

THE WORLD IN 2030

Restoring Earth



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Long-term commitments but short-term action fails to prevent the spiral towards catastrophic climate change and the continued collapse of biodiversity. As reality bites so does the pressure for collective action to dramatically evolve politics, business and consumption.

Up to 143 million environmental migrants by 2050

(UN International Organisation for Migration)¹

Loss of nature will wipe £368bn a year off global economic growth by 2050

(WWF, Global Futures Study 2020)²

The Emergency

Supported by rigorous science (e.g. UN IPCC, IPBES), the climate and biodiversity emergencies have been declared globally (by the UN), and regionally (by the EU) as well as in many countries (e.g. Argentina, Canada) and cities (e.g. Nagano – Japan, New York).^{3,4,5} These have been caused by the combustion of billions of tonnes of fossil fuels for industry, electricity, transport, heating and, more recently, computing; plus the general production of too much stuff for human consumption.

The consequence of this, as Professor Johan Rockstrom of the Stockholm Resilience Centre puts it, is that we have been living ‘outside our planetary boundaries of the safe operating space for humanity’. Although the evidence shows we are at a point where our impact on the planet can no longer be ignored, and most agree that there is only a small window of opportunity for us to act, not enough is being done fast enough to address the problem. Worse, maintaining the status quo is built into the foundation of geopolitics and the world economy.

Although vocal, environmentalists on their own will not be able to drive the necessary change. Reducing the impact of global warming and the restoration of nature requires mainstream support; on the supply side through investments in innovation, and on the demand side through procurement policies as well as policies that affect consumption and investment patterns. In particular, what is also needed is significant support from those who do not yet much care. Individuals, single organisations and indeed national governments can make a difference. Beyond this what is really required is massive concerted international collaboration, global action supported by national implementation.

The UN is doing its best to act as a global arbitrator. Its COPs on both biodiversity and climate at the end of 2020 will, in theory, set the pathways to address these interconnected topics. But there are such significant differences of opinion in terms of how far and how fast change must come, few believe

that it will have much impact. At one end of the spectrum climate advocate Greta Thunberg says, ‘I want you to act as if our house is on fire. Because it is’.⁶ At the other, US president and climate sceptic Donald Trump, who has already taken America out of the Paris Climate Agreement, refers to activists as ‘profits of doom’. This despite the fact that California, the richest state in America, is, at times, initiating self-imposed electrical black-outs to reduce the risk of wildfires.

Some argue that treating the symptoms of climate change, global warming and loss of biodiversity is wasting what limited time we have. Much more important is the need to tackle the root cause. New economics lead thinkers, including Professor Mariana Mazzucato and Kate Raworth, all point to the need for a fundamental re-think in mainstream economic principles and explore the associated implications for both policy and business. Over the next ten years expect an increasing number of policy-makers and academics to acknowledge that the current system is simply not set up to account for the environmental damage it is creating - a fundamental new form of measurement is required to ensure that we live within our planetary boundaries.



Insufficient Action

Some believe that capitalism is the culprit. After all, to date, the system has been fuelled by the burning of fossil fuels in ever-greater quantities and, despite pledges to act, the market economy has failed to change. Others disagree arguing that competitive markets, properly incentivised and backed by politicians responding to public demands, can do more than any other system to limit the warming that can be forestalled and manage that which cannot. Rather than a complete overhaul, therefore, they suggest what is needed is a fast evolution of our existing economic models. But driving significant change is difficult for democracies. Elected politicians are generally unwilling to make hard and unpopular decisions and so are inclined to kowtow to vested interests. As a result, the system can fall victim to indecision and short termism. This is why some consider that a crisis as severe as rising global temperatures can be mitigated only by the strong arm of authoritarian rule. This has opened the door to an unlikely hero. China is becoming a surprising poster child for climate action.

Given its now pivotal role in the global economy, its vast renewable energy resources, and its technological leadership in key industries, China is uniquely positioned to lead the global energy transition and to decarbonize its economy completely by 2050. Its one-party system provides it with the stability to take a longer-term focus. It has already demonstrated it is able to put into effect sweeping changes and at a very fast pace. Take, for example, the creation of an eco-civilisation in its current 5-year plan.⁷ Also, given that 72% of its oil and 43% of its gas was imported last year, it has pressing incentives to reduce its dependency on imported fossil fuel. It is already making progress - a third of the world's electricity-generating capacity from wind is now in China and it is home to a

quarter of the world's solar panels. Indeed it has more than twice the solar power of the US and 3.5 times that of India.⁸ The country is also building 11 new nuclear reactors, to add to its existing 47, and from next year China will start requiring fossil-fuelled power firms to buy and sell credits in a national carbon-trading scheme - albeit it may be years before the system results in big cuts in emissions.

