World Benchmarking Alliance

Assessing the 'just' in corporate transition plans: framework and guidance

Disclaimer

The World Benchmarking Alliance (WBA) launched an international working group in November 2023 (See Annex 3) on tracking just transition progress. This working group seeks to support the understanding and dissemination of existing methodologies and tools to track progress on the just transition with a focus on company action. In doing so, the aim of this working group is to provide clear guidance on how to assess the robustness of the just aspects of corporate transition plans. Additionally, through this report the working group seeks to show how the improved monitoring and evaluation of just transition efforts can lead to a better understanding of where gaps exist and how these gaps can best be filled over time.

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Executive summary

There is growing consensus on how to assess the credibility of corporate transition plans, [1] with the just transition[2] emerging as a crucial element. Credible transition plans increasingly recognise the importance of addressing the socioeconomic challenges of the low-carbon transition, particularly the need for creating opportunities and social acceptance for affected workers, communities and consumers. Reflecting this evolution, the just transition is being progressively integrated into a range of international frameworks, standards and policies.[3]

This growing momentum around the just transition further coincides with the importance of operationalising the International Labour Organization (ILO) Just Transition Guidelines, in which the private sector has a key role to play. It also coincides with the uptake of mandatory human rights and environmental due diligence (HREDD) legislation, even if the link with the just transition can be strengthened within such policies.[4] Under HREDD policies, and in line with the UN Guiding Principles on Business and Human Rights (UNGPs), companies have a responsibility to identify and address real or potential adverse impacts on human rights and the environment. Given these developments, it is paramount to understand the impacts, risks and opportunities that transition plans can have on affected stakeholders, including workers, communities, suppliers and consumers.[5] It is therefore essential to integrate insights from the climate, labour rights and human rights fields of practice to provide clarity about what makes for a robust 'just' corporate transition plan.

The World Benchmarking Alliance (WBA) convened an international working group to better understand how businesses are implementing a just transition. One of the key takeaways from this group was the importance of contextualising how 'just' aspects of corporate transition plans fit within local, national and sectoral policies and pathways. While some UN bodies and governments, such as the UNFCCC and South Africa's Presidential Climate Commission, demonstrate the importance of building these linkages in their work, much remains to be done on this front.

This report takes stock of the work conducted by WBA and other organisations[6] on just transitions, including trends and examples from an assessment of 450 high-emitting companies across WBA's Climate and Energy Benchmarks. It further provides recommendations for assessors[7] to better understand the depth of integration of the just transition in companies' transition plans. It should be noted that this report is primarily focused on the energy sector and further studies are needed to assess other sectors, such as food and agriculture.[8] While this report discusses the importance of monitoring and evaluating just transition indicators, it looks beyond this and also acknowledges the complexity and context specificity of a just transition.

The core aim of this report is to provide more guidance for transition plan preparers and assessors to evaluate how 'just' a transition plan is and the robustness of the just aspects of the plan. This is of critical importance given the increasing prominence of just transition frameworks and indicators, which, without guidance, are likely to create more confusion.

The report integrates responses from interviews conducted with company sustainability professionals, unions, industry associations and technical experts from WBA's just transition working group. It further draws on learnings from a just transition monitoring workshop hosted by the Initiative for

Climate Action Transparency (ICAT), the World Resources Institute (WRI) and South Africa's Presidential Climate Commission under Chatham House rules.

The insights in this report can support the assessment of transition plans by investors and other stakeholders and inform the design of disclosure standards by public authorities and standard setters.[9] The report is also designed to support those responsible for developing transition plans, policies and regulations, including regulations related to HREDD.

The report is structured in four sections. The first section outlines how assessors can measure the integration of the just transition in corporate transition plans while showing the links between just transition, transition planning and HREDD. The second section provides further context for reviewing integration of the just transition, keeping in mind sectoral and regional specificities, with a detailed illustrative focus on heavy industries and steel. The third section shows how to categorise different types of transitions and how this affects the ways in which companies' implementation of a just transition should be interpreted by assessors. Finally, section four takes stock of just transition indicators at multiple levels (national, company and project) to better understand the local and transboundary social impacts of corporate transition plans. The report also includes annexes that provide a detailed list of corporate just transition indicators and examples of sectoral pathways that integrate a just transition.

The report offers five key recommendations that can be used by companies, assessors and governments.

1. Companies should use a bottom-up approach to just transition, rooted in social dialogue, meaningful stakeholder engagement, labour rights, decent work, and robust HREDD and transition planning.
2. Assessors should tailor their evaluations to the company's local context, sector, and internal and external implementation factors.
3. Assessors can use a typology of transitions to better identify social impacts, risks and opportunities linked to companies' transition plans.
4. Assessors should use just transition indicators at the national, company and project levels to assess alignment with local and sectoral contexts. Just transition observatories can help connect insights across these levels.
5. Governments and the UN should clarify business responsibilities in advancing just transitions and invest in the transition itself. Integrating just transition principles into sustainability reporting standards, HREDD and transition planning policy and taxonomies is one way forward.

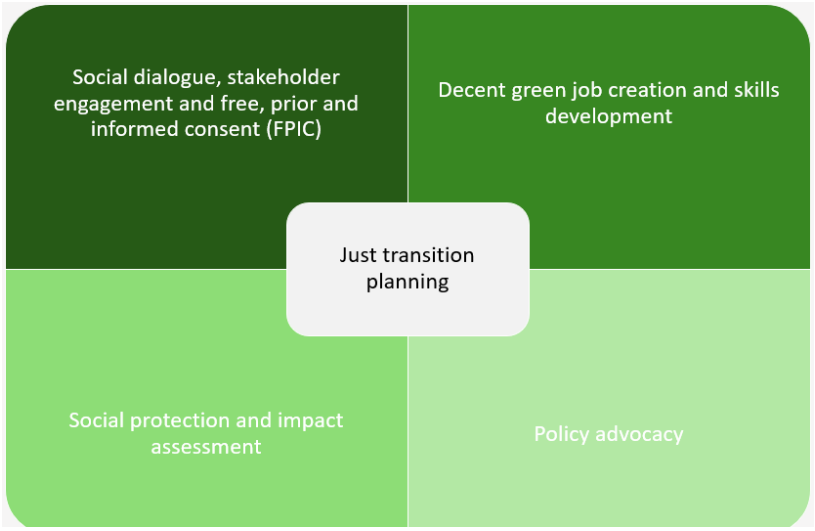
Background to just transition for corporates

What does a just transition mean for companies?

It is globally accepted that the transition to a net-zero economy will require deep, structural changes in our production and consumption systems, implying critical risks and impacts for people directly or indirectly related to companies. However, although corporate transition planning is developing quickly as a practice, it is not clear that the practice, nor the frameworks that guide it, fully reflect the importance of considerations for a just transition. Companies of all sizes, in all regions, need to plan for a transition to clean energy and low emissions that is just for affected stakeholders. Corporate transition plans that integrate a just transition are important to safeguard against employment losses, preserve job security and quality and avoid the exacerbation of inequalities. Corporate transition plans that are just can further empower rightsholders to improve social outcomes and support investors and financial actors in accelerating just transition finance (Macquarie and Tyson, 2025)[10]. They can therefore drive the much-needed convergence of actions between the public and private sectors to accelerate the energy transition.

A just transition applies to companies at different stages of their low-carbon journey.[11] This includes companies that have transitioned or are further ahead in their transition.[12] It also includes companies that have business models dependent on clean energy technologies (e.g. electric vehicle manufacturers, renewable energy component and battery manufacturers). Finally, it includes companies that need to transition away from their current activities with more or less disruptive technology needs (decarbonisation in production technology, energy source, etc.). Ensuring a just transition involves a number of key aspects for companies, namely just transition planning, social dialogue, stakeholder engagement and free, prior and informed consent (FPIC), decent green job creation and skills development opportunities, social protection, impact assessments along the value chain and policy advocacy.[13] It is important for assessors to consider how companies are integrating these elements[14] and, in doing so, protecting affected workers, communities, rightsholders and consumers. For sector-agnostic indicators that could be used to measure how companies are (or are not) delivering on this integration, see Annex 1.[15] For a high-level overview, see Figure 1.

Figure 1: High-level overview to assess just transition implementation by corporates



This report shows that in addition to reviewing what companies disclose, it is essential to understand the design and implementation of transition plans that makes them just. This means that assessors should review the extent to which transition plans are linked to underlying good practices on HREDD. It also means assessors should better understand the types of transitions companies are undergoing and the regional and sectoral specificities that apply to their transition plans (see Sections 2 and 3).

There are also several steps assessors should undertake to ensure a just transition is meaningfully integrated by companies in their planning and decision-making. These steps include reviewing the extent to which boards, senior leadership and different departments (procurement, sustainability professionals, C-suite) are collaborating to deliver on just transition goals and their expertise on the matter. Given its cross-cutting nature, a just transition should be integrated in all aspects of a company's transition plan (see Figure 4 and Annex 1). This integration includes making sure impact, risk and opportunity (IRO) assessments integrate social elements and are informed by the just transition. It also includes, for example, ensuring supply chain decarbonisation initiatives do not focus too narrowly on supply chain emissions, but acknowledge the socioeconomic context in which decarbonisation can happen (support to suppliers, upskilling in supply chains, etc). In addition to de-siloing just transition from transition planning, assessors need to better understand how the social challenges and opportunities implied by a company's transition plan evolve as the company transitions (see Section 3).

How are companies currently faring on the just transition?

As shown in previous research, the majority of companies are still struggling to plan for a just transition. While electric utilities are more mature in their readiness, some companies in other sectors, such as heavy industries, are still catching up (see WBA's Heavy Industry Benchmark). Overall, the level of company maturity on just transition implementation is also higher in relation to supporting green job creation and reskilling and/or upskilling, compared to other aspects such as just transition planning and social protection, even though companies show considerable gaps across all of WBA's just transition indicators. It is also important to go beyond high-level commitments and look at the depth of integration of each just transition indicator. For example, an assessment of 450 high-emitting companies by WBA shows that while about 20% of companies have a high-level commitment to engage in social dialogue, only 9% disclose which stakeholders they engaged with and 5% report the steps they took to ensure the meaningfulness of that engagement (see subsection on social dialogue and stakeholder engagement).

Looking at the depth of integration also means assessors should review the level of collective bargaining, quality of green jobs[16] and unionisation rates for specific sectors. As some interviewees highlighted, it is key to have these core elements in place and to integrate them as part of sectoral social dialogue and collective bargaining beyond the plant and company level. It is also important for assessors to review how affected communities and rightsholders have agency over the impacts that company transition plans will have on them (see subsection on social dialogue and stakeholder engagement and Annex 1).

Reviewing how the 450 companies assessed by WBA's Climate and Energy Benchmarks are performing on some of these indicators highlights gaps that can hinder effective just transition implementation. For example, in WBA's 2024 Automotive and Transportation Manufacturers Benchmark, which assessed 44 companies, only 30% of the companies disclosed the proportion of their direct workforce covered by collective bargaining agreements. Additionally, only assessing which companies disclose the share of their employees protected by collective bargaining is insufficient. It is not always an indication that companies are meeting their social dialogue obligations, nor of the

quality of the bargaining process (see subsection on social dialogue and stakeholder engagement). For examples of indicators to measure these just transition aspects and their relation to transition planning at the company level, see Annex 1.

