FORUM
FOR THE
FUTURE

DRIVING SYSTEMS CHANGE IN TURBULENT TIMES

THE FUTURE OF SUSTAINABILITY 2019

FORUM FOR THE FUTURE

Forum for the Future is a leading international sustainability non-profit with offices in London, New York, Singapore and Mumbai.

We specialize in addressing critical global challenges by catalysing change in key systems. For over 20 years, we've been working in partnership with business, governments and civil society to accelerate the shift toward a sustainable future.

Together we are reinventing the way the world works.

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CONTENTS

THE 2020s ARE ALMOST HERE…

… and they promise to be challenging and uncertain.

We have identified seven areas of change that, from the perspective of early 2019, look likely to play a major role in shaping the 2020s. We have chosen these trends based on experience working on the frontier of change for the past year, drawing on research, interviews, contributions to the Futures Centre, our global futures platform, and system-changing projects across the world.

For each one, we look at what's happening now and ask where it might lead in the future. We also ask where we're beginning to see a deeper shift: in patterns of behaviour, structures or mindsets – either towards or away from sustainability.

Seven areas of change

The plastics kickback

Despite almost unprecedented attention and activity, responses to pervasive plastic pollution have so far largely failed to address the root causes or avoid unintended consequences. We remain desperately addicted to this cheap, ubiquitous material.

Migration and the climate crisis

Migration reached its highest point since WWII in 2018 and climate change will become a major driver of it in years to come, potentially sparking a humanitarian crisis and protectionism. Will the world put in place the structures and systems to cope?

Nationalism marches again

Nationalist governments and sentiment are rising around the world. We may be leaving the globalist era and moving into a period of fragmentation and competition. If so, navigating this divisive narrative will be crucial to effective action on sustainability.

The onlife

Half the world will be online in 2019. This almost unregulated space feeds off our attention, herds us into echo chambers and could have some serious consequences for society and our ability to create change.

The rise of participatory democracy

As the globalist vs nationalist debate intensifies, citizens and governments are experimenting with new ways to come together and make decisions – a local antidote to global issues.

Changing consumerism in Asia

Lifestyles with heavy environmental footprints are becoming the norm across the world, but in Asia there are faint hints of a new flavour of consumerism brewing.

Biodiversity in free fall

We are experiencing a sixth mass extinction event that undermines the natural systems on which our very survival as a species depends. There are signs of restoration and regenerative approaches, but they need joining up and widespread adoption to have lasting impact.

Taken together, these seven areas have big implications for how – even whether – we are able to address global challenges. Positive developments abound, but the deep shifts in mindset and attitudes represented by the rise of nationalism, the growth of consumerism or the emergence of the 'onlife' are pushing in the opposite direction. Is the Sustainable Development Goal ambition "to ensure that all human beings can fulfil their potential in dignity and equality and in a healthy environment" already a pipe dream?

This has to change.

Action for sustainability should ultimately target the structures and mindsets that govern the way the world works, but to date we have seen little of this. We need to step up and skill up: step up our ambition levels, and skill up on how to work towards fundamental and lasting change. At Forum for the Future, we believe that means understanding how to work systemically on global challenges, by:

› Realising the scale of the challenges we face and the time within which they need to be solved;

› Building connections beyond your field and outside echo chambers to bring in new perspectives and to foster empathy;

› Identifying and addressing the root causes behind the problem, helping to avoid 'sticking-plaster' solutions;

› Aligning on the goals of the change you're trying to make;

› Understanding your role in the system and the power you have, and doing everything you can to leverage your assets for systems change;

› Moving beyond competition to experiment, learn, share, be open and collaborate.

We apply these principles to the forefront of our work, focusing on the global challenges of sustainable nutrition, staying below 1.5°C and sustainable value chains and livelihoods. Solve these, and we believe we're well on the way to ensuring a more stable, sustainable future.
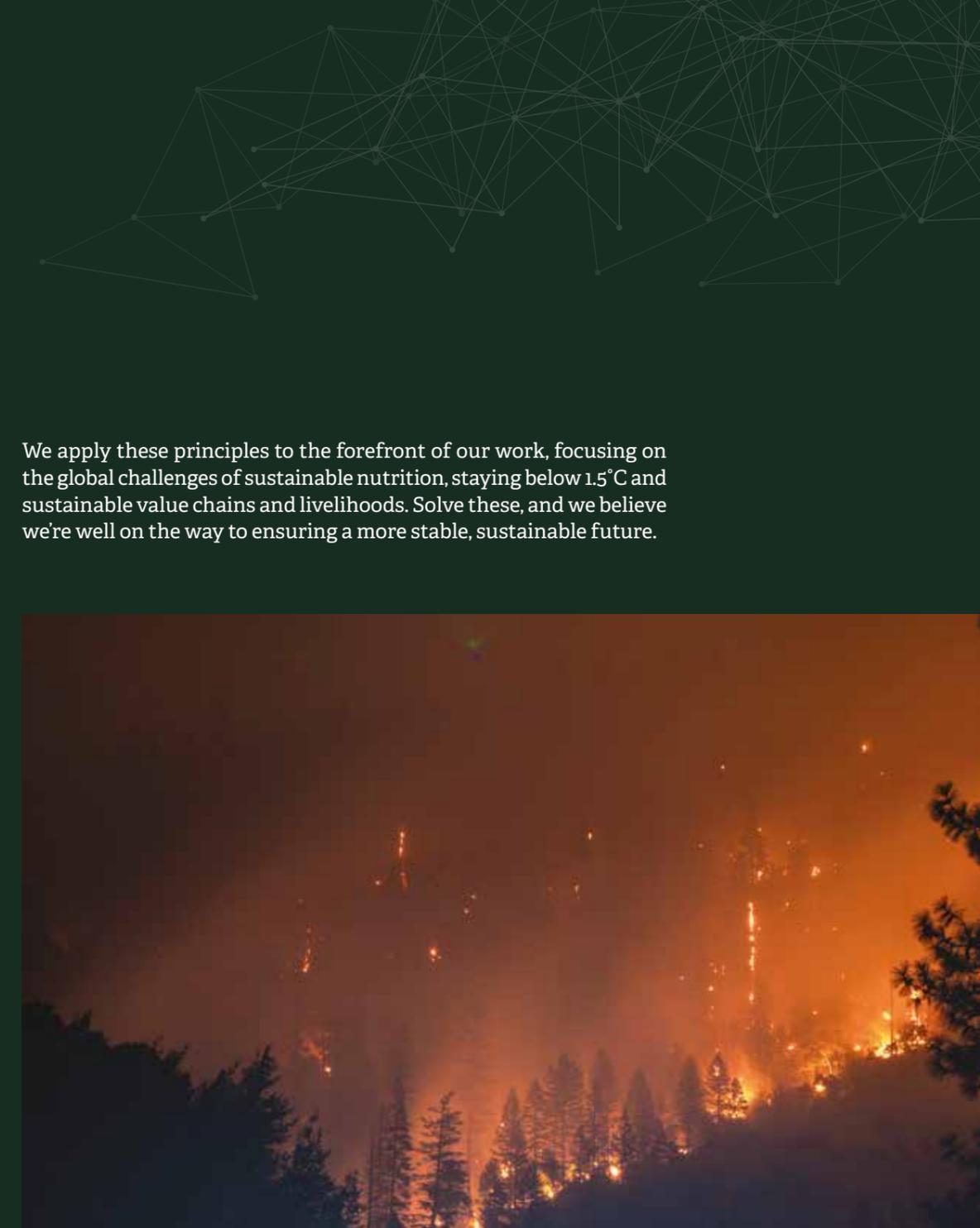
INTRODUCTION

For decades, people have forecast with trepidation the run-up to 2030 as a challenging time for human life on the planet.

Limits to Growth projected a civilisational collapse in 2030.[1] John Beddington, former Chief Scientific Advisor to the UK government, famously named 2030 crunch time for a 'perfect storm' of resource and climate crises. The IPCC recently warned that we have 12 years to avert catastrophic climate change, and the consensus is that we're already locked into 1.5°C of warming - not climate change but climate breakdown.

We are now almost in the 2020s, on the cusp of a decade that threatens great uncertainty, volatility and suffering. The window of opportunity to create a sustainable world, one in which people everywhere can lead fulfilling lives on a healthy planet, seems narrower than ever before.

But there are always multiple futures open to us. At Forum for the Future we believe that a positive future is still possible if people in positions of power everywhere step up their level of ambition, and skill up on how to work systemically.
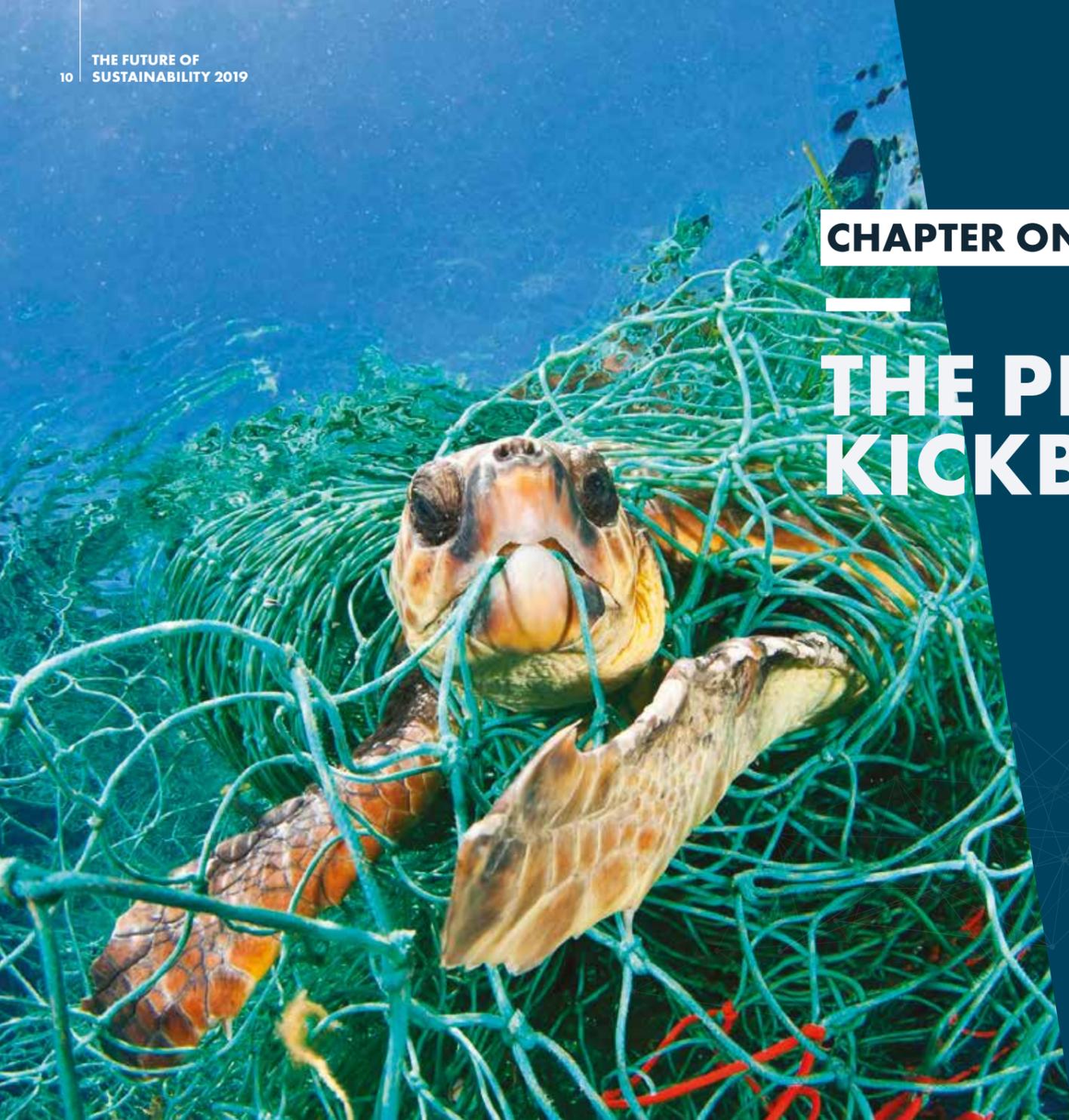
To help us to do that though, we need to understand how the world is changing, what the implications are and how that translates into action needed today.

