11 Financing a Just Transition

How to Connect the Environmental and Social Dimensions of Structural Change

Nick Robins

11.1 INTRODUCTION[1]

Climate change is arguably one of the greatest injustices in history, given the projected extent and duration of its negative impacts on current and future generations. Climate disruption already harms the lives of billions and these impacts will intensify and extend for centuries into the future, particularly if the rise in temperature is not capped at well below 2°C and ideally 1.5°C above pre-industrial levels, the goal of the Paris Agreement. Many of those most affected by climate change live in poverty and have contributed least to its causation. It is therefore a matter of fundamental global justice to deliver the goals of the Paris Agreement and protect current and future generations. More than this, the activities that contribute to climate change can lead to many other injustices, notably the immense health implications of air pollution from fossil fuel combustion as well as the impacts on vulnerable communities from deforestation and unsustainable land use. For Pope Francis, it is clear that when faced with the climate emergency, 'we must take action accordingly, in order to avoid perpetrating a brutal act of injustice towards the poor and future generations' (O'Kane, 2019).

As a result, the transition to a climate-resilient, net zero economy is essential for the delivery of inclusive economic development

[1] This chapter draws on the findings of the Investing in a Just Transition initiative at the Grantham Research Institute, which involves a number of partner organisations. The author would like to particularly thank the following for their insights and contributions which have informed this chapter: Sharan Burrow, Vonda Brunsting, William Irwin, Fiona Reynolds, Bettina Reinboth, James Rydge, Alison Tait, Sophia Tickell and David Wood.

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in the twenty-first century. The prize is not just to minimise the human damage of climate change, but also to design the transition so that it tackles entrenched poverty and rising inequality. To do this, the transition itself needs to be just and achieved in ways that are fair for all. It is in this context that the 2015 Paris 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' (United Nations, 2015). Three years later at the COP24 UN climate conference in 2018, fifty-three countries (including all of the members of the European Union) signed the Just Transition Declaration, which recognised the need to factor in the needs of workers and communities to build public support for a rapid shift to a zero-carbon economy.

The just transition is no longer simply an issue for international climate negotiations, however. Fears about the downside consequences for workers and consumers of the transition have risen to the top of the political agenda in a number of countries. In 2017, among the many reasons given by President Trump for withdrawing from the Paris Agreement 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). In November 2018, the Gilets Jaunes ('yellow vest') protests started in response to fuel tax increases designed to tackle climate change on account of the impact on middle- and low-income consumers.

Yet, the just transition is also a key demand of the youth climate strikers led by Greta Thunberg as well as the Extinction Rebellion movement. It is a core feature of plans for a radical Green New Deal on both sides of the Atlantic (Pettifor, 2019). And it is rising up the sustainable finance agenda, with institutional investors, commercial banks and development banks as well as policy makers and regulators recognising the importance of connecting the environmental and social dimensions of the transition. Indeed, it was the EU's High-Level Expert Group (HLEG) which was one of the first to make the links between responses to climate change and the societal consequences, arguing in its final report that:

> 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.
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> *(European Commission, 2018)*

This chapter explores how financial institutions and policy makers can support the just transition. It first sets out the scope of the just transition and then looks at the implications for different financial actors. It concludes by identifying key priorities for the EU's sustainable finance strategy to make the just transition a reality in the 2020s.

11.2 SCOPING THE JUST TRANSITION

It is increasingly clear that the twin crises of climate change and inequality need to be managed and resolved as one. This is the agenda of the just transition, which is included in the Paris Agreement to ensure that the interests of workers and communities are respected in the shift to a net zero and resilient economy. This fits as part of the wider climate justice agenda, which places the human rights of current and future generations at the heart of actions needed to overcome the climate and environmental emergency. Without a just transition, efforts to accelerate climate action could stall or fall short of their potential.

