

Investing in a just transition

Why investors need to integrate a social dimension into their climate strategies and how they could take action

Nick Robins, Vonda Brunsting and David Wood

Policy insight

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In partnership with



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This policy insight is intended to inform decision-makers in the public, private and third sectors. It has been reviewed by at least two internal referees before publication. The views expressed in this paper represent those of the authors and do not necessarily represent those of the host institutions or funders.

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Foreword

As the world begins its much needed transition from high-carbon to low-carbon economies, investors will have to take a holistic view. The Principles for Responsible Investment (PRI) has been working with investors on the carbon performance of their portfolios and assisting them to engage with the companies they invest in, particularly the world's largest emitters of carbon dioxide, on their transition plans. We also need to look beyond these physical environmental issues and consider the social aspects: what is called the 'just transition'.

We have been encouraged by the growth of jobs in the low carbon sector. The United States alone employs more people today in solar energy than in oil, coal and gas combined. By 2050, it is estimated that solar will have added 24 million additional roles. We also need to ensure that workers and communities in fossil fuel-dependent economies have a pathway to prosperity. In the new and emerging work of tomorrow, it is important that these jobs have as good if not better conditions than the sectors we are leaving: highly organised with good salaries, pensions and healthcare.

This agenda is strategically important for investors. To better address the social issues in climate change and how investors can incorporate them into their climate efforts, the PRI has teamed up with the Grantham Research Institute at the London School of Economics in the UK, the Harvard Kennedy School in the US, and the International Trade Union Confederation to develop an action plan for tackling this issue and identify the role that investors can play. We will release the final report at the UNFCCC's Climate Change Conference (COP24) in Poland, a country that remains heavily dependent on fossil fuel production and use. We are hoping that this research will become an essential part of global climate discussions now and in the future.

Fiona Reynolds, CEO, Principles for Responsible Investment

Investing in a just transition is both a strategic approach to sustainability and a contribution to ensuring the trust of workers and their communities to support the pace of change that is required in all sectors to address climate change.

Investments in renewable energy and net zero emission sustainable infrastructure, green building standards, retrofitting heavy industry and services are needed now. Fundamental human and labour rights, prevailing industry wage rates, secure pensions and skills and redeployment support need to go hand in hand with the transformation that a fair and sustainable social and economic future demands.

This partnership of the LSE's Grantham Research Institute and Harvard's Initiative for Responsible Investment, with the PRI and unions, demonstrates a commitment to both the systemic shift that is vital to meet the climate challenge and the social and job creation dimensions of economic reform.

Sharan Burrow, General Secretary, International Trade Union Confederation

Executive summary

The *Investing in a Just Transition* project

This discussion paper explores why investors should contribute to the 'just transition' and how they can do so. It is the first output of the *Investing in a Just Transition* project, co-designed by the Grantham Research Institute on Climate Change and the Environment and the Initiative for Responsible Investment. The project will be delivered in partnership with the Principles for Responsible Investment and the International Trade Union Confederation.

The purpose of this initial paper is to offer our emerging insights and seek readers' inputs and feedback for the project's next phase.

Emerging insights

Investors are increasingly taking action to respond to climate change risks and opportunities

This is happening globally through shareholder engagement, capital reallocation and policy dialogue, efforts that form part of the wider adoption of responsible investment practices by over US\$70 trillion of assets under management, integrating environmental, social and governance (ESG) factors into core operations.

But most investor strategies on climate change have yet to incorporate a robust social dimension

The positive and negative implications for workers and communities posed by the shift to a zero-carbon economy are not yet being addressed. This is the agenda of the 'just transition', which offers investors a range of opportunities for implementing a comprehensive approach to climate action in tune with the overarching objective of sustainable development. By including the just transition in their climate strategies, investors can not only tackle the challenge of 'stranded assets' but also of 'stranded workers' and 'stranded communities'. Such action looks set to be a critical part of the way in which investors can help to accelerate the transition to a zero-carbon economy and thereby support the development of a more efficient, effective and sustainable global financial system.

The transition to a zero-carbon economy needs careful management

The shift from a high-carbon to a zero-carbon economy and to one that is also resilient to the physical impacts of climate change will clearly have far-reaching implications for growth, employment and investment. Governed well, this shift will deliver significant economic, environmental and social gains (for example, in terms of health). At a macro level, the benefits will far outweigh the costs. But there will still be significant transitional implications for key sectors, regions and countries. The task is to manage this process so that the transition is not just environmentally effective and economically efficient, but also socially inclusive. Importantly, the imperative of delivering this just transition was included in the 2015 Paris Agreement on Climate Change.

There is a growing body of policy and market experience on the ramifications of the just transition

Highlights from across the world include:

- The International Labour Organization has issued a set of guidelines for a just transition to environmentally sustainable economies and societies.
- The secretariat of the UN Framework Convention on Climate Change has examined the quantitative and qualitative implications of the just transition across key sectors.

- The International Trade Union Confederation has established a dedicated Just Transition Centre. Across the world, labour unions are also advocating for a just transition.
- Business coalitions such as the B-Team, along with individual firms, are identifying how to develop the social dimension of climate action.
- A range of regional and national governments are putting in place strategic initiatives to manage the just transition, and are introducing national roadmaps for sustainable finance.
- Grassroots organisations are pioneering new forms of investment at the intersection of social justice, community development and environmental sustainability.
- A small but growing number of investors have recognised the need to integrate the social dimension into their climate strategies and examine their contribution to the just transition.

The just transition is a multi-dimensional challenge

There is, however, a lack of robust analytics and guidance to enable investors as a group to play an effective role. This is a gap that the *Investing in a Just Transition* project aims to fill. Our initial survey of the landscape has enabled us to identify 10 strategic dimensions of the just transition that could help frame the investor response.

The just transition: 10 dimensions for investors to consider	
1. The just transition is about managing both the positive and negative social and employment implications.	6. The just transition covers the social and the spatial, highlighting the importance of place.
2. The just transition is global in scope, affecting developed and developing countries.	7. The just transition needs to be understood along global value chains.
3. The just transition is a whole-economy issue, covering all sectors, far beyond energy.	8. The just transition is about both process ('how') and performance ('what').
4. The just transition connects climate change with the Sustainable Development Goals.	9. The just transition is part of a growing focus on unequal financial and economic systems.
5. The just transition is part of the future of work in an increasingly digital economy.	10. The just transition will need to be delivered in a time of political disruption and upheaval.

To date, investors have not been actively involved in the growing number of just transition initiatives. Likewise, the social dimension has so far been missing from most investor strategies to tackle the threat of climate change. The low profile given to the workplace and community elements of climate change in the reporting recommendations of the Taskforce on Climate-related Financial Disclosures (TCFD) is illustrative in this regard. Fortunately, there is clear room for manoeuvre. Investors have developed growing experience with managing the social dimension of responsible investment which can now be applied to responding to the environmental drivers of climate change.

There is a clear investor rationale for action on the just transition

We have identified six reasons why investors could consider an active role in the just transition, based on this broad body of investor practice. In brief, these are that a focus on the just transition:

1. Integrates the environmental and social pillars of responsible investment, linking climate action with the material importance of human resource management, for example.

2. Aligns investor practice with international goals and standards, notably around human rights, labour standards and the Sustainable Development Goals.
3. Provides a lens through which new investment opportunities can be identified, notably in place-based real assets such as infrastructure, real estate, private equity, bonds, impact investments and community assets.
4. Responds to growing beneficiary preferences for responsible investment as well as specific interests in supporting a just transition by savers in affected sectors and regions.
5. Enhances understanding of systemic risks by connecting the climate change and inequality agenda, highlighting potential barriers to the transition and ways of promoting acceleration.
6. Offers a platform for collaboration between investors and other stakeholders, particularly to develop blended finance strategies.

Investors have a number of options to contribute to the just transition

Taken together, these reasons provide a compelling case for investor action. Building on this, we suggest four main ways in which investors could take action to promote the just transition, which all build on established practices:

The just transition: options for investor action

1. Investment strategy

- Include just transition principles in a statement of investment beliefs.
- Incorporate just transition principles within climate policy statements.
- Making just transition a part of investor scenario exercises on climate change
- Integrate just transition into human resource management processes internally.
- Embed just transition principles into consultant and manager searches externally.
- Communicate action on the just transition with clients, savers and beneficiaries.

3. Capital allocation

Place just transition principles within both core and thematic approaches within:

- Fixed income (including green and social bonds)
- Public equity (including large and small caps)
- Private equity/venture capital (including impact investing)
- Real assets (including infrastructure, property, land and forestry)
- Cash (including commercial banks and community development finance institutions)

2. Investor engagement

- Broaden the scope of climate engagement to include the social dimension, using the TCFD framework: strategy (including scenarios), risk management, governance and metrics.
- Carry out initial social and employment assessments of climate-exposed assets, covering key just transition issues such as worker engagement, skills development, occupational health and safety, social protection (including healthcare and pensions), labour standards (including freedom of association, collective bargaining), social dialogue, supply chain and community relations.

4. Policy dialogue

- Involve investors in international policy discussions relevant to delivering the just transition (e.g. ILO, UNFCCC, G20).
- Encourage development finance institutions to develop strategies for the just transition.
- Support the inclusion of the just transition – and how to finance it – in national climate plans.
- Channel proceeds of public green bonds to just transition activities.
- Focus on the just transition within national roadmaps for green and sustainable finance.
- Develop regional strategies to attract investors into place-led green assets.

Feedback to inform the next project phase

Based on this initial review, we are seeking feedback on three key topics:

1. How can the case for investor action on the just transition be deepened?

- What are the strategic challenges of the just transition for investors and for the stakeholders who engage them?
- What motives for engaging on the just transition resonate with different kinds of investors?
- How can we best identify the most useful roles that investors are suited to play in the just transition? What concerns should we address about investor roles and contributions?
- What are the key barriers to investors contributing to the just transition?
- How might the investor contribution towards the just transition be measured?

2. How can investor guidance on the just transition be most useful and effective?

- What existing investor policies and practices support the just transition?
- What existing frameworks and tools from responsible investment, climate action and elsewhere can investors adapt and deploy for the just transition?
- What new tools need to be developed to facilitate investor action?
- What are the key mechanisms – policy and otherwise – that can structure investor participation in the just transition?

3. How can investors become part of cross-sector collaborations on the just transition?

- Who are the key stakeholders that investors should engage on the just transition?
- How can dialogue between investors, workers, communities and governments be developed productively?
- Where are there place-based opportunities for cross-sector collaboration in which investors can play the most useful roles?
- Where are there innovations in collective ownership, investment goals and vehicles, or collaborative engagement that can pilot new models for achieving the just transition?
- What policy reforms could better enable investors to contribute to a just transition?