Can we change the story of the 2020s before it transforms us?

CHAPTER ONE

THE PLASTICS KICKBACK

We live in a plastic world, and have done for decades.

This light-weight, waterproof, durable, cheap material is in our electronics, cars, aeroplanes, clothes and every type of packaging imaginable. It is so cheap that we throw it away without a thought. As a result plastics and microplastics are pouring into the world's water systems, buried in our soils, lying on the ocean floor, infiltrating once pristine ecosystems. They're much closer to home too. Right now there are microplastics in your internal organs, in the food you just ate and the air you're breathing.

Consumers and businesses are waking up to the consequences with unprecedented levels of concern and activity. This year has felt like we're on the verge of a breakthrough. But how much has really transformed? We've been tracking the plastics crisis for some years and our analysis suggests that only a small amount of the current activity has truly transformative potential. In fact, some efforts could even be reinforcing the status quo by suggesting that it's possible to 'clean up' the problem without addressing the structural drivers of the problem - namely linear, high-growth, low-responsibility business models and the regulations, lack of distribution innovation, consumer behaviour and mindset of disposability that enable them.

DID YOU KNOW?
The equivalent of a truck load of plastic enters the oceans every minute.

TODAY'S PICTURE

The environmental cost of our plastic addiction.

The stats are mind-boggling: we know how much plastics enters the ocean every year (eight million tons),[2] how little plastic packaging we recycle globally (around 14%),[3] and the amount of the world's drinking water containing plastic fibre (83%).[4]

We know less about the deleterious effects on human health, but the build up of toxic interference from plastics is well documented in marine life, disrupting reproductive cycles and even causing cancer both in fish and in mammals.[5]

What's remarkable is the public and business reaction. The furore has sparked a frenzy of activity: improvements to recycling,[6] inventing compostable alternatives,[7] creating models for monetising and reusing plastic items like cups and bottles,[8] spurring activism, such as the 'plastic attacks' rejecting packaging in-store, and cleaning up existing pollution as well as a spate of business and government pledges.[9]

While this is all important, it does not fundamentally shift the way we produce, consume and manage end-of-life in plastics; we're still just at the surface of change. These isolated efforts must be combined with deeper action, that changes the structures and mindsets underpinning the world's growing demand for convenience products and 'throwaway' culture, which ultimately drives the massive amount of plastic flowing through our economies.

⚡ WHAT ARE THE IMPLICATIONS?

Despite this being perhaps the highest profile environmental issue in years, the movement is still in its infancy and has yet to become mainstream.

We're seeing more and more action towards a shift to circularity, but we risk missing the window of opportunity by not thinking and acting in a systemic way. So how can the overwhelming global focus on tackling plastic pollution be channelled into truly transformative change without creating new problems in its wake?

Understanding a system as a whole is a necessary step in diagnosing any challenge: the key actors, centres of power, challenges and trends driving change, and windows of opportunity.

First we need to understand who is driving plastic output; what is in the way of plastic take-back; and what alternative packaging systems can be piloted and scaled rapidly. We also need to look beyond the plastic packaging crisis to terrestrial, water and airborne microplastics, which pose an array of human health and environmental risks. And we must consider the consequences for emissions and land use, soil depletion, food waste and hygiene before 'rolling out' alternatives to plastic or removing it altogether. We must ensure that whatever solutions we design don't entrench our current throwaway culture, and actively help to transform our relationship with waste and convenience.

Alignment on the end goal is also vital to prevent efforts pulling in different directions. The UK's WRAP plastic pact is a good first step, coordinating players across the whole system with ambitious goals and a shared understanding of the required change.

Our failure thus far to translate the attention on plastics into meaningful, widespread change shows the importance of taking a step back, looking at the root of the problem, and asking how we can restructure the whole system.

Nevertheless, we can learn from this successful awareness-raising around plastic. Unlike the bigger and much more existential threat of climate change, plastic pollution is tangible and easy to visualise. There's a creative challenge open to communicators and organisations with strong media presence to bring the same emotive power of plastic pollution to issues like climate action, deforestation and fast fashion.

🚩 SIGNALS OF CHANGE

In the UK, WRAP's Plastic Pact is bringing together businesses across the plastics value chain with the government and NGOs to commit to a shared vision for plastic packaging. A set of 2025 goals include 100% of plastic packaging to be reusable, recyclable or compostable, and to eliminate single use plastics.

Ooho is a water pouch which can be eaten alongside its contents, providing an alternative to plastic water bottles. The pouch is made from plant-based materials derived from seaweed and other plant materials, has a low environmental impact and is said to be cheaper to produce than plastic.

Staged across the world, shoppers have been removing unnecessary plastic packaging from goods in supermarkets, such as excessive packaging on fruit and vegetables, and leaving it for the store to deal with. There were over 100 of these so called 'plastic attacks' in 2018 around the world.

In a number of cities, including Beijing, Jakarta and Istanbul, people can now pay for public transport by trading their plastic waste for credit through reverse vending machines. The schemes not only help collect waste, but also encourage people to use public transport.

CupClub is a disruptive new business model providing reusable smart cups, reducing plastic waste and changing consumer attitudes to single-use items. The company provides RFID-tagged coffee cups to cafes which are then used by consumers, returned, washed and redistributed to participating retailers by CupClub.

CHAPTER TWO

MIGRATION & THE CLIMATE CRISIS

We are at the tipping point for climate change.

On one side of that point is the ebbing possibility of keeping warming to 1.5°C, which will require "unprecedented changes in all aspects of society" and still see the loss of 70-90% of coral reefs, according to the IPCC report. Already, at 1°C above pre-industrial temperatures, we are seeing fires - even in the Arctic - record floods, superstorms, heatwaves and cold snaps. In 2018, we became aware that the possibility of avoiding severe and system-wide disruption has already disappeared. And from here, it will certainly get worse.

The secondary effects of climate change are also becoming more apparent and give a glimpse of the future we're facing. In particular, record levels of displacement, higher even than after WWII,[10] find their roots in climate drivers. Blamed on war, poverty is growing, but a closer look reveals climate drivers are there too, fuelling drought, chronic agricultural failure, and food and water shortages.

We need to do all we possibly can, urgently, to head off the worst scenarios, but also find ways to adapt and plan for a radically different world, in which levels of forced displacement are higher than ever before. This is a critical lens through which all other activities – business, society and governmental – should be viewed. We still have some choices about the kind of future we create for people and planet. But only just.

TODAY'S PICTURE

Acute impacts and chronic situations.

We're seeing both acute climate impacts and chronic situations catching up with us. More cities are expected to run out of water: Cape Town first, then Bangalore, and Jakarta - which is already sinking 7.5cm/year due to groundwater depletion. Rain-fed crops are at particular risk (for instance corn and soy in the Midwest) - marine and rainforest food webs are disintegrating,[11] and these have cascading impacts for the planet's carbon cycle and sinks.

A major concern is impacts that reinforce global warming ('positive feedback loops'), such as methane release from melting Arctic permafrost and deep-sea methane hydrates (solid ice-like blocks on the ocean floor). With warming, these systems could quickly, and catastrophically, destabilise the climate, locking us into a 'Hothouse Earth' scenario. Critically, we don't know where this tipping point is, and whether or not we have already passed it: we can already see signs of it happening.

Scientists, academics and prominent public figures are calling for a drastic reassessment of priorities in order to adapt to a disrupted and uncertain future.

With large parts of the world becoming less hospitable, more and more people will seek to migrate to relative safety from climate threats. This will both exacerbate and be driven by geopolitical instability. Take, for example, the role that water scarcity (due to a changing climate) played in heightening the intra-state tensions that sparked the Syrian civil war and led to Europe's most pressing refugee crisis to date.[12]

We're heading into an environmental pressure cooker for geopolitical strife, and inequality - in livelihoods, health risks and access to resources - will intensify it. Billionaires are buying up apocalypse bolt-holes in New Zealand, and we're seeing a wave of 'climate gentrification' with those who can afford to moving away from areas vulnerable to climate change.[13] Many of these responses look set to make the long-term situation worse.

⚡ WHAT ARE THE IMPLICATIONS?

We face a massive humanitarian crisis, with no sign that anyone is prepared for the levels of displacement that even 1.5°C of warming will bring.

Projections of the number of displaced people due to climate change range from the World Bank's relatively conservative estimate of 100 million, to forecasts of up to one billion people worldwide by 2050 by UN agency International Organisation for Migration – that's one in 9 people.[14] Compare this to the effects of just 65 million displaced today on national politics and international relations.

We already know how situations can deteriorate when we're not prepared for migration. We've seen the dangerous links between migration and nationalist politics. Add social media manipulation and climate change in as intensifiers, and you've got a perfect storm.

So what do we do when we know it's going to happen? At the very least, this means recognising that transience is a way of life for an increasing number of people.

While doing everything possible to mitigate the factors that drive people to leave their homes, NGOs, governments and businesses can also design systems for transience that help create resilient, local communities. For example, it might be possible to reimagine refugee camps as agile Smart Cities, as suggested in a recent article,[15] rethink products and service access, and look to new models of governance such as participatory democracy. This is just one example of the radical change in mindset that will be needed if people are to thrive in a world of climate breakdown.

In his disquieting report *Deep Adaptation: A Map for Navigating Climate Tragedy*, Professor Jem Bendell emphasises the importance of going beyond the idea of sustainability and embracing strategies for resilience, relinquishment and restoration. How we shore up resilience of essential systems and infrastructure, how we relinquish current systems and behaviours that are making things worse, and how we rebuild after inevitable difficulties and tragedies – these will dictate what we can salvage for a more manageable future.