1. Fundamental elements to assess the just aspects of corporate transition plans

A just transition should first and foremost involve a credible 1.5C-aligned transition plan

Amid recent pushback against sustainability reporting and due diligence, it is more important than ever to clarify what a just transition entails and what it does not.[17] In particular, it is key to emphasise that the necessary basic foundation for a just transition is a credible and robust 1.5C-aligned transition plan. The Assessing Transition Plans Collective (ATP-COL), which brings together 90 experts from 40 organisations, uses a triple consistency approach to delineate the core elements for assessing the credibility and robustness of company transition plans. These include credible local and sectoral pathways for companies to align with 1.5C, the international climate objectives that companies set themselves and how these align with countries' nationally determined contributions (NDCs), and external and internal drivers that affect companies' transition plan implementation.

The pace at which companies need to transition and the extent to which the low-carbon transition will impact them varies. This depends on many factors, including historical contribution to greenhouse gas (GHG) emissions, the level of dependence on emissions-intensive production processes, financial capacity to transition, sector and regional specificities and external dependencies (see Section 2). However, regardless of these differences, a just transition should neither be used by companies to justify delaying climate action nor should it be siloed from transition planning or HREDD (see Figure 4). Not transitioning in and of itself is a social injustice. Across sectors, countries and regions, the most vulnerable groups will be the most disproportionally affected by companies' lack of climate action.

Social dialogue and stakeholder engagement: enablers for effective corporate action on the just transition

Social dialogue and stakeholder engagement are both preconditions and enablers for effective corporate action on the just transition and should be embedded in the design and implementation of transition plans.[18] Social dialogue and stakeholder engagement can lead to better outcomes for workers, local communities, rightsholders and affected stakeholders and reduce the risk of social conflict and resistance to change.[19] Regardless of how social impacts may vary, social dialogue serves as a cornerstone of effective action on the just transition. Global framework agreements, collective bargaining agreements, worker council and joint committees, social dialogue platforms and community advisory panels are all relevant in these efforts. As one interviewee noted, it is important that workers and communities affected by a company's transition plan understand the transition planning process.[20] This is essential to better integrate socioeconomic assessments into company transition plans and to increase social acceptance[21] for the effective delivery of such plans.

Box 1: Social dialogue and the just transition

While both social dialogue and broader stakeholder engagement are needed to achieve just transition goals, it is important to make a distinction between them. The former, based on the ILO definition and ILO Just Transition Guidelines, involves tripartite negotiations between employers, unions and governments at the enterprise, sectoral and national levels.[22] Social dialogue should also take place at all stages, from policy design to implementation and evaluation. Spain and New Zealand are two emblematic cases of how social dialogue can be effectively conducted in practice, including how this can support better implementation of the just transition from businesses. New Zealand has established a Future of Work Tripartite Forum that convenes unions, business groups and government to address risks and opportunities with the changing nature of work. New Zealand has also developed a framework that includes employers, unions, local and central governments, educational institutions, and community groups. Spain's Just Transition Agreements also offer an example of formalised tripartism, in which the government, trade unions and the National Federation of Coal Mining Businesses (Carbunion) have jointly negotiated support packages needed to effectively manage the coal transition. These types of formalised social dialogue mechanisms help companies integrate the just transition into their transition planning efforts.

While it is difficult to measure the extent to which these efforts have translated to improvements in the integration of just transition by businesses, there are promising signs. In Spain for example, some interviewed companies highlighted how they are integrating the just transition as part of their impact, risk and opportunity assessments (IROs) and made clear links to the social dialogue mechanisms that took place at the company, sectoral and national levels. In New Zealand, insights from technical experts evidence social dialogue between the government, Business New Zealand (the national business association) and the New Zealand Council of Trade Unions (CTU). Amongst other promising developments, this has led to a social unemployment insurance scheme that would support workers to retain about 80% of their income for a given period after they lose their jobs. However, while such social dialogue mechanisms are an effective way to deliver a just transition at a domestic level in specific countries, companies should take a more proactive approach. This is important so that companies do not simply wait for enabling policy environments but take their own steps to ensure the just transition is embedded across their value chain.

Further, assessors should review the share of collective bargaining agreements with green clauses to ensure the integration of social dialogue into transition planning. While progress has been made on this front, further efforts are needed, with the ILO illustrating that globally only about a quarter of collective bargaining agreements contain such green clauses. A key finding here is that companies tend to discuss transition planning aspects outside of collective bargaining agreements. This is because transition planning is often seen as falling outside the scope of collective bargaining, instead pertaining more to the prerogative of corporate leadership and broader environmental, social and governance (ESG) mechanisms.[23]

Although it is not social dialogue in the strict sense, how companies conduct meaningful stakeholder engagement with communities and rightsholders[24] affected by their transition plans is also a core component assessors should review (see Annex 1). One relevant example is how the Extractive Industries Transparency Initiative (EITI) engaged with local communities in Colombia, Ghana and Indonesia. This project, launched in 2022, explored the way the energy transition impacts the

livelihoods of communities in those countries and the challenges these communities face in turn in accessing data related to the just transition. Such data includes, for example, impact assessments conducted by companies and how companies have engaged with communities in decision-making processes. The data also includes employment and socioeconomic benefits linked to companies' energy projects, such as revenues generated, social spending and whether or not the latter fulfil legal obligations.

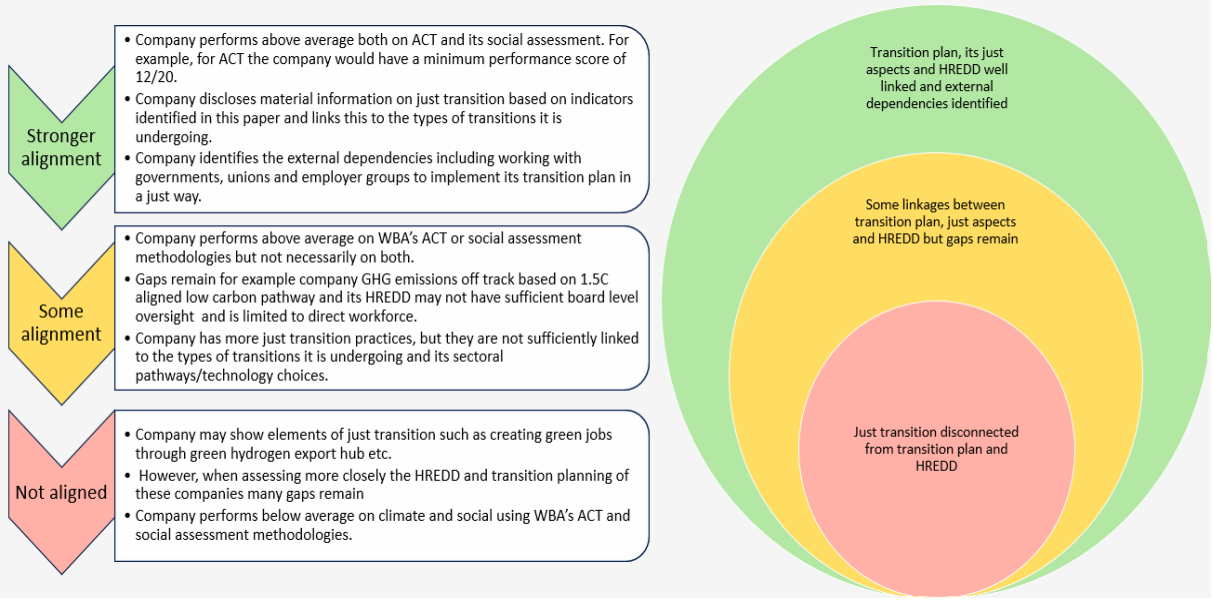
HREDD: the connective tissue binding the just transition to transition planning

Human rights and environmental due diligence (HREDD) is a key tool for companies to ensure they take an integrated approach to the just transition, bringing together social and environmental risks. By identifying, assessing and addressing their human rights and environmental risks and impacts, companies can understand the most salient challenges regarding the impacts of their climate transition plans on people. In turn, companies can implement measures to ensure their transition plans are truly just. Robust HREDD starts with board oversight, needs to be embedded at all levels of the company and has an ongoing and iterative nature.[25]

Figure 2 gives an overview of how HREDD, coupled with transition planning, can be linked to stages of just transition implementation by corporates. In practice, this means assessors should review the types of pathways companies use in their transition plans and their equity implications (see Section 2). As shown in Figure 2, reviewing the stages of just transition implementation also means looking at the connection between the company's HREDD, transition planning and just transition practices to ensure they constitute a coherent whole.

Petronas, the Malaysian national oil company (NOC), provides an example of why it is useful for assessors to build such connections. Petronas faces important climate transition risks[26] due to its costs of production and planned investments. The company is also experiencing declining gas reserves and announced in 2025 that it would restructure its workforce due to a challenging economic outlook. These factors may also explain Petronas' publication of a just transition strategy at COP28. However, a 2025 report by environmental non-profit Klima Action Malaysia shows existing gaps to just transition implementation in Malaysia of relevance to Petronas and suggests ways forward. The latter include developing a national workforce readiness assessment and upskilling programmes and employers better utilising the country's Human Resources Development Fund for energy transition trainings. In addition, WBA's assessments of Petronas show that the company has room to improve its human rights due diligence and living wage policies. Its transition planning also lags behind its peers, with the company projected to exceed its carbon budget by more than 100% between 2022 and 2050 based on the International Energy Agency (IEA) Net Zero Emissions by 2050 (NZE) Scenario. While Petronas' efforts towards a just transition are commendable and the strategy it released at COP28 does refer to human rights due diligence, it still seems that these practices are disconnected from the company's transition plan for now.

Figure 2: Stages of just transition implementation for corporates[27]



Companies can carry out HREDD to highlight just transition risks and opportunities — as specific just transition requirements for companies are currently lacking. In this respect, mandatory HREDD legislation plays a key role in levelling the playing field and ensuring companies take such an integrated environmental and social approach to their transition plans. The European Union (EU) Corporate Sustainability Due Diligence Directive (CSDDD) is one example of mandatory HREDD policy that implicitly integrates the just transition, although its coverage, scope and ambition were curtailed with the Omnibus Package. However, existing HREDD legislation can be strengthened even further to more explicitly address the just transition. Similarly, sustainability reporting regulations can better mandate companies to implement the just aspects of their transition plans. As an example, while the European Financial Reporting Advisory Group (EFRAG) released guidance in the context of the EU, companies in the EU and globally are not explicitly required to disclose the potential justice implications of their transition activities.[28] As one interviewed company put it, in the EU the lack of mandatory reporting requirements for companies on the just transition stands in contrast to the requirements for having a transition plan.[29] For example, one interviewed company mentioned how it is seeking to integrate the just transition as part of its IRO reporting, but the lack of guidance and policy creates an additional burden. Companies are therefore currently not sufficiently incentivised or mandated to report and integrate the just transition into their transition plans.[30]

Companies that transition but fail to integrate HREDD and the just transition into their transition plans can face significant costs to their operations. A study by Davis and Franks (2014) shows that company-community conflicts in the extractive sector could represent high costs for companies. For example, a large mining project with a capital expenditure of USD 3-5 billion would see costs of about USD 20 million per week due to delayed production.[31] The 2023 shutting down of the First Quantum (FQM) copper mine in Panama is one recent example. The government's expedited extension of mining rights and lack of consultation with affected communities has paralysed exports, with the potential loss of USD 4 billion annually.

