

Accelerating systemic change

The North Star Collective

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When we know what we know about climate change, biodiversity loss and rising inequality, why do we do so little? And when we do act, why are our actions so unimpactful?

In our view, this is because the economic machine draped across planet earth is actually a collection of inter-connected systems (finance, food, energy, transport, manufacturing, government, political systems, national cultures, etc) which are tightly woven together across the globe. Since this economic machine is complex and adaptive, we have limited ability to control it. Further, this economic machine is having highly negative, planet-wide impacts. Therefore, we must find ways to influence its future course.

Today, there are thousands of initiatives across the world seeking to drive or accelerate change. Yet, across the inter-connected systems, we are not witnessing a change of direction.

We need to identify the biggest obstacles holding up change, call out points of failure and target those parts of the system where our effort may be leveraged 10X. We want to see a global system that allows life to thrive on planet earth.

Backdrop

The climate challenge is the defining existential issue of our age. It has no magic silver bullet that can address and solve the issue. Instead, it needs a wide-ranging and deep systemic engagement on multiple issues that converge and clash with each other.

There is more - *climate change* is not the only cataclysmic threat we face. The continuing degradation of *biodiversity* threatens food production and the basics of life on earth. *Access to raw materials* is seeing significant constraints, challenging the future of many industries. *Social tensions* are at a peak, while deep-set *inequality* undermines the development imperative. At the same time, we continue to *pollute* the planet on an industrial scale.

Climate change, however, seems to be the biggest and most immediate threat facing humankind and is deeply inter-related to the other challenges. Somehow, it seems to be the tip of the spear, multiplying threats relating to issues such as greed, injustice, inequality and ambition. Together, we can go so far as to see an ending to life on earth, as we know it.

System-wide risks

The challenges we are face are getting much more serious on a daily basis. The planet has already warmed by +1.1C¹ in the industrial age and the temperature continues to rise, due to past industrial emissions, but also because current greenhouse gas emissions continue to rise.

The effects of this rise in temperature are far-reaching and devastating:

¹ See Lenton et al (2019) for a discussion of the cascade of changes sparked by global warming which threaten the existence of human civilisations.

- More than 5 billion people will lack sufficient water for at least one month a year by 2050, up from 3.6 billion today²
- Rising seas could force around 750 million people living in coastal cities to flee their homes at a cost of \$1 trillion each year by 2050³
- One in four species of life on earth is facing extinction, and that number continues to grow⁴
- There are tipping points, such as the loss of forest cover and the release of methane from melting permafrost, that push the system into even faster temperature rises⁵
- Climate scientist Tim Lenton is expecting one billion climate refugees for every 1C rise in global temperatures⁶

To counter this, we are seeing hundreds, maybe even thousands of positive actions taking place in a variety of domains, from carbon schemes and green energy to circular economy and responsible business ideas. In practice, this translates into a tiny minority of thought-leading CEOs and political leaders taking action, while the majority are either dragging their feet or voluntarily making things worse.

Causal factors getting worse

Our deep and abiding concern is that, despite all efforts, we are seeing no impact where it counts, in the GHG emissions and global temperature rises:

- If every existing and committed fossil fuel-fired power station simply operated for their expected economic life, that alone will blow the carbon budget to keep us below 1.5C warming.⁷
- On top of that, we continue to extract over 80m barrels of oil per day every day across the world.⁸
- IMF has calculated that fossil fuel subsidies amounted to \$4.7trn in 2015, and projected \$5.2trn for 2017⁹
- The global rate of forest cover loss has increased to 26m hectares per year, or the size of the UK every year around the world.¹⁰

² The Global Commission on Adaptation, chaired by Ban Ki-moon, Bill Gates and Kristalina Georgieva, produced a 2019 report that makes the case for climate adaptation, with specific insights and recommendations in key sectors.

³ See Global Commission on Adaptation report (2019).

⁴ The Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services (IPBES) carried out a global assessment of the status and trends of the natural world, the social implications of these trends, and their causes. See IPBES 2019 report.

⁵ See Lenton et al (2019).