🚩 SIGNALS OF CHANGE

Wildfires were not limited to arid areas of Europe and America: they were even reported as far north as the Arctic Sea as temperatures soared in summer 2018. In July, Italy and Norway sent fire-fighting aircraft to help Sweden quell 44 fires reaching as far north as Lapland.

An authoritative study published in Proceedings of the National Academy of Sciences (PNAS) suggested that even if the targets laid out in the Paris agreement are met, there's still a risk that we could tip into a 'Hothouse Earth' scenario, with warming of 4-5°C and 10-60m of sea level rise.

After experiencing consecutive droughts, major world cities such as Cape Town and São Paolo almost ran out of water and remain at high risk over the next few years. Cape Town had less than 90 days' worth of water available in its reservoirs in January 2018, and personal water usage was capped at 87 litres per day.

Climate change has been identified as a major underlying factor behind the Central American migrant caravan heading towards the US border. *"The main reason people are moving is because they don't have anything to eat. This has a strong link to climate change,"* Robert Albro, a researcher at the Center for Latin American and Latino Studies at American University, told the Guardian.

Winning an almost unanimous vote, the United Nations General Assembly has adopted a global framework to *"step up and shoulder our responsibilities towards refugees"* explains the UN Deputy Secretary-General. While the commitment is not binding, it marks a significant geopolitical consensus to addressing the issue collectively.

CHAPTER THREE

NATIONALISM MARCHES AGAIN

Nationalist movements are gaining ground.

Across the world, nationalist movements are gaining ground, and in 2018 this accelerated. Hungary's nationalist leader, Viktor Orbán, was re-elected for a fourth term on an anti-immigration platform; the nationalist Jair Bolsonaro became the president of Brazil, and Recip Erdoğan was re-elected in Turkey. Meanwhile, the UK Brexit negotiations, the China-US trade war, and an increase in protectionist and nationalist rhetoric give the impression that we may be moving into a new phase of fragmented global politics.

If we leave the globalist era, and nationalism becomes the new operating context, what will this mean for the Sustainable Development Goals and action on global challenges such as climate change?

TODAY'S PICTURE

Deep and structural factors.

There are a number of complex and interconnected cultural and economic factors driving the rise of nationalism around the world. These factors are deep and structural, such as growing income and wealth inequality, demographic change, and increases in domestic and international migration. For example, the US is on track to be a 'non-majority ethnic' country by 2045, and there are almost nine million displaced people in Brazil, out of a total population of 208 million. The perceived impunity of corrupt elites is another factor, and very new and poorly regulated social media tools are a powerful divisive force. Ubiquitous and unregulated social media creates opportunities for fringe groups to run divisive campaigns and use misinformation and hate speech to target key audiences. Online 'filter bubbles' and social bots amplify impact. Activist cells are being created and can be rapidly activated for demonstrations or violent acts.

We are witnessing the political polarisation of societies, and a decline in trust in democracy and major institutions.[16] In Brazil, support for democracy has halved since 2010, and in the US,[17] support for 'an anti-democratic system' or 'a strong leader who does not have to bother with Congress or elections' has been gradually increasing over the past few decades. Nationalist groups are exploiting this and cooperating both overtly and covertly to build support for nationalism globally.[18]

Climate change, further increases in migration, and technological disruption with the possible loss of many traditional jobs in a new wave of automation, may lock-in nationalist politics for years to come. The re-emergence of nationalism as a political force may therefore be a deep and long-term shift in beliefs, which is already affecting political and democratic structures. This is happening just as international cooperation and effective governance is most needed.

⚡ WHAT ARE THE IMPLICATIONS?

If nationalism is the new paradigm, what will it mean for our capacity to address global issues such as those identified by the Sustainable Development Goals?

Its divisive nature makes it an apparent threat. Global institutions whose legitimacy rests on the painstaking work of decades are being undermined, and international relations based on trade and cooperation are threatened. Nationalist governments discourage the widespread cooperation and collective action that is needed to face our most pressing sustainability challenges, by creating mindsets and systems based on opposing and excluding groups.

Few have suggested sustainability will be easier to achieve in a divided world, but how can the shift to nationalism be reversed?

Some of the answer might lie in the steady growth in local participatory democracy, and indeed the Economist Intelligence Unit's Democracy Index 2018 records an increase in political participation over the past decade, mostly as a result of increasing participation by women. Working to address division is critical, by creating opportunities for people from different backgrounds to come together, and by building connection and empathy at every opportunity. This is something that people and organisations from across society can do. There is also work to be done to counter the drivers of nationalism, such as finding a way to manage or regulate social media, breaking down echo chambers online and holding tech companies accountable for their social impacts.

2019 will see more change, with a third of the world's population participating in national elections, including India, South Africa, Indonesia and Nigeria.[19] But if nationalism does continue to grow in power, then new ways of creating change will be necessary, that rely less on multilateral cooperation and more, perhaps, on bilateral agreements and action from civil society and business.

⚑ SIGNALS OF CHANGE

Nationalist politics is often linked to a deprioritisation of environmental issues. Recently elected neo-nationalist Brazilian president Jair Bolsonaro committed to opening up the Amazon for more development. His current plan entails weakening environmental protection laws and enforcement. This legislation could significantly threaten the Amazon rainforest as a protected ecosystem, indigenous homeland and carbon sink.

Indian news has covered an increasing number of incidents of 'cow vigilantism', or lynchings of cattle traders: a trend associated with the rise of Hindu nationalism. From 2012-2018, 45 people were killed in 120 cases of cow-related violence across India. Commentators suggest social media has a significant role to play in spreading rumour and inciting violence.

Former Trump advisor Steve Bannon has formed an international alliance of populist groups called 'The Movement'. The group includes Belgium's People's Party, Italy's Northern League and France's National Rally Party and seeks to promote economic nationalism and right-wing populism in Europe.

In the US, hate groups are growing in size and prominence. The number of hate groups operating in the US is up 20% since 2014 with neo-nazi groups seeing the largest growth. Hate crimes, mostly motivated by race and ethnicity, have been on the increase for the third consecutive year.

Grassroots movements and civil society have played a strong role in supporting nationalist leaders. In Poland, a powerful conservative civil society works with the government to tighten control over the judiciary by removing existing justices and replacing them with more loyal ones.

CHAPTER FOUR

THE ONLIFE

How many minutes have you spent on the internet today?

For a growing proportion of the world, our lives are increasingly lived online. Our 'onlives' make us gloriously connected, grant us myriad opportunities to reinvent ourselves, to learn, to innovate, to access life-saving advice and assistance, and to teleport an endless cornucopia of goods to our front doors.

But there are signs that living perpetually plugged-in is bringing unintended consequences. The dark side is expressing itself in our politics, our mental health, our screen addictions and our social cohesion. As we are gamed at every turn to keep scrolling, keep watching, keep tapping, our valuable attention is diffused between the promise of endless dopamine hits, buzzing notifications and tides of information.

How can we ensure the internet is a force for good in the disruptive years to come?

DID YOU KNOW?

Half the world's population will have internet access in 2019.

TODAY'S PICTURE

Social media platforms have become hotbeds for extreme views.

In 2018 Mark Zuckerberg was hauled in front of Congress over mishandling of data and privacy, and we became starkly aware of just how unregulated a space the online world has become. Social media platforms have become hotbeds for extreme views, terrorism, witch-hunts, and trolls; the domain of deep-fakes, data breaches, swarms of bots, and fake news.

Many of these are the surface-level expression of the 'attention economy' business model of internet platforms that seek to stimulate a user's emotional response by perpetuating polarisation, shock and novelty, where the product is your attention span.[20] Indeed, many internet companies employ specialist Attention Engineers programming us with manipulative design tactics in an arms race towards addiction.[21]

Hooked, our onlives have become canvases onto which we paint meticulously curated, and often misleading identities. We have a 24/7/365 window into the self-promoted lives of those more successful, more wealthy, more beautiful and more popular than we are - a global consciousness our brains just aren't wired for.

Business models built on ad revenue and attention, surveillance, centralisation of power, lack of tech-giant accountability, and a paucity of regulation – these are all systemic, structural problems that form the foundation of our onlives. It is from here that the patterns and events emerge and multiply. Beyond the malign political influence, studies show strong causal links between burgeoning internet use and reductions in analytical and problem-solving skills, memory creation, critical thinking and empathy, as well as spikes in anxiety.

In short, our onlives are rewiring our brains, our politics, our social interaction, and even the climate - the gargantuan amount of energy and materials required are set to exceed 14% of global emissions by 2040.[22] Is it time to step back?

⚡ WHAT ARE THE IMPLICATIONS?

There are many implications for sustainability, but here are three which stand out.

Firstly, with half the world coming online in 2019, we're going to have to accelerate the energy revolution to keep those chargers plugged in without destroying the planet. Secondly, amid information overload, the sustainability community must learn the tricks of the trade in raising awareness and getting the most pressing challenges the attention they deserve in a distracted world. Thirdly, we need to look at our own ability to create change. Shifting entire systems and tackling global challenges is thorough, focused work. If every waking hour is spent in a state of fragmented attention, we weaken our capabilities for creating system change. If society is increasingly herded into ghettos of political persuasion and identity, our ability to cooperate is undermined. As more of the world logs on, we should also view it as a growing percentage of the world vulnerable to misinformation and manipulation.

So what can be done? As with all these dynamic areas, there are multiple possible futures open to us. The internet we have now isn't the only one possible.

Internet, or internets? It's perhaps outdated to talk about the internet when there are already at least four: China's firewall-enclosed version, the GDPR internet, the Wild-West Web outside that, and the shadowy Dark Web.[23] Advocates for a repurposed internet include its own founding-father Tim Berners-Lee, and professor of internet-law Jonathan Zittrain. They are calling for the wholesale reinvention of the internet to create a regulated, equitable space, promising to protect users from hate and prejudice, fake news and data exploitation.

Governments and regulators are likely to regularly and heavily scrutinise tech giants from 2019 onwards.

There have even been calls for an age restriction on social media use, to protect the most vulnerable, and for Facebook and Google and the like to become public utilities regulated by governments.[24] For future generations, as well as current internet users, education on how to navigate the onlife should be de rigueur. Learning to detect real from fake, how to maintain an on/offline balance, how to use, and not be used by, social media are critical skills for maintaining both mental health and social cohesion.