Based on stakeholder feedback along with further research and engagement, the team will build an increasingly robust evidence base. This will involve:

- Widening the review of the landscape of how investors could best contribute to the just transition.
- Holding two consultation meetings to gather stakeholder perspectives on investor guidance and policy recommendations.
- Conducting two place-led pilot studies on the role of investors in specific regions in the UK and the US. We also welcome expressions of interest to conduct pilots in other countries.
- Releasing a draft case for action along with investor guidance at the PRI in Person conference and Global Climate Action Summit in September 2018.
- Following feedback, presenting a consolidated case for investor action and draft guidance for investors at the UNFCCC Katowice Climate Change Conference (COP24) in December 2018.

1. Introduction: investors, climate change and the just transition

Climate change: the strategic role of investors

Investors will play a critical role in the implementation of the 2015 Paris Agreement on Climate Change. This means decarbonising capital flows to hold the increase in global average temperatures to well below 2° Celsius as well as strengthening economic capacity to withstand the physical impacts of climate change. Importantly, a significant and growing proportion of the global investment community now recognises that long-term returns can only be generated if climate risks are controlled and sustainable development delivered. These efforts on climate change are part of the wider adoption of responsible investment practices across the financial system: 2,000 institutions with assets under management (AUM) of over US\$70 trillion have signed the Principles for Responsible Investment, committing themselves to integrate environmental, social and governance (ESG) factors throughout their operations (see Principles for Responsible Investment data portal, 2017).

Recognition of the strategic materiality of climate change is translating into investor action in terms of investment strategy, investor engagement, capital allocation, dialogue with policymakers and transparency over their actions and impacts. Highlights include:

- **Engagement:** Investors are engaging with the assets they own to better understand climate impacts and stimulate alignment with the Paris Agreement. In December 2017, 225 institutional investors with more than US\$26.3 trillion in AUM launched Climate Action 100+. This initiative is focusing on the world's largest corporate greenhouse gas emitters to encourage them to step up their actions. Investors are also benchmarking the management capability and carbon performance of firms to inform their engagement, through programmes such as the Transition Pathway Initiative (Grantham Research Institute on Climate Change and the Environment, 2018).¹
- **Capital allocation:** Investors are integrating climate factors into capital allocation choices across listed equities, fixed income, property and infrastructure as well as private assets. This involves decarbonising portfolios by reducing or removing allocations to high-carbon assets and directing flows towards assets aligned with the low-carbon economy: green bond issuance grew from just US\$11 billion in 2013 to US\$155 billion in 2017, for example (Climate Bonds Initiative, 2017).
- **Policy dialogue:** Investors are also working with local, national and international policymakers to put in place the reforms needed to correct the market and policy failures that create the climate problem. At the G20 Summit in July 2017, investors with US\$22 trillion in AUM urged the leaders of the world's largest economies to implement the Paris Agreement, to drive investment in the low-carbon transition and implement the climate reporting recommendations of the Financial Stability Board's Taskforce on Climate-related Financial Disclosures (TCFD) (CERES, 2017).

¹ The Grantham Research Institute is the academic partner for the Transition Pathway Initiative (TPI) and has evaluated the climate performance of nearly 140 listed companies for an alliance of international investors. See www.lse.ac.uk/GranthamInstitute/tpi/

Managing the structural implications of the transition

Action on climate change is certainly intensifying, but it remains insufficient in terms of speed and scale. Governments, businesses, investors and citizens are realising that the size of the restructuring required means that core economic policies for growth, employment and investment have to be rethought. Transformational policies are increasingly needed for both the real economy and the financial system. If governed well, it is clear that the climate transition can deliver significant economic, employment and social benefits (for example in terms of health). 'Earlier episodes of innovation-led structural change teach us that it can be a powerful engine for job creation, productivity improvements and growth,' argued Sam Fankhauser, Friedel Sehlleier and Nick Stern a decade ago, concluding that 'if this evidence is right, climate change has the potential to create many more jobs than it destroys in the long run' (Fankhauser et al., 2008; see also Bowen, 2012). Recent assessments have confirmed this. In its 2017 *Investing in Climate, Investing in Growth* report, the Organisation for Economic Co-operation and Development (OECD) estimated that a decisive transition package that avoids climate damage could boost long-run output by 5% on average across the G20 economies by 2050 (OECD, 2017a).

Nevertheless, there will be significant transitional challenges for key sectors, regions and countries. This is not a marginal issue. There are the direct concerns for affected industries, workers and communities which need to be managed. But there could also be wider implications for the pace of the transition itself if a focus on downside impacts comes to dominate the policy debate. This was highlighted with the decision by President Trump to pull the United States out of the Paris Agreement. Among the many reasons given by President Trump was a claim that compliance would cost the US millions of jobs, including in the coal industry. According to a fact-check conducted by Germany's Environment Ministry, President Trump's assertions on job losses were 'doubtful and misleading' (Federal Ministry for the Environment, Nature Conservation and Nuclear Safety, 2017). Indeed, international evidence collected by the OECD shows that green policies 'do not need to harm overall employment if they are well implemented' (OECD, 2017b; see also Bowen, 2012 and Fankhauser et al., 2008).

That a zero-carbon future is net-positive does not mean that the social implications of the transition can be brushed aside. To be successful, the transition will need to be socially inclusive as well as economically efficient and environmentally effective. Investors are increasingly conscious of the risk of 'stranded assets' in their portfolios. This awareness needs to extend to the threat of 'stranded workers' and 'stranded communities', to use the words of Sharan Burrow, General Secretary of the International Trade Union Confederation (see Burrow, 2017). As the shift to a zero-carbon economy gathers pace, investors could potentially make a significant contribution to ensuring that it delivers positive outcomes in workplaces and communities. For investors, this means linking the environmental, social and governance dimensions of ESG in order to develop a comprehensive response to climate change, one that also contributes to the delivery of the Sustainable Development Goals (SDGs).

The 'just transition' as a frame for action

For over a decade, this approach has been known as the 'just transition', a goal that is now part of the Paris Agreement. At its core, the just transition is a frame for action – a way to unify social concerns with climate progress. It is a means to identify opportunities for public and private investment in sustainable and inclusive growth. It helps to coordinate related activities across the multinational bodies, regional and national governments, climate-related business and investor networks, the development and philanthropic sectors, and the workers and communities who will feel the effects of the transition – whether well or poorly managed – most keenly.

The idea of the just transition has roots in the labour movement and its efforts to connect environmental sustainability with the imperatives of decent work and social inclusion. In recent years, the idea has received increasing attention across a number of domains. Community advocates have used the idea of a just transition to highlight how environmental issues affect marginalised people, places and sectors. Regional and national governments are beginning to link climate strategies to industrial policy and economic development. Global development organisations have highlighted the need to connect the climate agenda with the needs of developing countries. And development finance institutions (DFIs) are exploring their role as conduits and partners to catalyse private sector capital for inclusive approaches to clean energy deployment and resource efficiency. This broad multi-sector support for breaking down the silos of environment, society and economy mirrors the growing recognition that a joined-up approach provides a more likely and beneficial chance to effect the necessary transition to a low-carbon economy.

Aims of the *Investing in a Just Transition* project

In spite of the growing recognition among investors of the need to integrate the social dimension into their climate strategies and examine what contribution they could make to the just transition, there is a lack of robust analytics and guidance to enable investors as a whole to play an effective role. The *Investing in a Just Transition* project aims to fill this gap. It will undertake three main activities:

- **The strategic case for investor action on the just transition** in terms of factors such as risk, opportunity and investor responsibility will be explored through a scoping exercise.
- **Draft guidance for investors and the just transition**, covering aspects such as shareholder engagement, capital allocation and policy dialogue, will be produced, based on emerging practice.
- **Recommendations for policy, market and community-level approaches** that identify and enable effective investor contributions to the just transition will be generated through a process of dialogue and analysis.

In addition, the project will link investors to the broad array of policy, place-based, community, labour and business efforts to deliver a just transition and explore ways of empowering community and labour groups to effectively engage with investors. It will provide a resource for leading investor initiatives during 2018 such as the Climate Action 100+. Finally, it will lay the foundations for long-term action by investors and others to ensure that the climate transition contributes to the wider Sustainable Development Goals.

The aim is to present draft guidance in time for the UNFCCC's Climate Change Conference (COP24) in Katowice in December 2018.

Project background, delivery and funding

The *Investing in a Just Transition* project started in February 2018 and has been co-designed by the Grantham Research Institute on Climate Change and the Environment at the London School of Economics and Political Science and the Initiative for Responsible Investment (IRI) at the Harvard Kennedy School. Nick Robins leads the Grantham team and the IRI team is led by Vonda Brunsting and David Wood. We have begun this project because we believe that the just transition will continue to grow as a strategic issue affecting policy and markets – and investors need to bring their expertise and resources to bear.

The project is being delivered in partnership with the Principles for Responsible Investment (PRI) and the International Trade Union Confederation (ITUC). It is guided by an international advisory

committee, co-chaired by Fiona Reynolds, CEO of the PRI and Sharan Burrow, General Secretary of the ITUC. The project is funded by the PRI, the Friends Provident Foundation in the UK and the Surdna Foundation in the US.

Purpose and structure of the paper

This discussion document is the first output from the *Investing in a Just Transition* project. It draws on an initial review of experience, interviews with key experts and the results of a round of meetings, for example in Australia, Canada, South Africa, the UK and the US. It is by nature incomplete and presents a work in progress. Its purpose is to offer our emerging insights and seek readers' inputs and feedback for the next phase of the project. This is critically important in order to strengthen the rigour of our analysis and the practical value of our findings in terms of investor guidance and policy recommendations.

The rest of this discussion document reviews the evolution of the just transition agenda and identifies key aspects of this multi-dimensional challenge. It then explores the strategic rationale for investor involvement and suggests ways in which investors could contribute, before closing with key questions and next steps.

2. The just transition: a critical dimension of climate action and sustainable development

Each time the global economy goes through a wave of structural change, critical issues emerge that focus on how the process is managed so that the benefits are widely shared and the costs are distributed fairly. Even where the overall impacts are positive, particular firms, sectors and regions can be hit hard. With each wave, this challenge of transition needs to be addressed head on to avoid increasing inequality, economic stagnation and political instability.

The same issues of how to manage economic transformation are starting to arise in the context of climate change and the wider shift to sustainable development. The just transition is a multi-dimensional and often contested concept.² What is just (and valued as important) will vary and conceptions of justice will differ across society. Questions around the just transition affect society today but also have intergenerational implications.

This section explores the growing importance of the just transition in the climate agenda and identifies the critical dimensions investors could consider as they develop a strategic response.

