

GEORGE MONBIOT

George Monbiot is the most significant environmental journalist of our generation. He tells it as it is and, as a father, he is as concerned as Peace Child is to secure our children's futures...



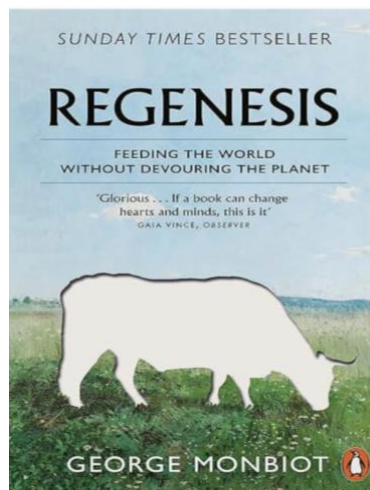
📷 'So my new year's resolution is to spend more time on my sea kayak. It possesses almost miraculous properties: it is a four-metre, plastic, rejuvenation machine.' George Monbiot kayaking with his daughter Martha. Photograph: George Monbiot

A recent scientific paper showed that climate breakdown is drastically increasing the chances of simultaneous crop losses in the world's poorest nations. The effects of this could be devastating.

We face an epochal, unthinkable prospect: of perhaps the two greatest existential threats – environmental breakdown and food system failure – converging, as one triggers the other.

So why isn't this all over the front pages? Why, when governments know we're facing existential risk, do they fail to act?

Looking back on previous human calamities, all of which will be dwarfed by this, you find yourself repeatedly asking "why didn't they ... ?" The answer is power: the power of a few to countermand the interests of humanity. It always has been, but the stakes are now higher than ever. July 2023



George Monbiot – Regenesis Lecture

1. As a teen-ager, he did Pig-farming and found the cruelty so bad, he asked: "Why is this legal?"
2. **Agricultural sprawl**: 1% of the earth's surface is Urban sprawl; 40% of the earth's surface is farming sprawl – 12% of which is crop rearing; 28% is livestock rearing: no way is pasture-fed

beef sustainable. Organic is even worse as it take up more land – and the cattle end up trashing everything. (he feels the Allan Savory claim that: "only livestock can reverse [desertification](#)" is a bit dodgy!)

3. He feels we must become "food numerate" – Isabella Tree and Knepp are good re-wilding, but terrible farming
4. **Subsidies (1)**: There's about Half a Trillion dollars in food and farming subsidies around the world – almost all of which are environmentally perverse, and many of which go to people who are not even farmers – but rich land-owners and agri-business leaders. Rather than protest these Subsidies, Monbiot argues that they are the solution: simply use them to subsidise the revolutionary / radical food production solutions that Monbiot describes in his book.
5. **Subsidies (2)**: The same solution should apply to oil and all energy: there are – depending on which figures you believe – between \$2 and \$4 trillion dollars of subsidy to the Fossil Fuel industry. If you simply took them away and subsidised only renewable / sustainable sources of energy, you could remove fossil fuels from the energy mix within a decade.
6. **Subsidies (3)**: The Best thing about Brexit is that it got us out of the Common Agricultural Policy – a Terrible waste of money. But now HMG is re-introducing subsidies which only serve to make rich farmers richer. We need to change and subsidise only healthy food at the point of sale
7. **Bucolic Myths**: He says we have to strip out the bucolic myths – popularised in 50% of children's stories. Old Macdonald's farm is pure fiction – and not helpful fiction.
8. **Tolly**: Tolly is a remarkable ecologist and farmer – who restores soil through soil biology, not soil chemistry. 50% of nitrate and 80% of phosphate fertiliser + most manure is lost in run-off into rivers. Tolly has dispensed with all fertilisers except wood-chip and restored the biology of soil through the reintroduction of micro-bacteria which draws the soil together.
9. **Rivercide**: the River Wye is dead – a sludge sewer because of Chicken Farms along its banks. Chickens are fed on Soya which is imported from Brazil – and is destroying the Amazon. He has made an hour long documentary film about it called "[Rivercide](#)."
10. Don't fetishise local food: we need the super exporter countries – like USA, Canada, Russia and the Ukraine.
11. Not all farmable land needs to be farmed: re-wild some of it.
12. Lab-grown meats do taste better than actual meats. [Precision Fermentation](#) is an incredibly promising technology which could eliminate the need for livestock farming.
13. We are dependent just on 4 x grains: wheat, maize, rice and soya
14. 4 x Large Companies control 90% of food production – that has to change. We have to destroy corporate intellectual property rights.
15. Microsoft's Carbon Offset programme is useless – might as well invest in coal mines
16. Vertical Farms? – the economics don't add up! They go bust regularly – or grow cannabis;
17. But "Despair is NEVER warranted..." We can crack this....
18. [Perennial Grain Plants](#) – developed by the Land Institute in Salinas, Kansas: "Perennial plants do not have to be reseeded or replanted every year, so they do not require annual plowing or the suppression or killing the weeds chemically or mechanically. Perennial crops are robust; they protect soil from erosion and improve soil structure. They increase ecosystem nutrient retention, carbon sequestration, and water infiltration, and can contribute to climate change adaptation and mitigation. Overall, they help ensure food and water security over the long term."
19. Perennial Sunflowers survived a drought – where the annuals shrivelled – because they have roots going down 3m where annuals' roots only go a few centimetres
20. Because we have a food system that relies on "Just in time" flows – food producers are dispensing with silos. Grain is stored at sea – and this means that lower grain prices doesn't mean lowering hunger. Ukraine War has not created the food crisis. It has exposed it.

EARTH SYSTEM'S COLLAPSE

One of the problems we face in persuading people to love and protect the living world is the language in which this love is expressed. Few of the terms we use vividly describe either the planet we are trying to defend or the threats it faces. Take “the environment”: a cold, abstract and distancing term that creates no pictures in the mind. Have you ever seen an “environment”? Or “climate change”, such a mild and neutral term to describe an existential catastrophe. It’s like calling an invading army “unexpected visitors”.

I’ve been pressing for more effective language for a long time, and I was delighted when, in 2019, the Guardian started changing the way it talks about our crisis, using terms such as “living planet” or “natural world” instead of “the environment”, replacing “climate change” with “climate breakdown”. I’m even happier to see how the Guardian’s shift has triggered a wider change.

But there is one term in particular that still niggles. It might seem an odd one to contest, because it’s pretty graphic: mass extinction.

It is used to describe the catastrophic events (there have so far been five since animals with hard body parts evolved) that wiped out many of the planet’s lifeforms. We are now in the midst of the sixth of these events. So what’s my problem?

Well, I think the term reflects what palaeontologists call “taphonomic bias”: a mistaken view of the past caused by what happens, or doesn’t happen, to be preserved. We call these events “mass extinctions” because it is easy to see the disappearance of large numbers of species from the fossil record. The rocks also reveal the deeper issue, but this is less immediately visible. Mass extinction, horrendous as it is, is one outcome of something even bigger: Earth systems collapse. This, I feel, is what we should call the thing we are facing. We are in the midst of the sixth Earth systems collapse.