This agenda is of core relevance to banks and institutional investors, who manage the savings of hundreds of millions of citizens across the world. The integration of ESG factors is being mainstreamed across the banking and investment sectors to manage risk,

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respond to customer demand and align portfolios with societal goals. The just transition provides connective tissue between the environmental and social dimensions of the climate crisis – and helps to place a spotlight on the human aspects of this structural shift, aspects which have often been missing in climate policy and financial sector responses to date. For example, the disclosure recommendations of the TCFD contains little on the workplace dimensions of corporate strategy, such as human capital formation and skills, employee engagement, corporate restructuring and labour rights.

Managed well, the net zero transition will not only help to mitigate and largely prevent the immense human and economic costs of climate disruption, it could also generate net new jobs and sustainable, inclusive growth now and in the future. This could help to maintain decent employment and thriving communities over the coming decades. '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). More recent assessments have confirmed this. In its 2017 Investing in Climate, Investing in Growth report, the OECD estimated that a decisive transition package that avoids climate damage could boost long-run output by 5 per cent on average across the G20 economies by 2050 (OECD, 2017). However, these benefits will not happen automatically. Policies are needed to ensure that jobs and workers in the new low-carbon economy have working conditions that are at least as good, or better, as those in the old high-carbon industries.

Managed poorly, however, countries and regions could see not only 'stranded assets' but also 'stranded workers' and 'stranded communities' to use the words of Sharan Burrow, General Secretary of the International Trade Union Confederation (see Burrow, 2017). 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). Past experience of deindustrialisation in many parts of the world highlights the importance of looking beyond the direct employment impacts to understand the wider ecosystem of prosperity in affected regions. Failing to do so could slow or even stall climate progress, while contributing to economic stagnation and political instability.

Economic and climate policies are often assessed against the three principles of effectiveness, efficiency and equity (fairness). By 'effective', we mean that they achieve their aim. By 'efficiency', we mean that they are implemented in the most cost-effective way. And by 'equity', we mean that the costs and benefits are shared fairly across society. This means both shaping the transition, so it brings positive benefits to underserved groups (e.g. by extending access to energy) and also ensuring that those less well-off do not bear a disproportionate share of policy costs (Stern, 2008). In a globalised world, it also means that countries need to consider the cross-border impact of their climate policies. The depth, speed and scale of the global economic transformation needed to meet the Paris climate change targets mean that these issues need to be addressed with foresight. Until the last five years, however, the equity dimension of climate policy lagged far behind.

In the run-up to the Paris Agreement, the International Labour Organization (ILO) released a consensus set of guidelines in 2015 which show how this shift can support the goals of decent work and quality jobs across the full spectrum of government policies, including macro-economic strategy, industrial and regional policy as well as employment, skills and education policies; specific guidelines for financial policy were not included (ILO, 2015). For the ILO, the just transition thus captures a holistic approach:

> it is a bridge from where we are today to a future where all jobs are green and decent, poverty is eradicated, and communities are thriving and resilient. More precisely, it is a systemic and whole of economy approach to sustainability. It includes both measures to reduce the impact of job losses and industry phase-out on workers and communities, and measures to produce new, green and decent jobs, sectors and healthy communities.
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> *(quoted in Smith, 2017).*

The just transition starts from the perspective of how workers are affected, positively and negatively, by the transition. Numerous studies have been undertaken to evaluate the aggregate implications on job numbers. These are summarised in Table 11.1: the conclusion of the most recent studies is that the transition will deliver a net boost for job creation.

These assessments have little to say, however, about the quality of low-carbon jobs compared with today's existing jobs. Crucially, job losses and change are likely to be concentrated in particular places, not least for resource-intensive sectors such as energy. In addition, the scope of the just transition extends beyond the world of work. Communities will be affected by indirect implications of economic change on local businesses and supply chains. For example, renewable energy may be more decentralised than large fossil fuel power stations. Consumers also face the distributional impacts of climate policies, such as carbon prices. Ultimately, all citizens are affected in terms of the distributional and procedural aspects of the transition.

