



Bank Action Guide

Towards a just transition for
small–medium enterprises (SMEs)

The University of Cambridge Institute for Sustainability Leadership

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The Banking Environment Initiative (BEI)

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Banking a just transition for SMEs

The net-zero transition is a whole economy challenge that will radically change how economies are structured, businesses operate, and people live and work. While the transition holds the promise of a sustainable future, it is essential to approach it with caution.

If the transition is not executed with care and consideration, including by banks, there is a risk that it could intensify existing societal issues, placing undue burdens on vulnerable communities and supply chains. Such outcomes could challenge the acceptability of the transition to civil society and the social licence to operate for banks. While there is a possibility that the transition might be rejected if it appears unjust or exclusive, it is important to note that a) the most vulnerable often possess the least power to resist change, and b) opposition to the transition often stems from both actual disruptions and perceptions of injustice. Therefore, a just transition approach is critical, especially by economy-wide actors such as banks, to deliver a net-zero transition future in which people and the planet thrive.

Banks' role in a just transition

Banks mirror the real economy. They succeed when the clients and communities in which they are embedded thrive. As the volatility of the transition creates winners and losers, banks will become critical partners of vulnerable clients and communities. Not only are deposit-taking banks heavily exposed to small businesses and individuals, who are likely to be more vulnerable to climate-related transitions than major corporations, but their social licence to operate is bound to how these clients interact with their banks. This means banks face both reputational and financial risks by not pursuing a just transition approach to net zero.

Why a just transition of SMEs matters to banks

There is no net-zero transition without small-medium enterprises (SMEs). They account for over 95 per cent of firms and 60–70 per cent of employment (World Bank, 2023). SMEs play a pivotal role in sectors that are at the forefront of the climate transition, such as energy, transport, agriculture and manufacturing. In the OECD countries, SMEs account for 50 per cent of greenhouse gas (GHG) emissions (OECD, 2023). While the public discourse often highlights large extractive and power generation companies as the primary players in the climate transition, it is crucial to understand that SMEs are deeply embedded in these sectors and their supply chains. Their role is not just peripheral; they are often the innovators, suppliers and service providers that enable the larger corporations to function. As such, any meaningful transition to a net-zero economy must involve SMEs, not only because of their sheer number but also due to their significant influence in sectors that are critical to achieving climate goals.

Enabling an entire economy transition to net zero is a complex endeavour. While it is theoretically possible to achieve this transition even if it is unjust, such an approach would likely lead to significant problems and could ultimately fail. SMEs, many of which face high climate-related transition risks, play a crucial role in this process. Their unique socioeconomic circumstances make them acutely vulnerable to these transition risks. Therefore, for a transition to be both successful and sustainable in the long run, there needs to be an explicit focus on SMEs and the challenges they face.

SMEs account for 33 per cent of GDP in high-income countries and even more in developing countries (British International Investment, 2023), so any full-service systemically important bank that mirrors the economy will have significant exposure to SMEs and often deep historical connections to the communities in which they operate. A just transition will mean supporting these SME clients to navigate the climate-related transition risks they face and, first and foremost, those that are most vulnerable to these risks.

How banks can support a just transition for SMEs

Banks today have an opportunity to define their approach to financing a just transition and forge stronger bonds with their client base. This includes supporting SME clients and SMEs in the value chain of their corporate clients as part of Scope 3 emissions and the net-zero transition to manage financial and regulatory risks; meeting the growing demand from stakeholders for responsible business practices; and seizing new market opportunities created by the global shift towards a low-carbon economy.

Achieving the SME net-zero transition requires a further USD 50 trillion of financing (Colas et al., 2021)¹. Banks will be integral to bridging this financing gap as the source of finance, intermediary or trusted partner through the transition from which guidance is sought. Their expertise will be invaluable in mitigating the potential short-term social repercussions of this transition, especially for SMEs. By evolving their financial and non-financial services, banks can ensure that even the most vulnerable SMEs are not left behind.

Yet this transition also calls for a paradigm shift in banking practices. In emerging markets and developing economies, banks have the opportunity to emerge as thought leaders, collaborating with regulators and leveraging initiatives such as Just Energy Transition Partnerships (JETPs)². They can also form partnerships with multilateral agencies and governments to make financing a just transition more feasible. This shift requires banks to move beyond traditional credit assessments and focus on forward-looking metrics that account for transition risks. Globally, there is a call for banks to advocate for differentiated capital treatments for just transition projects and to harness fintech and climate tech for smoother transitions. Banks need to apply global ESG principles, particularly the 'S' for social, in ways that resonate with local contexts, ensuring human rights standards are universally applicable.

How banks can start action on a just transition for SMEs

The concept of a just transition has broadened in recent years from (a) encompassing concerns for protecting workers and communities affected by the move away from unsustainable industries to (b) being concerned with addressing social and economic inequalities through fairer distributions of the costs and benefits of the net-zero transition.

The Just Transition Initiative³ (2021) developed a framework that illustrates how achieving this ambition will require actions across two critical dimensions: distributional impacts and inclusion. Therefore, making progress toward a just transition – meaning how companies or financiers evolve operations to support a just transition – would mean making progress on either impacts or inclusion:

- The distributional impacts dimension of a just transition is about outcomes – how the benefits and harms of the transition are distributed and what the employment and social landscape looks like once the economy is decarbonised, for example, the availability of decent work.
- The inclusion dimension is about the process – how we get to a net-zero economy, for example, dialogue happening at all levels of society to ensure that the transition's burden-sharing is just and equitable.

1 Half of the estimated USD 100 trillion investment needed to get global supply chains to net zero by 2050 will need to go to SMEs. For this calculation, SMEs are defined as businesses with <250 employees.

2 JETPs are a nascent financing cooperation mechanism, the aims of which are to help a selection of heavily coal-dependent emerging economies make a just energy transition. The goal is to support these countries' self-defined pathways as they move away from coal production and consumption while doing so in a way that addresses the social consequences involved, such as by ensuring training and alternative job creation for affected workers and new economic opportunities for affected communities.

3 The Just Transition Initiative (JTI) is a collective effort by the Center for Strategic and International Studies and the Climate Investment Funds to build mutual understanding on how to advance just transitions. It has developed a JTI framework that can be used to assess current just transition principles and processes and help inform transformative practices.

To start work on a just transition, banks can therefore begin with a focus on the inclusion dimension which can ultimately drive the outcomes dimension.

Inclusion refers to:

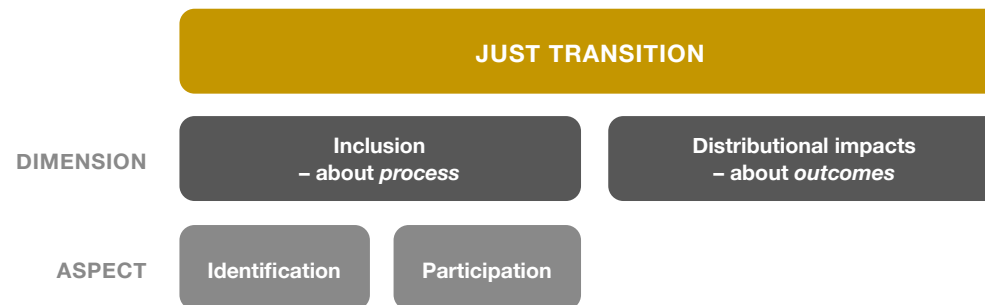
- (1) Identifying marginalised groups, such as SMEs facing high climate-related transition risks.
- (2) Enabling marginalised group participation in processes and decision-making processes that shape the character of net-zero actions that affect them.

A focus on inclusion enables marginalised groups to influence and shape climate action, ensuring the acceptability and appropriateness of net-zero pathways. This approach recognises that achieving equitable outcomes in the distributional impacts dimension is intrinsically linked to the inclusivity of the processes leading to those outcomes.

The practical, actionable first steps toward a just transition are, therefore, about inclusion. These steps move a just transition from a high-level concept to a reality for institutions such as banks. They entail, first, identifying the needs of marginalised groups such as SMEs facing high climate-related transition risks and second, enabling them to participate in the process of defining net-zero actions intended to support such vulnerable groups.

Consequently, there is a need to develop action guides for different stakeholders that will enable this inclusion and participation. This guide does just that by focusing on how banks can identify and integrate the perspective, knowledge, values and needs of SMEs through the net-zero transition.

Figure 1: Dimensions of just transition



Challenging unequal power relations and empowering vulnerable populations to influence and collectively own decision-making processes. This will remove symptoms of exclusion:

- Unequal access to resources
- Unequal participation
- Denial of opportunities



How this guide can be used for banks to act toward SMEs

This guide is a blueprint for actionable steps banks can take to include acutely vulnerable SMEs and, therefore, begin to ensure they are included in the net-zero transition. It offers a roadmap for banks to ensure a fair and sustainable transition for acutely vulnerable SMEs.

These SMEs are the focus for any initial action a bank takes because the climate related transition risks they face are the most material, being heightened due to social, economic and environmental challenges, and their inclusion is crucial for the legitimacy and success of the net-zero transition.

Table 1: SME vulnerability to climate-related transition risks and wider challenges

| Transition risk | SME vulnerability | Wider challenge | SME vulnerability |
|------------------|---|-----------------|--|
| Policy and legal | <ul style="list-style-type: none"> Navigating complex regulations and policies | Economic | <ul style="list-style-type: none"> Economic instability SMEs located in areas with limited access to basic services |
| Technology | <ul style="list-style-type: none"> At risk of being left behind as new technologies and processes are adopted | Social | <ul style="list-style-type: none"> Ownership rights over natural resources and land Rights to repair of products and consumer protection Access to further education, civic services or legal aid |
| Market | <ul style="list-style-type: none"> Increased competition from larger companies Struggle to access new markets | Environmental | <ul style="list-style-type: none"> Burden to administrate or pay for recovery responses to extreme weather events Inability to incorporate adaptation and mitigation measures into their business model |
| Reputation | <ul style="list-style-type: none"> Are at risk of damage to their reputation and brand image as environmentally sustainable products and services become prioritised | | |

Acutely vulnerable SMEs

SMEs facing high climate-related transition risks and social, environmental and economic factors that make them acutely vulnerable to those transition risks.

