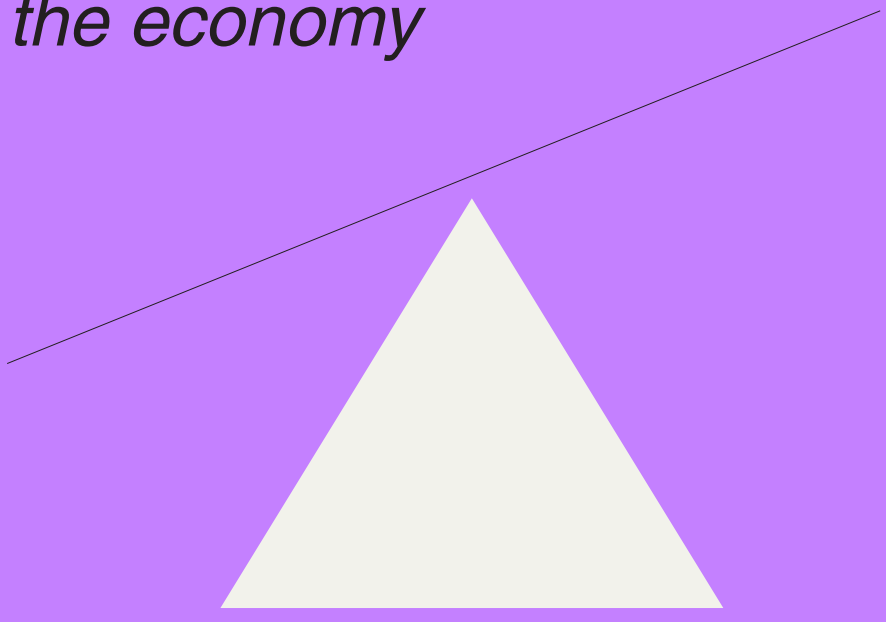
The * *Pivot* Point

*Building the groundswell of voluntary **climate action** into ground rules for the economy*



* This report is a product of **radical collaboration** across organisations working on accelerating non-state actor climate action in support of the Paris Agreement, coming together to share findings, insights and perspectives. It presents an overview of the current landscape across the voluntary climate leadership initiatives, and emerging standards and regulations, and offers insights on how to dramatically accelerate from voluntary action to the adequate standards, policies and regulations needed to deliver climate action at scale and achieve the mitigation goal of the Paris Agreement - recognising the different circumstances, capacities and needs of different countries. It explores some appropriate enabling environments and outlines the wide array of tools available, and highlights key questions to address hereon, providing a thought piece for dialogue and consideration.

Contents /

Executive Summary: **Why Do We Need More?**

Where Are We Now?

Where Can We Get To?

*In this report, the High Level Climate Champions have convened a group of **experts, academics and practitioners from across 40 organisations** to present insights to accelerate this needed transformation. The perspectives presented throughout each chapter of the report represent each author's view and are not necessarily attributable to all co-authors *or Global Ambassadors to the Race to Zero and Race to Resilience**

The Levers And Drivers Of Change

Questions To Address Moving Forwards

EXECUTIVE SUMMARY

Why do we need more?

Foreword /

IPCC REPORT

“Any further delay in concerted global action will miss a *brief and rapidly closing window* to secure a liveable future”

The danger - *and opportunities* - we face

Net zero targets now cover over 90% of the global economy. Yet fewer than one-fifth of net zero targets set by national and subnational governments and only a third of the largest public corporates with net zero targets actually meet science-aligned criteria, according to the Net Zero Tracker. Whilst alignment to the mitigation *goal* of the Paris Agreement is increasing, global progress to limit temperature rise to 1.5C remains inadequate, exacerbating inequality globally, threatening human dignity, worsening losses and damages which puts pressure on adaptive and resilience-building capacities, and accelerating the destruction of nature.

Over the last decade, scientists have repeated and strengthened their stark warnings of the dangers we face. Each new report highlights increasing risks, with scientists incontrovertibly warning that 1.5C is increasingly out of our reach without urgent mitigation. In parallel, we have been faced recently with additional reasons to pursue efforts to accelerate climate solutions: these solutions are also solutions to the Covid-19-induced socio-economic crises, and to the global dependence on fossil fuels.

It is time for a pivot.

Against this backdrop of mushrooming net zero targets, Race to Zero has worked with partners and experts across the globe and through the support of the Glasgow Finance Alliance on Net Zero to drive a race to the top by establishing robust, science-aligned criteria for non-state actors to meet. Companies, investors, cities, states and regions, and others in the campaign have shown that credible and immediate climate action is both possible and desirable. This ambitious and growing voluntary action must now become the default starting point across the entire economy, and we must work to ensure that all actors have robust, reliable and consistent information on the actions that they and others are taking, to inform their own investments, purchases and policies. We must not allow greenwashing to undermine the efforts of those who are leading with high ambition voluntary action.

However, we cannot rely on voluntary action alone to achieve the goals of the Paris Agreement. We need to re-imagine a positive cooperation and collaboration between governments, regulators and the private sector to correct market failures and provide enabling regulatory environments to unlock this opportunity and incentivise a dramatically accelerated transformation to a 1.5C-aligned economy. States continue to strengthen national climate targets and policies in line with commitments at COP26, and increasingly seek to implement these through national legal frameworks. This report offers insight from non-state actors as to the challenges presented by incomplete and fragmented global compliance framework and proposes how clear, consistent and harmonised global standards, supported by harmonised implementing national regulation, may operate to promote and accelerate investment in transition and transform voluntary non-state actor leadership into economy-wide action. Climate change mitigation, adaptation and investment in transitioning to net zero are all global issues: the necessary cooperation and collaboration is transnational and between geopolitical competitors - even adversaries.

We need all hands on deck.

As Global Ambassadors to the Race to Zero and Race to Resilience, we collectively welcome this report and urge all stakeholders to wake up to this piercing alarm bell to accelerate the transition from voluntary leadership to globally consistent standards in order to deliver a net zero world.

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Introduction /

The *Ambition* Loop

The mandate of the UN Climate Change High-level Champions is to accelerate action and enhance the ambition of cities, regions, businesses and investors across the world, connecting these voluntary initiatives with national governments' climate ambitions in delivering the Paris Agreement. As such, we have sought to activate and continuously strengthen the positive feedback loop between non-state actors and national governments that accelerates progress, known as the 'Ambition loop'.

In June 2020, the Champions launched Race to Zero as a global campaign to help deliver this mandate: since its inception and with its Partners, Race to Zero has helped to define a clear minimum floor and leadership practices for 1.5C-aligned net-zero commitments, applicable to a wide range of companies, cities, states and regions, financial institutions, and others across regions and sectors. The campaign's efforts have bred coordination and driven upward convergence towards best practice across the voluntary actor ecosystem. Thanks to its stakeholders and supporters, Race to Zero has grown tenfold since June 2020, to now well over 11,000 non-state actors from across 116 countries committed to science-aligned criteria, taking immediate action to reduce emissions.

We still need more.

Voluntary action by non-state actors has had an enormous impact, but alone, it is not enough to achieve the goals of the Paris Agreement alone. We need to treat alignment to the goals of the Paris Agreement for states and non-state actors alike as a fundamental guardrail for the economy overall.

Through the latest criteria update, Race to Zero introduced a new criterion ('Persuade'), requiring members to align their lobbying and advocacy activities with their net zero commitments. This focus on policy engagement at the heart of Race to Zero provides a needed basis for scaling climate advocacy to turbocharge the introduction of fit-for-purpose standards, policies and regulation.

How voluntary climate action builds a roadmap to regulation

Voluntary non-state climate action since the adoption of the Paris Agreement has created significant expertise and political support for net zero-aligned standards, policy and regulation. The momentum built and progress made by non-state actors has been substantial: under the leadership of Race to Zero's Partners, business models are changing, as are stakeholder and investor expectations. Technical standards for defining 1.5C-aligned pathways are rapidly developing and data systems for measuring progress are becoming more sophisticated and reliable.

However, outside of Race to Zero, such 'net zero' targets vary significantly in robustness: the lack of consistent, clear, transparent standards, definitions, tracking mechanisms and approaches across non-state actors has created a "deficit of credibility and a surplus of confusion", compromising efforts to mitigate urgently, as signalled by the UN Secretary General at COP26.

In response, we see increasing efforts to set robust standards for net zero alignment, and to enshrine such requirements in regulation and law. But these efforts remain fragmented and incomplete. Going forward, we need to build a stronger "conveyor belt" from voluntary action to the rules governing the economy overall.

To achieve this, voluntary action must help inform and catalyse:

*

The **harmonisation and strengthening of *existing* standards** to resolve confusion and bring coherence to a fragmented system;

*

The **introduction of *new* policies and regulation**, in line with country capacities, to **tackle greenwashing, level the playing field, and incentivise investment**;

*

The **removal of regulations that currently inhibit ambitious action** by non-state actors.

The major economies and global multinational corporations have the responsibility to lead this shift, whilst ensuring that progress lifts up the whole economy rather than driving a deeper wedge between countries and stakeholders across different regions.

Corporates and financial institutions can benefit from this transformation

First, **global standards can resolve confusion**. Standards and mandatory requirements for net zero are already emerging in a number of significant jurisdictions (see Chapter 2 - An assessment of current regulatory progress), although the current lack of alignment creates a risk of fragmentation between competing standards and regulations. This potential dissonance can lead to increased costs and complex approaches to reporting, which in turn reduce action. Effective, relevant and consistent climate policies can offer more certainty for planning, investments, purchases and partnerships, and help corporations better anticipate economic risks and opportunities. Standards and regulation clarify what good looks like and help guide non-state actors in reducing emissions, funding a rapid transition and building resilience.

Second, **international consistency in standards and regulation can help level the playing field and must support development**. Ensuring consistency in global standards mitigates cross border carbon leakage and can help set up innovative low carbon leaders to be globally successful companies in the future. Moreover, as governments strive to jointly achieve climate targets, they also need to power their economic growth and development. Aligning clear standards and policies with the level of ambition required to set the world back on a 1.5C trajectory can support fair competition for members doing the right thing via voluntary initiatives, and can provide guidance and supportive infrastructure for SMEs and corporates in developing economies. Regulation can help remove barriers for leaders when any cost of action hits their bottom line, and can help ensure that laggards step up and align with a minimum level of action needed.

Thirdly, **clear standards and regulation incentivise and reward investment, and correct market failures**. Non-state actors with clear climate action plans and targets already prevail in bids and tenders, as well as capturing investor attention, in large part because climate change is one of the most significant risks on any systemic risk register, for both likelihood and impact.

Those that continue to sit on the side lines of climate action will be disadvantaged relative to those devising strategies to reduce risk and find competitive advantage in a transforming, carbon-constrained world.

However, in the face of climate change as a market failure, where huge costs and risks are imposed on future generations who will suffer the consequences that are not reflected in current market prices, and where even existing and identifiable costs of physical, transition and legal climate risk, and cost of greenhouse gas emissions, are not reflected, states need to take additional policy and regulatory steps to help correct market failure and bring the cost of climate to where it belongs enabling non-state investors to make investment decisions that reflect those costs.

State and non-state actor market participants committed to net zero have a self-interest in advocating for international cooperation for greater consistency of regulation globally which can create the enabling environment that they need to deliver on net zero ambitions, financing innovation and growth, and providing the capital needed for a climate positive economy.

The transition must accelerate *dramatically* to win the race this decade

The “race to regulation” has already begun. For example, disclosure of climate related or broader sustainability risk is now mandatory or scheduled to become so under national legal frameworks in states accounting for nearly half of global GDP and GHGS (see Chapter 2). This builds on recommendations of the 2015 Task Force on Climate-Related Financial Disclosures (TCFD) and decades of long-preceding initiatives on consideration and disclosure of climate risk. This progress towards harmonised national regulation should continue across a range of aspects of investment, business, industry and law in order to ensure that 2030 goals are on track. Major economies and non-state global multinational corporations and financial institutions are well placed to lead the way.

We no longer have time to wait.

Non-state actors committed to net zero also should help overcome the headwinds which often strangle or postpone adequate regulation (such as anti-climate lobbying, alignment around the lowest common denominator, inconsistencies across borders, short-term competing priorities, resource & capacity gaps for implementation, perception of regulation as anti-business and anti-innovation), showing the readiness and providing the confidence that standards, policies and implementing regulation are welcome tools to enable the private sector to invest in a manner that facilitates achieving climate targets. This must be done in a holistic and dynamic way, acknowledging different country capacities. Consistent definitions, standards and implementing regulation will advance transition from non-state actor voluntary leadership action to an economy-wide systemic change at the pace and scale required, while promoting economic development, resilience and poverty alleviation.

5 Takeaways /

1.

Voluntary action is driving progress in support of country commitments; now we need universal alignment around the mitigation goal of the Paris Agreement

Voluntary action has driven substantial change over the last few years since the Paris Agreement, from the launch of the Science Based Targets initiative in 2015 (requiring 2C targets for corporates); the launch of Race to Zero in 2020 with 1,000 non-state actors; to now well over 11,000 non-state actors from across 116 countries setting science-aligned, 1.5C net zero targets in the campaign. However, this momentum is not by itself sufficient for delivering a net zero global state. Voluntarism must urgently be coupled with (a) the harmonisation and strengthening of existing standards to bring coherence to a fragmented system, building on the Race to Zero criteria and related efforts, (b) the introduction of new policies and regulation, in line with different country capacities and contexts, and (c) the removal of existing regulations which hamper ambitious action, to together accelerate the delivery of the Paris Agreement.

2.

Maintaining regional & sectoral diversity is critical for successful policies

This process of evolution from voluntary non-state action towards standards and implementing regulation will naturally vary across countries and regions. This 'Race' does not refer to a single universal date for all entities and sectors, or a single universal law, but should instead be aligned to a global, science-based, just transition. Therefore the standards, policies and other implementing regulatory tools called for by non-state actors should be sensitive to such nuances - whilst not creating loopholes for lower ambition; there is no one size fits all single regulatory instrument.In parallel, new standards and national implementing regulation must be avoid unintended and perverse outcomes or create unnecessary burdens for developing countries (such as trade freeze-outs and taxes) and SMEs. The private sector can inform and shape ambitious global policies, standards and implementing regulation to ensure these do not fall back to the lowest common denominator, whilst creating space for nationally determined policies to promote and facilitate continued development.

3.

We need to shift the paradigm to recognise the benefits of stronger standards & policies

More mature regulatory infrastructure is not only a clear public interest; it is also pro-business, pro-markets and pro-competition. Non-state actors can and should embrace and actively help shape - rather than passively be subject to - policy & regulation. Many actors in the Race to Zero already are, and these can set best practice to inspire peers. The expertise demonstrated by non-state actors can help inform ambitious regulation and policy making and avoid policy missteps for which there is no time. We must also recognise the power of standards to bring alignment to our collective action, and leverage world class expertise from around the globe to provide a robust foundation for policy and regulation. We must all 'learn by doing, together'!

4.

We can overcome headwinds by governing net zero in a dynamic way

Progress towards regulation is already underway, but must exponentially accelerate so that we win this race by 2030. We don't have time to wait: we must overcome the headwinds which often strangle or postpone adequate regulation (such as anti-climate lobbying, alignment around the lowest common denominator, inconsistencies across borders, short-term competing priorities, resource & capacity gaps for implementation). To do so, we need a dynamic relationship whereby voluntary commitments interact with, evolve into and raise the ambition of standards and regulatory mechanisms, following a dynamic "conveyor belt" model (see Chapter 3). There are multiple regulatory tools and external influences available which must align in a cohesive and coherent way in order to effectively and efficiently accelerate the needed transformation.

5.

We need to come together in radical collaboration

This is not a fight we can win in silos. Achieving a global net zero state in line with the Paris Agreement will require collaboration across borders, sectors, actor types and between governments and non-state actors, including geopolitical competitors - and even adversaries.