But this is not enough. Even achieving the most optimistic targets would not be sufficient to reduce China's emissions from over 9 Gt in 2015 to much below 3 Gt by 2050 and globally temperatures are still predicted to rise by 3-3.5°C, far above the 2°C target for this century set in the 2015 Paris Agreement and the longer term target of 1.5°C. Worse, given the slowing growth of the Chinese economy some analysts doubt whether China can commit to tougher emissions targets. The pressure to produce its own energy makes it susceptible to pressure from the power firms. In March 2019 they proposed that the government allow another 300-500 coal-fired power stations to be built by 2030, a 30% increase in capacity. If allowed to go ahead, this would have dire consequences for the global ecosystem. Also, a quarter of the energy projects associated with the Belt and Road Initiative are coal-fired stations. That will account for 28% of global carbon emissions.



Other nations are also largely failing to step up to address the problem. According to Climate Action Tracker, at the start of 2020, only two countries currently have a coherent plan to reduce their CO₂ emissions to a level consistent with limiting warming to 1.5°C: Morocco and The Gambia. Unfortunately, those at the bottom of the class, whose action is currently consistent with a rise of >4°C, include two of the world's top 4 emitters: the USA and Russia. This highlights the fundamental problem. If one country reduces emissions but no one else does, we face roughly the same climate risk as before.

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Rising Pressure

Ironically, although nature-based solutions are seen as a critical component of action to tackle climate change, the same pattern is true for nature which is being destroyed by inappropriate land use (e.g. the destruction of rainforest for palm and soy plantations), over-exploitation (e.g. fishing) and the illegal wildlife trade.

In the absence of adequate co-ordinated state intervention, specialist policy groups such as Client Earth in Europe and the NRDC in the US are taking legal action on behalf of the planet and winning against governments (e.g. in UK, Poland and Germany) as well as companies.

Business leaders are beginning to realise the potential impact of all this. Blackrock's CEO Larry Fink's open letter to shareholders encouraged more social and environmental responsibility and a 'fundamental reshaping of finance'.⁹ Similarly, insurers, banks and investors are increasingly refusing environmentally questionable projects. The largest of these, the Climate Action 100+ initiative comprises c.370 fund managers controlling some \$35tn of assets. Microsoft has dramatically raised the bar of corporate commitment, pledging 'to go carbon negative by 2030 and to have neutralised all emissions since launch in 1975 by 2050'. Many



see this as a game-changer; a move that changes the pace and rules of engagement. The implication is that business has accepted responsibility to tackle the environmental damage they have created and address the negative footprints left behind. Even some oil companies are now starting to take action. For example, BP has committed to eliminate or offset all of its emissions, roughly equal to those of Australia, by 2050. That said, commitments are one thing, delivering on them quite another. In reality there are very few organisations that today show others the way to operate in the new world. One stand-out performer is Patagonia. Its 'Worn Again' and 'Don't Buy' on Black Friday initiatives champion not only a new circular economy but also show how brands can take real stands against overproduction and overconsumption.

One of the major challenges, and an issue for current world leaders, is that the benefits of action today will not be accrued for another 50 or 100 years. Action taken now will only come into effect for our grandchildren. Perhaps this explains the rise of activism among the young. 2070 is hypothetical for most of the world's current leaders, but for the likes of Greta Thunberg and 2.6 billion other young people it is very much part of their future. This gives them moral authority to demand change. Across the world multiple initiatives are emerging from Schools Strikes for Climate to the broad #VoiceForThePlanet coalition. They are all, seeking to encourage business and Government to do more faster. Some are calling for more dramatic action. For example, Extinction Rebellion describes itself as 'an international movement that uses non-violent civil disobedience in an attempt to halt mass extinction and minimise the risk of social collapse.' It believes dramatic shifts are required to the global economic model to affect the 'just transition' required.¹⁰

Clearly a change in habits to reduce the negative impacts of food, energy and transport consumption is required. This needs widespread public support. Storytelling and dialogue remain powerful forces in shifting culture and society's consciousness – think, for example, of the now infamous image of a whale and a plastic bag in Sir David Attenborough's Blue Planet II series which has become one of the most popular television programmes of all time.¹¹ However, unprincipled advertisers still pump out obfuscations and many people are simply swamped with inconsistent and conflicted messages. Although many are willing to get involved, they are just muddled about what to do. Some are careful about what they buy but many, many more are largely confused about what actions they can take to really make a positive difference.^{12,13} The net result is that factors such as price and convenience will continue to dominate, unless either regulation (e.g. bottle return schemes, plastic bag taxes) or social guilt kicks in (e.g. staycations or meat free Mondays).