In other words, human activities are not causing a biodiversity crisis, or a climate crisis, or a freshwater crisis, or a forests crisis, or a soils crisis, or an oceans crisis. We are creating an everything-crisis. While compartmentalising this omni-crisis helps us to study it and report on it, nature recognises no such boxes. All these systems are intimately connected and mutually dependent. There are no hard boundaries between them. If one fails, it threatens to bring down the rest. That is what happened in the previous five Earth systems collapses. We need, as much as we are able, to understand the whole.

Our omni-crisis is also a political and economic crisis. It is driven, above all, by a few immensely powerful oligarchs and corporations: the pollutocrats. It is a crisis of power: the power they wield over us and over Earth systems; their ability to block the progressive

change we need; to ensure that business as usual, which has granted them their power, is sustained.

This is an existential crisis for them too. As the signs of gathering collapse become ever less deniable, their industries – fossil fuels, meat production, cars, roads, planes, mining, logging, fishing - are exposed to public scrutiny as never before. So they must fight harder than ever before.

They are pouring money into politics, funding and directing political parties, demanding ever more draconian laws against protesters, paying lobby groups (so-called thinktanks) to publish misleading claims, and funding troll farms to flood social media. The billionaire media, representing the same interests, crank out ever wilder misinformation about even the mildest policies (net zero, low emissions zones, 15-minute cities) which might help to arrest the slide towards destruction. Their strategies are omnicidal.

Our survival now depends on defending and expanding islands of resistance: places from which we can explain and debate the Earth systems crisis we face. The Guardian is one of these islands. By refusing to succumb to the pollutocrats' full-spectrum assault on people and the planet, by investigating the strategies they use and the power they wield, by holding the governments they have captured to account, and by doggedly seeking to tell the truth about the crises we face, it develops some of the tools required to fight back.

Nothing here is easy. Time is short, the powers arrayed against us are great. But we know that, just as ecosystems have tipping points, so do social systems, and history shows that these often turn out to be much closer than we imagine. The quest now is to reach the social tipping points before the ecological ones.

George Monbiot

Guardian Columnist

The Guardian

The UK's 'green day' has turned into a fossil fuel bonanza – dirty money powers the Sunak government

George Monbiot



In prioritising oil and gas over renewables, ministers are doing the bidding of the polluters. And we'll all pay the price
Wed 29 Mar 2023 15.00 BST

Money for the criminals, prison for the heroes: this, in brief, is the government's climate policy. If something is damaging to the public interest, it's likely to be rewarded and subsidised. If it's beneficial, it will find itself in a hostile environment.

This government represents the denouement of the **Pollution Paradox**: as dirty money has the greatest incentive to invest in politics, it comes to run the whole system. Across these 13 years of misrule, we have seen the perversities of Conservative government multiply and intensify. Thursday was supposed to be "green day", when the government, **forced to act by a court ruling**, would unveil a new, more detailed plan for achieving net zero emissions. Instead, the occasion has been rebranded "**energy security day**".

Rather than announce the comprehensive change required to defend Earth systems, Rishi Sunak's government will defend the fossil fuel industry from its competitors. It is likely to set no meaningful new green targets: instead, it will pump money into false solutions, such as carbon capture and storage, which **has not materialised at scale for 20 years** and never will. This fabled technology's purpose is to justify fossil fuel extraction, on the grounds that "one day" the carbon emissions could be buried. Sunak will also promote "sustainable aviation fuel", though **there is, and can be, no such thing**.

Worse still, he is likely to announce the licensing of a huge new oilfield: Rosebank. Its development, by the Norwegian state company Equinor, will be almost entirely subsidised by the UK's tax relief for new oil and gas development. While Sunak will doubtless justify this generosity by claiming that it helps secure our future energy supplies, 80% of the oil the field produces is likely to be exported.

This tax relief is a massive but little-known scandal. The government hands back **91p out of every pound** it harvests from the energy profits levy, to fund oil and gas investments. It thus creates a major incentive for fossil fuel companies to open new wells. Yet the science is clear: if we are not to push global heating past 1.5°C, there can be no **new fossil fuel development**. Almost 60% of oil and fossil gas reserves must be left in the ground to permit just a **50% chance** of preventing this degree of heating. For a higher chance of averting planetary disaster, more or less all of them should

remain unexploited. The countries that should move first are the richest ones, which have the **greatest capacity** to invest in alternatives.

Amazingly, no such generosity is extended to the development of new renewables. They must survive the market forces the Tories claim to celebrate, but mysteriously suspend when it comes to their favoured (ie filthy) industries. There is no equivalent investment relief **from the electricity generator levy** that renewable power must pay when prices are high, which incidentally stands at **45%, in contrast to the 35% levy on oil and gas**.

There is neither a moral nor a business case for this outrageous policy, which protects a dying industry against clean technologies. The new oil and gas fields for which it pays will start producing only when all such fossil fuels should have been retired. This incentive, and **others like it**, has nothing to do with energy security. Like the **PPE procurement scandal**, it's just a gift to favoured interests.

While the government splashes money around like an arsonist with a petrol can, it has done almost nothing to reduce energy demand. Its general funds for improving the energy efficiency of our homes – the **green deal loan scheme** and the **green homes grant scheme** – were destroyed by the breathtaking incompetence and nihilistic vandalism that have become Conservative hallmarks. The continued absence of a coherent insulation policy is almost impossible to believe. The government is, however, uncharacteristically happy to keep **supporting household energy bills**. Why? Because these discounts encourage us to consume more gas. Never mind that the heat they pay for, in **the leakiest homes in western Europe**, pours straight through our roofs and walls. Scandalously, homes being built today will need to be expensively retrofitted to meet the government's net zero obligations. If they were built right, properly insulated, with heat pumps instead of gas boilers, the extra cost would amount to an average of £4,800. But because the government has allowed the construction industry to save money, they will need to be **upgraded at an average cost of £26,300**. In the meantime, those who buy them must also spend more on energy. Elsewhere in Europe, heat pumps are **becoming standard**. In Norway, two-thirds of households use them, and gas fitting is almost extinct. Even in Poland, scarcely renowned for climate policies, **sales more than doubled last year**, to over 200,000. In Italy, 500,000 were sold in 2022. Yet in the UK, we bought only 60,000, one tenth of the government's "ambition". Why? Because there are no incentives. The money that might have been spent on them has gone instead to the oil and gas companies.

There are similar failures, powerfully documented in the **report by environmental organisation Zero Hour**, in every field: surface and air transport, business emissions, land use, marine carbon. The government has failed to upgrade its greenhouse gas policies in the light of new science, failed to include emissions from imported goods, failed to account for aviation, shipping and **trawling**. It has awarded the UK more than twice its global share of greenhouse gases, even under the Intergovernmental Panel on Climate Change's global carbon budget calculations, which are **far too generous to the rich nations**.

Such perversities are baked in. They are not an accidental outcome of Conservative politics, but the reason for this government's existence. The Tories were always close to dirty money. Now they represent nothing and no one but the most destructive and inhumane commercial interests, which reward them handsomely for the favour. **They are, to a remarkable extent, bankrolled by petro-capital**. Dirt is the fuel on which their election machine runs.