The Five Ps /

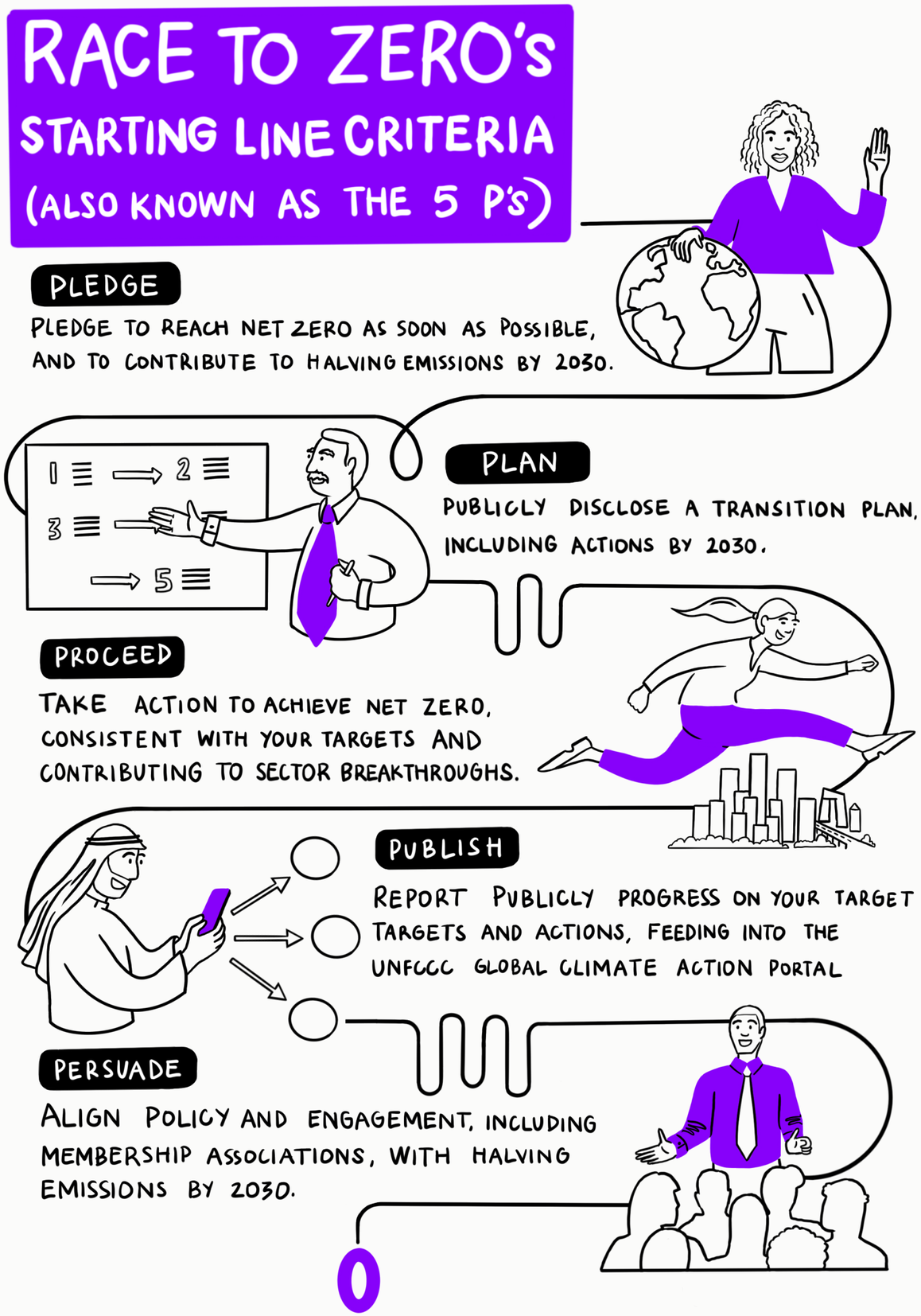
Standardising the ‘5 Ps’ Of Race to Zero

The introduction and continuous strengthening of the Race to Zero criteria, and the work of GFANZ, help to identify the key components needed for translating the growing momentum of voluntary non-state actor leadership into ground rules for the global economy. The good news is, some of these shifts are already underway, notably across many of the financial institutions in the Race to Zero and GFANZ and through efforts led by International Sustainability Standards Board (ISSB), European Financial Reporting Advisory Group (EFRAG), the U.S. Securities and Exchange Commission (SEC), and the International Workshop Agreement (IWA)’s Net Zero Guiding Principles. These must continue, at the highest level of ambition, and must also be proactive in considering country capacities, so as not to exacerbate global inequalities.

The Race to Zero starting line criteria are well positioned to inform country and global efforts to develop fundamental consistent standards around climate targets, plans, disclosure and progress tracking to be embedded within the economy and that countries could incorporate into their policies and regulations.

This section is designed to highlight how such rules can make the 5 “Ps” not just a benchmark for robust voluntary action, but a ground rule for the economy overall.

These 5 “Ps” are already being put into various regulatory rules. More extensive mapping in Chapters 1 and 2 of this report provide detail on the status of the shift from voluntary towards standards and regulation, and outline recommendations for where to focus efforts for accelerating change.

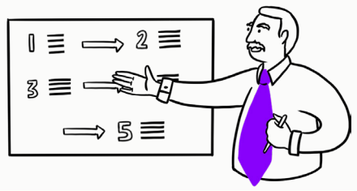


Pledge (Net Zero Targets)

Some jurisdictions are already requiring companies to align to net zero or putting rules around who can claim net zero alignment.

Standardising net zero targets in line with the below minimum principles can help reduce confusion, tackle greenwashing and accelerate private sector implementation of climate action in support of national governments:

- Ambitious end-state target in line with climate science;
- Coverage of all scopes of emissions;
- Interim targets in line with fair share contributions according to a non-state actor's capacities and sectoral circumstances;
- Appropriate use of high quality sinks and credits



Plan (Transition Plans)

Net zero transition plans are also increasingly required, either explicitly, or as part of more general disclosure requirements. Such plans – which articulate an organisation's transition goals, the specific actions they will take, and the accountability mechanisms they will implement to ensure their plans are credible - are a critical tool for helping real-economy firms, with support of governments and the financial sector, to decarbonize their business activities and scale climate solutions. With multiple parallel approaches to transition planning and disclosures globally, international cooperation to converge on best practice is needed such that transition plans, and the related data that comes from them, are reported consistently and transparently across organisations and jurisdictions. Clear and comparable transition plans and implementation progress from real-economy firms will enable corporates and financial institutions to evaluate whether their financing decisions and other services align with transition objectives, and help regulators address micro- and macro-prudential risks. Guiding principles for quality plans include:

- Foundations (ambition & strategy including feasibility)
- Processes (what actions are taken & how decisions are made to reduce emissions)
- Policies (sectoral policy i.e. coal policy, deforestation policy etc., as well as plans for lobbying & engagement)
- Metrics & targets (clear timeline, plans for measuring & monitoring progress)
- Accountability (clear governance structures, disclosure, performance incentives, etc.)
- Engagement (clients, counter-parties, peers in the industry, policy makers, regulators, industry associations, consumers, investment manager, investees, service providers etc.) in order to demonstrate that engagement is in line with stated objectives

Harmonised standards for such transition plans, and the relevant regulations that can drive their widespread and consistent adoption - are critical to accelerating action.

Proceed & Publish (Disclosure and claims)

Disclosure of climate-related information is fast becoming mainstream. It has often been said that "transparency is the best disinfectant": disclosure is needed to accelerate mitigation and ensure a just transition which benefits people and nature. Transparency creates accountability and informs investment decision-making. It also creates a more effective price signal that directs investment flows efficiently towards the most impactful climate action, and ensures the market provides the right incentives to drive rapid internal decarbonisation. However, this will only work if transparency genuinely informs investment decisions and does not create unintended consequences. For this to happen, disclosure must shine a light on the quality of these targets, claims, plans and credits.

Voluntary leadership is thus driving progress toward global societal and economic goals, and can help inform, shape and give confidence to the introduction of standards, policies and regulatory tools to accelerate change. However, for the private sector to genuinely be part of the solution, corporates and financial institutions need to ensure that their full influence is working as part of the solution.

Race to Zero's 5th 'P' of '**Persuade**' was introduced specifically to address this necessity, and this report partly serves as an early effort to think through how Partners and their members can activate around this new, vital criterion.

Call to Action

The UN Climate Change High-level Champions call on
all non-state actors, in particular corporates
and financial institutions,

to ***join*** **the Race to Zero**
(if not already in);

to ***ratchet*** **their policy engagement**
in line with this report;

and **urge them to help *inform, shape and drive***
standards, policies and regulations,
which will support national governments in delivering the
Paris Agreement.

Where are we *now* ?

* This section provides an overview of the current landscape across the existing voluntary action and standards spaces, and existing national, sub-national and regional regulation based on academic research and mapping carried out by Oxford Net Zero and Blavatnik School of Government.

Chapter 1 //

A mapping of voluntary initiatives & standards progress

Oxford Net Zero

For more information on this section, please see https://netzeroclimate.org/mapping-voluntary-initiative-landscape/

In the absence of robust and universal regulation on net zero, guidance for businesses has emerged in the form of guidance documents, investor frameworks, standards and independent trackers (henceforth "voluntary initiatives"). Voluntary initiatives have played an important role developing net zero guidance for state and non-state actors in a range of different capacities. **These coherent best practices in the voluntary landscape can be scaled into ambitious regulatory interventions to fill gaps in net zero integrity** - these might include tying executive pay to achievement of targets, or restricting the use of quality credits for only tightly defined residual emissions. Voluntary initiatives are an important space for experimentation, testing and development of new thought leadership and best practices on pathways to net zero. They are able to respond rapidly to evolving concerns and promote and push the frontier of best practice through consultation with NGOs, scientists and stakeholders alike.

However, **voluntary initiatives are not sufficient** to level the playing field across non-state actor groups to drive an economy-wide net zero transition. Furthermore, our analysis shows **gaps in the net zero voluntary landscape**. More guidance is needed in particular on setting targets for nature, and concrete measures for addressing climate justice and equity within net zero strategies. In order to identify best practice and gaps in the voluntary landscape to policymakers for strengthened net zero regulation, Oxford Net Zero conducted analysis of 33 initiatives, with a specific focus on initiatives guiding net zero businesses. Our analysis has been mapped against the 5 Ps of the Race to Zero criteria in order to demonstrate where current voluntary guidance maps against these areas of action. This provides insight for standard-setters, regulators and policy-makers on how best to learn from the voluntary initiatives to standardise net zero criteria to align all initiatives to the same level of required ambition.

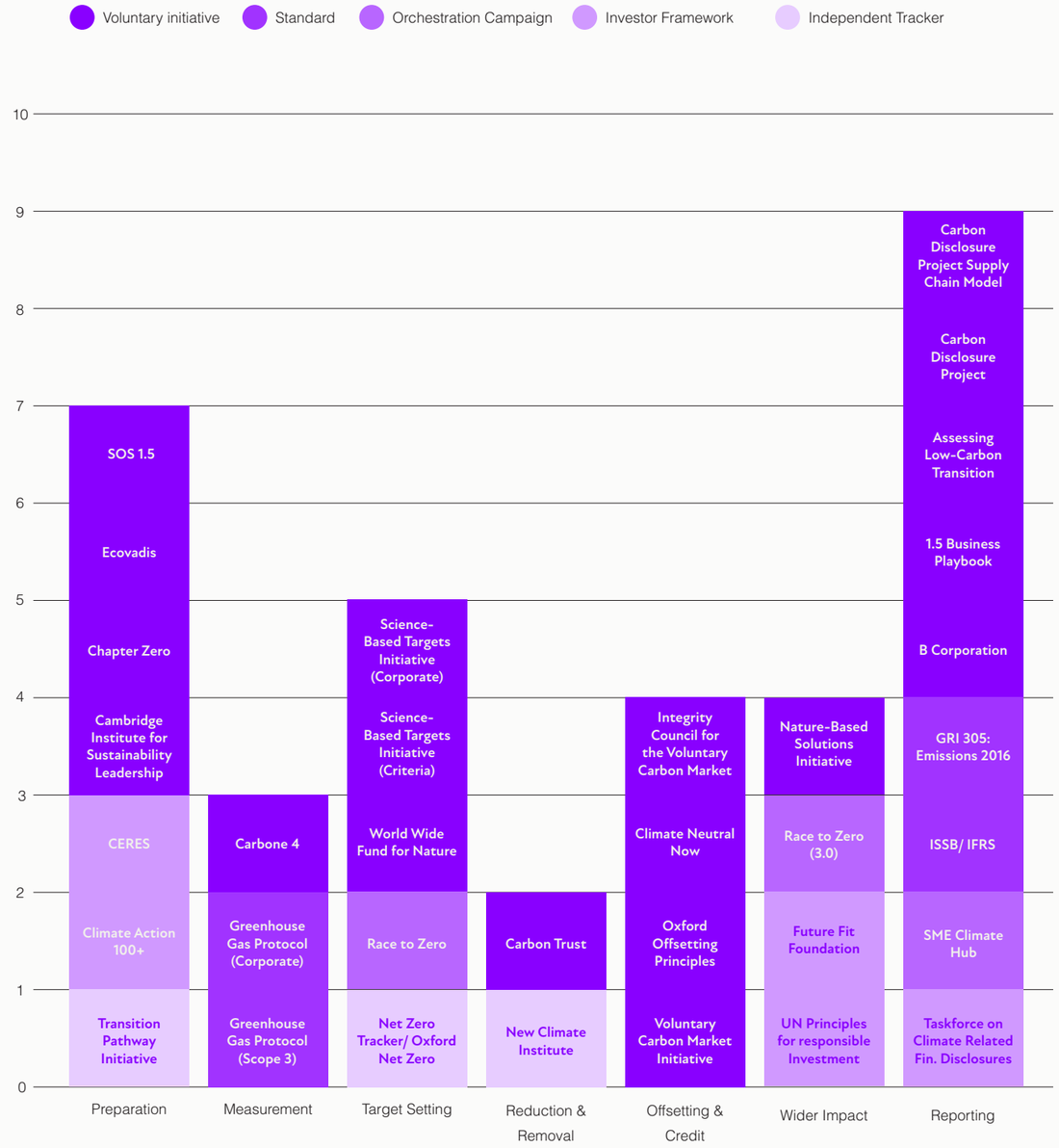
Methodology

Initiatives were selected based on relevance to business, proximity to legislation, and their coverage of net zero criteria and themes. We began with a handful of core initiatives and independent trackers closely tied to Race to Zero. We then used snowball sampling to identify further voluntary standards and initiatives of relevance. Initial analysis of core standards helped to identify a structure of key metrics to analyse. Through this process, our team grouped and coded the content in each section from key documents from each initiative to review themes in guidance for net zero. We built in new metrics and re-coded with input from additional initiatives. A full list of these initiatives and the documents used for analysis, as well as a longer version of the methodology, can be found in the full version of this report, found above (see link).

Our analysis began by breaking the process of a net zero strategy into seven stages: Prepare, Measure, Target, Reduce, Remove, Impact and Report. Though many initiatives often focus on more than one stage of a net zero strategy, we classified them as being predominantly focused on one stage based on the amount of content dedicated to that stage. These different focuses can create the appearance of divergence in the voluntary landscape, when in fact the analysis shows strong convergence and cross referencing among widely cited and trusted initiatives. We present an overview of these focuses in Figure 1 (see next page).

Figure 1:

Focus of different voluntary initiatives (Oxford Net Zero). While we recognise that these initiatives often focus on more than one stage of a net zero strategy, we have represented the predominant focus of these initiatives.



In addition to 17 of the most relevant voluntary initiatives and guidance documents for businesses, we review 7 investor frameworks, 4 standards and 3 independent trackers. The below assessment shows the more detailed suggestions which should be considered as part of the standardisation and regulation of voluntary best practice, building on the 'Standardising the 5 Ps' section. A longer version of the research can be found in the full summary report (see above).

Pledge

LEADERSHIP OVERSIGHT
i.e. executive endorsement of net zero strategy

- There is **wide acknowledgement of the need for strong leadership behind net zero targets:** over half (58%) of voluntary initiatives recognise the need for climate accountability at the head of an organisation.
- A third of initiatives (9/33) recommend the **establishment of a designated team or Board member specifically accountable for the climate strategy** and the same number require **governance to address climate-related risks and opportunities**.
- Leadership oversight is expected by pace setting initiatives to be further formalised through levers such as **tying executive remuneration to interim sustainability targets, and skills courses to increase "carbon literacy"** on Boards and for executives.