In the face of the disruption to come we can, and must, step back and reconfigure our relationship with living online, for our own resilience and that of our communities; digging deep to assess what it really means to be connected and what it means to be human.
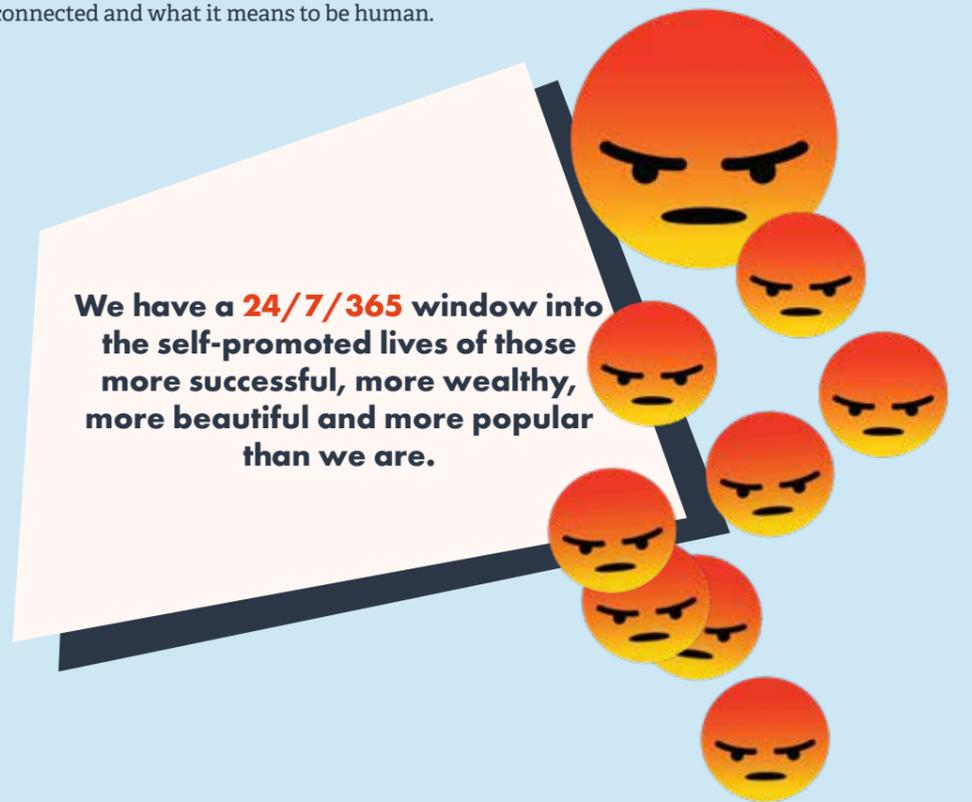
We have a **24/7/365** window into the self-promoted lives of those more successful, more wealthy, more beautiful and more popular than we are.

⚑ SIGNALS OF CHANGE

Earlier this year WhatsApp added labels to indicate when a message has been forwarded, partly in response to fake news about rumoured child kidnappings disseminated via WhatsApp, which led to a spate of lynchings in India. The company is now imposing limits on how many groups a single message can be sent to. India is currently WhatsApp's largest market with over 200 million users.

The NHS is due to launch its first ever clinic for internet and gaming addictions following growing concern over the problem and the World Health Organisation (WHO) classifying it as a mental health condition.

In 2018, Donald Trump repealed net neutrality, quashing hopes for a more regulated internet to make it for the many not the few. This opens the door for internet providers to censor or charge for access to certain content and could unfairly penalise small business owners.

A wide range of services including credit scoring, policy making, social media and job recruitment are increasingly mediated by AI, some of which has taken on biases. Trained on historical data and built by humans, a large number of these algorithms threaten to perpetuate existing biases and discriminate on the basis of gender, sexual orientation or race.

An Indian start-up called Metafact is drawing on artificial intelligence to try and combat the fake news crisis. The Delhi-based company founded in 2017 hopes to use AI to empower journalists to identify fake news stories.

WE THE PEOPLE · END DIGNITY

CHAPTER FIVE

THE RISE OF PARTICIPATORY DEMOCRACY

A sustainable and inclusive, local political and economic system.

Participatory democracy refers to a system that tries to maximise the involvement of citizens in decision making.

The most celebrated example is the city of Porto Alegre in Brazil, which began involving citizens in making budget decisions in 1989. Since then, around 10% of Porto Alegre's population of 1.5 million have taken part, including a disproportionate number from poorer districts, and this has led to documented improvements in service delivery, a shift in expenditure towards health and social care, and a decline in tax evasion.

There are now thousands of similar examples worldwide – from Antwerp to Syria to Taiwan. If local approaches like this became the norm, could they help define a new type of sustainable and inclusive, local political and economic system?

TODAY'S PICTURE

Income and wealth inequality are on the rise globally.[25]

Where democracy was once strong, trust in government and the political classes is now waning.[26] The opportunity and space for people in civil society to come together to discuss and debate is under pressure.[27]

It is no wonder that people around the world are turning to populists and nationalists, who promise easy solutions and blame the machinations of the global elite. As Anthony Zacharzewski of The Democratic Society told us in recent research, "politicians are scared that democracy is falling apart."

In England, the Civil Society Futures inquiry uncovered a society that felt to many "more unequal, more disconnected from power and more divided".[28] The findings will be familiar to people in many different countries. The inquiry has called for a "radical and creative shift" in civil society "that puts power in the hands of people and communities, preventing an 'us and them' future, connecting us better and humanising the way we do things".

This situation is driving a rapid increase in interest and support for participatory democracy. Madrid's 'Decide Madrid' is a pioneering example in Europe.[29] Using the open-source platform Consul, Madrileños make proposals for how a pot of £100 million can be spent, and the proposals are then voted on by other citizens. A proposal to plant native trees across the city has received over 20,000 votes.

Similar schemes are being tried out across the world.[30] In many cases they are being treated as experiments, but as evidence grows that the model works, some cities - like Antwerp - are expanding the scope. Investment is increasing, national governments, like Iceland and Taiwan, are adopting the approach and funding innovation, and efforts are being made to join examples up at conferences and in global networks.[31]

If the movement towards participatory democracy is to scale, investment is needed in the structures and systems that can support the experiments taking place now. For example, in Brazil 2.5% of local governments are using some form of participation, but this has yet to transition into a broader, codified model and depends on the support of local politicians, which could easily be withdrawn.

⚡ WHAT ARE THE IMPLICATIONS?

Local participatory democracy is an opportunity to build meaningful and productive connections between people of different backgrounds, united by the affinity they feel for where they live.

It could be an antidote to the current crisis of representation and political polarisation, and counter the downward spiral in quality of governance that is stirring tensions.

Facing and embracing challenges like mass migration and climate breakdown will be impossible without inclusive and resilient local communities. Participatory democracy could help to ensure that the responses to these challenges are rapid, context-specific and socially just.

As detailed above, the conditions for participatory democracy to create systemic changes in governance are emerging, but the process could be accelerated through concerted interventions.

National governments can invest in and support local experiments, fund training and platform development and adopt effective approaches, as the European Commission is likely to.
Will governments embrace participatory democracy as a more effective and efficient way of delivering services, and an answer to the democratic deficit?

Local governments everywhere can adopt best practice and help to build the capacity of their staff and citizens to develop and participate. Civil society groups can advocate for the adoption of participatory democracy in the places where they operate. Businesses can look for opportunities to work with and engage with emerging systems of governance, perhaps as a means of better understanding the role of business in meeting social needs and aspirations.

There is a strong innovation opportunity here too, for entrepreneurs to develop systems that are as transparent and trustworthy as possible, along the lines of Mudamos,[32] which allows Brazilian citizens to pass national legislation via digital petition-style voting.

🚩 SIGNALS OF CHANGE

The city of Ghent in Belgium plans to become a 'commons city', managed for its citizens by its citizens. In an initial research phase, 500 commons initiatives were mapped out on wiki.commons.gent.

The Indian state of Andhra Pradesh has adopted blockchain for e-governance to protect data, such as records of who owns certain assets. Similar use of tech could help build transparency and provide a trusted record of decisions being made by local government.

In Rojava, the autonomous Kurdish area of northern Syria, communities have adopted a model of participatory self-government at a village level, which is very inclusive of gender and ethnicity.

Ten percent of Antwerp's council budget - over €1 million - is decided through participatory budgeting. The city has been using online voting but is shifting to face-to-face consensus building to build inclusiveness and deepen discussion. The council is also training citizens in debating skills.

Cities4Europe is a network of cities aiming to find ways to engage and involve citizens in the democratic process in the run up to the European Parliamentary elections in 2019.
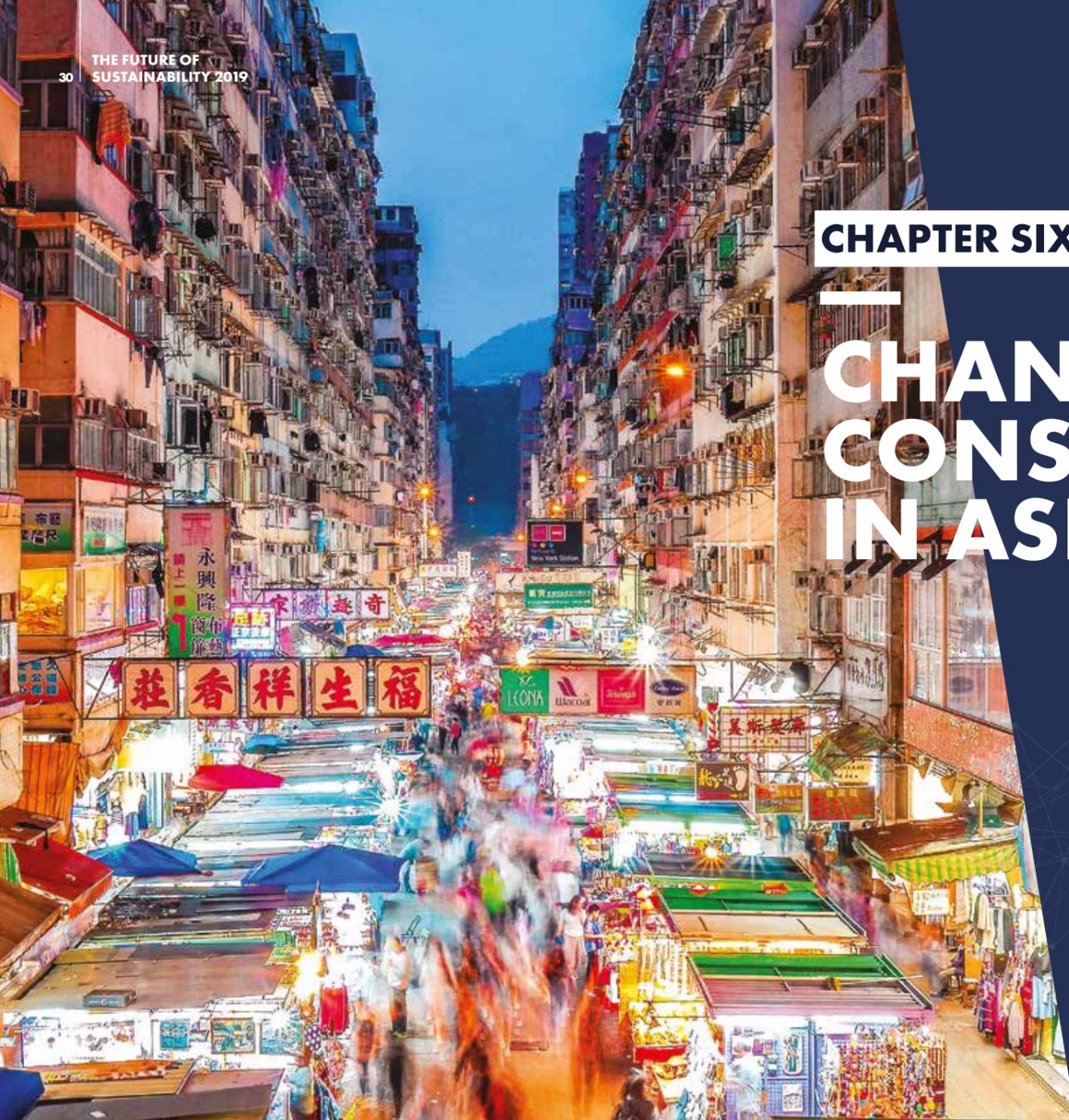
CHAPTER SIX

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CHANGING CONSUMERISM IN ASIA

Could runaway consumerism destabilise our collective future?