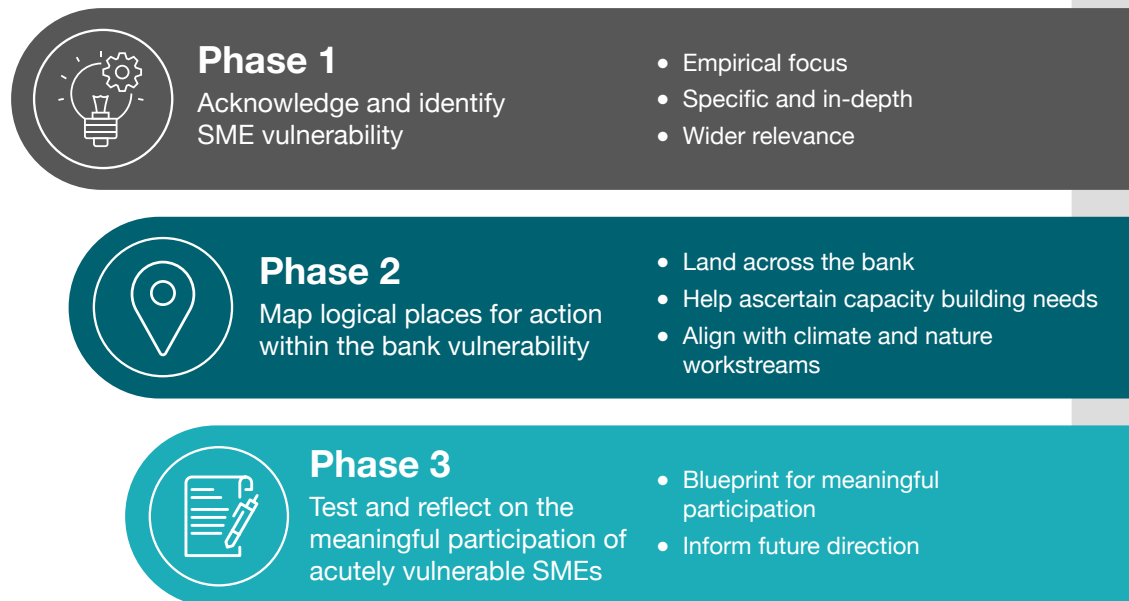
The transition to a sustainable economy presents both risks and opportunities. This guide emphasises the importance of supporting SMEs, particularly the most vulnerable, in their journey toward sustainability. The guide is structured in three phases, as illustrated in Figure 2. These phases are designed to help banks:

- **Acknowledge and identify vulnerabilities:** Identify the unique challenges faced by acutely vulnerable SMEs in the context of climate-related transition risks.
- **Map out action:** Develop appropriate strategies and actions within the bank to address these vulnerabilities.
- **Test and embed participation:** Ensure meaningful involvement of these SMEs in the net-zero transition, fostering a deep partnership between banks and SMEs.

The guide is adaptable to various contexts and considers action on a just transition for SMEs across five key aspects of the transformation of the banking business and operating model. These five aspects are part of the roadmap for banking to net zero, called “Bank 2030”, developed by CISL in 2020, about how banks’ operational and business models need to evolve to accelerate the decarbonisation of our economy.

Table 2: A just transition for SMEs across five key aspects of the banking business and operating model

Figure 2: Phased approach for bank action on just transition for SMEs



Strategy

Integrate just transition factors, focusing on acutely vulnerable SMEs, into the core of the bank’s net-zero transition plans. This includes aligning the just transition with net-zero objectives, targets and timelines.

Employees

Equip staff with the skills and expertise required to support these SMEs, leveraging the soft skills and local knowledge present in bank branches.

Risk Management

Understand how climate-related transition risks vary for SMEs based on their vulnerability.

Product Offer

Evaluate whether products designed for the net-zero transition cater to the needs of acutely vulnerable SMEs.

Customer Service Model

Revise the bank–client interface to recognise and address the net-zero support required by these SMEs.

Phase 1: Acknowledge and identify SME vulnerabilities



Why are some SMEs acutely vulnerable to climate-related transition risks?

SMEs are not a homogenous group, and they encompass a broad spectrum of definitions. Different organisations and countries set their own guidelines for defining SMEs, often based on headcount, sales or assets⁴. Yet enabling a full economy net-zero transition requires a focus on SMEs that face high climate-related transition risks and socioeconomic circumstances that make them acutely vulnerable to those transition risks (Figure 3). Exposure to environmental, economic and social factors can have a significant impact on the ability of some SMEs to overcome climate-related transition risks. Some SMEs may also be unable to participate effectively in the formulation of net-zero actions due to these factors. The result is that some SMEs are likely to be acutely vulnerable to climate-related transition risks.

These acutely vulnerable businesses will exist across traditional SME definitions. A materiality assessment across SME definitions, using susceptibility as the benchmark, can concentrate attention on these acutely vulnerable SMEs in just transition actions. Transition risks faced by vulnerable SMEs are critical given the importance of SMEs to economies and communities. As key actors that mirror the economy, banks must thus take proactive measures rather than disengaging, delaying action or, paradoxically, pulling back from supporting vulnerable SMEs because vulnerability makes them riskier customers to bank.

How to conduct a materiality assessment for acutely vulnerable SMEs

As a first step, banks need to identify acutely vulnerable SME clients and assess their level of exposure. A vulnerability identification process has been developed by CISL to help a bank identify an SME's level of vulnerability (high/very high, medium or low). Each vulnerability level indicates the level of effort needed by the bank to support a just transition of the SME to net zero. The three key steps are shown in Figure 4.

Figure 3: Some SMEs facing high climate-related transition risk also face socioeconomic and environmental challenges that make them acutely vulnerable

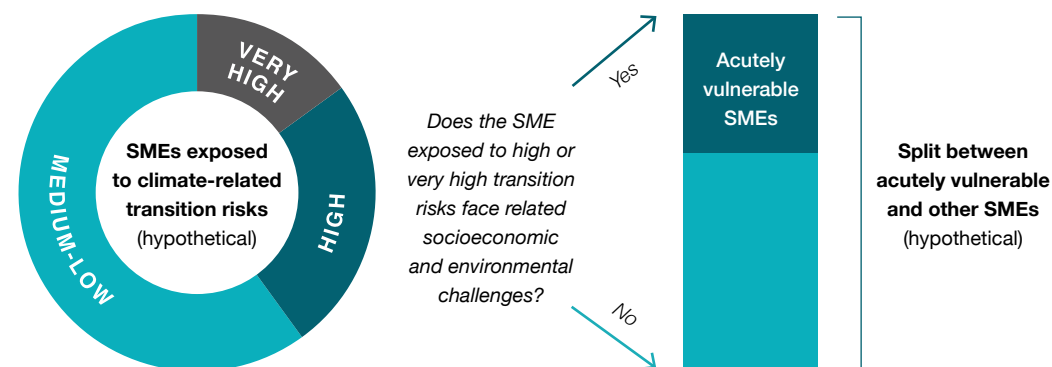


Figure 4: Step-by-step method to identify SME vulnerability



⁴ The research adopts the International Finance Corporation (World Bank) definition of an SME, namely, that it meets two of the following three criteria: employees (100–300), total assets (US\$ 100,000–US\$ 15 million), annual sales (US\$ 100,000–US\$ 15 million) or if the loan to it falls within the relevant SME loan size proxy (< US\$ 100,000–< US\$ 2 million).



Step 1: Undertake a comparative country-level analysis⁵

By using the vulnerability matrix in Table 4, a comparative country-level analysis can be undertaken to understand the multifaceted vulnerabilities a country faces in the context of climate-related risks and the wider social, economic and environmental challenges faced by SMEs.

The vulnerability matrix is composed of the following categories:

Geography-related/ acute physical climate risks: This category focuses on a country's exposure to extreme weather events, such as hurricanes, floods or droughts. It considers the geographic vulnerability of a country based on rankings derived from the Climate INFORM Risk Index, providing insights into its susceptibility to immediate climate impacts.

Chronic physical risks arising from long-term climate shifts: This category evaluates a country's vulnerability to long-term and gradual shifts in climate patterns, such as sea-level rise, temperature changes and ecological disruptions. The ND-GAIN Country Index provides a score that combines a country's vulnerability to climate change with its readiness to improve resilience.

Climate-related transition risks: This category examines the risks associated with transitioning to a low-carbon economy and adapting to climate change policies and regulations. It is divided into three subcategories:

- **Policy and legal factors:** This subcategory assesses the ease of doing business, the country's use of tax leverage to address negative climate impacts and the level of fossil fuel subsidies.
- **Technology factors:** This subcategory examines a country's access to the internet and its comparative advantage in low-carbon technology products.

- **Market factors:** This subcategory evaluates a country's readiness to achieve net-zero emissions across specific sectors, including electricity and heat, transport, agriculture, land use and forestry.
- **Contextual risk factors:** This category encompasses various environmental, social and economic factors that can influence a country's vulnerability to climate risks.
- **Environmental factors:** These factors consider a country's exposure to air pollution by particulate matter (PM2.5 ranking) and changes in land cover that can contribute to climate alterations.
- **Social factors:** These factors assess a country's human development, poverty and social exclusion, income distribution, employment conditions and working conditions/health and safety. Indicators such as sustainable development goals index, multidimensional poverty index and gender pay gap rankings provide insights into social vulnerabilities.
- **Economic factors:** This factor examines financial inclusion indicators, such as the percentage of the population with financial institution accounts, usage of mobile phones or the internet for financial transactions, borrowing from formal financial institutions and the financial inclusion of women.