SCOPE / COVERAGE
i.e. what GHGs should be covered in a company's inventory

- **79% of initiatives** agree that **targets should cover all three scopes**
- There is consensus that all **GHGs should be accounted for in target setting** (66% initiatives require all GHGs be covered in targets, in line with the GHG Protocol). Some pace-setters recommend these be measured and reported.
- **82% do not specify a baseline year** nor offer guidance on how to set a baseline year for emissions reductions targets. Pace-setters recommend that a company's selected baseline be independently audited and endorsed by a third party specialist expert.
- **7/33 (21%) of initiatives stipulate holding absolute *and* intensity targets**.
- There is a **deficit of guidelines on the handling of historical emissions**, i.e. those which might pre-date a company's baseline for their net zero target. **79% (26/33) did not specify guidance on historical emissions**. Those that *do* mention historical emissions suggest these might be measured and dealt with as a second priority to targets for ongoing emissions but encouraged the consideration of historical emissions in target setting and investment in contribution credits.

TIMING
i.e. the suggested pace of reduction

- Just under **two thirds** of initiatives (20/33) ask committers to target net zero by 2050.
- 7/33 ask committers to target a **50% reduction by 2030** or a 7% annual reduction.

Plan

TRANSITION PLANS
i.e. guidance on decarbonisation strategies

- **79% (26/33) of initiatives recommend a decarbonisation strategy or transition plans**, though there are different types of decarbonisation plans depending on the sector
- Overall, there is a **deficit of sector and particularly geographic-specific decarbonisation guidance**, which presents a gap in the *voluntary* landscape

Plan Cont.

EQUITY AND JUST TRANSITION
i.e. wider social considerations

- **63% (21/33) of standards**, including those with offsetting guidance, **hold no mention of any provisions for climate justice or equity**.
- Pace-setters advocate for **alignment with other sustainability initiatives** like the SDGs. They also ask companies to consider the impact of a lower-carbon business model on their workers and communities.
- **None** of the standards and voluntary initiatives reviewed suggest emission reduction targets be set based on an entity's financial and technological capacity to reduce, which would reflect a fair share consideration.

NATURE
i.e. biodiversity or nature considerations

- **36% (12/33) stipulate that organisations should set a biodiversity or nature target**. This provides an enormous gap that must be addressed by the regulatory landscape

Proceed

IMMEDIATE ACTION AND PATHWAYS
i.e. time-sensitive actions

- **Over half of the initiatives (55%) ask entities to set an interim target**. Many recommend intervals of a minimum of five and maximum of 10 years for interim targets. Pace setters acknowledge the need for sector-agnostic ambition for shorter-term interim targets in line with the carbon law (i.e. 50% of emission reductions by 2030)
- **Only 33% make explicit reference to climate scenarios** when recommending a particular pace of recommendation. This presents a gap to have deeper engagement between climate science and reduction recommendations.

OFFSETS/ CREDITS
i.e. purchased unit of emission reduction carried out by another actor

- **76% of standards recognised the role of offsetting in an organisation's climate strategy**. Only a few standards discourage the incorporation of offsets into a climate strategy, maintaining they should be independent from emissions reductions targets.
- Many voluntary standards asserted that there ought to be conditions of offset use, i..e:
    - **Emissions reduction as a priority** - offsets should not be used as a decarbonisation delay tactic
    - **Separate reporting** for emissions reductions, offsets and credits.
    - The definition, and governance of **"high-quality" credits**
    - **Types of offsets that should be used** (removals, avoided emissions, carbon capture and storage). If applied, standards have tended to focus on offsets that have a high degree of permanence towards net zero targets.
- There is also wide agreement (45% of initiatives) that **the use of offsets and credits should be restricted to residual emissions**, where there are no technologically or financially viable alternatives to eliminate emissions. As governance evolves, it will be essential to define what emissions can be considered as "not feasible to eliminate" in order to determine allowable residuals, especially when financial criteria are used.
- As it stands, 8/33 (24%) voluntary initiatives provide guidance on **social considerations and equity measures in the practice of offsetting**. Across these, the key themes are co-benefits and positive outcomes for local / Indigenous communities; active participation of local stakeholders, compatibility with human rights and a prior and ongoing impact assessment. The regulatory landscape can help ensure this integrity.

Publish

REPORTING AND PUBLIC COMMUNICATION
i.e. disclosure of progress against stated targets

- **26/33 (70%) recommend a published report on progress**, and **67% (22/33) of initiatives stipulate this be done on an annual basis**.
- Pace-setters recommend that companies disclose their internal carbon price and disclose memberships of trade associations that engage on climate-related issues
- **Only 33% recommend a separate emissions report**. This lack of visibility at a GHG-specific level could hamper comparability further down the line.
- **No initiative specifies reporting on the limitations of the data**, including unknowns, known errors or discrepancies. This transparency can help target support where needed.

Persuade

LOBBYING AND ADVOCACY
i.e. policy engagement outside a company's operations

- **50% of initiatives** encouraged organisations to **align lobbying and advocacy with their climate target**, through mobilising and building capacity across an organisation's value chain, influencing policy & regulation and joining memberships and alliances.
- Pace-setters encourage building capacity through the organisation, by **educating employees and empowering them to drive climate action** in their daily work and life.

Figure 2 demonstrates a visual representation of some of the most compelling elements of what is covered by the voluntary initiatives above. This summarises what elements of a net zero strategy are recommended to businesses as part of different voluntary guidance. It is important to highlight that different initiatives have different focuses, and therefore an initiative tagged here as not recommending an action may represent a difference in focus rather than a shortcoming of the initiative.

Figure 2:

Figure 2 Visual representation of elements of the inclusion of elements in voluntary initiatives

	Designated team to deliver its climate strategy? (✓/-)	Executive **remuneration to be tied to climate targets?** (✓/-)	Measure **Scopes 1, 2 and 3? (✓/-)**	**Which GHGs** to measure? (✓/-)	**Type of target?** (Absolute Targets, Absolute or Intensity Targets, Absolute and Intensity Targets,-)	Stipulates **Carbon Law** (50% by 2030 / 7% decrease year on year)? (✓/No/-)	Recommends **decarbonisation strategy or transition plan?** (✓/-)	Encourages a **biodiversity or nature target?** (✓/-)	Ask entities to **set Interim Target?** (✓/-)	**Restriction of offsets** to residual emissions? (✓/ No/-)	Recommend a published **report on progress?** (✓/-)	**Reporting frequency** (Annual, Other, -)	Encourage organisations to **align lobbying and advocacy** with climate goals? (✓/-)
VOLUNTARY INITIATIVES													
SME Climate Hub (SMECH)	-	-	✓	-	Absolute and Intensity Targets	✓	✓	-	-	✓	-	-	✓
1.5 Business Playbook (1.5BP)	✓	✓	✓	All according to the GHG Protocol	Absolute and Intensity Targets	✓	✓	-	✓	✓	✓	Annual	✓
Assessing Low-Carbon Transition (ACT)	-	✓	-	All according to the GHG Protocol	Absolute and Intensity Targets	-	✓	-	✓	-	-	-	✓
B Corp (BCORP)	-	-	✓	All according to the GHG Protocol	-	No	✓	-	✓	✓	✓	Annual	-
Cambridge Institute for Sustainability Leadership (CISL)	✓	✓	✓	All according to the GHG Protocol	Absolute or Intensity Targets	No	✓	✓	✓	✓	✓	-	✓
Carbon Neutral Now (CNN)	-	-	✓	All according to the GHG Protocol	-	-	-	-	✓	No	✓	Annual	-
Carbon Trust (CART)	-	-	✓	All according to the GHG Protocol	-	✓	✓	-	✓	✓	✓	Annual	-
Carbone 4 (CAR4)	-	✓	✓	All according to the GHG Protocol	Absolute or Intensity Targets	-	✓	-	-	✓	✓	Annual	-
Chapter Zero (CHA0)	-	✓	-	Some	-	-	✓	-	✓	-	✓	-	✓
Ecovadis (ECOV)	-	-	✓	All according to the GHG Protocol	-	-	✓	-	-	-	✓	Other	-
Integrity Council for the Voluntary Carbon Market (ICVCM)	-	-	-	-	-	-	-	✓	-	-	✓	Other	-
Nature-Based Solutions Initiative (NBSI)	-	-	-	-	-	-	✓	✓	-	-	-	-	-
Oxford Offsetting Principles (OOP)	-	-	✓	All according to the GHG Protocol	-	-	✓	✓	-	✓	-	-	✓
Science-Based Target Initiative (Corporate Net Zero Standard Criteria) (SBTIC)	-	-	✓	All according to the GHG Protocol	Absolute or Intensity Targets	-	✓	✓	✓	✓	✓	Annual	✓
Science-Based Targets Initiative (Criteria and Recommendations) (SBTI)	-	-	✓	-	Absolute or Intensity Targets	✓	✓	-	✓	✓	✓	Annual	✓
SOS 1.5 (SOS1S)	-	-	✓	-	-	-	✓	-	-	-	✓	Annual	✓
Voluntary Carbon Market Initiative (VCMI)	-	-	✓	All according to the GHG Protocol	Absolute or Intensity Targets	-	✓	✓	✓	-	✓	Annual	✓
World Wide Fund for Nature (WWF)	-	-	-	All according to the GHG Protocol	-	-	✓	-	✓	✓	✓	Other	-
INVESTOR FRAMEWORKS													
CERES (CERES)	✓	-	✓	-	-	✓	✓	✓	✓	✓	✓	Annual	-
CDP General Questionnaire (CDPGQ)	-	✓	✓	-	Absolute or Intensity Targets	-	✓	✓	✓	-	✓	Annual	✓
CDP Supply Chain Module (CDSPC)	-	✓	-	-	Absolute or Intensity Targets	-	✓	-	-	-	-	Annual	-
Climate Action 100+ (CA100)	✓	-	✓	-	Absolute or Intensity Targets	-	✓	-	-	✓	-	Annual	✓
Future Fit Foundation (FFF)	-	-	✓	-	-	-	-	✓	-	-	-	-	✓
Taskforce on Climate-Related Financial Disclosures (TCFD)	-	✓	✓	All according to the GHG Protocol	Absolute or Intensity Targets	-	-	-	-	-	✓	Annual	-
UN Principles for Responsible Investment (UNPRI)	✓	-	✓	All according to the GHG Protocol	Absolute or Intensity Targets	-	-	✓	✓	-	✓	Annual	✓
STANDARDS													
Greenhouse Gas Protocol Corporate (GGPC)	-	✓	✓	All according to the GHG Protocol	Absolute or Intensity Targets	-	✓	-	-	✓	✓	Annual	-
Greenhouse Gas Protocol (Scope 3) (GGPS3)	-	✓	✓	All according to the GHG Protocol	Absolute or Intensity Targets	-	✓	-	✓	-	✓	Annual	-
GRI 305: Emissions 2016 (GRI)	-	-	✓	All according to the GHG Protocol	-	-	-	-	-	-	✓	Annual	-
ISSB/IFRS (ISSB)	✓	✓	✓	All according to the GHG Protocol	Absolute or Intensity Targets	-	✓	-	-	-	✓	-	-
INDEPENDENT TRACKER													
Net Zero Tracker/Oxford Net Zero (NZT)	✓	-	✓/-for scope 3	-	Absolute or Intensity Targets	-	-	-	There is a question regarding the Interim Target (Nature of the target, year and text)	-	✓	-	-
New Climate Institute (NCI)	-	-	✓	-	Absolute or Intensity Targets	✓	✓	-	✓	✓	✓	Annual	-
Transition Pathway Initiative (TPI)	-	✓	✓	-	Absolute or Intensity Targets	-	-	-	-	-	-	-	✓

Chapter 2 /

An assessment of *current* regulatory progress

Net zero considerations are now embedded in a growing number of governmental regulations across a wide range of jurisdictions (see figure 3, full list in Appendix XXX). This section provides a snapshot of the current number and status of net zero regulations around the world, though the landscape is changing rapidly. It covers four key areas in which net zero regulation is rapidly advancing: disclosure of climate-related risks, claims around net zero and related ideas, procurement and product standards, and transition plans. These areas cover the first 4 “Ps” of the Race to Zero campaign--pledge, plan, proceed, publish--and emphasise the value of the 5th: persuade. While other regulatory areas are also related to net zero, these areas show the most activity to date.

Net zero-related regulations take several forms. Some are climate-specific rules designed to advance net zero alignment across the economy, while others are embedded in broader sustainability measures, or in areas not specifically directed at climate, such as consumer protection or financial risk. Net zero regulations can be found in specific laws, or in rules adopted by independent regulatory agencies, central banks, or similar bodies.

Disclosure *leads* the way

Disclosure of climate-related risks--including both the impacts of climate change and the effects of decarbonization--is currently the most developed area of net zero regulation. Climate-related risk disclosure has been a longstanding voluntary practice in the private sector (e.g. via CDP). It entered the regulatory agenda via the Taskforce on Climate-Related Financial Disclosure (TCFD) under the G20's Financial Stability Board in 2015, which proposed a set of guidelines for reporting on both climate impacts and decarbonization. These ideas are now being taken up by a wide range of regulatory bodies, providing a clear demonstration of the “conveyor belt” model, which illustrates how robust, science-based, rigorous voluntary action can become formalised into regulatory measures (see Figure 4).

At present, climate- or sustainability-related risk disclosure of some kind is mandatory in China and the United Kingdom, and it will become mandatory in the next few years in Canada (2024), the EU (2023), India (2023), New Zealand (2023), South Korea (2025), and Switzerland (2023). **Together these jurisdictions already account for nearly half of global GDP (47.9% of 2021 GDP) and global emissions (46.6% of 2019 emissions)**. They are also collectively home to 874 of the 2000 largest listed companies in the world. Mandatory disclosure is also proposed by regulators in the United States, which, if it were to be adopted, would bring mandatory disclosure to an additional 24% of global GDP, 13% of global emissions, and 590 of the largest 2000 companies globally, cementing disclosure as a ground rule for operating in the global economy. Alongside these mandatory policies, regulators in jurisdictions including Japan, Malaysia, and Australia recommend reporting climate-related risks. To bring coherence to this framework, the International Sustainability Standards Board is furthering the world of the TCFD in developing common benchmarks.

Growing *fast*: transition plans, claims, product standards, and procurement

Other areas of net zero regulation are growing quickly. Regulation on mandatory corporate transition plans has been passed in Spain and France. Similarly, the United Kingdom government will introduce new requirements for net zero transition plans. The standard on which this regulation will be based is currently being developed by the Transition Plan Task Force which works in collaboration with other international frameworks such as the Glasgow Financial Alliance for Net zero as well as the International Sustainability Standards Board.

Other areas of net zero regulation are more nascent, such as regulation of claims companies make around climate impact and net zero. The European Commission has proposed a new regulation which ensures that businesses substantiate claims of being “carbon neutral” and “climate neutral” with evidence. Similarly, the French government has passed a law which makes carbon neutrality claims dependent on a greenhouse gas emissions report which examines the product or service’s entire life cycle emissions based on the requirements of the ISO 14067 reference standard and will come into force in 2023. In the United Kingdom and the United States, regulatory recommendations and guidance have been issued regarding the corporation’s carbon neutral and net zero claims and advertising.

Regulatory attention to voluntary carbon credit markets and their role in offsetting and providing for the “net” component of net zero remains in early stages. Notably, the United States Commodity Futures Trading Commission (CFTC) has started a consultation on its jurisdictional reach over voluntary carbon credit markets and the product standards it could introduce in this space.

Procurement standards are also being used as a mechanism to increase net zero aligned production and consumption. The United States and Spain have legally enshrined the desire to achieve net zero aligned public procurement in the future. The United Kingdom enforced a procurement policy by which goods and/or services with an expected contract value over £5 million annually need to show evidence of a net zero goal by 2050 for their UK operations from 2021.

International dimensions

One of the reasons regulation can be such a powerful tool for driving net zero alignment is because corporate supply chains extend across borders. This means that regulations in one jurisdiction can exercise influence across the world economy. Disclosure provides a good example. The EU disclosure guidelines that come into force in 2023 will require companies that own subsidiaries in the EU, or that sell stocks or bonds on EU markets, to report on their global operations. Similarly, the proposed US disclosure law would require companies to report on the emissions of their supply chain partners around the world. The adoption of disclosure requirements in large, globalized markets can in this way accelerate the trend globally.

Governments are also of course considering how to align international economic exchange to climate goals. The World Trade Organization has created a Trade and Environmental Sustainability Structured Discussions even as some countries, notably the EU, move to adopt carbon border measures. Similarly, in the investment protection regime, the OECD has begun to discuss how existing bilateral investment treaties could be reformed to better reflect the urgency of the net zero transition, giving countries additional "policy space" for climate objectives. In practice that could mean giving countries greater leeway to regulate for net zero. Ensuring that these shifting rules reflect equitable and just pathways to global climate goals is increasingly urgent as net zero becomes an organising principle not only for domestic economic regulation but international trade and investment rules.