The just transition is also a whole economy agenda, addressing the upside potential from clean growth as well as managing the downside risks of decarbonisation. It is key that the new 'green jobs' in the renewable sector, for example, deliver decent work and also respect human rights of communities. In addition, many argue that the resilience to the physical shocks of climate change should also be included in the just transition agenda. This is particularly relevant for developing countries, where most of the world's one billion

Table 11.1 *Employment implications of the transition: key findings*

Global Assessments	Region/ Country/ Sector	Low-Carbon Transition Policies	Employment Change
Chateau et al., (2011)	OECD countries	With just transition policies	−0.32% in 2030
Chateau et al., (2011)	OECD countries	No just transition policies	−2.00% in 2030
IRENA (2019)	Global/ energy sector	Energy transition policies only	+2.00% in 2050
New Climate Economy (2018)	Global	Carbon pricing and sector policies only	65 million additional low-carbon jobs, 37 million net additional by 2030
EU (2018)	EU	Policies consistent with 2°C (1.5°C) path – carbon price with revenues used to reduce taxes	Up to 1.3 (2.1) million new jobs compared with baseline by 2050. 0.6% (0.9%) increase in total employment compared with baseline in 2050
Chateau et al., (2018)	OECD and non-OECD	Policies consistent with 2°C (1.5°C) path	0.3% (0.8%) reallocation of jobs (sum of jobs created and destroyed) compared with 20% past reallocation rates across OECD countries
ILO (2018)	Global/ energy, transport and construction sectors	Energy-related policies to achieve 2°C path	24 million additional jobs, 18 million net additional, by 2030

agricultural workers live. Without measures to boost resilience to increased heat stress and natural disasters, income, health and productivity will all fall. Table 11.2 sets out these interlocking relationships. Policy makers and financial institutions investors will need to consider all of these dimensions.

These just transition dimensions are not new: the economy is always in transition. What is striking about the climate transition is that it is largely policy-led – and therefore rightly open to public involvement – and is also on a scale not seen since reconstruction efforts after the Second World War. One of the ways of ensuring public acceptability and accelerating climate action is to ensure that it is inclusive. This means taking account of the distributional consequences so that no one is left behind.

Finally, it's important to recognize that the transition related to climate change is only one of many other transitions currently underway, notably the digital revolution and rise of artificial intelligence (AI). The just transition related to climate policy impacts also needs to simultaneously consider other disruptive economic transitions, as well as recognize the wider environmental emergency facing natural systems. As Nick Stern has remarked:

> We should see the just transition as part of the new story of inclusive, sustainable growth. This is a highly attractive economic model, with strong innovation and growth and able to overcome poverty in an effective and lasting way. But it requires us to manage the process of change in much better ways . . . We need to be organising for transitions in the plural including technologies, economic structures, cities and the international division of labour. And we must accelerate the pace of decision-making if we are to respond to the urgency of climate change.

Failure to consider adequately the socio-economic dimensions of emissions reduction and sustainable growth policies is already hindering the pace of the transition. This is reflected at the ballot box, where anti-climate action politicians have come to power partly

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Table 11.2 *Setting the scope of the just transition: initial illustrations*

	Workers	Communities	Consumers	Citizens
High-exposure, high-carbon sectors	Ensuring responsible decarbonisation in the fossil fuel energy sector, transport, industry etc.	Responding to the spillover impacts on industrial communities. Revitalising regional economies.	Tackling energy poverty in industrialised countries; ensuring fairness in carbon pricing.	Managing the distributional and participative issues of phasing out fossil fuels (e.g. those unfairly impacted by changes or excluded from decision-making).
Zero-carbon, green sectors	Delivering good green jobs in renewables, building efficiency, EVs and their supply chains (e.g. local jobs, gender dimension).	Building a strong license to operate, empowering community rights (e.g. land rights around renewable energy).	Delivering universal access to sustainable energy, promoting prosumers and citizen-investors.	Managing the distributional and participative issues of 100% zero-carbon energy (e.g. broadening the beneficiaries).
Resilience	Ensuring workers are resilient to heat stress and other physical impacts of climate change to protect well-being, incomes and productivity.	Ensuring communities have resilience plans, including trees, green space, adequate building codes, disaster recovery plans etc.	Ensuring households have access to affordable cooling, to prevent overheating/heat stress.	All citizens to have a voice on resilience measures, ensuring planning is not only directed by central governments and/or vested interests.