2. Sectoral and regional considerations

There are both sectoral and regional considerations for assessing the social impacts of companies' transition plans. The Institute for Sustainable Finance (2024) echoes this finding in its evaluation of just transition implementation across multiple sectors, including non-energy sectors. An extensive analysis of all the different sectors is beyond the scope of this report. However, to illustrate how specific considerations are needed for different sectors, this section examines the example of the heavy industries sector, with a particular focus on the steel industry. While doing so, it is also important to emphasise the cross-sectoral and local-regional dimension of the just transition (Krawchenko, forthcoming).

The just transition for heavy industry and steel companies

In addition to having a heavy climate footprint (contributing to almost 20% of global carbon dioxide (CO2) emissions), heavy industries have significant economic importance. The building materials industry, for example, represents about 5% of global GDP. In the EU alone, the economic significance of heavy industries such as steel production is often linked to broader industrial clusters (coal production, internal combustion engine (ICE) production), particularly in Central and Eastern Europe. In turn, these clusters are often more affected by climate policies and just transition considerations given their reliance on carbon-intensive production processes and overlapping socioeconomic dependencies. In the EU, the steel industry in and of itself represents 300,000 direct jobs, 2.3 million indirect jobs and around 1% of the bloc's employment and GDP.

Crucially, as with energy, heavy industry materials are also inputs into the rest of the economy. Consequently, what happens in these sectors reverberates throughout the economy through price effects. There are thus cross-sectoral linkages relating to the just transition to take into account. For example, in the EU, the declining car market has had repercussions on companies in the motor industry supply chain.[32] Similarly, inflation of energy-intensive materials (cement, glass, steel) can have an impact on the construction sector and add to economic difficulties.[33]

In addition to emissions-intensive production processes, the heavy industry sector is characterised by high operating and financing costs and relatively thin profit margins. In the steel industry, for example, low-carbon technologies are highly capital-intensive and not all yet technologically mature. Coupled with current excess capacity[34] and declining demand in some regions such as the EU, this exacerbates the need for companies to implement a just transition. Doing so ensures that companies are able to protect workers and local communities whose livelihoods depend on steel production. The social risks of lack of strategic foresight and planning are evident in recent announcements by companies, such as by Thyssenkrupp Steel to slash 40% of its workforce.

However, WBA's Heavy Industries Benchmark shows that apart from some outliers, most companies in the sector have a low level of just transition implementation. The assessment is corroborated by findings from unions and technical experts, which show that although some good practices exist, many gaps remain in integrating the just transition across the value chain. For example, Building and Wood Workers' International reveals that climate change discussions between unions and companies are relatively limited, occurring in only about 40% of 113 integrated cement plants across 40 countries.[35] Similarly, international framework agreements with a focus on the just transition in the building materials sector remain limited in number and recent.

Beyond workers, heavy industries' decarbonisation plans can have different impacts on local communities, Indigenous peoples and consumers. For example, fully integrated companies that operate upstream in the mining segment of the value chain may see rising instances of just-transition-related litigation without the proper considerations being integrated at the project level (see Section 4).

Regional specificities and external dependencies

Regional considerations and external dependencies are crucial for understanding the footprint that companies have and how this affects their implementation of a just transition. In the EU, for example, 71.4 % of steel installations will be reaching the end of their lifetime in this decade and will require major reinvestments. This presents an opportunity for policymakers in the region to spearhead just transition efforts now, given the long duration of technologies and investments. Conditioning public subsidies on the ability to show and implement credible, robust and just transition plans should therefore be a key priority.[36] Yet, a 2025 report on the State of European Steel shows that so far the majority of public aid provided to steel companies in the EU has weak environmental and social conditionalities attached to it. In the context of the EU, the lack of such conditionality puts the Savings and Investments Union, Steel and Metals Action Plan and Clean Industrial Deal at risk of carbon lock-in. This current gap also means workers and local communities are not sufficiently involved in the design and implementation of transition plans, even though some positive examples — as shown in this section — exist.

In addition, similar to other advanced economies, the demand for steel in the EU is expected to decline in contrast to growing urbanisation and demand in developing countries.[37] Even within the EU, just transition pathways for companies and the external dependencies of their transition plans will differ depending on companies' footprints and how different technologies fare in different regions. For example, some regions may see more potential in terms of scrap recycling, whereas others may be hotspots for green hydrogen development, and others still may have the ability to use steel more efficiently as part of renovation in the construction sector.

In order to have a better understanding of external dependencies, it is important for assessors to map the heterogeneity of companies' decarbonisation pathways based on a number of aspects. These include but are not limited to resource, labour availability, asset characteristics (capacity, type, performance), inputs for production, market and business environment and innovation. These aspects also affect common but differentiated responsibilities (CBDR) and the nature, pace and scale of decarbonisation efforts across economies. While more work is needed to connect these aspects to socioeconomic criteria and the just transition, some efforts in the EU are noteworthy. The EU Joint Research Centre (JRC) mapped, using a geographical dependency assessment, the feasibility of the implementation of companies' transition plans based on external factors in the locations where companies operate and the available policy levers. The EU JRC also mapped regions most at risk from decarbonisation through indicators such as the exposure of these regions to job losses, their adaptive capacity and their broader socioeconomic vulnerabilities.

Looking at the regional footprint of companies, the external dependencies they face and how this affects their implementation of a just transition is therefore critical. The example of China Steel, assessed by WBA, is a relevant example. China Steel is only based in Taiwan and its ability to implement its transition plan is very dependent on domestic factors, including the development of a national hydrogen roadmap and state support, which is less substantial than in other regions. In contrast, companies such as Tata Steel have a footprint across multiple countries, including India, the Netherlands, Thailand and the UK. The extent to which Tata Steel's decarbonisation plan has positive

or detrimental social impacts depends on the extent to which the company embeds the just transition into its transition plan, but also on the local context. For example, besides its failure to adequately integrate the just transition into its transition plan, Tata Steel faces challenges in Port Talbot in the UK compounded by other factors. These include local socioeconomic vulnerabilities in the region and the need for a broader green industrial strategy. This stands in contrast to the example of Ijmond Port in the Netherlands, with its economic importance, where Tata Steel Europe negotiated a Green Steel Social Contract with a just transition pathway. This contract involves employment guarantees, monetary incentives related to retention and individual tailor-made employability plans for affected workers. Box 2 provides yet another example of such regional specificities and external dependencies in the context of green steel production in Brazil.

Box 2: Green steel production and the just transition in Brazil

Brazil is a relevant example when considering just transition implications for green steel production. The country has many advantages, including high-quality iron ore reserves, abundant renewable energy and a skilled workforce. Brazilian steel producers such as Gerdau are also among the leading companies advancing credible transition plans in the industry. Yet, unlike other regions such as the EU, more than half of the country's coal-based blast furnaces are new or recently relined. This means that switching to green alternatives will require public policies and proactive company planning to address these important shifts.

When addressing the just transition for the steel industry in Brazil, regional and global considerations are also important. Regionally, for example, the Northeast region of Brazil has higher levels of unemployment and inequality, and while it represents the region with most renewable energy projects, steel plants are mostly located in the South East. These are important elements for assessors to consider as labour and resource availability are two examples of external factors on which companies are dependent to implement their transition plans.

Given some of the availability constraints foreseen for scrap-based electric arc furnaces, hydrogen direct reduction iron (H-DRI) emerges as a promising route for the decarbonisation of the industry. While it requires significant investments and international cooperation to be deployed successfully, it has the potential to reconfigure global value chains, creating more local value added in Brazil and lowering the cost of low-carbon steel globally. This would involve the export of green iron from Brazil rather than the traditional route where regions such as Europe build their own DRI with Brazil exporting iron ore. Companies in Brazil along the value chain and internationally are already entering into partnerships for such technological developments. This is also spearheaded by policy developments in the country, including an expected National Policy for the Decarbonisation of Industry.

Nevertheless, an important gap remains, as steel companies in Brazil and globally currently do not sufficiently assess the employment dislocation risks, skills gaps and local community impacts linked to their transition plans. A promising development in this regard — one that warrants further attention — is the fact that Brazil, in partnership with the Initiative for Climate Action Transparency (ICAT), will be developing a monitoring and evaluation framework on the just transition. However, as Brazil develops such a framework, assessing how companies are contributing to a just transition will be key

to designing policies that can hold companies accountable on the just aspects of their transition plans.

Scaling up from project to company level

While many heavy industries do not have a full-fledged just transition strategy, they might be more successful in integrating the just transition at a project level. Although this is insufficient to be qualified as a full-fledged just transition strategy, a better mapping of just-transition-related projects (see also Section 4) can support the scaling of such initiatives as a core part of companies' transition plans. For example, Cemex and Svenskt Stål AB (SSAB) through some of their projects show elements of just transition implementation. This is the case with the 'HYBRIT' initiative in Sweden, involving SSAB, Luossavaara-Kiirunavaara Aktiebolag (LKAB) and Vantenfall, to replace blast furnace technology with hydrogen-based processes and actively engage communities in the process and identify skills gaps. Similarly, Cemex provides entrepreneurship support to local small and medium enterprises (SMEs) in its value chain and supports community development in its decarbonisation approach through its Growing Platform and Centres for Self-Employment.

In the EU and at the plant level, other positive examples exist, such as that of Salzgitter and Stahl-Holding-Saar (SHS). These companies, through strong governance structures, were able to implement at least some aspects of the just transition. SHS developed transition plans for its two blast furnaces, and co-leads Green Steel Skills, which is a government-funded project to address the lack of local skilled workers for green steel. Similarly, Salzgitter's workers' council was instrumental in advancing the company's transition plan. The company delivered its first CO_2-reduced electrical steel to an automotive supplier in South Africa in 2024 and its green steel brand will be one of the first certified with the new Low Emission Steel Standard (LESS).

There are also relevant examples of just transition integration by smaller heavy industry companies that offer lessons for larger companies. Stegra, for example, (formerly known as H2 Green Steel) since its inception has been very active in engaging with local communities at the building site of its new green steel plant, avoiding social backlash. Liberty Steel, one of the largest steel producers in Eastern and Central Europe, set up a Greensteel Academy to work with local education institutes and prepare workers for the skills needed for green steel production. The company is also receiving support from the EU Just Transition Fund as it switches to green steel through its transformation plan.