As net zero regulation accelerates, cooperation and coordination is vital. It is imperative to ensure that all regulations follow the principles outlined in this report and reflect science-based, rigorous, and just transition pathways. Voluntary action is laying the groundwork for these approaches, as are strong international standards and benchmarks that guard against fragmentation. As net zero crystallizes into a set of regulatory rules, it is vital that scientific integrity and due consideration of equity and climate justice be at the centre of its design.

Though net zero regulation is just beginning, the direction of travel is very clear. Net zero is increasingly becoming a basic rule of the global economy.

***Looking ahead,* we can begin to see a future in which all large economies have similar rules around several elements:**

Disclosure:

Companies and financial institutions report on the risk of both climate impacts and decarbonization in a regulated and routine fashion, just as they currently do for financial disclosure.

Transition plans:

Regulators require firms to outline their pathways to net zero to create additional transparency and to advance national climate objectives.

Claims:

Advertising products and services, or describing corporate performance as "net zero" or similar is subject to transparent and rigorous standards.

Product standards:

Individual products related to net zero (for example carbon offsets, net zero steel, etc.) are regulated in a way that makes them standardised and reliable.

Procurement:

Governments condition procurement to firms and products that meet well defined net zero standard.

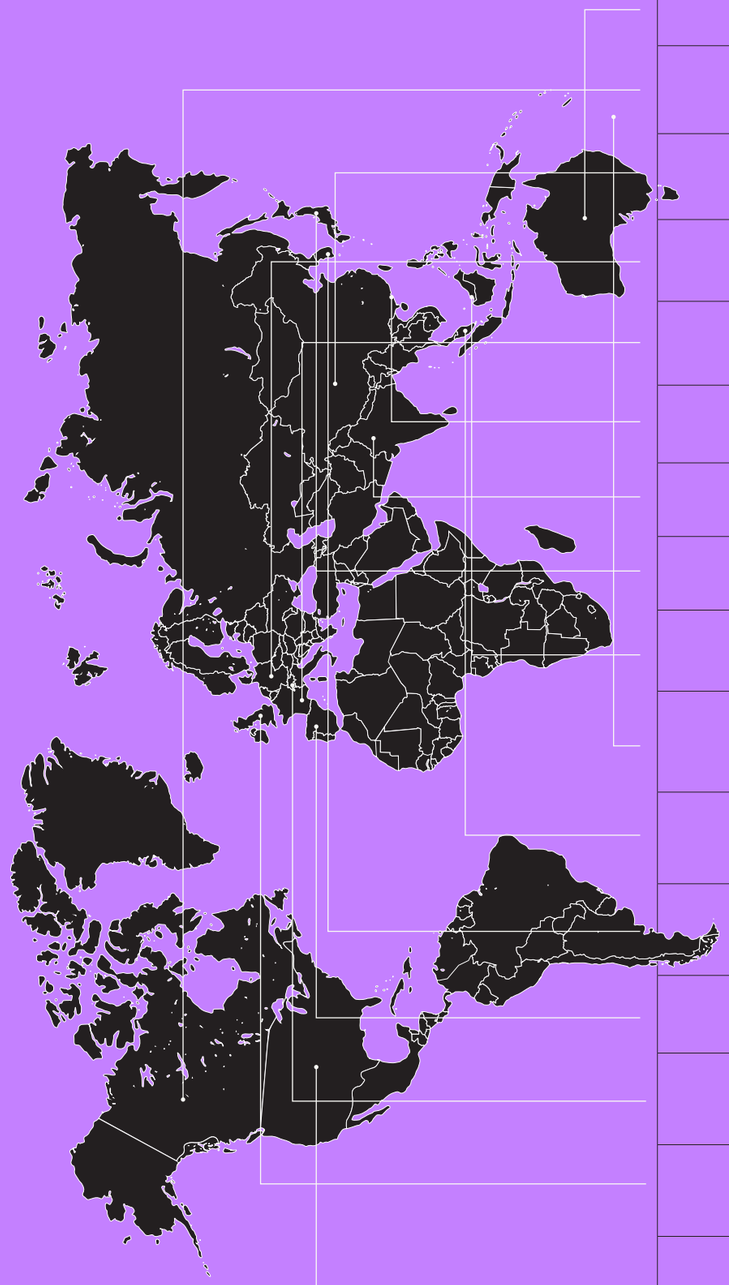
International trade and investment rules:

Agreed definitions around green products allow cross-border economic exchanges to advance climate action.

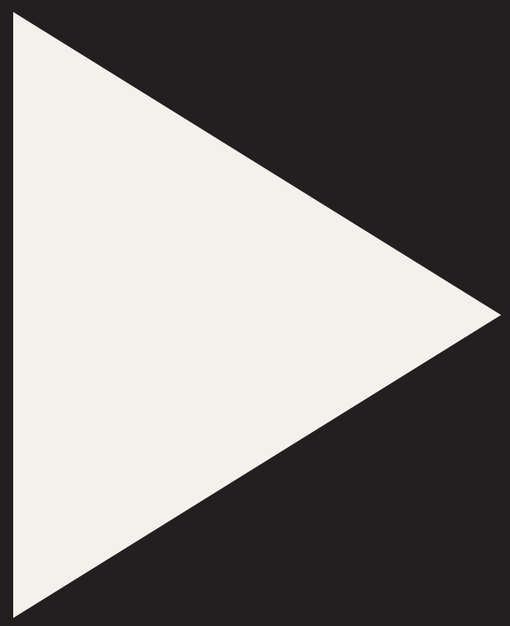
* By building a package of net zero regulations across the economy, governments have an enormous opportunity to align their economies to their climate goals. By mainstreaming net zero in economic regulation, governments will accelerate the transition while also creating a level playing field.

Table 3:

The emerging net zero regulatory landscape (full details in Appendix XXX).



JURISDICTION	DISCLOSURE	CLAIMS	PROCUREMENT & PRODUCT STANDARDS	TRANSITION PLANS
Australia	2018: Regulator recommends climate-related disclosure			
Canada	2021: Mandatory ESG reporting planned from 2024			
China	2022: Mandatory ESG reporting (including emissions) for heavy polluting companies and investors, recommended for all companies			2021: The "N+1" framework will lay out sector-specific targets for China's path to peaking emission and carbon neutrality
European Union	2023: Mandatory ESG reporting	2022: Regulator proposes specific requirements for terms including "carbon/climate neutral"	2020: Regulator establishes taxonomy for green products	
France	2021: Mandatory disclosure of fossil fuel related activities	2021: Specific requirements for terms like "climate/carbon neutral"		2021: Mandatory disclosure of Paris Agreement alignment strategies; emissions targets to be updated every 5 years
Hong Kong	2022: ESG and climate-related funds must disclose key information			
India	2023: Mandatory ESG reporting for 1000 largest listed companies			
Japan	2022: Regulator recommends climate-related disclosure			
Malaysia	2022: Regulator recommends climate-related disclosure			
New Zealand	2023: Regulator mandates climate-related disclosure for large financial institutions			
Singapore	2021: Regulator recommends climate-related disclosure			
South Korea	2021: Regulator recommends ESG disclosure; mandatory from 2025 for large companies and from 2030 for all companies			
Spain	2021: Mandatory disclosure of climate-related risks			2023: Creditors must publish decarbonization targets
Switzerland	2023: Mandatory climate-related disclosure			
United Kingdom	2022: Mandatory climate-related risk disclosure	2021: Regulator publishes guidelines on environmental claims	2021: Government conditions procurement on net zero alignment for suppliers bidding for contracts over £5m/year	2023: Regulator requires transition plans for large companies and financial institutions
United States	2022: Regulator proposes mandatory disclosure of climate-related risks	2022: Regulator updates guidance on environmental market claims	2021: Government targets net zero for all procurement by 2050 2022: Regulator begins process of defining standards for voluntary carbon markets	



Where *can* we get to ?

Chapter 3 /

Governing net zero
- *the conveyor belt*

Tom Hale

“The next phase of net zero requires building political power to shift rules and institutions that drive change; it requires *governance*.”

THOMAS HALE, PROFESSOR IN GLOBAL PUBLIC POLICY, UNIVERSITY OF OXFORD

This section draws on: Thomas Hale, “Governing Net Zero: the Conveyor Belt.” Blavatnik School Policy Memo November 2021.

https://www.bsg.ox.ac.uk/research/publications/governing-net-zero-conveyor-belt

As the world passes the “end of the beginning” of net zero—a near-universal commitment to the destination climate science says we need to arrive at by the middle of the century—a more difficult but critical phase lies ahead. A concept describing a global outcome must be operationalized for individual countries, regions, cities, sectors, and companies. Pledges must become robust and binding pathways with sufficient short-term action to be credible. The next phase of net zero therefore requires building political power to shift rules and institutions that drive change; it requires governance.

The current landscape of net zero reflects in many ways the messiness that follows from the enormously successful rapid uptake of the concept. There is now an extraordinary array of pledges and targets across the world, but these vary substantially in robustness (Net Zero Tracker, 2022). At the same time, an explosion of efforts have emerged to set standards for net zero targets, to track progress, and to bring coherence to this fragmented system (see figure 2 above). Notably, regulatory requirements for net zero are emerging in a number of significant jurisdictions (see figure 3 above). At present, there is a significant risk of fragmentation and dissonance between competing or redundant standards and regulations.

The question thus arises:

Even if we agree that making net zero a basic rule for the whole economy is the outcome we seek, *how do we get there?*

To collectively advance net zero governance, we need to recognize the strengths and weaknesses of different elements of the governance landscape, as well as how they fit together. No single “governance technology” is by itself likely to deliver net zero on the timescale we need. Instead, we should think about a governance “ecosystem” that links voluntary initiatives, UN orchestration efforts, the standard-setting system, and regulations. Each of these has strengths and weaknesses..

Voluntary initiatives have the advantage of greater flexibility. When they are designed around scientific principles, they can achieve a very high-level of quality, pushing forward the frontier of best practice. Of course, they can also be very weak and amount to little more than greenwashing. Separating the strong from the weak, and therefore consolidating the frontier of best practice, is therefore a critical function of **orchestration initiatives** like the UNFCCC Race to Zero and the UN Secretary General’s High Level Expert Group.

But these approaches of course suffer from the limits of voluntarism. They lack power to compel alignment from those who do not sign up to or heed best practices, and they can only exert reputational pressure on those who do. In turn, standards and regulations have more power to coerce, but come with their own limits.

International standards in the ISO and related bodies are decided through consensus-based committees of experts from national standards bodies. That process is powerful because it can align expectations and ultimately create voluntary but influential rules across

CONTINUED...

the world economy. But precisely for this reason, international standards reflect the views of a wide range of interests, including incumbent industries. Helpfully, standards have a built-in review and update process, but each iteration will take time.

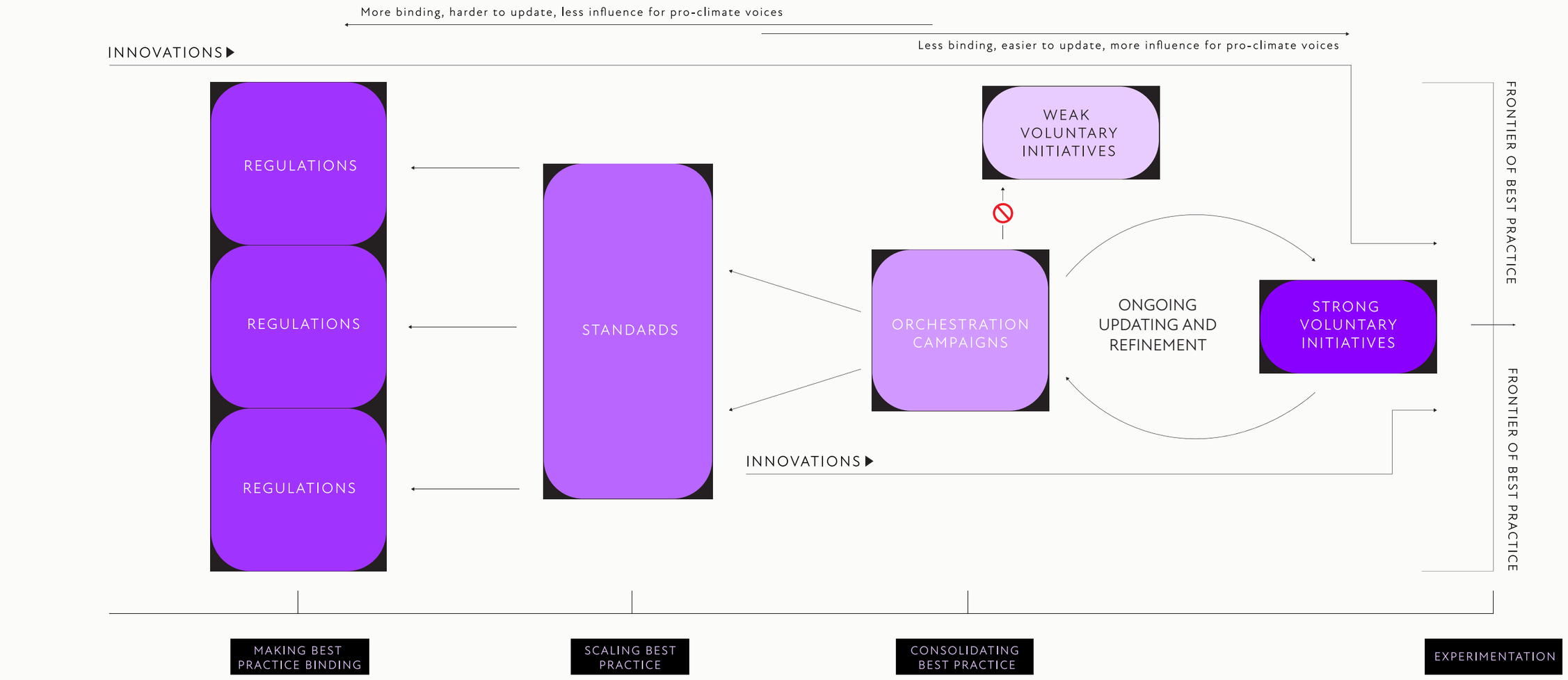
Regulations, in turn, can be very binding, whether at the sub-national, national, or intergovernmental (e.g. EU) level. But they will likely be mixed in terms of robustness. Where pro-climate interests are able to exercise power, we may find strong outcomes. In other jurisdictions, particularly those heavily reliant on fossil fuels, prospects for strong rules are dim. At the same time, laws tend to change slowly, or rely on circumstantial windows of opportunity around elections or key moments. Relying only on regulation will therefore risk creating a patchwork of outcomes that will be difficult to update.

The challenge is therefore to build a "conveyor belt" system (see figure 4) that organizes the messy operationalization of net zero around robust, science-based, rigorous standards. Within this system, voluntary initiatives, UN-backed orchestration campaigns, international standard setters, and national regulations all have a role to play. The ultimate goal, however, should be to bring net zero alignment from a voluntary effort by a leadership group to a mandatory baseline across the economy.

Given these trade-offs, an effective governance ecosystem should aim to marry the high quality and flexibility obtainable toward the top of the table with the scale and bindingness delivered by elements toward the bottom of the table. And it should be dynamic, pushing forward the frontier of best practice and progressively scaling it and making it more binding. If hard rules everywhere are the ultimate goal, a fit for purpose governance system should provide a process

Figure 4:

A **conveyor belt governance system** for net zero over the next decades



Chapter 4 /

We need a *systemic* transformation

Tom Tayler

“Changing the system requires *systemic* change”

MICHAEL E MANN, CLIMATE SCIENTIST

Regulation across many different areas with high ambition and consistent application is an essential element of the systemic change that is needed in this crucial **“Decade of Delivery”**. It is welcome to hear the language of systems change in some corners of the political, regulatory and non-state actor conversations. Now, in order to avoid a shallow or failed transition, it is worth considering how successful systemic transformations are brought about in order to provide regulatory and other interventions with the maximum chance of success.

The global economic system has delivered many benefits and economic growth that has lifted millions out of poverty. However, the benefits are far too unequally shared and the SDGs stand as evidence of the many ways in which the economic system has failed to deliver shared prosperity and equity. But the system has also perpetuated growth based on over-extraction and exploitation of the planet’s resources to deliver economic benefits, and unless the goals of the system are changed, those are the effects it will continue to deliver.