Consumerism - or the belief that buying goods regardless of need is a good thing for people, society and the economy - has a tenacious hold over a growing number of people around the world.

While the livelihoods and wealth created by consumerism have helped lift millions out of poverty, across the world our resource-sapping, waste-extruding lifestyles are putting unprecedented strain on our fragile planet and ramping up climate change.

Holidays, cars, meat-heavy diets, mobile phones and branded goods – each with a heavy greenhouse gas, rare-earth mineral, water and land-use footprint – are pushing us towards critical thresholds. The irony is not to be missed: by pursuing an endlessly better life, we are diminishing our capacity to have the very basics that make life good.

The trajectory overall is concerning. But there are promising signs of a push-back and a deeper shift in mindsets around our consumption. Could Consumerism 2.0 be emerging? If it does, we may be witnessing its birth in Asia. A new system, combining circular business models, a next generation of conscious leaders often within family-owned structures, and a niche but growing conscious consumer movement, promises a reappraisal of what, why and when we consume.

TODAY'S PICTURE

The complex picture of consumerism in Asia is woven from many threads.

Based on the current rate, Asia could account for 59% of the world's middle-class consumption by 2030.[33] Despite a recent slow-down, China still leads the way, but with other economies like India, Japan, South Korea and Thailand speeding up, fueled by a binge of consumer credit.[34]

Against this landscape, the first sign of a new approach to consumption is a demographic shift forming part of a global phenomenon of conscious consumerism. Millennials in Asia typically have shallower pockets than the previous generation, so are often more discerning consumers, and are close to the environmental consequences of modern lifestyles, such as toxic air pollution and plastic waste. As such, many are exploring new patterns of consumption and playing with the sharing economy, valuing quality over quantity, access over ownership, and experience over possession. The key question is where the trajectory will go.[35]

The second element also refers to a coming of age, this time in the leadership of many of Asia's family-owned businesses. Family-owned businesses are particularly prevalent in the region, accounting for 85% of businesses, and representing some of the world's largest companies.[36] With an increasingly global outlook and a legacy to uphold, the opportunity for this generation to harness its wealth to drive sustainable development is ripe. Using their risk-tolerant capital to invest in new ways of doing things, they can lead the market to deliver more sustainable products and services.

The third piece concerns new and disruptive business models in the sharing and circular economy, enabled by tech and logistical advances. China has been a hotbed of sharing economy innovation, where everything from bikes and scooters to umbrellas and phone-chargers can be rented. In fashion, Singapore's Style Theory, an 'infinite closet' based on algorithm-enabled designer clothing loans, China's YCloset and CaaStle, both 'clothes as a service' rental models, as well as our own Circular Leap Asia project supported by the C&A Foundation, are working to provide consumers with value without the hefty environmental price-tag.

⚡ WHAT ARE THE IMPLICATIONS?

The trick will be in bringing this new system together in a way that creates meaningful change and offers a new lifestyle for aspirational citizens: net positive and circular by default and combining the virtual, the experiential and the real.

Collaboration and openness will be key. We know from our 20 years' experience that no one brand or business can change systems alone. Experimenting, innovating and then sharing your solutions ensures we make faster progress and can quickly elevate brands to pioneers of sustainability.

Recognising the nature of the challenge and the dynamism at play is also vital.

These beacons of hope are as yet just faint eddies in comparison to the global tide. We cannot ignore that the overall trajectory is one of runaway consumerism of mind-blowing proportions. India's economy will overtake the UK's in 2019. China's 'Singles Day' became the record biggest shopping day in history in November 2018 with Alibaba making over $30 billion in 24hrs, $1 billion of which was in the first 90 seconds of sales.[37] Controlling over-consumption requires joined-up efforts to address the most deep-rooted of systemic drivers: our mindsets and beliefs.

Consumerism 1.0 is, at heart, about satisfying intangible needs – like security, self-esteem, human connection – with tangible goods.

Relying on the gradual and passive flowering of the conscious consumer is not going to cut it. Brands can, and must, use their immense collective social and cultural power to hold up a mirror to consumers and show there's a different set of values to which we can subscribe. They must see consumers as the citizens they are and engage them in a two-way conversation about the future of materialism in Asia.

⚐ SIGNALS OF CHANGE

A recent stunt of conspicuous consumption involved Chinese millennials posing for photographs after pretending to have tripped out of their cars, spilling their luxury possessions – Jimmy Choos, designers goods and even wads of cash – onto the roadside.

In Singapore, the United Overseas Bank (UOB) launched a millennial-focused credit card, branded as YOLO. According to the bank, the name captures the essence of the mantra, "You only live once", encouraging customers to "Eat. Drink. Play. Repeat."

China's sharing economy is expected to grow by 30% per year for the next five years according to a report by the People's Daily. It is spawning innovations across sectors, from agriculture to elderly care, but also brings unintended consequences relating to the vast amounts of personal data collected.

Starbucks revealed its plans to open a new store in China every 15 hours through to 2022. As of 2018, it had more than 3,000 stores in 136 cities, and currently has announced no strategy for managing the vast number of cups and straws that will be generated.

Neflix's latest hit Tidying Up with Marie Kondo, a series which brings minimalism into the mainstream by encouraging decluttering of viewers' homes, has caused a frenzy from Singapore to Australia. The Government of Victoria even issued a warning advising Australians to donate their unwanted goods rather than sending them to landfill.
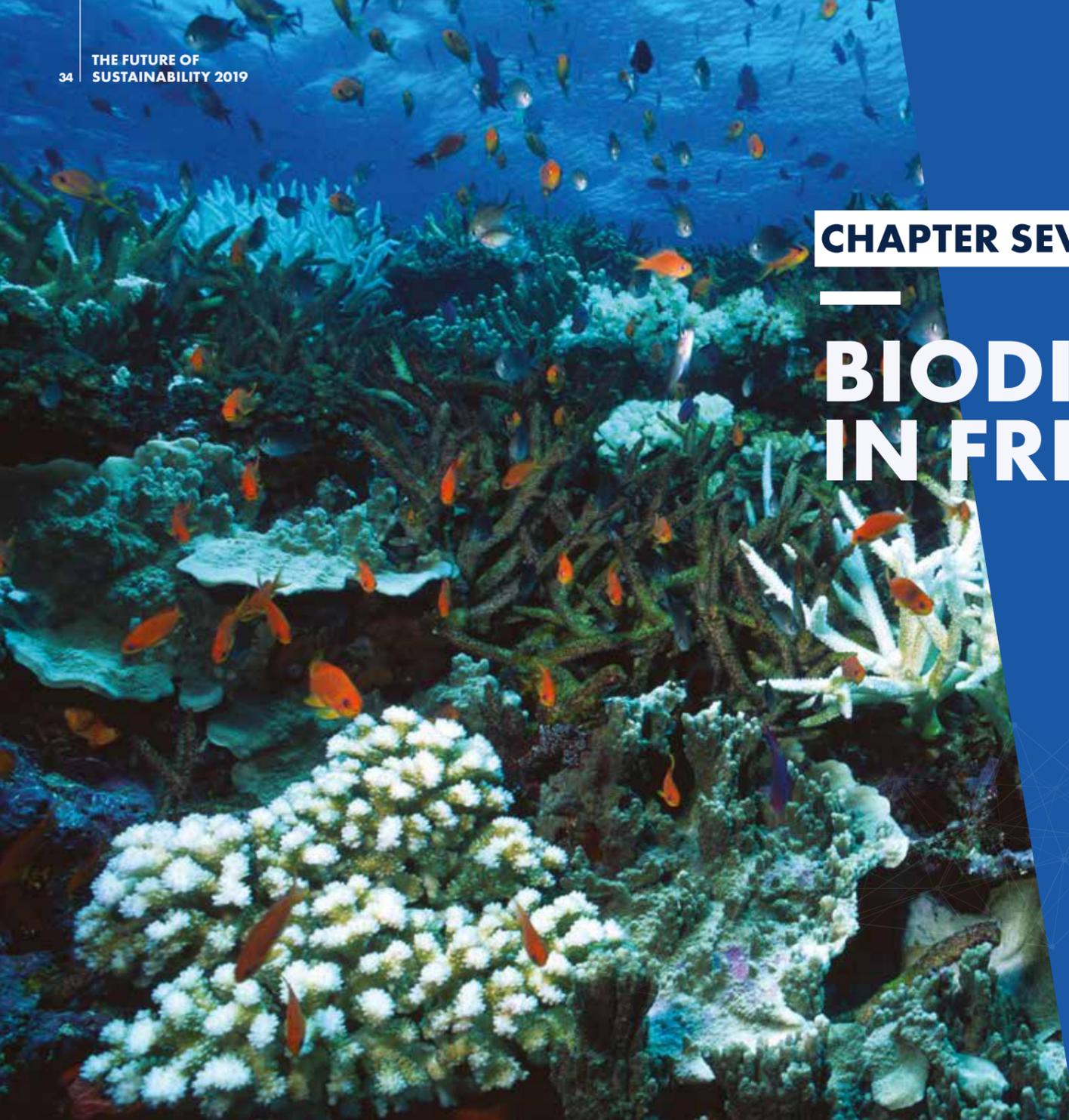
CHAPTER SEVEN

BIODIVERSITY IN FREE FALL

A sixth mass extinction.

In 2014, scientists warned that we're in the midst of a sixth mass extinction, with extinctions occurring 1,000 times more frequently now than in the 60 million years before humans came along.[38] Four years on, they warn the extinction rate might actually be 10,000 times higher, and we are beginning to notice. Species don't exist in isolation, so we shouldn't be surprised at evidence of ecosystem collapse that emerged over 2018. In the tropical forests of Puerto Rico, scientists reported that the biomass of insects and bugs has declined 60-fold since the 1970s, while temperatures there rose by 2˚C. They also saw similar losses in the wild populations of lizards, frogs and birds.[39]

Do fewer bugs in Puerto Rico really matter to life at large? Immensely. Biodiversity – the variety of life on earth in all its forms and interactions – represents the mother of all systems and underpins our economic and social wellbeing. In the words of conservationist John Muir, "When one tugs at a single thing in nature, you find it attached to the rest of the world." The riskiest thing about unravelling the natural fabric of the planet is that we're not yet sure what the consequences will be, but there is clear evidence that they will be dire.

