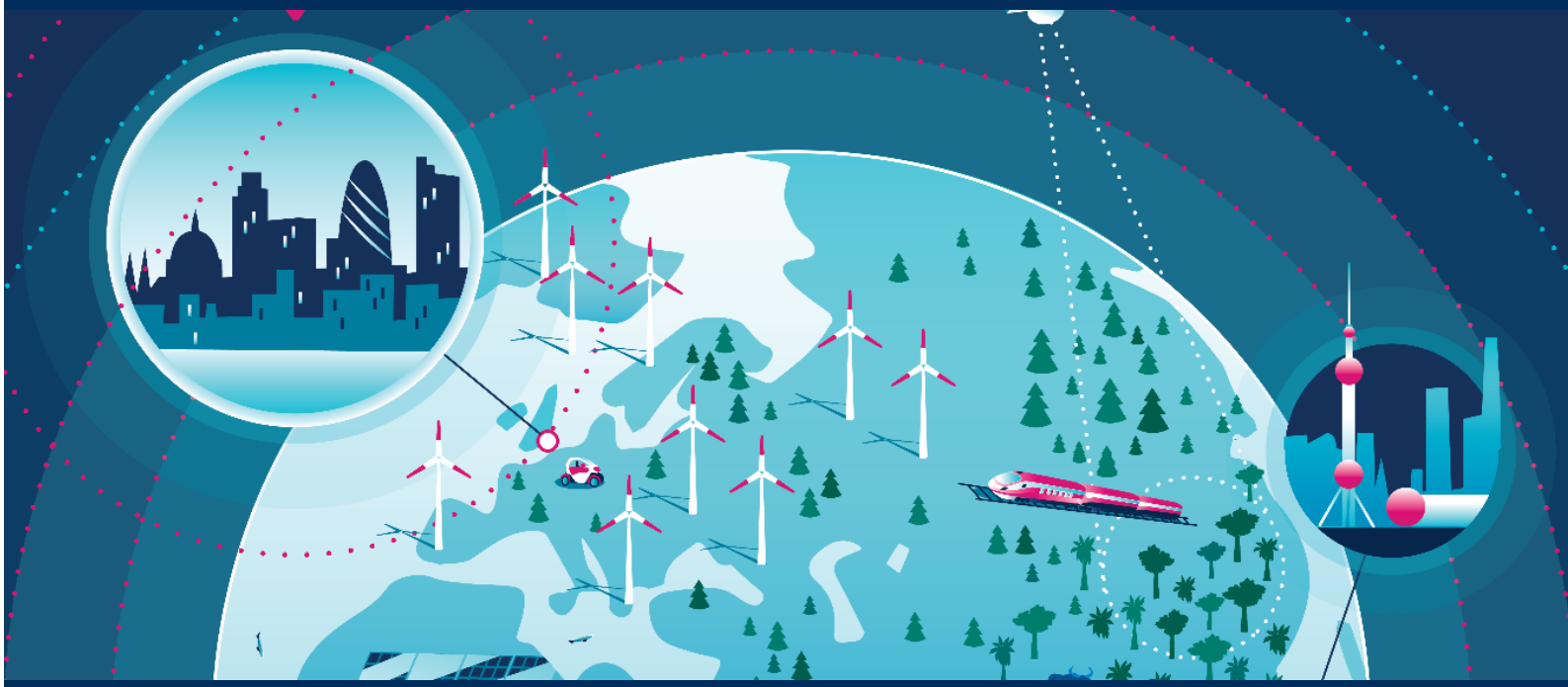
Multilateral Development Banks: Supporting the Aims of a Just Transition – An initial stocktake



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Executive summary

The Paris Agreement's call for a 'just transition' (JT) closely aligns with the mandates of multilateral development banks (MDBs). The Paris Agreement points to '*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*'.[1] This aligns well with the mandates of the MDBs which, while varying by institution with respect to their specific mandate, include fostering sustainable economic development and supporting regional cooperation, economic integration and intra-regional trade.[2] Moreover, the nature of MDB activities uniquely positions them to foster a JT: they can take a long-term view because of their mandates and ownership structure; they can support policy development and implementation; their presence reduces government-induced policy risk; they have available a range of financial instruments, including equity, guarantees, etc; they have convening power; and they are a source of specialist skills.[3]

This study has been commissioned by the members of the Paris Alignment Working Group (PAWG) as part of the work related to Building Block 4 (on engagement and policy development).[4] It presents an initial stocktake of MDB and non-MDB JT activities to date, and presents a way forward for MDBs to enhance their support for the aims of a just transition through the PAWG. It has been conducted through a series of interviews and desk-based research between April and July 2020.

An initial stocktake of JT-related activities by MDBs indicates a variety of support for the aims of a JT, across different organisational focus areas:

- **Integration of JT into MDB strategies.** All MDBs have operational strategies that touch on core aspects of a JT, including through their climate change, economic inclusion and labour issues, and regional development strategies. Some MDBs have begun to explicitly approach a JT as part of those strategies (e.g. the EIB's Energy Lending Policy, IDB's climate strategy to 2020, and the World Bank's Global Program for Energy Transition in Coal Regions (which includes support for China, South Africa, Morocco, Poland, Greece, Ukraine, Bosnia and Hertzogovina, Bulgaria and Serbia), or through dedicated JT strategies (e.g. the EBRD's just transition initiative (JTI) launched in June 2020). The Operational Priority 1 of ADB's Strategy 2030, which is focused on addressing remaining poverty and reducing inequalities, includes activities focused on developing green jobs to support inclusive and green growth in the region, as well as creating a cross-institutional platform on the future of work to facilitate collaboration and sharing of experience, and development of clear frameworks and institutional perspectives.

- **Policy-based financing** used by AfDB, the World Bank and IDB, such as the World Bank's policy-based financing in the Shanxi region in China where the policy commitments required to trigger finance disbursement included a transition away from coal while creating decent work opportunities for displaced workers; and the IDB's policy-based financing for Costa Rica's decarbonisation plan, including considerations to mitigate any negative impacts on workers and communities.

- **Project financing that creates employment opportunities and inclusive growth in regions in transition,** such as the EBRD's financing of a large solar plant over an exhausted lignite coal mine in

[1] The Just Transition (JT) as referred to in the Paris Agreement is rooted in the 2015 International Labour Organization (ILO) *Guidelines for a just transition towards environmentally sustainable economies and societies for all.*
[2] ODI 2018 'A guide to Multilateral Development Banks'.
[3] Supporting the Just Transition: the central role of development banks. Nicholas Stern (2019) Talk given at EBRD's 'Financing a Just Transition event', Madrid 2019
[4] Members are the Asian Development Bank (ADB); Asian Infrastructure Investment Bank (AIIB); African Development Bank (AfDB); European Investment Bank (EIB); European Bank for Reconstruction and Development (EBRD); InterAmerican Development Bank (IDB), Islamic Development Bank (IsDB); International Finance Corporation (IFC), the New Development Bank (NDB)and the World Bank.

North Macedonia and its work on integrating Economic Inclusion into private sector projects; the EIB's Public Sector Loan Facility under the EU's Just Transition Mechanism; and the IFC's investment in green buildings for low-income households.

- **Specialised technical assistance and policy engagement** including modelling the impacts on labour of the low-carbon and climate-resilient transition, as the World Bank is with analytical activities estimating the gross and net impacts of direct, indirect and induced jobs associated with the transition in MENA countries such as Morocco and Egypt, and the IDB has done in Chile; as well as capacity building of government officials to achieve and implement policy targets that are part of the policy-based financing agreement, as the World Bank did in Shanxi, and the IDB did in Costa Rica. Examples of policy engagement include developing knowledge products around key components of a JT, such as the creation of jobs in a net zero future (Saget, Vogt-Schilb and Luu, 2020) and the skills required for inclusive growth and green jobs (Maclean, Shanti, and Jouko, 2013).

- **Environmental and social due diligence activities,** as used by all MDBs in ensuring high-quality governance related to environmental and social performance standards of all activities.

The MDBs operate alongside and together with national and regional governments, civil society organisations, and other multilateral organisations in supporting the aims of a JT. Each region, country, and sector faces its own transition-related challenges that require a context-specific and coordinated response from a rich ecosystem of actors, of which MDBs are one element. Ensuring decent work in the face of a low-carbon, climate-resilient transition is central to many government strategies, including long-term strategies towards the Paris Agreement. The upcoming update round of the nationally determined contributions (NDCs) is also an opportunity to introduce JT considerations, where some updated NDCs, such as Chile's, have explicitly introduced JT considerations. Multiple countries have signed up to pledges to support a JT (e.g. the COP 24 Solidarity and Just Transition Silesia Declaration, and the ILO climate action for jobs initiative) and specific regional initiatives (e.g. the EU's Just Transition Mechanism). Countries including South Africa, Scotland, and Germany have developed specific JT programmes. Additionally, post-COVID-19, governments and communities can focus on incorporating JT considerations into recovery, including the creation of green jobs and green recovery initiatives. The country-led JT activities, alongside the actions of civil society, affected workers and marginalised communities, are the foundations for all multilateral organisations to ensure the legitimacy of their JT support.

An initial high-level stocktake of ongoing initiatives by other multilateral organisations shows that actors, such as the ILO, are rolling out programmes on JT that focus on policy support for governments. This includes the ILO's Green Jobs Assessment Institutions Network (GAIN) that seeks to develop better JT policy and planning with a focus on green jobs, as well as more investment in JT-aligned projects in the countries where MDBs are most active. Other non-MDB financing institutions, such as CDC Group,[5] have integrated JT programmes into their overall strategies, or are in the process of developing them.

Building on their existing expertise and experience, the MDBs can do more to realise their potential for supporting a JT by leveraging their suite of instruments:

- Investment financing can be scaled up and focused on low-carbon projects that present an opportunity for those in need to benefit from the transition. It can more broadly foster JT in industrial and sector policies, low-carbon and climate-resilient infrastructure, and enterprise policies.

- By explicitly incorporating desirable JT outcomes as part of policy-based financing, the MDBs can catalyse the right macroeconomic, growth and social protection policies in support of a JT.

[5] CDC Group is a development finance institution owned by the UK government. It invests through a fund model, as well as through direct investment in viable business in its target markets. The investment focus is mostly on South Asia and Sub-Saharan Africa.

- There is scope for JT-oriented technical assistance, where it can be possibly be attached to project finance and policy-based finance, which can further support countries to develop the skills, knowledge base and implementation capacity in order to strengthen the policy and regulation structure to support a JT. Furthermore this JT-oriented technical assistance can support social dialogue and engagement to ensure inclusiveness and transparency. It can be deployed alongside project finance with a different focus but with elements of a JT, or alongside JT-focused project finance. Additionally, MDBs can play an important role in generating robust and evidence-based knowledge on JT.[6]

All actors involved in supporting a JT would benefit from learning from past transitions in order to ensure successful outcomes which are relevant to all countries, regardless of level of development. Based on evidence from past transitions, as well as more recent evidence from the decarbonisation process shared by MDBs,[7] four generally applicable lessons can be distilled:

- **Tailor to the region and industries in question to leverage strengths and manage risks.** Successful strategies need to be context-specific, and, to a large extent, owned by sub-national and national governments given the strong role the public sector must play.
- **Create a long-run strategy, comprising unblocking, enabling, and protective elements**. JT policy should be guided and given coherence by a long-term framework that accounts for potential opportunities and negative distributional implications of transitions. As such, MDBs can seek to develop long-term strategies for their JT activities, as well as supporting governments in developing their own long-term strategies.
- **Start policy planning early, before large-scale job losses occur, to ensure vital trust is not lost early in the process and that there is equal distribution of emerging opportunities from new economic activity.** Engaging widely and early about how to address the impacts of the low-carbon and climate-resilient transition leads to a much more positive response, and buy-in on the process.
- **Operationalise through an inclusive and transparent process.** A JT should be implemented by involving a wide cross-section of stakeholders, including those who are impacted, as well as those who can provide mitigating solutions.

This analysis leads to four actions that the MDBs, through the PAWG or individually, can take immediately.

First, consider whether a common definition of a JT is desirable, or whether the MDBs can reach a common understanding of JT that accommodates a range of views on how to support its aims. The ILO's 2015 *Guidelines for a just transition towards environmentally sustainable economies and societies for all* (International Labour Organisation, 2015) presents a broad vision to address environmental, social and economic issues in a comprehensive JT approach, with a focus on protecting workers in affected sectors and creating new, green and decent jobs. While all stakeholders engaged as part of this process clearly understood a JT as related to the interaction between climate action and workers along the lines of what the ILO describes, many MDBs have broadened the JT definition to encompass different sustainable development objectives, marginalised communities and consumer impacts, and distributional implications at different scales. A lack of clarity on how different MDBs define a JT will hinder progress on coordinating, prioritising, and communicating externally about JT activities.

[6] A recent example of this is the IADB's flagship publication of Saget, C., Vogt-Schilb, A., Luu, T., 2020. *Jobs in a net-zero emissions future in Latin America and the Caribbean*. Inter-American Development Bank and International Labour Organisation.

[7] The transitions reviewed are the first Industrial Revolution (1770-1830), the rise of railroads and steam shipping (1830-1870), the second Industrial Revolution (1875-1920), the rise of mass production and mass consumption (1910-1975), and the second great wave of globalisation (1970-2020), as well as findings from literature on recent energy and industrial transitions shared by the MDBs with the authors.

If further harmonisation of views across the MDBs were deemed desirable, the PAWG would first need to make explicit the types of MDB activities which can be recognised as supporting a JT. This could start with a consideration of whether it is desirable to limit the MDBs' JT definition, guided by the six dimensions of JT laid out in this paper. For example, whether JT-related interventions include those that support the transition to a Paris-aligned world, a more broadly environmentally sustainable world, or achieving all Sustainable Development Goals (SDGs). This could also consider the extent to which procedural justice, alongside distributional impacts, are part of the JT concept. Given that developing a 'new' MDB definition for a JT along these lines may well build upon the original concept in the ILO approach paper, and its subsequent reference in the Paris Agreement and the Silesia Agreement, the PAWG could opt for a learning-by-doing approach by taking a broad definition as a starting point and refining the types of relevant JT activities through time. This approach could involve developing a JT finance tracking process, as further elaborated below, and adapting the definition and assessment criteria over time to reflect the characteristics of JT projects as they emerge from MDB activities.

A harmonised JT definition could look to prioritise different types of intervention depending on the development context of countries where activities take place. Any definition of a JT could mean different things for countries at different stages of development, with the development context largely determining the view of which aspects of a JT should be prioritised. In general, organisations with activities in low-income countries expressed a preference for the JT approach to account for wider SDGs, rather than linking solely to the low-carbon and climate-resilient transition, and should consider both policy and physical impacts across both producers and consumers. Organisations with a focus on middle- and high-income countries, where high-carbon economic and employment structures are more established, tended to emphasise a JT approach focused on environmental policy impacts (across the domains of water, life on land, and climate), and on how these affect productive sectors and their workers. Any approach by the MDBs could allow these perspectives to coexist, and could be accounted for, for example, by allowing a broader JT definition in lower-income countries than in higher-income countries.

Third, the MDBs can build out their toolkit for a JT. To successfully deploy these instruments, MDBs can, collectively or independently, develop an operationalisation strategy based on three key elements:

- A diagnostic process applied at the regional, national and sub-national level can enable MDBs to identify the range of needs and barriers to implementing a JT in their countries of operation. The diagnostic would identify the causes, effects and potentially effective remedies for the JT of relevance, highlighting specific interventions for MDBs and other actors to implement and potentially incorporate into national processes for NDCs, an area which remains untapped. Such remedies would clearly distinguish between unblocking, enabling, and protective responses. At present, while emerging work exists on how such a diagnostic could be undertaken, developing a joint view on how to tackle JT issues in a meaningful way would facilitate cross-MDB collaboration in undertaking diagnostics and in implementing subsequent activities. Platforms such as the Climate Investment Funds (CIF) are well placed to facilitate this multi-MDB collaboration on diagnostics and investment planning.

- A co-benefit tracking process that sheds light on how MDBs' current and planned activities support the aims of a JT. This can support the fine-tuning of project design and selection of suitable instruments, as well as communicate to other actors their activities to enable coordination. Additionally, this can identify how current environmental and social standards can be adapted to ensure projects and activities are JT-aligned.

- A finance tracking framework could enable MDBs to track the scale of finance in support of JT-aligned activities. This might rely on a harmonised single definition or be flexible enough to enable a range of JT approaches, and be tracked annually as part of the joint MDB report on climate finance.

The choice of whether MDBs should settle on a single JT definition or agree on a framework that allows for a range of approaches will determine the type of finance tracking framework required.

Fourth, MDBs could look for further collaboration opportunities, both with each other and with non-MDB actors. MDBs should collaborate to roll out complementary JT activities, facilitated by information sharing on ongoing activities. MDBs that focus on private sector development such as the IFC and EBRD could collaborate with MDBs with stronger links to the public sector to deploy complementary activities that align the public and private sector towards common JT objectives. There are emerging examples of this, such as the establishment of the Coal Regions in Transition Platform in the Western Balkans and Ukraine, and the CIF Just Transition Initiative. MDBs can collaborate with a range of non-MDB institutions on research, awareness raising, capacity building and investment. A fertile area for collaboration is research, where MDBs could collaborate with public, private and international institutions to build on the knowledge base about effective ways to support a JT and build this into operations, leveraging knowledge from expert institutions such as the ILO. MDBs can also support the implementation of JT initiatives and long-term strategies by bolstering the efforts of institutions that focus on capacity building and financing, and those particularly linked to the role of strategic planning, education and labour reforms, and regional economic development.

1 Introduction

This paper considers the role of multilateral development banks (MDBs) in supporting the aims of a just transition (JT). It was commissioned by the members of the Paris Alignment Working Group (PAWG) as part of the work related to Building Block 4 (on engagement and policy development)[8] in order to inform their engagement with a JT. It has been conducted through a series of interviews and desk-based research between April and July 2020. It does not attempt to be fully comprehensive, but is rather an initial assessment to guide future activities and strategic objectives of the PAWG.

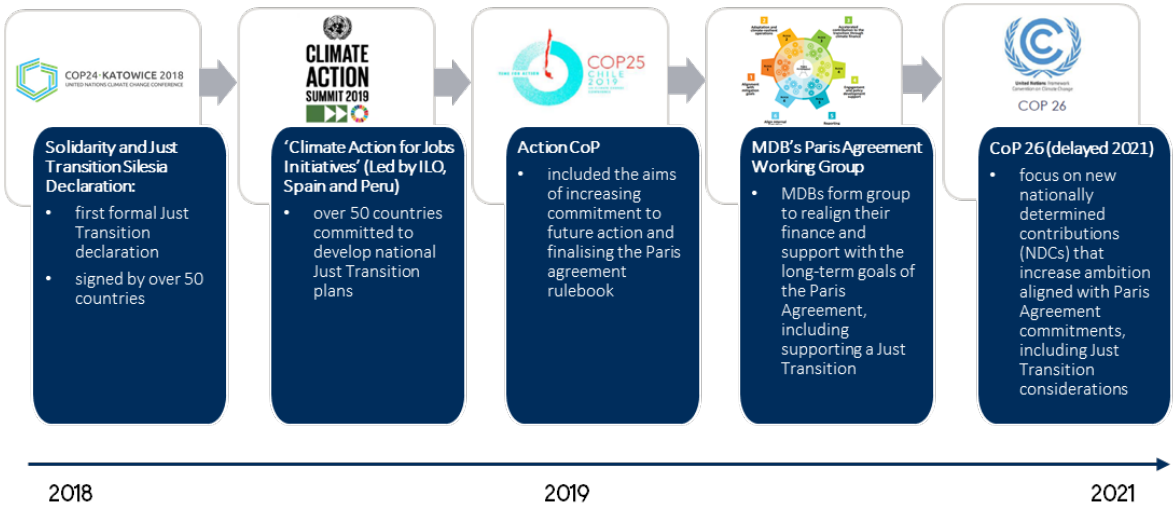
The concept of a JT originated in the labour movements of the 1970s, but it is now gaining prominence in response to the risks posed by climate change and the transition to a green economy. The Paris Agreement of December 2015 enshrines a JT within its preamble, which commits parties to *'taking into 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'*.[9] Furthermore, at the 2018 COP24 in Katowice, over 50 heads of state and governments signed the Silesia Declaration on Solidarity and Just Transition, which reaffirmed this commitment to JT, and the relationship between responses to climate change and equitable sustainable development and poverty eradication.[10] Momentum has continued to grow through the establishment of an ILO (International Labour Organisation) green jobs programme, and various initiatives at the country level (e.g. Germany, South Africa, Scotland, Canada).[11]

There are several reasons why a JT is important for climate action and sustainable development. Support for a JT is separate from, although closely related to, climate justice, given its focus on ensuring that transition is equitable and its emphasis on the responsibilities of different stakeholders. Perceived 'fairness' is also a strong predictor of public support for climate action. In this context, failure to address the political and economic impacts of transition, especially where these fall heavily on one region, sector, or particular group within society (as illustrated by the *gilets jaunes* protests of 2018) can create barriers to transition. A JT that 'leaves no one behind' is also directly linked to several UN Sustainable Development Goals (SDGs) – especially SDG5 (Gender Equality and Women's Empowerment), SDG7 (Affordable and Clean Energy), SDG8 (Decent Work and Economic Growth), SDG10 (Reduced Inequalities), and SDG13 (Climate Action) – and the wider 2030 Agenda.

The COVID-19 pandemic and its related economic and social consequences have provided further impetus for a focus on a JT. The health and economic burden of the crisis has fallen upon the most vulnerable, both within and between countries, exacerbating pre-existing inequalities and exposing a lack of systemic resilience. There is now growing consensus that the crisis may present an opportunity to 'build back better', both by focusing on a jobs-led recovery that can deliver decent work in low-carbon sectors such as renewable energy and green buildings, and by accelerating the phase-out of carbon-intensive assets.[12] Support for a green *and* just recovery – offering equitable and inclusive access to those sectors that stand to benefit from transition, and support for regions, communities and workers that rely on those sectors that stand to lose – are also now gaining traction.[13]

[8] Members are the Asian Development Bank (ADB); Asian Infrastructure Investment Bank (AIIB); African Development Bank (AfDB); European Investment Bank (EIB); European Bank for Reconstruction and Development (EBRD); InterAmerican Development Bank (IDB), Islamic Development Bank (IsDB); International Finance Corporation (IFC), the New Development Bank (NDB)and the World Bank.
[9] https://unfccc.int/files/essential_background/convention/application/pdf/english_paris_agreement.pdf
[10] https://cop24.gov.pl/fileadmin/user_upload/Solidarity_and_Just_Transition_Silesia_Declaration_2_.pdf
[11] https://www.ilo.org/global/topics/green-jobs/areas-of-work/climate-change/WCMS_732060/lang--en/index.htm
[12] See, for example, https://www.iea.org/reports/sustainable-recovery
[13] See for example https://www.unpri.org/pri-blog/shaping-an-inclusive-green-and-sustainable-recovery/5975.article

Figure 1 Just transition timeline to COP26



Source: Stern, N. (2019), *Supporting the Just Transition: the central role of development banks,* presented at the COP25 side event 'Financing a Just Transition' held in Madrid in December 2019.

While there is a clear role for MDBs in financing the transition to a low-carbon and climate-resilient economy, there has been relatively less attention paid to their role in supporting a JT. Given their mandate and ownership, MDBs can take long-term and strategic approaches, which can help mobilise finance and implement policy at a regional, country, and sub-national level. MDBs have convening power and can aid cooperation and coordination between providers of finance (domestic and international, public and private) and affected stakeholders (workers, communities, consumers). They also have highly relevant skillsets, from institutional capacity building and developing social protection measures, to investing in local skills and lifelong learning.

Support for a JT is now being formulated as a distinct area of work by some MDBs, but it is not a 'new' agenda per se. Many existing areas of MDB advice and assistance – particularly those relating to labour markets and economic inclusion, education and skills, regional development and support for small and medium-sized enterprises (SMEs), clean energy, and other sectors of the economy that are critical for green growth – are relevant to the aims of a JT. The response from the MDBs will also need to consider how support for a JT interacts with other drivers of change beyond the green economy, such as the impact of digitisation and automation on the future of work and livelihoods. In this context, ensuring effective support for a JT is as much about coordination *within* MDBs as it is about coordination *between* them.