Whilst regulation is undoubtedly a necessary element of this systemic change, theories of effective systemic interventions, such as Donella Meadows’ Leverage Points, suggest that changing standards will not deliver effective systemic change unless also allied with more powerful interventions including driving positive feedback loops (such as the ambition loop), changing system goals and structures, and ultimately the mindsets or paradigms of the system. Without these mindset shifts, we risk limiting the effectiveness of these necessary regulatory interventions through actors adopting minimum plausible compliance leading to shallow or failed transitions that do not deliver the systemic impact that the crisis requires.

Mia Mottley notes that in 2008, in the shadow of the global financial crisis, G7 finance ministers and central bank governors came together and delivered one of the shortest, yet most influential communiques on record[1]. They said, “we agree to take decisive action and use all available tools”, in effect “whatever it takes”. As Mottley goes on to observe, we now face a far bigger crisis and once again need to come together to show that “humanity is not limited by ambition or ability”. In order to successfully shift the current paradigm, and to give the essential regulatory interventions the best possible chance of maximum impact, a global, collective, **“all of the above, whatever it takes”** approach is needed. That means global cooperation and collaboration, between counties themselves and between countries and non-state actors to design and implement the necessary interventions to course correct our global economy and the emissions trajectories that it underpins. The Paris Agreement sets the basis for this cooperation to happen, now that we are moving into the phase of implementation, the same spirit of radical collaboration with a “whole of society approach”is more needed than ever; aligning voluntary actions with standards and regulation with the right policy and markets incentives is essential to fulfil the goals of the Paris Agreement.

[1] Financial Times - Barbados PM: Climate Change requires a new financial architecture for us all. 14 June 2022

The levers and drivers of change

Chapter 5 /

The *headwinds* to regulation

If this transformation were easy, we would not be in the state of emergency in which we currently find ourselves. The shaping, creation and implementation of fit-for-purpose standards, policies and regulation does not come without its challenges. However, these challenges often unnecessarily strangle progress. In this chapter, we aim to identify some of the major challenges which hamper progress in this space, and look to suggest potential solutions for consideration in overcoming these.

CHALLENGES	SUGGESTED SOLUTIONS
SHAPING REGULATION	
Settling on a lowest common denominator Due to the dissonance of standards globally, there is often a risk of dilution or watering down global standards to the lowest common denominator when it comes to the operations of multinational corporations.	• Multinational corporations operating in different countries should urge the lower standards and policies to be strengthened, in line with the most ambitious ones they are subject to. • Many policies traditionally apply only to bigger businesses. However, it is critical to ensure that regulation creates the right incentives to engage, support and include the smallest businesses from different regions. • Sector-specific regulation may be useful to develop unique requirements for reaching net zero across different sectors.
Lack of political will or perception of lack of political voter and business confidence Regulators and policy-makers are often held back through fear of going against corporate / political will.	• Non-state actors must give policy-makers, standards-bodies and regulators the confidence that strong climate policies will be welcomed, and show readiness for high ambition. • More wide-spread education and activism of business employees should also more vocally provide reassurance that regulators and policy-makers can and must go further, faster.
Misalignment of regulatory incentives with competing stakeholders to satisfy Traditional business models may incentivize businesses based on how much infrastructure they deploy, or how many products they produce etc., which is detrimental to climate action and hence could lead to negative lobbying.	• Non-state actors already leading in net zero climate action should play an active role in shaping incentives that will support, reward and accelerate their innovation and leadership. • Regulatory incentives can therefore more confidently be harmonised and aligned with other performance metrics such as energy efficiency, carbon reduction, equity etc.
Potential perverse outcomes Taxes and trade, if managed poorly, can be detrimental to development, with regulations potentially crowding out trade from developing countries, or deterring ambitions for working on climate action. Moreover, given the pace of the transition needed, standards and regulations could risk becoming outdated rapidly, hampering progress.	• Ensuring inclusivity in the shaping of cross-border regulations can ensure these do not hamper development and instead support a just, equitable transition. • Non-state actors globally can encourage the continuous revision of standards and policies in a flexible way to enable continued alignment with science and to the benefit of the development of emerging economies.

CHALLENGES	SUGGESTED SOLUTIONS
CREATING REGULATION	
Anti-climate lobbying Policy and quality regulation depends on the balance of power between pro- and anti-climate interest groups. Ideally, progressive business pressure creates the ambition loop we want; but in reality, regulatory progress is often achieved despite very little/weak positive business support and is hampered by overwhelming negative anti-climate corporate lobbying.	• Net zero aligned groups should form strong organisational alliances to coherently advocate for regulation and to diminish the influence/regulatory capture of any anti-climate lobby (i.e. CLG); • Regulation should mandate more transparency around trade associations' activities; • Working cross-sector to create alignment and have greater influence i.e. stronger change can come from working with other NSAs, even competitors or different types of NSAs working together.
Consensus-based decision-making slows processes In order to gain buy-in, standards and policies are usually shaped through lengthy consultation processes. Whilst these are critical for inclusion and for understanding different perspectives, they can delay action and contribute to alignment around a lowest common denominator.	• Consultations on regulation should input from wide-ranging viewpoints (civil society, indigenous, business and alliances), whilst recognising the urgency of meeting the global, scientific objective of halving emissions by 2030. • Again, standards, policies and regulation should be more adaptive and reactive, enabling and ensuring urgent action whilst also being open to evolve as science, knowledge and progress evolve.
Risk of creating greater divides between developed and developing countries Given different country capacities, the introduction of certain national policies and standards may occur over varying timelines. This could risk creating a sharper divide between developed and developing countries.	• Ensure inclusivity in the shaping of cross-border regulations to ensure they do not hamper development and support a just, equitable transition. • Ensure that the creation of regulation helps lift up the most developing countries, rather than sharpen the divide between the 'leaders' and those who risk being left behind. • Ensure trade agreements support value addition.
Enabling and ensuring a just transition The Paris Agreement is clear about the close link between climate action, sustainable development and a just transition involving decent work and quality jobs. If we leave people behind, climate change will only exacerbate social and economic disparities.	• Businesses must ensure the green transition is fair and inclusive for employees of all ages, at all levels and across regions.

CHALLENGES	SUGGESTED SOLUTIONS
GOVERNING REGULATION	
Implementation Even when regulation is strong on paper; it requires state capacity and resources to be implemented effectively	• Regulations should be followed by effective implementation mechanisms, including sustained engagement and collaboration with non-state actors.
Lack of flexibility and adaptive capacity Often, binding regulations can take time to implement and subsequently take time to change.	• The 'conveyor belt' model (see figure 4) outlines how this lack of flexibility can be addressed: non-state actors, as part of their voluntary initiatives and orchestration campaigns, can provide the confidence and readiness to empower standards and policies to be introduced in an adaptive capacity.

Chapter 6 /

Policy & regulatory *actors* and *tools*

Standards and national regulation will naturally vary depending on sectors and regions, to be as efficient and effective as possible and in recognition of different country capacities. The rate of transformation from voluntary action and non-state actor momentum to the introduction of adequate standards, policies and national regulation will also differ according to country capacity. However, variation between national regulatory frameworks should not create a competitive disadvantage for multinational corporations that have committed to push for the highest level of ambition in all countries in which they operate or loopholes for those who have not.

Specific sectoral standards and policies have been developed and suggested in the Breakthrough Agenda report, which highlights the types of policy asks that actors in key sectors of the global economy should be proactively calling for. Moreover, further efforts should be directed towards understanding the specific enabling environments for local regions and countries to accelerate this transformation.

In the meantime, members across this working group have outlined a handful of the critical tools and actors who should hold themselves responsible and accountable for introducing the necessary standards, policies and regulations to pick up from the momentum built by voluntary actors.

a) Subnational regulation

i) States & regions

- Nehmat Kaur, Under 2 Coalition; Tessa Ferry, Climate Champions

Sub-national governments, including states, regions, devolved authorities and cities have a key role to play in delivering the stepchange needed globally to transform voluntary actions into ground rules for the economy; though their role varies from country to country according to different governing systems and institutional frameworks. Subnational governments are often responsible for developing and implementing policies, regulations and legislation across many sectors (climate, energy, land-use, transportation, economy, health, nature etc). Such subnational governments should ensure that they are aligning these with the goals of the Paris Agreement using all relevant tools and levers at their disposal according to their jurisdictional authority. They are already doing this, for example in Jalisco, Mexico the State Government signed a Collaboration Agreement with the Tequila Regulatory Council (CRT) to establish the basis for the formulation and implementation of an institutional cooperation scheme that would contribute to the sustainability of the sector and aim to reduce deforestation by 50% by 2024 and 100% by 2030.

They can also deepen and enhance cooperation within and between networks, geographies and stakeholders, supporting the private sector in accelerating climate action. For example, the Western Climate Initiative was set up to support California, Quebec, Nova Scotia and Washington to develop and implement their emissions trading programs. This has led to California and Québec linking their separately managed economy-wide emissions trading programs, which has created the largest carbon market in North America.

As well as being rule-makers, subnational governments operate within the framework set by the national governments, and their ability to act is shaped by the rules set for them. Active and deliberate advocacy and engagement can and should be deployed to shape these rules and increase ambition. Setting voluntary commitments that are more ambitious than national frameworks can also help inspire action, and galvanise advocacy from others.

ii) Cities

- Heather House, RMI

In addition to the above, local governments can play a role when it comes to state-level decision-making. Oftentimes, cities, counties, or municipalities may have their hands tied due to anti-climate policies, regulations, market rules etc. To address these challenges, local governments can band together to advocate for pro-climate policies, incentives, regulations, rules, and programs by participating in key state decisions at the state legislature, public utility commission, energy market, and electric utility. As noted above, this type of action will transcend borders, and enable local governments to meet their climate commitments within their jurisdiction, whilst also supporting other local governments in doing the same, leading to region-wide decarbonization.

When adequate customer energy solutions didn't exist, Park City, Summit County, Salt Lake City, and City of Moab partnered with their utility to develop legislation that enabled the utility to create a program to serve communities in the State of Utah (on an opt out basis) with 100% renewable energy, which culminated into HB411 in 2019. The City and County of Honolulu demonstrated what it can look like to influence energy regulation, by participating in performance-based regulation (PBR) technical workshops and submitting written comments in support of the adoption of distributed energy resources, urging the regulatory commission to include financial incentives or rewards for accelerated GHG reduction, which would incentivize the Hawaiian Electric Companies to accelerate its GHG reduction efforts. Ultimately, an "Approval" performance incentive metric (PIM) that incentivizes faster interconnection timelines for small-scale solar and storage systems was approved in the decision and order, alongside a LMI Energy Efficiency PIM. Local governments in North Carolina have also demonstrated leadership through recurring regulatory engagements; in 2020 15 local governments collaboratively advocated for their electric utility's integrated resource plan to support and align with their clean energy and community goals– and have again come together in 2022 to urge the utility commission to ensure their utility's carbon plan meets their climate goals while improving energy efficiency and keeping prices competitive.

b) National & international standards

- Emily Faint, Our 2050 World

Standards can address the fragmentation and variation in global understanding of what net zero means in practice for actors across the global economy. They can provide an aligned, consistent framework upon which robust regulation for net zero can be based. Many actors understand what net zero means for our planet, but those looking to act face a confusing and fragmented governance landscape. We must seek to remove fundamental variations in approaches and understanding of net zero if our collective actions are to ratchet up as the Paris Agreement goals require.

Standards at the international and national level play a critical role in this transition. As described by the International Organization for Standardization (ISO), an International Standard is a document containing practical information and best practice. It is often described as an agreed way of doing something, or a solution to a global problem, developed in collaboration with global participants. The prominent voluntary initiatives in the net zero space provide the ambition and direction of this best practice. 'Governing Net Zero: The Conveyor Belt' (Thomas Hale, Oxford), an influential model for global net zero governance, positions the international standards system as the vehicle for leveraging this best practice and scaling it across global markets and sectors.

The interplay between national and international standards is important for driving action on net zero. National members of the international standards system understand the requirements of their national context for a given issue. National members can choose to adopt international standards directly into their national catalogue or develop solutions at a national level which can have international applications.

Standards, therefore, can provide a framework for alignment and conformity in approach to net zero at each level of actor and, crucially, and can act as the connector and driver of compatibility with global supply chains. Governments, businesses and jurisdictions already have much of the infrastructure to use standards; we must now ensure we are using this infrastructure to support the journey towards aligned voluntary and regulated action for net zero.

Action towards this is already underway. Our 2050 World, an international collaboration between ISO, the Race to Zero and the UNFCCC Global Innovation Hub is facilitating the development of the Net Zero Guiding Principles document which aims to establish this basis for alignment, acting as a common reference point and interpretation guide for those that create net zero governance, and those operating within it.

The Net Zero Guiding Principles document, developed via direct engagement and consensus in an open workshop environment provided by the ISO platform, demonstrates how global governance for net zero must seek to innovate and learn as it goes, as the conveyor belt model advocates. By bringing together those who create net zero guidance and those who aim to follow it into one unique forum, the Net Zero Guiding Principles aims to harness the momentum of existing voluntary initiatives and distil this expertise into one core document for actors at all levels to navigate net zero guidance, and clearly understand what actions they should take.

c) International economic law

- Wendy Miles, KC

International economic law is the body of cross-border property-based rights and obligations enforceable through international legal instruments and frameworks that applies to states and non-state actors acting in a commercial capacity. Whereas the UNFCCC and Paris Agreement are public international law instruments applying only to state parties (the non-party language of the Paris Agreement Adoption Decision Articles 134 and 135, which is the provenance of Race to Zero, is therefore couched as voluntary), international economic laws have a much broader existing application in the context of investment in net zero.

The modern global economy is shaped by the early 20th century neo-liberal economic starting point, that "in any well-functioning market economy the 'invisible hand' of market competition must by necessity be complemented by the 'visible hand' of the law".[1] The system of international economic law evolved around principles of free trade, deregulation, globalisation and a reduction in government interference in the movement of capital, investment and trade. At its heart is the protection of private property rights, created and reinforced through legal instruments, including from unnecessary state interference.

Most investment in transition to net zero, including scaling up net zero emitting infrastructure and phasing down and phasing out incumbent high emitting operations, involves some form of cross-border or transnational investment and legal relationship, usually a multitude. These may include financing, ownership, public private partnerships, joint ventures, engineering procurement and construction, operating and maintenance, procurement, transport, etc. Each legal relationship is governed by at least one contract; each contract operates within a broader legal framework based on its governing law (as agreed, determined by conflict of law principles or mandatory based on place of performance or place of registration) and a dispute resolution mechanism.

Race to Zero and other voluntary commitments can help influence the establishment of commitments which individual state signatories to the UNFCCC and Paris Agreement can enact into national legal frameworks to govern conduct within their own territory and/or extraterritorial conduct of their nationals. All the proposed binding and enforceable solutions in this report are anchored in national law (legislation, regulation and/or jurisprudence (case law)), including standards such as the ISSB, which would need to be integrated into national legal frameworks in order to have legal force (similar to the incorporation of IAS into domestic Companies Acts). Essentially, the framework broadly falls within national corporate, securities or consumer protection law.

International economic law also encompasses, for example, international investment law, trade law, cross-border tax, insolvency, competition, corporate, intellectual property and contract or commercial law. A system of conflict of laws governs which one or more state law/s apply to a given legal relationship, or parties may choose to be governed by a non-domestic legal system altogether (e.g., general principles of law or commercial trade rules such as the Grain and Feed Trade Association (GAFTA) Rules or UN Convention on International Sale of Goods (UNCISG)). One of the primary objectives of international economic law is to create certainty and uniformity of investor expectations and eliminate unnecessary risk that would discourage investment.

Any newly implemented national net zero-related regulation will not replace or supersede the existing body of law that operates within the broad context of international economic law. It may co-exist but its application and effect on broader private property rights will be determined by the terms of the parties' contracts and dispute resolution bodies appointed by them to enforce those contracts. International investment agreements in natural resources and infrastructure may include economic stabilisation provisions, for example, that may insulate against economic effects of new net-zero-related regulation or policy. Insofar as international economic law frameworks are founded in international instruments or obligations (i.e., treaties, conventions and customary international law between states), these are not easily overridden or substituted by newly implemented national laws.

The challenge is to reconcile bottom up, state-by-state introduction of national net zero-related regulations with existing international and national laws and the existing international economic law framework. Given that the transition pathways require promotion and facilitation of private investment into transition, to the scale of $7 trillion+ per annum, it is important both to understand the limitations of national net zero-related regulations and the opportunity that the existing international economic law provides to mobilise foreign direct investment that is critical to net zero. An alignment of principles or objectives across both would best achieve the climate change mitigation and adaptation objectives.