Taken together, these factors can provide a country-level vulnerability score. See the annex for an example of this.

Step 2

Step 3

⁵ A total of 30 indicators has been used under four risk/contextual factor types to assess SMEs' vulnerability to climate-related transition risks based on their geographical location and the sector in which they operate. The risk/factor types and their associated indicators are not exhaustive in nature. All the information provided in the table is sourced from publicly available datasets and websites. No effort has been made to source non-public data sources/indicators for SME selection for the purpose of this exercise. The countries chosen for vulnerability assessment are based on geographies of interest for BEI members. This methodology can be applied to any country and sector context.



Step 1: Undertake a comparative country-level analysis

Table 4: Country-level vulnerability matrix⁶

| Country level vulnerability matrix | | | | |
|---|---|---------------|------------------------------------|------------|
| Risk type | Indicators | Data level | Data source | Data type |
| A. Geography-related/ acute physical climate risks | 1. Geographical exposure to extreme weather events | Country level | Climate INFORM Risk Index, 2023 | Ranking |
| B. Chronic physical risks arising from long-term and gradual shifts in climate patterns | 1. Country's vulnerability to climate change and other global challenges in combination with its readiness to improve resilience | Country level | ND-GAIN Country Index, 2021 | Score |
| C. Climate-related transition risks (applied in the context of geography) | | | | |
| C1. Policy and legal | 1. Ease of doing business index ranking | Country level | Doing Business Index, 2019 | Ranking |
| | 2. Country level; tax the country's government leverages on negative impacts as a percentage of the country's GDP | Country level | IMF Climate Change Dashboard, 2023 | Percentage |
| | 3. Fossil fuel subsidies (estimated value of explicit and implicit government subsidies related to fossil fuels (coal, natural gas, petroleum and electricity)) | Country level | IMF Climate Change Dashboard, 2023 | Percentage |
| C2. Technology | 1. Access to internet (rank) | Country level | World Bank WDI, 2023 | Ranking |
| | 2. Comparative advantage in low-carbon technology products | Country level | IMF Climate Change Dashboard, 2023 | Score |
| C3. Market | 1. Net-zero readiness index | Country level | KPMG, 2021 | Ranking |
| | 1a Electricity and heat readiness | Sector level | KPMG, 2021 | Ranking |
| | 1b Transport readiness | Sector level | KPMG, 2021 | Ranking |
| | 1c Agriculture, land use and forestry readiness | Sector level | KPMG, 2021 | Ranking |
| D. Contextual risk factors | | | | |
| D1. Exposure to air pollution by particulate matter | 1. PM2.5 ranking | Country level | IQAir ranking, 2022 | Ranking |
| D2. Land cover | 1. Climate altering land cover index (compared to 2015 level of 100) | Country level | IMF Climate Change Dashboard, 2023 | Score |

Step 2

Step 3

⁶ An example of this applied to eight selected countries is shown in the annex.



Step 1: Undertake a comparative country-level analysis

Table 4: Country-level vulnerability matrix⁷

| Country level vulnerability matrix | | | | |
|--|--|---------------|------------------------------|------------|
| Risk type | Indicators | Data level | Data source | Data type |
| D. Contextual risk factors | | | | |
| Social | | | | |
| D3. Human development | 1. Sustainable Development Goals index | Country level | UN, 2022 | Ranking |
| | 2. Planetary pressures-adjusted human development index | Country level | UNDP, 2023 | Ranking |
| D4. Poverty and social exclusion | 1. Multidimensional poverty index | Country level | OPHI, 2023 | Score |
| D5. Income distribution | 1. Income share of the bottom 40% and top 10% of the population | Country level | UNDP, 2023 | Ranking |
| | 2. Gender pay gap | Country level | WEF, 2022 | Ranking |
| D6. Employment | 1. Female labour force participation | Country level | World Bank, 2020 | Percentage |
| | 2. Informal employment (% of total employment) | Country level | ILO, 2023 | Percentage |
| D7. Working conditions/health and safety | 1. Global modern slavery index/estimated prevalence of modern slavery | Country level | Walk free, 2023 | Ranking |
| Economic | | | | |
| D8. Financial inclusion | 1. Financial institution account (% aged 15+) | Country level | Global Findex Database, 2022 | Percentage |
| | 2. Use of a mobile phone or the internet to make payments, buy products and services or send or receive money using a financial institution account (% aged 15+) | Country level | Global Findex Database, 2022 | Percentage |
| | 3. Borrowing from a formal financial institution (% aged 15+) | Country level | Global Findex Database, 2022 | Percentage |
| | 4. Financial institution account, female (% aged 15+) | Country level | Global Findex Database, 2022 | Percentage |

Step 2

Step 3

⁷ An example of this applied to eight selected countries is shown in the annex.



Step 1: Undertake a comparative country-level analysis

Table 4: Country-level vulnerability matrix⁸

| Country level vulnerability matrix | | | | |
|---|---|---------------|------------------------------------|------------|
| Risk type | Indicators | Data level | Data source | Data type |
| D. Contextual risk factors | | | | |
| Environmental | | | | |
| D1. Exposure to air pollution by particulate matter | 1. PM2.5 ranking | Country level | IQAir ranking, 2022 | Ranking |
| D2. Land cover | 1. Climate altering land cover index (compared to 2015 level of 100) | Country level | IMF Climate Change Dashboard, 2023 | Score |
| Social | | | | |
| D3. Human development | 1. Sustainable Development Goals index | Country level | UN, 2022 | Ranking |
| | 2. Planetary pressures-adjusted human development index | Country level | UNDP, 2023 | Ranking |
| D4. Poverty and social exclusion | 1. Multidimensional poverty index | Country level | OPHI, 2023 | Score |
| D5. Income distribution | 1. Income share of the bottom 40% and top 10% of the population | Country level | UNDP, 2023 | Ranking |
| | 2. Gender pay gap | Country level | WEF, 2022 | Ranking |
| D6. Employment | 1. Female labour force participation | Country level | World Bank, 2020 | Percentage |
| | 2. Informal employment (% of total employment) | Country level | ILO, 2023 | Percentage |
| D4. Poverty and social exclusion | 1. Global modern slavery index/estimated prevalence of modern slavery | Country level | Walk free, 2023 | Ranking |

Step 2

Step 3

⁸ An example of this applied to eight selected countries is shown in the annex.

Step 1

Step 2: Choose sector(s) and apply sector indicators to the country-level analysis

Identifying and assessing aspects or categories of vulnerability specific to a particular sector is crucial for understanding and addressing the unique risks and challenges faced by acutely vulnerable SMEs in that sector. Banks can integrate existing typologies they use for sector classifications, such as the Standard Industrial Classification (SIC) code.

The purpose of the two examples used in the guide below – agriculture and power generation – is to illustrate how a vulnerability matrix can be tailored to dissect and understand the distinct challenges and risks faced by acutely vulnerable SMEs within specific sectors. Each sector has its unique set of indicators and factors that determine its vulnerability, and these examples demonstrate how such factors can be identified, categorised and assessed.

In the case of agriculture, the vulnerability matrix provides the detail needed to make an assessment of the sector's susceptibility to physical climate risks and transition risks related to policy, technology and market factors as well as broader contextual risks. This comprehensive approach allows stakeholders to pinpoint the specific challenges that SMEs in agriculture might face from changing land use patterns to policy frameworks and market dynamics.

However, it is essential to recognise that while agriculture and power generation serve as illustrative examples, the vulnerability matrix approach is not confined to these sectors alone, and the methodology can be adapted to any sector.

Agriculture sector

In the context of agriculture, especially concerning acutely vulnerable SMEs, the vulnerability matrix (Table 5) provides a comprehensive overview of various risk types, including physical climate risks, climate-related transition risks and contextual risk factors.

Physical climate risks are particularly pertinent for these SMEs. Indicators such as agricultural irrigated land, agricultural stress index, arable land, forest area and land under cereal production offer insights into the susceptibility of agricultural operations to climatic adversities, such as rising temperatures, extreme weather events and sea-level rise.

When considering climate-related transition risks, it is essential to understand the unique challenges and opportunities for acutely vulnerable SMEs in agriculture. Factors such as agricultural subsidies, the adoption rate of sustainable farming technology and evolving consumer preferences and commodity prices are crucial. These indicators illuminate the policy environment, technological advancements and market shifts that can support or challenge these SMEs in their journey towards sustainable practices and resilience against changing conditions.

The contextual risk factors for agriculture that are of significant concern for acutely vulnerable SMEs span environmental, social and economic dimensions. Environmental factors, such as freshwater withdrawals, soil erosion and water scarcity, can directly impact the productivity and sustainability of SME operations. Social factors, such as the rural population, gender representation and employment in agriculture, emphasise the human-centric challenges and opportunities within the sector. Economic considerations, especially financial inclusion, access to credit and insurance availability for small-scale farmers, determine the financial robustness of these SMEs and their capacity to navigate economic shocks and stresses.

Step 3



Step 1

Step 2: Choose sector(s) and apply sector indicators to the country-level analysis

Table 5: Sector-wise vulnerability matrix – agriculture⁹

| Sector-wise vulnerability matrix – Agriculture | | | | | | |
|--|--|--|---------------|------------------|--------------------|--|
| Risk type | Specific risks | Indicators | Data level | Data source | Data type | Note |
| A. Geography-related/ acute physical climate risks | Rising temperatures, increased frequency and intensity of extreme weather events, sea-level rise | Agricultural irrigated land (% of total agricultural land) | Country level | World Bank, 2023 | Percentage | |
| | | Agricultural Stress Index | Country level | OECD/FAO, 2021 | Percentage/Ranking | |
| | | Rural land area where elevation is below 5 metres (% of total land area) | Country level | World Bank, 2023 | Percentage | |
| | | Forest area (% of land area) | Country level | World Bank, 2023 | Percentage | Indicates the overall forest health of the country, which has direct and indirect impacts on weather events and sea-level rise |
| | | Percentage of land replaced by cattle | Country level | WRI, 2023 | Percentage | |

Step 3

⁹ An example of this applied to eight selected countries is in the annex.