The evolution of the just transition agenda

Trade unions were among the first to call for a just transition: one that involves environmental regeneration as well as decent work, social inclusion and poverty eradication. The term originates from the US chemical industry which was facing in the 1990s the challenge of overcoming toxic pollution. 'The basis for just transition is the simple principle of equity,' argued Les Leopold of the Labor Institute at the time (Labor Network for Sustainability and Strategic Practice, 2016). It was extended to the climate arena in the early 21st century. In 2007, for example, the International Trade Union Confederation (ITUC) made clear to climate negotiators that 'the effects on the economy – including on employment – will be catastrophic if ambitious measures are not taken to reduce [greenhouse gas] emissions' (quoted in Rosemberg, 2010). A growing number of community organisations as well as local and national governments have also started to focus both on boosting job creation through new low-carbon industries as well as mitigating the negative impacts on employment of decarbonisation.

What is the just transition?

'A just transition is an economy-wide process that produces the plans, policies and investments that lead to a future where all jobs are green and decent, emissions are at net zero, poverty is eradicated, and communities are thriving and resilient.'

(ITUC, 2017a)

In 2013 the International Labour Organization (ILO), which is the United Nations' agency for the world of work, began to bring together governments, employers and workers' organisations to develop a policy framework on the just transition. The result was a set of non-binding guidelines, issued in November 2015. These set out how to deliver a just transition to environmentally sustainable economies and societies, not just in terms of responding to climate change (ILO, 2016). These guidelines were negotiated and agreed through a tripartite process involving governments, and employer and union organisations, and were endorsed by the ILO's governing body. The guidelines outlined the opportunities and challenges for the world of work and contain a comprehensive framework covering 10 key policy areas. Highlights are included in Table 1.

² The just transition is also linked to broader questions of environmental and climate justice. See Schlosberg and Collins (2014).

Table 1. The ILO's guidelines for a just transition - 10 key policy areas

Policy area	Example
1. Macroeconomic and growth policies	Undertake collaborative efforts to incorporate the just transition framework into macroeconomic policies (including tax reform).
2. Industrial and sectoral policies	Pay special attention to the industries, regions, communities and workers whose livelihoods might experience the hardest impacts.
3. Enterprise policies	Enhance the resilience of businesses, in particular micro, small and medium-sized enterprises (MSMEs), to avoid disruption to economic activity and loss of assets, jobs and incomes.
4. Skills development	Give high priority and allocate resources to identifying and anticipating evolving skills needs and the alignment of training programmes.
5. Occupational health and safety	Assess occupational safety and health risks from climate change, resource scarcity or other risks linked to the environment.
6. Social protection	Promote adequate social protection systems, including healthcare, income security and social services.
7. Active labour market policies	Encourage policies that help enterprises and workers to anticipate changing labour markets (especially workers affected by climate change).
8. Rights at work	Implement international labour standards: freedom of association, the right to collective bargaining; prohibition of forced labour and child labour; equal remuneration; non-discrimination.
9. Social dialogue	Actively promote social dialogue to forge consensus on pathways towards environmental sustainability with decent work.
10. Policy coherence	Integrate provisions for a just transition into national plans and policies for the Sustainable Development Goals and national climate plans.

Source: ILO (2016)

This work laid the foundations for including the just transition in the Paris Agreement on Climate Change one month later. The preamble to the Agreement states that governments should take into account 'the imperatives of a just transition of the workforce and the creation of decent work and quality jobs in accordance with nationally defined development priorities' (UNFCCC, 2015).

After Paris: exploring the implications of the just transition

Following the Paris Agreement, the secretariat of the UN Framework Convention on Climate Change (UNFCCC) produced an in-depth examination in 2016 of the quantitative and qualitative implications, which are summarised below:

- **Quantitative impacts:** Climate change and the transition to a low-carbon economy will have quantitative impacts in terms of the number of jobs created, substituted, eliminated and transformed across industry sectors. To date, 'mitigation policies (such as replacing fossil fuels with renewable energy) have had limited impact; most of the employment changes have been due to industrial restructuring and growing mechanization, unconnected to sustainability policies' (UNFCCC, 2016: 14).

- **Qualitative impacts:** Climate change and the transition will also have qualitative impacts on employment: ‘Jobs created in the transition to a low-carbon economy must be “decent”. This means jobs that provide adequate incomes and social protection, safe working conditions, respect for rights at work and effective social dialogue’ (ibid.).

The UNFCCC also conducted a first analysis of sectoral impacts and identified nearly 1.5 billion workers critical to climate stability; the key sectors are set out in Table 2 below. Overall, it concluded: ‘Although winners are likely to far outnumber losers, the negative impacts should not be overlooked or taken lightly’ (ibid.).

Sector	No. of jobs
Energy	30 million
Forestry	44 million
Transport	88 million
Buildings	110 million
Resource-intensive manufacturing	200 million
Agriculture	1,000 million
Total	1,472 million

Source: UNFCCC (2016)

The full depth and breadth of the implications of the transition for employment are likely to go well beyond these headline numbers. Changes in the sectoral balance of economies can have profound knock-on implications on associated businesses, potentially resulting in some regions being ‘left behind’. This has been the case for many industrial regions in the OECD that were once based on high-carbon sectors such as coal and steel. Industrial clustering means that a just transition cannot be delivered simply through a focus on individual workplaces. A holistic approach is needed that looks at the direct and indirect implications of the transition both for employment and for wider community prosperity. Experience of attempts to rejuvenate ‘rust belt’ regions is therefore highly relevant to the shift to a zero-carbon economy. Here, for example, the attempted renewal in Europe’s old industrial regions demonstrates that ‘successful regional transition is – while not inevitable – indeed possible’ (Campbell and Coenen, 2017).

Looking across the economy, a number of sectors stand out for in-depth assessment.

Energy

To date, much of the public discussion around the just transition has focused on the energy supply sectors. One estimate suggests that the transition to a 100% renewable energy system by 2050 could create 52 million full-time jobs and cause the loss of 27 million jobs across non-renewable and carbon-based energy options, a net gain of 24 million jobs (Jacobson et al., 2017). The implications for the coal sector are particularly acute, not least because of its high-carbon profile and the growing number of countries with coal phase-out plans.³ In November 2017, for example, more than

³ The Coal Transitions international research project has an extensive base of analysis on the challenges at stake. See <https://coaltransitions.org/>.

20 governments launched the Powering Past Coal Alliance, which now includes more than 25 national and numerous subnational government members (BEIS, 2017a).

Coal mining represents about a third of overall energy sector employment, but employment levels have been in structural decline, largely for non-environmental reasons. In 2015, coal employed an estimated 9.7 million people worldwide. By comparison, according to the International Renewable Energy Agency (IRENA), jobs in renewable energy grew from 7 million in 2012 to 10.3 million in 2017 (McPhee, 2018).

As clean energy grows, more attention is being placed on how this can catalyse wider social benefits, not least in terms of access to energy across the developing world. In the workplace, women are under-represented in this growth sector, accounting for only 20–25% of employees in the renewable sector in countries such as Canada, Germany, Italy, Spain and the US (Baruah, 2016). In addition, community impacts (including questions of spatial justice) also need to be managed with the deployment of renewables infrastructure projects (Yenneti et al., 2016).

Transport

Energy supply is tightly linked with the transport sectors on land, sea and air, which have combined employment levels three times larger than the energy sector. Here, a convergence of powerful forces is leading to potentially profound disruption. Air pollution and climate risk are part of a broad array of social and environmental factors leading to smarter urban design and integrated low-carbon transportation. Over the next decade, this could deliver significant financial and wellbeing gains, with opportunities to redesign more resilient, healthier cities as well as a 90% reduction in carbon emissions from vehicles, according to one estimate from RethinkX (Arbib and Seba, 2017). In addition, this fundamental move to 'transport as a service' (TaaS) could mean 70% fewer passenger cars and trucks being manufactured each year, along with many jobs in driving, fuelling and maintenance becoming obsolete (ibid.). Already job losses are growing in the manufacture of diesel vehicles. Concerns have also been expressed about labour conditions in emerging low-carbon pioneers such as Tesla (see Reuters, 2017). This ongoing transformation of mobility highlights that climate change may be just one factor in a system-wide remaking of business models, employment and quality of life that needs to be managed as a whole. This is particularly important in terms of the importance of transport planning for the fast-growing megacities of the developing world, to ensure accessible mobility.

Agriculture, forestry and fisheries

Agriculture, forestry and fisheries are the sectors with the greatest employment exposure and the most direct vulnerability to the physical impacts of climate change. Agriculture accounted for 31 per cent of global employment in 2013, down from 45 per cent in 1991 (UNFCCC, 2016). Agricultural production and employment conditions are already being affected by rising temperatures, changing rainfall patterns, increasingly harsh extreme events in terms of droughts and floods, as well as the geographical redistribution of pests and diseases. Agriculture is also a sector where working conditions are often poor and where labour standards need substantial improvement, particularly for women.

To date, the just transition has largely been viewed in the context of efforts to mitigate climate change and deliver decarbonisation. There are also profound workplace and social issues related to building resilience to physical climate impacts. These extend across all sectors, including within the service sector, which is already being affected by the physical impacts of climate change. Workers in professions such as healthcare may not seem like typical climate-related jobs, but these sectors are already facing increasing demands and unforeseen impacts. Investors are also starting to measure physical climate risk in their portfolios; extending this to explore the social dimensions would be a next step (Four Twenty Seven and Deutsche AM, 2017).

Multi-stakeholder action to deliver a just transition

The just transition agenda is becoming ever more sophisticated, with a growing number of stakeholders involved and greater depth of analysis and action. On the international policy front, the ILO and UNFCCC continue to promote international cooperation on the issue, hosting the first Global Forum on a Just Transition in December 2017 (ILO, 2017). The ILO's *World Employment and Social Outlook 2018* focused on the potential for the 'greening' of jobs (ILO, 2018) – see Box 1.