The government's destructive policies will break its own laws, leading to more legal trouble. Like Donald Trump, it will revel in every adverse ruling, using them both to demonstrate its loyalty to filthy capital and to provoke the outraged reactions on which it thrives. For Sunak and his chums, this is a game, played for political advantage. For those who understand the implications, it's a matter of life and death.



Illegal fires in the Amazon rainforest reserve in Pará state, Brazil, 2020. Photograph: Carl de Souza/AFP/Getty Images

From the Amazon to Australia, why is your money funding Earth's destruction?

[George Monbiot](#) Wed 30 Nov 2022 06.00 GMT



Fossil fuels, fisheries and farming: the world's most destructive industries are protected – and subsidised – by governments

In every conflict over the living world, something is being protected. And most of the time, it's the wrong thing.

The world's most destructive industries are fiercely protected by governments. The three sectors that appear to be most responsible for the collapse of ecosystems and erasure of wildlife are [fossil fuels, fisheries and farming](#). In 2021, governments directly [subsidised oil and gas production](#) to the tune of \$64bn (£53bn), and spent a further \$531bn (£443bn) on keeping fossil fuel prices low. The latest figures for fisheries, from 2018, suggest that [global subsidies for the sector](#) amount to \$35bn a year, over 80% of which go to large-scale industrial fishing. Most are paid to “enhance capacity”: in other words to help the industry, as marine ecosystems collapse, catch more fish.

Every year, governments spend [\\$500bn on farm subsidies](#), the great majority of which [pay no regard to environmental protection](#). Even the payments that claim to do so often inflict more harm than good. For example, many of the European Union's pillar two “green” subsidies sustain livestock farming on land that would be better used for ecological restoration. Over half the European farm budget is spent on [propping up animal farming](#), which is arguably the world's most [ecologically destructive industry](#).

Pasture-fed meat production destroys [five times as much forest as palm oil does](#). It now threatens some of the richest habitats on Earth, among which are forests in Madagascar, the Democratic Republic of the Congo, Ecuador, Colombia, Brazil, Mexico, Australia and Myanmar. Meat production could swallow 3m square kilometres of the [world's most biodiverse places in 35 years](#). That's almost the size of India. In Australia, 94% of the deforestation in the catchment area of the Great Barrier Reef – a major cause of coral loss – [is associated with beef production](#). Yet most of these catastrophes are delivered with the help of public money.



The Great Barrier Reef near the Whitsunday region, Australia. Photograph: Jumbo Aerial Photography/AP

The more destructive the business, the more likely it is to enjoy political protection. A study published this month claims that chicken factories being built in Herefordshire and Shropshire are [likely to destroy far more jobs than they create](#), wrecking tourism through the [river pollution](#), air pollution, smell and scenic blight they cause. But none of the planning applications for these factories has been obliged to provide an economic impact analysis. Planning officers, the paper found, are highly dismissive of the hospitality industry, treating it as “non-serious and trivial”. By comparison, the paper found, “attitudes to farming were very different; described as serious, ‘proper’ (male) work”. The “tough”, “masculine” industries driving Earth systems towards collapse are pampered and protected by governments, while less destructive sectors must fend for themselves.

While there is no shortage of public money for the destruction of life on Earth, budgets for its protection always fall short. According to the UN, \$536bn a year [will be needed to protect the living world](#) – far less than the amount being paid to destroy it – yet almost all this funding is missing. Some has been promised, scarcely any has materialised. So much for public money for public goods.

The political protection of destructive industries is woven into the fabric of politics, not least [because of the pollution paradox](#) (“the more damaging the commercial enterprise, the more money it must spend on politics to ensure it’s not regulated out of existence. As a result, politics comes to be dominated by the most damaging commercial enterprises.”) Earth systems, by contrast, are treated as an afterthought, an ornament: nice to have, but dispensable when their protection conflicts with the necessity of extraction. In reality, the irreducible essential is a habitable planet.

In 2010, at a biodiversity summit in Nagoya, Japan, governments set themselves 20 goals, to be met by 2020. [None has been achieved](#). As they prepare for the biodiversity [COP15 summit](#) in Montreal next week, governments are investing not in the defence of the living world but in greenwash.

The headline objective is to protect 30% of the world’s land and oceans by 2030. But what governments mean by protection often bears little resemblance to what ecologists mean.

Take the UK, for example. On paper, it has one of the highest proportions of protected land in the rich world, at 28%. It could easily raise this proportion to 30% and claim to have fulfilled its obligations. But it is also one of the most [nature-depleted countries on Earth](#). How can this be? Because most of our “protected” areas are nothing of the kind.

One analysis suggests that [only 5% of our land](#) meets the international definition of a protected area. Even these scraps are at risk, as scarcely anyone is left to enforce the law: [the regulators have been stripped](#) to the bone and beyond. At sea, most of our marine protected areas are [nothing but lines on the map](#): trawlers still rip them apart.

All this is likely to become much worse. If the [retained EU law bill](#) goes ahead, the entire basis of legal protection in the UK could be torn down. Even by the standards of this government, the

mindless vandalism involved is gobsmacking. To prove that Brexit means Brexit, [570 environmental laws](#) must be deleted or replaced by the end of next year. There will be no public consultation, no scope for presenting evidence and, in all likelihood, no opportunity for parliamentary debate. It is logistically impossible to replace so much legislation in such a short period, so the most likely outcome is deletion. If so, it's game over for rivers, soil, air quality, groundwater, wildlife and habitats in the UK, and game on for cheats and con artists. The whole country will, in effect, become a freeport.

Never underestimate the destructive instincts of the Conservative party, prepared to ruin everything for the sake of an idea. Never underestimate its appetite for chaos and dysfunction.

The protected industries [driving us towards destruction](#) will take everything if they are not checked. We face a brutal contest for control over land and sea: between those who seek to convert our life support systems into profit, and those who seek to defend, restore and, where possible, return them to the indigenous people [dispossessed by capitalism's fire front](#). These are never just technical or scientific issues. They cannot be resolved by management alone. They are deeply political. We can protect the living world or we can protect the companies destroying it. We cannot do both.

- George Monbiot is a Guardian columnist

Our leaders had a final chance to halt climate breakdown. They failed each and every one of us

[George Monbiot](#)

It's a miracle that any one of us is alive today. Those with the power to grant that miracle to future generations chose not to



Illustration: Thomas Pullin/The Guardian

Fri 18 Nov 2022 14.55 GMT

The chances of any one person [being born](#) were calculated by the life coach Dr Ali Binazir. He multiplied the probability of your parents meeting, mating and conceiving by the chances of a particular sperm and egg fusing; of all your human and hominid ancestors reaching reproductive age; and of all them successfully reproducing. He arrived at a figure of one in 10 to the power of 2,640,000. In other words, a 10 followed by 2.6m zeros. It's an unimaginable, miraculous number. Yet here we are.