Step 1

Step 2: Choose sector(s) and apply sector indicators to the country-level analysis

Table 5: Sector-wise vulnerability matrix – agriculture¹⁰

| Sector-wise vulnerability matrix – Agriculture | | | | | | |
|--|---|--|--|------------------|------------|--|
| Risk type | Specific risks | Indicators | Data level | Data source | Data type | Note |
| B. Climate-related transition risks (applied in sectoral context) | | | | | | |
| B1. Policy and legal | Changes in environmental regulation, carbon pricing, deforestation laws | Agricultural subsidies in 2017, by country | Country level | UNEPFI, 2023 | Number | |
| | | Increase in the percentage of climate-resilient crops being used | Suggested indicator at country level ¹¹ | GIS, 2023 | Percentage | |
| B3. Market | Shift in consumer preferences, commodity price volatility | Gross Agriculture Production Index (2014–2016 = 100) | Country level | FAO, 2023 | Number | Compounded index indicator that includes market shifts |
| | | Food Production Index (2014–2016 = 100) | Country level | World Bank, 2023 | Number | Compounded index indicator that includes market shifts |
| | | Livestock production index (2014–2016 = 100) | Country level | World Bank, 2023 | Number | Compounded index indicator that includes market shifts |
| | | Agriculture, forestry and fishing, value added (% of GDP) | Country level | World Bank, 2023 | Percentage | |
| | | Crop production index (2014–2016 = 100) | Country level | World Bank, 2023 | Number | Compounded index indicator that includes market shifts |
| | | Meat consumption per capita and a shift from beef to poultry | Regional/country level | OECD/FAO, 2021 | Number | |
| | | Fertiliser consumption (kilograms per hectare of arable land) | Country level | World Bank, 2023 | Number | |

Step 3

¹⁰ An example of this applied to eight selected countries is in the annex.

¹¹ Where appropriate, suggested indicators are listed for data that was not available at the time research was undertaken, but as sectoral data availability improves, these would be useful indicators to be included in the vulnerability assessment matrix. 16



Step 1

Step 2: Choose sector(s) and apply sector indicators to the country-level analysis

Table 5: Sector-wise vulnerability matrix – agriculture¹²

| Sector-wise vulnerability matrix – Agriculture | | | | | | |
|--|---|---|--------------------------------------|------------------|-------------------|--|
| Risk type | Specific risks | Indicators | Data level | Data source | Data type | Note |
| C. Contextual risk factors | | | | | | |
| C1. Environmental | Loss of biodiversity, Soil degradation, Water scarcity | Annual freshwater withdrawals, total (% of internal resources) | Country level | World Bank, 2023 | Percentage | |
| | | Cereal yield (kg per hectare) | Country level | World Bank, 2023 | Number | |
| | | Number of inventories of climate change impacts on biodiversity | Suggested indicator at country level | GIZ, 2023 | Number | Compounded index indicator that includes market shifts |
| | Soil erosion, water scarcity, drought, flooding, pests and diseases | Uptake of soil conservation measures | Suggested indicator at country level | GIZ, 2023 | Number | Compounded index indicator that includes market shifts |
| | | Percentage of water demand being met by existing supply | Suggested indicator | GIZ, 2023 | Percentage | Compounded index indicator that includes market shifts |
| | | Overall invasion threat and total costs of invasions to countries of invasive species | Country level | UNEPFI, 2023 | Percentage/Number | |

Step 3

12 An example of this applied to eight selected countries is in the annex.



Step 1

Step 2: Choose sector(s) and apply sector indicators to the country-level analysis

Table 5: Sector-wise vulnerability matrix – agriculture¹³

| Sector-wise vulnerability matrix – Agriculture | | | | | | |
|--|--|--|--------------------------------------|------------------|------------|------|
| Risk type | Specific risks | Indicators | Data level | Data source | Data type | Note |
| C2. Social | | | | | | |
| Human development | Access to quality education, healthcare access | Rural population (% of total population) | Country level | World Bank, 2023 | Percentage | |
| | | Number of people not in education and vocational training (NEET) | Country level | UNESCO, 2023 | Percentage | |
| | | Persons with universal health coverage | Country level | WHO, 2023 | Percentage | |
| Poverty and social exclusion | Gender and minority representation in the agricultural sector | Number of women organised in agricultural cooperatives | Suggested indicator at country level | GIZ, 2023 | Number | |
| Working conditions/ health and safety | Safety standards, workers' rights, exposure to harmful chemicals, access to clean water and sanitation | Change in average, daily agricultural real incomes due to a global temperature rise of 3°C compared to pre-industrial levels | Country/regional level | UNEPFI, 2023 | Percentage | |

Step 3

13 An example of this applied to eight selected countries is in the annex.

Step 1

Step 2: Choose sector(s) and apply sector indicators to the country-level analysis

Power generation sector

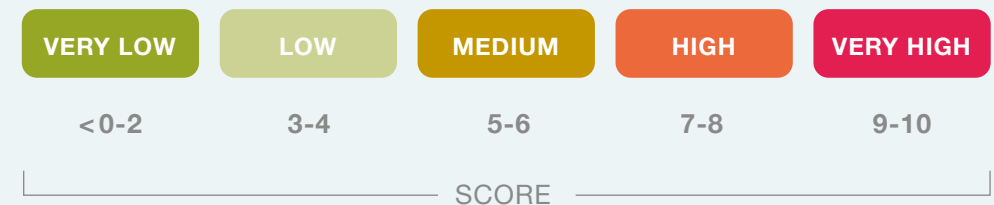
When we talk about “high transition risk” in the context of power generation, we are referring to the risk associated with transitioning from fossil fuels (such as coal, oil and natural gas) to renewable energy sources (such as wind, solar and hydropower). SMEs can participate in the entire power generation value chain, especially in small equipment manufacturing activities, installation, civil works, retail and maintenance. For example, a small company in the supply chain of a coal-fired power plant faces a high transition risk because there is increasing pressure from governments and the public to reduce carbon emissions. This could lead to new regulations, taxes or even the phasing out of coal altogether, all of which could have a significant financial impact on the company.

Assessing the acute vulnerability faced by SMEs in the power generation sector involves examining indicators across different categories (Table 6).

In terms of geography-related physical climate risks, indicators such as renewable energy production and fossil fuel energy consumption provide insights into a country’s energy consumption patterns and reliance on different energy sources. Additionally, indicators such as energy use per capita and the intensity of primary energy highlight the sector’s overall energy efficiency. Contextual risk factors, such as GDP per unit of energy use, consider the economic dimension of the power generation sector. This indicator helps assess the efficiency of energy use in relation to economic output, providing insights into the sector’s sustainability and economic performance.

These indicators can provide a sector-level vulnerability score that can be compounded with the country-level vulnerability score to calculate the acute vulnerability of SMEs through a colour code typology (Figure 5). (Examples of how a score can be derived can be found in the annex).

Figure 5: Colour code typology for acute vulnerability levels



The vulnerability assessment process utilises publicly available indicators and datasets to develop country- and sector-level matrices that help calculate the vulnerability level of SMEs. Banks may have their own indicators and datasets that can also be triangulated with the suggested indicators list. In some country and sector contexts, SME-focused data may not be available. To capture more granulated and nuanced data, there is a need to develop wider data ecosystems. This will involve investing in data infrastructure, encouraging industry associations to collect and share relevant data, and implementing targeted surveys and studies focused on SMEs. Additionally, collaboration between government agencies, industry associations and private-sector organisations will be crucial to ensure comprehensive and accurate data collection.

Over time, the vulnerability assessment process will be complemented by emerging data analyses focused specifically on the SME net-zero transition. For example, Theia Finance Labs is developing the ‘TILT’ (transforming in a low carbon transition) database, which focuses on SMEs at product level with indicators to measure their emissions profiles and the sector profile risk for their products.

Step 3



Step 1

Step 2: Choose sector(s) and apply sector indicators to the country-level analysis

Table 6: Sector-wise vulnerability matrix – power generation¹⁴

| Sector-wise vulnerability matrix – power generation | | | | | | |
|--|---|--|----------------|--|------------|--|
| Risk type | Specific risks | Indicators | Data level | Data source | Data type | Notes |
| B. Climate-related transition risks (applied in sectoral context) | | | | | | |
| B2. Technology | Rate of adoption of clean energy technologies, dependence on fossil fuels | Combustible renewables and waste (% of total energy) | Country level | World Bank, 2023 | Percentage | |
| | | Electricity production from renewable sources, excluding hydroelectric (kWh) | Country level | World Bank, 2023 | Number | |
| | | Energy intensity level of primary energy (MJ/\$2017 PPP GDP) | Country level | World Bank, 2023 | Number | |
| | | Alternative and nuclear energy (% of total energy use) | Country level | World Bank, 2023 | Percentage | |
| | | Renewable capacity expansion forecasts 2021–2027 | Regional level | International Energy Agency, 2023 | Percentage | |
| | | Renewable electricity output (% of total electricity output) | Country level | World Bank, 2023 | Percentage | |
| | | Fossil fuel energy consumption (% of total) | Country level | World Bank, 2023 | Percentage | |
| | | Fuel exports (% of merchandise exports) | Country level | World Bank, 2023 | Percentage | This indicator is relevant because a higher percentage indicates a greater dependency on fossil fuels, making the SME more vulnerable to regulations and changes associated with the transition. |
| Investment in energy with private participation (current US\$) | Country level | World Bank, 2023 | Number | This indicates the level of private-sector involvement and investment in an SME, which is relevant because private investors may pull out or demand changes if the company is not aligning with the global trend towards net zero emissions. | | |