Just transition implications of sectoral pathways

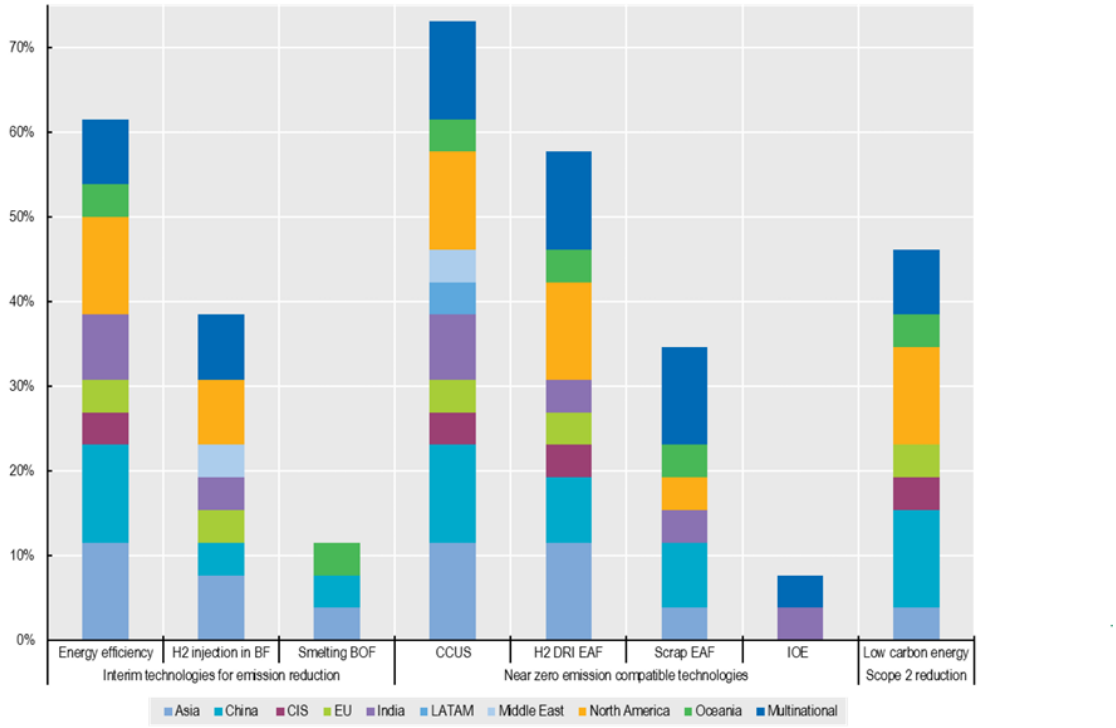
As shown in Section 1, a core component for assessing the robustness of companies' just transition efforts lies in the extent to which companies are linking these efforts to their transition plans.[38] In particular, the scenarios and pathways companies use as part of their transition plans, the extent to which they align with 1.5C, the low-carbon business models and technologies they prioritise, all have just transition implications. For example, the investments and technology choices companies make[39] will have an impact on upskilling, retaining and reskilling needs.

Further, a 2024 OECD assessment of decarbonisation plans in the steel industry shows that certain technological pathways are favoured by most companies (see Figure 3). This includes roughly 60% of 26 companies analysed by the OECD referring to energy efficiency and 40% for H2 injection in blast furnaces for interim technologies needed for emission reductions. In terms of technologies

compatible with near-zero emissions, companies show a strong preference for carbon capture, utilisation and storage (CCUS) — adopted by 70% of companies — followed by HR DRI EAF (60%). For an overview of different technology choices in steel companies' transition plans, see Figure 3.

The overemphasis on CCUS in steel companies' transition plans may exacerbate the risks of stranded assets, which ultimately will have detrimental social impacts on workers and local communities. This is given its low CO2 emission capture rates, high capture costs and the fact that there are no commercial CCUS plants for blast furnace technology anywhere in the world. A 2023 report from Global Energy Monitor shows that stranded asset risk for the steel industry is growing, with as much as USD 554 billion in stranded assets at risk with the build-up of blast furnace (BF- BOF) capacity.

Figure 3: Share of companies mentioning technology types in their transition plans



Source: (OECD, 2024)

Swennenhuis et al. (2022) show that the deployment of different technologies such as CCUS, biomass-based steelmaking and hydrogen-based direct reduction have varying equity implications. While this needs to be contextualised, this mapping can help identify some of the just transition implications of companies' transition pathways.[40] For example:

- CCUS operates downstream from steel production and therefore has fundamentally different socioeconomic implications than other technologies. Large parts of steelmaking processes that remain in use retain labour on site and possibly absorb any fossil fuel extraction workers at risk. While job losses and other risks for workers may be reduced in the short term, harms may be shifted onto local communities due to negative air pollution and environmental impacts. Ultimately, carbon lock-in may lead to stranded assets further along a transition pathway, resulting in negative impacts for all stakeholder groups.
- Biomass-based steelmaking, in contrast, can only substitute a small portion of fossil fuel materials in the coking process. Given its land-intensive nature, it is likely to increase GHG

emissions due to land-use change, in addition to the human rights impacts linked to land grabbing and food security concerns.

- Hydrogen-based direct reduction avoids carbon lock-in and has the potential to reconfigure global value chains for regions with abundant renewable energy potential and iron ore deposits. However, the scale-up of wind and solar infrastructure and the associated electricity requirements may also affect local communities and low-income households through higher electricity prices.

These examples show that companies' pathways often present trade-offs between technology and investment choices and the just transition.

Yet, there are important gaps in addressing the just transition in sectoral and industry roadmaps, which may pose a challenge for companies as they may not be able to assess the equity implications of the pathways they use. This is important as companies use sectoral or global pathways to draw company-specific insights. The Industry Transition Tracker, for example, shows that there is a wide heterogeneity in the availability of sectoral pathways for heavy industries across countries. However, there are fewer pathways that assess what the just transition or social impacts of decarbonisation might be. Work conducted by the French Agency for Ecological Transition (ADEME) stands out as an exception in this regard. In the cement industry, for example, ADEME modelled the differing socioeconomic impacts of decarbonising cement based on different scenarios. It also examined the corresponding investment needs, impacts on direct employment across territories and production costs.

Some business associations and countries in the Global South are also starting to integrate the just transition and socioeconomic modelling into sectoral pathways. For example, in South Africa the National Business Initiative (NBI), in consultation with companies, government, labour and civil society, has developed a number of climate pathways across sectors, including heavy industries. These pathways show how local and global demand could affect South Africa's emerging green heavy industry market in terms of net direct and indirect jobs, reduced exposure to transition risks and costs of manufactured goods. Trinidad and Tobago is another country currently developing a just transition policy with sectoral plans for companies to develop reskilling programmes and map new business opportunities. However, more work is needed to translate these sectoral roadmaps into company-specific pathways based on factors such as companies' market shares, GHG emissions and contribution to employment and revenues. For an overview of some pathways that integrate the just transition and their underlying assumptions, see Annex 2.

Despite some of these promising developments, there is an overall lack of integration of social impacts in current decarbonisation roadmaps for the steel industry, as shown by (Rumsa et al., 2025). These social impacts should be part of a life cycle assessment as there are just transition considerations across the whole value chain, from raw mineral extraction and transport, to use and end-of-life stages.

3. Categorisation of the just aspects of transition plans

To more accurately assess the robustness of the just aspects of companies' transition plans, assessors need to better understand the types of transitions companies are undergoing. Table 1 shows that the types of just transition policies that companies should undertake will vary. In addition, companies will likely be undergoing multiple transitions at the same time. This shows the need for economic diversification alongside responsible exit,[41] and planning both a transition to clean energy and away from energy- and emissions-intensive production processes. As one interviewee highlighted, this categorisation of transitions is also relevant for companies to learn what worked well — and what didn't — from one type of transition and apply this to another context. As an example, some companies conceive of just transition more broadly than simply in the context of climate, such as detrimental socioeconomic impacts that can occur to their operations due to commodity price swings. This in turn helps companies ensure their actions for a just transition are adaptable to different circumstances.

Table 1: A categorisation of transitions and their just transition implications

Type of transition	Examples of what the transition entails	Examples of companies	Examples of priorities in just transition planning
Emerging industries and/or new opportunities linked to the transition	Critical minerals and hydrogen industries	• Mining of copper from Anglo American in South America (ex Collahuasi and Quellaveco projects)	• Free prior and informed consent • Co-ownership and revenue sharing models
Transformation	Innovations and investments to reduce GHG emissions of a specific industry (e.g., steel production)	• Tata Steel replacing primary steel production with green steel production (using H-DRI and EAFs)	• support for innovation/R&D/capital investments to meet decarbonization objectives • Skills (re)training
Industry phase-out and replacement	Shift from one industry to another (e.g., offshore oil and gas to offshore wind).	• Shift from DONG to Orsted	• Economic diversification and regional development • Responsible exit • Early retirement benefits/ pensions • Environmental remediation • Social policies • Need for long term strategies and investments
Industry phase-out and economic diversification	Coal industry phase out	• RWE coal exit plan by 2030 • EDP plan to phase-out coal by 2025	

Source: Adapted from Krawchenko (forthcoming)[42] with examples from WBA assessments

How companies map their interventions

Understanding the way in which companies prioritise interventions based on underlying socioeconomic vulnerabilities is critical. As highlighted by one interviewed company, there is a misconception that as companies transition out of environmentally harmful activities, this will automatically translate to positive green and social outcomes on the ground. Regardless of how much the company may wish for such an outcome, this will not always be feasible. This is particularly true in

rural remote regions where there are few if any alternatives to transition away from existing modes of production. This point is also emphasised by the OECD in its 2024 employment outlook, which shows that rural low-skilled workers stand to lose the most from the low-carbon transition compared to higher skilled urban workers. A host of policies could be introduced to remediate such widening gaps, such as early intervention measures, effective training programmes and targeted in-work support approaches, such as time-limited wage subsidy schemes. In addition, long-term investments and economic diversification are necessary in instances of few economic alternatives. Companies can play an important role through policy advocacy in channelling demands to policymakers.

While there is no blueprint and it remains to be seen how this plays out, there are some inspiring local examples, such as that of Collie in Australia, illustrating how economic diversification can be implemented. In the case of Collie, the development of a just transition working group and plan were essential. Collie's just transition plan includes emphasis on diversifying the local economy through supporting local businesses, attracting other industries and growing the tourism industry. The state electric utility Synergy (who also runs Collies' state power plants) further put in place a robust worker transition programme. Incentives for companies to invest in Collie, along with proper sequencing of the transition and co-creation of the transition plan with affected workers and communities were all central to initial successes.

Some interviewed companies also highlighted how they are developing just transition indicators to map the socioeconomic vulnerabilities in regions where they operate through economic dependency analysis. This helps companies assess redeployment opportunities for workers and examine broader socioeconomic impacts on revenues and public services as they close and/or transition some of their assets. In turn, this mapping can help companies to target their financial and capacity building support to certain contractors, or to specific communities facing higher fiscal impacts from the companies' transition plans. The interviews also highlight that in undertaking this mapping, companies often find there is a cross-sectoral element to the just transition that goes beyond the direct control of a single company. As an example, many heavy industry or mining companies are dependent on electric utilities. The shutting down of coal power stations by governments in specific regions therefore also affects their mineral refining and smelting operations.

Finally, the interviews showed that some companies are conducting socioeconomic modelling attached to their decarbonisation pathways in the locations where they operate in partnership with consultancies or research organisations. This helps companies internally assess their reskilling and investment needs and the external dependencies linked to their transition plans. However, this information is rarely disclosed due to the lack of mandatory disclosure requirements on the just transition, and for competitiveness reasons in some sectors such as heavy industries.

A typology of transitions

As an illustration of the categorisation in Table 1, some companies have already — or largely — completed their transitions, making certain aspects of the just transition less relevant to them. In the case of Ørsted, for example, just transition indicators linked to workforce transition may carry less weight compared to other companies, given that it has already undergone most of its transition. However, assessing its impacts across its value chain and on human rights, environmental defenders, Indigenous peoples and affected communities rights remains key. This is important for the company to prevent any human rights violations that may occur as the result of the manufacturing of its low-carbon products (wind turbines) and local community impacts that may occur as the company scales up its low-carbon projects, for example.