Existing international trade and investment law bodies, including the UN Commission on International Trade Law (UNCITRAL), the UN Conference on Trade and Development (UNCTAD) the UN International Institute for the Unification of Private Law (UNIDROIT), are tasked with uniform laws and guidance governing investment and retain a body of specialist expertise and resource. A principles-based alignment of international economic law with the climate change mitigation, adaptation and resilience building goals that engages some or all of these bodies would improve outcomes in terms of driving investment into net zero aligned activity across borders. Race to Zero's accredited Accelerator (the Net Zero Lawyers Alliance) has already put this on the UNCITRAL agenda and its 55th meeting in July 2022 approved moving forward with a new net zero UNCITRAL initiative.

d) Macroprudential regulation

- Dr Megan Bowman, Centre for Climate Law & Governance, Kings College London

For more information and to read the full report, please visit this page.

In broad terms, prudential regulation and monetary policy (by central banks and supervisors) aims to ensure price and financial stability; and securities and market regulation (by financial market regulators) aims to ensure properly functioning markets via integrity, transparency and fairness. Regulatory actions to fulfil those aims must not seek to substitute economic, fiscal and environmental policies by government. Doing so would conflict with the mandate of central banks, supervisors and financial regulators (hereon CBFRs) - their mandate being the legal bases and parameters of agency remit - and also, where relevant, their political independence to attain those objectives (that is, not expropriating elected government duties nor suffering undue government interference).

However, the urgency and scope of the climate crisis and its potential impacts have triggered two interrelated paradoxes regarding mandate.

- **Paradox 1:** Financial stability could be undermined if central banks and supervisors act too quickly on green finance; yet financial stability will be undermined if they act too slowly or not enough (Bolton et al 2020).

- **Paradox 2:** Relatedly, this study identifies that central banks and supervisors cannot wait until all the legal frameworks are concretised and all the right policy is in place before acting; yet they cannot be so proactive as to usurp governments or parliaments.

These combined paradoxes produce a fine line that CBFRs must navigate: ***facilitating*** a net zero and sustainable finance transition without driving it.

The evidence shows that CBFR respondents see themselves as part of a broader political response in which:

- Governments are responsible for masterminding national net zero plans for a whole of economy transition, and decisive fiscal and economic policies to eliminate dependence on carbon-intensive activities/sources; ***and***

- Complementary prudential, monetary and market regulatory tools promote and facilitate that transition in line with mandate and government policy.

Interviews revealed a common theme: the nascency, urgency and scope of the issues are requiring new ways of ‘thinking and doing’ the regulating in this space. For some, that means adapting existing regulatory tools in new ways, such as extending risk-based measures or regulating corporate culture. For others, it means embracing the epistemological breaks heralded by climate change and adopting new tools. In short, a key finding is that CBFRs are adopting experimental and cooperative ways of regulating as a response to this unprecedented space.

This study makes two novel findings:

1. Central banks are a symbiotic component of a domestic regulator ecosystem for sustainable finance. This interconnected regulatory matrix includes financial market regulators and government agencies such as Treasury, which has a coordinative function and holds the purse strings, plus business ministries, energy ministries, and other relevant entities such as pension authorities.

2. Alongside central banks, financial market regulators also have a key role in facilitating the transition due to their remit of maintaining properly functioning markets by ensuring market integrity, fairness, and transparency. Indeed, due to their remit, market regulators are at the front line of scrutinising climate disclosures and will be increasingly responsible for supervising transition planning, preventing greenwashing, and ensuring the availability of green financial products for the increasing number of investors that want them.

The agencies within regulator ecosystems enjoy varying degrees of independence; yet the data from this study revealed multiple interdependent interactions on climate-related financial issues within these ecosystems. In this way, the domestic regulator ecosystem for sustainable finance is both transforming traditionally siloed attitudes and approaches and enabling heightened levels of cooperative and collaborative engagement between regulators and other agencies.

Whilst cooperation and collaboration are sometimes required by law or government policy, it is also an organic response to an expansive and complex existential threat. Heightened regulatory cooperation reflects changing external factors, namely increased government attention, stakeholder and societal expectations, and legal initiatives. Moreover, regulators are also demonstrating heightened convening powers amongst stakeholders to help initiate and implement new regulation, notably through advisory forums and working groups that comprise public, private and civil sector members to work through thorny issues such as lending exclusions, metrics and methodologies for portfolio alignment, anti-greenwashing standards, and mandatory transition plan templates.

Domestic regulator ecosystems also exist alongside transnational and international cooperation occurring through formal networks such as the NGFS and also informally through regulator conversations and professional relationships. These emerging ‘regulator ecosystem’ responses are laudable and exciting. They will be essential for countering the inherent complexity of systems change and ensuring contemporaneous and timely action along the full value chain which undergirds regulatory goals of a whole-of-economy transition.

e) Securities regulators

- IOSCO

The International Organization of Securities Commissions (IOSCO) is the international body that brings together the world's securities regulators and is recognized as the global standard setter for the securities sector. IOSCO develops, implements and promotes adherence to internationally recognized standards for securities regulation. It works intensively with the G20 and the Financial Stability Board (FSB) on the global regulatory reform agenda. In this capacity, it is well positioned to help tackle greenwashing by promoting internationally recognised standards which align with the level of ambition needed.

IOSCO has focused its attention on addressing the growing risk of greenwashing in securities markets. This is an important step as finance will only be able to fund a shift towards a more sustainable economic model for the planet if it is trusted by investors. To that extent, IOSCO has published two sets of recommendations aimed at addressing greenwashing, one in the asset management space, and the other one on ESG rating and data providers where – for the first time – IOSCO called for the active regulation of these participants. Underpinned by these reports, IOSCO is now working closely with both market participants and regulators towards the implementation of its recommendations without delay and has already received significant levels of industry support for its Call for Action which enunciates good practices that the industry should follow to address greenwashing based on these recommendations.

f) Procurement

- David Brambley-Crawshaw, Senior Policy Advisor at the Cabinet Office, leading on commercial and procurement policy in Net Zero

Policy at both national and sub-national government levels are already being used to drive forward emissions reductions and set common standards. Procurement policies in some jurisdictions, for instance, are already requiring suppliers bidding for major Government contracts to publish plans outlining their GHG emissions and their organisational commitment to achieving Net Zero by 2050 at the latest. In the UK, since the implementation of such a procurement policy in September 2021, this measure has been applied to procurements totalling over £105 billion, and thousands of suppliers have completed a Carbon Reduction Plan in response (Procurement Policy Note 06/21: Taking account of Carbon Reduction Plans in the procurement of major government contracts).

Sub-national governments are also setting overarching climate laws and climate plans to underpin economy-wide action and incentivise private sector corporate action. According to the Under 2 Coalition's 2022 progress report 46 states and regions have economy-wide net-zero targets; with a third of these enshrined in legislation and a further third in an official declaration or mandate from the head of state/region. These legislations and mandatory requirements can help

g) International trade

- Kennedy Mbeva, Postdoctoral Research Associate, University of Oxford

Climate change can negatively impact trade by disrupting distribution and supply chains and raising trade costs. The World Trade Organization (WTO), as the cornerstone of the multilateral rules-based global trading system, plays a key part in supporting climate action. It provides a framework of disciplines to facilitate global trade and serves as a forum to negotiate further trade openness and to discuss trade concerns. The WTO rules require members to be transparent when adopting new measures impacting trade with legitimate policy objectives, such as combating climate change. The WTO seeks to ensure that such measures are coherent and fit-for-purpose and do not create unjustifiable discrimination.

But there is significant disagreement between industrialised countries on the one hand, and developing and emerging countries on the other hand. A key point of tension and policy debates is how global trade rules can support climate policy. For developing countries, the main concern is on how to ensure that trade measures aimed at achieving climate policy goals do not undermine their development prospects.

Several challenges constrain the role potential of global trade rules in supporting climate action. First, the inconsistency between global trade rules and some of the key principles of international climate policy has been a major barrier. Many developing and emerging countries have framed their NDCs within the broader context of sustainable development, with a view to linking trade and industrial policy. But in favouring their domestic industries over foreign ones, such as in manufacturing clean technologies, these countries may violate global trade rules, especially the principle of nondiscrimination.

Second, some trade-related climate measures may also contravene WTO rules. The much debated European Carbon Border Adjustment Mechanism (CBAM), which is a carbon-border tax, is illustrative. While non-discrimination is the cornerstone of the global trading rules, differentiation is central to the Paris Agreement. Some developing and emerging countries have argued that the CBAM undermines the principle of Common But Differentiated Responsibility (CBDR), which is central to multilateral climate cooperation. Even though CBAM measures may be deemed to be consistent with global trade rules, they remain politically contentious.

A third challenge is the growing incongruence between regional and global trade rules. Over the last several decades, the proliferation of preferential trade agreements (PTAs) has transformed the global trading landscape. More than eight hundred PTAs are currently in existence, with many of them addressing climate change. Incongruence between how countries are using their PTAs to address climate change, and global trade rules, has generated significant uncertainty. While some major economies have prioritised the use of trade sanctions to enforce climate policy in their PTAs, emerging and developing countries have adopted an approach mainly based on coordination and technical support. A result has been a fragmented landscape of heterogeneous climate-related trade rules.

These challenges notwithstanding, there are numerous opportunities for the global trade rules to support developing and emerging countries in implementing ambitious climate policies. Ongoing diplomatic efforts at the WTO to develop a coalition of trade ministers on climate issues is a promising initiative that may bridge divergent issues. Such high-level political support would also strengthen the climate-related negotiations under the Trade and Environmental Sustainability Structured Discussions (TESSD) forum.

Given the rapidly evolving landscape of trade rules and climate action, especially at the regional level, key emerging lessons and best practices could be consolidated, shared and formalised. Experimentation, learning and capacity-building initiatives could serve this purpose. Better diplomatic, technical and policy coordination between regional and global trade regimes would ensure a mutually reinforcing alignment that overall supports ambitious climate action. Several of the regional economic communities (RECs) in Africa, for instance, have developed and are implementing ambitious regional climate policies. Crucially, the member states of these RECs have adopted a flexible and experimental approach, without undue focus on using trade sanctions to enforce climate policy commitments. Similar initiatives in other parts of the Global South underscore the need to move beyond trade sanctions and expand the repertoire of trade policy instruments to support climate action.

Less salient but powerful global trade policy instruments can be leveraged to spur climate action. Trade facilitation has been one of the most successful initiatives in the WTO. While initiatives such as Aid for Trade have been beneficial for developing and emerging countries, they have been limited in scope. Leveraging innovative trade instruments and institutions such as export and import (EXIM) banks, Export Credit Agencies (ECAs) and the WTO Trade Facilitation Agreement can support mutually beneficial trade, development and climate policies. Mainstreaming climate change policy into mega-infrastructure initiatives such as the Belt and Road Initiative, Build Back Better World, and the EU Global Gateway Initiative, could be a viable approach that also reduces the risk of climate-related disputes at the WTO.

That global trade rules at the WTO should be rewritten to support international climate policy is not in dispute. What remains an open question is on how to do so. Global trade rules deliver both development and climate benefits that would be most suitable for developing and emerging countries. But this would necessitate a paradigm shift from viewing global trade rules as primarily punitive to a facilitative mechanism for long-term climate cooperation.

g) Competition law

- Drawing on a paper by Simon Holmes, Visiting Professor, Oxford University and member of the UK Competition Appeal Tribunal

As Margrethe Vestager, Executive Vice-President of the European Commission, recognised, everyone is called upon to play their part-including competition enforcers. We must utilise all policy tools available to us. Non-state actors are able to go further and/or faster than regulators and, where this is the case, we need very good reasons if we are going to let competition law prevent them from doing so.

Where individual businesses can develop more sustainable products and compete profitably on the sustainability of their products, they should do so. However, this is often still complex, especially in early stages of development. We need to transform our whole economy moving production and consumption onto a sustainable footing as fast as possible. Often this can only be done (or can only be done faster enough) by businesses working together. In most cases this can be done under existing competition law (with appropriate safeguards).

Rather than look to place obstacles to such urgent cooperation, tying ourselves in knots in arcane competition speak, the competition community needs to do everything it can to ensure that competition law does not stand in the way - and communicate that message clearly to those businesses keen to “do their bit”. Future generations will not thank us if we do not. Imagine explaining to your great grandchild why we opposed an agreement to develop new clean fuels or to eliminate plastic from a product.

Finally, we should stop exaggerating the power of competition. Yes, competition can lead to leaner production using fewer resources-but, equally it can push businesses to use cheaper and less sustainable resources, even when they would prefer not to. Yes, competition can make prices more cost reflective - but not if those prices do not reflect all those costs conveniently left out and dumped on society, rather quaintly known as “externalities”.

The good news is that these key messages are being understood and promoted by more and more people in the competition community. This includes competition authorities. In addition to the thought leadership of the HCC, I would single out the Dutch and the Austrians:

- **The Dutch Authority for Consumers and Markets (ACM) has developed an innovative approach to make it easier to exempt “environmental damage agreements”;** *and*

- **The Austrians have amended their law so that agreements that “make an essential contribution to an ecologically sustainable and climate neutral economy” can be excluded from the general ban on anti-competitive agreements (as always, if certain conditions are met).**

Competition law alone is not the answer to the climate challenge but it can and must play its part. In fact the best thing it can do is not to get in the way (intentionally or otherwise) of the exciting and vital initiatives that our businesses are ready and willing to pursue together to combat the biggest challenge we face today-the climate crisis.

Chapter 7 /

The *drivers* and *influencers* of change

These regulatory tools and standards can be supported and driven by a host of drivers and influential efforts across the broader ecosystem. This chapter outlines some of the key elements which can help lay the foundations for - and help accelerate - the needed regulatory tools to be introduced, in an aligned and ambitious manner.

a) Corporate Policy Advocacy

- Sophie Punte, We Mean Business

With more than 8,000 companies committing to Race to Zero, and 2,000 specifically setting Science-based Targets, we can safely say that climate ambition has become mainstream. The SBTi companies alone have a combined market capitalization 38 trillion US dollars, or over one-third of the global economy. But to turn that into concrete action and build a business case for deep and long-term investments, they rely on governments to provide an enabling policy environment and level playing field.Government NDCs and long-term targets could limit warming below 2.3°C according to Climate Action Tracker. They still need to raise NDC ambition further as well as set policies along with underpinning regulations and investments. Only with the acceptance of citizens and other stakeholder groups, including business, can governments deliver. It is therefore essential that businesses engage in policy advocacy.

Corporate policy advocacy can be very powerful, especially when businesses band together. In 2020, through CLG Europe we gave the EU the confidence to raise climate ambition. Ursula von der Leyen, President of the European Commission, said in her State of the Union Address: "…our economy and industry can manage this. And they want it too. Just yesterday, 170 business leaders and investors – from SME's to some of the world's biggest companies - wrote to me calling on Europe to set a target of at least 55%."

This opened many doors for us, and we've since repeated this to influence policy decision in the US, Japan, the G20 and many others. Last year we mobilized 400 American businesses to sign a letter in support of President Biden's 50% emission reduction target by 2030. John Kerry went on CNN to tell how important business backing was. We then ran policy campaigns for Japan's climate target, the G7 Summit, and the EU's 'Fit for 55' policy package as part of the EU Green Deal. These successes paved the way for greater ambition at the G20 Summit in October and COP26 in November. Our open letter with concrete policy asks to G20 leaders was signed by 778 businesses, representing US$2.7 trillion in annual revenue, and employing 10 million people.

More than 1000 businesses have joined our policy advocacy campaigns that in addition to business sign-on letters also include meetings between policy makers and businesses, letters to Ministers, business toolkits, and communication via mainstream and social media. But we can do more. The number of companies that advocate for ambitious climate policy is the tip of the iceberg. Companies are sometimes inconsistent: taking a pro-climate stance while in parallel undermining climate policies directly or through trade associations with conservative views.