As the issue of a JT gains momentum ahead of COP26, the MDBs need to consider how they can support its aims. At COP24 in December 2018, a group of nine MDBs established the MDB Joint Framework for Alignment with the Paris Agreement, with the objective of working together to realign their finance and support with the long-term goals of the Paris Agreement. At the UN Secretary General's Climate Summit in September 2019, these MDBs issued a high-level statement, including the commitment to help clients move away from the use of fossil fuels, and specifically, to work '*with national development banks and other financial institutions, by COP26, to develop financing and policy strategies supporting a just transition that promotes economic diversification and inclusion*'.[14] To inform such commitments individually or as a group, the MDBs decided to focus on the following questions:

[14] http://www.ebrd.com/joint-mdb-statement-climate-finance

- First, what does a JT entail? Given different interpretations of what a JT is, there is a need to develop a common understanding of it in order to structure effective support, through a common operational definition and/or a common approach.
- Second, which areas of MDB assistance and instruments or tools are relevant? A better understanding is required of existing MDB activities and potential new ones that could help identify both opportunites and gaps in potential support, informed by historical experience of structual change.
- Third, where are there opportunties for collaboration? A JT will require structural shifts that are beyond the scope of any individual institution, and that heightens the need for coordination, including understanding the role and interaction of the public and private sector.

This paper seeks to answer these questions and provide a set of recommended next steps for the PAWG in the lead-up to COP26. Drawing on desk-based research and 20 interviews with MDBs and other key stakeholders at the national, regional and international level, it provides:

- The theoretical framework presenting six dimensions for evaluating a JT, as well as a review of the different approaches to JT currently used by MDBs and their national and multilateral partners, in the context of climate change and green economy transition **(Section 2)**;
- A review of past transitions from which we identify four key lessons on operationalising a JT **(Section 3)**;
- An overview of opportunities for collaboration with non-MDB organisations deploying activities related to a JT **(Section 4)**;
- Analysis of the instruments and tools that MDBs can use to support a JT **(Section 5)**; and
- Next steps for the PAWG, setting out how public commitments to support a JT ahead of COP26 could be individually and collectively delivered **(Section 6).**

Additionally, we have included a number of apendices with further details on insights reflected in the sections above:

- **Appendix 1** provides the inventory of JT definitions used in the analysis of Section 2;
- **Appendix 2** presents the EBRD and EIB approach to supporting a JT as two case studies;
- Expanding on the findings presented in Section 3, **Appendix 3** presents the expanded analysis of past transitions; **Appendix 4** summarises the key features from the past transitions assessed; and **Appendix 5** sets out the lessons from past transitions;
- **Appendix 6** contains a summary of the interviews conducted and interviewee details.

2 How MDBs can build a shared understanding of a just transition to improve its delivery

This section seeks to shed light on the concept of JT and how MDBs can build a shared understanding of the type of activities that support JT outcomes. A process of literature review and stakeholder interviews unveiled a wide range of views on what a JT is and is not, according to different organisations, partly reflecting their varying mandates.

Whichever concept the PAWG favours, it should recognise that the transition to low-carbon, climate-resilient economies, as anticipated by the Paris Agreement, will create an unprecedented step change in the structure and dynamic of economic activity in all sectors and geographies. This will deliver a distinct set of stark challenges and opportunities for developing countries that may require a unique approach to development cooperation from more general sustainable development support.

This section is organised as follows:

- **Section 2.1** outlines the conceptual framework for defining JT approaches. This framework will be used to examine existing definitions and capture the results from our scoping of MDBs' current thinking.
- **Section 2.2** presents the results from scoping existing definitions of a JT, as well as the insight gathered from interviewing MDBs on their initial conception of a JT approach.

The section concludes by proposing an approach to addressing the divergence in views on how a JT should be defined.

2.1 Conceptual framework for defining a just transition

Climate change, environmental degradation, and the policies intended to address them, can all have unbalanced distributional implications, leading to calls for a JT. The ILO's 2015 *Guidelines for a just transition towards environmentally sustainable economies and societies for all* (International Labour Organisation, 2015) presents a broad vision to address environmental, social and economic issues together in a comprehensive just transition approach. Climate change is one of the most significant environmental issues facing humanity today and will lead to a change in the way we live, both through its physical impacts and through the policy measures required to shift to a low-carbon, climate-resilient economy. Some groups are more impacted by this transition than others, depending on their source of income, skills set, and geographical location (Nicholls, 2020; UNFCCC, 2016; and Diffenbaugh and Burke, 2019). The adverse effects of climate change will be disproportionately felt by the poorest (Islam & Winkel, 2017; Burzynski, de Melo, Deuster, & Docquier, 2019) and most socially excluded groups, including women and indigenous group members (IPCC, 2001). Mitigation policies may have negative distributional effects by impacting workers employed by high-carbon sectors, or through price increases triggered by the removal of fossil fuel subsidies or the introduction of carbon pricing (Martinez-Fernandez, Hinojosa, & Miranda, 2010) . Adaptation policies may have distributional implications for personal assets and sources of income may be affected by structural changes to increase resilience, or because efforts to develop climate-resilient economies are unequally distributed. Other environmental issues stemming from economic activities, such as industrial-scale agriculture, may harm some groups who are dependent on those natural resources for their livelihood and who are often at the lower end of the socioeconomic spectrum (UNESCAP, 2018). More broadly, growth that does not take into account inclusivity and sustainability can lead to widespread inequality as gains from economic growth are concentrated among a small group, leaving many behind (OECD, 2015).

The distributional implications of climate change can be seen within and between sectors, countries, and regions. Countries and localities within countries have different distributions of natural resources and sectoral economic activity which will determine how they will be affected by physical and policy impacts. Similarly, within countries, impacts on sectors will be asymmetric according to, respectively, emissions intensity and the availability of low-carbon alternatives (mitigation) and climate vulnerability (climate impacts). Within sectors, workers, firms and communities will be affected differently depending on their skills sets, sources of income, diversification opportunities, and consumption patterns.

Building on these observations, we distil six key dimensions along which a concept of a JT can be defined and subsequently operationalised. A survey of the literature, supplemented by interviews with MDBs and multilateral organisations, yields a diversity of views on how a JT should be defined. Six key dimensions can capture the spectrum of views on how an aspect of JT should be defined, from a narrow to a broader definition:

1. **Motivation: distributional justice and/or procedural justice.** Most JT approaches focus on ensuring that the distributional implications are considered. However, the JT approach could also encompass procedural implications, ensuring that the decision-making processes accompanying any transition are inclusive.[15]

2. **Context: climate change, environmental protection, and/or inclusive growth.** The JT could focus on the distributional implications of climate change, or it could encompass a wider scope including distributional consideration from environmental degradation and inclusive growth.[16] [17]

3. **Trigger: physical and/or policy impacts.** Narrower definitions of a JT include distributional implications of climate policy-driven transitions (both mitigation and adaptation policy[18]), whereas broader definitions may also include the distributional implications of physical climate impacts.

4. **Focus: negative and/or positive implications of climate change.** Narrower definitions of the JT focus on the distributional implications of the negative impacts of climate change ('leave no one behind'), while broader definitions also consider the distributional implications of the positive impacts ('equal opportunity for all and affirmative action').

5. **Target: production and/or consumption.** The scope of JT interventions may be focused on supporting impacted production only, or on both production and consumption impacts. The production side relates to workers and companies in sectors which are negatively affected by physical and policy impacts, including SMEs and informal businesses and workers in the impacted sectors. However, there are also distributional implications for consumption, since prices will be affected by changes in supply chains, as well as by mitigation policies such as carbon taxes.

6. **Scale: distribution between workers, companies, sectors, or countries.** JT definitions can have differing levels of granularity, ranging from those that focus on distributional implications between

[15] In the Paris Agreement, climate justice, encompassing restorative justice, is included as a stand-alone clause separate to the clause referencing a JT. As such, we have not explicitly included restorative justice considerations in the motivation dimension, although we recognise that some stakeholders do see climate justice and the JT as overlapping concepts.
[16] This report is widely focused on the JT in the context of the low-carbon and climate-resilient transition. However, this dimension suggests that some stakeholders, including MDBs, may be thinking about the JT in a wider context.
[17] For the purposes of clarity of the terms used, 'inclusive growth', as defined by the OECD, refers to economic growth that is distributed fairly and creates opportunities for all. Sustainable growth refers to growth that takes place without compromising the ability of future generations to meet their own needs. Finally, climate justice, as defined by the UN, presents the climate crisis through a human rights lens, focusing on the impact of climate change on the people and communities most vulnerable to it.
[18] While impacts of mitigation policy are widely understood to have significant distributional implications, as can be seen, for example, from the regressive nature of energy taxation, the distributional impacts of adaptation policy can also be significant. For example, water pricing to improve resource efficiency and resilience may be regressive, affecting lower-income vulnerable households disproportionally. Similarly, the establishment of flood plains, hurricane evacuation zones, and other nature-based interventions could displace poor communities.

workers or companies of an impacted sector, to sector-specific dynamics within a country, and those that focus on distributional implications between countries. In between those extremes, JT definitions may also focus on comparing sectors within a specific country or sub-national region, or across a number of countries, focusing also on regional implications.

These six dimensions are not mutually exclusive. As a pertinent example of that interaction, the position on the motivation dimension, especially the extent to which procedural justice is taken into account, might imply that a more expansive interpretation is also taken on the other dimensions. For example, involving all affected stakeholders in the deliberations over an investment programme may inevitably result in a focus on consumption impacts as well as production impacts, or lead to a greater range of triggers being taken into account.

2.2 Where different organisations stand on the six dimensions

This section sets out a review of different organisations that have an operational definition of JT and evaluates them against the six dimensions presented above. The objective of this review is to assess the range of approaches under each of the dimensions, assessing the broad or narrow perspectives across the organisations identified. We present conclusions on what determines the positioning of an organisation, and capture the results graphically. One limitation here is that the perspective is limited to the organisations we have surveyed, which may not be reflective of a wider survey that would incorporate more views from specific countries and geographies, particularly from developing countries. Additionally, the organisations surveyed are large, and as such the perspectives captured may be limited to the departments and sectors that they represent and work on.

2.2.1 Proposed framework for assessing operational definitions and scope

The review of existing JT definitions shows that they can range from a narrow to a broad scope across each of the key dimensions identified. Narrower scopes are characterised by having a close focus under each of the dimensions identified and tend to be adopted by organisations with relatively narrowly focused activities and target audiences. On the other hand, broader scopes tend to encompass a wider set of elements under each dimension. These definitions tend to be adopted by organisations with a broader range of activities and an international focus. Table 1 presents these two extremes of the spectrum, and Box 1 illustrates in more detail the cross-cutting nature the motivation dimension.

Table 1 Different scopes of just transition definitions

	Motivation	Context	Trigger	Focus	Target	Scale
Narrow scope includes:	Distributional justice	Climate change	Policy impacts	Negative	Production	Between workers and companies, and between sub-national regions
Broad scope includes:	Distributional and procedural justice	Climate change, environmental degradation, non-inclusive growth	Physical and policy impacts	Negative and positive	Production and consumption	Between workers, companies, sectors, and countries

Source: Vivid Economics

Box 1 The motivation dimension is cross-cutting, applying to both broad and narrow definitions

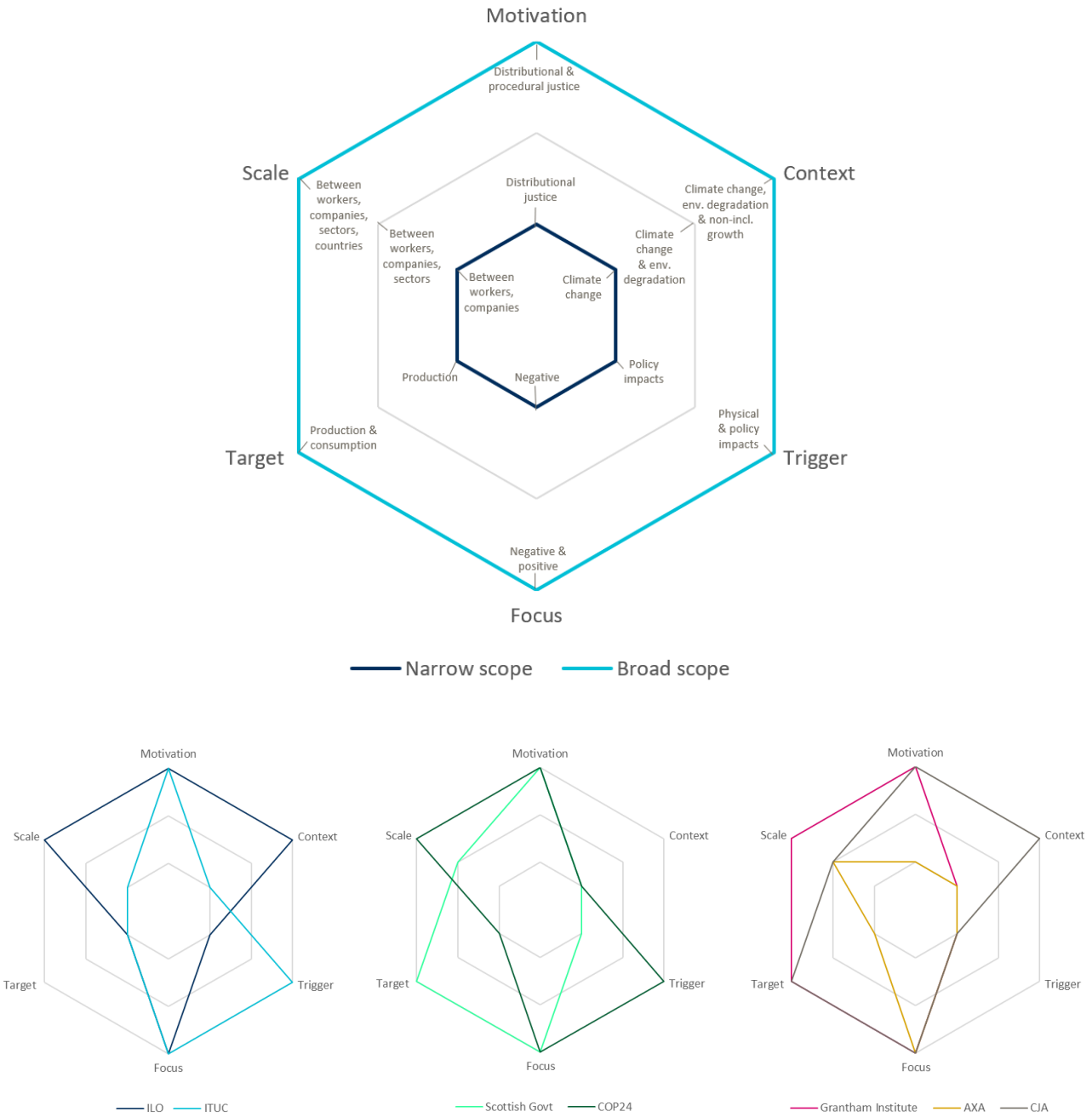
Whether an organisation chooses to focus on distributional justice, or both procedural and distributional, is a cross-cutting question, applicable to both broad and narrow definitions. Procedural justice refers to ensuring that the decision-making processes for addressing the low-carbon and climate-resilient transition are inclusive. This influences the way in which the organisation seeks to implement its approach to Just Transition, as defined by the other dimensions. For instance, an organisation that takes a narrow view on the Trigger dimension, only accounting for the low-carbon policy impacts, may still choose to take a broad stance on the Motivation dimension, accounting for both distributional and procedural justice. That is, when identifying the impacts of low-carbon policy, the organisation ensures that the process for identifying the impacts, and addressing them, is inclusive and takes account of procedural justice.

Nonetheless, there may be some correlation between how an organisation focuses on the motivation dimension and how it chooses to focus on other dimensions. For example, a focus on both distributional and procedural justice may lead to a focus on both production and consumption impacts, since the latter will often be an important consideration for poor and vulnerable communities included in the process.

To account for different perspectives, the definitions under consideration are drawn from a variety of sources ranging from governments to investment managers. Table 1 collates information from labour and trade union organisations, governments, research institutes, investment managers and social movements. This cross-section of stakeholders is not an exhaustive list of actors with JT approaches in place. The selection was chosen with the objective of presenting a wider range of definitions to illustrate the spectrum. Some omitted actors, such as certain national governments including South Africa and Germany, with developed approaches were not included as their definitions are closely aligned with other established definitions explored in this section – including the ILO definition. Section 5 explores an expanded set of stakeholders, focusing on the activities associated with a JT, and the opportunities for collaboration with MDBs.

Figure 2 **displays the scope of the narrow and broad definitions.** The figure visually represents the most extreme narrow and broad definitions of JT. As discussed below, apart from the EIB and the EBRD, most MDBs are yet to fully develop their understanding of, and approach to a JT. To this end, a radar chart such as this may be useful for MDBs when considering how they wish to conceptualise their approach.

Figure 2 Just transition definitions used by other MDBs will be mapped across a diagram that allows cross-comparison



Source: Vivid Economics

2.2.2 Non-MDB multilateral organisations and governments

This section assesses each existing JT definition using the dimensions developed in Section 2.1 to identify trends in the definitions. In Table 2, seven approaches to defining the JT are assessed against the six dimensions. The trends in each dimension column demonstrate the diversity of different approaches in use.

Almost all perspectives state that, besides distributional justice, procedural justice in the form of social dialogue and inclusive decision-making is crucial for a JT. While all definitions agree that JT must result in distributional justice, most of them also advocate the need for a just process to reach this outcome. This procedural justice, they argue, should take the form of social dialogue to ensure that the decision-making process is accessible to, and inclusive of, all perspectives in society. Only AXA Investment Managers place less emphasis on this aspect.

Most approaches apply the term 'just transition' in the context of climate change, as opposed to other environmental or socioeconomic transitions. Only the ILO and the Climate Justice Alliance explicitly take a broad approach beyond climate change, allowing the JT to further encompass environmental degradation and non-inclusive growth considerations.

While climate policy impacts are consistently incorporated into the scope of the JT, the distributional implications of physical impacts are acknowledged less frequently. All reviewed approaches identify climate policy to be a trigger for JT measures. In doing so, most definitions focus on the distributional implications of mitigation policy; adaptation policies are not specifically mentioned by any of the sources but occasionally their inclusion is inferred (for example, Grantham Research Institute on Climate Change, 2018). Only ITUC and the Heads of State and Government at COP24 consider the distributional effects of physical climate impacts.

All definitions under review note that the concept of a JT should incorporate both costs and benefits. All seven approaches consider actions that alleviate the negative climate change implications, as well as measures that fairly distribute the associated benefits. That is, the JT is considered to be not only about not leaving anybody behind, but also about creating opportunities for all.

Of the seven definitions, four emphasise only the impacts on workers and companies, but three also account for consumption implications. The Scottish Government, Grantham Research Centre and Climate Justice Alliance opt for a comprehensive approach that acknowledges the possible distributional effects of climate change on consumers and supply beyond the production-side implications. On the other hand, sources with a more international focus consider JT measures with production-side targets only. Most of them do so because their target groups are workers (ILO and ITUC) and companies (AXA).

The majority of definitions include sectoral, sub-national, national and international distributional considerations. Three approaches state that JT measures can be implemented both at the national and international levels. The remaining four approaches, most of which have been developed with a narrower target group in mind, define JT interventions in relation to one or more sectors in the national economy. Of those four definitions, three look at distributional implications between workers, companies and sectors, and one looks at distributional implications between sector measures only.

Table 2 Criteria for defining just transitions

Organisation / Author	Motivation	Context	Trigger	Focus	Target	Scale
International Labour Organisation (Smith, 2017)	Distributional and procedural justice	Climate change, environmental degradation, non-inclusive growth	Policy impacts	Negative and positive	Production	Between workers, companies, sectors, and countries
International Trade Union Confederation (Smith, 2017)	Distributional and procedural justice	Climate change	Physical and policy impacts	Negative and positive	Production	Between workers and companies, particularly in fossil fuel sectors
Scottish Government, (2020)	Distributional and procedural justice	Climate change	Policy impacts	Negative and positive	Production and consumption	Between workers, companies, and sectors
Heads of State and Government (2018) at COP24	Distributional and procedural justice	Climate change	Physical and policy impacts	Negative and positive	Production	Between workers, companies, sectors, and countries
Grantham Research Institute on Climate Change and the Environment (Robins, Brunsting, & Wood, 2018)	Distributional and procedural justice	Climate change	Policy impacts	Negative and positive	Production and consumption	Between workers, companies, sectors, and countries
AXA Investment Managers (Fromaget, 2019)	Distributional justice	Climate change	Policy impacts	Negative and positive	Production	Between sectors
Climate Justice Alliance (2019)	Distributional and procedural justice	Climate change, environmental degradation, non-inclusive growth	Policy impacts	Negative and positive	Production and consumption	Between workers, companies, and sectors

Source: Vivid Economics

2.2.3 MDBs

This section synthesises findings from a series of interviews conducted with the eight MDBs that are part of the Paris Agreement Working Group (PAWG). During April to June 2020, twenty interviews were conducted with ten MDBs, and seven with international organisations. They were conducted in a semi-structured way, using the six dimensions as a guide to explore each MDB's perspective on, and operationalisation of a JT. Two overarching issues that were discussed in all interviews were:

- What does JT mean; and
- What is the role of the MDBs in supporting it?

The results presented in this section are a synthesis of MDB perspectives. No evaluation or assessment is undertaken. Moreover, with the exception of the two case studies on the EBRD and EIB (see Appendix 2), the findings presented here are not attributed to specific MDBs. Instead, where clear links emerged between interview findings and types of mandate or institutional focus, these connections are made explicit.

The key lesson from the interviews is that MDBs as a group currently hold a wide range of views on what constitutes a JT, underpinning the importance of this initial stocktake in determining how, as a group of institutions, they could support it. This range of views highlights and reflects the differences in mandate, programmatic specialisation, and geographic focus across MDBs in the PAWG. Additionally, since MDB activities are country-led, JT perspectives will also respond to the development agenda of the countries of operation.

Motivation: distributional justice or procedural justice

Distributional considerations are the primary focus of most MDBs' current JT thinking. There is a widespread recognition that climate change mitigation and adaptation policies have distributional effects, possibly leading to unequal negative and positive social and economic outcomes for certain groups. Current JT thinking across most MDBs focuses on identifying these outcomes and alleviating them through appropriately designed projects and programmes.

A number of MDBs have also highlighted the importance of procedural justice in the context of a JT. Some MDBs stress the importance of developing a JT approach that is procedurally inclusive – in particular, giving those affected a voice and considering what measures would best support them throughout the transition. Additionally, some MDBs have started to consider how a JT can determine whether the processes behind the low-carbon and climate-resilient transition are inclusive.

The extent to which each MDB emphasises procedural justice concerns appears to depend on the institution's channels of influence. MDBs with extensive networks in national governmental institutions are more likely to highlight the importance of procedural justice in the context of the JT. Other MDBs, particularly those with a greater focus on private sector investment, consider procedural inclusiveness in the context of noting that stakeholder engagement is important to identify impacts of, and barriers to, benefiting from the low-carbon and climate-resilient transition, as well as on how companies engage with their employees to determine retraining needs and approaches to redundancy.

Some MDBs also highlight the importance of including historical justice concerns in thinking about the JT. Given that climate change is driven by the stock of atmospheric greenhouse gases (GHGs), which consist of a combination of current and historical emissions, some MDBs stress the importance of including inter-temporal justice considerations in elaborating what a JT means. They emphasise that this could boost public and governmental buy-in, particularly in the context of developing countries.

Context: climate change, environmental protection, or inclusive growth

Most MDBs identify the low-carbon and climate-resilient transition as the context on which their approach to thinking about the JT will initially focus, aligning with the Paris Agreement. There is consensus that the low-carbon and climate-resilient transition is accelerating, leading to calls for an immediate JT approach. JT initiatives have the primary objective of helping to drive the low-carbon and climate-resilient transition by addressing the social and economic impacts of policy, thereby removing potential political and social obstacles and disadvantages.

Most MDBs, especially those with developing country clients, stress the need to ensure that their JT approach is linked to long-term national development plans, and long-term climate strategies, including the upcoming nationally determined contribution (NDC) update round. MDBs stress the need to consider the wider policy and developmental context, rather than focusing only on interactions between low-carbon and climate-resilience policies and social and economic outcomes. To achieve this, MDBs place a strong emphasis on linking JT planning to the needs and competitive advantages of the countries and regions in question through identifying connections to National Development Plans and NDCs. This finding supports the operational recommendation derived from past transitions to develop a coherent and strategic framework for an effective transition.

Most MDBs point out that adjusting JT policy to the local context will also increase public and governmental buy-in, and hence support climate transition policies. JT approaches to national strategies accentuate the benefits from a JT for those impacted and increases support for low-carbon, climate-resilient policies.