Building on the categorisation in Table 1, there are several examples of how companies (often in partnership with governments, unions, rightsholders and other stakeholders) have delivered on different aspects of the just transition. For example, the shift from DONG to Orsted in Denmark was facilitated by the government's commitment to a just transition in phasing out oil and gas. In addition, the government supported the transition through active labour market policies, incentives for scaling up wind capacity and managing the transferability of skills from offshore oil and gas to wind. The latter was facilitated through an Offshore Academy in Esbjerg, for example.

Ørsted's current approach to the just transition is very different from its approach during its transition away from DONG. Ørsted's response to a just transition now includes abiding by free, prior and informed consent (FPIC) and supporting revenue sharing and co-ownership models. The latter are cornerstone elements of the just transition, particularly relevant for renewable energy companies and mining for energy transition minerals. While there is no blueprint to operationalise FPIC and shared prosperity models, companies can implement several steps and policies. These include but are not limited to board oversight to respect Indigenous people's rights, due diligence policies in relation to selection of other business partners and sufficient internal resourcing, capacity and skills to deliver on such partnership models. There are a number of good examples of such partnerships taking place, such as between Greenwood Energy and the Arhuaco people in the co-development of the Terra Initiative project in Colombia.

4. Complementary just transition indicators for monitoring and evaluation

Relevance of complementary just transition indicators

Just transition indicators play an important role in evaluating the robustness of how just companies' transition plans are. These indicators have been considered until now in a somewhat siloed way at the national, sectoral,[43] corporate and project levels. However, understanding how these levels interrelate is important for assessors to evaluate the robustness of companies' just transition efforts. Complementary just transition indicators (see Box 3) monitor and evaluate companies' implementation of a just transition at multiple levels. They are complementary because they support each other in giving a sense of any inconsistencies in just transition implementation by companies and how their transition plans align with the sub-national, national and global contexts. Furthermore, these indicators adopt a more systems-thinking approach,[44] can support multi-stakeholder partnerships, help contextualise the just transition for corporates and can provide a feedback loop for the design of public policies that can hold companies accountable to the social impacts of their transition plans.

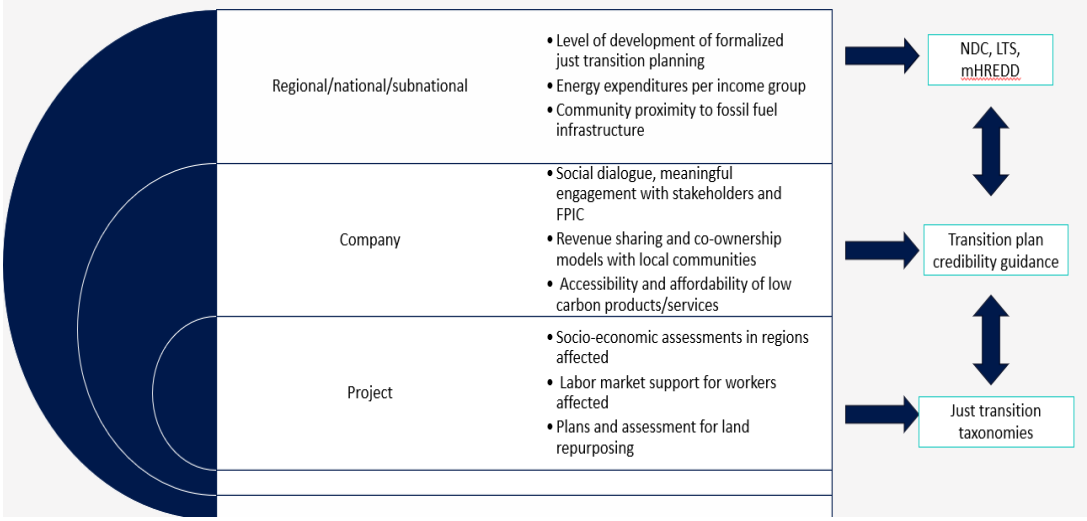
For transition plan assessors, the process for reviewing just transition efforts can be seen as iterative. Assessors would start by examining company-level data through third-party assessments, benchmarks, annual and sustainability reports and engagements with the company. If information is lacking, red flags emerge and/or there is a lack of coherence in terms of just transition implementation, then assessors can probe deeper into the project and/or regional/national/sub-national level. Annex 1 in this report provides detailed indicators, assessments points and guidance for assessors to specifically review corporate just transition efforts.

Box 3: Complementary just transition indicators and their role in corporate transition plans

Just as linking national and private sector transition planning with common buildings blocks[45] is crucial for creating an integrated transition planning ecosystem, the same approach can be applied to the just transition. While there are some differences in terms of indicators, a number of frameworks[46] to measure corporate just transition implementation revolve around common building blocks. These include just transition planning, social dialogue, stakeholder engagement and FPIC, decent green job creation and skills development opportunities, social protection, impact assessments along the value chain and policy advocacy. By breaking down these building blocks into indicators and examining the interplay between national and private sector integration, assessors can have a better overall picture of companies' just transition implementation (see Figure 4).[47] In turn, these complementary indicators can support a more in-depth integration of the just transition in public policies at different levels to hold companies accountable.

This complementary mapping can also be beneficial to companies themselves to get a better overview of where their actions fit in the broader ecosystem. For example, one interviewed company highlighted that one of the challenges it faces internally in advancing a just transition is the lack of agreement within the company even on what constitutes a green job. This hampers its ability to measure how its technology choices and projects are contributing to positive and just outcomes. This finding also highlights how some companies might be tracking just transition outcomes more narrowly on green job creation, without more thoroughly measuring both positive and negative employment changes that may result from climate action.

Figure 4: Linking indicators with policies to hold companies accountable on the just transition[48]



Source: WBA, based on UNFCCC forthcoming, UCSB 2035 initiative, World Bank (2024), UN PRI (2024), Shift (2025)

In Figure 4 there is also a feedback loop at each stage of the process from macro- to micro-level integration. For example, indicators to assess the compatibility of company activities/projects with just transition objectives can inform just transition taxonomies, which in turn can be connected to transition plan credibility guidance. This can help connect a company's wider just transition strategy as part of its transition plan to the projects it undertakes in different countries. While more efforts are needed, some jurisdictions have begun to publish taxonomies that either explicitly or implicitly integrate the just transition, and more countries are expected to do so. This includes the ASEAN

2024 taxonomy, efforts underway in South Africa and the EU taxonomy for sustainable activities and its proposed social taxonomy. For further examples of company projects and their just transition implications, see Table 2.

At a national level, indicators can inform a more in-depth integration of the just transition in Nationally Determined Contributions (NDCs), Long Term Low Emission Strategies (LTS) and public policies such as HREDD legislation with accountability mechanisms for corporates. While not reflected in Figure 4, it is also important for assessors to consider sector specificities (see Section 2). Additional sector- and industry-specific metrics[49] can be useful to guide the assessment of companies operating across sectors.

From the point of view of systems-thinking, mapping the global footprint of companies where they operate and where their tangible assets/activities/projects[50] are based (power plants, production sites, etc.) is key. Here, project-level just transition indicators can help direct assessors' attention to specific activities that companies undertake and support the design of just transition taxonomies and place-based just transition policies.

Complementary just transition indicators can also support multi-stakeholder partnerships (with research institutes, sector associations, employer and business member organisations, unions, national-subnational policymakers) and form the basis of just transition observatories. Observatories can gather different sources of information to reflect the state of just transition progress among non-state actors, governments and other stakeholders. The EU Commission, for example, intends to develop a fair transition observatory. This observatory will monitor just transition implementation at all levels, involve multiple stakeholders and showcase best practices. It will also include data on the state of play of just transition implementation across different sectors, beyond coal. The complementary just transition indicators presented in this report (see Box 2 and Figure 4) beyond the company-specific, sector-agnostic ones, are not meant to be prescriptive. Ultimately, a just transition will be context-specific and these indicators serve more as guidance for assessors on how to consider and contextualise corporate just transition efforts.

Complementary just transition indicators can help assessors understand how companies might be implementing the just transition in the absence of more robust disclosure to date. For example, though the just transition disclosure by corporates may be low, the jurisdictions in which companies operate may have a number of just-transition-related policies in place already. While the lack of disclosure and transparency from companies should itself be a red flag, understanding how companies are actually implementing the just aspect of their transition plans, beyond what they report, is key. Iberdrola provides a good example of this, given its lower performance on the just transition in WBA's 2023 Electric Utilities Benchmark despite more robust just transition processes existing at the national and subnational level in Spain.

Additionally, complementary just transition indicators can support the design of more targeted public policies (mandatory HREDD policies, standards, procurement, fiscal policy and other public policies) that can hold companies accountable for the just transition. The South African electric utility Eskom is a case in point. Even though Eskom's performance improved from 2021 and 2023 and it has a just transition planning office, it does not meet any of the just transition planning fundamentals measured by WBA. However, South Africa's Presidential Climate Commission has undertaken robust analysis to assess the country's level of just transition readiness, including work on monitoring and evaluation and upcoming national-level metrics.[51] South Africa was also one of the first countries to integrate the just transition in its NDC. Yet, as with many countries, gaps remain[52] in making just transition policies

consequential to businesses.[53] In South Africa, addressing these gaps requires better operationalisation of just transition principles from a procedural, distributive and restorative justice point of view. This means going beyond referencing the just transition in ESG disclosure purely as a business risk, and instead focusing on prevention and remediation of adverse impacts on people. It also means ensuring participatory processes are well-structured and resourced and that companies enhance the size and capabilities of their community- and worker-facing teams for access to remedy, amongst others.

The Interconnected Justice Report published by the Taskforce on Net Zero Policy further highlights that these policy gaps in holding companies accountable for the just transition is a trend at the international level. Only 11 policies out of the 304 analysed by the Net zero Policy Taskforce recommend or require disclosure of just transition indicators from non-state actors. To address these gaps, companies themselves should play an important role in advocating for public policies that will help them implement the just transition. Yet, currently only 5% of the companies assessed by WBA are partly doing so.

The rise in just-transition-related litigation

In addition to examining companies' just transition strategies at a global or macro level, it is important for assessors to closely examine the characteristics of company projects and their just transition implications. Indeed, companies may see rising instances of just-transition-related litigation (see Table 2), which can delay and represent high costs for their implementation of low-carbon projects.[54]

Table 2 below derived from Business and Human Rights Resource Centre's (BHRRC) just transition litigation database shows a growing trend in corporate just-transition-related litigation, with a 73% increase in the number of cases filed since 2018. As Table 2 shows, the types of claims often involve multiple forms of justice, including redistributive, restorative and procedural. It is also noteworthy that some of the companies listed in Table 2, such as EDF Energy, emerge as the better performing companies on the just transition in WBA's 2023 Electric Utilities Benchmark. EDF, for example, has a Global Framework Agreement in place with two international trade union federations (IndustriAll and ISP) that integrates the just transition. EDF is also active at the local level, for example, in supporting the reconversion of the Aramon territory in France linked to the closure of its thermal power station.