Ceres, the B Team and several other organizations have come up with guidelines and tools to help companies with 'responsible policy engagement' or RPE. The 4As for Climate Leadership (advocacy is one of these As alongside ambition, action and accountability), combines RPE requirements for companies:

- **Make a public commitment to advocate for ambitious climate policy, and engage key stakeholders**
- **Publicly advocate for bold science-based climate policies, and call out those that obstruct the 1.5°C pathway**
- **Align the climate policy advocacy of a company's trade associations, alliances and coalitions with the goal of net zero by 2050.**
- **Allocate advocacy spending to advance climate policies, not obstruct them.**
- **Disclose in accordance with the three disclosure asks of the Global Standard on Responsible Corporate Climate Lobbying.**

The opportunity now is to take this global by developing a global harmonised RPE Framework as the industry norm. This will ensure that companies that have set science-based targets are truly advocating for ambitious climate policies that they, and the world, need to halve emissions by 2030 and reach net zero before 2050.

b) Litigation

- Margherita Cornaglia, FILE Foundation

As noted in the latest IPCC report, “Climate-related litigation, for example by governments, private sector, civil society and individuals is growing, with a large number of cases in some developed countries, and with a much smaller number in some developing countries, has influenced the outcome and ambition of climate governance.” The report acknowledges that successful litigation “can lead to an increase in a country’s overall ambition to tackle climate change” and that it can be instrumental in blocking the development of high-emitting projects. Furthermore, the report highlights the impact that litigation has and will continue to have at increasing pace on financial markets and flows of capital: “Climate change presents both risks and opportunities for the financial sector. The risks include physical risks related to the impacts of climate change itself; transition risks related to the exposure to policy, technology and behavioural changes in line with a low-carbon transition; and liability risks from litigation for climate-related damages.”

Legislative and litigation trends illustrate the nature and extent of risk involved where non-state actors fail to act on climate or deliberately act inconsistently with the Paris agreement goals. Within these trends are sub-themes in litigation which see non-state actors increasingly held to account on the credibility and sufficiency of their net zero commitments. A growing segment of the public has lost faith in empty promises - governmental and non - and has, as a result, taken to the courts to prevent misleading action on net zero. While this litigation is on the rise, regulators are also under pressure to ramp up oversight of NSA net zero commitments - this pressure is unquestionably leading to ever more stringent regulation of NSAs.

These trends show that it is no longer advisable to make unsubstantiated claims of carbon neutrality, as a growing body of well-informed civil society organisations, backed by climate scientists, are increasingly active in holding corporations accountable for lies and disinformation on net zero. Greenwashing or climate washing claims have been brought against a wide array of diverse corporate actors across a range of jurisdictions (see e.g. these cases: Danish Crown, Terracycle, Danimer Scientific, Coca Cola, BP’s misleading claims, Total, ACCR v Santos), and public bodies are taking legal action against corporates too: in a string[3] of cases before courts in the USA, public authorities are seeking compensation from major polluters to help them pay for adaptation. Private citizens are seeking to do the same: for instance, Luciano Liuya is asking RWE to pay up to adapt his village in Peru, which is critically vulnerable to extreme weather events and which Liuya argues have, at least in part, been caused by RWE’s contribution to global emissions.

Another limb of litigation sees civil society demanding that courts require corporations to decarbonise credibly. Following its successful suit against Shell in the Netherlands, Milieudefensie is threatening legal action against 30 other major climate polluters in light of their substandard and misleading transition plans. On foot of the Dutch Supreme Court’s judgement in the Shell litigation, which ordered Shell to reduce its emissions by 45% by 2030 compared to 2019 levels - quoting extensively from the Race to Zero criteria at the time, claims have already been filed against Daimler and BMW, Mercedes Benz, Total and Volkswagen, amongst others. Publishing ambitious transition plans without backing them with credible and sufficient action to reach net zero is no longer fool-proof and will be taken to court.

Governments and legislators are also under continued scrutiny. Claims focusing on state obligations to limit and regulate emissions have proliferated, at the domestic, regional and international level.[4] The general public is ever more well informed of the causes, consequences and responsibilities for the climate and ecological crisis. Government institutions are ramping up regulation of NSAs and bringing lawsuits against corporate actors to help them pay up for existing loss and damage and what will be significant future adaptation costs. The picture which emerges from a close analysis of litigation and legislation trends is clear: NSAs are no longer immune from taking responsibility for the consequences of their operations on the planet and on nature, and they will increasingly be asked to pay for the impacts on climate and biodiversity which they cause, either via the courts or through increased regulation.

[3] See e.g. Anne Arundel County v BP, City of Annapolis v BP, Oakland v BP, Baltimore v BP, County of Maui Sunoco LP, City of Charleston v Brabham Oil Co, Delaware v BP America Inc, City & County of Honolulu v Sunoco LP, State v American Petroleum Institute and recent interim judgement allowing Massachusetts v Exxon to proceed to substantive hearing.

[4] See e.g. Urgenda, Neubauer, FoIE v Ireland, Leghari v Pakistan, l’Affaire du Siècle, Commune de Grande-Synthe, Klimatzaak v Kingdom of Belgium, IEA v Brazil, Giudizio Universale, Duarte Agostinho v 33 states, Union of Swiss Women, Nordic Oil, Plan B, Careme v France, Vanuatu petition before the ICJ.

c) ‘Ecocide’ law

- Sophie Dembinski, Ecosia

International criminal law can also play a pivotal role in tackling the climate crisis and guiding corporate activity towards safer waters with regard to activities which exacerbate climate change. The International Criminal Court (ICC), in particular, has a unique complementary relationship with its member states which allows for adopted international laws to be enforced domestically in ratifying jurisdictions. The ICC also has a focus on “persons of superior responsibility”, enabling key decision makers to be held to account. There is thus a hitherto untapped potential for international law to positively influence and support global efforts to keep pace with ambitious climate and biodiversity targets by changing corporate behaviour and delivering lasting accountability and protections for vital ecosystems and life on earth.

In this context, a growing number of countries and businesses are increasingly joining calls for the introduction of more ambitious environmental regulations, laws and policies, including the recognition of ‘ecocide.’ The term “ecocide” was first used on the international diplomatic stage at the UN Conference on the Human Environment in Stockholm 1972 by then Swedish PM Olof Palme, to denote mass destruction of the environment. In recent years, the concept has experienced a huge surge in popularity among hundreds of organisations, parliamentarians, governments of both climate-vulnerable and a number of European states as well as businesses - such as the investor-led International Corporate Governance Network ($59 trillion in global assets) among others, which in its statement to the COP26 presidency (October 2021) set out a recommendation to governments to “mandate regulation and collaborate internationally on criminalising ecocide”.

Discussions of ecocide law are now on public record at parliamentary and/or government level in at least 23 states which are parties to the Rome Statute of the International Criminal Court, following the emergence of a consensus legal definition of ecocide from a panel of 12 top lawyers from around the world with combined expertise from the fields of international criminal, humanitarian, environmental and climate law. As with other offences at the ICC, the adoption of the international law of ecocide could draw a line under what is considered permissible business practice. By emphasising the responsibility of key decision makers, it could provide a useful cross-sector “outer boundary” through which to examine business practices and supply chains and act as a deterrent or preventive guardrail against the authorization of the most destructive projects.

More broadly, it also has the potential to usher in a number of other positive spillover effects that could provide numerous benefits to consumers and the wider business community. For example, by rebalancing demand away from goods created through harmful practices, unlocking innovation and investment into new regenerative business models, levelling the playing field for sustainable enterprise, stabilising operational and reputational risk and delivering climate and environmental justice to those most affected by destructive practices.

Beyond providing a much needed international legal and regulatory framework for businesses to keep pace with ambitious climate and biodiversity targets, adopting such a law would also encourage a vital shift of consciousness and unlock new opportunities with regards to how business engages with the natural living world in the long-term.

d) Market pressure and climate risk

- Tom Tayler, Climate Champions

The vast majority of institutional investors now cite climate risk as a leading issue driving their engagement with companies. There is now widespread acknowledgement that climate risk is, or can be, financially material and therefore it falls within the duties of investors and other financial market participants to manage and mitigate climate risks as with other financially material considerations. However, there is less acknowledgement that there is a need to consider not only the risks connected to climate change that impact a company (and through them their investors) but also that the activities of the company and the decisions of investors are a driver of climate risk though their impact. Where a company's activities have a material impact on people or planet and that is not a financially material part of their valuation, then that is evidence of market failure that can only be corrected via regulation.

Nonetheless, the stewardship activities of market participants and their influence on companies to mitigate both their risks and their impacts can and should be a key means of driving more sustainable behaviour. A positive feedback loop can be created where regulation also incentivises more sustainable behaviour and so more capital is likely to flow to those who prioritise sustainability and the stewardship asks of investors are more likely to be well received by management.

There are also key demand signals that should flow from consumers, especially if allied to consumer awareness and education initiatives. The majority of consumers, when asked, prefer for *their* money (and in the vast majority of cases it is their money that we are talking about, however many links in the chain of intermediation) to be invested sustainably. Most people do not want return 'at all costs', if those costs include the future of civilization as we know it and the prosperity of their children and grandchildren. But all too often the awareness of what is done with their money is lacking, and the link to their preferences is lost. Regulatory initiatives in some jurisdictions have sought to restore that link - in the EU, for example, from this August all financial advisers and portfolio managers must establish whether their customers have any sustainability preferences that they wish to be reflected in the way that their money is managed. But consumer awareness can influence corporate behaviour far beyond savings and investment pots - when consumer behaviour changes and consumption habits align more closely with sustainability values, then companies are quick to react. Concerns about greenwashing are often well founded, but there is a reason that companies wish to burnish their sustainability credentials with their customers - they know that increasingly sustainability matters to the way that they choose to spend their money. Again, to ensure a level playing field and promote both fair competition and market integrity, regulation is needed to address greenwashing and ensure that claims can be substantiated so that the true leaders see the benefit of their actions.

There is also a role for leaders to ensure that they are not only making their own commitments, but that they are using their spheres of influence and their commercial power to drive a transition within their supply chains and distribution networks. If all Race to Zero members were to prioritise suppliers and networks that align with the values that they have committed to, always being alive to the obligations to ensure fair competition, then this 360 degrees, holistic approach supports the sorts of market shifts that are needed to accelerate the transition and creates a fertile economy for successful regulatory intervention by policymakers to raise the collective bar and reward the highest common denominator.

e) Activism

- Charmian Love & Zoe Carton, Natura & Co

When thinking about the need to shift policy it is important to recognise the power of people in creating the mandate for – and driving – regulatory change. This power shows up in many ways – including through activism and engagement in social movements.

Counter to some views, engaging in social movements and activism are not activities reserved exclusively for rebels. Activists are generally moved by what is needed rather than limited by what feels possible, and because of this they play a critical role in stretching current thinking and challenging accepted norms. They also help in holding organisations who have made commitments to account by calling out those who are not 'walking the talk'. When large groups engage in mass gatherings or protests, they can show just how many people care about an issue – providing a clear signal to those in positions of power and influence that they have support to make change happen.

Why are social movements important to this transformation?

- **Stretch thinking and challenge status quo**
- **Hold organisations to account on the commitments they are making**
- **Raise awareness of climate issues by making it part of the news cycle**
- **Show policy makers that they have mandate from the population to take action**

Looking back, we see strong examples of where the work of social movements have led to landmark victories for society, from the suffragettes winning the right to vote for women, protests and strikes in South Africa which ended the government's apartheid policy, protests in Saudi Arabia which overturned its ban on women's right drive, through to the People Power Movement, Filipinos took to the streets in Manila which lead to the end of the Marcos regime. Today, people are coming together to let their governments know how they feel about climate policy decisions. Of note are the global youth movements, like Fridays for Future school strikes, where millions of young people and their supporters show how desperately they care about climate issues.

The 3.5 % Rule

One way to understand the importance of mass mobilisation is through Erica Chenoweth's research which found that, by looking at social movements in the past, **governments are** (with some exceptions) **unable to withstand 3.5% of the population engaging in nonviolent civil disobedience**. Chenoweth's more recent research finds that even in the context of limited mass participation social movements can still succeed when activists focus on persuading social, political and economic elites.

When it comes to policy demands, climate activists are pushing for action on key areas such as accelerating net zero timelines, creating new models of participation through Citizen Assemblies, and ending harmful subsidies. If some of these demands sound radical, it's probably because they are, but that doesn't mean they should be discounted. The origin of the word radical comes from the latin 'radix' which means rooted and many of these demands are often rooted in what scientists are telling us will be needed. We also need to remember the work of activists and social movements of the past are the origin of some foundational societal progression. Those in positions of power and influence in both business and government might want to tune into current activist priorities as a portal into where we're collectively headed.

Whilst the work of activists and social movements often overlap with the work of NGOS, their roles and tactics can be distinct. Some NGOs have very direct means of drawing attention to the need for policy change by holding governments to account (Client Earth which successfully took the UK government to court which found their Net Zero strategy to be 'unlawful'), by holding businesses to account (Share Action draws attention to the gap in what investors say vs what they do) and by mobilising people to take action through the power they have on their finances (Make My Money Matter which encourages people to challenge their pension providers to go green). Importantly, the work of more radical social movements and activists which mobilise large groups in direct action can create momentum and help open the Overton Windows for NGOs to accelerate and deepen their work on aligned issues.

In summary - people power matters when it comes to driving changes in climate policy. To make this change happen with the speed and scale the science is calling for, we need to change the rules of the games. And to change the rules of the game, we need to understand all the different actors driving this change - from the work of social movements mobilising mass engagement to the work of NGOs and their interventions - and align them as a movement of movements.

f) Education

- Sophie Lambin, Kite Insights

Eight out of ten employees want to act on climate change at work. The right standards and policies can ensure they have the climate literacy to do it. We will be able to respond to climate change more quickly and effectively if we harness the energy, ideas, and creativity of employees. Companies will find it easier to decarbonise their operations and supply chains if employees understand the commitments and targets and contribute their front-line knowledge of how to achieve them.

By helping employees be climate literate, companies are also preparing their local workforces for the green jobs of the future. The transformation relies on new skills and capabilities such as low carbon ways of producing building materials to design buildings and cities, new ways to measure and mitigate climate impacts, and innovative ways to be nature positive, to name but a few. By offering training, companies offer a base level of knowledge enabling people to contribute, find their way in the new economy and unleash more talent for the challenges ahead.

If we are to strengthen regulation on areas such as carbon pricing, climate impact disclosure, and deterring fossil fuel investment, we will need a strong political consensus. Recent international experience shows that this cannot be taken for granted. If we educate employees on the science of climate change and the need for urgent action, they will take that understanding home with them. They are likely to apply it when they choose what goods and services to buy and what political positions and campaigns to support. **All this will strengthen the democratic safety net of political support for regulatory action.**

However, getting employees' role in the climate transition right brings challenges too.
If they are to contribute meaningfully, employees need to understand how climate impacts their role, their company and their industry. 70% of respondents to our survey called for training on climate action in the workplace. But committing to climate targets at C-Suite level did not automatically translate into employee knowledge about climate change and the action needed to limit its effects. Of staff surveyed, only 34% of staff could confidently explain their company's climate commitments, with the figure dropping to 22% among junior employees. This is a clear indication that even the best-laid plans require better internal communications and staff training to bed in and be effective.

The second challenge is to make sure all this is done in a way that is compatible with climate justice. If we leave people behind, climate change will only exacerbate social and economic disparities. Businesses must ensure the green transition is fair and inclusive for employees.

The third challenge is to bear these imperatives in mind when designing future regulation. Can regulation strengthen incentives for businesses to improve climate literacy? Can it nudge companies towards providing the skills we will need to do the green jobs of the future? Getting this right is a challenge for policymakers and campaigners around the world. Right now, the desire to act on climate change has become mainstream, but the ability to act is not. Employees are keen to take action on climate. Let's make sure they have the skills to do it.

"Achieving a just transition to a net-zero economy relies on businesses to upskill their workers accordingly – ensuring that *no one is left behind*. Climate literacy is such an important part of this transition."