Box 1. Key findings of the International Labour Organization's 2018 *Greening with Jobs* report

The 2018 edition of the ILO's *World Employment and Social Outlook* focuses on the strategic linkages between the shift to a green economy and the world of work. Its key findings include:

'The transition to a green economy will inevitably cause job losses in certain sectors as carbon- and resource-intensive industries are scaled down. But these will be more than offset by new job opportunities. Measures taken in the production and use of energy, for example, will lead to job losses of around 6 million as well as the creation of some 24 million jobs. A transition to agricultural sustainability and a circular economy will result in more and often better jobs.' (p1)

'The job-creating potential of environmental sustainability is not a given: the right policies are needed to promote green industries while ensuring decent work within them. They are also needed to allow workers to transition to new sectors and to protect those who may lose out due to lower activity in industries that contribute to environmental degradation.' (piii)

'Legal standards can promote progress towards decent work during and beyond the transition to environmental sustainability. By virtue of their broad acceptance and universal relevance for workers, workplaces and the various sectors, international labour standards provide a social pillar for the green economy and can help to ensure that emerging sectors offer decent working conditions.' (p2)

'Social dialogue has contributed to making environmental governance more labour-friendly by promoting frameworks, legislation and policies that include both labour and environmental concerns.' (p3)

'Social dialogue, the elimination of discrimination in employment and occupation, and good governance are the foundations of an effective and just transition.' (p4)

'Although skills development programmes for enterprises and workers facilitate the transition to a green economy, they are yet to be mainstreamed in policy discussions. Skills development programmes are crucial to the achievement of a just transition.' (p4)

'A just transition offers enhanced potential for decent job creation through the integration of labour and environmental issues. [...] Environmental laws, regulations and policies that include labour issues offer a powerful means of integrating elements of the Decent Work Agenda with environmental objectives.' (p4)

Source: ILO (2018)

The ITUC has established a dedicated Just Transition Centre to be a centre of excellence for both analysis and outreach (Smith, 2017; ITUC, 2017a). In Europe, detailed analysis has been undertaken to explore the implications of the low-carbon transition in seven industrial regions in Belgium, Bulgaria, Germany, Poland, Spain, Sweden and the UK. From these, the European Trade Union

Confederation (ETUC) highlighted the need to accelerate the deployment of low-carbon technologies and develop regional strategies for a just transition, as well as to consult with trade unions and employers along with increased investment in skills (ETUC, 2016). The ETUC has also produced a guide on how trade unions can get involved in climate action to deliver a just transition (ETUC, 2018).

More broadly, the trade union movement has drawn up a set of key principles for a just transition, going beyond the workplace to include community renewal and investment (see Box 2).

Box 2. Key principles of a just transition

1. **Anticipation:** research and early assessment of social and employment impacts
2. **Active dialogue:** social dialogue and democratic consultation of social partners and stakeholders
3. **Labour markets:** active labour market policies and regulation, including training and skills development
4. **Social protection:** including securing of pensions
5. **Regeneration:** community renewal and economic diversification plans
6. **Investments:** sound investments leading to high quality, decent jobs

Source: ITUC (2017b)

Across civil society, the just transition has also been the focus for community campaigning and advocacy in Australia, South Africa and the US, notably by those impacted by high-polluting sectors. In the US, action in marginalised ‘frontline communities’ has highlighted the racial, gender, income and power dimensions of the transition.⁴ For grassroots organisations and philanthropic institutions pioneering alternative models for low-carbon development with a particular focus on local and place-based projects, the just transition has become a coordinating mechanism for community development, social justice and environmental sustainability advocates.⁵ For instance, the Just Transition Fund, which is focused on coal-affected communities in Appalachia and elsewhere, has built on federal government funding and US grant-making to support bottom-up innovation in sustainable economic development (Just Transition Fund, 2018). Place-based strategies such as these work up from local community levels to influence the direction of regional and national strategies, and work from a shared set of just transition principles meant to move resource flows towards more socially optimal outcomes.

A wide range of environmental organisations are also focused on ensuring that the transition is ‘fast and fair’. Before Paris, Greenpeace highlighted the need for governments to ‘put in place the progressive economic measures necessary to distribute the positive and negative impacts of the transition’ (Greenpeace, 2014). WWF and CARE have emphasised the strong synergies between the Paris Agreement and the Sustainable Development Goals, pointing to the need for greater ambition ‘to accelerate a just transition to net-zero emissions, climate-resilient sustainable development and poverty eradication’ (WWF and CARE, 2016). For Friends of the Earth International Chair Karin Nansen, ‘an “unjust” transition – one that leaves workers behind, abandons communities to post-industrial decline, and deepens inequality – is not acceptable. Likewise, a shift to “green jobs” that are precarious, badly-paid and few, is not acceptable’ (Friends of the Earth International, 2017). The Climate Action Network (CAN) has highlighted the just transition as one of ‘great eight’ rights-related dimensions in the Paris Agreement preamble, the others being human rights, indigenous

⁴ See, for example, Just Transition Collaborative, University of Colorado (2016).

⁵ See, for example, the Our Power Campaign: Communities United for a Just Transition at www.ourpowercampaign.org, a network of grassroots organisations coordinating as the Climate Justice Alliance.

peoples' rights, public participation, gender, ecosystem integrity and protection of biodiversity, food security, and intergenerational equity (CAN, 2018a). It has also argued for the just transition to be placed on the agenda of the G20 (CAN, 2018b).

Leaders in the business community are also acknowledging the need for a transformation in global markets to start to lay out elements of the just transition. The Business and Sustainable Development Commission (2017), for example, identified 380 million new jobs that could flow from the implementation of the Sustainable Development Goals (SDGs) by 2030, with many linked to the climate agenda. A guide for business action on the just transition was published in May 2018 (Just Transition Centre and B Team, 2018). Individual companies are also starting to link their climate change strategies with a strong social dimension (B Team, 2017). Italian energy utility Enel is one of these, making a strategic commitment to four of the SDGs: SDG 4 (education); SDG 7 (clean and affordable energy); SDG 8 (decent work) and SDG 13 (climate action) (Enel, 2017a; see also Box 3).

Box 3. Enel's commitment to a just transition in partnership with trade unions

Enel has committed to decarbonise its energy mix by 2050. As part of this, it will close 13 GW of thermal power stations in Italy and expand low-carbon options such as renewable energy and demand management. The company has entered into social dialogue and a framework just transition agreement with its Italian union partners (Enel, 2017b). The framework covers retention, redeployment, reskilling and early retirement for elderly workers. According to the ITUC's Just Transition Centre, 'it is a good example of a just transition agreement for the sector', including provisions for: a recruitment plan using apprenticeships to ensure the knowledge transfer from elderly to younger workers; encouraging mobility and training for the optimisation of internal resources; and dedicated training to ensure qualification and employability as well as for the creation of new skills for new business (Just Transition Centre, 2017).

Finally, a growing number of regional and national governments are also introducing a number of both proactive and reactive just-transition initiatives. In Australia and Canada, these are specifically related to the coal sector.

- **Australia:** On 1 May 2017, the Government of the State of Victoria announced the signature of the Latrobe Valley Worker Transfer Scheme Partnership Agreement, potentially a model for the transition of workers in the energy sector from carbon-intensive to low-carbon generation (Public Services International, 2017) (see Box 4).
- **Canada:** In February 2018, Canada launched the Task Force on the Just Transition for Canadian Coal-Power Workers and Communities to provide the government with expert advice on how to make the phase-out of coal a fair one (Government of Canada, 2018a). The Task Force builds on long-standing work in Canada ranging from the promotion of positive 'green job' opportunities (York University et al., 2018) to provincial-level dialogue to manage the decline of high-carbon sectors⁶ (see Box 4).

⁶ In Canada, York University's Work in a Warming World provides an extensive resource of materials on adapting Canadian work and workplaces to respond to climate change at <http://www.adaptingcanadianwork.ca/>.

Box 4. Insights for investors from the just transition initiatives in Australia and Canada

Australia: State of Victoria and the Latrobe Valley

In November 2016, the French-based energy company ENGIE announced that it was closing the Hazelwood coal-fired power station in the Latrobe Valley, the most carbon-intensive electricity generator in Australia. The decision was part of the company's global decarbonisation plans but came as a shock and revealed a lack of pre-closure transition planning. The Construction, Forestry, Mining and Energy Union (CFMEU), together with the Australian Council of Trade Unions (ACTU), asked the state government to intervene. The end result was the Latrobe Valley Worker Transfer Partnership Scheme, announced in May 2018. The deal includes a commitment to minimise job losses, retrain workers, and an early retirement scheme that will free up positions for those wishing to continue working in the industry. This worker transfer scheme is part of an A\$266 million transition package for the Latrobe Valley, the largest regional development package ever announced by a Victorian government. Importantly, this scheme builds on the 2010 Global Agreement on Fundamental Rights, Social Dialogue and Sustainable Development, reached by ENGIE's predecessor company GDF-Suez with the IndustriALL Global Union; this agreement included specific provisions on the just transition (IndustriALL Global Union, 2012). Looking ahead, an analysis of the political economy of the transition away from coal-fired power generation in Australia, in light of the Hazelwood closure, concluded: 'Absent institutional reform, the most likely means by which coal closures could move closer to "best practice" in Australia is through action by unions and environmental groups to mobilise institutional investors to pressure energy companies to adopt more worker- and community-friendly, "just transition" policies' (Wiseman et al., 2017).

Canada: Government of Alberta's coal transition plan

In November 2017, the Government of Alberta released the 35 recommendations of its Advisory Panel on Coal Communities for promoting a just transition (Government of Alberta, 2017). The panel was set up in response to the target within the government's Climate Leadership Plan to phase out coal-fired electricity by 2030. The Advisory Panel focused on three key stakeholders: workers, communities and First Nations. The 18 recommendations regarding workers relate to income security and replacement, pension security, retraining and re-employment and propose a strong role for unions in planning and process. The government also established a C\$40 million transition fund for workers and communities to cover financial support for retraining, on-site employment counselling and the provision of facilitators to develop a workplace transition plan. The plan was influenced by the work of the Coal Transition Coalition project, an alliance of unions led by the Alberta Federation of Labour (AFL) (Coal Transition Coalition, 2017). The AFL described the plan as 'a step in the right direction' and highlighted the need for federal action both on employment insurance and economic diversification in affected communities. These will now be taken up by Canada's new Task Force. The Task Force is focused in the first instance on Canada's phase-out of coal; its work could broaden over time.

Lessons learned

Investors were not involved in these processes in either country. Nevertheless, these examples suggest three insights:

- The importance of global agreements between multinational corporations and trade unions to embed fundamental rights and strategic sustainability priorities (including the just transition) in operational practice.
- The need for practical structures for dialogue in the workplace to explore the adjustment process and develop a transition plan; these will clearly differ according to jurisdiction, given the widely different institutional structures for giving employees a voice in corporate governance.
- The potential role for investors to engage in dialogue with unions, businesses and policymakers to encourage the adoption of emerging good practice.

In Europe, the policy focus looks beyond coal to the wider implications of the low-carbon transition particularly for key industrial regions, often placing this in a broader sustainable development context.

- **The EU:** At the One Planet Summit held in Paris in December 2017, the European Commission launched two new initiatives to address the climate and industrial transition challenges for high-carbon regions: the first focuses on coal and carbon-intensive regions, while the second looks more broadly at industrial transition, focusing on the development of 'smart specialisation' strategies that harness decarbonisation, digitisation and the improvement of people's skills (European Commission, 2017). The overall aim is to ensure that 'no regions are left behind in the shift to a sustainable future'. In addition, as part of the 2017 reform of the EU Emissions Trading System, the just transition has been included as one of the priorities of the Modernisation Fund, which will receive a small share of trading revenues.
- **France:** As part of its implementation of the Paris Agreement, France's Ministry for the Ecological and Inclusive Transition is exploring the just transition in the context of the national roadmap to implement the SDGs. In addition, it is promoting an international coalition for a just transition with a number of international partners.
- **Scotland:** In September 2017, the Scottish Government announced it would set up a Just Transition Commission 'to advise on adjusting to a more resource-efficient and sustainable economic model in a fair way which will help to tackle inequality and poverty, and promote a fair and inclusive jobs market' (Scottish Government, 2018).