Table 2 : Examples of company projects that face just transition litigation[55]

Company	Sector/Industry	Project	Just transition implications
South32	Heavy industry, aluminium mining	Cerro Matoso nickel mine, Colombia	In 2013, local Indigenous and Afro-Colombian community leaders filed actions against BHP Billiton (now South32, which was spun off from BHP in May 2015) and its Cerro Matoso nickel mine, and against the Ministry of Mines and Energy and the National Mining Agency. The court ruled that the company would not have to pay damages to the communities due to the challenge of establishing a clear link between the communities' health issues and the company's activities. However, the court upheld the decision requiring the company to reapply for an

			environmental licence, including undertaking community consultations, which it obtained in 2021.
Norsk Hydro	Heavy industry, aluminium, mining	Paragominas bauxite mine, Brazil	In 2023, a domestic lawsuit in Brazil was filed against Norsk Hydro in relation to its Paragominas bauxite mine, with the case ongoing. The Public Defender's Office filed the lawsuit on behalf of Quilombolas and Indigenous peoples from 26 communities in Pará. They argued that Norsk Hydro's exploration of bauxite exacerbated land conflicts and encroached on Quilombola territories. Additionally, they cited numerous irregularities in the environmental licensing process granted by the state. A number of institutional and legal barriers also explain the challenges faced by the Quilombolas and Indigenous peoples. This include the fact that the legal framework for FPIC implementation in Brazil remains incomplete.[56]
Savannah Lithium	Lithium mining	Barroso lithium mine, Portugal	In July 2022, the community group of Common Land of Covas do Barroso in Portugal filed a lawsuit against Savannah Lithium (part of Savannah Resources) for allegedly encroaching on communal land to develop the company's lithium mine project. They accused the company of improper appropriation of land assigned to the community and buying land based on topographical surveys that did not correspond to common land limits established beforehand. They ask for the purchases to be declared void. In February 2024, prosecutors asked the court to annul the environmental permit for the lithium mine, citing legal violations and inadequate environmental risk assessments. The case is ongoing. There has also been widespread community resistance to the project due to limited stakeholder engagement from both the company and the government.
EDF	Electric utilities	Gunaa Sicarú Wind Project, Mexico	A lawsuit was filed in France against EDF in 2020 as a form of transnational litigation. The plaintiffs include representatives from the Indigenous Zapotec community of Unión Hidalgo, ProDESC and the European Center for Constitutional and Human Rights (ECCHR). The plaintiffs filed the lawsuit under the French Duty of Vigilance Law (2017). They argue that free, prior and informed consent (FPIC) was not obtained and the company did not sufficiently establish and implement appropriate measures to prevent human rights abuses and adverse

			environmental effects in the course of its Gunaa Sicarú Wind Project. The case is still ongoing.

Source: BHRRC just transition litigation tracking tool (2024): https://www.business-humanrights.org/en/from-us/just-transition-litigation-tracking-tool/

Table 2 shows that even companies that are performing better on their overall just transition strategy may be facing risks[57] of just transition litigation at a project level — an issue also highlighted in the Interconnected Justice Report released at COP29. The cases above also reinforce the importance of having complementary just transition indicators that can measure impact at a corporate and project level, given the existing dichotomy between the two. Coupling different types of data and just transition indicators can be a key way for assessors to derive a more accurate view of the social impacts of companies' transition plans.

However, next to complementary just transition indicators, guidelines and guardrails are also needed. These are important to design indicators that are strong predictors of business decision-making and behaviour, and that offer insight into the quality of due diligence as well as into the contribution being made to positive outcomes for people. While generally relevant in the context of social indicators, Shift published a series of guidelines and guardrails for strengthening the S dimension in ESG, which can be instructive in thinking about how we can create measurable accountability for the just transition. To this end, it is key that assessors focus on what companies are implementing in practice and not only on indicators that are about intention.

Recommendations

This report has shown that there are several steps assessors should take when reviewing the robustness of the just aspects of companies' transition plans. The recommendations below synthesise some of the main report findings and can be used by companies, assessors and governments.

1. Companies should use a bottom-up approach to just transition, rooted in social dialogue, meaningful stakeholder engagement, labour rights, decent work, and robust HREDD and transition planning.
2. Assessors should tailor their evaluations to the company's local context, sector, and internal and external implementation factors.
3. Assessors can use a typology of transitions to better identify social impacts, risks and opportunities linked to companies' transition plans.
4. Assessors should use just transition indicators at the national, company and project levels to assess alignment with local and sectoral contexts. Just transition observatories can help connect insights across these levels.
5. Governments and the UN should clarify business responsibilities in advancing just transitions and invest in the transition itself. Integrating just transition principles into sustainability reporting standards, HREDD and transition planning policy and taxonomies is one way forward.

Annexes

Annex 1 Measuring corporate just transition implementation

The draft quantitative just transition metrics in the table below are a work in progress that represent research and conversations that Shift has conducted with various experts to date. They will be continually updated and improved based on on-going discussions and feedback.

They are designed:

- As a limited, foundational set of sector-agnostic metrics that can provide a first insight into the 'justness' of companies' climate-related transition plans and activities.
- To address the need for a clear set of widely-supported practical and decision-useful quantitative metrics that can provide measurable evidence of whether good intentions regarding the implementation of a 'just transition' are achieved in practice.
- To complement existing qualitative indicators and benchmarks regarding companies' climate-related transition plans and activities, recognizing that qualitative information can provide important context to the interpretation of quantitative data.
- For companies to apply within the same 'boundaries' as those that they apply to their climate transition plans and activities: that is, they would be implemented in the same scope of locations, entities and facilities as those for which GHG emissions and other climate-related metrics are measured and reported.
- Further work is underway to specify precise definitions and methodologies for the application of the draft metrics.

Issue	Proposed metric	Additional qualitative context	Rationale
	Workforce/own employees		
Job security (employees)	No. of employee jobs that are created as a result of the organization's transition plan, within the reporting year, with a breakdown by region and the proportion of those jobs that are: i) permanent jobs ii) temporary jobs iii) full-time jobs iv) part-time jobs		To understand the change in the number of employee jobs available, both created and lost, due to the transition plan and the financial security provided by those jobs To understand the breakdown by region in order to see whether jobs are moving, on balance, towards or away from developing or emerging market economies.
	No. of employee jobs that are lost as a result of the organization's transition plan, within the reporting year, with a breakdown by region and the proportion of those jobs that are: i) permanent jobs ii) temporary jobs iii) full-time jobs iv) part-time jobs	In cases where there are significant changes as a result of the implementation of a company's transition plan, which results in mass termination for employees, the organization should provide qualitative information regarding how it manages: the termination procedure, including how workers' representatives are consulted; the appeal procedure; notice periods provided; and termination payments and separation benefits (inspired by GRI SICH 1(c)). The organization should also provide qualitative context around any public social protection programmes available to impacted employees (inspired by GRI REWO 6).	
Reskilling, upskilling & redeployment (employees)	No. of employees whose jobs have been lost as a result of the organization's transition plan, within the reporting year, that have (a) been offered training (b) that have taken up training (c) have accepted early retirement agreements (d) been offered redeployment (e) been redeployed into employee jobs created as a result of the transition plan (f) been redeployed into non-employee jobs created as a result of the transition plan	The organization should provide qualitative context to explain how it is making use of early retirement agreeements, as well as why some employees are moving into non-employee jobs.	To understand not only whether retraining and redeployment are offered, but the extent to which they are taken up in practice. For retraining this is significant to avoid counting retraining offers that are widely distributed but not pertinent to or truly accessible for the workers who are losing their jobs. To understand the degree to which employees that are accepting redeployments are being redeployed into less secure jobs
Job security (non-employees)	No. of non-employee jobs created as a result of the organization's transition plan, within the reporting year, with a breakdown by region, and the proportion of those jobs that are: i) full-time jobs ii) part-time jobs		To understand the change in the number of non-employee jobs available, both created and lost, due to the transition plan. To understand the breakdown by region in order to see whether jobs are moving, on balance, towards or away from developing or emerging market economies.
	No. of non-employee jobs lost as a result of the organization's transition plan, within the reporting year, with a breakdown by region, and the proportion of these jobs that are: i) full-time jobs ii) part-time jobs	The organization should provide qualitative context around any public social protection programmes available to impacted non-employees (inspired by GRI REWO 6).	
Redeployment (non-employees)	# of non-employees redeployed as a result of the organization's transition plan, within the reporting year, into: a) employee jobs created as a result of the transition plan b) non-employee jobs created as a result of the transition plan		To understand whether and how many non-employees are being redeployed and the security of jobs into which they are being redeployed.

Issue	Proposed metric	Additional qualitative context	Rationale
Remuneration & Living wage	a) % of employees in jobs created through the implementation of the organization's transition plan, within the reporting year, who are paid: - at or above the legal miniumum wage - at or above the living wage		To understand whether employee jobs being created through the transition plans are decent jobs that allow employees to maintain a basic decent standard of living for themselves and their families.
	b) For the employees below the Living Wage, the percentage of these employees that are paid: - 90% to 99% of the Living Wage estimates for the countries/regions where the organization operates - 75% to 89% of the Living Wage estimates for the countries/regions where the organization operates - 50% to 74% of the Living Wage estimates for the countries/regions where the organization operates - less than 50% of the Living Wage estimates for the countries/regions where the organization operates		To understand, over time, the extent to which employees in jobs created through the transition plan are moving towards a living wage. This recognizes that securing a living wage can take time given wider economic factors, such that data on the progress in that direction is important information alongside the more binary measure of the % of employees above (and therefore below) the living wage.
	% of non-employees in jobs created through the organization's transition plan, in the reporting year, who are paid: - at or above the legal minimum wage - at or above the living wage	To supplement the wage information and understand the quality of remuneration packages, the organization should provide qualitative, contextual information about the types of social protection made available to its employees in these newly created jobs such as: medical and health care insurance; sickness benefit; maternity and paternity benefits; employment injury benefit; unemployment benefit; invalidity benefit; survivors benefit retirement benefit. This should include discussion of which of types of protections are/are not provided by public programs.	To understand whether workforce non-employee jobs being created through the transition plan are decent jobs that allow non-employee workers to maintain a basic decent standard of living for themselves and their families.
FoA/CBA	% of employees in jobs created through the organization's transition plan, within the reporting year, who are covered by collective bargaining agreements		To understand the degree to which employees in jobs created through the transition plan are covered by agreements that protect their rights, ensure fair wages, benefits and working conditions, as well as providing insight into the stability and well-being of the new workforce being created through the transition plan over time.
Stakeholder engagement	No. of dialogues held with worker representatives regarding: (a) the design of the organization's transition plan (b) the implementation of the organization's transition plan	The organization should provide qualitative information to supplement this metric, including: methods utilized to reach out to workers, points in the transition process at which consultations took place, workforce participation in dialogues, how feedback received informs/informed planning and implementation processes, tripartite considerations in jurisdictions where there is more institutionalized collective bargaining, and how the workforce is engaged in the governance and monitoring of the organization's transition plan.	To understand the extent to which workers - employees and non-employees - have a voice in decisions regarding the transition plan and how it will affect them.
	Have any agreements been reached with worker representatives regarding: (a) design of the organization's transition plan (Y/N) (b) implementation of the organization's transition plan (Y/N)	The organization should provide qualitative context with regard to the nature of that agreement and the degree of coverage for workers, as well as how the agreement has impacted decision-making pertaining to transition planning and implementation.	To understand whether the organization has actively sought the agreement of worker representatives on the design and implementation of the transition plan, which implies that representatives are aware of and have agreed to the associated organizational changes that will impact them.