DID YOU KNOW?

20% of the Amazon rainforest has disappeared in 50 years.

TODAY'S PICTURE

Biodiversity is critical to all Earth's life support systems.

The air we breathe, the water we drink, the food we eat, the delicate balance of our atmosphere. While its intrinsic value is beyond measure, the services ecosystems provide are worth an estimated US$125 trillion a year. Stopping their loss is a precondition for managing climate change, feeding our growing population, and protecting livelihoods. Biodiversity also offers a catalogue of solutions to global challenges, a potential we have hardly begun to understand: 70% of species on the planet are yet to be discovered.

Out of all the drivers of biodiversity loss, the worst culprit is our food system. Agriculture has fuelled the conversion of a third of all land on the planet, and is the driver for 80% of deforestation,[40] both of which mean less space for wildlife. It is also responsible for vast quantities of pesticides and fertilisers, destroying food webs, and ruining the very soils and waterways it depends on. What is more, the widespread use of monocropping means 75% of our food today comes from just 12 plant and five animal species - which leaves them extremely vulnerable to disease.[41]

Human mobility and development is driving other, unpredictable kinds of change, with nature adapting rapidly to the pressures we are putting on it. Invasive species in New Zealand are now equal to the number of native plant species.

Plants and animals are increasingly on the move and shifting their ranges as they respond to the changing environment. Urbanisation is changing evolutionary processes, speeding them up in some cases, creating new species in others.[42]

This extraordinary capacity for adaptation may be our biggest hope: new research indicates that some species of coral may be more resilient to rising ocean temperatures and acidification than previously thought.[43] Landscape-scale restoration and rewilding projects, from Patagonia National Park to the Caledonian forest, demonstrate the power of nature to rebuild itself when protected from development, and help to mitigate global warming and build resilience to changing weather patterns. Regenerative farming approaches are becoming more widespread, offering models of alternative and resilient farming methods. Currently, though, most regeneration and restoration initiatives are piecemeal, disconnected and fall far short of what is needed.

⚡ WHAT ARE THE IMPLICATIONS?

As our planetary systems move into a state of collapse, urgent action on all fronts and across all sectors will be needed to maintain the equilibrium.

It is vital that we stop seeing losses of species as isolated events and understand they are all connected to a picture of imminent collapse. It is clear that we will need to fundamentally reshape our understanding of the natural systems we rely on and how we interact with them. Incentives are needed to scale up practices that protect and enhance biodiversity, such as regenerative agriculture and deforestation-free supply chains. New ways of accounting for our interactions with nature that more accurately reflect its value could become the norm, from natural capital accounting to China's pioneering Gross Ecosystem Product as an alternative way of measuring wealth.[44] The recognition of local community rights to land ownership and management could be another pathway to limiting the impacts of industrial activity.

More immediately, large-scale, heroic measures from corporate activists and visionary governments are needed to protect what remains.

In the lead-up to the 2020 renegotiation of the Convention on Biological Diversity (the global framework that commits national governments to conserving biological diversity), some conservation organisations are exploring a proposal to protect literally half the planet for nature – an idea that would once have been viewed as radical, but that is gaining traction as the scale of the crisis becomes clear.[45] As we navigate these changes, might pristine nature reserves ultimately be recognised as the world's most precious commodity? Can we protect natural resources in a way that reduces rather than entrenches inequality? Will the 2020s be the decade where we engage with the challenge, or will we let it command our future?
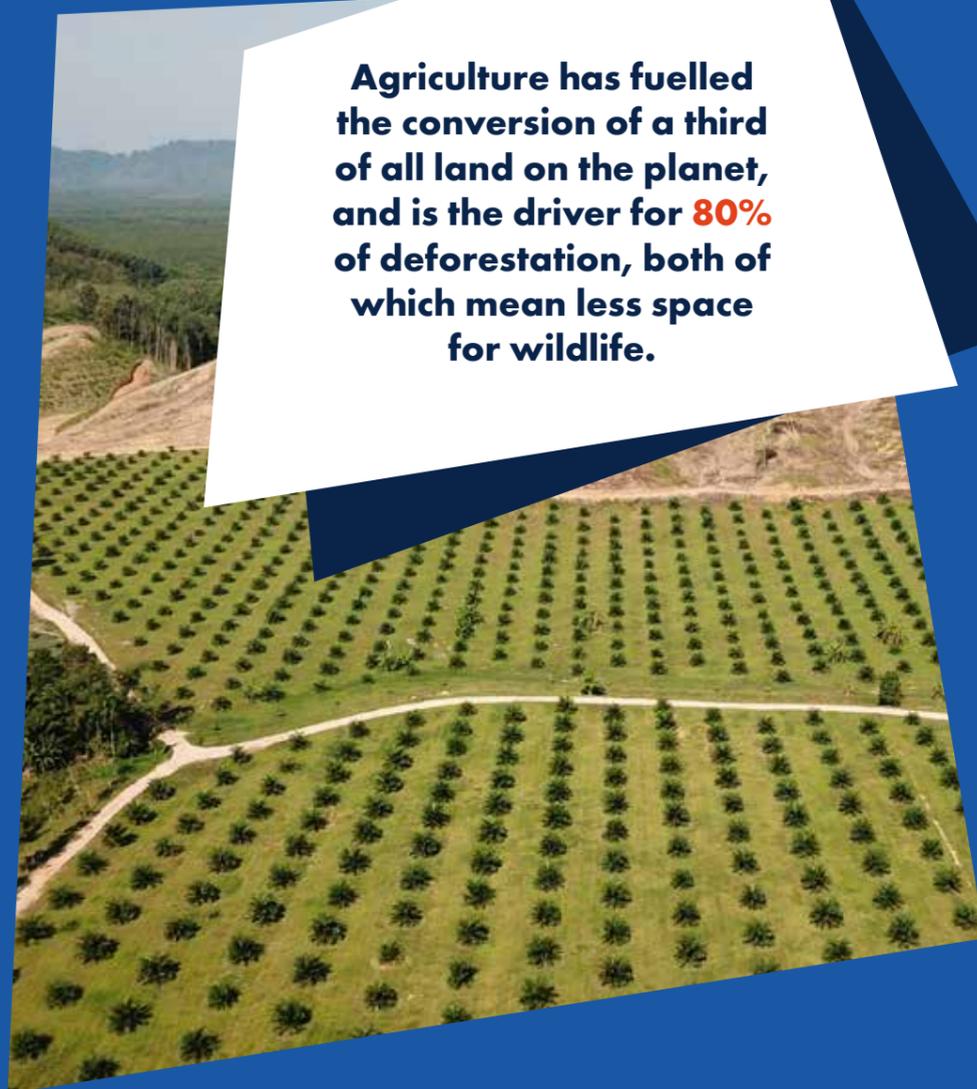
Agriculture has fuelled the conversion of a third of all land on the planet, and is the driver for 80% of deforestation, both of which mean less space for wildlife.

🚩 SIGNALS OF CHANGE

Climate change will **force hundreds of marine species to move ranges** in order to stay within tolerable temperatures as seas warm. Species, both marine and terrestrial, are already adapting their behaviour and migration patterns in response to a changing environment.

Scientists have proposed a Global Deal for Nature - a companion to the Paris Climate Deal - which would protect half the Earth by 2050 to halt the extinction crisis while sustaining human livelihoods. The deal would include "habitat protection and restoration, national- and ecoregion-scale conservation strategies, and the empowerment of indigenous peoples to protect their sovereign lands."

Scientists recently discovered a vast **underground ecosystem of billions of micro-organisms**, some of them many thousands of years old. The findings develop our understanding of the pervasiveness and interconnectedness of life on our planet, and demonstrate how much there is still left to discover.

More than 15% of land and 7% of the world's oceans now have protected status, taking us closer to the goal of creating nature refuges on 17% of the world's land and 10% of seas by 2020. However, enforcement remains a problem, and the protection of offshore oceans and freshwater ecoregions is lagging behind, according to a **UN report**.

Loss of natural habitat in Kerala, India, led to a **fatal outbreak of the Nipah virus**. The natural host for this zoonotic virus is fruit bats, whose habitats have been disturbed by rapid urbanisation and increased levels of bat-human interaction. The National Vector Borne Disease Control Programme is investigating loss of natural habitat as a cause of this outbreak and the rise of other zoonotic diseases.

HOW DO WE RESPOND?

The seven areas of change set out here will play a very significant role in shaping the near future, and the external context for addressing global challenges. How then do we make sense of the whole landscape?

These changes are not isolated but interconnected and simultaneous. Take climate breakdown and the huge movement of people it's precipitating. This is one of the drivers of the re-emergence of nationalism as a global phenomenon. Nationalism in turn may undermine the response to climate breakdown and migration in a deeply worrying reinforcing loop. Our lives online have also been implicated in the rise of nationalism, and also disconnect us from the natural world and the collapse of biodiversity, which in turn could mean that changes in the natural world are less visible and we are less willing to act. Conversely, nationalism is also creating interest in participatory democracy, as people around the world seek more effective connection and governance, and this in turn opens up prospects for solutions to a range of other challenges.

Change takes place at different levels, from the superficial and temporary, to the deep and lasting. We may observe isolated events or signals of change, and over time these may connect and reinforce each other in various different patterns.

Going deeper, trends may strengthen and start to influence structures such as government policy, dominant technologies, business models and so on. And going deeper still, we might observe shifts in beliefs, mental models, and society at large.

THESE DEEPER CHANGES SHAPE THE WORLD WE LIVE IN.

So where do the trends we have identified fit in this model?

Firstly, it seems that many of the changes that we explore are indeed taking place at the level of structures and mental models, and could be making the shift to a more sustainable future much harder.

The rise of nationalism is a good example of this - representing a deeper shift in mindsets and attitudes that also affects structures like trade and foreign policy. On the other hand, the positive developments around participatory democracy are, at least for now, superficial; isolated examples showing potential and momentum, but not yet affecting decision making at anywhere near the scale required. The rapid rise of consumerism in parts of Asia, and the huge shift in focus towards the onlife, are both deep changes affecting outlook and mindsets that could distract from the need for positive global change. Responses to the collapse in biodiversity are, regrettably, still very sporadic with no overarching global response. Similarly, despite the high profile of plastic pollution, responses are mostly not joined up nor do they address the root problem of throwaway mindsets. Among the trends we explore here, there may be ripples and waves on the surface that are moving towards sustainability, but the deep undercurrents are flowing in the opposite direction.