The just transition is also rising up the policy agenda in the developing world, notably in South Africa:

- **South Africa:** In February 2018, the National Planning Commission issued a new paper on energy, laying out the challenges facing a system dominated by coal following the Paris Agreement and the rapid global development of clean energy technologies. The paper highlighted that the risk of stranded infrastructure investment in the South African coal industry is 'significant' and pointed to 'an urgent need for co-ordinated stakeholder action driven by government to facilitate a transparent decision-making process on the future of coal in South Africa as part of a just energy transition' (National Planning Commission, 2018).

South Africa is just one of many developing economies with a high dependence on fossil fuels. More broadly, analysis is revealing risks of 'stranded nations', where strategic action will be needed in fossil-fuel-dependent developing countries to generate decarbonisation with inclusion and growth (Manley et al., 2017).

This focus on the social dimension of climate change comes at a time when a growing number of financial policymakers are realising the importance of taking a system-wide approach to mobilising capital for green growth and sustainable development.⁷ The need for a systemic approach is hardwired into the Paris Agreement, which commits countries to make 'financial flows consistent with a pathway towards low greenhouse gas emissions and climate-resilient development' (UNFCCC, 2015, Article 2c). A small but growing number of countries, such as Canada (Government of Canada, 2018b), China (People's Bank of China, 2016), the EU (European Commission, 2018), Italy (UNEP, 2017), Morocco (Jouahri, 2016) and the UK (BEIS, 2018), are now putting in place green and sustainable finance roadmaps to deliver this. Importantly, these policy initiatives are starting to

⁷ See UN Environment's Inquiry into the Design of a Sustainable Financial System for details of global practice – <http://unepinquiry.org>.

cover not just the environmental but also the social dimensions of sustainable finance. This was highlighted in the recent report of the EU’s high-level expert group on sustainable finance (Box 5).

Box 5. Europe – the role of sustainable finance in the just transition

‘Sustainable finance has a key role to play in delivering a “just transition”, and in making sure that the shift away from high-carbon, resource-intensive and polluting sectors produces net benefits for workers and communities. This could be achieved, for example, by working with local authorities, communities and others to develop investable pipelines of green assets (such as property and infrastructure) in vulnerable regions.’

Financial Stability, Financial Services and Capital Markets Union (2018a: 12)

Identifying the critical dimensions of the just transition

Our initial survey of the landscape shows that the just transition is a multi-dimensional challenge. We have identified 10 strategic dimensions of that could help frame the investor response (Table 3).

Table 3. The just transition: 10 dimensions for investors to consider

1. The just transition is about managing both the positive and negative social and employment implications.	6. The just transition covers the social and the spatial, highlighting the importance of place.
2. The just transition is global in scope, affecting developed and developing countries.	7. The just transition needs to be understood along global value chains.
3. The just transition is a whole-economy issue, covering all sectors, far beyond energy.	8. The just transition is about both process ('how') and performance ('what').
4. The just transition connects climate change with the Sustainable Development Goals.	9. The just transition is part of a growing focus on unequal financial and economic systems.
5. The just transition is part of the future of work in an increasingly digital economy.	10. The just transition will need to be delivered in a time of political disruption and upheaval.

1. The just transition is about managing the positive and negative social and employment implications

The just transition addresses how the rapid shift to a zero-carbon economy impacts the workplace and the broader community. This shift contains not one but two interlinked transitions, both of which have a profound social dimension. The first is the phase-down of high-carbon sectors and activities, where the focus is on ensuring decarbonisation with inclusion, taking into account risks of job displacement and smoothing the path to the enterprises and jobs of the future in key sectors and regions. Some of this could well be achieved by a focus on the expansion of zero-carbon opportunities, but this does not need to be the case. The second transition is the phase-up of the clean economy, where the just transition focus is to ensure that the positive potential for zero-carbon sectors to deliver decent work, reduce inequality and spur economic renewal is realised.

2. The just transition is global in scope, affecting developed and developing countries

The just transition affects all parts of the world. Most of the focus to date has been on industrialised countries. But in the future the scale of the challenge will be significant in developing countries,

notably those that have a high carbon intensity (emissions per unit of GDP), and those that rely on fossil fuel sectors for energy and exports (such as China, India, Indonesia and South Africa). Linking the just transition agenda with nationally determined climate plans and also with economic development and industrialisation strategies, and addressing unemployment as well as the formalisation of informal jobs, will all be key.

3. The just transition is a whole-economy issue, covering all sectors, far beyond energy

The just transition affects the whole economy – not just high-profile sectors such as coal. Coal is just one part of the transition in energy supply and demand, which also involves oil and gas, as well as nuclear, renewables and, crucially, energy efficiency. In turn, the energy transition is only one part of the zero-carbon economy, which also includes non-energy-related emissions notably from agriculture and forestry, and efficiency-related changes in the built environment. And the zero-carbon economy is only one part of the climate transition, which also involves making all economies and communities resilient to the physical impacts of climate change.

4. The just transition connects climate change with the Sustainable Development Goals

The just transition is an important manifestation of the impulse behind the SDGs, which link environmental, social and economic elements into an integrated approach. The ILO's guidelines for a just transition thus go beyond climate change to look broadly at environmentally sustainable development. In many ways, the just transition can be usefully seen as lying at the intersection of a cluster of SDG themes, such as climate, clean energy, decent work and equality. This helps to place investor action on climate in the broader strategic context.

5. The just transition is part of the future of work in an increasingly digital economy

The just transition is one aspect of the wider debate on the future of work. Many of the key solutions to climate change – solar energy, electric vehicles, resource efficiency, smart cities – are part of the wider digitisation megatrend. This means understanding the environmental and climate-change drivers of change in conjunction with other factors such as technology disruption, business model shifts and societal choice. Key to this will be understanding the scale of change required for workers to thrive in the low-carbon transition. New analysis estimates that 44% of US workers already have the transferable skills needed to contribute to the green economy and that the scale of the change involved in the greening of the US workforce will not be as disruptive as the changes that happened from the IT revolution in the quarter century after 1980 (Kuralbayeva, 2018).

6. The just transition covers the social and the spatial, highlighting the importance of place

The just transition addresses the social dimension of the transition (workers, communities, households) as well as the spatial (places, communities, regions). Both high-risk and high-potential sectors are often clustered in particular places. Rooting the just transition in the realities of place is an important part of rebalancing economic development so that it is regionally inclusive – a priority for an increasing number of countries.

7. The just transition needs to be understood along global value chains

The just transition has implications along the full global value chain of different sectors. It is not just a 'point source' issue. Often the most vulnerable enterprises, communities and workers will be suppliers to more prominent firms, with limited capacity to diversify and limited market power. This means making strong connections with the extensive experience in how to respect human rights in supply chains.

8. The just transition is about both process ('how') and performance ('what')

The just transition is about 'how' a structural shift is managed and 'what' is delivered, resting on two key pillars. The first is the procedural, covering how decisions are made (e.g. social dialogue, community involvement, public policy making). The second is the substantive pillar, covering how

the process of change impacts social, economic and environmental performance (e.g. jobs, skills, health and safety, wages, pensions, community health, regional economics and carbon emissions).⁸

9. The just transition is part of a growing focus on unequal financial and economic systems

Ten years on from the 2008 global financial crisis, there is growing concern about the implications of widening inequality and an increasing focus on how to shift from extractive to inclusive financial and economic systems (see Acemoglu and Robinson, 2013). Linked to this is the continuing shift in many developed countries from an industrial economy with some well-paying unionised jobs to a service economy with fewer well-paying jobs and more jobs with lower pay, fewer benefits and more precarious conditions. This context can mean workers and communities may have little power to change the market and governments may feel constrained in their ability or inclination to intervene.

10. The just transition will need to be delivered in a time of political disruption and upheaval

The just transition comes at a time of considerable global uncertainty, with a reaction against globalisation in some quarters, the growth of an increasingly nationalist policy environment, and intense focus on the need to close social divides, whether in terms of income, gender or race. Furthermore, the energy transition is evolving not just in terms of decarbonisation and decentralisation, but also in terms of the democratisation of energy production and consumption.

For investors seeking stable long-term returns, or those concerned about the real-world impacts of their investments, the just transition offers one way of responding in this time of turmoil.

⁸ We are grateful to Fergus Green for this insight. See Green (2018).

3. Exploring the investor role in the just transition

A missing dimension? Investors and the just transition

Our review of the just transition agenda has highlighted the role of many actors: international organisations, trade unions, governments, business and civil society. To date, investors have not been actively involved in the just transition agenda (Robins, 2017). Investors – and the financial sector more broadly – are usually only referenced in passing in the initiatives we have reviewed, if at all.

Likewise, the social dimension has so far been missing from most investor strategies to tackle the threat of climate change. The low-profile given to the workplace and community elements of climate change in the reporting recommendations of the Taskforce on Climate-related Financial Disclosures (TCFD) is illustrative in this regard. Mobilising human resources will be one of the critical factors determining corporate success in responding to climate change, involving issues such as managing employment relations and preparing for appropriate skills development. The TCFD's scope did not include the wider social dimension and these implications are mentioned only occasionally within the recommendations (see Box 6).

Box 6. Taskforce on Climate-related Financial Disclosures (TCFD) – the social dimension

The recommendations of the TCFD have been widely welcomed by businesses, investors and governments as providing a globally consistent reporting framework for institutions. The recommendations introduce a voluntary, business-led framework structured around how institutions incorporate climate change factors into their strategy, governance, risk management and performance metrics.

The recommendations point to the workplace dimension on a few occasions. Risks cited include reputation management issues around employee attraction and retention, along with potential reduced revenues and higher costs from negative impacts on workforce from physical climate impacts (e.g. health, safety, absenteeism). Opportunities cited include the way in which resource efficiency could lead to benefits for workforce management and planning (e.g. improved health and safety, employee satisfaction), resulting in lower costs. The importance of social dialogue and community relations is largely absent.

Source: TCFD (2017)

This low profile is not a sign that the just transition is unimportant for investors. Rather, it signals that investor approaches to climate change have yet to connect the environmental, social and governance dimensions of responsible investment. The risk is that investor climate actions are being taken in a silo. Fortunately, however, there is room to manoeuvre. Investors have developed growing experience with managing the social dimension of responsible investment, which can now be applied to responding to the environmental drivers of climate change. This section explores the emerging case for action and then sets out an initial set of options for investor action.

The rationale for action: why should investors care about the just transition?