The chances of being alive right now, as a member of one of the first generations to know the path it is on, and one of the last that can change it, must add several more zeros to this crazy number. The chances of being the president or prime minister of your nation at this critical moment ... well you get the idea.

So how have heads of government chosen to use this miracle? To extend our time on Earth, earning the gratitude of all the improbable humans of the future? No. They have chosen to do nothing. Nothing that has a realistic chance, in this contest of probabilities, of changing our trajectory. They had a choice at the [Cop27 meeting](#) in Sharm el-Sheikh of defending the habitable planet or appeasing their sponsors. They went with the sponsors.

We know how way leads on to way, how the power amassed through corrupt decisions in previous generations drives the corrupt decisions of our time. We know that the licence granted to fossil fuel companies by 50 years of failure has enabled them to make stupendous profits – [\\$2.8bn a day](#) on average across that entire period – and that they need invest only a fraction of this money in politics to buy every politician and every political decision they need.

We know that the easiest way for a politician to secure power is to appease those who already possess it, those whose power transcends elections: the oil barons, the media barons, the corporations and financial markets. We know that this power appoints the worst possible people at the worst possible time. We know how, as elderly billionaires seek to grab ever more of the life that slips from them, they create a death cult.

Fifty years, you ask? Yes, the [first international summit](#) that claimed to address the environmental crisis took place in 1972. A handful of powerful nations, including the UK and US, convened what their secret minutes called an “informal and confidential” body at that summit, whose purpose, the notes show, was to ensure poorer countries did not get what they wanted, and that [no international standards would be agreed](#) on pollution or environmental quality.

They learned an important lesson there. You make the threats to your sponsors go away by nodding and smiling, saying the right things in public, then blocking effective measures behind closed doors. When they arrived at Cop27 this year, they had no intention even of paying the money [they had promised](#) to poorer nations to help them adapt – if such a thing is possible – to climate breakdown, let alone seeking to prevent that breakdown from happening.

So here we are, after 50 years of engineered failure, with not one of the 40 markers of climate action on track [to meet the targets](#) governments have agreed. In the first nine months of this year, the seven biggest private sector oil companies made around [\\$150bn in profits](#). Yet governments continue to supplement this loot by granting oil and gas companies [\\$64bn a year](#) in public subsidies.

There are no longer any feasible means of preventing more than [1.5C of global heating](#) if new oil and gas fields are developed. Yet fossil-fuel companies, with the encouragement of the governments that either own or license them, are planning a [major investment surge](#) between 2023 and 2025. The biggest planned expansions, by a long way, are in the US. The soft facts – the vague and unsecured promises at Sharm el-Sheikh about curbing consumption – count for nothing against the hard facts of extending production.

We no longer need to speculate about where this path might lead: we have stepped through the gates. The floods in Pakistan that [displaced 33 million people](#) and washed away 3 million acres of soil followed a [crop-shrivelling heatwave](#). This is the whipsaw effect predicted in scientific papers: of moderate weather giving way to a [violent cycle of extremes](#). It's hard to see how the country will ever recover from the economic shocks of these disasters: as it starts to pick itself up, it's likely to be knocked down by another one. China this year, though this was sparsely

reported in the western media, suffered not only the greatest heatwave in its instrumental record, but the [greatest heat anomaly](#) ever recorded anywhere. The [devastating drought](#) in the Horn of Africa, now in its fifth year, offers a glimpse of what “uninhabitable” may look like.

The rich world’s governments arrived at the conference in Egypt saying “it’s now or never”. They left saying “how about never?”. We sail through every target and objective, red line and promised restraint towards a future in which the possibility of anyone’s existence starts to dwindle towards zero. Every life is a madly improbable gift. For how much longer will we sit and watch while our governments throw it all away?

- *George Monbiot is a Guardian columnist*

Earth is under threat, yet you would scarcely know it

[George Monbiot](#) Wed 28 Sep 2022 08.00 BST

Unlike most of the media, the Guardian resists political or commercial influence in order to keep the climate crisis front and centre



People use a temporary bamboo path near their home in Sindh province, Pakistan. Recent floods ravaged a third of the country and killed 1,500 people. Photograph: Asif

What is salient is not important. What is important is not salient. Most of the time, most of the media obsess over issues of mind-numbing triviality. Much of the world’s political journalism is little more than court gossip: who’s in, who’s out, who said what to whom. At the same time, issues of immense, even existential importance are largely or entirely ignored.

With the exception of all-out nuclear war, all the most important problems that confront us are environmental. None of our hopes, none of our dreams, none of our plans and expectations can survive the loss of a habitable planet. And there is scarcely an Earth system that is not now threatened with collapse.

Let's begin with the ground beneath our feet. Soil is a biological structure, created by the organisms that inhabit it. When conditions become hostile to their survival, the structure collapses, and fertile lands turn to dust bowls. The global rate of soil degradation is terrifying. We rely on the soil for [95% of our food](#), yet we treat it like dirt.

Ocean ecosystems are in even greater trouble, hammered by a combination of industrial fishing, pollution, and acidification, as carbon dioxide dissolves into seawater. Forests, rivers, wetlands, savannahs, the cryosphere (the world's ice and snow) – all are being pushed towards the brink. And above all, climate breakdown is gathering at shocking, unanticipated speed, with disasters occurring at 1.2C of heating that scientists did not expect until we hit 2 or 3C.

All of Earth's systems are complex, which means they do not respond to change in linear and steady ways. They absorb stress up to a certain point, then suddenly collapse. If one goes down, it can trigger the collapse of others: during previous mass extinctions, collapse seems to have cascaded from one ecosystem and Earth system to the next. The conditions in which we and the majority of life on Earth evolved could, if we do not take urgent and drastic action, soon and perhaps suddenly come to an end.

Yet you would scarcely know it. Most of the media, most of the time, either ignore our environmental crisis, downplay it or deny it. The reason is not difficult to discern. Most of the media are owned by corporations or billionaires, who have a financial interest in sustaining business as usual. If governments acted to prevent the collapse of Earth systems, business models would have to change drastically, and these changes would disfavour legacy industries and their investments. To keep the proprietors, shareholders and advertisers happy – or, in the case of public sector broadcasters, to keep the government off their backs – the most important topics of all are neglected.

Part of the Guardian's mission is to fill in the gaps, to cover issues overlooked by most of the rest of the media, above all the issues whose neglect could be fatal to much of life on Earth, including the majority of human beings. With correspondents all over the world and a dedicated team of expert reporters, thoughtful commentary and an open and empirical approach, the Guardian seeks to put environmental issues at the front and centre. Almost every week, we break major environmental stories, many of which feature nowhere else in the media, and which, by any objective measure, are more important than most of the stories that dominate elsewhere.

Without a proprietor or other such interests leaning on us, we are free to explore issues and express opinions that in other places are treated as a kind of blasphemy. Our aim is to make the important salient and the salient important. But depth and scope do not come cheap. Investigating issues not covered elsewhere, rather than merely recycling press releases, requires a great deal of time and money.

Moreover, we believe that everyone should have the right to learn about such crucial topics, so we have resisted the commercial pressure to paywall our content. Instead,

our fiercely independent journalism remains open and free for millions to rely upon every day.