Source: Robins and Rydge (2019).

on the basis of claiming to protect vulnerable workers and communities from change. In the words of the UK's Committee on Climate Change (2019), 'if the impact of the move to net-zero emissions on employment and cost of living is not addressed and managed, and if those most affected are not engaged in the debate, there is a significant risk that there will be resistance to change, which could lead the transition to stall'. The Committee concluded that it is critical that the transition is 'fair and perceived to be fair', recommending that the UK government to adopt a strategy to ensure a just transition.

This rapid overview of the just transition agenda allows us to draw out some guiding principles for taking action.

- *Anticipation:* the economy-wide implications of the transition need to be anticipated through careful assessment and scenario planning, so that impacts can be identified ahead of time to enable adjustment. The more time there is to prepare, the more likely the transition will be just and the less disruptive to workers and communities.
- *Empowerment:* many stakeholders will need to be empowered so that they can be actively involved in decision-making that shapes the transition, whether in the workplace, in communities or in key local and national policy processes, making sure that this is open to all in terms of gender, ethnic group, age or income.
- *Capabilities:* The climate economy will involve new sets of skills and capabilities, and a dedicated effort is needed to equip individuals with the technical and other expertise needed to thrive in the transition. This involves fresh approaches to human capital formation by business, trade unions and investors as well as government.
- *Place:* The transition will have profound spatial and place-based dimensions, requiring development of anchor institutions – such as local universities, government agencies utilities and financial institutions – that can help to support community wealth-building at a time of disruption.
- *Investment:* The just transition will require investment from the public and private sectors, notably fiscal support from government and patient capital from development banks as well as targeted lending from commercial banks as well as forceful stewardship from institutional investors.

The next section looks in more detail at this financial dimension.

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11.3 FINANCIAL SYSTEM ACTION TO SUPPORT THE JUST TRANSITION

Action to support green and sustainable finance have largely focussed to date on the environmental dimension, addressing issues such as climate risks and low-carbon investment opportunities. To address the just transition, financial strategies need to incorporate the full range of ESG factors. To date, investors, banks and financial policy makers have given insufficient attention to the social consequences of climate change. In a sense, this could be due to an unintended siloing of efforts. Climate change is clearly an environmental issue; the transition, however, is not. Rather it is a process of structural economic, technological and societal change that requires a similarly integrated response from the financial system.

Institutional investors have been the first to respond to this challenge. Launched in February 2018, the *Investing in a Just Transition* initiative is working to identify the role that institutional investors can play in connecting their action on climate change with inclusive development pathways. The initiative is led by the Grantham Research Institute on Climate Change and the Environment at the London School of Economics and Political Science (LSE) and the Initiative for Responsible Investment at the Harvard Kennedy School, working in collaboration with the Principles for Responsible Investment (PRI) and the International Trade Union Confederation (ITUC). The initiative has produced a global guide for investor action, and over 150 institutions with more than US$10trn in assets under management have signed an investor statement on the just transition (PRI, 2019). In addition, the latest Global Investor Statement to Governments on Climate Change, released in September 2019, also highlighted the need for a just transition. In this statement, 515 investors representing well over US$35trn in assets urged the full implementation of the Paris Agreement. Adding that 'it will be important that the benefits of gaining access to cleaner energy sources are shared by all, and that

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those workers and communities affected by the transition are supported' (Investor Agenda, 2019).