Investors will have multiple and overlapping motives for focusing on the just transition, not merely as a topic of policy concern but as a particular area in which investors can and should play important roles. Investors are a diverse group, ranging from multi-trillion dollar asset managers to individual citizens, from public pension funds to cooperative insurance firms, from family offices to university and philanthropic endowments and on to development finance institutions. Digital

technology is also enabling direct investing by individual savers. They have many different objectives – some operate as fiduciaries acting on behalf of others (notably pension savers); some are purely commercially minded; and others aim to ensure their investments are aligned with their wider mission in terms of delivering public value.

Against this backdrop of diversity, we have identified six reasons why investors could consider an active role in the just transition. In brief, these are that a focus on the just transition:

- integrates the environmental and social pillars of responsible investment
- aligns investor practice with international goals and standards
- provides a lens for identifying new investment opportunities
- responds to beneficiary interests and preferences
- enhances understanding of systemic risk by connecting climate and inequality
- offers a platform for collaboration between investors and other stakeholders

1. Integrating the environmental and social pillars of responsible investment

For investors, the just transition follows naturally from a commitment to integrate ESG factors into decision-making. It makes concrete the challenge of a deep, integrated approach to responsible investment as a unified approach to long-term investment strategy. Climate change has become a leading concern of investors, but there is also growing investor interest in the ‘S’ of ESG. What the just transition does is join the dots between the environmental and social pillars of responsible investment, helping to overcome the risk of a siloed approach.

To take one example, the just transition points to the materiality of how companies are engaging their workforce and managing human resources in the transition as a driver of long-term value (see Box 7, next page).

2. Aligning investor practice with international goals and standards

Beyond the financial motives for integrating ESG analysis, investors also have ‘soft law’ obligations to implement human rights and international labour standards in the assets they own. These flow from the UN Guiding Principles on Business and Human Rights (UNGPs), OECD Guidelines for Multinational Enterprises, and national laws such as the UK Modern Slavery Act and the French duty of vigilance law. Failure to identify, prevent and address adverse human rights impacts may lead to reputational, operational, financial and legal risk for investors.⁹ Responsible investors will therefore want to be confident that human rights and labour standards are respected as the low-carbon transition unfolds.

These norms and standards are now included within the decent work objective of the Sustainable Development Goals. Indeed, the just transition is an important manifestation of the impulse behind the SDGs, which seek to link economic, environmental and social elements into an integrated approach. For energy transitions, for example, the just transition lies at the intersection of: SDG 7 (clean energy), SDG 8 (decent work), SDG 10 (reduced inequalities), SDG 11 (sustainable cities and communities) and SDG 13 (climate action). A focus on the just transition can thus help bring to life investor commitments to the SDGs and provide a way to ensure that these norms are integrated into climate strategies (see Principles for Responsible Investment, 2017b, on investors, and UNDP, 2018 on the SDGs).

⁹ For an example of how this applies to private equity investments, see Principles for Responsible Investment (2017a). In addition, see OECD (2017c).

Box 7. Human resource management in a just transition

Investor returns are derived from the effective mix of human, natural and financial resources. According to the Human Capital Management Coalition, 'research has shown that investments in training and development, health and safety, employee engagement, diversity and inclusion and workforce composition and staffing are associated with increased workforce productivity, reduced turnover, and higher customer satisfaction.' Conversely, 'poor human capital management practices can create substantial risks for investors, including reputational and legal risks that can lead to depressed financial performance' (Human Capital Management Coalition, 2017). An ILO review study provides evidence that the effects of social dialogue on firm productivity and even industry-wide performance are significant on a large scale (Grimshaw et al., 2017).

In the academic literature, the quality of human resource management features prominently as a driver of different measures of company success, with employee satisfaction, participation and engagement linked to corporate outperformance, enhanced resilience during crisis, and accelerated innovation. For instance, Fulmer et al. (2003) found that US companies listed as 'great places to work' outperform the market and sometimes their peers. Carvalho and Areal (2016) present results suggesting the top half of those companies prove more resilient during times of crisis and Faleye and Trahan (2011) detect positive effects on return on assets, Tobin's Q, and productivity. Drilling deeper into employee relations, Kleinknecht (2015) finds that companies with a record of employee participation fare better in times of crisis. Employee participation has also been found to positively impact a company's innovation record in China (Kesting et al., 2015) as well as in the US (Brander and Zhang, 2016) where good union relations and cash profit-sharing have similar positive effects on innovation. Firm performance in Spain (Marin-Garcia and Bonavia, 2015) and return on equity in Korea (Kim et al., 2017) are also positively correlated with employee involvement. These findings are complemented by the more general results from Benlemlih and Bitar (2018) showing that relationships with a company's primary stakeholders such as employees enhance a company's investment efficiency.

Managing the transition to a zero-carbon, climate-resilient economy is a new and fundamental challenge for human resource management. From a perspective of long-term returns, investors would want to hold assets that are implementing a just transition strategy in terms of skills development, employee dialogue, health and safety as well as inclusion. This could be particularly promoted through investor engagement and stewardship activities.

3. Providing a lens for identifying new investment opportunities

Investors recognise that there are substantial opportunities for delivering good risk-adjusted returns as well as positive impact by aligning their portfolios with the transition to a zero-carbon, climate-resilient economy. However, investors are finding insufficient supply of attractive climate-aligned assets. Taking a just transition approach could help to provide a lens through which to identify new ways of expanding a pipeline of low-carbon assets.

For instance, using a just transition lens can highlight the way in which the low-carbon transition is disrupting the traditional investment landscape. In Germany, for example, investors have been profoundly affected by the way in which the transition has impacted listed energy utilities. In 2017, 42% of the country's renewable energy installed that year was deployed by citizens and energy cooperatives (Smith, 2018). Investors need to consider ways of accessing this new economic reality, particularly given the stronger social impact of community-owned energy assets in terms of local value-added compared with conventional commercial investment (Erneuerbare Energien, 2016). One challenge to overcome can be the aggregation of small-scale investments. Another is the sensitivity over the privatisation of public infrastructure.

The just transition can build on traditions of development finance and economically targeted investment where investors seek products that focus on specific underserved geographies or marginalised communities who may lack access to resources. Place-based investments responding to the spatial dimension of the just transition could include:

- Sustainable infrastructure, which is low-carbon, resilient and inclusive (including renewable energy, mass transit, and water management).¹⁰
- Real estate and property assets, which deliver strong environmental performance along with real social value, for example through redevelopment of property affected by deindustrialisation.
- Private equity and venture capital funds, which may invest in clean tech operating in high-carbon regions.
- Green and social bonds, targeted at areas impacted by the transition, with proceeds invested in new enterprises, retraining and infrastructure development.
- Impact investment strategies focusing on ensuring access to energy in developing countries, such as the *Shine* campaign (Sustainable Energy for All, 2018).
- Community energy businesses as well as community development finance institutions (CDFIs), which can attract investor capital via notes and community share issues.

To understand these place-based opportunities, careful research is required. In 2017, the Investor Group on Climate Change (IGCC), an investor coalition from Australia and New Zealand, looked in depth at the implications of the energy transition for the coal sector in Australia. As IGCC's CEO Emma Herd observed: 'this is a transition which we know is coming. It is foreseeable. It should, therefore, be manageable and how we act today can still determine whether Australia can deliver an orderly and just transition.' IGCC commissioned EY to examine the economic exposure of the coal sector and the vulnerability of specific communities. The resulting report identified a number of key determinants of a successful, just transition: the degree of stakeholder consensus, the balance of public and private investments in both human capital and new low-carbon infrastructure, and a framework for considering employment implications. The report underlined that 'employment is an outcome of economic activity, reflecting investment decisions and responding to demand for goods and services', with the implication that 'it is satisfying demand for goods and services that generates employment, and investment facilitates this process' (Investor Group on Climate Change, 2017). The report concluded with a framework that could be used by investors to identify investable solutions in regions impacted by the transition away from coal.

4. Responding to beneficiary interests and preferences

Demand for responsible investment products that incorporate ESG factors continues to grow but often there are barriers to the expression of these end-investor preferences. A core feature of responsible investment is serving the needs of savers and beneficiaries of pension plans. Recognition is growing that increased efforts are required to ensure that both traditional financial and sustainability preferences need to be taken into account so that holistic returns can be generated. For example, the EU's action plan on sustainable finance concludes that 'investors' and beneficiaries' preferences as regards sustainability are often not sufficiently taken into account when advice is given' and recommends ensuring that these factors are included in the guidelines for the suitability of investment products (Financial Stability, Financial Services and Capital Markets Union, 2018b).

In the case of the just transition, there could be an additional rationale rooted in specific beneficiary interests and individual preferences. Pension beneficiaries in exposed regions and sectors could have a particular interest in ensuring a just transition as it directly affects their

¹⁰ The Inter-American Development Bank recently set out a framework for sustainable infrastructure (IADB, 2018).

livelihood, the ability of their pension plan to support their retirement, and the wellbeing of their community. Taking this one step further, the duty to protect long-term financial interests of beneficiaries in affected sectors could prompt fiduciaries to introduce investment diversification away from high-carbon assets, similar to the strategy recently adopted by the Norwegian public pension fund.

In addition, other savers and beneficiaries may have clear sustainability preferences that seek to support action on climate change and social justice. Institutional investors are increasingly needing to understand these preferences and translate them into the assets they manage on behalf of others.

5. Enhancing the understanding of systemic risk by connecting climate and inequality

More and more, investors are realising they need to contribute to building a sustainable financial system as well as manage their own assets. Indeed, the mission of the Principles for Responsible Investment states: 'we believe that an economically efficient, sustainable global financial system is a necessity for long-term value creation' (Principles for Responsible Investment, 2017c). As Steve Lydenberg, William Burckart and Jessica Ziegler of the Investment Integration Project (TIIP) explain: 'given their growing influence and power, investors are increasingly able to create positive and negative externalities and, ultimately, to impact systems', adding 'by ignoring this potential impact, investors can unintentionally damage the environmental, societal and financial systems crucial to their wealth-creating opportunities' (Lydenberg et al., 2017).

In line with a growing body of investor research, the just transition provides a framework with which to evaluate systemic social and environmental risks that pose long-term challenges to society and investors alike. One principle systemic concern raised by the just transition is that inattention to the social dimension makes the necessary transition to a low-carbon economy less likely or more difficult. Unlike economic transitions that result from, for instance, technological innovation or shifts in consumer habits, the low-carbon transition has mainly been initiated by public policy-making, which then stimulates self-reinforcing processes of change. Those who believe they are negatively impacted by the low-carbon transition may choose to resist and oppose it.

Climate change is already a clear systemic risk – and the just transition offers a way for investors to deliver a similarly systemic response. Without a just transition, the global economy could fail to make the changes that are necessary to implement the Paris Agreement, not least because of potential resistance from affected sectors, communities and countries. This would result in severe economic, social and financial costs as climate change continues unabated and would fundamentally harm long-term investors. Equally, without a just transition, the global economy could make some progress towards reducing emissions, but at high social cost. This could increase inequality and suppress economic development, damaging investor returns, particularly for 'universal investors' such as pension funds and insurance firms.