Trigger: physical or policy impacts

All MDBs consider the impacts of climate change policies as a trigger for JT policies. The need to introduce measures that address the distributional implications of climate policies – including both mitigation and adaption policies – are a common element to MDBs' initial thinking on the JT. Within climate policies, all MDBs cited mitigation policies as relevant, while some also take into account the impact of adaptation policies. This area of focus was linked to the type of policies that are impacting the MDBs' countries of operation.

Some MDBs also consider the physical impacts of climate change as a trigger for JT policies. This view is particular to those MDBs with member countries facing the greatest climate risks. For instance, one MDB reported combining the expertise of natural disaster experts with social impact experts to generate resilience strategies that are integrated with social welfare considerations. The wider intention is to ensure that its policies targeting the physical impacts of climate change are distributionally just and maximise their positive social impact.

Focus: negative or positive implications of climate change

MDBs consistently refer to the need for JT policy to act on both the negative and positive distributional consequences of the climate transition. This means mitigating negative socioeconomic impacts and ensuring that the benefits from low-carbon, climate-resilient growth are inclusive and widely shared.

Concerning the negative distributional consequences, MDBs report a focus on addressing impacts on jobs, social welfare and overall economic development. Besides regionally and locally concentrated job losses, the social impacts of climate-relevant fiscal policy appear to be a strong focus area (as discussed further below).

JT policies to ensure the inclusive nature of green growth are seen as especially important by MDBs whose clients are developing countries. Specific examples cited include countries that rely on emission-intensive industries, whether in agriculture, resource extraction, GHG emission-intensive manufacturing, or otherwise. In these cases, a number of MDBs stress the importance of developing JT policies that enable affected groups and sectors to access the benefits from green growth and economic diversification, as well as sustaining long-term growth under the transition.

Target: production or consumption

Whether the target of MDBs' JT approach will be production or both production and consumption appears closely linked to their specific mandate and focus of investment. MDBs with a predominant focus on financing tangible and intangible assets in the economy tend to focus on production. Those with a mandate

to advise on government policy tend to incorporate the consumption side, too. These MDBs can also have a direct impact on policy through their interaction with governments.

Scale: distribution between workers, companies, sectors, or countries

MDBs report that the scale of their JT approach will likely be aligned with the current scope of their activities – i.e. largely at the regional, national or sub-national region, or city level. MDBs with an existing approach to regional development mentioned the possibility of introducing a JT approach that accounts for distributional considerations across countries within a region. In addition, some MDBs with strong country-specific focus and knowledge envision deploying their local knowledge to assess distributional implications within countries, using modelling tools to pin-point how particular countries might be affected by the low-carbon and climate-resilient transition, and which type of initiative would best counter the negative effects and amplify the positive.

2.2.4 Summary

Organisations appear to be largely in agreement on some of the dimensions: procedural justice has to be part of the JT, and the JT matters most at the scale of workers, communities and regions. MDBs agree that the process for achieving a JT should include distributive considerations as well as being inclusive, to ensure all perspectives are taken into account when identifying and addressing impacts. Additionally, there is a common understanding that a JT should include a focus on the impacts on workers, and assess distributional implications at the sub-national level.

This analysis also points to some distinct differences in views between organisations that focus on less-developed countries and those that focus on more advanced, developing countries:

- **For organisations working in developing countries, JT is often linked to a broader perspective.** MDBs highlighted that a JT approach should account for wider SDGs, rather than linking solely to the low-carbon and climate-resilient transition. This is also aligned with these organisations' ongoing efforts to emphasise the connection between low-carbon and climate-resilient transitions and wider SDGs – for instance, through the work on assessing co-benefits and the development impacts of climate investment. With regard to climate change, they feel that a JT should include impacts from climate policy, as well as consider the physical impacts of climate change, especially for countries facing high climate risk. They noted that their countries of operation tend to be highly vulnerable to climate impacts, and it is therefore an important element. They also emphasise the importance of accounting for the impacts on consumption, as well as ensuring that opportunities from the low-carbon and climate-resilient transition are available to all.

- **For organisations active in more advanced developing countries and developed countries, a narrower concept of JT concept is often applied.** These organisations tend to focus the concept of the transition to alleviate environmental pressures, across the domains of water, life on land, and climate, and the impact on different workers and sectors. This is aligned with the ILO Guidelines and the Silesia statement at COP24. Some organisations favour narrowing the JT concept further – for example, by focusing only on the even distribution of the impacts of climate change mitigation policy.

Such a variety of views, from seeing JT as relating only to the transition to a low-carbon economy to seeing it as relating to the achievement of all SDGs, is understandable when considering the varying mandates of MDBs and the governments they serve. However, such a dispersed set of views is not helpful in increasing coordination among critical stakeholders and ensuring that the JT agenda receives the attention and resources that it requires.

Through the PAWG, the MDBs have an opportunity to build a shared understanding of the JT in the context of the Paris Agreement. This study identifies two ways to achieve that aim:

1. **Facilitate a cross-MDB discussion to see if it is possible to reach consensus on the definition of JT.**

   - The PAWG could first consider whether harmonisation of the JT concept within the MDB community is desirable. MDBs already have different approaches in many areas of their work, but have harmonised in some, including climate finance tracking.
   - The proposed six dimensions of a JT are a useful starting point to facilitate discussion on the concept of a JT, and can be used to narrow or broaden the JT concept on different aspects to reach common agreement.
   - The PAWG may choose to qualify its definition by modifying the terminology it uses – for example, not claiming to define the JT 'writ large', but rather the JT 'in the context of low-carbon, climate-resilient growth'. It could do so with the acknowledgment that this definition would cover only one element of the JT, and with clear reference to a similar follow-up process in other fora that could produce related definitions, such as a JT 'in the context of ensuring no net biodiversity loss'.
   - Another strategy would be to allow multiple definitions to coexist – for example, a narrow definition related to the distributional impacts of mitigation policy in developed nations, and a broader definition that comprises both mitigation and adaptation, or even all SDGs, in the least-developed countries. This could also be a differentiated definition between MDBs, but with a common foundation in using the six dimensions as proposed in this study.

2. **Create a process for tracking the co-benefits from activities associated with a JT and the finance allocated to JT activities, leaving room for interpretation and adapting the definition over time**.

   - The way in which MDBs came to track finance allocated to adaptation activities may form a useful precedent to guide how MDBs go about conceptualising and tracking finance allocated to JT activity. This study presents a first attempt at tailoring the adaptation tracking process for the purposes of the JT.
   - Within the boundaries of a tracking process, the MDBs can start to create a shared understanding of JT by adapting the criteria that are part of the process.
   - Additionally, MDBs can deploy a diagnostic tool to support the process of identifying co-benefits from their portfolio of activities that may be aligned with a JT.

This latter action is linked to the approach that MDBs can take to operationalise a JT. Further details on this can be found in Section 4.3.

The next section presents an overview of lessons from past transitions that MDBs can take into account when constructing and implementing their approaches.

3 Historical parallels: Lessons from past transitions

This section presents our findings from reviewing five major past economic transitions: the first Industrial Revolution (1770-1830); the rise of railroads and steam shipping (1830-1870); the second Industrial Revolution (1875-1920); the rise of mass production and mass consumption (1910-1975); and the second great wave of globalisation (1970-2020).[19]

The single most important finding of the historical analysis is the importance of an inclusive political process for the success of a JT. Transitions have major and unpredictable redistributive effects – 'they are difficult processes' (Caldecott, Sartor, and Spencer 2017, p. 7). While strategic and inclusive policies are vital for ensuring their viability and success, given that their effects are unpredictable and tend to unfold over decades, only an inclusive process can assuage stakeholders' justified fears and concerns. Historical examples of introducing more inclusive political processes to support transitions include 19th-century state-level franchise extensions in the US, often following episodes of industrial unrest, the Conference of the Ruhr Region (1979), or, more recently, the Latrobe Valley Authority in Australia (2014).

In addition to this overarching lesson, three further operational findings emerged (Section 3.3). First, most successful JTs are guided and given **coherence by a long-run strategy**, which combines **unblocking**, **enabling, and protective** responses, as explained below. Second, most successful JT strategies are **tailored to the region and industries in question**. And third, most successful JT processes **start early**, before the first large-scale job losses and firm closures occur. These lessons were compiled from academic literature and key policy findings from literature shared by MDBs from the PAWG. A comprehensive summary of lessons identified from literature shared by MDBs can be found in Appendix 4.

3.1 Causes and effects

While the causes of the five transitions analysed here are difficult to summarise succinctly, a qualitative difference between the first and the subsequent four renders the latter set most relevant. Though technological change played its part, the first Industrial Revolution was primarily driven by a deep socio-cultural shift: a shift from production-for-use to production-for-trade-and-profit (Meiksins Wood, 2002). In contrast, the four latter transitions were driven by combinations of exogenous shocks, technological and organisational innovations, and state interventions. Given a broadly similar causal structure, their lessons are therefore of greater relevance to the low-carbon and climate-resilient transition.

The most important effects of these transitions were major changes in production and consumption patterns across geography, sectors, and social classes. Canals, railroads and, later, refrigeration technology, for example, shifted staple crops and cattle farming from the US East Coast to the Mid-West, and from the English countryside to Argentina and New Zealand. Urban consumers and manufacturers profited – lower wages sufficed to pay for workers' essential consumption needs – but US East Coast and English agricultural workers and land-owners suffered. Similar impacts are well known from the literature on former coal-mining and heavy industry regions, where mine and industry closures have led to local demographic shrinkage, rising unemployment rates, declines in public revenue, and a degradation of public spaces and property values (Martinez-Fernandez *et al.*, 2012). Finally, even in the context of flexible US labour and product markets, 'alongside the heralded consumer benefits' of the 'second great wave of globalisation', there are 'substantial adjustment costs and distribution consequences', where 'exposed workers experience greater job churning and reduced lifetime income' (Autor *et al.*, 2016, abstract).

As a result, transitions often spawned major social unrest. Examples of this include the Swing riots of the 1830s, driven by the introduction of threshing machines into British agriculture; the 1848 revolutions in

[19] An overview of these transitions is given in Appendix 3 and 4 below.

continental Europe, caused in part by poor harvests exacerbating the dislocations of ongoing industrialisation; severe industrial unrest in late 19th-century America, with peaks in 1877 and 1894;[20] and the 1968 worker revolts and the *gilets jaunes* movements across France in 2018. A frequent obstacle to successful transitions is hence resistance, both peaceful and at times violent, from those negatively affected.

An important finding in this regard is that labour resistance is lower in areas where alternative employment options are available. Caprettini and Voth (2020), for example, study the adoption of threshing machines in British agriculture in the 1830s, and find that 'where threshing machines had spread, the probability of riots was twice as high as in areas where they had not been adopted' (p. 10). However, 'where ease of access to alternative employment made workers' exit a realistic option, technological unemployment was less likely to translate into social unrest.' Conversely, where enclosures had reduced access to land and hence subsistence farming, 'threshing machine adoption tended to spell more political instability' (p. 10).

In addition to labour resistance, firms, too, have sought to slow down or halt transitions for fear of adverse distributional effects. This mechanism was particularly visible in the transition away from coal and steel in the Ruhr area. For example, 'for fear of new competitors in the labour market, regional [coal and steel] companies retained their large properties or sold them at excessive prices' (Galgóczi 2014, p. 225), thereby preventing the establishment of a Ford car manufacturing plant in the Ruhr area in the 1960s (Oei *et al*., 2019, p. 10). In addition to hoarding real estate, established firms also opposed the creation of universities, with Gustav Krupp commenting, for example, 'What we need in the Ruhr are muscles, not brains' (Galgóczi 2014, p. 225).

3.2 Key features of successful transitions

Although no single set of policies was successful across all transitions studied here, successful reactions generally involved a combination of unblocking, enabling, and protective responses.

Unblocking responses refer to policies that remove obstacles to an emerging transition. Taken on their own, these are not necessarily in line with a JT. Indeed, historically some exacerbated inequalities and gave rise to political resistance. But where significant vested interests are in place, they can be required for initiating a necessary transition, like the low-carbon and climate-resilient one. Historical examples of unblocking responses include: tariff removals, through which governments can circumvent or overcome the resistance of 'lagging' domestic sectors, as with the British Corn Law Repeal of 1846;[21] the weakening of entrenched corporatist structures, such as guilds, monopolies, or licensing regimes; or consensual stakeholder processes, such as the Conference of the Ruhr Region (1979), that unblocked the resistance of both trade unions and local employers to structural change.

Enabling responses refer to policies that allow a transition to proceed faster, smoother, and/or further than it otherwise would. While these policies are not strictly necessary for a transition to proceed – unlike unblocking responses – enabling responses can boost the fairness, speed, and the economic success of a transition. Public education is a canonical case of a successful enabling response. Other examples include acts of standardisation (e.g. of railroad gauges, voltage, rules of the road, sizes of paper, building materials, industrial components, and so on); the provision of legal infrastructure (e.g. patent protection, the limited liability company, standardised procedures for founding joint stock corporations); physical infrastructure (highways, urban sanitation, ports and airports, communication lines, etc.); and financial infrastructure (e.g. the Securities and Exchange Commission in the US). In addition, particularly for second-moving countries, the introduction of tariffs for infant industry protection has historically been a central enabling response (Chang 2003). In the context of the current low-carbon and climate-resilient transition, governments and development enablers can pursue mitigation and adaptation policy that provides local and

[20] The Great Railroad Strike of 1877 with over 100 fatalities (Piper, 2013, p. 95), and the Pullman Strike with over 50 fatalities, (Papke, 1999, pp. 33-5).
[21] The Repeal of the Corn Laws made imported wheat and other grains cheaper, thus undercutting British agriculture, increasing the real wage of urban workers through lower bread prices, and facilitating further reallocations of labour from agriculture and the countryside to industry and the cities.

immediate benefits such as less pollution, better health, improved energy access and efficiency, reduced energy expenditures, and higher agricultural productivity (Hallegatte *et al.*, 2015).

Finally, protective responses refer to policies that rein in the negative side effects of a transition, rendering it fairer than it would otherwise be and thus safeguarding its political viability. These may be considered close to the core of a narrow definition of a JT. Major historical examples include the 19th-century Factory Acts, banning child labour and certain unsafe work practices; the ten-, and then eight-hour working day; public pensions, healthcare, and unemployment insurance; the recognition of trade unions; and, most recently, the 'right to disconnect', introduced in French and Belgian labour law in 2017-2018 to protect workers' free time among increasing digital connectivity. There are also emerging examples of activities that have been deployed in the context of the low-carbon and climate-resilient transition, were governments can seek to mitigate negative impacts from climate policy by strengthening social protection and cash transfers or reducing taxes (Hallegatte *et al.*, 2015).

3.3 Key lessons for MDBs

Because of their often-complex nature, finding the right policy response to transitions is challenging. Recent reskilling policies, for example, when unaccompanied by other measures have often failed 'because of a mismatch between trained competences and local employment demand' (Caldecott, Sartor, and Spencer, 2017, p. 12).[22] Similar findings apply to regional transitions away from coal mining in recent decades: '[t]here are few if any instances of fully satisfactory economic rejuvenation outcomes in mono-industry coal mining towns' (World Bank 2018, p. 17).

Nevertheless, four operational findings for MDBs can be identified. These lessons have been identified after synthesising the analysis above and the literature on policy recommendations from recent transitions that was shared by members of the PAWG. A comprehensive summary of the latter is presented in Appendix 4, and referenced throughout this section.

First, the complex nature of transitions suggests the importance of a coherent framework to guide the overall policy response, which MDBs can help develop. This lesson emerges from recent regional transitions out of coal mining (Schulz and Schwartzkopff; 2016; Caldecott, Sartor and Spencer, 2017; World Bank 2018). A wider historical perspective suggests that, to be successful, frameworks should include a combination of unblocking, enabling, and protective responses: unblocking and enabling responses can support the economic and technological success of a transition. Enabling and protecting responses, in turn, can contribute to the fair and just nature of a transition, and hence its political viability.

Lesson One: Given their expertise and networks, MDBs are well placed to support the development of a coherent framework – e.g. via integrating JT planning with NDC and national development plans.

Second, each transition requires its own set of tailor-made policies underpinned by national development priorities and a broad socioeconomic vision. This is obvious for unblocking responses, which must be carefully targeted at the existing obstacles of the particular case; however, enabling responses, too, must be well-calibrated. Examples of successful decarbonisation strategies in Latin America are often guided by the countries' national development vision and socioeconomic development priorities. For instance, in Peru where 40% of the population in the Amazon region is poor, one of the objectives of the decarbonisation strategy was to explore how decarbonisation can reduce poverty by looking at assignment of use rights for primary forest, improved participation of native communities in conservation and sustainable forest management, and increased economic attractiveness of forestry activities triggered by the sustainable

[22] In the US, for example, there is little evidence that the Trade Adjustment Assistance (TAA) programme, the main tool explicitly intended to address the adverse impacts of increased openness to trade, has helped displaced workers reap the benefits of trade: 'While the TAA program may provide an income safety net, it does not help the average displaced worker who is enrolled in the program find new, well-paying employment opportunities … the TAA program does not make a difference' (Reynolds and Palatucci, 2012, p. 58; see also D'Amico and Schochet, 2012).

management of forest concessions and commercial plantations (IDB, DDPLAC, 2019). In particular, many successful enabling responses are solutions to collective action coordination problems,[23] and since the set of problems differ from case to case, so will the policies. In regional transitions out of coal mining in Western Europe, for example, investments in research and development (R&D) were central and successful enabling responses supported the emergence of local clusters that anchored high-value-added activities (Schulz and Schwartzkopff, 2016). However, the same kind of enabling response may not be as effective in mining regions that lack a history of high-value-added activity or local R&D.

Lesson Two: MDBs can support a JT by identifying the best set of policies in a given industry and region underpinned by national development priorities, collecting and sharing knowledge across cases, and deploying those instruments that fit well within each policy set (see Section 4 for further detail).

Third, JT policies should be planned and adopted early, which historically has resulted in tailored policies that are more targeted to individuals and communities affected and are better administered. For example, policies to mitigate social and labour impacts that start before labour layoffs occur can result in a more orderly, less stressful, and ultimately lower-cost transition (World Bank, 2018). In particular, early planning and action can prevent a breakdown of trust and preserve more options for constructive responses later on. 'The earlier the various actors anticipated, accepted and prepared for a transition, the better the results' (Karvounis, Strauss and Reinard, 2020, p. 15). This can be further facilitated through early investments in R&D, supporting the cooperation between local universities and the private sector. Evidence from comparing two neighbouring regions, one in the Netherlands and the other in Belgium, shows that transitioning away from coal mining earlier on leads to a more successful phase-out, with lower total costs. The Dutch region of Limburg announced its transition away from coal mining in 1965, whereas the Belgian government announced the phase-out in 1986. The Dutch government engaged in early dialogue with stakeholders and was able to identify alternatives and support for displaced workers (Karvounis, Strauss and Reinard, 2020, p. 26).

Lesson Three: MDBs can help a successful JT by initiating early action and dialogue with and between their partners and stakeholders, thereby helping to preserve trust and legitimacy as the process unfolds.

This links to a final, overarching lesson: JT policy should be transparent and embedded in inclusive political structures for both consultation and decision-making. Transitions unfold over decades, with difficult-to-predict impacts. Early action is important, but where inclusive political structures are missing, local buy-in may become weaker over time, at the limit leading to social unrest and a breakdown of efforts to reorient local and regional economies. Additionally, if the process lacks transparency, it can lead to ineffective assessment of impacts and costs and result in a lack of policies that support the transition and ensure a 'more equal distribution of costs and benefits' (Altintzis and Busser, 2014, p. 279). Where inclusive political structures and transparent processes are deployed, JT responses can be adjusted over time, so that trust and legitimacy are preserved. This lesson emerges clearly from the historical transitions covered (see Appendix 3 for further detail). For example, in the case of transitioning away from nuclear energy in Germany, the Ethics Commission on Safe Energy Supply was set up to provide expert policy advice and help find a societal consensus in the nuclear energy debate and provide advice on the phase-out process. It enabled a public debate between representatives of politics, science and the church on fundamental questions and concerns around the use of nuclear energy, with the support of high-level elected officials. The meetings were open to the public and received widespread media attention. The Commission published a final report which led to

[23] Historical examples of enabling policies, summarised in Appendix 3, range from the creation or facilitation of physical, legal and financial infrastructure, such as the creation of the interstate highway system, the joint stock company, or the Securities and Exchange Commission, to the provision of public education, product standards and infant industry protection, such as through land-grant colleges and various industry-protective tariffs in 19th-century America, or the DIN system of industrial standards in Germany. What unites many of these responses is that they are solutions to coordination or collective action problems: agreeing on standardised voltage for electricity, standard dimensions for nuts and bolts, or setting standards for transparency in financial markets, allows private actors to coordinate successfully and thereby engage in a productive division of labour. Public investment in (transferrable) human capital, or the public construction of high-quality, open-access roads, allows societies to overcome prisoner's-dilemma-style collective action problems, thus permitting the full potential of new technologies or production methods to be realised.

agreement on a complete nuclear phase-out (Schulz and Schwartzkopff, 2016, p. 9). Similarly, in Chile, social dialogue was identified as key to minimising and addressing the social impacts of the phasing-out of carbon-intensive industries. The Chilean government convened a working group which commissioned studies an all aspects, including social, of the coal phase-out plan. These were then discussed between coal power plant operators, workers unions, municipalities hosting coal power plants, academia, government, and civil society (IDB, DDPLAC, 2019).

Lesson Four: MDBs can support a JT by implementing inclusive dialogue and decision-making in their own policies, and by encouraging the same among their partners.

In sum, historical experience suggests successful JTs are politically inclusive. In addition:

- JT policy should be guided and given coherence by a long-run strategy, comprising unblocking, enabling, and protective elements;
- JT strategies should be tailored to the transition, region, and industries in question, to leverage strengths and manage risks; and
- JT policy planning and implementation should start early, before the first large-scale job losses occur, to ensure that vital trust is not lost early in the process and to ensure equal distribution of emerging opportunities from new economic activity.

MDBs can act on these lessons by:

- Supporting the development of **coherent** JT frameworks, possibly integrated with NDCs and national development plans;
- Helping to develop **tailored** JT policies to particular industries and regions – for example, via collecting and sharing knowledge among different stakeholders and cases;
- Initiating an **early** dialogue with and between their partners and stakeholders, helping to build and preserve trust and legitimacy in the context of difficult changes; and
- Insisting on **inclusive** dialogue and decision-making in their own policies and encouraging the same among their partners, to ensure that JT policies are adjusted and retain their legitimacy as a transition unfolds.

4 Stocktake: MDBs' current support for a just transition and opportunities going forward

This section presents a high-level and initial stocktake of existing MDB activities to support a JT, and initial conclusions on opportunities for extending support going forward. The research team reviewed existing documentation and carried out interviews with the MDBs to gather data on existing JT support, as presented in this section. A key limitation of the work resulted from the lack of a shared understanding of what the JT is among, and within, the MDBs, as explained in Section 2. However, it was clear that all MDBs have strategies that touch on core aspects of the JT, including through their climate change policies, economic inclusions and labour issues, and regional development strategies. Some MDBs have begun to explicitly approach JT as part of those strategies (e.g. the EIB's Energy Lending Policy; IDB's climate strategy to 2020; the World Bank's support in Poland, the Western Balkans and Greece; the Operational Priority 1 of ADB's Strategy 2030, which includes activities relating to the future of work, including cross-institutional collaboration), or through dedicated JT strategies (e.g. the EBRD's Just Transition Initiative).

Based on these strategies and initiatives, some MDBs were of the view that a range, or even the gamut, of their activities are relevant to the JT, without singling out many specific examples of projects. Other MDBs are in the process of identifying JT-relevant projects, but at the time of the interview, did not feel ready to highlight specific JT-relevant projects from their portfolios. Some MDBs were able to provide the team with specific examples of what could be, in their view, JT-relevant activities.

To reflect this state of affairs, this section does not claim to provide a fully comprehensive stocktake of projects that are labelled explicitly as JT-relevant; but rather presents an overview of the instruments that could be aligned with supporting JT objectives that MDBs have at their disposal. This stocktake of instruments is interweaved with all case studies of the specific activities in which those instruments have been deployed, and which the MDBs flagged as potential examples of activities supporting a JT. Where useful, the MDB experience was supplemented with broader DFI experience of JT support. As such, despite its limitations, this work represents, to the authors' knowledge, the most comprehensive review of MDB support for a JT to date, and forms a good basis for identifying potential gaps in the MDBs' JT support portfolio, opportunities to fill those gaps, and the tools for operationalising enhanced JT support.