With your help, we can continue to expand the scope of our inquiries, and to place environmental issues where they belong: at the front and centre of people's minds.

The Guardian puts the climate crisis front and centre, and is committed to doing so. We rely on readers to fund our important work. [Please consider supporting us today.](#)

This heatwave has eviscerated the idea that small changes can tackle extreme weather

[George Monbiot](#) Mon 18 Jul 2022 15.00 BST



'The dangerous heat England is suffering at the moment is already becoming normal in southern Europe.' A firefighter tackles a wild fire in Gironde, France, 17 July 2022. Photograph: Thibaud Moritz/AFP/Getty Images

Can we talk about it now? I mean the subject most of the media and most of the political class has been avoiding for so long. You know, the only subject that ultimately counts – the survival of life on Earth. Everyone knows, however carefully they avoid the topic, that, beside it, all the topics filling the front pages and obsessing the pundits are dust. Even the Times editors still publishing columns denying climate science know it. Even the candidates for the [Tory leadership](#), ignoring or downplaying the issue, know it. Never has a silence been so loud or so resonant.

This is not a passive silence. It is an active silence, a fierce commitment to distraction and irrelevance in the face of an existential crisis. It is a void assiduously filled with trivia and amusement, gossip and spectacle. Talk about anything, but not about this. But while the people who dominate the means of communication frantically avoid the subject, the planet speaks, in a

roar becoming impossible to ignore. These days of atmospheric rage, these [heatshocks and wildfires](#) ignore the angry shushing and burst rudely into our silent retreat.

We have seen nothing yet. The dangerous heat England is suffering at the moment is already [becoming normal](#) in southern Europe, and would be counted among the cooler days during hot periods in parts of the [Middle East](#), Africa and [South Asia](#), where heat is becoming a regular threat to life. It cannot now be long, unless immediate and comprehensive measures are taken, before these days of rage [become the norm](#) even in our once-temperate climatic zone.

The same formula applies to every harm humans do to each other: what cannot be discussed cannot be addressed. Our failure to prevent catastrophic global heating arises above all from the conspiracy of silence that dominates public life, the same conspiracy of silence that has, at one time or another, surrounded every variety of abuse and exploitation.

We do not deserve this. The billionaire press and the politicians it promotes may deserve each other, but none of us deserves either group. They are constructing a world between them in which we have not elected to live, in which we may not be able to live. On this issue, as on so many, the people tend to be far ahead of those who claim to represent us. But those politicians and media barons deploy every imaginable wile and ruse to prevent decisive action from being taken.

They do so on behalf of the fossil fuel industry, animal farming, finance, construction firms, car manufacturers and airline companies, but also on behalf of something bigger than any of those interests: the [power of incumbency](#). Those who hold power today do so by stamping out challenges, regardless of the form they take. The demand to decarbonise our economies is not just a threat to carbon-intensive industry; it is a threat to the world order that permits powerful men to dominate us. To give ground to climate campaigners is to surrender power.

Over the past few years, I've begun to see that mainstream environmental movements have made a terrible mistake. The theory of change pursued by most established green groups is entirely wrong. Though seldom openly articulated, it governs their strategy. It goes something like this. There is too little time and the ask is too big to try to change the system. People aren't ready for it. We don't want to scare away our members or provoke a fight with the government. So the only realistic approach is incrementalism. We will campaign, issue by issue, sector by sector, for gradual improvements. After years of persistence, the small asks will add up to the comprehensive change we seek and deliver the world we want.

But while they have been playing patience, power has been playing poker. The radical right insurgency has swept all before it, crushing the administrative state, [destroying public protections](#), capturing the courts, the [electoral system](#) and the infrastructure of government, shutting down the [right to protest](#) and the right to live. While we persuaded ourselves that there is no time for system change, they proved us wrong by changing everything.

The problem was never that system change is too big an ask or takes too long. The problem is that incrementalism is too small an ask. Not just too small to drive transformation; not just too small to stop the tidal wave of revolutionary change rolling in from the opposite direction; but also too small to break the conspiracy of silence. Only a demand for system change, directly confronting the power driving us to planetary destruction, has the potential to match the scale of the problem and to inspire and mobilise the millions of people required to generate effective action.

All this time, environmentalists have been telling people we face an unprecedented, existential crisis, while simultaneously asking them to recycle their bottle tops and change their drinking straws. Green groups have treated their members like idiots and, I suspect, somewhere deep down, the members know it. Their timidity, their reluctance to say what they really want, their

mistaken belief that people aren't ready to hear anything more challenging than this [micro-consumerist bollocks](#) carries a significant share of the blame for global failure.

There was never time for incrementalism. Far from being a shortcut to the change we want to see, it is a morass in which ambition sinks. System change, as the right has proved, is, and has always been, the only fast and effective means of transformation.

Some of us know what we want: [private sufficiency](#), [public luxury](#), [doughnut economics](#), [participatory democracy](#) and an [ecological civilisation](#). None of these are bigger asks than those the billionaire press has made and largely achieved: the neoliberal revolution that has swept away effective governance, effective taxation of the rich, effective restraints on the power of business and oligarchs and, increasingly, effective democracy.

So let's break our own silence. Let's stop lying to ourselves and others by pretending that small measures deliver major change. Let's abandon the timidity and tokenism. Let's stop bringing buckets of water when only fire engines will do. Let's build our campaign for systemic change towards the critical 25% threshold of public acceptance, beyond which, a range of scientific studies suggests, [social tipping](#) happens.

I feel clearer about what effective political action looks like than I have ever done. But a major question remains. Given that we have left it so late, can we reach the social tipping point before we hit the environmental tipping point?



Illustration: Sebastien Thibault

Too right it's Black Friday: our relentless consumption is trashing the planet

[George Monbiot](#)

Growth must go on – it's the political imperative everywhere, and it's destroying the Earth. But there's no way of greening it, so we need a new system

Everyone wants everything – how is that going to work? The promise of economic growth is that the poor can live like the rich and the rich can live like the oligarchs. But already we are bursting through the physical limits of the planet that sustains us. Climate breakdown, soil loss, the collapse of habitats and species, the sea of plastic, [insectageddon](#): all are driven by rising consumption. The promise of private luxury for everyone cannot be met: neither the physical nor the ecological space exists.

But growth must go on: this is everywhere the political imperative. And we must adjust our tastes accordingly. In the name of autonomy and choice, marketing uses the latest findings in neuroscience to

break down our defences. Those who seek to resist must, like the Simple Lifers in Brave New World, be silenced – in this case by the media.

With every generation, the baseline of normalised consumption shifts. Thirty years ago, it was ridiculous to buy bottled water, where tap water is clean and abundant. Today, worldwide, we use a [million plastic bottles a minute](#).

Every Friday is a Black Friday, every Christmas a more garish [festival of destruction](#). Among the [snow saunas](#), portable [watermelon coolers](#) and [smartphones for dogs](#) with which we are urged to fill our lives, my #extremecivilisation prize now goes to the [PancakeBot](#): a 3D batter printer that allows you to eat the Mona Lisa, the Taj Mahal, or your dog's bottom every morning. In practice, it will clog up your kitchen for a week until you decide you don't have room for it. For junk like this, we're trashing the living planet, and our own prospects of survival. Everything must go.