⁶ Tim Lenton speech at Thinking Ahead Institute Sustainability Summit 5 Nov 2019; paper not yet published

⁷ See Tong et al (2019) for a discussion on committed emissions from existing and proposed energy infrastructure (about 846 gigatonnes CO₂) which represent more than the entire carbon budget that remains if mean warming is to be limited to 1.5 degrees Celsius (°C) with a probability of 66 to 50 per cent (420–580 gigatonnes CO₂), and perhaps two-thirds of the remaining carbon budget if mean warming is to be limited to less than 2 °C (1,170–1,500 gigatonnes CO₂).

⁸ World Crude Oil Production derived from International Energy Statistics, Energy Information Administration, September 2019.

⁹ Fossil fuel subsidies are defined as fuel consumption times the gap between existing and efficient prices (ie prices warranted by supply costs, environmental costs, and revenue considerations). See Coady et al (2019) for an IMF Working Paper on fossil fuel subsidies.

¹⁰ Based on data for the period 2014-18 included in Progress on the New York Declaration on Forests: Five Year Assessment Report fact sheet, Climate Focus, 2019. This information does not take into account the Amazon and Australia fires, which will result in further negative data.

The machine of industrial capitalism seems unstoppable, despite widespread fears that the consequence of its actions is the extinguishing of life on earth. This is not an ideological critique of capitalism – instead, our perspective comes from the opportunities that will emerge to fix the system if we can rectify its market failures.

Systemic failures

We have no time to waste whatsoever, yet we see limited meaningful action to fight the crisis, particularly in the wake of the failure of political leadership witnessed at COP25. The climate bombs are going off all around us, but we don't sense the urgency or single-mindedness that comes from the imperative to survive, let alone thrive.

This is because the economic machine draped across planet earth is actually a collection of systems (finance, food, energy, transport, manufacturing, government, political systems, national cultures, etc) which are tightly woven together across the globe. Since this economic machine is complex and adaptive, we have limited ability to control it. Further, this economic machine is having highly negative, planet-wide impacts. Therefore, we must find ways to influence its future course.

Across these inter-connected systems, we are not witnessing a change of direction. The clogging issues seem to be institutional, structural and behavioural – all compounding our inability to take meaningful action.

- Finance has lost its sense of purpose and responsibility, confusing means and ends
- Business is distracted by an obsession with the maximisation of financial returns
- Policy-makers and politicians are more “followers” than “leaders”, driven by populist agendas

North Star Collective

Already, we are seeing people taking to the streets in cities across the world, demanding collective action. Perhaps, this represents the most exciting part, even the most hopeful part of the responses we see. The UN's sustainable development goals have acted as a catalyst for global action. Numerous international bodies are taking action, including organisations such as World Wildlife Fund, World Business Council for Sustainable Development, World Economic Forum, and so on.

So what else needs to be done?

For whatever reason, the various actions being taken across multiple initiatives do not seem connected enough to have the impact we need.

To identify the biggest obstacles preventing a change of direction, we need to do a number of connected things: map multiple inter-related systems, understand their central actors, identify points of failure and target those parts of the system where our effort may be leveraged 10X.

In other words, instead of being at the receiving end of multiple negative tipping points that take us to an undesirable place, can we exploit positive tipping points that move us to a destination we want to go to? It is our view that the various initiatives out there right now don't share a common vision, a common “north star” – if you like.

Tackling the problem will need multiple stakeholders collaborating together to focus on achieving a jointly-determined common north star - the problem we have with most change initiatives today is that they are too narrow in their scope and impact, and are doomed to not have the hoped-for impact. The current systemic web of business, finance and society that spans planet earth is unfit for purpose. We want to see a global system that allows life to thrive on planet Earth.

We seek to identify the actions that have exponential systemic impact, which will radically decelerate the current trajectory of global warming, and facilitate the hoped-for changes that many are working on. We want to enable those actions, by bringing together collectives of stakeholders to collaborate in the fight for survival against climate change, biodiversity, inequality and pollution.

To discuss these issues further, please contact Jyoti Banerjee on jbanerjee@fronesys.com.

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