Issue	Proposed metric	Additional qualitative context	Rationale
	Communities		
Stakeholder engagement	% of locations where the organization's transition plan affects local communities and/or Indigenous Peoples where those communities/Indigenous Peoples have been engaged in dialogue regarding the (a) design (b) implementation of the organization's transition plan and its impacts and/or benefits?	The organization should provide qualitative information on: how affected communities were identified; how the organization ensured that a representiative group of local community members and/or Indigenous Peoples were engaged in dialogue; methods used to engage affected communities and/or Indigenous Peoples; points in the transition process at which dialogue took place; the quality/effectiveness of the dialogue; how feedback received informs/informed planning and implementation processes.	To understand the extent to which affected communities and/or Indigenous Peoples have a voice in communicating how a transtion plan and its implementation may affect them, positively or negatively, and ideally in shaping the transition plan and implementation based on these insights.
Consent	% of locations where the organization's transition plan affects local communities, other than Indigenous Peoples, where there is one or more agreement(s) on related impacts and/or benefits	The organization should provide qualitative information as to how affected local communities were identified and how the company ensured that the agreement was reached with a representative group of affected local communities.	To understand the outcomes of dialogue processes.
FPIC	% of locations where organization's transition plan affects Indigenous Peoples where (a) free, prior and informed consent has been achieved and (b) there is one or more agreement(s) on related impacts and/or benefits	The organization should provide qualitative information as to how Indigenous Peoples were identified and how the company ensured that the agreement was reached with a representative group.	To understand the outcomes of dialogue processes, with a specific emphasis on achieving and maintaining free, prior and informed consent, for which an agreement on impacts and/or benefits may not always be a proxy.
Agreement feedback mechanisms	% of locations where the organization's transition plan affects local communities and Indigenous Peoples, where there is a mechanism for addressing disputes	The organization should describe whether these dispute mechanisms are only operational in the case of agreements reached or operate more broadly.	To understand what proportion of established agreements with local communities have built in feedback mechanisms to monitor community feedback regarding the agreement's implementation.
	Value chain workers		
Impact assessment	% of sourcing locations where an assessment has been conducted regarding how the organization's transition plan would affect value chain workers	The organization should explain how that assessment has informed the organization's transition planning	Inclusion of this supply chain information can demonstrate that the organization is thinking through the implications for people at its various sourcing locations as a result of the organization's transition plan.
	Consumers/End-users		
	No proposed indicators at this time.		

Source: (Shift, 2025)

Annex 2: Examples of Sectoral pathways and just transition considerations

Country	Stakeholders involved	Sector(s)	Details	Integration of just transition
 France	French Environment and Energy Management Agency (ADEME) in consultation with industry, public authorities and civil society	Industrial sector including cement, aluminium and steel amongst others	For the cement industry using different scenarios (market shock, technological bet and a reference scenario) ADEME mapped varying socio-economic impacts of relevance to cement companies in the French context. These scenarios include targets and investments in different technologies (CCS, fuel substitution rate, and reducing the clinker content ratio for example).	While not explicitly referring to just transition the socio-economic modelling attached to these scenarios and pathways integrates several key elements such as impact on direct jobs, production costs and investments required.
 South Africa	National Business Initiative (NBI), Business Unity, Boston Consulting Group, other public and private stakeholders	Heavy industries, buildings and construction, Power sector and transport	NBI co-produced with multiple stakeholders several sectoral pathways. For heavy industries for example the pathway identifies several recommendations linked to technology choices (green hydrogen, CCS, process and energy efficiency improvement, material substitution), cross-sectoral impacts and repercussions in terms of trade and local demand.	These sectoral pathways stand out as they both explicitly refer to just transition modelling and language. The pathways build clear links with how companies should plan the transition in a just way with companies' part of the steering committee in developing the pathways. The socio-economic modelling for a just transition integrates several factors such as impacts of decarbonisation on other sectors in terms of demand growth and net job creation but also impacts on costs of final goods for consumers.
	EU Transition pathways developed between EU	The pathways are mapped across nine sectors including	The pathways go in depth in several aspects related to infrastructure investments and funding,	The pathways explicitly refer to just transition policy mechanisms at the EU level. The pathways also include

EU	Commission, Industrial Forum and other stakeholder	chemicals, mobility and construction and others yet to be launched such as for the metals sectors.	regulation and public governance, research & innovation, technological solutions, skills and other social dimensions and sustainable competitiveness.	guidance for companies in terms of upskilling and re-skilling opportunities and provide examples from the EU Just Transition mechanism, the Just Transition Fund and the Pact for Skills. Some of the pathways also assess impacts on jobs, reskilling needs and broader societal impacts.
Australia	Australia's Climate Chance Authority and Commissioned by the Australian Parliament	Review of sectoral pathways in six sectors: agriculture and land; built environment; electricity and energy; industry and waste; transport and resources	Six strategies are identified to be incorporated in the country's Net Zero Plan. Suggested actions for the government include working with local, state and territory governments, businesses, communities and households to build on existing climate change policies, reform development approval processes and address mounting workforce shortages.	The pathways developed in Australia explicitly refer to and integrate the importance of just transitions. As an example, one of the key strategies put forward for the Net Zero Plan is about operationalising just transitions in transition planning through several steps. This includes working with state, territory and local governments to adopt a best-practice benefit and burden sharing framework for priority transition projects. The synthesis report also recommends developing a toolkit to help governments, project developers and communities (including remote, rural, regional and First Nations communities) negotiate agreements with free, prior and informed consent. Finally, the Sector Pathways Review recommends adopting a strategic, place-based approach to urban planning and regional development so, where viable, the benefits of new industries can be co-located

				with burdens of declining industries and infrastructure.

Source: Authors analysis based on IIGCC (2025), ADEME (2025) NBI(2023) and Australia Climate Change Authority (2024)

Annex 3: Just transition working group members

Below is the list of individual experts that joined the working group. Since the just transition working group was launched in November 2023, people may have changed function and organization. As long as they have been involved in the just transition working group, they all have received the materials, had opportunities to contribute to the different meetings as well as for some provide detailed comments to this report. It is important to highlight that members participate in the working group on an individual capacity and do not necessarily represent the point of view of their organisation.

First name	Last name	Organisation
Caroline	Avan	BHRRC
Maria	Azul Schvartzman	WBA
Joanne	Bauer	Rights Colab
Matilda	Becker	Oxford Net Zero
Guillaume	Bone	WWF FR
Savannah	Bosman	WBA
Aaron	Cantrell	UNEP-FI
Adriana	Chavarría-Flores	Climate Strategies
Yidan	Chen	WBA
Su-Mae	Chua	WBA
Luis	Costa	WBA
Sofía	del Valle	WBA
Ranjit	Deshmukh	UCSB 2035 initiative
Cynthia	Elliot	WRI
Elisa	Estrada Holteng	The B Team
Camila	Fernandez	UN Climate Champions
Philipp	Gass	IISD
Chelsea	Gomez	WRI
Sarah	Gondy	ILO
Javier	Gonzalez	We Mean Business Coalition

Ana	Gonzalez Alonzo	Climate Strategies
Eniko	Horvath	BHRRC
Inés	Jimenez Rodriguez	Climate Strategies
Dara	Karakolis	WBA
Sage	Kim	UCSB 2035 initiative
Georgios	Koukoufikis	EU JRC
Jenna	Kowalevsky	BSR
Tamara	Krawchenko	Institute for Integrated Energy Systems
Jonas	Kuehl	IISD
Sierra	Leder	The B Team
Sangji	Lee	UNDP
Rob	Macquarie	Independent
Solange	Martin	ADEME
Alexis	McGivern	Oxford Net Zero
Helen	Meekings	Shift
Cyril	Moyo	WBA
Maria	Patricia Gonzalez	WBA
Brianna	Peterson	Shift
Romain	Poivet	WBA
Matthieu	Prin	IEA
Antoine	Pugliese	WWF FR
Yuri	Ramkissoon	South Africa Presidential Climate Commission
Caroline	Rees	Shift
Gustaf	Renman	WBA
Paul	Rissman	Rights Colab
Alexandra	Rogan	Council for Inclusive Capitalism
Patrick	Rondeau	FTQ
Katie	Ross	WRI/South Africa Presidential Climate Commission

Joachim	Roth	WBA
Neelam	Singh	WRI
Vicky	Sins	WBA
Haley	St Denis	IHRB
Carson	Thal	Council for Inclusive Capitalism
Ginette	Walls	WRI
Erica	Westenberg	NRGI
Hao	Zhang	WBA

Endnotes

[1] Based on existing guidance and guidelines, standards and disclosure frameworks, as well as assessment methods, a transition plan can be defined as an aspect of a company's overall long-term strategy that lays out a set of short-, mid- and long-term targets, actions and resources, with accountability mechanisms, to align the company's business activities with a net-zero GHG emissions pathway that delivers real-economy emissions reductions with the objective of limiting global warming to 1.5°C and minimising the company's systemic climate transition risk. For further reference see: https://www.worldbenchmarkingalliance.org/research/assessing-the-credibility-of-a-companys-transition-plan-framework-and-guidance/

[2] According to the ILO, a just transition means greening the economy in a way that is as fair and inclusive as possible to everyone concerned, creating decent work opportunities and leaving no one behind. Further, a number of organisations have looked at the connection between just transition and human rights. For example, BHRRC uses the principles of shared prosperity, human rights, social protection and fair negotiations to advance corporate just transition action from a business and human rights perspective.

[3] Just transition is now integrated in multiple standards, guidelines and transition planning frameworks, including but not limited to the OECD Guidelines for Multinational Enterprises, the UK Transition Plan Taskforce, the UN High-Level expert Group on Non-state Actors and Net-Zero Policy Taskforce and frameworks for real economy and financial actors such as GFANZ.

[4] While its ambition and scope were lowered with the Omnibus this includes the EU Corporate Sustainability Due Diligence Directive (CSDDD) but also developments in EU member states such as France's Law on Duty of Care and proposed legislation in other countries such as South Korea. In the EU the Corporate Sustainability Reporting Directive (CSRD) constitutes the basis for creating and reporting on companies' transition plans.

[5] Here it is important to distinguish due diligence and disclosure related regulations and how they apply in the context of transition planning and the just transition, and how they relate to each other.

[6] See for example WBA, LSE, Council for Inclusive Capitalism (2023) Moving from pledges to implementation, WBA and LSE (2024) How finance can unlock credible, robust and just transition plans, LSE (2022) Making transition plans just, UK TPT guidance on just transition and other work in this field. See also BSR Business Guide on implementing just transition for businesses.

[7] Similarly to how the term assessors is used in ATP-COL this can include a wide range of stakeholders such as internal or external auditors, investors, ESG analysts and other verifiers and consultants.

[8] For insights on this topic including deeper dives across sectors see: https://institutdelafinancedurable.com/actualites/publication-les-investisseurs-et-la-transition-juste-une-grille-de-sensibilisation-pour-lengagement/

[9] These may include both mandatory and voluntary standards such as the European Sustainability Reporting Standards (ESRS), the Global Reporting Initiative (GRI), ISO, SBTi, ISSB, and any other net-zero and sustainability reporting standards emerging at a global and/or country level.