The ancillary promise is that, through green consumerism, we can reconcile perpetual growth with planetary survival. But a [series of research papers](#) reveal there is [no significant difference](#) between the ecological footprints of people who care and people who don't. [One recent article](#), published in the journal Environment and Behaviour, says those who identify themselves as conscious consumers use more energy and carbon than those who do not.

Why? Because environmental awareness tends to be higher among wealthy people. It is not attitudes that govern our impact on the planet but income. The richer we are, the bigger our footprint, regardless of our good intentions. Those who see themselves as green consumers, the research found, mainly focused on behaviours that had “relatively small benefits”.

I know people who recycle meticulously, measure the water in their kettles, then take their holidays in the Caribbean

I know people who recycle meticulously, save their plastic bags, carefully measure the water in their kettles, then take their holidays in the Caribbean, cancelling any environmental savings a hundredfold. I've come to believe that the recycling licences their long-haul flights. It persuades people they've gone green, enabling them to overlook their greater impacts.

None of this means that we should not try to reduce our footprint, but we should be aware of the limits of the exercise. Our behaviour within the system cannot change the outcomes of the system. It is the system itself that needs to change.

[Research by Oxfam](#) suggests that the world's richest 1% (if your household has an income of £70,000 or more, this means you) produce about 175 times as much carbon as the poorest 10%. How, in a world in which everyone is supposed to aspire to high incomes, can we avoid turning the Earth, on which all prosperity depends, into a dust ball?

By decoupling, the economists tell us: detaching economic growth from our use of materials. So how well is this going? A [paper in the journal Plos One](#) finds that while, in some countries, relative decoupling has occurred, “no country has achieved absolute decoupling during the past 50 years”. What this means is that the amount of materials and energy associated with each increment of GDP might decline but, as growth outpaces efficiency, the total use of resources keeps rising. More important, the paper reveals that, in the long term, both absolute and relative decoupling from the use of essential resources is impossible, because of the physical limits of efficiency.

A global growth rate of 3% means that the size of the world economy [doubles every 24 years](#). This is why environmental crises are accelerating at such a rate. Yet the plan is to ensure that it doubles and doubles again, and keeps doubling in perpetuity. In seeking to defend the living world from the maelstrom of destruction, we might believe we are fighting corporations and governments and the general foolishness of humankind. But they are all proxies for the real issue: perpetual growth on a planet that is not growing.

Those who [justify this system](#) insist that economic growth is essential for the relief of poverty. But a [paper in the World Economic Review](#) finds that the poorest 60% of the world's people receive only 5% of the additional income generated by rising GDP. As a result, \$111 (£84) of growth is required for every \$1 reduction in poverty. This is why, on current trends, it would take 200 years to ensure that everyone receives \$5 a day. By this point, average per capita income will have reached \$1m a year, and the economy will be 175 times bigger than it is today. This is not a formula for poverty relief. It is a [formula for the destruction of everything](#) and everyone.

When you hear that something makes economic sense, this means it makes the opposite of common sense. Those sensible men and women who run the world's treasuries and central banks, who see an indefinite rise in consumption as normal and necessary, are berserkers: smashing through the wonders of the living world, destroying the prosperity of future generations to sustain a set of figures that bear ever less relation to general welfare.

Green consumerism, material decoupling, sustainable growth: all are illusions, designed to justify an economic model that is driving us to catastrophe. The current system, based on private luxury and public squalor, will immiserate us all: under this model, luxury and deprivation are one beast with two heads.

We need a different system, rooted not in economic abstractions but in physical realities, that establish the parameters by which we judge its health. We need to build a world in which growth is unnecessary, a world of [private sufficiency and public luxury](#). And we must do it before catastrophe forces our hand.

The Impossibility of Growth

May 27, 2014

Why collapse and salvation are hard to distinguish from each other.

By George Monbiot, published in the Guardian 28th May 2014

Let us imagine that in 3030BC the total possessions of the people of Egypt filled one cubic metre. Let us propose that these possessions grew by 4.5% a year. How big would that stash have been by the Battle of Actium in 30BC? This is the calculation performed by the investment banker Jeremy Grantham(1).

Go on, take a guess. Ten times the size of the pyramids? All the sand in the Sahara? The Atlantic ocean? The volume of the planet? A little more? It's 2.5 billion billion solar systems(2). It does not take you long, pondering this outcome, to reach the paradoxical position that salvation lies in collapse.

To succeed is to destroy ourselves. To fail is to destroy ourselves. That is the bind we have created. Ignore if you must climate change, biodiversity collapse, the depletion of water, soil, minerals, oil; even if all these issues were miraculously to vanish, the mathematics of compound growth make continuity impossible.

Economic growth is an artefact of the use of fossil fuels. Before large amounts of coal were extracted, every upswing in industrial production would be met with a downswing in agricultural production, as the charcoal or horse power required by industry reduced the land available for growing food. Every prior industrial revolution collapsed, as growth could not be sustained(3). But coal broke this cycle and enabled – for a few hundred years – the phenomenon we now call sustained growth.

It was neither capitalism nor communism that made possible the progress and the pathologies (total war, the unprecedented concentration of global wealth, planetary destruction) of the modern age. It was coal, followed by oil and gas. The meta-trend, the mother narrative, is carbon-fuelled expansion. Our ideologies are mere subplots. Now, as the most accessible reserves have been exhausted, we must ransack the hidden corners of the planet to sustain our impossible proposition.

On Friday, a few days after scientists announced that the collapse of the West Antarctic ice sheet is now inevitable(4), the Ecuadorean government decided that oil drilling would go ahead in the heart of the Yasuni national park(5). It had made an offer to other governments: if they gave it half the value of the oil in that part of the park, it would leave the stuff in the ground. You could see this as blackmail or you could see it as fair trade. Ecuador is poor, its oil deposits are rich: why, the government argued, should it leave them untouched without compensation when everyone else is drilling down to the inner circle of hell? It asked for \$3.6bn and received \$13m. The result is that Petroamazonas, a company with a colourful record of destruction and spills(6), will now enter one of the most biodiverse places on the planet, in which a hectare of rainforest is said to contain more species than exist in the entire continent of North America(7).

The UK oil company Soco is now hoping to penetrate Africa's oldest national park, Virunga, in the Democratic Republic of Congo(8); one of the last strongholds of the mountain gorilla and the okapi, of chimpanzees and forest elephants. In Britain, where a possible 4.4 billion barrels of shale oil has just been identified in the south-east(9), the government fantasises about

turning the leafy suburbs into a new Niger delta. To this end it's changing the trespass laws to enable drilling without consent and offering lavish bribes to local people(10,11). These new reserves solve nothing. They do not end our hunger for resources; they exacerbate it.