The tide must be turned. Any approach to sustainability fit for the 2020s must target the structural and mindset level, something we've seen sparingly to date. Take for example the corporate sustainability movement. We can point to inspiring examples of how a number of leading businesses have transformed themselves and begun to have an impact on the world around them. At Forum for the Future we have been working with these pioneers to help create **transformational strategies** to do just that. But, almost 20 years after Corporate Social Responsibility became a buzz term, only a small proportion of businesses have integrated sustainability into their core business strategies and the rules of business remain more or less unchanged. As we enter the turbulent 2020s, this must shift quickly, so that the goals of mainstream capital markets are directed towards, and not away from, sustainability.
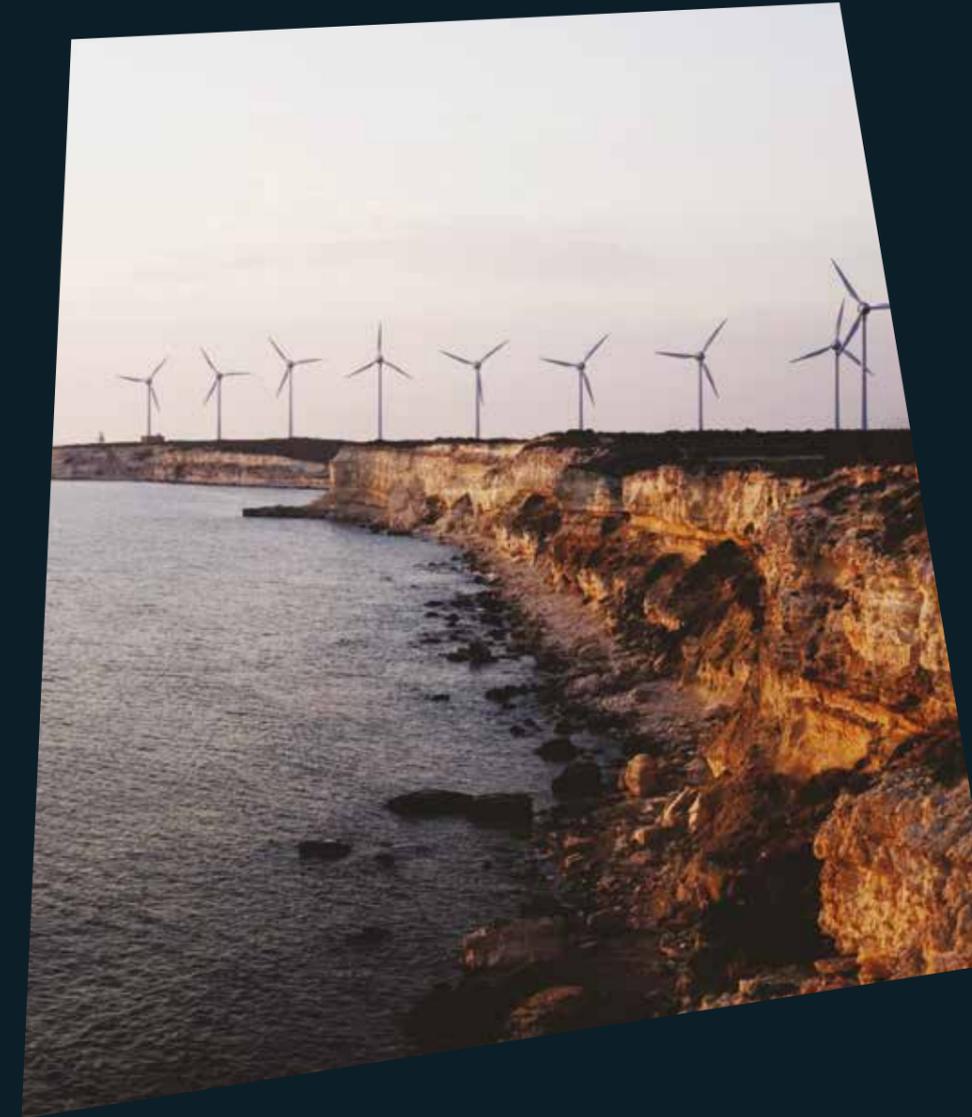
In our work we focus on three global challenges where we put our system change theory into practice.

We believe solving these challenges will be key to riding the rapids of the next 10 years.

GLOBAL CHALLENGE 01

—

STAYING BELOW 1.5°C

How can we move quickly to a 'carbon positive' economy and limit global warming to avoid climate breakdown?

## HOW DO THE TRENDS IMPACT THIS CHALLENGE?

Nations may find collaborating on climate even harder in a future of heavy migration. The need to provide for the needs of tens or even hundreds of millions of refugees may divert attention away from dealing with climate change.

In a world strongly swayed by nationalism, how do climate strategies need to change? Will action be more effective if it is seen as safeguarding national integrity, stability and the economy, highlighting security, resilience and speaking the language of populism?

Diminished ecosystems are less resilient and less able to respond to rapid changes in the climate system. **Transforming agriculture so that farming stores carbon in soils, protects biodiversity and restores ecosystems must be a global priority.**

Solutions to the plastic pollution crisis must be low-carbon or carbon positive if possible, and help to reduce carbon emissions across the economy. The effort to replace disposable plastic bottles with refillable alternatives and to create a network of drinking fountains is one good example. Plastic pollution is high profile in part because the effects are so tangible. **What can be learnt about making the climate challenge just as tangible to people?**

How can the tools and techniques that shape the 'onlife' be used to promote lifestyles and behaviour change commensurate with just 1.5°C of warming without entrenching the attention economy?
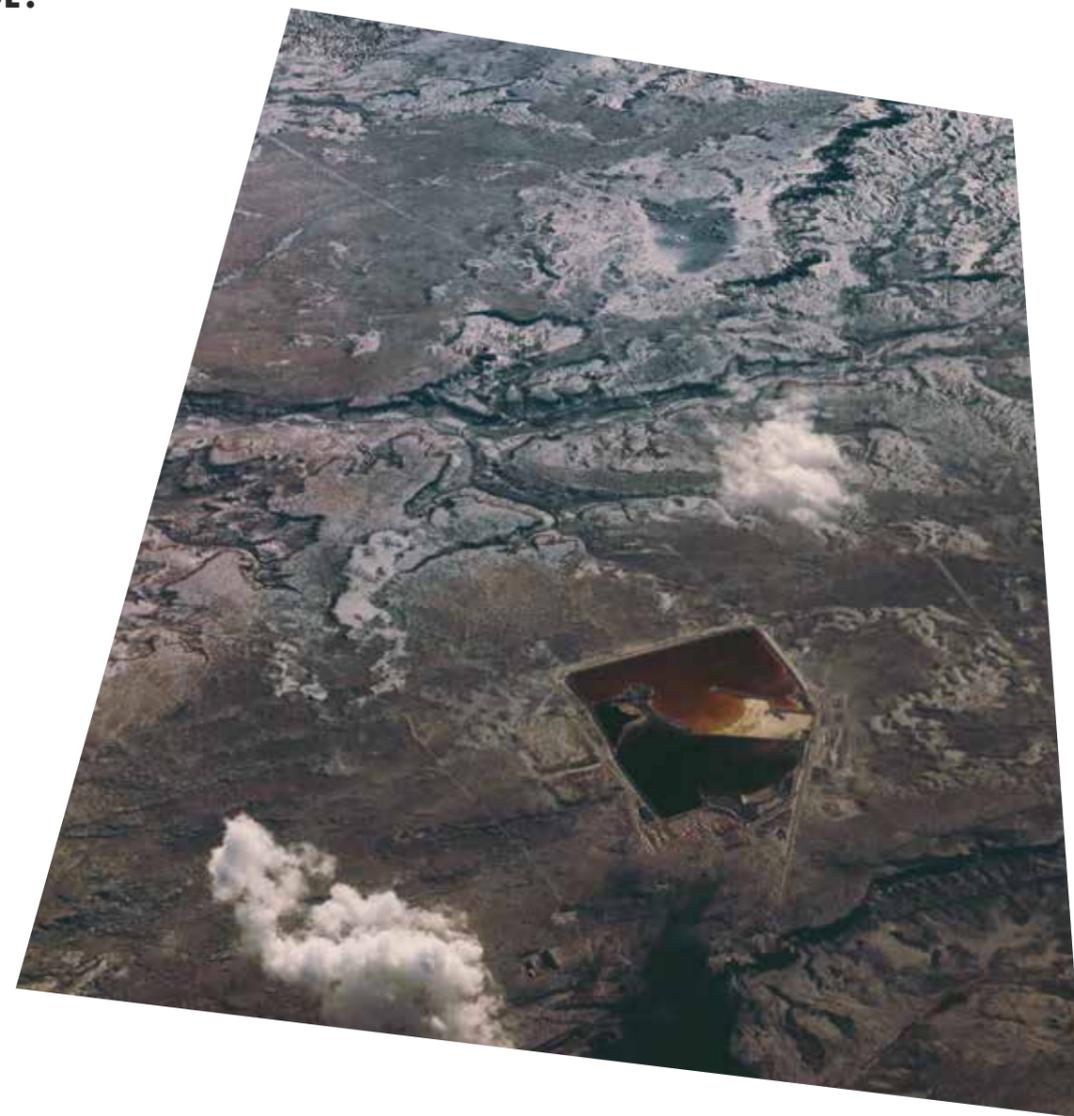
What does all this mean?

2018 saw heightened awareness of the primacy of immediate action, including rising recognition of the need to ensure that the transition to a low-carbon sustainable economy is just and safeguards livelihoods and human rights. This concept of a 'Just Transition' has the potential to use the changes that will be needed in our economy to reduce inequality rather than reinforcing it. We also saw continued breakthroughs in renewables, with nearly $300 billion invested in them, indicating potential to transform the energy system.[46]

But climate leadership from the world's largest economies persistently fell short, allowing the risks to grow. As we look at the other shifts we are anticipating, we see significant impacts for our ability to stay within 1.5°C of warming.

The urgency for action is increasing all the time – not just because the climate emergency is intensifying, but because many of the trends that will be shaping the 2020s make concerted and effective action harder. Despite the complexity there are some clear pathways forward: reducing meat consumption globally while investing in sustainable production of plant-based proteins, divestment from fossil fuels, and scaling clean energy – some of the key goals of **our work.** Practical solutions are now gaining traction in these areas, and all have the potential to contribute to a carbon positive economy.

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SUSTAINABLE VALUE CHAINS & LIVELIHOODS

How can we transform the value chains of key commodities to be environmentally sustainable, rights-respecting, fair, and ultimately, net positive?

HOW DO THE TRENDS IMPACT THIS CHALLENGE?

The clamour around plastics has heightened calls for businesses to be held to account, making firm understanding of full product life cycle both a necessary step for reputation and a tool to unlock answers. But it's the citizen reaction that was really the big thing about plastics. By learning how that was galvanised, and directing it towards the right solutions, we can apply it to other commodities like palm oil, cotton, sugar and coffee.

This rise of political nationalism has been matched by economic nationalism. Resulting repatriation of manufacturing may shorten supply chains, affecting livelihoods, and goad nations into trade wars, eroding trust and threatening the collapse of global markets.