11.3.1 Strategic Motivations

As fiduciaries, investors can make an important contribution to achieving a just transition, as stewards of assets, allocators of capital and as influential voices in public policy. For investors, the just transition provides the framework for connecting climate action with the need for an inclusive economy and sustainable development. The case for investor action rests on five strategic motivations, set out in Figure 11.1.

i. *Broadening the understanding of systemic risks:* Climate change is well understood by investors as a systemic risk to the global economy, undermining the ability of the financial system to deliver long-term returns. There is also growing realisation among investors that they need to be concerned about the systemic risk posed by social inequality (Wood, 2016). One systemic concern raised by the just transition is that failing to take account of the social dimension will give rise to pressures to delay, dilute or abandon climate policy. This will make the shift to a low-carbon economy less likely, thereby placing investors at risk from rising climate costs. Another systemic concern is that the transition could go ahead in a partial and suboptimal fashion, achieved at high social cost, potentially deepening inequality and harming the sustainability of economic growth by increasing fiscal drag.

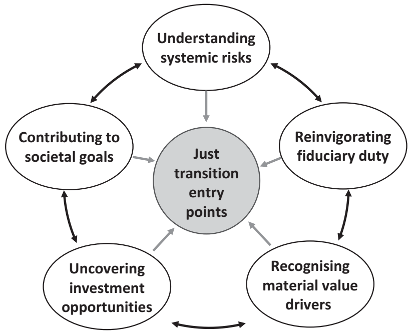

FIGURE 11.1 Reasons for investor action on the just transition
Source: Robins et al. (2018).

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ii. *Reinvigorating fiduciary duty:* The just transition extends the core fiduciary case for action on climate change to include the social dimension. Fiduciaries will need to understand and consider the interests and sustainability preferences of savers and beneficiaries as they relate to both the environmental and social dimensions of the transition. Beneficiaries in specific corporate, sector- or geographically based funds may have additional reasons for seeking a just transition. For example, beneficiaries may need assurance that they will not be in 'stranded pensions', where solvency is put in question by reliance on high-carbon business models and asset allocation.

iii. *Recognising material value drivers:* Moving from the strategic to the portfolio level, the just transition highlights for investors that a siloed analysis of ESG factors is unlikely to generate a full picture of long-term performance. For investors, it will be essential that the assets they hold operate effective systems for human capital management at a time of transformational change in technologies, business models and market demand. To date, human capital management has been absent from most business responses to climate change. The way that companies manage the transition will also have important impacts on their social licence to operate in the wider community. Companies that do not engage with workers and communities or take into account their views face operational, consumer, client and regulatory repercussions. Conversely, companies that manage this well could benefit from better reputations as well as reduced transaction costs.

iv. *Uncovering investment opportunities:* The just transition provides a lens through which investors can identify new investment opportunities and develop investment products that connect environmental and social goals. By incorporating a social dimension, investors can better understand the way in which the transition is disrupting the traditional investment landscape. For example, the shift to decentralised renewables is bringing structural changes to the energy system, with a greater role for community involvement and ownership.

v. *Contributing to societal goals:* Investors clearly need to manage the just transition as it relates to their own beneficiaries, portfolios and systemic risks. But they are also social actors and the just transition provides a framework to contribute to societal ambitions, notably the Paris Agreement and the Sustainable Development Goals (SDGs). Indeed, the

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just transition provides connective tissue that brings together different SDGs, most notably the goals on climate change (SDG 13) and decent work (SDG 8), showing how the other SDGs support this process.