This section analyses the existing MDB toolkit to identify which MDB instruments, individually or in combination, are particularly suited for supporting and advancing a JT (Section 4.1); the potential areas of investment where MDBs have an opportunity to scale up existing good practice or fill existing gaps (Section 4.2); and the tools that MDBs can deploy to operationalise enhanced support for the JT (Section 4.3).

4.1 Typology of instruments

At a high level, there are three types of instruments available to MDBs: investment financing; policy-based financing; and technical assistance and policy support (Table 3). A wider set of instruments are currently being deployed towards objectives aligned with the low-carbon and climate-resilient JT.[24] However, investment financing, policy-based financing, and technical assistance are the most relevant instruments for the objectives of a JT given the type of support needed, as well as the investment themes identified (Section 4.1.3).[25]

[24] For the complete typology of tools at the disposal of MDBs, see World Bank Group (2020) 'Transformative Climate Finance: A new approach for climate finance to achieve low-carbon resilient development in developing countries'.
[25] Also relevant are environmental and social due diligence activities, as used by all MDBs in ensuring high-quality governance related to environmental and social performance standards of all activities. This is not covered in detail here but represents another important avenue.

This section presents and overview of the three main instruments identified, including case studies of how MDBs have used these to meet the objectives of a JT.

Table 3 MDBs have a set of investment and financing tools that can be deployed to support a just transition approach

Instruments		Target
Investment financing	Equity	Equity stake/shareholder investment to support an enterprise or one of a series of discrete projects.
	Investment loans	Loans to government projects, an enterprise, or a series of discrete projects.
	Investment grants	Finance in the form of cash, goods or services, for which no repayment is required.
	Guarantees	The full or partial transfer of certain risks from investors or national governments to the MDB.
	Intermediated financing	Financial support through intermediaries such as banks, microfinance institutions, or other actors.
Technical assistance and policy support		Finance in the form of grants or non-financial assistance provided by specialists, to finance or provide support in the form of information sharing, expertise, skills training, knowledge/best practice sharing or other consultation services. The MDBs can also provide analytical support at the national and regional level with the objective of presenting national governments with options for achieving and developing policy objectives.
Policy-based financing		The provision of public finance is conditional on the borrower fulfilling its policy commitments.

Source: World Bank Group (2020) 'Transformative Climate Finance: A new approach for climate finance to achieve low-carbon resilient development in developing countries'

4.1.1 Investment financing

First, MDBs can deploy the investment instruments outlined in Table 3 to support project-based financing aligned with a JT approach. MDBs can support financing projects that target inequalities generated by the low-carbon transition by focusing on low-carbon technologies that create employment and investment opportunities for declining sectors. Specific areas of focus for investment in a JT may include projects that manage the impacts on employment, as well as those that ensure that the positive impacts of the low-carbon and climate-resilient transition benefit the population equally. For instance, CDC, in partnership with the Department for International Development (DFID), the Self-Employed Women's associations (SEWA) and Ayana have invested in a pilot skills development programme for communities living near Ayana's new solar power plant in India. This investment aims to increase the potential for employing the local community in the solar sector, creating an inclusive opportunity to benefit from the energy transition in the area.[26] Box 2 presents another example of how the IFC, an MDB focused on sustainable and inclusive growth through supporting the private sector, invested in an opportunity to bolster an inclusive transition. The IFC also has an extensive portfolio of work in energy access which focuses on delivering basic energy services to marginalised communities through innovative business models such as PAYGo. Similarly, the ADB is conducting work on inclusive green business and sustainability standards. Other prominent examples include

[26] https://www.cdcgroup.com/en/story/ayana-renewable-power/

the EBRD's work on integrating economic inclusion into private sector projects, and the EIB's Public Sector Loan Facility under the EU's Just Transition Mechanism.

Box 2 **IFC's investments in the green building sector in South Africa can be an example of how MDB investments can support a Just Transition**

In 2015, the IFC put a US$21 million equity investment into a private equity fund (IHS Fund II), managed by a large investor in South Africa's affordable housing sector (International Housing Solutions), seeing it as an opportunity to build up the green residential construction market. Other investors in the fund included the South Africa National Housing Finance Corporation, Eskom Pension Fund, and KfW. However, since low-income homeowners and renters could not afford the additional costs of greening measures, investors in the fund were facing lower returns. To overcome this challenge, the IFC structured a US$10 million concessional equity investment with funds from the Global Environmental Fund to partially cover the incremental greening costs. This action was then replicated by KfW which also invested in the same fund. The fund succeeded in convincing developers to install green technologies which have reduced energy and water use by 20% and lowered utility bills for low-income home-buyers and renters.

This investment supported the development of the green residential building market and therefore enhancing the benefits of a green transition, while ensuring that these benefits were also inclusive by supporting low-income households' access to green homes. The investment also spurred KfW to take similar action and increased the positive impact.

This example highlights how innovative concessional financing from MDBs can support a JT. MDBs can help overcome financing challenges with concessional finance and lead the way in supporting an inclusive green transition.

Source: International Finance Corporation (2019)

To maximise the positive impact and minimise the negative impact of investment instruments, MDBs can integrate their use into regional or country-level JT plans. For greater positive impact, projects identified as being aligned with a JT can be prioritised against regional or country-level JT approaches as well as NDCs and national development plans, with the most beneficial ones ranked highest. Given the increasing saliency of the JT, countries may use the 2020 NDC update round to include JT considerations, a criterion recognised as key to a high-quality NDC (Glynn *et al*., 2020).[27] This ensures that investment is deployed in the places that are most in need, and through the projects that will have a high impact, mitigating inequalities and generating inclusive growth. MDBs can also support the inclusion of JT considerations in national plans through policy support and technical assistance (see Section 4.1.2).

In addition, they can continue to use – and possibly augment – existing safeguarding assessments and standard environmental and social due diligence activities. MDBs can ensure that investments avoid long-term negative impacts by introducing/continuing to use safeguarding policies that take into account the social and economic impact of investments. Furthermore, they can augment safeguarding policies to include specific considerations aligned with a JT, such as the impact on jobs, and whether the benefits are inclusive of lower-income groups.

[27] https://wwf.panda.org/our_work/our_focus/climate_and_energy_practice/ndcs_we_want/?364143/NDCsWeWant-WWF-climate-ambition-checklist

4.1.2 Technical assistance and policy support

Second, across all contexts, MDBs can deploy technical assistance programmes to help identify and develop insights on key elements of a JT. In addition to financing instruments, technical assistance programmes can support governments in generating the knowledge to design policy and support their implementation. This support can take two complementary forms: first, support in identifying the impacts of the low-carbon and climate-resilient transition, by geography or by sector. This will help partner governments, institutions, and MDBs to prioritise their own JT approaches. Second, MDBs can support governments in developing solutions for implementing policy and activities related to addressing the impacts identified, such as working with educational organisations, labour organisations, and other implementing partners. For example, the World Bank is working on analytical activity for estimating the gross and net impacts of direct, indirect and induced jobs associated with the low-carbon and climate-resilient transition in MENA countries such as Morocco and Egypt.[28] Similarly, the IDB provided the government of Chile with technical assistance related to modelling the impacts of transitioning away from coal (Box 3). The ADB has a knowledge and support technical assistance project *Quality of Jobs and the Future of Work* to strengthen the capacity of its developing member countries to facilitate access quality jobs. The technical assistance will initiate steps towards building an evidence-driven and integrated approach to job promotion in ADB operations.[29]

Box 3 **IDB's work in Chile to support a just transition**

While the IDB is yet to develop a formal JT approach, it recently conducted a study on the labour impacts of coal phase-down scenarios in Chile,[30] providing an example of the type of work MDBs could do to support the JT. A coal phase-out in Chile will be part of the low-carbon transition, and therefore anticipating the potential impacts can support more effective policies and activities. The study looks at the labour impacts under four scenarios of electricity generation, three of which are coal power phase-down. It provides estimates of the number of jobs created and lost under each scenario and the implications for policy-making.

The study finds that although there is overall net job creation at the national level, there may be net jobs lost in the regions where coal power plants are situated. This highlights the need for a focused approach to the JT, identifying the specific regions that may be impacted by the low-carbon transition to ensure the jobs created may also benefit those communities.

This study is a form of policy support for the Ministry of Energy, providing information on the potential labour impacts of a coal phase-down which can help Chile in its policymaking, and help the IDB identify potential areas for investment and support . Specifically, the IDB provided:

- Input-output analysis, which is a way to assess direct and indirect effects of changing production and consumption of goods and services on the environment and the economy. It was used to estimate the direct and indirect effects of changing electricity production on job requirements and value-added in Chile
- Analysis of labour and capital costs for different electricity generation technologies and how they vary over time
- Analysis of the labour and value-added impact for each scenario

[28] Interview with World Bank officials.
[29] ADB. Technical Assistance on Quality Jobs and the Future of Work. https://www.adb.org/projects/54100-001/main
[30] https://publications.IDB.org/en/labor-impact-coal-phase-down-scenarios-chile

- Suggestions for policymaking, notably that addressing the potential job-loss issues at the local level is also important

This study could be qualified as supporting a JT in the following ways:

- The study looks at the potential distributional impacts of a coal phase-out/down, specifically jobs and value-added. Providing this type of evidence to governments can encourage them to take these impacts into consideration and create a fairer transition
- The study considers impacts at both the national and the local level. This is important as overall macro effects can often hide very different local impacts. Positive net job creation is not enough to ensure a JT; this study supports this case and provides potential policy ideas to support the transition for those most affected

Complementing technical assistance programmes, MDB's can deploy policy support for governments in introducing JT considerations into their existing long-term strategies relating to the low-carbon climate-resilient transition. Embedding JT considerations into existing long-term climate transition strategies will help to build coherent approaches that address the social impacts of climate policies, while progressing towards a low-carbon and climate-resilient future. This type of policy support is directly aligned with the fourth pillar of the MDBs approach to supporting the Paris Agreement by enabling the development of effective NDC strategies that will accelerate the low-carbon and climate-resilient transition (World Bank, 2018). For example, the World Bank developed a comprehensive report presenting a JT roadmap for Western Macedonia, outlining how to transition away from coal while minimising social impacts.[31] Similarly, the World Bank provided Poland with a comprehensive set of options for scaling up and accelerating the transition away from coal, accounting for JT considerations as a key theme (Box 4). The World Bank, alongside other partners, is also beginning to scale up work in the Western Balkans as part of its work establishing the Coal Regions in Transition Platform for the Western Balkans and Ukraine. The IADB is similarly supporting Chile and Peru in integrating JT considerations into their long-term strategies for decarbonisation to ensure early action to address the impacts of decarbonisation.[32] The IFC also provides targeted policy support to promote carbon pricing in its target countries, which can lead to effectively redistributing rents from polluting industries to governments which can then invest in social development. Creating more efficient market pricing in this way can be regarded as part of a strategy towards a JT.

As part of supporting government strategies, MDBs can also apply good governance and transparency around development of JT initiatives. Transparency and good governance are key to ensuring that all perspectives are taken into account when determining the impacts from the low-carbon and climate-resilient transition, as well as ensuring that strategies are effectively addressing the needs identified. For instance, Chatham House research and engagement with the Extractive Industries Transparency Initiative (EITI) has highlighted the importance of transparency and civil society engagement in supporting a JT, and the importance of continued donor and MDB support for this (Bradley, 2020).[33]

Finally, MDBs can play an important role in generating knowledge- and evidence-based policy advice on JT. MDBs are well placed to build up a robust knowledge base on JT, bringing together their network of experts and their practical country experience to produce well-rounded insight with real-world indications of how to

[31] https://www.interregeurope.eu/decarb/news/news-article/7743/alternative-energy-and-energy-storage-hub-for-wm/
[32] https://blogs.iadb.org/sostenibilidad/en/peru-advances-towards-carbon-neutrality-with-an-ambitious-participatory-and-robust-plan/ (Peru) https://blogs.iadb.org/sostenibilidad/en/chile-shows-that-multi-stakeholder-participation-is-key-to-designing-long-term-decarbonization-strategies/ (Chile)
[33] https://www.chathamhouse.org/sites/default/files/2020-06-17-transparency-in-transition-eiti-bradley.pdf

drive the JT forward at the community, country and sub-national region level, as well as at the regional level. For instance, the IADB recently launched an in-depth publication on the creation of jobs in the context of a net zero future in Latin America. This publication draws on a number of examples as well as on deep analytical expertise (Saget, Vogt-Schilb and Luu, 2020). Similarly, ADB has published two knowledge products on transitioning to green jobs and implications for skills development, based on a regional research study on *Education and Skills for Inclusive Growth, Green Jobs and the Greening of Economies in Asia*. The two books present the example of four countries on the role and importance of green jobs. The study also looked at the readiness of education and training systems to support the transition to green jobs in developing and middle-income countries. This research also addresses the skills needs for competitiveness in key sectors, including emerging green skills.[34]

Box 4 World Bank supported Poland's energy transition with a report outlining policy options, including just transition considerations[35]

The World Bank provided policy assistance to the government of Poland on how to scale up and accelerate its energy transition, including consideration of how to achieve a JT in the process. In close collaboration with Poland's Ministry of Environment, the World Banks support consisted of analysis and stakeholder engagement to produce a report presenting the government with options for scaling up and accelerating the energy transition to cleaner electricity and district heating generation mixes.

One of the four components of the policy advice was on how to enable a JT, mitigating the employment and social impacts of the energy transition. Policy advice suggested that active labour market policies contribute to mitigating employment impacts. Specifically, it noted that it can enable a JT by providing social safety nets and supporting coal miners and all affected groups during the transition, achieving sustainable and equitable growth.

Source: Berrah, N. et al. (2018) 'Poland Energy Transition : The Path to Sustainability in the Electricity and Heating Sector (English)' Washington, D.C.: World Bank Group

4.1.3 Policy-based financing

Second, policy-based financing can be used to ensure that JT support delivered by projects or programmes also contributes to the climate goals. The interviews conducted for this paper identified the risk that certain JT activities may hinder the low-carbon transition. In particular, insofar as JT activities aim to mitigate the negative impacts of the low-carbon transition, they may be misunderstood or misused as a means to slow down or halt the low-carbon and climate-resilient transition. To reduce this risk, MDBs can deploy policy-based financing to ensure that support to mitigate the negative distributional implications is aligned with an overall policy programme that advances the low-carbon transition. An example of such alignment would be investing in re-skilling programmes and education that facilitate the switching of workers from high- to low-carbon sectors. Boxes 3 and 4 present examples of how policy-based finance is being used to develop low-carbon strategies, illustrating the type of structure that could explicitly integrate JT policy objectives.

Moreover, there are significant synergies between policy-based financing, and policy engagement and technical assistance, both of which can support the receiving government in implementing the policy objectives tied to the loans. MDBs could, for example, build a programmatic approach to deploying JT

[34] ADB. Technical Assistance on Education and Skills for Inclusive Growth and Green Jobs. https://www.adb.org/projects/45103-001/main; https://link.springer.com/book/10.1007%2F978-94-007-5937-4; https://link.springer.com/book/10.1007/978-981-10-6559-0

[35] Berrah, N. *et al.* (2018) 'Poland Energy Transition : The Path to Sustainability in the Electricity and Heating Sector (English)' Washington, D.C.: World Bank Group

finance of which a core component would be deploying finance conditional on the development of country-led investment plans aligned with national plans, which in turn can be developed supported by technical assistance. For example, the IDB supported Costa Rica with technical assistance in modelling the potential social and economic impacts of its decarbonisation plan. Insight generated through analytical support can feed into better policy and regulatory design, a condition required in policy-based financing (Box 5). Box 6 and Box 7 provide two additional examples of how policy-based financing can be effectively combined with policy engagement and technical assistance.

Box 5 **IDB support for the government of Costa Rica in developing its decarbonisation plan used both technical assistance and policy-based financing**

In early 2019, Costa Rica launched its National Decarbonisation Plan, which aims to achieve a net zero emission economy by 2050. The plan focuses on ten lines of action, including nature-based solutions, electric transport, and elements for a JT. The IDB is supporting the design and implementation of this plan by using two instruments:

- Policy-based financing: the IDB provided a US$230 million loan to the government. It has a repayment term of 20 years, a grace period of five-and-a-half years, and an interest rate based on LIBOR. This loan is a programmatic policy-based loan and it has specific requirements attached to it, including institutional and regulatory changes. The aim of this policy-based financing is to address the challenges of promoting decarbonisation of the energy, transportation, forestry and agriculture sectors, and to push for the substantive reforms deemed necessary.
- Technical assistance: the IDB will provide technical assistance, initially focusing on the transport element of the decarbonisation plan. It will use cost-benefit analysis to look at the long-term plans with multiple objectives and high uncertainty, and will involve extensive stakeholder engagement. The analysis will provide Costa Rica with information that estimates conditions under which the plan has more economic costs than benefits (e.g. cost of gasoline, cost of batteries, successful reform of buses). This information will enable the government to design an implementation strategy that can avoid identified risks, adapts to changing circumstances, and minimises the costs to government, users and operators

Source: http://idbdocs.IDB.org/wsdocs/getdocument.aspx?docnum=EZSHARE-1151369642-91; https://blogs.IDB.org/sostenibilidad/en/how-much-is-it-going-to-cost-to-decarbonize-the-transport-sector-in-costa-rica/

Box 6 **AFDB's support for The Gambia Climate Smart Rural WASH Development Project**

In 2018, the AFDB approved funding to implement an Integrated Water Resources Management approach in The Gambia, aiming to increase access to safe and sustainable water supply, sanitation, and hygiene (WASH) in light of climate change threats. The programme primarily targets residents of rural and deprived urban communities who are particularly vulnerable to flash flooding and extreme drought. The AFDB deployed two financing tools in support of this project:

- Policy-based financing: the AFDB provided US$4.4 million for this project conditional on the government of The Gambia contributing to salaries and land for the required infrastructure. In line with the bank's expenditure eligibility policy, the government's contribution is relatively small (less than 10% of total project costs) because it previously increased its commitment to the WASH sector from 0.01% in 2015-17 to 1% in 2018.

- Technical assistance: the AFDB further supported this project by providing technical assistance with regard to multiple project components, including capacity enhancement for sustainable services delivery and project management.

The Gambia Climate Smart Rural WASH Development Project supports adaptation and resilience to climate change impacts and promotes the sustainability of sanitation services. Simultaneously, the programme promotes equitable utilisation of water resources to ensure that vulnerable communities are not left behind. This example stresses how policy-based financing and technical assistance can support JT measures.

Box 7 **Policy-based lending by the World Bank to support the transition away from coal production in the Shanxi Province in China**

The World Bank has issued the government of China with a US$200 million policy-based loan, or Development Policy Lending (DPL), which includes a pillar closely aligned with objectives of a JT linked to supporting workers and communities currently reliant on coal. DPL financing is structured over two phases of disbursement. The first phase is based on a number of policy priors established under four main pillars (see below). The second phase is conditional on the provincial government achieving 'triggers' linked to the strengthening of the policy priors.[36]

The overall objective of the operation is accelerating Shanxi Province's transition to a lower-coal economy, while diversifying economic growth and employment opportunities. The Shanxi Province aims to transition away from being the second-largest coal producer in China to being a pioneer of China's energy revolution, improving air quality and mitigating climate change in the region. The policy-based loan has been structured on four pillars:[37]

- Establishing a framework to guide economic and energy transition to maintain and diversify economic growth and employment opportunities;
- Transitioning energy consumption from coal to clean energy, including renewable energy, coal bed methane, energy efficiency, and clean heating, to replace coal consumption;
- Reducing coal production capacity in an inclusive and sustainable way, with a focus on coal mine closures and associated labour and social protection policies for laid-off workers and environmental remediation and land reclamation; and
- Transitioning to an environmentally friendly and resource-efficient economy focusing on air and water quality improvement.

The third pillar explicitly supports workers and communities affected by the transition away from coal. The pillar introduces policy priors and triggers linked to supporting laid-off workers from closed coal mines to non-coal sectors. These include the provincial government introducing a programme to re-employ laid-off workers, an earmarked subsidy fund for job creation and re-training of laid off-workers, and a programme for strengthening the social protection of laid-off workers. For the disbursement of the second phase financing, the provincial government will have to reach triggers that strengthen the policy priors such as

[36] World Bank (2019) Project Information Document
[37] World Bank (2019) Project Information Document

adopting an improved resettlement, training, and re-employment programme for laid-off workers budgeted from the subsidy fund and the unemployment insurance fund.

This operation is mobilised in parallel with the World Bank mobilising a complementary US$15 million of technical assistance grants from the UK funding/ESMAP ($10 million) and GEF ($5 million) to support Shanxi in achieving the triggers for the second phase of the DPL. This technical assistance is to support Shanxi in developing and implementing appropriate policy actions, building implementation capacity and undertaking the analysis to support a successful transition path. Specifically, this will include support for managing the social and environmental impacts stemming from coal mine closures, and the development of alternative employment opportunities for the economic transition from coal.

The following section provides an overview of potential themes that the MDBs will focus on when deploying the instruments outlined in this section. Some examples are given on the type of instrument that can be linked to each theme, but these are only indicative and the best choice of instruments will be highly context-specific and should be evaluated on an individual basis. See Section 4.3 for insight on how MDBs can go about this diagnosis.

4.2 Potential areas of investment

There are several key areas of investment that the MDBs can explore, based on this stocktake of instruments and how they have been deployed to support a JT to date, combined with further literature review and drawing from the historical parallels.[38] MDBs can identify projects that align with JT initiatives in these areas, as well as provide technical assistance to introduce JT initiatives within these areas.

While not necessarily exhaustive, a first list of important policy areas includes:

- **Macroeconomic and growth policies** – a JT lens can be applied to long-term growth policies to model the risks from the low-carbon, climate-resilient transition and identify the regions and type of impacts. MDBs can support clients to develop both their modelling capacity as well as their capacity to identify long-term solutions to the potential risks.
- **Industrial and sectoral policies –** MDBs can support governments in identifying the negative distributional impacts from climate change policies on sectors, and developing policies to mitigate those impacts. In parallel, they can also support economic diversification, deploying financing instruments and technical assistance and policy support to generate inclusive growth in green sectors to drive the creation of green jobs for displaced workers. To ensure that the new jobs are in line with a JT, decent pay and occupational health and safety standards are essential, and could be integrated into JT tracking frameworks, explored further below.
- **Environmental rehabilitation investments –** this is an important and recurrent area for investment, especially in the context of coal mining and heavy-industry transitions. A lack of investment in environmental rehabilitation leads of those regions having overall low attractiveness which in turn limits the ability of that community to transition into other industries and economic activities.
- **Low-carbon and climate-resilient infrastructure –** investment in sustainable infrastructure can generate employment opportunities, both in the construction phase, and through the productivity-

[38] This section combines findings of the preceding section with the analysis presented by the ILO on key areas for JT support: https://www.ilo.org/wcmsp5/groups/public/---ed_emp/---emp_ent/documents/publication/wcms_432859.pdf
Additionally, the recommendations in Saget, Vogt-Schilb and Luu (2020). Jobs in a net-zero emissions future in Latin America and the Caribbean. Inter-American Development Bank and International Labour Organisation.

boosting effects of better infrastructure. To this end, MDBs can deploy targeted investment in sustainable infrastructure to generate employment opportunities for those whose jobs were displaced by the low-carbon and climate-resilient transition. Infrastructure investment can also be focused on supporting the sustainable growth of areas that may be negatively impacted by the transition by, for instance, investing in transport to increase the connectivity of those areas to support job creation and economic diversification, and through investment in digital infrastructure. An example of the latter are plans in Germany to build high-speed train connections and new motorways to connect former lignite mining areas to growth hubs like Berlin or Dresden.

- **Enterprise policies –** MDBs can also focus on developing the private sector to create inclusive green growth opportunities for companies impacted by low-carbon and climate-resilient transition policies. This can relate to the support of SMEs by increasing access to green technology and encouraging diversification to create jobs and inclusive benefits.

- **Skills development –** MDBs can fund skills development for workers affected by the low-carbon, climate-resilient transition, enabling them to find employment in emerging green sectors. Additionally, they can support the development of curricula to include skills aligned with new low-carbon sectors to support the transition of a country's human capital into a low-carbon future. Additionally, MDBs can support skills development policies such as policies promoting green jobs, more efficient labour market matching policies, allocating resources to the identification of emerging skills demand, and coordinating environmental policies with skills demand.

- **Active labour market policies –** MDBs can support and facilitate labour market policies that support companies and workers to adapt to changing labour market demands in the context of the low-carbon and climate-resilient transition. They can support the strengthening and adaptation of employment services and the introduction of active employment policies including targeted subsidies for education and skills.