The trajectory of compound growth shows that the scouring of the planet has only just begun. As the volume of the global economy expands, everywhere that contains something concentrated, unusual, precious will be sought out and exploited, its resources extracted and dispersed, the world's diverse and differentiated marvels reduced to the same grey stubble.

Some people try to solve the impossible equation with the myth of dematerialisation: the claim that as processes become more efficient and gadgets are miniaturised, we use, in aggregate, fewer materials. There is no sign that this is happening. Iron ore production has risen 180% in ten years(12). The trade body Forest Industries tell us that "global paper consumption is at a record high level and it will continue to grow."(13) If, in the digital age, we won't reduce even our consumption of paper, what hope is there for other commodities?

Look at the lives of the super-rich, who set the pace for global consumption. Are their yachts getting smaller? Their houses? Their artworks? Their purchase of rare woods, rare fish, rare stone? Those with the means buy ever bigger houses to store the growing stash of stuff they will not live long enough to use. By unremarked accretions, ever more of the surface of the planet is used to extract, manufacture and store things we don't need. Perhaps it's unsurprising that fantasies about the colonisation of space – which tell us we can export our problems instead of solving them – have resurfaced(14).

As the philosopher Michael Rowan points out, the inevitabilities of compound growth mean that if last year's predicted global growth rate for 2014 (3.1%) is sustained, even if we were miraculously to reduce the consumption of raw materials by 90% we delay the inevitable by just 75 years(15). Efficiency solves nothing while growth continues.

The inescapable failure of a society built upon growth and its destruction of the Earth's living systems are the overwhelming facts of our existence. As a result they are mentioned almost nowhere. They are the 21st Century's great taboo, the subjects guaranteed to alienate your friends and neighbours. We live as if trapped inside a Sunday supplement: obsessed with fame, fashion and the three dreary staples of middle class conversation: recipes, renovations and resorts. Anything but the topic that demands our attention.

Statements of the bleeding obvious, the outcomes of basic arithmetic, are treated as exotic and unpardonable distractions, while the impossible proposition by which we live is regarded as so sane and normal and unremarkable that it isn't worthy of mention. That's how you measure the depth of this problem: by our inability even to discuss it.

2. Grantham expressed this volume as 10^{57} cubic metres. In his paper We Need To Talk About Growth, Michael Rowan translated this as 2.5 billion billion solar systems. (<http://persuademe.com.au/need-talk-growth-need-sums-well/>). [This source](#) gives the volume of the solar system (if it is treated as a sphere) at 39,629,013,196,241.7 cubic kilometres, which is roughly 40×10^{21} cubic metres. Multiplied by 2.5 billion billion, this gives 10^{41} cubic metres.

Seaspiracy shows why we must treat fish not as seafood, but as wildlife

[George Monbiot](#)



The film gets some things wrong, but it exposes the grim ecological destruction of the Earth's oceans



Wed 7 Apr 2021 06.00 BST

When the BBC made a film about the crisis in our oceans, it somehow managed to avoid naming the [greatest cause of their ecological destruction](#): the fishing industry. The only significant sequence on fishing in 2017's [Blue Planet II](#) was a heartwarming story about how kind Norwegian herring boats are to orcas. It presented industrial fishing not as the greatest threat to sealife, but as its saviour.

It's as if you were to make a film about climate breakdown without revealing the role of fossil fuel companies. Oh, hang on, the BBC did that too, in 2006. Its documentary [The Truth about Climate Change](#) mentioned fossil fuel companies only as part of the solution, because one of them was experimenting with carbon capture and storage. These films consisted of handwringing about a scarcely defined problem, followed by a suggestion that we should "do something", while offering no hint of what this something might be.

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They are symptomatic of a disease that afflicts most of the media, most of the time: a phobia about confronting power. Though the BBC has subsequently made some better films, it still tends to direct us away from the massive commercial assaults on our life support systems, and towards the issues I call [micro-consumerist bollocks](#) (MCB), such as plastic straws and cotton buds. I see MCB as a displacement activity: a safe substitute for confronting economic power. Far from saving the planet, it distracts us from systemic problems and undermines effective action. The [central premise of neoliberalism](#) is that the locus of decision-making can be shifted from democratic government to the individual, working through "the market". Rather than using politics to change the world for the better, we can do it through our purchases. If neoliberals even half-believed this nonsense, you'd expect them to ensure we were as knowledgeable as possible, so that we could exercise

effective decision-making in their great consumer democracy. Instead, the media keeps us in a state of almost total ignorance about the impacts of our consumption.



A still from *Seaspiracy* Photograph: Artgrid

But one of our bubbles of ignorance has just been burst. On a small budget, with the first film they've ever made, Ali Tabrizi and Lucy Tabrizi have achieved what media giants have repeatedly failed to do: directly confronted power. Their [film *Seaspiracy*](#) has become a huge hit on Netflix in several nations, including the UK. (Disclosure: I'm a contributor.) At last people have started to wake up to the astonishing fact that when you drag vast nets over the seabed, or set [lines of hooks 28 miles long](#), or relentlessly pursue declining species, you might just, well, you know, have some effect on ocean life.

The film gets some things wrong. It cites an outdated paper about the likely date of the global collapse of fisheries. Two of its figures about bycatch are incorrect. It confuses carbon stored by lifeforms with [carbon stored in seawater](#). But the thrust of the film is correct: industrial fishing, an issue woefully neglected by the media and conservation groups, is driving many wildlife populations and ecosystems around the world towards collapse. Vast fishing ships from powerful nations threaten to deprive [local people of their subsistence](#). Many "marine reserves" are a total farce, as industrial fishing is [still allowed inside them](#). In the EU, the [intensity of trawling](#) in so-called protected areas is greater than in unprotected places. "Sustainable seafood" is often [nothing of the kind](#). Commercial fishing is the greatest cause of the [death and decline](#) of marine animals. It can also be extremely [cruel to humans](#): slavery and other gross exploitations of labour are rampant.

Only 6.2% of the world's marine fish populations, according to the latest assessment by the UN Food and Agriculture Organisation, are neither "fully fished" nor "overfished", and they [continue to decline](#). "Fully fished" means that fish are being caught at their "maximum sustainable yield": the most that can be taken without crashing the stock.

This is a central aim of fisheries management. But from the ecologist's perspective, it often means [grossly overexploited](#). As the work of Prof Callum Roberts shows, populations of fish and other marine animals were massively greater before [industrial fishing began](#), and the state of the seabed, in many areas, entirely different. Even "well-managed" fishing at maximum yields prevents the restoration of rich and abundant ecosystems.

I agree, however, that details also matter, and while all films – like all journalism and all science – make mistakes, we should be sticklers for the facts. So why did the fisheries scientists who are screaming about the errors in Seaspiracy not complain about the far greater misrepresentations and omissions in Blue Planet II and the BBC's 2019 follow-up series, Blue Planet Live?

Blue Planet Live took distraction and deflection to a [whole new level](#). Though it focused largely on plastics, it failed to mention the plastics industry. It was as if plastic, climate breakdown and fishing pressure all materialised out of thin air. As it swerved round powerful interests, most of the solutions it proposed were tiny technological sticking plasters: rescuing orphaned seals, seeding coral, removing hooks from the mouths of sharks. Some of its claims were not just wrong but hilarious. For example, it stated that we can "rid our oceans of plastics" through beach cleans.