11.3.2 *Areas for Action*

Based on these strategic motivations, there are five areas for action through which investors can make the just transition part of their core operating practices. The good news is that investors do not need to reinvent the wheel to address the social dimension of climate change. There are a range of well-tested investor approaches that already exist, set out in Figure 11.2.

a. *Investment strategy:* A growing number of investors have extended their responsible investment and climate change strategies to include a focus on the just transition. In 2018, for example, Italian insurance company Generali released its climate strategy including targets to increase green assets and divest from coal. In addition, it has made 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 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).
b. *Corporate engagement:* Investors are significantly ramping up their collective engagement with the businesses and assets they own to ensure

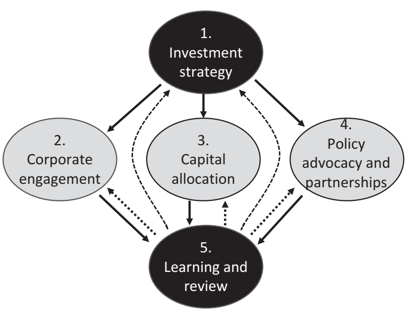

FIGURE 11.2 Priorities for investor action on the just transition
Source: Robins et al. (2018).

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alignment with the Paris Agreement. The just transition is now emerging as a natural extension to this engagement strategy, notably in the construction, energy, industrial and transport sectors. The purpose of this engagement is to ensure that companies introduce high social standards as part of their climate strategies (including labour rights, skills and training, community well-being). These standards are not only the right policies for businesses to adopt, but can be a smart approach, strengthening resilience during a disruptive transition process.

c. *Capital allocation:* Investors can also shift their allocation of capital to specific assets aligned with the just transition, particularly through place-based strategies. Currently, however, investors face an inadequate supply of assets that meet the goals of the just transition. Today's policy and market frameworks still do not reward the development of sufficient equity- and debt-based assets that both drive a just transition and meet investors' risk–return requirements. Two areas stand out for further action to scale up capital flows into assets that can support a just transition. The first is to extend the green bond market to address social criteria for local, corporate and public issuers. The second is to mobilise the growing interest in impact investing to channel capital into unlisted assets that support the transition and deliver social inclusion.

d. *Policy advocacy and partnerships:* Market and policy failures lie at the root of the climate crisis. These failures need to be corrected through policy reform; policy is also required to create new markets that channel capital towards strategic public goods, as proposed by supporters of a Green New Deal. In addition, policy reform is equally important to address the social dimensions of climate change, not least because the just transition often involves changes to models of decision-making and questions of distribution that are best dealt with by public authorities. Investors have been active participants in climate policy and the just transition is a new area for constructive dialogue and partnership at the local, national and international levels.

e. *Learning and review:* As the just transition is still a relatively new dimension of the climate change agenda for investors, investors will need to build capacity to deliver experimentation at scale for the just transition with effective monitoring, evaluation and sharing of outcomes. This means establishing effective ways of listening to, learning from and partnering with key stakeholders affected by the transition. Results of investor activities can also be incorporated in their reporting using frameworks such as the TCFD.

Beyond the investment community, public sector institutions also have a key role to play in financing a just transition. They can provide patient, long-term capital that does not necessarily seek to maximise risk-adjusted returns. One example of leadership comes from the UK's development finance institution, CDC, which has included the just transition as one of three pillars of its climate change strategy alongside a commitment to net zero and resilience (CDC, 2020). CDC's new renewable energy company, Ayana, in India gives a sense of what this means in practice. As part of the Ayana investment, CDC identified a major skills gap in the solar sector which could hold back expansion. To help overcome this, Ayana is partnering with the UK's Department for International Development and SEWA Bharat (the All India Federation of Self-Employed Women's Association) to train the local community, with a particular focus on women, who face more challenges than men in entering the green jobs market. (Ayana, 2019).

The European Investment Bank (EIB) has also recognised the role it can play in delivering a just transition. As part of its new Energy Lending Policy, the EIB will provide extra support for EU member states and regions that have a more challenging transition path as part of broader EU solidarity and regional policy frameworks (EIB, 2019). This includes financing for economic development and job creation in regions transitioning away from fossil fuels.

11.4 AN AGENDA FOR EU LEADERSHIP ON FINANCING THE JUST TRANSITION

The new European Commission that commenced work in late 2019 has made a transformational Green Deal a centrepiece of its strategic programme for the next five years. In the words of Commission President Ursula Von Der Leyen, 'we will ensure a just transition for all' and 'support the people and regions most affected' through a new Just Transition Fund.