- **Social protection –** JT activities can also support social protection measures designed to address the distributional implications of the low-carbon and climate-resilient transition. Specifically, they can support governments in identifying the social impacts and in designing programmes to mitigate negative impacts to consumption and wellbeing.

- **Social dialogue and tripartism –** MDBs are able to, and often have experience with, facilitating dialogue between governments and affected private sector actors, as well as those impacted by the climate transition. Inclusive dialogue may lead to an increase in buy-in from civil society and the private sector to support activities under the low-carbon and climate-resilient transition, as well enabling the design of more targeted policies and investment. This could be done through operationalising programmatic investment planning and implementation processes for the JT such as those pioneered in the CIF.[39]

Table 4 provides an illustrative typology of the projects and activities that the MDBs could engage in across the identified themes, applying the instrument typology discussed in Section 4.1. As MDBs develop their JT approaches, they will be able to identify further examples based on their current activities and countries of operation.

The following section presents a proposal for how the MDBs can operationalise their approach to the JT as they scale up their efforts to support its aims. This section provides an overview of the tools at the disposal of MDBs and the different investment areas that they could focus on. Each MDB will have to go through the process of refining its specific approach, identifying the tools and areas of investment that align with the

[39] CIF (2018) 'Evaluation of the Climate Funds' Programmatic Approach: Final Report and Management Response'.

needs of their countries of operation and comparative advantages. Section 4.3 also outlines the three steps that they can follow to achieve this outcome.

Table 4 The MDB instrument suite can be effectively targeted at some of the key investment themes of a just transition

Themes	Instruments		
	Investment instruments	Policy-based financing	Policy support and technical assistance
Macro and growth policies		Implementation of low-carbon fiscal reform linked to the recipient fulfilling policy objectives on mitigating the negative distributional impacts from the reforms.	Integration of JT considerations into NDC and long-term low-carbon and climate-resilient strategies. Long-term scenario modelling to identify risks from the low-carbon and climate-resilient transition.
Industrial and sector policies	Financing projects that are delivering low-carbon climate-resilient solutions which can employ those whose jobs may have been displaced, or that can create opportunities for those impacted by the transition, such as: • renewable energy • green tourism • nature-based solutions This can include supporting local procurement, and sub-national, national and regional national development policies through investments.	Financial support for sectors negatively affected by the low-carbon transition linked to low-carbon policy objectives being achieved.	Development of sectoral strategies for transitioning to a low-carbon and climate-resilient future, while accounting for the potential distributional implications, such as: • green economic diversification in affected areas • supply chain analysis to identify opportunities for growth and employment
Low-carbon and climate-resilient infrastructure	Financing projects that are delivering low-carbon and climate-resilient accessible to all, including low-income groups, such as: • affordable green housing • off-grid solar energy • sustainable transport to increase connectivity of affected areas	Financing the development of policies to enhance low-carbon and sustainable infrastructure conditional on meeting policy objectives related to social inclusion and support for those affected.	
Enterprise policies	Targeting impacted SMEs to switch to low-carbon and climate-resilient practices, as well as supporting those that may create jobs for those displaced by the low-carbon and climate-resilient transition.		Support for the development of bankable projects aligned with the low-carbon and climate-resilient transition that may also provide employment opportunities and re-skilling.
Skills development		Implementation of human capital investment plans linked to policy objectives aligned with re-skilling and skilling workers to work in low-carbon and climate-resilient sectors.	Support governments in updating curricula and national training programmes to introduce skills associated with green jobs.

Themes	Instruments		
	Investment instruments	Policy-based financing	Policy support and technical assistance
Social protection	Supporting primary healthcare and socio-psychological counselling. This could also support community centres/buildings that combine co-working spaces for start-up companies with space for social, cultural and learning activities.	Support for the introduction of social protection policies addressing those impacted by the low-carbon and climate-resilient transition	
Social dialogue			Facilitating dialogue between government, sub-national governments, and private sector to identify the impacts of the low-carbon and climate-resilient transition and develop solutions.

Source: Vivid Economics

4.3 Operationalising support for a just transition

This section presents three options for identifying and tracking MDB support for a JT. Specifically, the section tackles the following questions: how can MDBs operationalise their JT approaches? How can they assess and run a diagnosis of the JT needs in their target countries and region? And what are their existing activities with a JT lens?

This section proposes that operationalising the JT for MDBs can consist of three main components:

1. Identifying the distributional implications of the low-carbon and climate-resilient transition that should be addressed through a diagnostic process (Section 4.3.1);
2. Identifying projects or project components aligned with those targets by assessing the co-benefits of existing and planned activities (Section 4.3.2); and
3. Introducing a finance tracking framework that enables MDBs to track financing that can be directly linked to supporting the objectives of a JT, as defined by the MDBs (Section 4.3.3).

4.3.1 Diagnostic just transition needs

Before MDBs can assess specific activities for the purpose of identifying co-benefits and tracking finance, they need to implement a thorough diagnostic process that enables them to identify the needs of the countries and regions of operation linked to JT objectives. The diagnostic tool would allow for the MDBs to identify all of their activities that support the JT, assessing how widely or narrowly they are currently deploying them relative to their defined approach under the size dimensions.

MDBs should leverage quantitative and qualitative analysis to assess the distributional implications of the low-carbon and climate-resilient transition in their countries and regions of operation through three main elements. They can deploy long-term scenario modelling to assess the impacts on employment and productivity, as well as engage with local stakeholders to identify the vulnerable sectors and groups. Building on modelling results, they can conduct further analysis on the specific type of distributional implications. This will provide MDBs with a granular overview of the needs of the groups impacted by the low-carbon and climate-resilient transition, enabling them to identify the activities and instruments required. In parallel to assessing the negative implications, MDBs should also assess if jobs and economic opportunities created by the low-carbon and climate-resilient transition are accessible to all. MDBs can identify sectors that are set to grow under this transition and assess the distribution of jobs and services to determine if they can develop activities that can support equal distribution, and in some cases simultaneously address the negative implications.

The outcome of this diagnostic exercise can better guide the identification of activity co-benefits, inform a finance tracking framework, and also be integrated in other operational tools such as environmental and social risk management. The diagnostic tool has a clear role to play in concert with tracking tools for co-benefits and tracking JT finance. It can, for example, help fine-tune the criteria deployed under the finance tracking framework by introducing a way to identify specific needs and sectors of focus where JT support is relevant. Beyond the benefits presented in this section, a diagnostic tool can also contribute to other processes in the MDBs such as environmental and social risk assessment and management. As part of these processes, the diagnostic tool could be deployed as a screening instrument for all projects that aim to alleviate environmental pressures, even if they do not appear to have a clear JT angle at the outset.

As part of the diagnosis exercise, MDBs can also deploy a policy tracking framework. A policy tracking framework at the sub-national, country, or regional level can enable MDBs and countries to track the extent of planning and preparedness for JT-associated policy or investment intervention. This can also include an

assessment of the readiness status of the country to receive support, leading to more tailored interventions that can facilitate a smoother transition.

4.3.2 Tracking co-benefits associated with a just transition

At the project level, MDBs might apply a JT lens to their current activities to identify progress as well as areas for improvement with respect to the needs identified. This recommendation is in line with recent developments in increasing the focus on tracking social impacts of climate change and climate policy. The IPCC AR5 (2014) presented an enforced focus on risk, and the impact of climate change on people and communities, and how this should impact decision-making in the context of climate change. MDBs could identify existing activity components that are enabling a JT, either because the relevant benefits are directed towards those most in need, or because negative distributional consequences are explicitly addressed. MDBs could also identify activities that may be lacking certain components to be compatible with a JT, in particular because their benefits fail to be shared widely, or because the activities in question cause negative distributional consequences that are left unaddressed.

To track progress and identify channels of impact, MDBs could distil tracking criteria from their JT approach and use them to identify the JT co-benefits of existing activities. This could operate analogously to the World Bank's climate co-benefit tracking system.[40] These climate co-benefits are defined by a document that presents the typology of climate co-benefits by sector of activities.[41] In parallel, MDBs could develop and apply a typology of co-benefits aligned with their JT approach for each of their sectors and areas of operation, including, for example:

- Creating employment opportunities for those whose jobs may have been displaced by the low-carbon and climate-resilient transition;
- Supporting re-skilling or education components that enable workers to benefit from green jobs;
- Ensuring that benefits from the climate activity are made available to low-income and marginalised communities; and
- Ensuring that the processes and discussions around the low-carbon and climate-resilient transition are inclusive and transparent.

Slightly extending the co-benefit screening could help to identify, via the same process, activities that require additional components to become JT-aligned. In order to maximise progress towards a JT, MDBs may want to identify which of its existing activities fall short of full alignment with a JT. Such a shortfall could result from activities generating negative impacts, such as those affecting workers or low-income consumers; or it could result because the benefits generated fail to reach those most in need. By adding a screening for these two types of shortfall to the co-benefit identification process, MDBs might be able to quickly spot existing activities that require additional components for alignment with a JT. Such components could be identified in the same process and then introduced by MDB financing, or by actively seeking collaboration with government, other MDBs, or relevant stakeholders.

Identifying the co-benefits from activities, as well as the potential gaps in activities currently deployed, can support the MDBs in identifying activities that should be assessed with the finance tracking framework, as well as feed into the design of new programmes and project.

[40] http://www.oecd.org/env/cc/48251339.pdf
[41] https://www.worldbank.org/content/dam/Worldbank/document/Typology.pdf

4.3.3 Tracking MDB financing associated with a just transition

Even through MDBs are at the early stages of developing their JT approaches, a strategy for tracking JT financing can build up the framework for tracking impact.

Introducing a process-based finance tracking approach for JT activities will enable MDBs to leverage a common understanding of the JT, while operationalising their specific approach. This solution is akin to that used for adaptation activities, where the divergence of opinions leads to finding a common ground by agreeing on the process that finance tracking should follow. Section 2.2.3 explains that there is a varied set approaches to the JT among MDBs. Therefore, MDBs could follow a process-based approach to defining JT activities that circumvents the need to settle on a common definition in the immediate future, but rather allows for a range of activities to be labelled JT-relevant, and over time adjusting criteria following a learning-by-doing process.

This section outlines initial thinking on a framework for identifying and tracking JT activities. It presents an initial set of criteria for tagging and tracking. While potentially maintaining a shared core of criteria, this set could be refined and adjusted according to each MDB's specific mandate and approach. Initial thinking on this is set out by assessing how MDBs would interpret the criteria depending on their positioning across the six dimensions presented in Section 2.

The tracking framework suggested draws on MDB experiences with tracking adaptation activities. How to track adaptation initiatives was a longstanding debate, in large part because differentiating adaptation policies from general development initiatives proved challenging. This challenge was in part overcome by establishing a framework that emphasises the motivation behind activities, assessing whether they aim at addressing the impacts of climate change, rather than trying to assess the activities outside of this context. This, in turn, was assessed on a continuum, reflecting the varying degrees to which different projects conformed to the criteria in question. A similar approach could be used to track JT initiatives: criteria could be developed to identify alignment with the two JT core objectives: i) leaving no one behind; and ii) creating opportunities for all in the context of the low-carbon and climate-resilient transition. As with climate change adaptation, assessment against these criteria could then proceed along a continuum, to reflect the different degrees to which various projects meet them.

An initial set of criteria could be the following:

1. *The project, and all of its components, is consistent with the aims of the Paris Agreement.*
2. *There is documented evidence that the project, or relevant component of the project, has been designed and implemented in a way that:*

   2.1 The project or initiative has the objective of reducing the inequality in outcomes that would otherwise be expected from climate change (and environmental degradation) and/or policy efforts to reduce the impacts of climate change (and environmental degradation).

   2.2 The inequality of outcomes otherwise expected is clearly described, and there is a clear and direct explanation of how the project, or project component, will address the outcome inequality otherwise expected.

3. *The project, or relevant component of a project, is aligned with a strategic approach to delivering a JT – for example, with a clear link to the JT element of an NDC or long-term low GHG emission development strategy, or other document that articulates a JT strategy or results in a contribution to the development of such plans/strategies.*

4. *The project and all its components do not do any significant harm to any other environmental objective.*

These criteria have been developed on the basis that the core objective of the JT is to support the low-carbon and climate-resilient transition by addressing adverse distributional implications and social impacts. The criteria draw on an initial set of criteria proposed by the EBRD, generalised to suit a range of JT approaches.

The first criterion ensures that any project or initiative proposed under the JT is aligned with the Paris Agreement. This ensures that the activity in question facilitates and enables a low-carbon and climate-resilient transition, which is one of the principal objectives of JT policy. Consistency with the aims of the Paris Agreement can be determined by assessing if the potential impacts of the project, or project components, are directly aligned with the climate and socioeconomic objectives set out in the Paris Agreement. To facilitate assessment against this criterion, MDBs can leverage the process that they have already started to develop for ensuring that their activities are aligned with the Paris Agreement.

As reflected in our analysis of views on the definition of JT, MDBs that also consider wider development considerations can interpret this criterion to also include alignment with national development plans. When evaluating projects and project components, they can test the extent to which this also meets the goals outlined in existing growth strategies and wider development objectives of the recipient country or countries.

The second criterion reflects the central thrust behind a JT approach: leave no one behind and create opportunities for all. This ensures that the activity in question addresses the principal objective of JT policy: assuring the justice of the low-carbon and climate-resilient transition.

This second criterion could be tailored by each MDB toward its specific mandate and priorities, reflecting their different views on key dimensions. Each MDB will have its own set of priority areas outlined in its JT approach – i.e. sectors, geographies, or groups within their remit that are likely to be particularly affected, reflecting their position under the six dimensions and countries of operation. For example:

- MDBs can established whether the scope of the outlined inequalities is linked to the impact of climate policy, or of both climate policy and physical climate impacts;
- They can determine if the inequality of outcomes include considerations of both the negative implications, or will also account for the positive considerations, ensuring that benefits from the transition are inclusive; and
- The inequality of outcomes can include considerations of both production and consumption, or focus on production.

Once the targeted inequalities are clearly linked and in line with each MDB's approach to the JT, the causal link between the project or project component and addressing inequality identified should be explicitly stated and supported by qualitative and/or quantitative evidence. Evaluation for this criterion can include evidence from engaging with affected stakeholders that outlines both the impacts felt and the solutions identified.

The third criterion ensures that only those activities that mesh with existing JT strategies for the low-carbon and climate-resilient transition in the recipient country can qualify as JT activities. This serves to ensure that the project and project components funded under JT envelopes are aligned with existing strategies, thereby increasing policy coherence and efficiency, maximising impact, and increasing buy-in from partner countries. Additionally, ensuring alignment facilitates the tracking of progress against existing low-carbon and climate-resilient transition strategies, or with broader national development plans that are in alignment with the

Paris agreement. This criterion also supports the lesson from past transitions that effective approaches should be driven by coherent integration into existing strategies (Appendix 3).

The fourth criterion ensures that the project or project components in question are not hindering efforts to achieve other important environmental objectives. There may be a number of environmentally unsustainable solutions to the inequalities generated by the low-carbon and climate-resilient transition. This criterion seeks to ensure that MDBs focus JT policy on funding projects and initiatives that advance – or at least do not hinder – environmental objectives. In this way, progress towards climate and environmental sustainability is not impaired in the process of addressing inequalities created by the low-carbon and climate-resilient transition.

In practical terms, the approach to accounting for the financing identified can leverage existing accounting frameworks for MDB financing. The tracking framework proposed might identify four main types of JT-associated financing:

- Mitigation spending supporting the JT
- Adaptation spending supporting the JT
- Dual-purpose (mitigation and adaptation) spending supporting the JT
- Other spending supporting the JT

Mitigation, adaptation and dual-purpose spending are already tracked by MDBs. Therefore, this could be extended for the purpose of tracking JT finance by assessing what proportion of that tracked spending supports JT aims.[42] The fourth category allows MDB-tracked spending that does not count as climate finance to nonetheless be acknowledged as JT spending.

The introduction of a finance tracking framework could present a number of challenges that would call for cross-MDB collaboration. The framework would require a degree of harmonisation of the process, approach and framework which MDBs are using, which is difficult to achieve given the wide range of JT views across organisations. If a common set of criteria were agreed, MDBs may interpret them differently which could lead to acrimony across the MDBs. On the other hand, MDBs choose to use different criteria could lead to stakeholder confusion in interpreting the numbers.

In sum, MDBs can implement the three components outlined in this section to successfully operationalise their JT approaches, founded on a common understanding that builds in the flexibility to adapt to specific MDB perspectives. The diagnostic of needs associated with JT objectives can facilitate the fine-tuning and definition of what each MDB's JT approach should focus on, and the activities needed. The co-benefits tracking, and the finance tracking frameworks can in turn enable MDBs to concretely map out how their portfolios align with JT objectives, as well as the scale of the financing currently dedicated to JT-aligned objectives.

[42] This framework is not necessarily linked to a specific definition of JT. For example, an MDB with a very narrow approach to defining JT, that only considered policy impacts from the low carbon transition could still count adaptation finance towards JT financing if it provided new employment opportunities for displaced coal miners.

5 Stocktake of the wider landscape: potential areas of collaboration with international organisations and initiatives, and national governments

This section outlines the potential areas for collaboration with international and national institutions that are involved in supporting the objectives of a JT. As highlighted by the findings presented in this paper, and Section 3 in particular, it is key to follow a collaborative and coherent approach to a JT, emphasising the importance for MDBs to seek out partnerships and areas of complementarity with activities undertaken by other organisations and government actors. Table 5 presents a stocktake of the identified institutions involved in supporting the aims of a JT, highlighting those that were interviewed over the course of this study. The rest of the section identifies the different areas of collaboration that MDBs could pursue.

As noted in the table, the set of stakeholders interviewed for this project was non-exhaustive, and as MDBs take their JT initiative forward, they should seek to continue engaging with key actors. This work set out to interview a set of stakeholders that complement the initial stages of development of MDB JT approaches. As MDBs move this work forward and shape their approaches to, and understanding of, a JT, they can seek to engage with a wider set of stakeholders listed in the table below but not yet interviewed. Having a more defined approach can lead to more informed conversations on potential areas for collaboration and complementary activities.

Table 5 MDBs can engage with a number of international institutions active under a range of topics aligned with just transition objectives

Type of organisation	Name
International organisations	**ILO,** IRENA, **ITUC, OECD,** UNEP, **UNFCCC***
Regional and National Initiatives	EU Just Transition Mechanism, Scotland's Just Transition Centre, South African National Planning Commission's Just Transition Dialogue, Germany's Commission on Growth, Structural Change and Employment
Research and civil society organisations	Action Aid, **African Coalition for Sustainable Energy and Access (ACSEA),*** CSIS, Chatham House, E3G, Enda Tiers Monde, IDDRI, IISD, Just Transition Alliance, KAPSARC, **Pan African Climate Justice Alliance (PACJA),*** Pan African Parliament, **SEI, Solidaridad Network,*** WRI
Private sector-focused organisations	**UN PRI*, South African's National Business Initiative (NBI)***
Donors	AFD, **CIF**, DFID, GIZ, NORAD
Multi-stakeholder initiatives	EU JTC, **IEA Clean Energy Transitions Centre, ILO Green Jobs Assessment Institutions Network, Powering Past Coal Alliance (PPCA)***, UN Climate Action for Jobs Initiative, IPCC

Note: Bold = interviewed; * = interview by EBRD

The current landscape of JT actors is dynamic and varied, with most activity concentrated in research, awareness raising and capacity building, and funds largely destined for developed countries. Potential areas of collaboration are therefore concentrated under these four headings, but this may change in the near future. A brief overview of the four areas is presented below, followed by Table 6 listing initiatives and institutions.

Collaborating in research

A fertile area for collaboration is research. A number of public, private, and international institutions are currently seeking to deepen their understanding of the JT – for example via better modelling of the jobs impact of green policies, studying past transitions for relevant contemporary lessons, or developing principles that could guide a JT in practice. Insofar as MDBs may be interested in similar questions, this could be a fruitful area for partnerships. When collaborating with institutions in research, MDBs can deploy instruments such as policy support and technical assistance, which can complement and leverage research initiatives in the countries and regions of operation. For instance, IDB and the ILO are collaborating on a research project assessing the labour impacts of the net zero transition in the Latin American countries, leveraging the ILO's expertise with the IDB local presence and channels of communication with the impacted population. Similarly, ADB has a regional technical assistance project on enhancing gender equality results South Asia developing member countries. As part of this ADB is looking at how employment opportunities in the energy sector can mainstream gender equality and social inclusion.[43]

Collaborating in awareness raising

A smaller number of institutions and initiatives are engaged in awareness raising around the JT. Ranging from trade unions to activists, one part of the current JT landscape is engaged in raising the profile of JT activities. Since public buy-in is key for a successful JT, this may be another area for MDB partnerships. MDBs can collaborate with these types of institutions by identifying the type of awareness-raising initiatives that would complement their activities. For instance, they can collaborate with organisations for awareness raising on creating green jobs which can lead to more projects in which MDBs can invest. Additionally, there could be an important component of awareness raising on the availability of funding from MDBs for JT-aligned projects, and how to meet the criteria for funding. For instance, ADB, the ILO and the Government of the Phillippines co-organized a high-level dialogue at the ADB's Annual Meeting in 2018, largely focusing on investments that can facilitate the implementation of a JT approach to fulfilling the ambitions of the Paris Agreement. This session brought together up to 130 participants including government officials, representatives of workers and employers, and intergovernmental organisations.[44]

Collaborating in capacity building

Some organisations have begun to develop capacity-building programmes to support policymakers in drawing up JT policies. By and large, these programmes appear to be at an early stage, but they may constitute an important and potentially fast-growing set of possible collaborations for MDBs. This is a rich area for collaboration where MDBs can enhance their technical assistance activities to complement and leverage existing and planned capacity-building operations. For example, MDBs can collaborate with local and regional labour-focused organisations that work with labour unions and other civil society actors to facilitate dialogue and capacity building within government. Additionally, they can supplement existing capacity building within government with capacity building in the private sector, targeting actors including local financial institutions and companies. This type of collaboration would be aligned with the key lessons from past transitions indicating that the public sector has a pivotal role to play, but its efforts must be complemented by private sector JT-aligned initiatives (EBRD, 2020b). Furthermore, MDBs can use existing

[43] ADB. Technical Assistance on Enhancing Gender Equality Results in South Asia Developing Member Countries (Phase 2) (Subproject 4). https://www.adb.org/projects/44098-025/main#project-overview

[44] ADB. ADB 2018 Annual Meeting Side Event on High-Level Dialogue on More Quality Jobs in Asia and the Pacific: Investing for a Just Transition? https://www.adb.org/annual-meeting/2018/events/quality-jobs

capacity-building programmes or collaborate to develop new programmes aligned with the policy requisites embedded within policy-based financing.

Collaborating in funding

Co-funding JT activities is an area in which MDBs could enter into collaboration with ongoing and emerging initiatives. However, in part due to there being no agreed definition of JT activities to date, only a small number of JT funding initiatives have been identified so far, the majority of which are concentrated on JT funding in developed countries. Further opportunities for partnership are likely to emerge in this area. As MDBs develop their JT opportunities, and identify the type of investment finance instruments that they will deploy, they can seek investment partnerships to develop cohesive investment strategies within their countries of operation.

MDBs can seek to collaborate with private sector investors with existing JT funding strategies and instruments. For instance, the Solidarity Funds, set up by a Canadian labour federation, was originally intended to develop quality jobs and support SMEs. After 2015, the Funds have started to systematically explore the implications of climate change for their workers and communities, and how they can support them.[45] Similarly, since 2017, the Ircantec fund set the social implications of the ecological and energy transition as one of its three top priority areas, and in June 2019, it officially integrated the JT into its charter. Additionally, they could collaborate with initiatives that bring together private sector actors with the aim of supporting a JT, such as the Investing in a JT initiative which is working on identifying the role of private investors in the JT. 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 partnership with the Principles for Responsible Investment (PRI) and the International Trade Union Confederation (ITUC).[46]

In addition to co-funding, MDBs can develop other multi-MDB interventions. Given the scale, speed and complexity of the of change required in the JT, MDBs can leverage their respective comparative advantages across country, sub-national regions and sectors to develop comprehensive initiatives that address all the needs and opportunities. Additionally, they can deploy innovative collaboration mechanisms through instruments such as multilateral programmatic funding platforms like the CIF.