A recent PRI discussion paper produced by IRI (Wood, 2016) highlighted four reasons why investors have reason to explore how inequality shapes the world in which they invest:

- Harmful levels of inequality cause, or are a sign of, low growth and financial instability.
- Channels of investment may help mitigate inequality.
- The financial sector may play a particular role in generating harmful inequality.
- The effects of inequality cause harm to the beneficiaries of investment that they represent or serve, both in the short and long terms.

By contrast, the just transition could facilitate both a faster and more effective response to climate change, help to provide a workforce equipped for the zero-carbon economy and minimise 'stranded workers' and 'stranded communities', thereby protecting long-term stability and returns.

The just transition thus helps to broaden the systemic risk frame to explore how two prominent risks – climate change and inequality – intersect, and how investor action, including through policy dialogue, can reduce these and thereby contribute to long-term returns.

6. A platform for collaboration among investors and other stakeholders

The just transition is a multi-stakeholder imperative involving public authorities, development finance institutions, trade unions, enterprises, communities and civil society organisations as well as investors. Blended finance structures may require different investment time horizons and risk appetites (Blended Finance Taskforce, 2018). Importantly, place-based work can drive multi-sector innovation, opening up new paths towards more socially useful and environmentally sustainable financial activity. In all of these cases, investors may take on the just transition as a tool to coordinate collaborative investment activities and make them more effective. One potential of the just transition approach to climate investing stems from the ability of mission-driven investors to work with communities on new approaches to sustainably financing fundamental human needs. The just transition agenda could therefore help investors demonstrate their commitment to social and environmental issues, in ways that may help to build trust and ‘shared value’, thereby fulfilling their social contract with society (see Porter and Kramer, 2011).

Alongside these potential reasons for investors to consider their role in delivering a just transition, there may also be concerns. Some may feel that the just transition agenda may complicate their climate strategies or may harm returns. These and other concerns will need to be addressed through open discussion and dialogue.

What could investors do to support a just transition?

Based on the arguments above, we believe that investors will play an increasing role as the imperatives and opportunities for the just transition come to the forefront. But for investors to be effective, they will need clear understanding of the field and broad guidance that helps shape action. Investors have developed a wide range of strategies and tactics to deliver responsible investment, which can now be deployed to address the just transition.

At the outset, it is clear that a major topic such as the just transition has consequences for all asset classes: listed equities; fixed income; property; infrastructure; private equity. In addition, it also affects all parts of the investment chain, from beneficiaries through asset owners, asset managers and intermediaries to the end users of investment in the real economy and the stakeholders affected by it.

Our view is that incorporating the imperative of the just transition into investment practice does not require an entirely new approach. Instead, it means integrating environmental and social issues when designing and making climate-related investment decisions.

In practical terms, we have so far explored how the just transition could be realised across four key areas of investor practice: investment strategy; investor engagement; capital allocation; policy dialogue. We elaborate on these below.

Investment strategy

A growing number of investors have developed, published and started to implement whole-portfolio approaches to climate change as part of their overall investment strategies. These follow the tried and tested model of continuous improvement. One recent guide (Lake, 2015) to assist fiduciaries taking practical action on climate change has suggested a six-step process involving:

1. Clarifying mission
2. Specifying objectives and beliefs
3. Assessing exposure
4. Analysing options
5. Implementing the plan
6. Monitoring effectiveness (and using this to refine the strategy)

Clearly, a good process involves all relevant stakeholders within the organisation, including beneficiaries and end-investors, as well as professional partners.

There is now scope for investor climate strategies to include an explicit acknowledgment of the just transition in organisational purpose, such as:

- Including just transition principles into a statement of investment beliefs, to ensure the integration of climate-related investment activity with a commitment to inclusive growth
- Incorporating the just transition into climate policy statements, setting how environmental and social issues dimensions of climate change will be addressed
- Making the just transition a part of their own climate scenario exercises as asset owners and asset managers.
- Integrating just transition values and goals into human resource management processes internally
- Embedding just transition principles into consultant and manager searches externally
- Communicating action on the just transition with clients, savers and beneficiaries

The goal of these strategic commitments would be to create an organisationally coherent approach to integrating social and environmental analysis, and to ensure that their actions related to climate change are congruent with their broader commitment to responsible investment.

As investors consider the links between investment strategy and the just transition, useful questions include:

- Do your climate-related strategies and research take into account the social issues related to the just transition?
- Do you have a system to evaluate potential relationships with consultants and managers on just transition issues?
- Are there parallel commitments, for instance to the Sustainable Development Goals, which inform your climate-related investment strategies?
- How are you involving beneficiaries and clients on the incorporation of just transition into investment strategy?
- What are the ways in which you will report on your policies and performance related to the just transition?

Early examples of investors that have started to incorporate the just transition at the strategy level are provided in Box 8.

Box 8. Examples of incorporating the just transition into investment strategy

UK: Environment Agency Pension Fund's climate policy, October 2017

As part of a comprehensive response to the challenge of climate change, the EAPF's updated policy includes the following commitment: 'We recognise the need to integrate our climate goals with our wider programme of responsible investment, in particular the social impacts of transition, and we will look for investment opportunities to support the Sustainable Development Goals and the Paris commitment for an orderly and just transition' (Environment Agency Pension Fund, 2017).

Italy: Generali's climate change strategy, February 2018

Insurance company Generali's climate strategy includes targets to increase green assets and divest from coal. In addition, it has a commitment to stakeholder dialogue, stating 'in countries in which the economy and employment depend heavily on the coal sector, Generali will involve issuers, clients, and other stakeholders through constant dialogue, monitoring their plans to reduce environmental impacts, the strategy to transition to activities with low environmental impact, and measures envisaged for protecting the community and citizens' (Generali, 2018).

Investor engagement

Investors have well established mechanisms for engaging with the assets they own to ensure that they manage ESG factors effectively and adopt good practice. Engagement is often focused on listed equity, private equity and property holdings where there is a strong governance connection. Investors can, however, also have influence over practices in other asset classes such as fixed income and debt. The public good dimension of engagement (whereby the benefits cannot all be linked back to a particular investor) makes collaborative engagement a particularly powerful tool through mechanisms such as the PRI Engagement Clearinghouse. Worldwide, investor groups have been particularly focused on engagement on climate change risks and opportunities and the new Climate Action 100+ provides a coordinated platform for engagement with the largest contributors to carbon pollution.

Engagement can be delivered both through regular discussions with company management and through specific shareholder resolutions. The International Trade Union Confederation has published a set of ESG principles for shareholder resolutions that connect climate action with the importance of social dialogue, human rights due diligence, environmental impacts on communities and transparency (ITUC, n.d.). These principles have been taken up by the Committee on Workers' Capital (CWC). In general, however, the just transition has yet to become a feature of shareholder resolutions on climate change.

At this stage, we see two promising approaches for investors to engage on the just transition:

i. Broaden climate engagement to include the social dimension

Investors could broaden the scope of their engagement on climate change to include the just transition. This could usefully build on the management framework adopted by the Taskforce on Climate-related Financial Disclosures (TCFD). Indeed, the greater focus on disclosure by companies of their transition strategies could lead to a demand for explicit information about strategies for managing impacts on workforces and communities. This information may result, for instance, from the development of scenarios, as recommended by the TCFD. Based on the TCFD framework, we

have drawn up an initial set of possible questions for investor engagement with companies on the just transition (see Box 9).

Box 9. Possible questions for investor engagement on the just transition

Strategy

- **Impacts:** What are the potential impacts of climate change-related risks and opportunities for employees, workers in the supply chain and communities over the short, medium and long term? Do these have a particular gender or race dimension?
- **Scenarios:** Has the organisation included the implications for employees, workers in the supply chain and communities in its climate scenario analysis? If so, what are the results?
- **Human resources:** What are the strategic implications of climate-related risks and opportunities for the organisation's human resource management, notably the quantity and quality of employment; wages, benefits and pensions; employee satisfaction?
- **Restructuring:** How is the social dimension reflected in any restructuring plans linked to the transition (including mergers and acquisitions, capital expenditure, expansion plans, downsizing, closures)?
- **Investment:** How is the organisation investing to generate positive social outcomes from the transition and mitigate potentially negative implications for employees, workers in the supply chain and communities?
- **Regeneration:** How is the organisation contributing to wider plans for community renewal and economic revitalisation linked to the climate transition in areas where it operates?

Governance

- **Social dialogue:** How are unions (and communities where they may also be impacted) involved in the organisation's plans for responding to climate change risks and opportunities?
- **Social protection:** How are employee and community rights protected during the transition, for example in terms of the security of pensions?
- **Skills and development:** What is the company's strategy and performance in terms of developing employees with the skills they need to contribute to the transition?

Risk management

- **Identification:** How are climate change-related risks to employees, workers in the supply chain and communities identified?
- **Management:** How are climate change-related risks to employees, workers in the supply chain and communities managed? Has the organisation committed to respect for core labour standards in this process?
- **Health and safety:** How are the occupational health and safety risks linked to a changing climate and resource scarcity identified and managed?
- **Due diligence:** How are workplace human rights and community impacts incorporated into corporate procedures for due diligence related to investments and activities linked to climate change strategies?

Where relevant, investors could encourage companies to introduce specific metrics for the social dimension of climate change. These questions could also be adapted for issuers of municipal, development bank and sovereign bonds.

ii. Carry out initial social and employment assessments of climate-exposed assets

This broadening of investor engagement could also be supplemented by an assessment of the overall social performance of climate-exposed assets to get an initial impression of the company's competence. This would provide a baseline from which to engage with company management on how they are managing the specific social challenges of decarbonisation. This initial assessment could cover well established criteria in the social pillar of responsible investment which correspond to the just transition priorities such as:

- Employee engagement
- Skills development
- Occupational health and safety
- Social protection (including healthcare and pensions)
- Labour standards (including freedom of association, collective bargaining)
- Social dialogue (as the mechanism to engage the workforce)
- Supply chain management
- Community relations

This assessment could usefully draw from the guidelines prepared by the Committee on Workers Capital for the evaluation of workers' human rights and labour standards (Committee on Workers Capital, 2017). It could also include analysis of how the firms in question have gone about the management of previous exercises in restructuring, not necessarily linked to climate change.

A similar exercise could be undertaken for low-carbon growth companies and sectors to evaluate whether the positive social potential is being realised.

Capital allocation

The just transition provides a framework for investors not only to engage companies within their portfolios, but also to redirect investment capital towards more aligned enterprises and projects. Strategically, climate action involves the reallocation of capital from high- to zero-carbon assets. Shareholder engagement can contribute to this by influencing the direction of retained earnings. But investors can also make more direct investment decisions. Increasing numbers of investors are both moving away from high-risk, high-carbon assets (for example, through divestment) and reinvesting in low-carbon opportunities (see Divest Invest, 2018). A just transition approach takes this one stage further by considering the impacts on affected workers and communities and seeking out opportunities for connecting green assets with positive social performance.