This new fund could have an important catalytic role, but it needs to be seen as one component of the next phase of Europe's Action Plan on Financing Sustainable Growth. Much has been achieved by the Plan in a very short time, particularly in terms of introducing the core policy and regulatory architecture for sustainable finance (such as the taxonomy). A priority for the next phase is to ensure that these frameworks lead to actual changes in flows of capital across the EU and beyond so that finance rapidly becomes aligned with environmental goals in ways that deliver an inclusive economy. To do this, the following four actions could help to make sure that Europe's Green Deal finances a just transition.

i. *Green Deal Strategy – assessment and standards:* To make sure that the just transition becomes a core part of the European Green Deal, the EU will need a powerful assessment capability to anticipate the potential impacts, both positive and negative, of the ecological transition. This needs to go beyond the energy sector to look across the whole economy and extend beyond the quantitative to the qualitative in terms of co-benefits, workplace conditions, well-being and spatial implications. In addition, further work is needed to make the EU's Sustainable Finance Taxonomy a powerful tool for the just transition. Currently the focus is on environmental goals, with the proviso that minimum social standards should be respected. Working with financial institutions and civil society, the Commission could develop a set of commonly accepted expectations of industrial practice to deliver a just transition which would be used alongside the taxonomy by banks and investors in their ESG analysis.
ii. *Investment Plan – public, private, local:* The Commission has already committed to introduce a Sustainable Europe Investment Plan, deploying €1trn over the next decade. Key to success will be structuring the different blends of grant funding from government, patient capital from development banks (such as the EIB) and private funding from commercial banks and institutional investors to scale up flows for a just transition. This will need to cover all sectors of the economy and be designed to ensure that positive social impacts are generated. For example, Europe's circa 300mn residential, public and commercial buildings will all need to be retrofitted for a carbon-neutral world, providing an opportunity to

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simultaneously end long-standing problems of fuel poverty, insufficient supply of social housing and homelessness. Many of Europe's member states have strong traditions of local and regional-level financing which can be drawn on to build up the anchor institutions needed for the just transition.

iii. *Financial System – innovation and mobilisation:* Delivering the Green Deal will require a refreshed financial system, one that is fully engaged with the societal task of long-term sustainable development. Pragmatic, incremental measures to improve disclosure and risk management will need to be supplemented by more systemic interventions in order to reallocate capital at the scale and speed required. Fiscal leadership will be critical, particularly to channel low-cost public finance at productivity-enhancing investments in infrastructure, innovation and inclusion. Here, Europe could step up the pace of green sovereign bond issuance, extending the scope from purely environmental goals to incorporate social objectives (such as skills development and enterprise development in disadvantaged regions). This new wave of 'just transition' sovereign bond issuance should also be coordinated with the asset purchase and balance sheet management programmes of the European Central Bank (ECB) so that its holdings are progressively brought into line with the EU's long-term climate goals.

iv. *International – leadership, ambition, transformational transactions:* The EU already plays a leadership role in many aspects of the sustainable finance agenda, not least in the work of central banks through the Network for Greening the Financial System and finance ministries through the new International Platform for Sustainable Finance. Geopolitically, effective measures to channel finance for the just transition could become important confidence-building measures between the EU and key emerging and developing economies. This could help to build the basis for more ambitious national climate strategies. As part of this, the EU could identify ways in which it could with its member states support transformational financing packages such as the '*Just Transition Transaction*' announced by South Africa's President Cyril Ramaphosa, which would wind down the country's troubled coal assets, scale up renewables and do the right thing by affected workers and communities (Ramaphosa, 2019).

The just transition is a relatively new priority for sustainable finance. But it speaks to the long-standing need to integrate environmental

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and social factors into the routine operations of financial institutions and policy makers. It is set to be an essential element of the next wave of sustainable finance in the 2020s, both in Europe and beyond.

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