Table 6 Possible MDB partners in just transition, research, awareness raising, capacity building, and funding

Organisation	Activities
Research	
ActionAid	In December 2019, ActionAid (2019) published a report outlining four principles for a JT in agriculture.
Climate Investment Funds including in partnership with Center for Strategic and International Studies (CIF & CSIS) on the Just Transition Initiative	The CIF and CSIS have initiated a joint project, the Just Transition Initiative, to investigate how to achieve a JT through the transformational change needed to address climate change. This project will analyse the various definitions and understandings of a JT; conduct case studies to inform best practices; and build a community of stakeholders and scholars engaging in this space.

[45] https://www.unpri.org/pri-blogs/the-just-transition-how-two-investors-are-tackling-its-social-implications/5534.article
[46] https://www.lse.ac.uk/granthaminstitute/investing-in-a-just-transition-global-project/

International Institution for Sustainable Development (IISD)	The IISD has published multiple reports on the question of a just transition, focusing in particular on fossil fuel subsidy reform and the energy sector. Unlike much of the research in this area, IISD's work draws extensively on emerging market and developing country experience.
International Labour Organisation (ILO) Green Jobs Assessment Institutions Network	The ILO's Green Jobs Assessment Institutions Network (GAIN) is a network of individual researchers, research institutes, and international organisations that seeks to develop better models for the effects of green policies on employment, thus facilitating better JT policy and planning.
International Trade Union Confederation (ITUC) Just Transition Centre	ITUC's Just Transition Centre brings together unions, businesses, governments and communities to share examples of JT processes and plans, document best practices, start and support social dialogues, and offer strategic input to national and global policy dialogues.
Stockholm Environmental Institute (SEI)	The SEI pursues a large research programme on the JT, out of which has come research on past coal transitions (SEI 2019), and a set of seven principles for realising a JT (SEI 2020).
OECD	The OECD does not have an official definition of the JT, but it plays an important role in publishing information on best practice and policy advice on how to address the low-carbon and climate-resilient transition. Some of this policy support can be linked to elements related to a JT, especially under its work relating to inclusive green growth. In its flagship 2017 report 'Investing in Climate, Investing in Growth', it included a chapter specifically dedicated to enabling an inclusive transition, highlighting the role of governments and actors to support workers and consumers through the transition.
UN Climate Action for Jobs Initiative	The ILO, Spain, and Peru launched the UN Climate Action for Jobs Initiative in December 2019 (MITECO 2019). This initiative encourages countries to develop and implement JT plans, and will 'focus around three inter-related, complementary areas; advocacy and outreach; a policy innovation hub that will gather knowledge and generate innovative solutions; and capacity building and support for governments, workers' and employers' organizations' (ILO 2019).
UN Environment Programme (UNEP)	UNEP has announced its intention to support countries in undertaking JTs 'through targeted policy analysis, advice, dialogue and capacity building', in particular 'on how reforming agriculture-related fiscal policies by repurposing current subsidies and aligning fiscal incentives with sustainability objectives could support the just transition to sustainable agriculture and food production' (UNEP 2020).
Awareness Raising	
ITUC	The ITUC's Just Transition for Climate Ambition campaign (ITUC 2020), highlighting the importance of JT planning, is one of ITUC's three current 'Frontline Campaigns'.
UN Climate Action for Jobs Initiative	See above
Capacity Building	
Scottish Just Transition Commission	The Scottish Just Transition Commission, founded in 2019, advises the Scottish government on how to apply the Just Transition Principles to Scotland. It published its interim report in February 2020 (SJTC 2020), and may be a useful partner for capacity building and the application of Just Transition Principles in other places.

UN Climate Action for Jobs Initiative	See above
United Nations Framework Convention on Climate Change (UNFCCC) Gender Action Plan	The UNFCCC Gender Action Plan is built around five priority areas: i) capacity building to integrate gender considerations into climate policy and action; ii) achieving gender balance in the UNFCCC process; iii) mainstreaming gender considerations across UNFCCC-constituted bodies, the secretariat, and other UN entities and stakeholders; iv) ensuring a gender-responsive implementation of the Paris Agreement; and v) improving gender-relevant monitoring and reporting capacities. With the plan running to COP30 (2024), this may be an effective vehicle for MDB cooperation.
Funding	
UK CDC	The UK CDC, Britain's development finance institution, adopted a new climate strategy in July 2020, identifying the JT as one of its three pillars of Paris Alignment (UK CDC 2020, p. 5). In the same strategy, CDC highlighted a pilot project it undertook on skills training with DFID, the Self-Employed Women's Association, and Ayana Renewable Power in India, which trained women for employment in solar parks. Going forwards, UK CDC may be a possible partner, together with MDBs, for funding JT projects.
Developed-country facing funds	There are a number of funds for supporting the JT in developed countries. While operating with a different focus from MDBs, future changes could render them relevant funding partners, and important sources of information on lessons learnt: • The Canadian Low Carbon Economy Fund. This is part of the Pan-Canadian Framework on Clean Growth and Climate Change, offering US$2 billion to support projects in Canada that reduce emissions and create jobs. • The EU Just Transition Fund: boosted to €17.5 billion in the context of COVID-19, this fund will support JT activities in EU member states. • The Ireland Just Transition Fund was set up in 2020 with €11 million to fund innovating projects that contribute to the economic, social, and environmental sustainability of the Western Midland Region in Ireland.

Source: Vivid Economics

Although this section presents an overview of other institutions relevant to a JT, and identifies areas for collaboration, there is still important work to be done in refining the set of relevant stakeholders for each MDB, and the specific approach to collaboration. In this work, we have presented a generalised overview of the set of relevant actors, and the areas under which MDBs can seek to collaborate. However, as MDBs develop their specialised JT approaches, they should seek to define their collaboration strategies further by adapting the set of stakeholders and areas for collaboration to the specific context of their countries and regions of operation. As lessons from past transition have shown, JT approaches should be highly context-specific, mirroring the highly context-specific needs. This should translate into both their set of instruments and areas of investment, as well as into their collaboration strategies with other relevant institutions.

6 Next steps

This paper has set out why the MDBs should commit to supporting a JT ahead of COP26. This section sets out concrete next steps for the PAWG in terms of defining and communicating support for a JT, developing and implementing strategic approaches and interventions, and establishing entry points for a JT within existing policy and project processes.

Through this analysis we identified four concrete next steps that the MDBs should consider:

Decide whether a common definition of the JT is desirable, or whether the MDBs can reach a common understanding of the JT that accommodates a range of views on how to support its aims.

To successfully scale up and accelerate support for a JT, MDBs need to reach and communicate a common understanding of what a JT will look like. This process should include the following:

- Each MDB can use the six dimensions to refine its JT approach, evaluating across each dimension how its operations and competitive advantage determine its position within the dimension.
- After MDBs have mapped their position across the six dimensions, they can determine whether it is feasible to reach a common definition, or whether it is more effective to accommodate different definitions, agreeing on the six dimensions as the guiding structure.
- MDBs should outline their potential for individual and collective commitments in line with their particular competitive advantages and channels of influence. Subsequently they can determine how their approaches can lead to complementary activities, coordinating approaches to maximise the impact of their support. Additionally, they can collaborate with other non-MDB institutions that support the objectives of a JT.
- MDBs should clearly signal and communicate how they are supporting the aim of a JT ahead of COP26.

A common definition of the JT could facilitate the streamlining of projects and verification, but it could limit the potential for impact across a wider range of communities. A common definition of a JT simplifies the process for identifying and defining JT activities, as well as monitoring progress across MDBs. However, a single definition could limit the capacity of MDBs to adapt their understanding of a JT to their countries of operation and the specific needs and opportunities they face.

MDBs should seek to embed JT considerations in the long-term climate strategies of clients and the MDBs themselves.

Lessons from past transitions include the critical importance of planning ahead for both avoiding negative impacts and distributing the opportunities of transitions equally. The transition should be guided and made coherent by a long-run strategy that effectively combines unblocking, enabling, and protective responses.

- **Unblocking responses** refer to policies that remove obstacles to a successful transition, such as tariff removal and weakening of entrenched corporatist structures. In the context of the JT, the long-term strategies should therefore address barriers preventing those affected by the low-carbon and climate-resilient transition from accessing economic opportunities and transition-related benefits.

- **Enabling responses** can boost the fairness, speed, and the economic success of a transition. For a JT, this can include short-term solutions such as retraining programmes and asset repurposing, as well as longer-term initiatives such as structural change for green job creation and curriculum development for green skills.
- **Protective responses** refer to policies that rein in the negative side effects of a transition, rendering it fairer than it would otherwise be and thus safeguarding its political viability. These initiatives can focus on compensation schemes for those affected by the transition, as well as policy to ensure that the new green jobs are high-quality and that opportunities are available to all.

Aldo building on the lessons from past transitions, in the process of embedding JT considerations into long-term climate strategies, MDBs should recognise the importance of inclusiveness and transparency, accounting for the perspective of poor and vulnerable communities impacted. Introducing procedural justice into JT strategies will enable the development of actions and plans that align with the needs of those impacted, as well as increase public support for low-carbon and climate-resilient activities.

MDBs should consider building up a toolkit for supporting a JT.

MDBs can operationalise their approach to the JT through a set of common processes and principles that have the flexibility to adapt to a range of perspectives. The set of processes include:

- **A thorough diagnosis of the needs associated with a JT** in the MDBs' countries of operation, with the potential to share findings from JT diagnostics among MDBs active in the same regions or countries. The diagnosis can help the MDBs identify the specific instruments and areas of investment that their JT approach should focus on.
- **A co-benefit assessment framework** to identify and report how MDBs' current and planned activities are contributing to the aims of a JT, addressing the needs highlighted by the diagnosis.
- **A finance tracking framework** that adapts to MDBs' conceptualisation of the JT and enables them to accurately track the scale of financing directed into activities aligned with a JT. However, further discussions will be required within the MDB community to address some of the challenges associated with the implementation of such a framework.

MDBs could look for further collaboration opportunities, both with each other, and with non-MDB actors.

When implementing their activities, MDBs can seek to collaborate with each other and with other actors on the development of national and regional approaches. They can achieve this by leveraging the scale and convening the power of MDBs to deliver structural change and explore the appropriate balance of public and private, national and international support within that. Examples of this include:

- MDBs that focus primarily on private sector development could collaborate with MDBs with links to the public sector in order to deploy complementary activities that align the public and private sector with JT objectives.
- Leveraging multi-stakeholder funding platforms, such as the Climate Investment Funds, as instruments that support coordination within their countries of operation.

- Collaborating with a range of non-MDB institutions on research, awareness raising, capacity building, and investment. As MDBs refine their JT approach, they can more accurately target partnerships and identify opportunities for complementary activities.
- Supporting the implementation of JT initiatives and long-term strategies by bolstering the efforts of institutions focusing on capacity building and financing through complementary activities.
- Collaborating with institutions focusing on knowledge sharing and communications with the aim of increasing the profile of JT objectives, and potentially catalysing the market for JT-aligned financeable projects.

Appendix 1 – Overview of just transition definitions

International Labour Organisation (ILO): '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. It aims to address environmental, social and economic issues together.' (Smith, 2017)

International Trade Union Confederation: 'A just transition will: * respect the contribution that workers in fossil fuel industries have made to today's prosperity and provide income support, retraining, redeployment and secure pensions for older workers; * recognise that investing in community renewal is critical to gain the hope and trust of affected regions and townships whether energy transition, industrial transformation or disaster; * support innovation and shared technology to enable energy and manufacturing companies to make the transition with 2020 and 2030 targets for emission reductions and for jobs; * involve workers in the sectoral plans for the development of clean mega cities * formalise the jobs in rescue, rebuilding and resilience associated with climate disasters; * ensure investment in the jobs and decent work vital to both adaptation and mitigation; * guarantee essential social protection and human rights ; * be backed up by a just transition fund in every nation, and 4 4 * be based on social dialogue with all relevant parties, collective bargaining with workers and their unions and the monitoring of agreements which are public and legally enforceable.' (Smith, 2017)

Just Transition Commission, Scottish Government: 'The imperative of a just transition is that Governments design policies in a way that ensures the benefits of climate change action are shared widely, while the costs do not unfairly burden those least able to pay, or whose livelihoods are directly or indirectly at risk as the economy shifts and changes.'

Grantham Research Institute on Climate Change and the Environment: 'At its core, the just transition is a forward-looking, action-oriented framework that identifies opportunities for public and private investment in economic development that is both sustainable and inclusive. It helps to connect activities across international organisations, regional and national governments, businesses and investors, the development and philanthropic sectors, and, crucially, the workers and communities who will feel the effects of the transition – whether well or poorly managed – most keenly. Importantly, the just transition is a global agenda for industrialised as well as emerging and developing economies, one that addresses both the decarbonisation and resilience dimensions of the transition.' (Robins et al., 2018)

Axa Investment Managers: 'Studies show that almost half the global workforce could be affected by the move to a low-carbon society – creating a need for a "just transition". "Just transition" is the name given to an emerging concept taking into account the social impact on these workers and communities of transitioning to a low-carbon economy.' (Fromaget, 2019)

Climate Justice Alliance: 'Just Transition is a vision-led, unifying and place-based set of principles, processes, and practices that build economic and political power to shift from an extractive economy to a regenerative economy. This means approaching production and consumption cycles holistically and waste-free. The transition itself must be just and equitable; redressing past harms and creating new relationships of power for the future through reparations. If the process of transition is not just, the outcome will never be. Just Transition describes both where we are going and how we get there.' (Climate Justice Alliance, 2019)

Appendix 2 – EIB and EBRD emerging approaches to a just transition

This appendix sets out the EIB's and EBRD's initial thinking on their JT approaches. This study has focused on these two institutions since they are at a more advanced stage of defining their approaches, as well the activities they will pursue under a JT.

EIB

The European Investment Bank (EIB) is the lending arm of the EU and supports projects with the aim of crowding-in private finance and other public finance.

Mandate overview

The EIB supports projects that stimulate the economy, create jobs, promote equality and more broadly improve the lives of EU citizens and people in developing countries. Specifically, the EIB focuses on six key areas:

- **Climate and environment**: the EIB provides finance and advisory expertise to help achieve the targets set out in the Paris Agreement for mitigation and adaptation. The EIB currently commits more than 25% of their financing to this area, with the aim of achieving 50% by 2025.
- **Development**: the EIB supports developing countries to promote sustainable growth, reduce poverty and inequality, and ultimately improve lives while combating climate change. The EIB is specifically focused achieving these goals through targeted investment, especially focusing on the development of sustainable markets that are conducive to development objectives.[47]
- **Innovation and skills:** the EIB provides investment to overcome barriers and push the EU to take the lead in the next wave of innovation. This priority area includes supporting skills and training to create new job opportunities and help workers and firms to adapt to the new market needs.
- **Small businesses and mid-caps:** the EIB supports SMEs and midcaps with direct financing and venture debt financing with a focus on the digitalisation sector, energy efficiency and climate action.[48]
- **Infrastructure:** the EIB centres infrastructure financing on energy efficiency; smart, accessible and sustainable mobility; sustainable urban development; waste and wastewater management. There is also lending for social infrastructure, such as affordable housing and key public buildings. The aim is to make living areas more inclusive while supporting the transition to a low-carbon future.[49]
- **Cohesion:** the EIB supports cohesion policy and pushes for a balanced territorial development. This support is specifically for regions with average per-capita GDP below 90% of the EU average in order to address inequalities. It prioritises projects that aim to address inequalities by providing job and education opportunities, access to public infrastructure and services, a healthy and sustainable environment, and that support a thriving economy.

[47] https://www.eib.org/en/about/priorities/development/index.htm
[48] https://www.eib.org/en/about/priorities/sme/index.htm
[49] https://www.eib.org/en/about/priorities/infrastructure/index.htm

Within each of these areas, it is possible to observe elements related to the JT. This existing experience will help inform how the EIB expects to approach the JT. For example:

- **Climate and environment**: the EIB is currently developing its new Climate Bank Roadmap which aims to increase the ambition of climate action and environmental sustainability. This document is currently out for consultation and includes questions about how to include JT elements to 'ensure [that] EIB financing contributes to a JT for regions and countries that will be more affected, so that no one is left behind in the fight against climate change'.[50]
- **Development**: inclusion and sustainable growth are goals that are entirely aligned with the core objectives of a JT. The EIB intends to leverage its comparative advantage in deploying strategic investments to enable economic growth that is consistent with a JT approach.
- **Innovation and skills**: the current focus of this area of investment aligns well with both, enhancing the positive impacts of a climate transition, and addressing the economic and social costs of the transition, e.g. through retraining, upskilling and boosting public R&D activities in affected territories.
- **SMEs and mid-caps:** the funding is focused on sectors that are expected to have continued growth throughout the climate transition and which can generate employment opportunities for displaced jobs. This can enhance the positive aspects of this transition as well as help mitigate the negative effects.
- **Infrastructure**: as experience from previous and ongoing regional coal mining transitions (in the Czech Republic, the Netherlands, Poland, Spain, the UK and US) demonstrate, good infrastructure can play a key role in attracting new activity in regions heavily affected (Caldecott *et al.*, 2017). Improving connectivity (ICT, transport, energy) between the territories most affected by the carbon transition and the other parts of their countries will provide new development opportunities for various sectors and activities.
- **Cohesion**: the JT presents the opportunity to address the negative and positive distributional implications from the low-carbon and climate-resilient transition at a regional level, accounting for the impacts across the set of actors and identifying interconnections.

Just transition approach

The EIB's approach to the JT will centre around the EU's a high-level definition of the JT:

> *Just Transition encompasses the set of policy measures supporting the regions most affected by the transition towards climate neutrality and thus bearing the highest transition costs. The rationale for support follows both a compensation logic – related to the geographical mismatch between the costs and the benefits of regional decarbonisation efforts – and an efficiency logic, helping the carbon-intensive regions on their way to a new, sustainable and prosperous economic model. Successful Just Transition requires balancing trade-offs between economic, social, environmental and climate challenges in an optimal way and harnessing the opportunities of new technologies, labour and product market reforms. (EIB, 2020)*

The EIB is actively thinking about how to address the JT in its activities, recognising the value of early interventions. The EIB recognises the accelerated pace of the low-carbon transition, and the increasing need to address its distributional implications. Additionally, it acknowledges that addressing these equality

[50] https://www.eib.org/en/about/priorities/climate-and-environment/climate-action/index.htm

implications early on is likely to deliver better results, a finding corroborated in literature in other transitions (EBRD, 2020; EIB, 2020; Caldecott *et al.,* 2017) and discussed further in Appendix 3.

Although the EIB has begun developing its approach, it has not yet established an operational definition for the JT. The EIB recognises it can draw on previous experience supporting regional development and economic transitions, while addressing the new challenges presented by the low-carbon transition, especially related to the need to increasing public buy-in for low-carbon policies.

The following sub-sections elaborate how the EIB is currently thinking about the JT in each dimension.

Motivation: focusing on addressing the distributional consideration while enabling an inclusive process

The EIB's JT approach will address the distributional implications to the JT while enabling an inclusive process to determining activities. Activities will focus on addressing the inequality concerns triggered by the low-carbon and climate-resilient transition. However, it notes the importance of ensuring that the process for identifying the impacts and solutions is inclusive of those affected.

Context: a response to climate change

The EIB is currently approaching the JT as a necessary component to the transition so as to mitigate its negative social and economic impacts. However, the team acknowledges that the scope also includes addressing environmental degradation.

Trigger: addressing distributional implications of low-carbon and climate-resilient policies

The EIB currently focuses on the distributional implications of climate policies, rather than physical climate impacts. The distributional implications notably entail:

- The energy transition: there will be distributional implications to both the production and consumption of carbon-powered energy. The transition away from carbon-based production of energy will generate loss of jobs and assets in those regions and countries that heavily depend on it. Such regions need to find new, sustainable sources of heat and electricity and need to improve on energy efficiency, which had traditionally been neglected.
- An environmental transition based on the observation that environmental rehabilitation of heavily polluted and damaged sites is a precondition for new economic activities.
- A socioeconomic transition: regions will need to attract new companies, employers to compensate for the loss of jobs, and tax revenues. Dismissed workers from the sectors affected by the transition need to find jobs elsewhere in the (regional or national) economy, which in may require retraining.
- An infrastructure transition: as a precondition to attracting new sectors to the region, such as transport and communication networks. The shift to a service economy, for example, requires different infrastructure compared with a coal-centred economy (EIB, 2020).

However, in addressing these implications, it expects to include activities that will improve resilience to the physical climate impacts. Climate-resilient infrastructure can help attract new sectors to regions particularly affected by the climate transition. The EIB's focus is likely to be on green and sustainable infrastructure, which both improve resilience and support economic diversification.

Focus: the EIB's primary just transition focus is likely to be production

Given the focus of the EIB's operations to support economic growth and development, the EIB's JT approach is likely to focus on supporting areas where production is impacted by the transitions. Its main concern is to ensure a sustainable economic and social future for these regions.

However, its response might include measures that have a consumption impacts. The EIB is aware that in regions affected by low-carbon policies, such as mining regions, there will be a production-side impact through loss of jobs which, in turn, could increase energy poverty. Its response might include measures in relation to both production and consumption; in terms of the latter, energy efficiency measures are expected to be particularly important.

Target: negative and positive implications

In order to deliver a holistic strategy for regions heavily affected by the climate transition, the EIB is looking at both addressing negative impacts and enhancing positive impacts. While addressing the negative impacts is at the centre of the analysis, a holistic strategy will be necessary to have a successful transition. This includes supporting the diversification of the 'losing' regions' economies in order to create a sustainable economic future in the region. Some of the benefits of this diversification will be available to workers from coal and heavy industry sectors, but will extend more widely. The EIB argues that, given the complexity of the climate challenge, its approach to the JT cannot solely focus on addressing negative impacts.

Scale: inter-regional within a country and within the EU

The EIB is likely to assess the distributional implications within a country, as well as across countries at the regional level. The EIB's current activities are deployed according to sub-national needs, as well needs across countries, taking a regional approach to development. The JT approach is likely to mirror this approach.

It also intends to support cross-national cooperation. It has identified that the financial commitment required to address the distributional impacts will require additional support from national governments. It aims to play a facilitating role to coordinate activity and support across governments.

Activities

The EU has launched the Just Transition Mechanism, which includes a role for the EIB; although this initiative is in its early stages. The Mechanism aims to unlock €100 billion in investment for the next programming period (2021-27) to facilitate the transition to net zero and make it fair for all people, in particular those that live in regions heavily impacted by the shift. It will also include advisory support and technical assistance for regions. The Just Transition Mechanism will consist of three pillars:

- The Just Transition Fund, primarily used to provide grants with the aim of diversifying the economy in territories most affected by the climate transition, and the reskilling and active inclusion of workers and jobseekers;
- A dedicated JT scheme under InvestEU to crowd-in private investment which will cover sustainable energy and transport infrastructure, and decarbonisation projects;[51] and
- a new public sector loan facility operated by the EIB, which would also include an EU grant element, to leverage public financing with the aim of enabling public authorities to implement measures that contribute to achieving carbon neutrality.

At this stage, only draft regulation for the first pillar has been published and hence the role of the EIB under the JTM is yet to be fully outlined.

The EIB has also started explicitly integrating the JT in its operations and activities, most recently in its new Energy Lending Policy. In its Energy Lending Policy, the EIB commits to creating an Energy Transition Package that will support member states most heavily affected by the need to meet 2030 climate targets. This is to

[51] InvestEU is a programme that brings together the InvestEU Fund, the InvestEU Advisory Hub and the InvestEU Portal. The InvestEU Fund will support four policy areas: sustainable infrastructure; research, innovation and digitisation; SMEs; and social investment and skills.

ensure the success of the transition and address issues of social justice and solidarity within the EU. There is specific support for countries eligible under the Modernisation Fund,[52] which includes both allowing a higher proportion of funding for eligible energy projects and advisory services for national energy and climate plans. The latter is already underway through the JASPERS initiative[53] but could potentially be reinforced through additional project development services. The EIB will support other member states to access support for a JT through the EU's Just Transition Mechanism.

The EIB also has extensive experience in addressing the negative social distributional impacts of the low-carbon and climate-resilient transition. Several projects that the EIB funds address employment impacts in regions affected by economic transitions. Additionally, it recognises the need for re-skilling and economic diversification. The JASPERS initiative is also being deployed in coal-dependent regions to support these regions in building better projects to access grants and loans – notably in Poland, the Czech Republic and Slovakia, as detailed in Box 8.

Box 8 JASPERS is providing support in coal-dependent regions

In the context of the coal mines closing down and moving to towards carbon neutrality, the European Commission created the 'Platform on Coal regions in Transition' to provide structural support for coal regions to help drive their green transition and mitigate its social impacts. The ultimate aim of this initiative is to push for a fair transition where no region, sector or worker is left behind. This initiative has included a range of activities including working group sessions and an annual dialogue. As part of the initiative, coal regions propose pilot projects to enable the transition, which are then discussed through the Platform. The proposed projects may be eligible for current or future EU funding.