As with any responsible investment strategy, capital allocation informed by the just transition can be made across asset classes and feature a range of goals and techniques. For instance, the just transition can help investors to identify where their capital can address secular environmental and social trends. This is likely to involve an expanded analytical toolkit that builds on existing climate-related investing strategies: for instance, integrating relevant issues about workers and communities into the underwriting of green bonds offerings or infrastructure projects, as a form of political risk mitigation.

Investors may also wish to target investments that make outsized contributions to achieving the just transition. In much the same way that discussions around achieving the Sustainable Development Goals generate goals around social impact, the just transition can be a lens through which to view investments that focus on economic development in communities negatively affected by the low-carbon transition, or that offer quality jobs to workers who bear the brunt of industrial transition. These might include developmental investments in low-income regions, and equity investments in specialist funds that link labour and human rights issues with low-carbon outcomes.

Looking across the main asset classes, this just transition approach could be integrated into existing strategies and could drive a focus on thematic opportunities. Table 4 provides possible options.

Asset class	Integrated just transition	Thematic just transition
Fixed income	Incorporate JT factors into core selection of bonds, index design and benchmarks; integrate JT into green bond purchase strategies	Target bonds linked to sectoral or regional JT transition plans and funding
Public equities	Integrate JT factors into core stock selection, index design and benchmarking	Identify listed companies, focused on environmental solutions in affected regions
Private equity (PE)/venture capital (VC)	Engage PE/VC funds on JT policies; include JT in routine PE/VC screening and engagement policies	Seek specialist impact investment funds linking climate, job quality and community development
Real assets	Include JT criteria in green real estate and infrastructure strategies, as well as in timber/land conservation criteria	Targeted investment in high impact JT communities; elaborated JT policies directing targeting high impact JT real assets deployment
Cash	Engage all banks on JT principles and performance (e.g. review Equator Principles, lending strategies for exposed regions)	Focus on banks with specialist JT lending strategies (green jobs, place-based development, CDFIs)

Source: Authors

Within the fixed income asset class, green bonds offer considerable potential for the just transition.¹¹ The green bond market has expanded rapidly as a way for investors to allocate capital within a well established asset class, align portfolios with the Paris Agreement and hedge against rising carbon risks (Whiley, 2017). Green bonds have now been joined by a growing social bond market – along with the beginnings of sustainability bonds, which deliver both social and environmental performance (ICMA, 2018).

These positive trends can now be deployed to promote the just transition. Two specific opportunities stand out:

- **Linking green bonds with the SDGs:** A growing number of issuers and investors are connecting their strategies with the SDGs. Green bonds focused on the just transition would combine obvious environmental and climate goals with the more social SDGs, for example, on decent work, gender and inequality.
- **Targeting green bonds for regions exposed to the transition:** Bonds offer issuers the possibility of ring-fencing the use of proceeds for deployment in particular places. Municipal bonds, for example, could be issued to promote low-carbon opportunities in districts with

¹¹ This box within Table 4 is based on the results of a session on green bonds and the just transition held at the 2018 Climate Bonds Initiative conference.

high social challenges. Similarly, proceeds of sovereign green bonds could be channelled for retraining and redevelopment programmes in high-carbon areas. Equally, banks could pool proceeds from green bonds to support lending to households and enterprises in disadvantaged regions. For example, in the UK, the Lloyds Bank ESG Bond targets proceeds in small-scale renewable energy projects, SMEs and healthcare providers in the bottom 30% of economically disadvantaged areas in the country (Lloyds Bank, 2016).

Finally, the just transition offers a way for investors to coordinate capital allocation decisions across public, private and mission-driven investment opportunities. There is particular opportunity for innovations in investment forms and stakeholder coordination that prioritise social outcomes. One key area where such innovation is likely to take place is in the realm of place-based investing, where community-based efforts to rethink ownership strategies or develop grassroots development vehicles can help promote new channels for capital allocation across investor types – as seen, for instance, in the integration of social and climate issues into Quebec’s Fonds de Solidarité (see Box 10). The growth of impact investing as a field of practice can contribute to innovation in capital allocation that achieves just transition outcomes.

Box 10. Delivering development capital for sustainable development where people come first

With assets of C\$13.7bn, Quebec’s Fonds de Solidarité FTQ was created on the initiative of the FTQ, the province’s largest central labour body. The Fonds calls upon the solidarity and savings of Quebecers to help fulfil its mission to contribute to Quebec’s economic growth by creating, maintaining or protecting jobs through investments in small and medium-sized businesses in all spheres of activity. The Fonds is a socially responsible investor committed to ‘sustainable economic development where people come first’. In March 2018, the Fonds announced it would invest up to C\$200mn in Boralex, a flagship renewable energy company that fitted perfectly with the Fonds’ ‘energy transition plan respectful of workers’ (Fonds de Solidarité FTQ, 2018).

The development of public transition funds in hard-hit regions will likely lead to similar opportunities for investors to direct capital towards just transition goals. In the same way, the field of development finance, increasingly focused on leveraging private investment through blended capital structures, may allow for just transition products and strategies that integrate labour, community and climate issues in emerging markets. For investors to optimise their contributions to the just transition, participating in multi-stakeholder efforts to develop more socially useful investment strategies and vehicles will be essential. The just transition will require the development of new and different kinds of investment opportunities as well as the integration of just transition principles into existing capital allocation frameworks.

Policy dialogue

The systemic nature of climate change means that policy reform is essential to managing the social, economic and environmental dimensions of the transition. Investors have become increasingly influential players in the formation of climate policies, supporting, among others, long-term targets, carbon pricing and support for low-carbon sectors. The just transition could also be included into investor proposals to governments and international forums such as the G7, G20 and the UNFCCC.

At the international level, investors could encourage:

- Investor involvement in policy discussions at the ILO, the UNFCCC and elsewhere on delivering the just transition.
- International development finance institutions, such as the World Bank, to develop financing strategies to crowd in private capital behind just transition investments. (This could build on

the programme between Canada and the World Bank, announced at the One Planet Summit.)

- The incorporation of the just transition into G20 and other financial policy discussions on green finance and sustainable finance.
- A focus on the just transition and financing strategies in key decarbonisation initiatives such as the Powering Past Coal Alliance.

At the national level, investors could encourage:

- Support for including the just transition – and how to finance it – in long-term climate strategies, and for the implementation of the Nationally Determined Contributions (NDCs) to meeting the Paris Agreement.
- A focus on the just transition within national roadmaps for green and sustainable finance.
- National development and green banks to support a just transition by bringing together the environmental and social dimensions of their operations, developing innovative bond issuance.
- The use of revenues from carbon trading and carbon taxes to support just transition funds that would aim to mobilise private capital.
- Incorporating the just transition into the use of proceeds from municipal, sovereign or state-owned-enterprise green bonds.
- The development of regional strategies to attract responsible investors into place-led green investment (see Box 11).

Box 11. The UK: connecting green finance with an inclusive economy

Green finance has been identified as a strategic lever to help implement the UK's climate goals and industrial strategy. One of the priorities of the industrial strategy is to promote inclusive prosperity across the UK, with clean growth identified as one of the most promising opportunities (BEIS, 2017b). In March 2018, the Green Finance Task Force, which represented leading banks, investors and other key financial institutions, produced 10 recommendations for strengthening the alignment of Britain's financial system with climate action (Green Finance Taskforce, 2018). One of these recommendations focused on place-led investing, supporting local actors such as municipalities to attract capital for their climate strategies. The Task Force focused on the role that local government pension schemes in particular could play in championing low-carbon investments that contribute to wider economic and social development. It also recommended the establishment of Clean Growth Regeneration Zones to channel green finance into key regions.

In addition, there are powerful links to be made between green finance and the rise of social impact investing. In parallel with the Green Finance Task Force, the UK government is also seeking to grow a culture of social impact investing to develop a more inclusive economy (see DCMS, 2018 and UK National Advisory Board on Impact Investing, 2017).

For investors, the just transition sits at the intersection of green finance and social impact investing. Investors seeking to deliver positive social performance could use a just transition frame to seek out investments in clean growth opportunities in regions facing a transition away from high-carbon industry.

As part of our wider *Investing in a Just Transition* project, we will be making a detailed analysis of the potential in the UK, with a regional focus on Yorkshire.

4. Next steps

We see financing a just transition as one of the new frontiers for responsible investment. This paper is designed to spark a conversation on the implications of the just transition for investors. In the next phase of the project, we will engage investors and other stakeholders on these issues and gather input from a range of perspectives and experiences.

Based on this discussion paper, we are seeking feedback on three key topics:

1. How can the case for investor action on the just transition be deepened?

- What are the strategic challenges of the just transition for investors and for the stakeholders who engage them?
- What motives for engaging on the just transition resonate with different kinds of investors?
- How can we best identify the most useful roles that investors are suited to play in the just transition? What concerns should we address about investor roles and contributions?
- What are the key barriers to investors contributing to the just transition?
- How might the investor contribution towards the just transition be measured?

2. How can investor guidance on the just transition be most useful and effective?

- What existing investor policies and practices support the just transition?
- What existing frameworks and tools from responsible investment, climate action and elsewhere can investors adapt and deploy for the just transition?
- What new tools need to be developed to facilitate investor action?
- What are the key mechanisms – policy and otherwise – that can structure investor participation in the just transition?

3. How can investors become part of cross-sector collaborations on the just transition?

- Who are the key stakeholders that investors should engage on the just transition?
- How can dialogue between investors, workers, communities and governments be developed productively?
- Where are there place-based opportunities for cross-sector collaboration in which investors can play the most useful roles?
- Where are there innovations in collective ownership, investment goals and vehicles, or collaborative engagement that can pilot new models for achieving the just transition?
- What policy reforms could better enable investors to contribute to a just transition?

We also welcome feedback on any other topics readers think would be useful to the project.

Key milestones for the *Investing in a just transition* project

Based on this initial review, stakeholder feedback, and further research and engagement, the team will build an increasingly robust evidence base. This will involve:

- Deepening the review of the landscape of how investors could best contribute to the just transition.
- Holding two consultation meetings to gather stakeholder perspectives on investor guidance and policy recommendations.

- Conducting two place-led pilot studies on the role of investors in specific regions in the UK and the US. We would also welcome expressions of interest to conduct pilots in other countries.
- Releasing a draft case for action along with investor guidance at the PRI in Person conference and Global Climate Action Summit in September 2018.
- Following feedback, presenting a consolidated case for investor action and draft guidance for investors at the UNFCCC Climate Change Conference in Katowice (COP24) in December 2018.

Please contact us to provide feedback or to request further information:

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