So why the silence? Perhaps because some fisheries scientists, as the great [biologist Ransom Myers](#) pointed out, have come to identify with the industry on which their livelihoods depend. While they seem happy for outrageous distortions that favour industrial fishing to pass, they go berserk about much smaller mistakes that disfavour it.

To me, the problem is symbolised by two words I keep stumbling across in scientific and official papers: "underfished" and "underexploited". These are the terms fisheries scientists use for populations that are not "fully fished". The words people use expose the way they think, and what powerful, illuminating, horrible words these are. They seem to belong to another era, when we believed in the doctrine of dominion: humans have a sacred duty to conquer and exploit the Earth. I suspect some people are so angry because it's not just malpractice Seaspiracy exposes, but an entire worldview.

It's time to see the oceans in a new light: to treat fish not as seafood but as wildlife; to see their societies not as stocks but as populations; and marine food webs not as fisheries but as ecosystems. It's time we saw their existence as a wonder of nature, rather than an opportunity for exploitation. It's time to redefine our relationship with the blue planet.



'Across both the billionaire press and social media, those who seek cleaner air are demonised.'

We are being poisoned every day, so why do we keep voting for more pollution? Ask a lobbyist

The dirty industries that dominate politics deceive us into accepting dangerous pollutants such as ammonia as part of life

Fri 22 Sep 2023 06.00 BST

There are some things we rightly find intolerable, such as the possession of poorly trained, aggressive dogs. There are other things, whose impacts are many thousands of times worse, that we decide just to live with. What makes the difference? Visibility is one reason: a photo of a large dog with bared teeth triggers primal fear. Ubiquity is another: the more widespread the problem, the more we normalise it. Split incentives is another: what if we are simultaneously both perpetrators and victims? But I think the most important factor is lobbying power.

There is no corporate lobby behind the sale, let alone poor training, of American XL bullies. But there are powerful corporate lobbies behind the [air pollution](#) devastating many people's health. Oil corporations don't want to lose their market. Car firms want to sell existing designs for as long as possible. Even the manufacturers of wood-burning stoves run a small, but surprisingly effective, [persuasion operation](#).

Thanks to the Pollution Paradox – the dirtiest industries have the greatest incentive to invest in politics, so politics comes to be dominated by the dirtiest industries – such lobbies exert a vast impact on political choice. If people were asked to vote on whether they want their hearts and lungs damaged, their children's [cognitive development impaired](#), [extra cancers](#), [more stillbirths](#), a [higher risk of dementia](#) and [earlier death](#), they'd be likely to reject these options. But, thanks to decades of spin, the stark nature of the choice has been obscured.

The interests of some of the most powerful industries on Earth are represented as the interests of the working man and woman, trying to go about their business while greens and bureaucrats impede them. In reality, those who drive for their living – such as taxi drivers, couriers and rubbish collectors – have [the greatest exposure](#) to toxic diesel fumes. We could achieve cheaper, more effective mobility with a fraction of the pollution. With the right incentives, we could also [heat our homes](#) without poisoning our neighbours.

If you don't have the evidence required to win an argument, there's a ready alternative: set people against each other by stoking a culture war. Low emission zones and low-traffic neighbourhoods have

been the subjects of [grotesque falsehoods](#) in the media, lurid [conspiracy theories](#) and dark money lobbying. As the London mayor, Sadiq Khan, pointed out this week, [hundreds of thousands of pounds](#) have been spent on troll farms on social media attacking London's ultra-low emission zone (Ulez). We don't know where this money came from, but it may have been decisive in securing a Conservative win in the Uxbridge byelection.

Emboldened by the apparent success of such lobbying, the government is waging war on public health, announcing a ["review" of low-traffic neighbourhoods](#) and [scrapping the commitment](#) to stop the sale of polluting private vehicles by 2030. Across both the billionaire press and social media, those who seek cleaner air are demonised. Tory MPs who have called for severe penalties against environmental protesters are noticeably more relaxed about the [vandalism of Ulez cameras](#). It scarcely gets more perverse.

The Guardian's [mapping of air pollution in Europe](#) (including the UK) tells a shocking story. Only 2% of people live in places where the pollution caused by [PM2.5s](#) – tiny particles that cause a wide range of diseases – is within the limits recommended by the World Health Organization. Most people, including millions in the UK, are exposed to toxic particles at concentrations of at least twice this level. You would have to move to northern Scotland to escape the daily assault on your health.

Many rural people will be surprised to see how polluted their air is, but that's because the media seldom mention the major source of these particles: ammonia from farms. [A study](#) by researchers at University College London found that even in cities, ammonia from farms produces more particulate pollution than the cities themselves do. Farm ammonia contributes 25% of the PM2.5s in London, 32% in Birmingham and 38% in Leicester, while these cities generate from 13-24% of their own PM2.5 pollution (the rest blows in from mainland Europe or comes from construction and road traffic outside the city, shipping emissions and dust from distant deserts).

Where there is public silence, lobbyists rule. The ammonia comes from livestock farms and the manure and fertiliser spread on fields. There are several ways of greatly reducing its release: storing manure in sealed tanks rather than open lagoons, injecting it into soil instead of spreading it, banning the use of urea as a fertiliser, reducing the animal products we eat. According to [a paper in the journal Science](#), cutting ammonia pollution is 10 times more cost-effective than cutting nitrous oxide pollution, another major cause of airborne particulates. Halving ammonia emissions, [another analysis suggests](#), could save 3,000 lives in the UK every year. Reducing ammonia, according to Andrea Pozzer of the Max Planck Institute for Chemistry, is the "most effective way to reduce mortality linked to air pollution".

But the government, lobbied by the National Farmers' Union, has [thwarted all such efforts](#). In [a submission to parliament](#), the NFU appeared to admit that the purpose of much manure spreading is to dump surplus slurry rather than to fertilise crops: it needs to happen because "the production or import of manures far outstrips the immediate need of accessible soil and crops". This is the issue that [blights our rivers](#) as well as our air: livestock farms produce far more manure than the land can absorb. The lobby group went on to argue against a ban on [autumn spreading](#), which causes the worst pollution, and against a ban on the use of urea, a potent source of ammonia. The government gave it [everything it wanted](#).

The European parliament has now voted to bring EU legislation in line with the science, setting the WHO's recommended level as the legal limit for PM2.5 pollution, but, thanks to the lobbyists and their stooges, [not until 2035](#). There are, however, no such plans in the UK. As one of the great benefits of Brexit, the government merely aims to change the current "guidance" level of PM2.5 pollution from four times the WHO recommendation to twice the recommended level by 2040. The dates 2040 and 2050 are used by this government as synonyms for "never".

The idea that some people may freely poison others is one of the most astonishing but least contested aspects of modern life. It's time we saw past the lies and the culture wars. It's time to stop accepting our daily poisoning on behalf of corporate profits.

- George Monbiot is a Guardian columnist