Step 3

14 An example of this applied to eight selected countries is in the annex.



Step 1

Step 2: Choose sector(s) and apply sector indicators to the country-level analysis

Table 6: Sector-wise vulnerability matrix – power generation¹⁵

| Sector-wise vulnerability matrix – Agriculture | | | | | | |
|--|---|--|--------------------------------------|-------------|------------|------|
| Risk type | Specific risks | Indicators | Data level | Data source | Data type | Note |
| C3. Economic | | | | | | |
| Financial inclusion | Access to credit and insurance for farmer | Percentage of farmers and fisherfolk with access to financial services | Suggested indicator at country level | GIZ, 2023 | Percentage | |
| | | Total sum of investments in programmes for the protection of livestock | Suggested indicator at country level | GIZ, 2023 | Number | |
| | | Percentage of livestock insured against death due to extreme and slow-onset weather events | Suggested indicator at country level | GIZ, 2023 | Percentage | |
| | | Percentage of farmland covered by crop insurance | Suggested indicator at country level | GIZ, 2023 | Percentage | |
| | | Turnover generated by agricultural cooperatives | Suggested indicator at country level | GIZ, 2023 | Number | |

Step 3

15 An example of this applied to eight selected countries is in the annex.

Step 1

Step 2

Step 3: Develop further identification processes for specific SME clients

To further identify vulnerabilities faced by specific SME clients, we can utilise SME sub-sector personas in the agriculture and power generation sectors in the UK and India (Table 8). We have worked on four SME fictional profiles that are based on available information about SMEs across sectors and the challenges they commonly face in developed and developing world contexts. These fictional profiles serve as representative examples to help us understand the unique challenges and vulnerabilities of SMEs in specific sub-sectors and sub-national contexts. By utilising a profiling approach (which may also be referred to as an archetypes approach), banks can gain valuable insights into the specific needs of SMEs and begin to develop actions for the sub-sector as a whole.

By conducting this comprehensive analysis at sub-sector and sub-national levels, banks can gain a nuanced understanding of SMEs' vulnerability in agriculture and power generation. This knowledge will enable them to tailor interventions, provide targeted support and develop customised strategies to address the unique challenges and risks faced by SMEs in different sectors and regions.

Note: Both sectors serve as illustrative examples; the vulnerability matrix approach is not confined to these sectors alone, and the methodology can be adapted to any sector.



Step 1

Step 2

Step 3: Develop further identification processes for specific SME clients

Table 8: SME profiles in India and UK for the agriculture and power generation sectors¹⁶

| SME profile | Location | Sector/ Sub-sector | Level of acute vulnerability ¹⁷ | Physical Climate Risks (acute and chronic) | Climate related transition risks | | | | Contextual risk factors | | |
|--------------------------|-----------------|--------------------------------------|--|--|---|--|--|---|---|--|--|
| | | | | | Policy and Legal Risks | Market Risks | Technology Risks | Reputation Risks | Social Factors | Economic Factors | Environmental Factors |
| Gupta Paddy Farms | Amritsar, India | Agriculture | Very high | Unpredictable monsoon rains, heatwaves and pests due to climate change | Regulations on stubble burning, sustainable farming practices | Decreased crop yields, increasing competition | Outdated, high-emission farming equipment | Criticism of environmentally damaging farming practices | Employee retention during crop failure seasons | High costs of fertilisers and machinery | Environmental impact due to stubble burning |
| Mehta Turbines Pvt. Ltd. | Jhakrand, India | Power generation, Parts manufacturer | High | Increasing flooding due to intense monsoons | Regulatory push towards low-carbon energy | Decreased demand for coal-based turbine parts | Difficulty adapting to manufacturing parts for renewable energy technologies | Public criticism of pollution from manufacturing processes | Retraining or redeploying workforce with coal-specific skills | Asset devaluation, challenges in securing funding due to the transition toward low carbon energy | Pollution from manufacturing process, waste management for obsolete parts |
| Wilson Dairy Farm | Cheshire, UK | Agriculture | Very low | Changing rainfall patterns, heat stress on dairy cows | Regulations on effluent runoff, lower-emission cattle farming | Decreased demand for dairy, competition from plant-based alternatives | Outdated, high-emission farming equipment | Criticism of contribution to water pollution | Maintaining fair wages and safe working conditions | High costs of transitioning to lower-emission cattle farming | Water pollution due to effluent runoff |
| CoalPro Energy | Yorkshire, UK | Power generation, Parts manufacturer | Very low | Potential flooding due to increased rainfall and severe weather events | Strict carbon emission targets, regulatory pressure to transition to cleaner energy sources | Decreased demand for coal power, competition from cheaper renewable energy | High costs and complexities of transitioning to cleaner energy sources or adopting carbon capture technology | Public criticism due to high emissions and contribution to climate change | Ensuring employee safety against potential flooding | Potential devaluation of assets associated with coal-fired power | Negative impact on air and water quality due to coal mining and combustion |

¹⁶ The identified risks are non-exhaustive; diverse other risks may be faced by SMEs in the geographical and sectoral contexts presented.

¹⁷ Based on sector vulnerability score in Phase 1 Step 2.

Phase 2: Map logical places of action within a bank



In Phase 2 of this Action Guide, we outline how banks could begin to map the logical places they can play an active part in co-creating and delivering just net-zero transitions for SMEs, especially those that are acutely vulnerable.

Banks today have an opportunity to define their approach to financing a just transition and forge stronger bonds with their client base, not only in terms of what to finance but also how to do so. The approach will consider:

- the conditions attached to financing and related activities.
- public-private finance partnerships.
- the local context and community resilience.

This approach aims to foster a symbiotic relationship where banks and communities transition to net zero as one. It means that actively participating in a just transition, especially in the context of acutely vulnerable SMEs, likely signifies a shift in a bank's operational model. This transformation positions banks as intermediaries for new knowledge about the net-zero transition as well as providers of finance.

Figure 6: A bank's role as intermediary between clients, experts and capital to create with clients a share vision of a net-zero future (CISL, 2020)



Step 1: Consider the alignment of bank practices to just transition goals

The five aspects of a bank's business and operational model that need transformation to enable the bank to accelerate the transition to a net-zero economy offer categories for banks to integrate just transition goals (Figure 7, from CISL's Bank 2030). Table 9 uses these categories to summarise potential action areas of a just transition for SMEs.

Figure 7: Five aspects of Bank 2030



Strategy

Embedding just transition factors, and thus acutely vulnerable SMEs, as part of the overarching goals, ambitions and foundations of net zero transition plans.



Product Offer

Considering whether products created to support client net-zero transition are applicable for acutely vulnerable SMEs.



Customer Service Model

Focusing on the interface between bank and acutely vulnerable SME clients, considering how it can evolve to identify the net zero support they need and then meaningfully engage those SMEs.



Risk Management

Considering how climate-related transition risks manifest differently for SMEs of varying vulnerabilities.



Employees

Building the skills and capabilities needed to support acutely vulnerable SMEs, building on the soft skills and local expertise in branches of supporting customers and clients.

Step 2



Aspect: Strategy



Aligning with just transition goals

Examples of action (not exclusive to SMEs)¹⁸

Include mentions of a just transition in relevant climate strategies of the bank.

- BNP Paribas (2023) has identified five levers for developing just transition strategies toward a more inclusive and sustainable financial landscape: 1) Financing tailored ESG projects, indicating a commitment to positive societal and environmental impacts. 2) Providing advice and support, positioning the bank as a strategic guide rather than just a financier. 3) Promoting sustainable financial products with social criteria to ensure no one is left behind. 4) Engaging stakeholders to develop holistic and well-rounded solutions. 5) Focusing on training, professional retraining and skills development for bank clients. This approach highlights BNP Paribas's commitment to not only financing the future but ensuring it is inclusive and sustainable.
- Standard Chartered's "Just in Time" report (2022) and sustainability aspirations indicate key strategic shifts: 1) Recognition of the financing gap, acknowledging the \$94.8 trillion required for the net-zero transition in emerging markets, positioning the bank as a thought leader. 2) Commitment to small business financing, pledging \$15 billion to small businesses, signalling actionable steps to address market segments. 3) Addressing Scope 3 and downstream emissions in their transition finance framework, showing a holistic approach to carbon footprints. 4) Lack of specific mention of SMEs in the context of scope 3 and downstream emissions, suggesting areas for refinement or further detailing in their strategy. This highlights the bank's awareness of the financial landscape, commitment to supporting small businesses and a holistic approach to addressing their carbon footprint while indicating areas for further refinement.

Develop collaborative solutions that can be actively championed by the bank that show commercial logics detailing how collaborative action is beneficial. This can help inform wider business model changes needed for alignment with just transition goals.

- Credit Agricole's climate strategy recognises the importance of fairness and inclusivity in the environmental transition. Alongside its science-based climate strategy, the bank emphasises its commitment to enhancing social cohesion and inclusion. There is a mention of revitalising vulnerable/weakened territories to promote their economic and social development.
- In 2020, a collaboration between more than 40 banks, investors, financial institutions, universities and trade unions led to the establishment of the Financing a Just Transition Alliance (FJTA) in the UK.
- In December 2022, the Glasgow Financial Alliance for Net Zero (GFANZ) established a working group including HSBC, Standard Chartered, Deutsche Bank and Citi to support the Just Energy Transition Partnership (JET-P).

Step 2

¹⁸ The listed examples of action are not exclusive to SMEs and may represent broader and diverse sets of actions undertaken by banks toward a just transition.



Aspect: Product offer



Aligning with just transition goals

Examples of action (not exclusive to SMEs)¹⁹

Customise offerings to cater to the unique challenges acutely vulnerable SMEs face, including financing options for climate resilience measures and green technologies.