JASPERS, which is a technical assistance partnership between the EIB and the European Commission, has been supporting countries with coal regions in transition in the context of this initiative. JASPERS is supporting regions in creating quality projects that contribute to a JT. It has created a standard methodology for screening projects that align with the aims of the initiative. The criteria include:

- General project eligibility requirements where projects must be in a coal region in transition and contribute to at least one of the following: structural transformation and diversification of the economy, job creation and economic growth, development of advanced technologies, improvement of energy efficiency and transformation of energy systems, smart urban development and resilience, positive impact on environmental and climate change goals
- Project impact criteria that evaluate the project based on its contribution to local/regional/national/EU policies, programmes and strategies; the impact on local economy and businesses; impact on employment, reskilling and retraining; impact on the environment; impact of innovativeness and replication potential.
- Soundness of project criteria which looks at the feasibility of the project, institutional capacity, technical feasibility, business case, risk management.

Based on this assessment JASPERS provides advice regarding general project eligibility, project impact, project soundness, recommendations for completion (if incomplete), options for further project enhancement, needs for further technical assistance, financing options, and general conclusions and recommendations to make the project 'bankable' and/or eligible for grants. Specifically:

[52] Bulgaria, Czech Republic, Estonia, Croatia, Latvia, Lithuania, Hungary, Poland, Romania, Slovakia.
[53] JASPERS is a technical assistance partnership between the EIB and the European Commission, and is an important instrument of the EU Cohesion Policy. It supports beneficiaries to shape high-quality projects by providing support in the form of project preparation, capacity building and independent quality review.

- In the Czech Republic, the Ministry for Regional Development asked for support from JASPERS to help screen projects for compliance with the objectives of the Coal Regions in Transition initiative, advise on their soundness and impact, and assistance in the development of certain priority projects from the list of projects proposed by the regions.
- In Slovakia, JASPERS supported the Prime Minister's Office in project screening and assisted with the development of quality projects.
- In Poland, JASPERS screened selected proposed projects for compliance with the Coal Regions Transition initiative, provided advice on the soundness and impact of projects, identified potential sources of financing and needs for technical assistance, and general and specific recommendations for further development of the projects.

Source: JASPERS, https://ec.europa.eu/energy/sites/ener/files/documents/2.3._technical_assistance_opportunities.pdf

EBRD

Mandate overview

The European Bank for Reconstruction and Development's (EBRD) purpose is to support economic progress and reconstruction to help countries transition towards open market-oriented economies and promote private and entrepreneurial activity. Its current operations span three continents and cover south-eastern Europe, Central Europe and the Baltic states, Eastern Europe and the Caucasus, Southern and Eastern Mediterranean, as well as Turkey and Russia.[54] Through this work, the EBRD has gained experience in supporting countries and regions through economic transitions with a focus on driving growth through private sector development, and supporting public sector institutions and policymaking.

It provides different financial products, as well as policy reform dialogue services and advisory services. The EBRD finances projects in the private sector both directly and indirectly. For larger projects, it can provide direct finance of between US$ 3 million and US$250 million through loans or equity. For smaller projects, the EBRD provides financial support to financial intermediaries who then support smaller projects. In addition, it provides business advice to SMEs, through its Small Business Initiative, with the aim to support sustainable local and regional economies. [55]

Just transition approach

Motivation

The EBRD will focus on both distributional and procedural justice in its JT approach which was launched in June 2020. It will focus on addressing the distributional implications of low-carbon and climate-resilient transition impacts, as well as ensuring that transition is inclusive. It recognises the need to engage, and support governments in engaging, with different stakeholders to identify distributional implications and include the perspectives of those who may lose out when developing activities and policy support.[56]

Context

[54] https://www.ebrd.com/where-we-are.html
[55] https://www.ebrd.com/what-we-do/products-and-services.html
[56] https://www.ebrd.com/what-we-do/just-transition-initiative

The EBRD's initial approach to the JT will focus on the low-carbon and climate-resilient transition. It recognises the need to match the accelerated pace of the climate transition with interventions that address its social and economic impacts. This will aim to leave no one behind, as well as ensure that the opportunities and benefits are available to all.

Although the focus will be on the impacts from the low-carbon and climate-resilient transition, it intends to make use of existing knowledge on inequalities and social wellbeing for diagnostic support needs. It will leverage its experience of diagnostic inequality and social wellbeing issues with the intention of effectively identifying the distributional implications of the climate transition. It will also aim to leverage JT initiatives to address existing inequality and social wellbeing initiatives linked to gender, age, ethnicity, and disability.

While the initial focus will be on the low-carbon and climate-resilient transition, the EBRD notes the future possibility of expanding the scope of its JT approach to include environmental degradation.

Trigger

The EBRD is likely to focus on the distributional implications of low-carbon policies affecting its regions of focus. Specifically, it highlights the need to address the impacts from transitioning away from carbon-based energy production, addressing the impacts on jobs and economic development as well as impacts on social welfare. To this end, it plans to use its networks with national governments (especially labour ministries) and the private sector to develop programmes that target employment and skills. Additionally, it will build on experience in assessing how changes to energy tariffs affects the most vulnerable groups.

In addition to the impact of low-carbon policies, it recognises the need to address the impacts of the transition away from carbon intensive processes driven by market forces. The EBRD recognises that in some cases the move away from fossil fuels will be market-driven, and it plans to also address the distributional impacts of a market-driven low-carbon transition.

Focus

The JT approach is likely to focus on the negative distributional implications of the low-carbon and climate-resilient transition, as well as on ensuring the benefits from solutions and creating opportunities for all. The EBRD's approach is focused on ensuring that the negative social and economic distributional implications are addressed through targeted investments and policy support. However, it will also focus on identifying opportunities for green growth and ensuring that those benefits can contribute to distributional outcomes through employment creation and skill sharing. Additionally, it expects that identifying positive implications can help guide activities to amplify the opportunities in terms of employment and re-skilling, and support ventures that present consumers with affordable low-carbon alternatives.

Target

The EBRD's JT focus will leverage its competitive advantage in working with companies. Given the EBRD's experience in working the production side towards social and economic development, it identifies this as the area in which it can have the most impact. As such, it will focus on identifying the negative distributional implications for the production side in terms of job losses and affected assets, and designing investment strategies around identified solutions.

In addition, it will deploy its policy advisory experience to support governments in identifying the effects of policy on the most vulnerable. The EBRD intends to leverage its networks with national and sub-national governments to support policymakers in identifying and addressing the impact of low-carbon and climate-resilient policies on the most vulnerable people in their communities. The EBRD's policy advisory support will also support governments in ensuring the private sector is successfully and responsibly managing the transition.

Scale

The EBRD's approach will focus on country-specific strategies, as well as sub-national region strategies, leveraging its experience on this scale of investment and policy support. The EBRD will use its experience in dealing with country-specific development strategies and investment. Additionally, recognising that the JT should be approached as a regional issue, not limited to specific actors, the EBRD will aim to develop sub-national and regional strategies that follow a cohesive approach to development. This is in line with the lesson from past transitions that strategies to approach the transition should be tailored to the local needs for better results (Appendix 3).

Activities

While the EBRD is still consolidating the integration of the JT into its work, it is actively identifying the key areas that it can support, as well as the approach it should deploy. Broadly, it aims to encourage discussion about the JT at local and national levels, while, in parallel, using technical and financial support to help design and implement territorial transition plans. Additionally, it plans to provide support to facilitate dialogue between key stakeholders to complement analysis and ensure plans are locally driven and account for the priorities of different stakeholders.

The EBRD is also aiming support the capacity of governments to implement JT activities. This includes planning, financial structuring of investments, and policy design and implementation. Specifically, the EBRD will advise governments on fiscal policies, particularly for heavily fossil-fuel-dependent economies and lower income countries, where a rapid transition could increase indebtedness and reduce public services. The EBRD will help develop inclusive strategies to reform fossil fuel subsidies, which encourage decarbonisation while that ensuring the negative social impacts are addressed.

The EBRD has chosen to focus on certain just transition interventions (EBRD, 2020), specifically:

- Supporting the diversification of carbon-intensive companies towards more sustainable alternatives. Specific projects in this area could include the reconversion of stranded assets, as well as supporting hard-to-abate sectors such as cement, chemicals and steel, by investing in low-carbon alternatives with the aim of pushing the technological frontier.
- Strengthening investments in climate change projects, both mitigation and resilience, which explicitly account for how such projects can generate new economic opportunities and employment for those that may be negatively affected by the climate transition.
- Supporting remediation and rehabilitation of land and other assets, while ensuring that regulatory requirements defined by authorities are not weakened (e.g. it will not be offering concessional finance to cleaning-up activities that a company is obliged to undertake).
- Reinforcing its involvement in programmes that create re-skilling opportunities for workers and communities affected by the transition, in collaboration with the industries affected, the private sector and educational institutions. The EBRD could include this in its Economic Inclusion programmes and is looking at designing both short- and long-term solutions for impacted workers and communities.
- Targeted support for SMEs and entrepreneurs, focusing on regions affected by the low-carbon and climate-resilient transition. It will also continue to facilitate the emergence of aggregators for small-scale projects.
- Financing infrastructure in cases where it supports regional economic development, such as increasing transport connectivity or urban renewal (to enable private sector investment).

To ensure successful large-scale deployment of support, the EBRD will initially pilot target activities in a small number of countries guided by a 'just transition diagnostic'. The bank will run country diagnostics with the aim of identifying the challenges and opportunities from the low-carbon transition, as well as leverage existing country diagnostics. These pilot activities will build the evidence base to refine the EBRD's JT approach and activities (EDRB, 2020b).

In sum, the EBRD has developed its approach to the JT by focusing on the needs of its target regions and assessing its comparative advantage. Its target for investment and policy support has been based on an initial diagnosis of the negative distributional implications from the low-carbon and climate-resilient transition, recognising that this transition is accelerating and that there is a need for targeted and timely efforts to address its social and economic impacts. Its specific areas for focus aim to match its comparative advantage and include (EDRB, 2020b):

- Regeneration and decontamination of land, as well as repurposing of projects;
- Introduction to JT considerations to their Green Cities Action plans;
- Policy design to manage the distributional impacts of climate policies;
- Support to SMEs, skills, infrastructure and policy for a well-managed transition;
- Capacity building including planning and project preparation support; and
- Emphasis on digitalisation and digital connectivity.

Additionally, it will leverage strategic partnerships with a number of national and international institutions towards meeting JT objectives. It will seek to align its activities with the EU's Just Transition Mechanism regarding activities in EU countries. This can include supporting EU countries in project design and preparation to apply for funding from the InvestEU programme (EDRB, 2020b). The EBRD will also seek to coordinate with other MDBs present in their regions of operation to ensure that they are not doubling in efforts, and that they are deploying complementary strategies.

Appendix 3 – Findings from past transitions

This appendix presents our findings from reviewing major past economic transitions, and how they apply to the low-carbon and just transition.

The single most important lesson is the importance of an inclusive political process for managing a JT. If important stakeholders are excluded, political instability is a likely result, rendering it challenging for a transition to go well, even if other policy measures are well calibrated. Of course, the creation of an inclusive consultation and decision-making process is not something that MDBs can necessarily guarantee. Nevertheless, having a clear grasp of its importance may help guide MDB engagement with other stakeholders, as well as prioritising MDB time, money, and energy appropriately. This finding is particularly important for the MDBs in the context of the differing concepts of justice covered by alternative JT definitions, as discussed in Section 2 above.

Besides the lesson that successful transitions are embedded in inclusive consulting and decision-making processes, three operational lessons emerge:

- Most successful JTs are guided and given **coherence by a long-run strategy**, with successful strategies combining **unblocking**, **enabling**, and **protective** responses, as explained further below;
- Most successful JT strategies are **tailored** to the region and industries in question; and
- Most successful JT processes tend to start **early**, before the first large-scale job losses and firm closures occur.

These conclusions are derived from an analysis of five major past transitions along three axes: their **causes**, **effects**, and the **responses** adopted in response to them. Analysing past transitions through these lenses permits the separation of relevant from irrelevant implications for the climate transition.

The five transitions analysed here constitute some of the most important economic transformations of the past three centuries: the first Industrial Revolution (1770-1830); the rise of railroads and steam shipping (1830-1870); the second Industrial Revolution (1875-1920); the rise of mass production and mass consumption (1910-1975); and the second great wave of globalisation (1970-2020):

- The first Industrial Revolution witnessed the switch from isolated innovations and short bursts of prosperity – as seen in a variety of places, sectors, and movements before – to a process of sustained innovation and productivity gains, taking root for the first time in history in late-18th-century Britain.
- The rise of railroads and steam shipping, taking root in the half-century after the first Industrial Revolution and propelled by improved steam engines and the Bessemer and Siemens-Martin processes for steel-making, greatly reduced transport costs and allowed for stronger regional specialisation both within and across countries.
- The second Industrial Revolution was driven by the harnessing of electricity, developments in chemistry, and further cost declines in steel, shipping, and energy. This transition saw the rise of large firms – often organised into the newly accessible legal form of joint stock companies – and the first wave of globalisation, as the telegraph introduced near-instant long-distance communication.
- The rise of mass production and mass consumption – based on interchangeable parts, war-time and Fordist mass-production methods, and radio, the telephone, and television – was the first major transition of the 20th century and brought widespread prosperity to Western populations.

- The second great wave of globalisation is the most recent major transition that is largely completed. Driven by containerisation, lean production, and further advances in information technology and electronics, this transition has led to another fundamental redistribution of economic activity across the globe.

Concerning their causes, while the first Industrial Revolution was driven by a fundamental socio-cultural shift, most transitions since have been driven by combinations of exogenous shocks, technological and organisational innovations, state interventions and trade liberalisation. This suggests that the latter four transitions offer the most relevant lessons for navigating the climate transition, with the exception of the cultural-behavioural dimension, where the first transition may hold useful insights.

Concerning their effects, all major transitions have had significant distributional impacts, harming some groups, sectors and/or countries, while benefiting others. These effects varied by sector, sub- or supra-national geography – depending on factors such as natural resource endowments and historical trade- and production patterns, as well as by consumption patterns. In addition, transitions have often had political consequences at the local, national, and international level.

The remainder of this section explains the distinction between unblocking, enabling, and protective responses, before describing in greater detail the causes, effects and responses associated with the five major transitions analysed here.

Successful past transitions feature unblocking, enabling, and protective responses

Although no single pattern of specific policies and measures to address their distributional impacts held across all five transitions studied here, successful reactions involved a combination of unblocking, enabling, and protective responses.

Unblocking responses refer to policies that remove obstacles to an emerging transition. Taken on their own, these are not necessarily in line with a JT – indeed, they can exacerbate inequalities and give rise to political resistance – but, where significant vested interests or other rigidities are in place, they can be required for initiating a transition that is deemed necessary or desirable. Historical examples include:

- The Enclosure Acts in 18th- and 19th-century England, breaking up traditional land-use patterns and permitting the commercialisation and rationalisation of English agriculture that would in turn provide the cultural and financial bedrock for the first Industrial Revolution.
- Tariff removals (particularly for technology leaders), through which governments can circumvent or overcome the resistance of 'lagging' domestic sectors to reallocations of capital and labour, as with the British Corn Law Repeal of 1846.[57]
- The weakening of entrenched corporatist structures, such as guilds, monopolies, or licensing regimes, particularly in the first Industrial Revolution and the Rise of Railways and Steam Shipping, or arguably trade unions, during the second great globalisation after the 1970s.

Enabling responses refer to policies that allow a transition to proceed faster, more smoothly, and/or further than it otherwise would. While these are not policies that are strictly necessary for a transition to proceed – unlike unblocking responses – enabling responses can boost the fairness, speed, and the economic success of a transition. Public education is the canonical case of a successful enabling response. Other examples include acts of standardisation (e.g. of railroad gauges, voltage, rules of the road, sizes of paper, building materials, and industrial components), the provision of legal infrastructure (e.g. patent protection, the

[57] The Repeal of the Corn Laws made imported wheat and other grains cheaper, thus undercutting British agriculture, increasing the real wage of urban workers through lower bread prices, and facilitating further reallocations of labour from agriculture and the countryside to industry and the cities.

limited liability company, standardised procedures for founding joint stock corporations), physical infrastructure (highways, urban sanitation, ports and airports, communication lines, etc.), or financial infrastructure (e.g. the Securities and Exchange Commission or the creation of a secondary market for residential mortgages via Fanny Mae).

Finally, protective responses refer to policies that rein in the negative side effects of a transition, rendering it fairer than it would otherwise be, and thus safeguarding its political viability. Major historical examples include the 19th-century Factory Acts, banning child labour and certain unsafe work practices; the ten-, and then eight-hour working day; public pensions, healthcare, and unemployment insurance; and the recognition of trade unions; or, most recently, the 'right to disconnect', introduced in French and Belgian labour law in 2017 and 2018 to protect workers' free time in the context of increasing digital connectivity.

As highlighted above, political reform, too, plays a major role in successful protective responses. Having a seat at the table gives affected stakeholders a credible guarantee of not being overlooked as a transition unfolds. This supports fairness and political stability as a transition unfolds. Historical examples of this include 19th-century franchise extensions in the UK and, at the state level, in the US, which often followed episodes of industrial unrest. More recent examples include the Conference of the Ruhr Region, 1979, or the Latrobe Valley Authority in Australia, 2014, which brought together regional stakeholders to create consensus behind difficult transitions out of heavy industry and coal mining, respectively.

A notable feature in historical transitions is that the rise in redistributive taxation does not appear closely linked to them. In particular, the history of progressive income and wealth taxation – the most redistributive elements in modern economic governance – appear to be structured by the rhythm of war and mass mobilisation, not economic transitions (Scheve and Stasavage, 2012, 2016).

Causes: most historical transitions were caused by a combination of causes

The first Industrial Revolution was driven by a fundamental socio-cultural shift. Although natural endowments (especially coal reserves), individual technological innovations, secure property rights, access to growing sales markets and new distribution channels, and high wages all played a role in causing the first Industrial Revolution, none of these factors, individually or together, appears to have been a sufficient cause, since they were present before the late 18th century and in places other than England (Clark, 2012). The shift from production-for-use (with sale of surplus) to production-for-trade-and-profit (Meiksins Wood, 2002) in English agriculture, however, was a novelty. In combination with the 'Industrial enlightenment' (the belief that the physical world can be systematically understood and acted upon, Mokyr (2010), the spread of 'bourgeois values' (McCloskey, 2010), and the other necessary causes listed above, led, for the first time in history, to continuous technological advance and productivity growth.

Once the fundamental socio-cultural shift of the first Industrial Revolution had taken place, key innovations in general purpose technologies and the organisation of production, repeatedly revolutionised the structure of production and consumption. The invention of railroads and steam shipping in combination with innovations in steel production (Bessemer and Siemens-Martin processes) and large productivity differentials, particularly in agriculture, led to a rapid revolution in transport between 1830 and 1870. The development of these cheaper and more reliable methods in steel production, the harnessing of electricity, and the invention of modern chemistry drove the second industrial revolution, with its peak years from 1875 to 1920. The emergence of interchangeable parts and the invention of Fordist production methods made mass production and mass consumption a possibility; the exigencies of mass warfare, the strengthening union movement, and the pressure of Cold War competition led to public policies that realised this possibility across the Western world. Further improvements in logistics, electronics, and communication technologies, the introduction of Lean Production methods, and the dismantling of trade barriers, finally, drove the second great wave of globalisation from the 1970s on.

Although details differ, the four transitions that followed the first Industrial Revolution have been driven by combinations of exogenous shocks, technological and organisational innovations, and state interventions. This conjunction of causes, resembling those that are currently driving the climate transition, suggest that the four latter transitions may offer the most relevant lessons for navigating the climate transition today. In particular, the climate transition is being driven, at its root, by deliberate public policy aiming to reduce emissions and other negative externalities; the technological innovation that results from tackling this challenge, for example cheaper renewables or electric vehicles; and exogenous shocks, such as natural disasters or the COVID-19 pandemic. Of course, insofar as the climate transition, too, requires and involves deep socio-cultural changes, the first transition, too, may hold useful insights. However, since socio-cultural change is difficult to engineer deliberately through public policy, less emphasis is placed on this aspect here.

Effects: transitions have redistributive effects that can cause major resistance

Transitions lead to major changes in production and consumption patterns across geography, sectors, and social classes. Canals, railroads, and later refrigeration technology, for example, shifted staple crops and cattle farming from the US East Coast to the Mid-West, and from the English countryside to Argentina and New Zealand. While this was to the advantage of urban consumers and manufacturers, for whom cheaper staples meant that lower money wages would suffice to pay for workers' essential consumption needs, it was to the detriment of US East Coast and English farmers, agricultural workers, and land-owners. Similar changes resulted from revolutions in textile production and metallurgy, the invention and widespread adoption of electricity, the shift from railroads to road haulage, containerisation, and modern information technology, among other examples.

These uneven impacts are evident in the 'second great wave of globalisation'. David Autor and his co-authors show that the (re)integration of China into world trade and production patterns had a major adverse impact on a subset of American manufacturing areas: even in the context of flexible US labour and product markets, '[a]longside the heralded consumer benefits of expanded trade are substantial adjustment costs and distribution consequences', where 'exposed workers experience greater job churning and reduced lifetime income' (Autor *et al.*, 2016, abstract). Similar impacts are well-known from the literature on former coal mining and heavy industry regions, where mine and industry closures have led to demographic shrinkage and local negative feedback loops, involving rising unemployment rates, declines in public revenue, and a degradation of public spaces and property values (Martinez-Fernandez. *et al.*, 2012).

As a result, transitions can spawn major social unrest, particularly if unblocking and enabling policy responses are not accompanied by suitable protective responses. Since many transitions 'have left long-term effects on specific regions, often with high dependency ratios (non-working to working population), low educational attainment, below average wages and wage stagnation', and since transitions can have strong and locally concentrated negative social and cultural effects (Haney and Shkaratan, 2003), local populations have often attempted to resist them (Caldecott *et al.*, 2017, p. 8). Examples of this include:

- the Luddite movement of the early 1810s, resisting the mechanisation of weaving through smashing textile machinery;
- the Swing riots of the 1830s, driven by the introduction of threshing machines into British agriculture;
- severe industrial unrest in late 19th-century America, with peaks in 1877 (The Great Railroad Strike, with over 100 fatalities (Piper, 2013, p. 95)) and 1894 (The Pullman Strike, with over 50 fatalities (Papke, 1999, pp. 33-5));
- the *gilets jaunes* movements across France in 2018.

A frequent obstacle to successful transitions is hence resistance, both peaceful and at times violent, from those negatively affected.

An important finding in this regard is that labour resistance is often lower in areas where alternative employment options are available, compensating for job losses in declining industries. Caprettini and Voth (2020), for example, study the adoption of threshing machines in British agriculture in the 1830s, and find that 'unrest was strongly correlated with the adoption of labor-saving technology … where threshing machines had spread, the probability of riots was twice as high as in areas where they had not been adopted' (p. 10). However, in proximity to major manufacturing towns, 'where ease of access to alternative employment made workers' exit a realistic option, technological unemployment was less likely to translate into social unrest'. Conversely, where enclosures had reduced access to land and hence to the alternative of subsistence farming (self-)employment, 'threshing machine adoption tended to spell more political instability' (p. 10).

In addition to labour resistance, firms, too, can seek to slow down or halt transitions for fear of adverse distributional effects. This mechanism was particularly visible in the transition away from coal and steel in the Ruhr area. For example, '[f]or fear of new competitors in the labour market, regional [coal and steel] companies retained their large properties or sold them at excessive prices' (Galgóczi 2014, p. 225), thereby preventing the establishment of a Ford car manufacturing plant in the Ruhr area in the 1960s (Oei *et al*., 2019, p. 10). In addition to hoarding real estate, established firms also opposed the creation of universities, for example with Gustav Krupp commenting 'What we need in the Ruhr are muscles, not brains' (p. 225).

