslands and aquatic systems is like killing our best allies in the fight against climate change. A precondition for sustainability is the strengthening, not the weakening of the resilience of natural and managed ecosystems and food production systems.
9. **We must urgently realize new scales and sources of climate finance for developing countries to enable our rapid transition to zero--carbon, climate-resilient societies.** This includes additional public funding for mitigation and adaptation at a level at least comparable to current global ODA (around 135 billion USD p.a.). Innovative schemes such as globally funded renewable energy feed-in-tariffs are required. The private sector must be encouraged to mobilize substantially larger sums. Governments should engage with banks and pension funds, enabling a shift to climate--friendly investments. Global and national climate funding must be effective, transparent and accountable.

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