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By 2030 More of the Same?

What then by 2030? Even the most optimistic will surely acknowledge we are not doing enough to limit warming to 2°C. While the direction toward planetary stewardship may be clear, it is not yet evident whether there will be significant action to drive change. One view is that most nations, businesses and individuals will choose not to lead and instead to remain in-step or only half a step ahead of others in terms of climate action. The net result of this would be that by 2030 the evolutionary adjustments to business as usual may not have gone far enough or quickly enough to make the difference required.

There will probably be some change. Expect a united lexicon and agreed standards for measurement and accounting to emerge. For example, we have already moved from 'carbon neutral', to 'net positive' to Starbucks latest missive 'resource positive'.¹⁴ Similarly, today the talk and focus is on planting trees. This will be replaced by an emphasis on 'managing trees' and 'ecosystem services' as we choose to care for them and pass them on to the next-generation, moving from 'CSR' to 'stewardship'. The plethora of ESG (environmental, social, governance) and SRI (socially responsible investment) measures of today will amalgamate into a handful of common standards. There will also be clearer labelling to help consumers make the right choice, for example carbon and nature impact. As a brand, doing the right thing and being seen to do the right thing will become an essential part of the licence to operate.

In parallel, accounting practices may integrate off-balance sheet environmental costs into financial reporting standards. One early example here is the European Commission which is seeking to establish non-financial reporting standards as part of its climate change-informed economic growth plan, the European Green Deal. More generally, over 1,000 global organisations have declared their support for

the voluntary recommendations of the Task Force on Climate Related Financial Disclosures (TCFD).

This rebalancing of the books will, in turn, usher in new business models. For example, Veolia's water and waste management solutions in India or Schneider Electric's use of recycled materials and pay per use charging schemes are early examples of eco-age circular economy models. Similarly, Naturevest's ground-breaking \$1bn debt swap with the Seychelles Government, which will channel finance more effectively toward marine conservation and climate adaptation projects, demonstrates how new creative economics can aid a faster transition.^{15,16,17}

Perhaps more difficult to envisage is how consumerism will evolve beyond data-driven, ad-funded business models which arguably seek to maximise consumption with little responsibility for the environmental consequences. One possible route forward here is Brave's cryptocurrency, Basic Attention Tokens (BAT) model, in which consumers are paid to watch adverts.¹⁸

There will be both sector and company casualties. For example, it is hard to imagine organisations whose fundamental business model is predicated solely on the extraction of fossil fuels surviving much beyond 2030. They will demonstrably need to be contributing powerfully to the energy transition and playing their part in the regenerative economy.



All this might not be enough and the public will gradually become aware of this. This explains the increasing trend towards off-grid living and eco-anxiety.^{19,20,21} Some fear that inaction will lead to an extensive social breakdown and that this will happen by 2030 - even in the rich world. In large parts of Africa there is already mass migration due to food and water shortages, with West Africa and the Sahel in particular identified by the UN as climate-change hotspots. The UN's International Organisation for Migration believes this is just the beginning; there could be up to 1 billion environmental migrants by 2050. Less well-known triggers might include the transmission of infectious disease triggered by climate change.²² All this will have a profound effect on civil society and its existing institutions.