Technologies with economies of scale or network externalities are particularly prone to cause major redistribution; transitions in and out of such technologies – e.g. in the energy sector – are hence especially likely to be controversial and feature resistance. Unless counteracted by active competition policy, by consumer organisations, and/or by trade unions, economies of scale and network externalities tend to create oligopolies with market power that are capable of exploiting both workers and consumers. This mechanism was visible in the rapid rise of trusts in steel, oil, railroads, chemicals, and other sectors in the late-19th-century (Lamoreaux, 1985), as well as, many contend, in the rise of market concentration upon the relaxation of anti-trust enforcement in the late 20th, early 21st century (Philippon, 2019). Where a transition *toward* such technologies occurs, consumers and workers are likely to seek to resist it. Similarly, where a transition *away* from such technologies occurs, there may be resistance from entrenched firms and allied interests invested in the associated oligopoly rents. This mechanism was visible in the resistance to structural transformation in the Ruhr area during the 1960s, 70s, and 80s (Grabher, 1993; see also Appendix 3 in Karvounis, Strauss, and Reinard, 2020, the EIB's in-house Just Transition Survey study).

In sum, transitions have major redistributive effects that can cause resistance from labour, capital, and political actors invested in pre-transition technologies and methods of production. 'A strong lesson from the historical examples […] is that they are difficult processes' (Caldecott, Sartor, and Spencer, 2017, p. 7).

Successful responses to past transitions suggest three operational lessons

Because of their often-complex nature, finding the right policy response to transitions is challenging. The dominant response to dislocations associated with the second great globalisation, for example, has not been a success: retraining policies, when not accompanied by other measures, have failed in places 'because of a mismatch between trained competences and local employment demand' (Caldecott, Sartor, and Spencer 2017, p. 12).[58] Similar findings apply to regional transitions away from coal mining in recent decades: '[t]here are *few if any* instances of fully satisfactory economic rejuvenation outcomes in mono-industry coal mining towns' (World Bank, 2018, p. 17; italics added).

[58] In the US, for example, there is little evidence that the TAA programme, the main tool explicitly intended to address the adverse impacts of increased openness to trade, has helped displaced workers reap the benefits of trade: 'While the TAA program may provide an income safety net, it does not help the average displaced worker who is enrolled in the program find new, well-paying employment opportunities … the TAA program does not make a difference' (Reynolds and Palatucci, 2012, p. 58; see also D'Amico and Schochet, 2012).

Operational finding No. 1

The complex nature of transitions suggests the importance of a coherent framework to guide the overall policy response. This is supported by findings from recent regional transitions out of coal mining (e.g. Schulz and Schwartzkopff, 2016; Caldecott, Sartor, and Spencer, 2017; World Bank 2018). In particular, although it is important to have tailored activities and policies, an overall strategy will ensure that impact is maximised and guided by the same principles. Additionally, the overall strategy will ensure that all elements relevant to a JT are considered, including the rehabilitation of discontinued assets and wider international impacts.

To be successful, a framework should include a combination of unblocking, enabling, and protective responses can support successful and just transitions. In particular, unblocking and enabling responses can support the economic and technological success of a transition. Enabling and protecting responses, in turn can, contribute to the fair and just nature of transitions, and hence their political viability.

Unblocking responses, although potentially contributing to adverse distributional effects, may be necessary to allow an emerging transition to proceed. For example, while the Enclosure Acts in 18th- and 19th-century Britain increased rural poverty, they were a key element of the causal chain leading up to the first Industrial Revolution. By furthering profit-oriented farming, they contributed to the socio-cultural transformation that in the end drove the shift from isolated to sustained innovation (Meiksins Wood, 2002). Similarly – though in this case without the adverse effects on poverty – getting Ruhr coal and steel companies to sell their surplus landholdings was a key element in the transition toward a more diversified, ecological industrial structure, a move they had initially resisted for fear of new firms bidding up wages in local labour markets (Galgóczi, 2014). Privatisations, the deliberate reduction of worker bargaining power (through tight monetary policy and the creation of unemployment, direct changes in labour and union law, and increased capital mobility), and the removal of trade barriers are more recent examples of controversial, but potentially necessary, unblocking responses.

Where unblocking responses remove obstacles to a transition, enabling responses allow it to proceed faster, smoother, and/or further than it otherwise would. In doing so, they can contribute to both the fairness and the economic success of a transition. Nevertheless, despite their potential contribution to both dimensions, on their own they are not always sufficient to get it underway (which may require unblocking responses), or to secure full political backing (which may require protective responses).

Successful enabling responses often solve coordination or collective action problems. Historical examples of enabling policies, summarised in Appendix 3 below, range from the creation or facilitation of physical, legal and financial infrastructure, for example the creation of the interstate highway system, the joint stock company, or the Securities and Exchange Commission, to the provision of public education, product standards and infant industry protection, for example through land-grant colleges and various industry-protective tariffs in 19th-century America, or the DIN system of industrial standards in Germany. Another examples is the Netherland's transition out of coal mining, where the various stakeholders (public and private) were able to agree on a master plan of staged closure of coal mining. The State mine closed first as the company moved onto drilling for gas in the North Sea, and the private mines closed gradually over the course of one decade (1965-75). This is an example of overcoming coordination failure through corporatist, tripartite negotiations between state, private companies and trade unions. What unites many of these responses is that they are solutions to coordination or collective action problems: agreeing on standardised voltage for electricity, standard dimensions for nuts and bolts, or setting standards for transparency in financial markets, allows private actors to coordinate successfully and thereby engage in a productive division of labour. Public investment in (transferrable) human capital, or the public construction of high-quality, open-access roads allow societies to overcome prisoners-dilemma style collective action problems, thus permitting the full potential of new technologies or production methods to be realised. Since transitions

often require entire ecosystems to form anew, a process replete with both coordination and collective action problems, policy responses of this kind are crucial.

Operational finding No. 2

A wide variety of enabling responses have been adopted in the past; the lesson this suggests is that each transition requires its own set of tailor-made enabling policies. Although successful enabling responses are unified by their nature as solutions to collective action or coordination problems, it appears little can be said in the abstract about the ideal set of enabling responses. Since the set of coordination or collective action problems differ from transition to transition, careful analysis is required to identify the right combination of policies.[59] This may achieve the creation or reinforcement of **local clusters** that durably anchor high-value-added activities in the transitional region (Schulz and Schwartzkopff, 2016).

In regional transitions out of coal mining, investments in R&D as well as infrastructure were central and successful enabling responses. Given the large overlap between the climate transition in general and the transition out of coal mining in particular, this suggests that investment in R&D and infrastructure may play a key role in achieving a just climate transition. However, here too the importance of tailoring policies to local circumstances apply: R&D investments, depending on research ecosystems, may not be as effective in mining regions that lack a history of high-value-added activity or local R&D.

Finally, protective responses refer to policies that rein in the negative side effects of a transition, rendering it fairer than it would otherwise be and thus safeguarding its political viability.

Operational finding No. 3

Operationally, a key lesson is for protective responses to be planned and adopted early, *before* major layoffs take place. Policies to mitigate social and labour impacts that start before labour layoffs occur can result in a more orderly, less stressful, and ultimately lower-cost transition (World Bank, 2018). In a similar vein, the EIB finds that 'the earlier the various actors anticipated, accepted and prepared for a transition, the better the results' (Karvounis, Strauss, and Reinard, 2020, p. 15).

As with enabling responses, a wide variety of protective responses have been adopted in the past, suggesting the need to tailor them to each transition.

Nevertheless, they can be grouped into three major categories: job quality and health and safety; income protection and insurance; and political reforms.

Job quality and health and safety legislation, broadly construed, was the dominant protective response in earlier transitions, and remains important to this day. Major historical examples include the 19th-century Factory Acts in the UK, the ten- and later eight-hour working day, and the 1970 Clean Air Act in the US. More recently, the 'right to disconnect', introduced into French labour law with the 2017 'El Khomri Law' and adopted in Belgium in 2018, is a relevant example.

In addition to job quality and health and safety legislation, a variety of income protection and social insurance policies have been adopted in response to transitions. This includes, for example, the Speenhamland System in early-industrialisation England, the Bismarckian early welfare state with health and

[59] A more detailed analysis of the enabling responses required for a successful and just climate transition may be a fruitful avenue for further research.

accident insurance and a public pension system in late-19th-century Germany, the introduction of Social Security and the Earned Income Tax Credit in 20th-century New Deal America, as well as the near-universal extension of the welfare state in Western states after WWII. Packages of early retirement schemes, severance payments, or enhanced unemployment or social assistance payments for coal, iron, and steel workers, prevalent in a number of regional transitions out of these sectors (World Bank, 2018, p. 37-40), are among the most recent examples of such policies.

Taken on their own, income protection and social insurance policies have their limits. This finding emerges from recent transitions out of coal mining. The a recent survey of JT experience in European coalmining area, for example, finds a 'low effectiveness of "golden handshakes" for former workers' (Karvounis, Strauss, and Reinard, 2020, p. 16), a finding in agreement with the results from Caldecott, Sartor, and Spencer (2017), because they do little, on their own, to generate economically sustainable high-quality jobs.

Key overarching lesson: successful responses to transitions are politically inclusive

The third kind of protective response is the most important: successfully managed transitions often involved political reforms that empower previously excluded groups, a development that is perhaps best understood as a credible commitment to adopting future protective and enabling reforms as the transition unfolds. Examples of this pattern include the Reform Acts in 19th-century Britain (1832, 1867, 1884),[60] bringing first the bourgeoisie and then the (male) working class into the political system; state-level franchise reform in 19th-century America, a process that was often linked to local patterns of industrialisation[61] or, more recently, the creation of regional (e.g. the Conference of the Ruhr Region, 1979, or the Latrobe Valley Authority in Australia, 2014) or sectoral stakeholder engagement bodies (e.g. the Commission on Safe Energy Supply, set up in reaction to Fukushima in 2011 in Germany) (Schulz and Schwartzkopff, 2016; see also World Bank, 2018, pp. 28-32).

Operational finding No. 4

Insisting on the creation and local ownership of inclusive political structures for consultation and decision-making is vital for a JT. This lesson emerges clearly from the five historical transitions analysed above, and is supported by recent findings from the ongoing transition out of coal mining (Campbell and Coenen, 2017, p. 15; Karvounis, Strauss, and Reinard, 2020, p. 15). Where such structures are missing, local buy-in may be weak, undermining efforts to reorient local and regional economies, and political and social stability may be jeopardised, at the limit leading to social unrest and a breakdown of public order. Inclusive political structures, in contrast, can build consensus and preserve stability.

The importance of political reforms for successful and just transitions is not surprising. As Campbell and Coenen observe for the most recent transition, 'a vexing challenge for renewal of old industrial and coal regions is to create legitimacy and buy-in for transition from across a broad field of significant stakeholders' (2017, p. 15). Further, as the EIB's in-house JT study shows, 'consensual approaches [to transitioning out of coal] … have generally been successful ... The required in-depth and close cooperation between different actors … has proven to be best achieved through a bottom-up process' (Karvounis, Strauss, and Reinard, 2020, p. 15). Given that transitions tend to unfold over decades, with difficult-to-predict impacts, assuring adequate protection for all stakeholders may best be achieved through the creation of inclusive political structures, through which other responses can then be adopted and adapted over time, rather than through

[60] There is evidence that the 1832 Reform Act was a direct response to the Swing riots associated with the introduction of threshing machinery into British agriculture (Aidt and Franck, 2015), suggesting that political entrepreneurs saw the extension as the franchise as an effective way to forestall similar outbursts in the future.
[61] See, for example, the case of Rhode Island and Dorr's Rebellion in the 1840s (Keyssar 2009).

the adoption of a fixed set of policy responses at an early date. It is also important to consider that political structures will impact the cost-sharing of the transition and how costs are spread between national and sub-national governments. It is important that as part of an inclusive transition the cost is spread across tiers of government, ensuring an inclusive political response.

Further, past transitions suggest the importance of including workers and local residents in particular in decision-making structures. In the transition out of coal, for example 'companies tended to privatise gains but socialise losses', while also 'tend[ing] not to pay for important indirect costs of their activities like site remediation' (Karvounis, Strauss, and Reinard, 2020, p. 14). Both justice and prudential considerations thus support including workers and local residents in decision-making structures, to prevent the extraction of rents, the externalisation of costs, and the social unrest that may result from an exclusionary process.

Conclusion: coherent, tailored, early, and inclusive – four lessons for just transitions

This section has covered five major past transitions, identifying four lessons for a just climate transition today. It described the causes, effects, and policy responses to the first Industrial Revolution, the rise of railroads and steam shipping, the second Industrial Revolution, the rise of mass production and mass consumption, and the second Great Globalisation.

One overarching strategic take-away emerged: successful JTs are politically inclusive.

In addition to this strategic lesson, three operational conclusions were identified:

- JT policy should be guided and given coherence by a long-run strategy comprising unblocking, enabling, and protective elements;
- JT strategies should be tailored to the region and industries in question, to leverage local strengths and manage local risks; and
- JT policy planning and implementation should start early, before the first large-scale job losses occur.

Appendix 4 – Summary of past transitions

Table 7 Five major transitions: causes, effects, and responses

Transition	Cause	Effect	Responses		
			Unblocking	Enabling	Protective
1st Industrial Revolution (1770-1830)	Switch from isolated innovation to sustained innovation driven by: • the market transformation of British agriculture (enclosures, rise of for-profit farming) • growth of markets (extension of canal network, abolition of internal trade barriers, sales to colonial markets) • a 'culture of growth' and 'industrial enlightenment (Mokyr, 2010, 2016) • institutional changes that reduced rent-seeking (North and Weingast,	• shifting agricultural sector (cotton boom abroad, decline of staple agriculture in UK) • expanding textile and manufacturing sectors • relatively little real wage growth until ~1850, with gains going into population growth rather than per capita income (Mokyr 2004) • rise in inequality (Lindert 2000), social unrest, e.g. Luddites • institutional and cultural groundwork for later expansion	• Master and Servant Act (1823, to prevent 'combination' of workers in trade unions) • abolition of Statute of Artificers (UK, 1813-4, abolition of guild-like protection of trades) • Enclosure Acts (e.g. 1773 or 1801)	• large-scale demand from British Navy in Napoleonic Wars	• food tariffs (1815 Corn Laws) to protect farming and landowners • Speenhamland System (1795, effectively a negative income tax for workers in the countryside)

Transition	Cause	Effect	Responses		
			Unblocking	Enabling	Protective
	1989, Acemoglu and Robinson, 2012)				
Rise of Railways and Steam Shipping (1830-1870)	• improved steam engines • first declines in steel production • regional productivity differentials, especially in agriculture and manufacturing	• shifting agricultural sector. US example: East Coast cities now fed by Midwest & Great Plains • expanding industrial and transport sectors • Chartist movement • growth of international inequality, 'Great Divergence' takes off • demographic transition begins, urbanisation near complete (UK)	• New Poor Law (1834, replacing Speenhamland's negative income tax with system of workhouses) • repeal of UK food tariffs (Corn Law Repeal 1846) • further Enclosure Acts (1845-1882)	• legal reform around the corporation (Joint Stock Companies Acts of 1844 and 1856, allowing for incorporation by registration, and Limited Liability Act of 1855) • land grants and public financing of railroads (e.g. Pacific Railroad Acts, 1862-66 in the US) • US tariffs	• factory legislation, ban of child labour, limits to working day (especially UK Factory Acts of 1833 and 1847) • political reforms to enfranchise UK industrial districts (1832 Reform Act) • state-level franchise extensions (US)
2nd Industrial Revolution (Steel, Chemistry, Electricity & Heavy Engineering, 1875-1920)	• cost declines in steel, shipping, energy • development of organic chemistry and electricity • telegraph	• international integration of communication, trade & financial networks ('first globalisation') • growth of national and	• restrictive US Supreme Court jurisprudence (e.g. *Lochner v New York*, 1905, striking down legal limits on working hours, or *Hammer v Dagenhart*, 1918, striking down	• spread of formal education (Mokyr, 1998) • expansion of higher education in US (Morrill Land-Grant Acts 1862 and 1890) • standardisation (e.g. railway gauge, electricity voltage, rules of the road, etc);	• 8-hour day (generally adopted after WWI) • recognition of trade unions (UK: Trade Union Act 1871) • early social insurance (Bismarck welfare legislation, 1883-89) • US: Trust-busting (Sherman Act 1890; Clayton Act 1914, FTC)

Transition	Cause	Effect	Responses		
			Unblocking	Enabling	Protective
		international inequality • urbanisation of US and continental Europe • oligopoly-formation • industrial conflict (US: peaks in 1877 and 1894)	federal regulation of child labour) • use of Sherman Act (1890) against trade unions		
Rise of Mass Production and Mass Consumption (Oil, Automobiles, Aviation, 1910-1975)	• perfection of interchangeable parts • invention & widespread adoption of Fordist production method • radio, telephone, TV • war-time mass production • post-war expansionary fiscal policy & fiscal-monetary coordination • union movement & Cold War	• widespread prosperity, income equality, full employment • demographic transition completed (West) • peak 'Great Divergence'		• US: Federal Housing Agency, creation of 30-year mortgage market (FNMA) • Interstate Highway Construction Programme • post-WWII expansion of education (UK: 1944 Education Act, US: GI Bill)	• UK: Beveridge Report, NHS • US: New Deal (e.g. Social Security Act 1935), Clean Air Act (1970) • female suffrage (in two waves, post-WWI & post-WWII)

Transition	Cause	Effect	Responses		
			Unblocking	Enabling	Protective
The 2nd Great Globalisation (containerisation, lean production, information technology, 1970-2020)	• reduction in trade barriers (GATT, WTO) • public (defence) investments driving advances in micro-electronics • Toyota Production System, just-in-time production • standardised shipping container	• localised de-industrialisation, 'Rust-belt' (Autor et al 2012, 2016 for the US, Altintzis and Busser, 2014 for general overview) • organisation of production into global value chains • rise in within-country income inequality, decline in labour share • decline in international inequality, end of 'Great Divergence' • global urbanisation (2007: more than 50% of humans in cities)	• welfare reforms (US: PRWORA 1996, Germany: Hartz I-IV, 2002-3) • privatisations (e.g. UK: 1980s, France: late 80s and 90s, Germany: 1990s) • deregulation (e.g. US: energy, transport, and telecommunications, late 70s and early 80s) • Volcker shock • Union-busting (UK, NUM strike, US, PATCO strike)	• local transition subsidies & programmes (e.g. in Ruhr area) • further expansion of higher education	• US Trade Adjustment Assistance • US Earned Income Tax Credit • EU Globalization Adjustment Fund

Source: Vivid Economics

Appendix 5 – Policy recommendations from recent transitions

Table 8 Summary table of recommendations identified in the literature

Source	Recommendation specific to the JT today	Recommendation/lesson from other recent regional transitions
Caldecott Sartor and Spencer (2017)		• action should be taken as early in the transition as possible • coherent strategies should be prioritised over a collection of discrete measures created on an ad hoc basis over time • policymakers and stakeholders should be wary of false or short-term solutions that are deceptively attractive for political reasons, providing a brief boost to local regional economies but ultimately leaving them without any long-term solution • invest in research
EBRD (2020)	• key actors – industries in decline, trade unions, educational institutions and other private sector actors – should be mobilised at an early stage for to ensure the process is inclusive and builds consensus about actions and roles • develop a locally owned strategy, both at the national and sub-national level • interventions should be guided by a comprehensive assessment of challenges and opportunities. They should also be implemented through pilots to aid evidence-based policy learning • strategies should be tailored to the specific needs of the affected community, in some cases introducing a partial 'managed retreat', particularly where investment potential is limited • the green economy transition brings significant opportunities for all • workers indirectly and directly affected should be supported through re-skilling, financial compensation, and job creation, mental support and financial counselling • important to consider past environmental assets when determining the way forward • focused investments that enable physical and digital infrastructure have an important role to play	

Source	Recommendation specific to the JT today	Recommendation/lesson from other recent regional transitions
Galgóczi (2019)		• social dialogue and meaningful involvement of stakeholders is necessary • both the central and regional governments should be involved • look to invest in a specific agency specialising in employment transitions • policies need to respond to short-term as well as long-term demands
Hospers (2004)	• regional restructuring is a long-term process and policies should be designed with that in mind • transitional policies should be based on the economic and institutional elements of the region • transitional strategies need to involve all relevant stakeholders to ensure that there is understanding and buy-in	
IDB, DDPLAC, (2019)		• the design and implementation of strategies need to be implemented according to the views of a broad set of stakeholders to ensure they are tailored to the country context and are socially acceptable • national development priorities and a broad socioeconomic vision should drive the design of the long-term strategies • decarbonisation brings economic and development opportunities
Karvounis, Strauss, and Reinard (2020) EIB	• approach should be case-specific • policies and activities should focus on regional strengths and weaknesses • the JT policies and activities should be guided by an overall strategy • should invest in research and local knowledge to determine the way forward • invest in enabling infrastructure	• ensure that all key actors are aligned to the approach • mobilise resources early and take a long-term, holistic view, making binding commitments • ensure that the costs of the transition are equally distributed so that no single actor bears all the cost • exit strategies for declining industries should be tailored to local circumstances • exit strategies should also be conducted in stages
Schulz and Schwartzkopff (2016)		• the guiding principle to policy should be about identifying clusters – identifying areas in the global market that the target region can most successfully occupy • the starting point of the process should be recognising economic strengths and weaknesses of a region, and what the long-term strategy would be • policy priorities and projects should be identified and chosen through an inclusive process that takes into account all views of those affected

Source	Recommendation specific to the JT today	Recommendation/lesson from other recent regional transitions
World Bank (2018)		• managing the social and labour impacts from coal mine closures are best achieved when multiple agencies participate in the policy development • genuine stakeholder consultation starting at the planning stage and continuing throughout the mine closure process can significantly reduce the possibility of social conflicts • systematic processes that mitigate social and labour impacts and that start before any labour layoffs occur can result in a more orderly, less stressful, and ultimately lower cost • pre-layoff planning and assistance can prepare workers for impending layoffs • post-layoff assistance, including temporary income support, can help sustain laid-off workers in a way that promotes continued participation in the labour market • active labour market policies offer services, programmes, and incentives that can encourage and enable re-employment among laid-off workers. • environmental reclamation is best addressed from the outset of mine planning • financial assurance mechanisms can be an effective tool to guarantee funding availability
Zachmann, Fredriksson and Claeys (2018)	• invest in research on the distributional impacts of climate policies • ensure that policies introduced are not regressive, and introduce mitigating measures where they are • develop climate policies that target and benefit low-income households • compensation schemes should be considered and implemented • domestic climate policies should be designed, taking into account international impacts	

Source: Compiled by Vivid Economics

Appendix 6 – Interviews

Table 9 List of organisations interviewed and interviewee details

MDB	**Stakeholders interviewed**
ISDB	Ahmed Al Qabany; Olatunji Yusuf; Daouda Ben Oumar Ndiaye
EIB	Hubert Strauss; Michael Schaller; Sarunas Bruzge; Zoran Stanic; Emmanouil Styvaktakis; Alexandros Karvounis
IFC	Hans Peter Lankes, Alzbeta Klein, Marcene Mitchell, Anup Jagwani, Erika Rhoades, Shari Friedman, Irina Likhachova, Caitriona Palmer, and Peer Stein
ADB	Kate Hughes; Arghya Sinha Roy;
IADB	Adrien Vogt-Schilb; Juan Pablo Bonilla
AFDB	Kevin Urama; Gareth Phillips; Anthony Nyong; Ayanleh Daheraden; Batchi Baldeh; Edith Adera; Diego DeVelasco; Muthoni Nduhiu; Davinah Milenge-Uwella
World Bank (CIF)	Hugh Searight; Neha Sharma; Mike Ward; Mafalda Duarte
World Bank	Alexandrina Platonova-Oquab; Michael Stanley; Stephen Alan Hammer; Chandrasekar Govindarajalu; Ashok Sarkar; Zuzana Dobrotkova
EBRD	Sung-Ah Kyun; Gianpiero Nacci; Jan-Willem Van de Ven; Russell Bishop; Siân Bradley; Isabel Blanco; Barbara Rambousek; Georgios Gkiaouris;
*NDB**	Yuan Zheng; Fabio Batista; Meng Qingwei; Elisa Xiao
*AIIB**	Sani Ye Zhou; Jianping Thia
Other organisations	
OECD	Jens Sedemund
SEI	Claudia Strambo; Aaron Atteridge
ILO	Marek Harsdorff
The Just Transition Centre	Samantah Smith
CDC	Amal-Lee Amin
*NBI**	Steve Nicholls
*Solidaridad**	Samuel Ogallah
*ACESA**	Augustine Njamnshi
*Powering Past Coal Alliance (PPCA)**	Environment and Climate Change Canada (Government of Canada, Co-Chair of the PPCA) Christopher Evans and Alisha Karim; PPCA Secretariat - Candice Jackson and Anna Drazkiewicz
*UNFCCC**	William Agyemang-Bonsu; Kusum Lata

Note: * = interview conducted by EBRD staff
Source: Vivid Economics

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