SOPHIE LAMBIN, KITE INSIGHTS

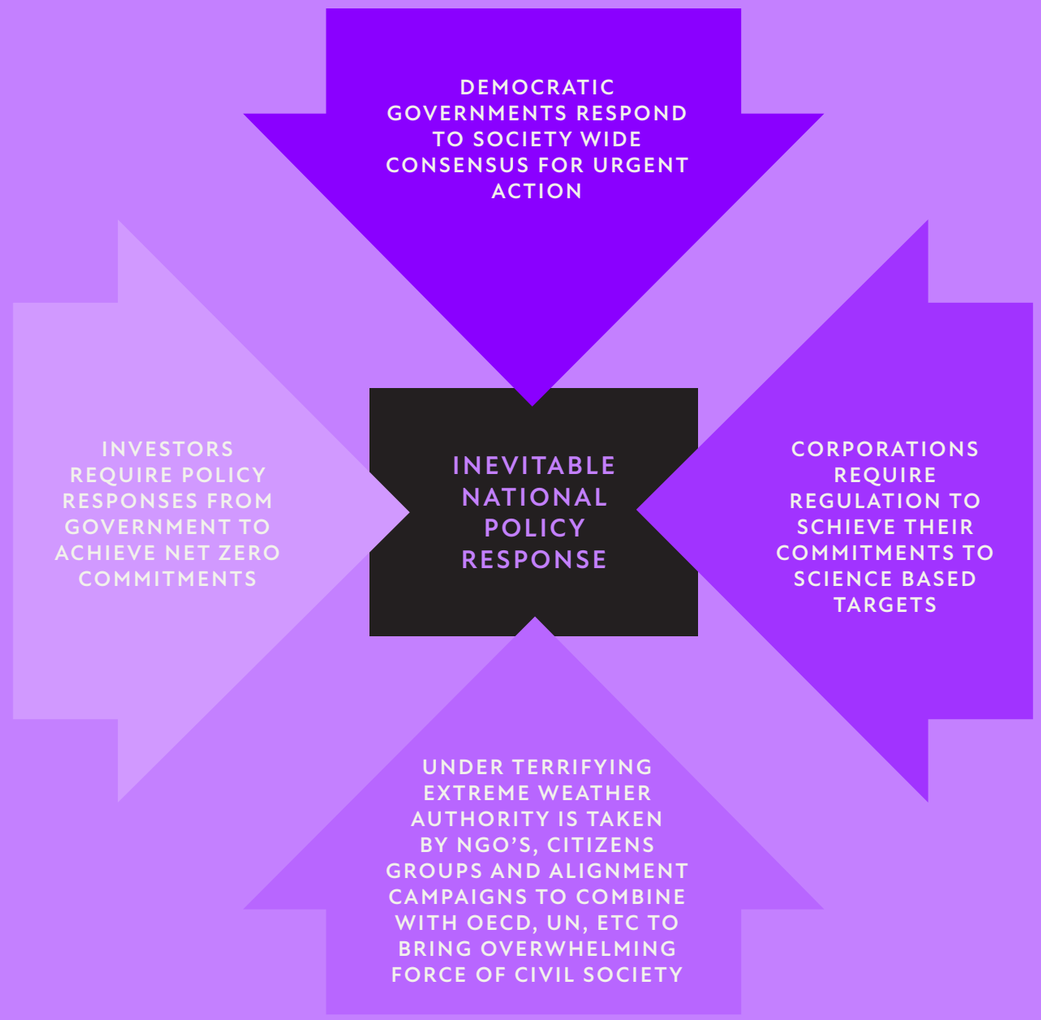


DIAGRAM FIRST DEVELOPED BY PAUL DICKINSON, FOUNDER AND CHAIR OF CDP

Questions & issues to *prioritise* moving forwards

This report has sought to provide clarity on the progress and actions across the private sector (and more broadly, the non-state actor community) to convert voluntary action into standards, policies and national regulation to dramatically accelerate implementation of the global climate goals. However, this does not mean that voluntary non-state action should become extinct. Instead, by raising the floor across the entire economy, momentum is created for leaders to reach even higher. Ever-more ambitious action is needed to win the race to zero and reach the goals of the Paris Agreement.

Voluntary action also allows for experimentation and learning. The truth is that there are many parts of the Race to Zero that still need more ideas and solutions to be developed. The transition is complex, and many open questions remain. As per the conveyor belt model, there is particular value in the flexibility and adaptive capacity of a needed new governance system, which still allows - indeed, encourages - the voluntary space to continue pushing the frontiers of best practice and experimenting to drive maximum ambition in just climate action. The working group's discussions and contributions to this report surfaced the need to explore in more detail the issue of carbon pricing and the need for stronger governance on this issue. Critically, emerging standards for carbon markets must help drive high quality, high volume and a high price to ensure integrity.

The conversations also importantly highlighted some key themes which are deemed to require further exploration, development and innovation within the voluntary landscape, helping to later inform relevant standards, policies and regulations. These also built on the three previous rounds of Race to Zero criteria consultations since 2020.

Chapter 8 /

One priority for *accelerating* towards regulation: the issue of carbon pricing mechanisms

Voluntary carbon markets, driving corporate action and the pathway to regulation

Annette Nazareth, Tariye Gbadegesin and Rachel Kyte

Voluntary carbon markets (VCMs) can be an important tool to accelerate collective global action to reach net zero emissions when high-integrity credits are used in complement to science-aligned decarbonisation. Mobilising private capital is essential for keeping global temperature change within 1.5°C. VCMs can help channel investment towards additional, high-integrity emissions reductions and removals, delivering benefits for the climate, people and nature. But VCMs will only realise their potential if they are rooted in integrity, trust, and accountability.

High-integrity VCMs that are aligned to the goals of the Paris Agreement and facilitate a pathway to regulation will be key. Robust regulation can provide a coherent enabling environment and level playing field for high integrity climate action worldwide. The most effective way to build high-impact, just VCMs is within a supportive policy environment that promotes high integrity in the supply, trading and use of credits. This means buyers, traders, and suppliers in VCMs working in collaboration with policy makers and regulators to promote effective measures that will drive genuine and ambitious, economy-wide climate action, above and beyond what companies and governments would otherwise be able to achieve. These would include, for instance, regulation on climate claims and consumer protection standards relating to net zero, trading standards and corporate sustainability disclosures.

VCMs contribution to the goals of the Paris Agreement and Sustainable Development Goals is hindered by a lack of clarity on credible supply, trading and use of carbon credits. Demand in VCMs has grown considerably in recent years, representing a potentially significant financing opportunity. But the lack of consistency in standards and transparency makes the market hard to navigate. In addition, a proliferation of competing national and international standards risks fuelling a race to the bottom on price and quality, which would be detrimental to the market, to the planet, and to the people it is designed to serve. This coupled with past instances of misuse, misleading claims, and social harms – erodes trust and limits investment.

High-integrity demand and supply-side VCMs standards will provide much-needed clarity, consistency, and transparency on the road to regulation. On the supply-side, the Integrity Council for Voluntary Carbon Markets (IC-VCM) is developing a rigorous and independent threshold standard for high-quality carbon credits representing real, additional, and verifiable climate impact with high environmental and social integrity. This is designed to provide an accessible means to identify carbon credits that can deliver climate impact at speed and scale. These 'Core Carbon Principles' will help mobilise private capital towards the most effective mitigation activities globally. And on the demand-side, the Voluntary Carbon Markets Integrity Initiative (VCMI) is providing practical guidance for companies and other Non-State Actors, setting out when and how to use carbon credits, and what to credibly say about that use. The 'VCMI provisional Claims Code of Practice' closes greenwashing loopholes and recognises and rewards ambitious climate action on the journey to net zero.

If we work together, we can build high integrity VCMs that are supported and enabled by effective regulation and policy. This will build trust, reduce confusion and fragmentation, and unlock urgent investment. This is particularly critical given the important role VCMs can play in channelling finance to emerging markets, and to those who need investment in mitigation as well as supporting adaptation and resilience. High integrity voluntary action paves the way for complementarity between public and private carbon markets. While there can always be room for non-state actors to go further than compliance in their ambition, regulation of various aspects of VCMs will ensure their use never supplants ambitious policymaking, regulation, or rigorous value-chain decarbonisation in the corporate sector. This will provide enduring confidence to investors, governments, consumers, and the public.

Regulating a price on carbon

Tom Tayler

Climate change interacts with and exacerbates different and interlinked market failures. However, at its heart, the biggest market failure is the failure to price carbon emissions. It is generally still more profitable for a company to continue emitting than to decarbonise, because those emissions are not, or are insufficiently, internalised to their financials, and therefore companies continue to pollute. What is needed is a price on carbon at a level where the costs to people and the planet are reflected in companies' balance sheets, cashflows, and valuations of the corporations who do so.

Harnessing the "profit motive" of the private sector by internalising the carbon externality, so that the pursuit of profit is aligned with sustainable business choices and accelerating the transition, is widely considered by economists to be a key means to bring the transition about. Many investors consider that without policy interventions to (a) price carbon at a level consistent with the achievement of the Paris Agreement's goals, (b) phase out of fossil fuel subsidies, and (c) deploy other supportive policy measures like subsidies for clean energy and other technologies and innovations, then the transition will not occur at the pace and scale required by the scientific arithmetic of emissions pathways.

The long term economic case aligns with the scientific and sustainability case to transition, but shorter term pressures and narrowly conceived duties owed to shareholders and beneficiaries mean that unless the economics of the transition are altered by policy interventions such as carbon pricing, a "business as usual emissions trajectory" will continue. Regulation and policy interventions of many kinds are needed to create an effective landscape in which the transition cannot just be realised, but can thrive, accelerate and self-sustain. All non-state actors committed to net zero should therefore adopt and advocate for policy positions from governments and policymakers that implement carbon pricing with levels and coverage necessary as part of broader regulation to achieve a stable, global net zero state whilst ensuring that proceeds of carbon pricing are utilised in support of a just transition that does not disproportionately impact those least able to afford it.

Ensuring integrity and robust governance for carbon dioxide removals

Ashleigh Arton

The science is clear: carbon dioxide removals are essential to reach net zero. All IPCC modelled pathways that keep warming below the Paris Agreement threshold of 2°C, or preferably 1.5°C, require year-on-year emission reductions and the safe removal and storage of CO2 from the atmosphere. We must be reducing our emissions as fast as possible across all sectors while increasing our global capacity to remove past emissions from the atmosphere. These activities are complimentary, and cannot be substituted one for the other. It is estimated that we will need 5-16 giga tons of removals per annum by 2050. Regulation is critical to support scaling global carbon dioxide removal (CDR) capacity and generate the enabling conditions required to catalyse a responsible CDR ecosystem. Not only will this help us reach the goals of the Paris Agreement; it also has the potential - if carefully managed - to contribute significantly to food security, climate resilience, biodiversity, employment and skills creation.

CDR cannot be supported by private finance alone. At present, capital flows are estimated at under $10 billion per year. It is forecast that we will require public and private payments for Carbon Dioxide Removal to reach ~$200 billion per annum, and for capital investment in Carbon Dioxide Removal to average ~$100 billion/year by 2030 (Energy Transitions Commission, 2022). We need to bridge public and private financing to help plug these resourcing gaps.

Whilst we acknowledge that regulating CDR is critical, this issue faces contention and requires delicate and considered policies to manage the scaling of CDR in a just, equitable and appropriate manner. As such, we require policies that provide

- **Robust governance and regulatory support frameworks (e.g. formalised approaches for accounting, monitoring reporting and verification to enhance transparency)**
- **Clear methodologies & rules to account for CDR in national inventories and NDCs;**
- **National and international regulatory standards on the durability, permanence, and environmental integrity of CDR solutions (and ensure that removals are in addition to emissions reductions);**
- **Guardrails and regulation of environmental claims made to consumers and the use of carbon credits for compensation claims, to ensure legitimacy and police fraud**
- **Industry-wide insurance schemes, liability caps, and clear liability guidance for reversals or re-release of stored CO2**

2

- **Rules to govern the location of CDR projects and the rights of local stakeholders to ensure that projects do not create perverse and unintended consequences (e.g. negatively affect biodiversity or displace communities).**

Policy priorities will differ according to varying CDR methods. Generally, policy options can follow a sequential process as different policies will be required at different stages of each method's development (beginning with supporting enabling conditions, research and development and moving towards support for deployment and scaling). Moreover, approaches to CDR will of course vary depending on regions. That said, CDR is relevant and can be undertaken across the world, recognising the variety of solutions available and the incentives needed to get them off the ground. For instance, reforestation and afforestation may be best suited for forested tropical regions, whilst coastal areas and SIDS could focus on the restoration of mangrove forests, and seagrass meadows. Direct Air Carbon Capture and Storage can be deployed in areas with the right geological storage capabilities as well as access to renewable energy capacity (where additional renewable energy would not displace fossil fuel energy production. I.e. we must reduce before we can remove).

All CDR solutions should ensure co-benefits such as increased biodiversity and resilience, access to affordable and clean energy, job creation, public health benefits such as cleaner air, and opportunities to new sources of livelihood, skills creation and investments. Regulation is key to catalysing a global CDR ecosystem that is responsible, just and equitable.

Chapter 9 /

Unresolved Questions for *further* exploration and innovation

The below themes draw on the topics raised during the 2022 Race to Zero criteria consultation and have been further discussed by the independent Expert Peer Review Group in the context of recent applications from initiatives to join Race to Zero as Partners.

1. Standardising the vision of net zero

Service-provider alignment to net zero is now a fertile area for experimentation. From Lawyers to advertisers; investment consultants to financial service providers - these industries face vastly complex challenges in defining what net zero looks like for each of their sectors, and how to achieve this goal at pace, with adequate accountability. A key question in which to delve deeper moving forwards will be convening experts and partners on how to best define what net zero should look like for the service industry, consultancies, emerging finance sectors and more.

2. Operationalising the principles of fair share, equity and justice

Achieving the mitigation goal of the Paris Agreement explicitly requires reaching a global state of net zero as quickly as possible, and by 2050 at the latest. Within this goal, there are certain targets which we know we collectively need to implement at global scale, ***for example:***

- **Shift from dirty to clean energy;**
- **Electrify our global infrastructure;**
- **Protect and restore forests, grasslands, oceans, reversing biodiversity loss.**

Failing to do so will imply severe social, economic and environmental costs, especially for developing countries and all those most vulnerable to the impacts of climate change - impacts which are already being felt in all corners of the world.

While the impacts of climate change are often unjust, affecting mostly those who have less historical emissions, the global climate system responds to the aggregate of emissions and requires a global, coordinated response effort. However, global climate models do not specify exactly what each individual country, city, company, state, region, or other entity must do. For countries, the UNFCCC articulates the general principle of common but differentiated responsibilities and respective capabilities. The Paris Agreement operationalizes this idea by asking each country to develop its own Nationally Determined Contribution and Long-Term Strategy in a way consistent with the objectives of the Paris Agreement and its national context. For non-state actors, an array of frameworks exists for how to operationalize the idea of a 'fair share' of effort. Within Race to Zero itself, the campaign recommends that its non-state actors consider the broader societal consequences of their mitigation actions, including on race, gender and intergenerational equity. They are urged to enable all actors to contribute to the global transition toward (net) zero through engagement, information sharing, access to finance, and capacity building. Entities are required to be bold and shoulder the greatest responsibility, and consider the established principles around equity in international law.

Some salient examples of ways to implement this fair share principles within the campaign ***include:***

- **Some initiatives using climate models to generate scenarios for how the world reaches 1.5°C, and then assign individual entities emissions reduction pathways, including interim targets, that reflect a share of the overall reductions calculated in that scenario. For example, the Science Based Targets initiative uses scenarios to determine sectoral pathways to 1.5°C, and then participating companies determine targets based on their share of the market in a given sector. In this way it relies on climate models to determine what individual entities' shares should be. See discussion below on what criteria climate scenarios should meet.**
- **Other initiatives assign different targets to entities at different stages of development. For example, C40's Deadline 2020 program includes cities from both the global North and South. Because many cities in the latter are still growing, they are on slower pathways to halving emissions, but, at the same time, the cities from the Global North that are part of the initiative have more accelerated timeframes, in many cases halving emissions before 2030 (all cities aim to reach net zero before 2050).**

While there is clearly no "one size fits all" approach, given the heterogeneity of different actors, The Race to Zero has aimed to emphasise, consolidate and clarify the ideas of fair share, equity, and justice in climate action. Noting the importance of this topic, the Race to Zero also created a dedicated working group focused on equity questions during the 2022 criteria consultation process. The question has also been brought to the fore by the UN Secretary General's High Level Expert Group on Net Zero, chaired by Catherine McKenna.

Off the back of this report, the Climate Champions therefore propose to accelerate efforts to operationalize these multiple recommendations on embedding more concretely and tangibly the concepts of fair share, equity and justice into non-state climate action, across the Race to Zero community between COP27 and COP28.

It Is *Time* For A Pivot.

We Need *All* Hands On Deck.

We *No Longer* Have Time To Wait.

Thank you to all those who have contributed to this report - be that in thoughts, in comments, in chapters, in research and in design. We look forward to collectively embarking on the next steps to *accelerate* this needed transformation.