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Leading in 2030

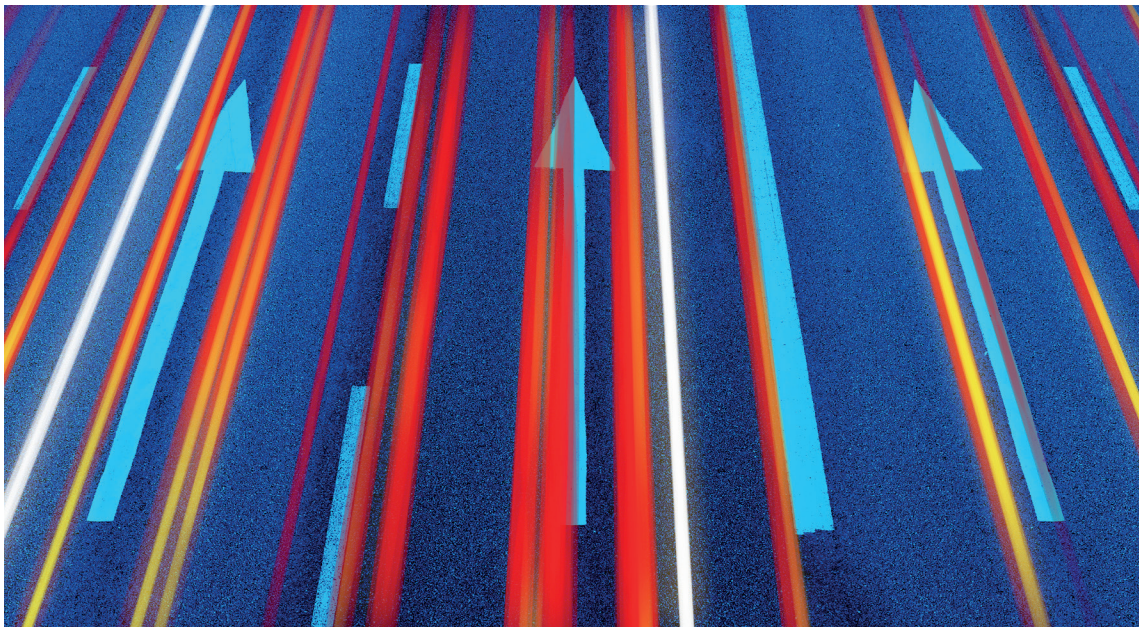
Over the next decade it will be increasingly clear that inaction is not an option. By 2030, whether by evolution or revolution, expect a new common sense to emerge, one in which government, business and citizens take the action necessary in order to prevent catastrophic climate change and to restore biodiversity. This transition will be anything but easy and will challenge everything, particularly those with economic models that previously benefitted from privatising profit and socialising risk, for example big oil and agribusiness.

- **Governments** and regulators will act at both national, regional and global levels to set targets, alter law and policy to support a just transition to a new economics that ensures the environmental underpinnings to society and business are in place. Those that do not are likely to witness challenges to their legitimacy at best or societal unrest at worst. Emerging standards for measuring progress at national, local as well as company level will be increasingly common.

- **Organisations** will need to be able to demonstrate and explain to all stakeholders how their operating and business models as well as their product and service brands are contributing to a just transition. Misalignment over time will increasingly be punished by both investors and consumers. The search for restorative solutions for both nature and climate will provide rich territory for innovation and growth.

- **Individual's** voices will become powerful advocates of change and will increasingly hold those organisations which fail to contribute to climate mitigation and the biodiversity challenge to account.

One thing is certain. If governments and companies don't go after the climate, the climate will go after them.



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The World in 2030

This is one of 50 global foresights from Future Agenda's World in 2030 Open Foresight programme, an initiative which gains and shares views on some of the major issues facing society over the next decade. It is based on multiple expert discussions across all continents and covers a wide range of topics. We do not presume to cover every change that will take place over the next decade however we hope to have identified the key areas of significance. Each foresight provides a comprehensive 10-year view drawn from in-depth expert discussions. All foresights are on <https://www.futureagenda.org/the-world-in-2030/>

Previous Global Programmes

The World in 2020 was published in 2010 and based on conversations from 50 workshops with experts from 1500 organisations undertaken in 25 countries as part of the first Future Agenda Open Foresight programme. This ground-breaking project has proven to be highly accurate in anticipating future change and the results have been used by multiple companies, universities, NGOs and governments globally. Rising obesity, access not ownership, self-driving cars, drone wars, low cost solar energy, more powerful cities and growing concerns over trust were just some of the 50 foresights generated. For more details: <https://www.futureagenda.org/the-world-in-2020/>

Five years on, the World in 2025 programme explored 25 topics in 120 workshops hosted by 50 different organisations across 45 locations globally. Engaging the views of over 5000 informed people, the resulting foresights have again proven to be very reliable. Declining air quality, the growing impact of Africa, the changing nature of privacy, the increasing value of data and the consequence of plastics in our oceans are some of the foresights that have already grown in prominence. For more details: <https://www.futureagenda.org/the-world-in-2025/>

About Future Agenda

Future Agenda is an open source think tank and advisory firm. It runs the world's leading Open Foresight programme, helping organisations to identify emerging opportunities, and make more informed decisions. Future Agenda also supports leading organisations on strategy, growth and innovation.

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