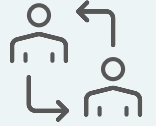
- Lloyds Banking Group is working with the Soil Association to pilot a new service, the Soil Association Exchange, to help British farmers to accelerate their transition. Lloyds Banking Group is funding up to 1,000 of its largest agriculture customers to help improve their operations' ecological footprint and overall sustainability. This covers soil health, carbon emissions, water quality, biodiversity, animal health and the social and community impacts of the farms. The pilot also aims to help create advice, guidance and support that can be applied across the agriculture industry.
- The NatWest Entrepreneur Accelerator has partnered with the University of Warwick's Warwick Manufacturing Group to establish a Clean Transport Specialist Accelerator. This programme offers SMEs a comprehensive package that includes coaching, thought leadership, community support and access to valuable networks with the aim of fostering growth and innovation in the clean transport sector.
- Triodos, in collaboration with the Welsh government, offered financial support for the development of a community-owned wind farm in a disadvantaged region of Wales between 2017 and 2020. This initiative addressed the funding gap for community projects in an area historically dependent on coal mining, empowering the community to act against climate change and promote the transition to a low-carbon economy. Triodos also provides financing for socially oriented organisations that align with the green agenda, such as charities, social enterprises and values-driven businesses.
- HSBC UK's Green SME Fund is designed to make investing in sustainable solutions more accessible and rewarding for SMEs. The fund offers 1% cashback on a loan value of £25k and below, subject to the use of proceeds to finance a range of green activities.
- The AGRI3 Fund, established through a collaboration between UN Environment, Rabobank, the Dutch Development Bank (FMO) and IDH Sustainable Trade Initiative, aims to facilitate the transition toward more sustainable and climate-smart agricultural systems. It seeks to mobilise an additional \$1 billion in capital from commercial banks, development finance institutions (DFIs), and impact investors and institutional investors by providing guarantees and subordinated loans. Key performance indicators at the fund level encompass metrics such as the number of farmers integrated into supply chains and trained (including smallholder farmers).
- Samsung Card, a consumer finance company in South Korea, has concluded its inaugural ESG financing through a \$300 million cross-border social credit card securitisation. BNP Paribas served as the ESG advisor for this transaction, which was finalised in March 2021. The offer included financial inclusion programmes that offered lending services to individuals and small businesses that lack access to the banking system.

Step 2

¹⁹ The listed examples of action are not exclusive to SMEs and may represent broader and diverse sets of actions undertaken by banks toward a just transition.



Aspect: Customer service model



Aligning with just transition goals

Examples of action (not exclusive to SMEs)²⁰

Partner with representative (archetype) SMEs²¹ to co-create strategies and product solutions. This involves developing a nuanced understanding of the specific climate-related risks that acutely vulnerable SMEs face and aligning capital and risk models to provide targeted support for their needs.

Collaborating with industry partners, policymakers and corporate clients to develop sector-specific solutions and standards in hard-to-abate sectors relevant to acutely vulnerable SMEs can also foster resilience and sustainable growth. Banks can also leverage their position to voice policy- and ecosystem-level changes needed to support SMEs' transition.

- HSBC UK has created a country-wide network of over 100 Sustainable Finance Ambassadors who act as local advocates of sustainability and sustainable finance. They also provide SME customers with a guide to get started on sustainability to help them assess carbon emissions and consumption.
- RBS provides its SME customers with access to Local Enterprise Managers who provide guidance on emerging business trends and market developments and help build networks with other SMEs in the region.
- In 2021, Barclays launched a guide to post-lockdown business resilience for SMEs in the UK with a dedicated section on ESG issues. In the same year, it also launched a Specialist Relationship Support team to support front-line colleagues in helping vulnerable customers with related complex needs.
- Project SPEED in Portsmouth and Bournemouth by Barclays Eagle Labs has delivered workshops on the Internet of Things for local businesses to reduce a port ecosystem's carbon footprint and save money.
- Lloyds Banking Group has worked with smaller businesses around the UK and developed a range of resources to support its sustainability work, including a "Now to Net Zero" practical guide for SMEs that sets out a five-step journey for SMEs to reach net zero.

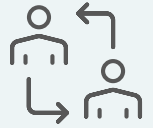
Step 2

²⁰ The listed examples of action are not exclusive to SMEs and may represent broader and diverse sets of actions undertaken by banks toward a just transition.

²¹ Banks can focus on identifying and then enabling archetypal acutely vulnerable SMEs to participate in processes that shape net-zero products and technical assistance. Learning from these archetypes, the financial and non-financial services provided to the SME community can evolve so that acutely vulnerable SMEs are included.



Aspect: Risk management



Aligning with just transition goals

Examples of action (not exclusive to SMEs)²²

Implement regular reviews and monitoring mechanisms within the climate risk function to proactively manage and mitigate the risks acutely vulnerable SMEs face.

Conduct a gap analysis of the existing climate risk management framework for these SMEs to pinpoint areas needing enhancement. Develop specialised tools within the framework to accurately quantify and assess the distinct climate risks associated with acutely vulnerable SMEs.

Engage with supervisors on the situation of these vulnerable SMEs and financial materiality of the risk.

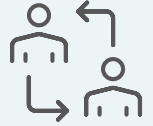
- Citi (2021) has acknowledged embedding just transition elements into its reporting on climate-related disclosures. It has included a section of additional considerations on issues intersecting with climate: biodiversity and natural capital, social impact, energy justice and just transition. In 2023–24, the bank is undertaking a materiality assessment of the agriculture sector that will consider the impacts on food security as well as social impacts.
- McKinsey (2022) notes that several banks apply a qualitative credit assessment (QCA) to underwrite SME loans in emerging markets, where financial data are often unavailable, insufficient or unreliable. This typically relies on expert judgement, which is prone to biased decision-making. It suggests that banks can mitigate human biases through the use of machine learning, analytical models and/or indices overlaying existing data sources, like the approach suggested in [Phase 1](#) of this guide.

Step 2

²² The listed examples of action are not exclusive to SMEs and may represent broader and diverse sets of actions undertaken by banks toward a just transition.



Aspect: Employees



Aligning with just transition goals

Examples of action (not exclusive to SMEs)²³

Invest in continuous training programmes and recruit professionals adept at capturing and analysing climate data, setting emissions reduction benchmarks and formulating transition plans tailored for acutely vulnerable SMEs.

Develop and enhance in-house capabilities to craft specialised strategies and products that cater to the unique needs of acutely vulnerable SMEs.

Enhance the expertise of frontline teams to grasp the distinct challenges acutely vulnerable SMEs face and equip them with the resources to craft bespoke solutions.

- BNP Paribas launched the “We Engage” series with seven training modules between 2019 and 2022, providing education to all staff globally on sustainable finance, environmental and societal issues. From there, the bank developed different groups within the organisation whose members could focus on how a sustainable and just transition is understood and embedded through the business.
- Citi (2021) had global Champion groups of employee volunteers across coverage and products who share business updates, best practices and market developments on the net-zero transition. It also rolled out a climate risk training module for all employees to cover emerging climate risk standards including social considerations.
- In 2022, Lloyds Banking Group provided a range of sustainability-related training for its senior leadership along with specialist training for frontline commercial banking colleagues and general sustainability training to colleagues across the Group. Topics covered included nature and biodiversity loss and climate-risk and sector-specific training.

Step 2

²³ The listed examples of action are not exclusive to SMEs and may represent broader and diverse sets of actions undertaken by banks toward a just transition.

Step 1

Step 2: Map specific actions needed for acutely vulnerable SMEs

Step 2 delves deeper into the actionable strategies banks can employ to support acutely vulnerable SMEs, building upon the foundational understanding established in Step 1.

While Step 1 emphasised the alignment of bank practices with just transition goals using the Bank 2030 framework, Step 2 narrows the focus to specific sectors and geographies. It underscores the importance of tailoring actions to the unique needs of SMEs in distinct sectors, such as agriculture and power, especially in diverse regions such as the UK and India.

Using the SME fictional profiles introduced in Phase 1, Step 2 provides illustrative action maps guiding banks on the granularity and specificity needed to ensure the genuine inclusion and engagement of these SMEs. This step-by-step approach ensures that banks not only recognise the challenges faced by acutely vulnerable SMEs but also develop and implement strategies tailored to their specific needs and circumstances.

Phase 2 transitions banks from the foundational understanding of identifying these SMEs, as established in Phase 1, to crafting actionable strategies tailored to unique SME needs. By focusing on specific sectors and geographies, banks can ensure they are better equipped to offer more nuanced and effective support, ensuring that these SMEs are not just recognised but provided with the tools and resources they need to thrive in a net-zero future.

However, it is crucial to recognise that the journey toward a just transition is iterative. While Phase 2 offers potential actions to integrate acutely vulnerable SMEs into the Bank 2030 vision, the dynamic nature of the banking landscape means that continuous experimentation and adaptation are essential.

Phase 3 focuses on this iterative process – on refining strategies, measuring impact and ensuring the sustained engagement of acutely vulnerable SMEs in the net-zero journey. It is about consolidating learnings, iterating strategies and ensuring that the momentum gained is not only maintained but amplified.

Step 1

Fictional SME profiles

These fictional SME profiles are based on personas of acutely vulnerable SMEs in the agriculture and power generation sectors operating in the UK. For each SME, targeted actions are listed around the just transition business and operational model aspects²⁴ identified in Phase 2.

These actions have been grounded in specific SME profiles that are based on information gathered through ground-truthing interviews with SMEs (see appendix C) to showcase the need to develop bespoke and tailored support for SME clients from diverse and heterogenous backgrounds. However, these actions can be considered broadly for SMEs in other country and sector contexts as well.