[10] Macquarie R and Tyson J (2025) Company disclosures and metrics as tools for just transition monitoring: investor, rightsholder and policy perspectives. London: Grantham Research Institute on Climate Change and the Environment. London School of Economics and Political Science.

[11] This report focuses more on the practices of multinational companies, or keystone companies as defined by WBA. However a core aspect of how MNCs advance just transitions should be supporting their suppliers, often MSMEs in advancing just transition. For further insights on MSMEs and just transition see for example: https://www.ilo.org/sites/default/files/wcmsp5/groups/public/@ed_emp/@emp_ent/documents/publication/wcms_858855.pdf

[12] For a deep dive on a framework and guidance on what constitutes a credible transition plan, see https://www.worldbenchmarkingalliance.org/research/assessing-the-credibility-of-a-companys-transition-plan-framework-and-guidance/

[13] Using some of the existing just transition corporates metrics and with a deeper dive on electric utilities see for example: https://www.c2es.org/wp-content/uploads/2024/07/Perspectives-on-a-Just-Transition-in-the-Electric-Utilities-Sector.pdf

[14] It is also important to recognize how intersecting forms of discrimination and marginalization (e.g., gender, race or ethnicity, age, etc) may affect the distribution of costs and benefits.

[15] For a shorter and simplified list of just transition indicators that WBA intends to apply to 2000 of the world's most influential companies see: https://assets.worldbenchmarkingalliance.org/app/uploads/2025/02/Just-transition-methodology-2025_FINAL.pdf

[16] For further insights into this and wage differentials and varying retraining needs per industry, see: World Energy Employment 2024. IEA analysis for example shows that retraining needs are higher for oil and gas workers to shift to CCS or offshore wind than fossil fuel heating to heat pumps and ICE manufacturing to EV manufacturing. In advanced economies on average employees for oil and gas supply also earn twice as much as those in the solar PV industry.

[17] In the context of EU sustainability reporting, due diligence and taxonomy related legislation a number of companies have come forward arguing in favour of such policies and why they are essential for economic competitiveness.

[18] For examples of best practices for mobilizing and engaging stakeholders, see also Climate Strategies' submission to the UNFCCC Just Transition Work Programme: https://www4.unfccc.int/sites/SubmissionsStaging/Documents/202408300954---300824_ClimateStrategies_UNFCCC-JTWP2ndDialogue.pdf

[19] For further insights on the relationship between social dialogue and just transition see for example: https://www.theglobaldeal.com/resources/WBA-benchmarking-on-just-transition.pdf

[20] See also climatestrategies.org/wp-content/uploads/2024/11/Just-Transitions-Toolkit-A-Policymakers-Guide-to-Inclusive-Planning-6.pdf. This toolkit also summarizes some good learnings from Climate Strategies work on Just Transitions.

[21] On social acceptance see for example the EU survey conducted by Ipsos, Terra Nova, CSR Europe, and the Bocconi University as part of the second edition of the Just Transition Observatory and how social acceptability is at the core of the energy transition.

[22] There is no one size fits all in terms of how social dialogue can best support just transitions. National, sectoral and regional/local approaches were put in place in different countries (New Zealand, Spain, Canada, Germany, Scotland, Denmark) depending on culture, institutional needs and capacities, and scale of the transition challenge.

[23] Here some legislative developments are noteworthy. For example in France the Law on Climate and Resilience of 2021 includes social dialogue mechanisms to support workers in sectors affected by the transition.

[24] See also for further details the relevance of Community Benefit agreements: https://www.wri.org/insights/community-benefits-agreements-us-clean-energy

[25] See: https://www.worldbenchmarkingalliance.org/publication/chrb/

[26] For example 20 percent of its capital expenditure (as a share of annual government expenditure) would not break even under the IEA APS scenario. See for further details: https://resourcegovernance.org/sites/default/files/2023-11/Riskier-Bets-Smaller-Pockets-How-National-Oil-Companies-Are-Spending-Public-Money-Amid-the-Energy-Transition.pdf

[27] For the ACT readiness threshold used in the figure see: https://actinitiative.org/wp-content/uploads/documents/act_assessment_categorization_framework_paper_v0.1.pdf and for more details on ACT sectoral methodologies see: https://actinitiative.org/en/

[28] Further limitations in integrating just transition in the CSDDD include more guidance needed from the European Commission on the level of support companies can provide to SMEs within their value chain, what just contractual terms look like. In addition as shown by research conducted by EU Africa RISE mandatory HREDD legislation such as CSDDD can be seen as a double edged sword for businesses outside the EU. This reinforces even more the importance for companies to work with their suppliers in implementing their transition plans and addressing just transition concerns. See for further details: https://media.business-humanrights.org/media/documents/1736153255728.pdf

[29] It is worth noting here that a number of transition planning frameworks, tools and methodologies exist to integrate the just transition dimension, although legally there are very few obligations for companies.

[30] For further insights on the relationship between net-zero policy, just transition and non-state actors see: Interconnected Justice: Understanding the cross-border implications of climate transition policies | PRI Web Page | PRI

[31] IHRB launched a new two year project on this titled "The cost of Green Conflict": https://www.ihrb.org/projects/the-cost-of-green-conflict

[32] Analysis conducted by WBA showed that a handful of steel producers emerge as the largest suppliers to automotive manufacturers. These include ArcelorMittal, Baowu and Tata Steel.

[33] It is important to put these figures into perspective, even though, as shown by Mission Possible Partnership, the cost increases for final goods may be relatively modest, with cost increases from low-carbon steelmaking reaching 0.5% for passenger cars, 2.1% for construction and 1.5% for white goods in 2030, and expected to fall to 0.3%, 1.4% and 1% respectively by 2050. https://missionpossiblepartnership.org/wp-content/uploads/2022/09/Making-Net-Zero-Steel possible.pdf

[34] For further overview of policy recommendations on how to avoid excess capacity in the scale up of low-carbon steel, see: https://www.oecd.org/en/publications/addressing-steel-decarbonisation-challenges-for-industry-and-policy_e6cb2f3c-en.html

[35] A survey conducted in the UK with steel workers revealed similar findings. While 92% of steel workers viewed the transition as necessary, 79% had not been consulted by companies on their transition plans.

https://justtransitionforall.com/wp-content/uploads/2022/03/UK-Preparing-for-a-Just-Transition-Meeting-green-skill-needs-for-a-sustainable-steel-industry.pdf

[36] For further insights on this, see work from Industriall Europe advocating for this at the EU level as part of an European Steel Action Plan. https://industriall-europe.eu/Article/1169

[37] The demand for cement and steel is projected to grow by 30% and 45% respectively by 2050 led by emerging markets. See: https://www.weforum.org/publications/the-net-zero-industry-tracker/in-full/cement-industry/

[38] A study from Climate Bonds initiative, ODI and auctusESG stands out in this respect for analysing just transition plans specifically for steel and cement industries. Its findings are largely complementary to those of WBA's heavy industries benchmark. See: https://www.climatebonds.net/files/reports/cbi_g20.pdf

[39] Here it is important to highlight that social impacts will also vary from company to company depending for example on the dependence of local economies on companies' activities.

[40] It is also important to note that companies often use multiple technologies at different operational sites.

[41] Following the UNGPs and OECD guidelines for Multinational Enterprises, responsible exit should include conducting HREDD and adequately consulting with local communities and rights holders. It also requires companies to understand job losses and local economic impacts that may occur such as through environmental and social impact assessments. Finally, companies should be accountable for the remediation of adverse human rights and wider social impacts that their divestment may cause.

[42] Krawchenko, T. (Forthcoming). Regional dimensions of net zero transitions. Centre for Net Zero Industrial Policy, The Transition Accelerator. Calgary, AB.

[43] While more sector/national specific metrics are needed see some examples from UCSB 2035 initiative and Climate Strategies: Equity Metrics for Low-Carbon Energy Transitions — The 2035 Initiative at UC Santa Barbara and Transition Indicators to broaden perspectives beyond adaptation and mitigation - Climate Strategies

[44] This is important to address cross border and multi-dimensional aspects of just transition. See for example https://link.springer.com/book/10.1007/978-3-031-69848-4

[45] For transition plans these include foundations, implementation strategy, engagement strategy, metrics and targets and governance.

[46] See for instance work conducted by Institute for Climate Finance, Business and Human Rights Resource Centre (BHRRC), CA100+, World Benchmarking Alliance, Business for Inclusive Growth, LSE, Council for Inclusive Capitalism and work from Shift.

[47] For a full overview of all proposed indicators, metrics and assessment criteria in relation to just transition monitoring and evaluation see Annex 1.

[48]A more detailed list of sector-agnostic company indicators is provided in Annex 1. It should also be noted that overall only some indicators are reflected in this figure as an illustrative list and many others are needed. For example at a national level additional indicators can include representation in energy company leadership, financial support for green retraining programs and proportion of government revenues coming from fossil fuels. While these will ultimately be context specific particularly at a national level, WRI published a Just Transitions Monitoring guide with support from ICAT on this https://www.wri.org/research/just-transitions-monitoring-guide

[49] For further insights on this see UCSB 2035 initiative. Amongst others these can include public EV charger availability and EV rebate allocation, conflict, violence of displacement linked to renewable energy development, renewable energy incentive allocation per income group, household fuel usage, energy efficiency cost and adoption across local communities, and share of households facing rent increases of displacement due to energy efficiency renovations. These can also include human rights safeguards integrated into renewable energy auctions and/or govt. procurement and data on renewable energy projects with benefit-sharing mechanism.

[50] For reference see the just transition project tagging tool developed by TIPS as one example of this in the South African context: https://www.tips.org.za/projects/current-projects/item/4592-just-transition-transaction-framework and the 2024 World Bank just transition taxonomy: https://thedocs.worldbank.org/en/doc/4170363805a08d5eaca17fbd62db45d2-0340012024/world-bank-just-transition-taxonomy-2024

[51] Several other governments are also publishing just transition indicators including Scotland, New Zealand, and Ireland. The UNFCCC/KCI has a forthcoming paper on this topic and tracking just transition progress in collaboration with IISD, WBA and GIZ.

[52] It is noteworthy though that South Africa stands out for being one of the few countries to have policy instruments that integrate the just transition for non-state actors even if these could be strengthened. For example, South Africa's JSE Climate Disclosure Guidance recommends non-state actors to assess their climate impacts against just transition.

[53] For recommendations to shape a just business role in South Africa's just energy transition see: https://ihrb-org.files.svdcdn.com/production/assets/uploads/reports/Shaping-a-Just-Business-Role-in-South-Africas-Energy-Transition-JETP-Report.pdf?dm=1730195922.

[54] See for example https://www.nature.com/articles/s41893-024-01439-y

[55] The examples of just-transition-related litigation cases linked to the low-carbon and transition mineral mining projects listed above are only illustrative. They are not meant to show that these companies are performing better or worse than others in this regard.

[56]For further insights on this, see: https://www.business-humanrights.org/en/from-us/briefings/stop-and-listen-pathways-to-meaningful-engagement-with-rights-holders-in-the-global-rush-to-mine-for-transition-minerals/

[57] For upcoming work on this, see IHRB: https://www.ihrb.org/projects/the-cost-of-green-conflict

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