It will be extremely challenging, impossible even, to operate global supply chains and trade routes in a volatile world of extreme weather, large-scale migration and resource conflict. **Rising temperatures and resource scarcity will make certain commodities no longer viable in current growing regions.**

Crashing biodiversity and the erosion of ecosystems upon which supply chains rely will put further pressure on our ability to produce goods. The solutions are there: regenerative approaches wait in the wings for the demand and investment to make them viable.
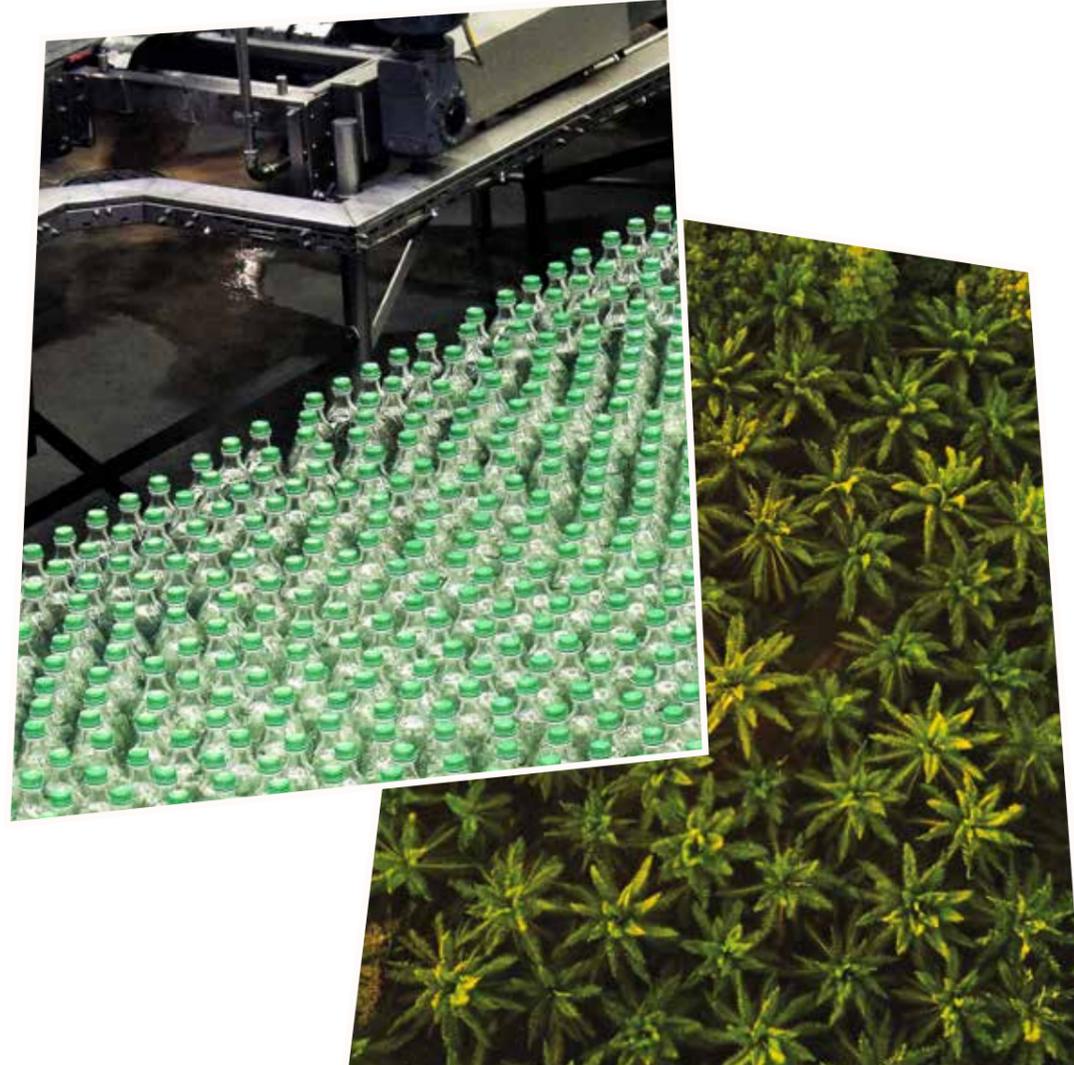
What does all this mean?

As our eyes opened to the urgency of climate change in 2018, they inevitably also focused on what this means for our ability to provide for ourselves in years to come. The challenge of sustainable supply chains is to forge ways of creating and distributing goods that get turned into products that people need, in a way that builds social and environmental capital across the producer communities. There is no question that this will need to transform in the 2020s.

While we may be forced to relinquish our reliance on certain commodities as an environmental imperative, a new model can also be forged: one that recasts producing communities and organisations as front-line stewards of the natural environment, delivering a blend of services and products that both enrich ecosystems and livelihoods, and build connection with the end consumer.

At Forum for the Future we use the term 'value chains' or 'value networks' to reimagine the commercial, one-way nature of supply, encouraging businesses to recognise the contributions of all parties to their operations. Truly 'valued' chains have the potential to tie the world together at a time when it risks fragmenting. They go beyond transaction, reaching into every habitat, every citizen and every government. We work with pioneering businesses on developing these kinds of resilient and respectful value chains – be it in fashion, beauty or other types of fast-moving consumer goods – and see this as an open invitation for collaboration and action.

GLOBAL CHALLENGE 03

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FOOD & SUSTAINABLE NUTRITION

How can we ensure that the way we grow, distribute and eat food provides healthy and affordable nutrition whilst restoring ecosystems and improving the livelihoods of farmers?

HOW DO THE TRENDS IMPACT THIS CHALLENGE?

Agriculture will have to cope with rapid climate change and resultant declines in productivity, but can make a huge contribution to the challenge of staying below 1.5°C through burying carbon in soil – a potential significant source of revenue in the future. **Huge increases in migration will be a challenge for the food system, but there may be opportunities to develop local, closed-loop food systems that can work in transient settings.**

A more nationalist world will make international agreement on the goals of the food system more difficult and is already leading to a roll-back of environmental and health commitments. We may also see shortening supply chains which will force a major rethink of how the global food system works.

The food system is not only culpable for biodiversity loss but is also dramatically weakened by it. **Pressure is likely to increase for dramatic reform of farming that allows nature to thrive.**

In our onlives, the influence of social media and advertising on our diets is profound. **There are 74 million posts tagged with #vegan on Instagram alone – showing that this lifestyle choice is now becoming a status symbol** – and social networks are fertile grounds for discussion around less resource-intensive diets.

As consumption in Asia rapidly increases, will diets continue to become meatier and milkier, or will people adopt more sustainable behaviour? **Sophisticated behavioural change tactics and influencers may be key in reshaping diets to include a greater proportion and range of nutritious plant proteins.**

What does all this mean?

In 2018 we witnessed continued momentum behind sustainable diets and new farming practice, trends that we have been tracking for some years. Most of the solutions to the challenge of sustainable nutrition are out there already: it's a matter of scaling them.

Regenerative agriculture delivers clear multiple wins: soil acts as a carbon sink, increasing soil health delivers productivity and future resilience. We know it works: farmers in Colombia have multiplied their meat and dairy productivity up to tenfold using climate-friendly silvopasture, replanting trees and boosting biodiversity. But it requires fundamentally new thinking about the design of the food system, supporting innovation in production diversity rather than monoculture, and financial incentives to invest in new systems. All this will need to be underpinned by a shift in mindset that can drive action at scale.

At present, we're not seeing these solutions coming together in a way that shifts the wider system. A systemic, collaborative approach is the only way forward, something we're working on with the Protein Challenge 2040. Because supply chains aren't designed to enable practical change, because public policy is fragmented and short-termist, because economic interests are designed around business as usual, and because we are still simply too disconnected from the reality of how our food is produced.

CONCLUSION

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OUR CALL FOR DEEPER ACTION

The world is, at present, poorly equipped to manage the trends and global challenges we set out here, and the 2020s will hit us hard. We need to step up and skill up: step up our ambition levels, and skill up on how to work systemically.

We see this as involving six elements, the need for which is demonstrated through the trends we have explored in this report.

Firstly, **recognise the true scale of the problem**: this is not a blip. The plastics kickback demonstrates how pervasive problems can take a long time to generate awareness and action. We need a sober understanding of how migration, nationalism, living online and tanking biodiversity are here to stay and will form the operating context of the 2020s.

Secondly, faced with trials that threaten to divide us we must **build empathy and foster connections** beyond our fields. Nationalism ghettoises society and living online exacerbates this while severing our connection to the natural world. To mitigate the climate migration to come, to foster stewardship and restoration of biodiversity, and to break down barriers of misinformation, it is vital to address empathy gaps and social cohesion. Garnering diverse perspectives allows different parts of a solution to come into play, such as the fertile grounds appearing in Asia with the next generation of family owned businesses, innovators and new cultural values coming together.

Next, **identify and address root causes**. Plastic pollution is ultimately about our convenience mindset and throwaway culture. The rise of nationalism in part springs from emotional needs and taking back for citizens control. Climate change is a failure of market economics and is in turn the root cause of much migration and biodiversity loss. Approaches that don't recognise the root cause will ultimately flounder or reinforce current unsustainable patterns.

Efforts should be made to **align on goals**. We must be clear what we're aiming for to avoid entrenching current systems. The plastics problem shows us the dangers of working at cross purposes. What's the best way to end our plastic addiction: new materials, new behavioural models, or improvement of recycling? Unless goals are aligned, parallel efforts can cancel each other out.

Another critical element is to **understand your role in the system and the power you have**. Don't think you don't have a role because you don't have a big environmental impact or have no power. Insurance and legal firms, investors, local government, tech companies all can contribute in some way or another. Corporate activists like Sky and Patagonia are using their assets and influence way beyond their core business on issues that matter. Brands can use their cultural power to offer value in non-material ways. Civil society can advocate for the uptake of participatory democracy at a local and national level. Could FedEx become pioneers of innovation for transience? Could Google fast-track environmental stewardship for biodiversity?

Finally, **experiment, learn, share; be open and collaborate**. We are genuinely all in this together. Business can learn from participatory democracy models for more effective operation; NGOs can learn how to create behaviour change from tech giants, new models of citizen governance can spring from migrant communities, consumer brands can collaborate to deliver value – but none of this is possible if we don't experiment, share, learn fast and adapt. Our challenges came about in a globalised, cross-pollinated world; addressing them calls for globalised, cross-pollinated solutions.

What can you do? Skill up and step up.

We believe we have some of the answers that can help you navigate the 2020s. We can help individuals and organisations skill up by coaching for systems change and learning through the School of System Change. We can help organisations across all sectors develop transformational strategies designed to transform themselves and the system around them. Organisations and individuals can also step up to tackle global challenges directly through our 'challenge labs' in food and sustainable nutrition, staying below 1.5˚C and sustainable value chains and livelihoods. Finally, we invite you to share the changes you are seeing on the Futures Centre to develop our collective perception of the challenges we're up against and identify emerging solutions.

You can read this report online at thefuturescentre.org/fos2019

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ACKNOWLEDGEMENTS