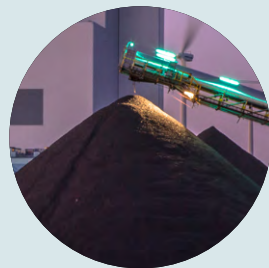


UK company profiles



Wilson Dairy Farm

Sector: Agriculture
Sub-sector: Beef extensive grazing
Location: Cheshire



Coal Pro Energy

Sector: Power generation
Sub-sector: Regulated high carbon, parts manufacturer
Location: Yorkshire



India company profiles



Gupta Paddy Farms

Sector: Agriculture
Sub-sector: Crops high emission intensity
Location: Amritsar, Punjab



Mehta Turbines

Sector: Power generation
Sub-sector: Unregulated high carbon
Location: Jharkand

²⁴ Targeted action(s) for “employees” is/are not mentioned as capacity-building and skills development needs vary across banks, require organisational-level support and are not specific to each SME client.



SPOTLIGHT: UK | Action map for SMEs in the Agriculture and Power Generation Sectors



Strategy

- Establish a just transition strategy that prioritises comprehensive assessments of clients' current practices, such as Wilson Dairy Farm's cattle farming methods. This strategic focus will enable the bank to guide clients towards lower-emission farming methods aligning with broader sustainability goals.



Risk Management

- De-risk client portfolios by collaborating with insurance providers to develop tailored insurance options. For clients like Wilson Dairy Farm, this could mean addressing specific vulnerabilities, such as livestock health and feed crop failures due to climate-related factors, ensuring that both the bank and the client are protected against unforeseen losses.
- Implement advanced data analytics and climate modelling tools to proactively identify and assess potential climate-related risks in the agriculture sector. By understanding patterns and predicting potential challenges, the bank can better advise clients like Wilson Dairy Farm on risk mitigation strategies.



Product Offer

- Design specialised loan packages that cater to Wilson Dairy Farm's specific needs, enabling the client to invest in eco-friendly modifications and infrastructure upgrades. These may include financing options for energy-efficient equipment and renewable energy installations (such as solar panels or anaerobic digesters, improved waste management systems and soil/ grazing nutrient quality).
- Offer tailored loans to implement sustainable practices through supportive government policies, such as adopting regenerative grazing techniques or improving nutrient management systems to reduce environmental impacts.
- Facilitate connections with local markets, cooperatives or direct-to-consumer channels to promote sustainable and locally sourced dairy products.
- Provide guidance on energy efficiency measures and renewable energy adoption within the company's operations including recommendations for on-site renewable energy generation or energy management systems.



Customer Service Model

- Provide access to data-driven risk assessment tools that help Wilson Dairy Farm identify and mitigate climate-related risks, such as extreme weather events, heat stress in livestock or disruptions in feed supply due to climate impacts on crops.
- Offer support in developing contingency plans and resilience strategies to manage climate risks effectively including access to alternative feed sources or implementing adaptive herd management practices.
- Establish a dedicated relationship manager who understands the challenges and opportunities specific to Wilson Dairy Farm's operations and acts as a primary point of contact for regular discussions and updates.
- Hold regular meetings or farm visits to understand the farm's evolving needs; provide updates on market trends, consumer preferences and policy changes related to sustainable agriculture.



Wilson Dairy Farm

Sector: Agriculture

Sub-sector: Beef extensive grazing

Location: Cheshire

These fictional SME profiles are based on personas of acutely vulnerable SMEs in the agriculture and power generation sectors operating in the UK.



SPOTLIGHT: UK | Action map for SMEs in the Agriculture and Power Generation Sectors



Strategy

- Incorporate expertise on emerging clean energy technologies into the bank's strategic advisory services. By staying updated on advancements in solar, wind or hydroelectric power, the bank can offer informed guidance to SMEs like CoalPro Energy, which are highly vulnerable due to their dependence on fossil fuels, ensuring they have a competitive edge in their transition journey.



Risk Management

- Conduct comprehensive risk assessments to identify potential climate-related risks and vulnerabilities associated with CoalPro Energy's operations.



Product Offer

- Provide customised insurance options that cover potential damages or business interruptions caused by climate-related events, such as extreme weather events, flooding or regulatory changes.
- Facilitate funding options and financing solutions specifically designed to support CoalPro Energy's clean energy transition including the retrofitting of existing facilities for carbon capture and storage (CCS) technology.
- Collaborate with industry experts to offer guidance on the technology selection, procurement and installation of clean energy infrastructure.
- Explore financing options for research and development of innovative clean energy solutions or technologies to enhance CoalPro Energy's competitiveness in the evolving energy market.



Customer Service Model

- Assign a dedicated relationship manager who will act as a primary point of contact for CoalPro Energy, providing regular updates on renewable energy trends, policy changes and market opportunities.
- Offer risk mitigation strategies and contingency planning support to help CoalPro Energy minimise the potential impact of climate transition risks on their business.
- Organise workshops and seminars to educate CoalPro Energy's team on the latest advancements in renewable energy and clean technology, enabling them to stay ahead of industry developments.



Coal Pro Energy

Sector: Power generation

Sub-sector: Regulated high carbon, parts manufacturer

Location: Yorkshire

These fictional SME profiles are based on personas of acutely vulnerable SMEs in the agriculture and power generation sectors operating in the UK.



SPOTLIGHT: India | Action map for SMEs in the Agriculture and Power Generation Sectors



Strategy

- Incorporate sustainability assessments into the bank's strategic client evaluations. By analysing the current farming practices of clients like Gupta Farm, the bank can pinpoint and prioritise areas for the integration of sustainable farming practices, aligning with broader environmental goals



Risk Management

- Conduct risk assessments to identify potential vulnerabilities and develop risk management strategies that consider climate change impacts on Gupta Farm's operations.
- Provide access to climate data and forecasting tools to help Gupta Farm anticipate and mitigate climate-related risks, such as droughts, floods or heatwaves.



Product Offer

- Collaborate with insurance providers to develop customised insurance schemes that specifically address the climate risks faced by Gupta Farm, such as crop failures due to extreme weather events or pests.
- Design specialised loan packages with lower interest rates aiming to support the client's transition to eco-friendly farming practices.
- Offer financing options to invest in sustainable farming equipment, such as drip irrigation systems, solar-powered equipment or precision farming technologies.
- Provide financial advice and assistance in accessing government grants, subsidies or other incentives available for adopting sustainable farming practices



Customer Service Model

- Establish regular communication channels to update Gupta Farm on the latest sustainable farming trends, technological advancements and policy changes relevant to their operations.
- Offer workshops, training sessions or webinars on sustainable farming practices, inviting experts to share knowledge and experiences.
- Connect Gupta Farm with local or regional agricultural networks and communities to facilitate knowledge-sharing and collaboration among farmers facing similar challenges.



Gupta Paddy Farms

Sector: Agriculture

Sub-sector: Crops high emission intensity

Location: Amritsar, Punjab

These fictional SME profiles are based on personas of acutely vulnerable SMEs in the agriculture and power generation sectors operating in the UK.

SPOTLIGHT: India | Action map for SMEs in the Agriculture and Power Generation Sectors



Strategy

- Formulate transition roadmaps within the bank's strategic planning services. By collaborating with clients like Mehta Turbines, the bank can co-create comprehensive business strategies that consider market demand, competitive landscape and regulatory requirements, ensuring a holistic approach to their transition journey.



Risk Management

- Offer insurance coverage against business disruptions caused by climate change-induced disasters, such as extreme weather events, floods or cyclones.
- Provide access to climate data and forecasting tools to help Mehta Turbines anticipate and mitigate climate-related risks, allowing for more informed decision-making.



Product Offer

- Facilitate access to tailored loans and financing options specifically designed to support Mehta Turbines' technology upgrades, capacity expansion and green certifications.
- Collaborate with industry experts to offer guidance on obtaining relevant green certifications and standards, such as ISO 14001 for environmental management or LEED certification for sustainable manufacturing.
- Explore partnerships with suppliers and manufacturers of renewable energy equipment to ensure access to the latest technologies and components required for parts manufacturing.



Customer Service Model

- Organise workshops and training sessions on renewable energy trends, technological advancement and business opportunities in the sector tailored to Mehta Turbines' specific needs.
- Provide regular updates and information on policy changes, government incentives and market trends related to renewable energy to support informed decision-making.



Mehta Turbines

Sector: Power generation

Sub-sector: Unregulated high carbon

Location: Jharkand

These fictional SME profiles are based on personas of acutely vulnerable SMEs in the agriculture and power generation sectors operating in the UK.

Phase 3: Test and reflect on how to ensure the meaningful participation of acutely vulnerable SMEs



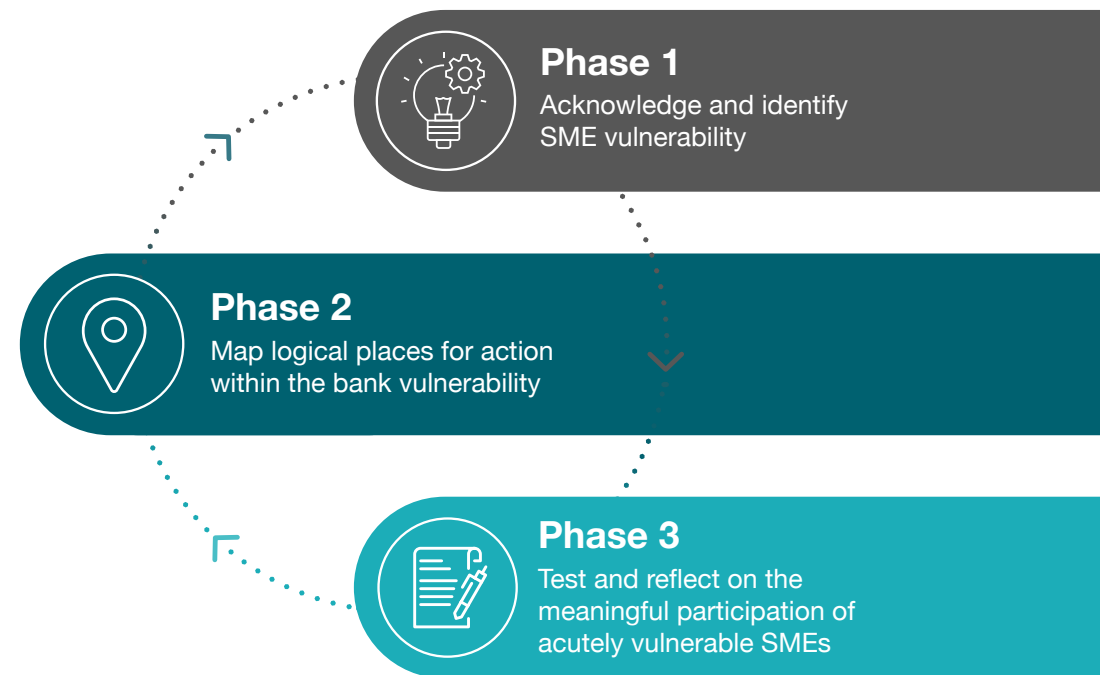
Meaningful participation is not merely a term; it is the essence of a just transition. While identifying acutely vulnerable SMEs is a pivotal first step toward net zero, it is continuous engagement that truly fosters an inclusive journey.

Inclusion is not a one-time act but a sustained commitment, and in the context of a just transition, it means ensuring that every stakeholder, especially acutely vulnerable SMEs, is seen and heard.

Banks are partners to their clients. They provide financial services as well as support, guidance and the co-creation of solutions that cater to the unique needs of each client. In the journey to net zero, this partnership takes on an even more profound significance – listening, understanding and iterating based on the feedback and insights of SMEs.

By giving acutely vulnerable SMEs a voice, banks are empowering their clients and enriching their own understanding of the challenges and opportunities that lie ahead. This voice becomes the compass that guides the iterative process across the phases of this guide – a co-created journey during which both banks and SMEs evolve. This process is captured in Figure 8 as a continuous loop of identification, support, feedback and iteration. Each cycle refines the approach, making it more aligned, effective and inclusive.

Figure 8: Iterative interaction between phases

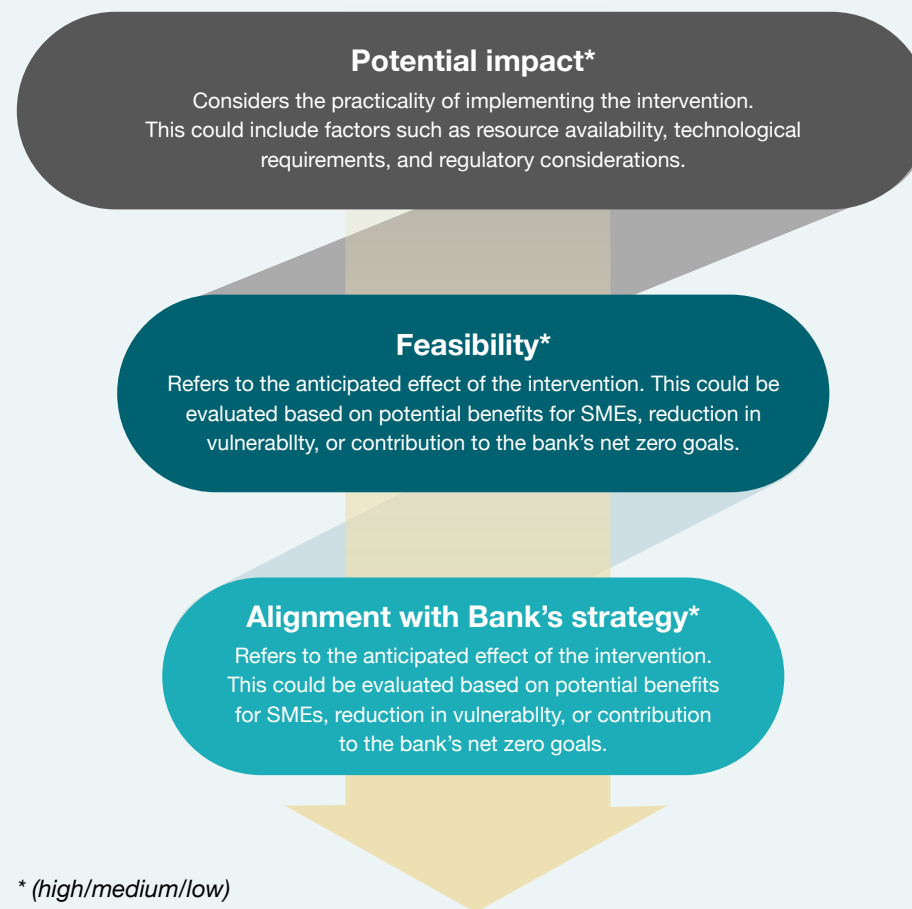


Step 1: Classifying and prioritising interventions

Based on the actions identified in Phase 2, banks need to identify a set of interventions that can be prioritised based on factors such as potential impact, feasibility and alignment with the bank’s overall strategy. From the prioritised list, a subset of interventions can be selected for pilot testing. Dedicated teams or individuals with relevant expertise and understanding of SMEs’ climate-related and wider social, economic and environmental challenges need be assigned to lead each intervention. This ensures that the interventions are effectively implemented on a smaller scale allowing for close monitoring of progress and feedback collection from both the SMEs and internal stakeholders. An intervention prioritisation matrix is presented in Figure 9.

This matrix can be adjusted and customised as per the bank’s unique needs and priorities, making it a versatile tool for decision-making.

Figure 9: Intervention prioritisation matrix for pilot testing



Step 2

Step 3

Step 1

Step 2: Pilot testing

For each intervention, a detailed plan for implementation needs to be developed including clear objectives, success metrics and timelines. For example, SMEs such as Mehta Turbines in the power generation sector require access to tailored loans and financing options that can support them with technology upgrades, capacity expansion and green certification.

Step 3



Step 1

Step 2

Step 3: Reflect on how meaningfully the acutely vulnerable SMEs participated in each pilot intervention

By reflecting on the success of interventions, banks help ensure that acutely vulnerable SMEs are beneficiaries and active participants in the net-zero journey. Pilot testing offers a snapshot of the interventions in action. However, the true measure of success lies in the depth of participation and sense of ownership felt by acutely vulnerable SMEs. The reflection exercise is critical for this as it provides a platform for these SMEs to voice their experiences, challenges and aspirations, both assessing the effectiveness of the interventions and deepening their sense of ownership over their net-zero pathway. Banks, by soliciting direct feedback from acutely vulnerable SMEs, are reinforcing the principle of inclusion. They are sending a clear message that the journey to net zero is a shared one, where every challenge faced, every item of feedback given and every suggestion made by acutely vulnerable SMEs holds value. This co-ownership fosters a sense of trust and partnership, making the transition journey more collaborative and resilient.

The insights gained from the reflection phase are invaluable. They serve as the foundation upon which future interventions are built and ensure these interventions are more aligned, inclusive and effective.

The following criteria can help banks assess the extent of meaningful participation of acutely vulnerable SMEs in each pilot intervention (Table 10).

Implementing these criteria in the assessment of each intervention allows for a comprehensive understanding of how effectively it engaged SMEs and enabled their participation in a process that would create a sense of co-ownership. Such evaluation can inform improvements in future interventions, ensuring they are more inclusive and impactful.

Table 10: Intervention criteria to assess the meaningful participation of acutely vulnerable SMEs

| Criteria | Questions |
|-------------------------------------|--|
| Awareness and understanding | <ul style="list-style-type: none"> <input type="checkbox"/> How does the intervention assist acutely vulnerable SME clients in comprehending how the bank's actions/support will aid in achieving their net-zero goals? <input type="checkbox"/> Were the SME clients involved in determining the knowledge and capacity-building requirements for this intervention? <input type="checkbox"/> Are any dedicated components for knowledge sharing and/or capacity building included in the intervention plan? |
| Access to information and resources | <ul style="list-style-type: none"> <input type="checkbox"/> How effectively did the intervention convey its objectives, procedures and advantages to the SME client? Was the information easily accessible and comprehensible to the SME? <input type="checkbox"/> Were the resources linked to the intervention (such as applications and training programmes) readily accessible to the SME client? |
| Inclusion and representation | <ul style="list-style-type: none"> <input type="checkbox"/> Was there a method for the SME client to offer suggestions or feedback during the intervention, e.g., via suggestion boxes, feedback forms, discussion forums or a dedicated relationship manager function? |
| Fair and equitable treatment | <ul style="list-style-type: none"> <input type="checkbox"/> Did the SME client have an equal chance to benefit from the intervention? <input type="checkbox"/> Did the intervention take into account the distinct challenges encountered by various types of SMEs and offer customised support? This could be assessed by examining the demographic distribution of the benefited SMEs and soliciting feedback from those who felt excluded |
| Impact and outcomes | <ul style="list-style-type: none"> <input type="checkbox"/> Did the intervention bolster the SME client's resilience against climate-related transition risks and the broader environmental, social and economic challenges encountered in each sector and region? |

Implications arising from the use of this Bank Action Guide

Any implementation of this Bank Action Guide has broad implications including around a bank's duty of care, policy advocacy and action.

Duty of care

Identifying the acute vulnerability of SME clients is a critical step in banks' risk assessment, but at the same time it carries the risk of providing an evidence base for banks to exit vulnerable clients and/or increase their cost of capital. This raises important questions for further consideration: what duty of care do banks owe to their clients, and what opportunity exists for the bank –as regards their licence to operate, community resilience and commercial terms – by providing support, financial or otherwise?

Policy advocacy and action

The risk that implementing the steps of this guide leads to higher costs of capital for acutely vulnerable SMEs requires banks to engage government, either for public-private partnerships or supportive policies. Banks' access to and visibility over acute vulnerabilities in the economy, including in the transition to net zero, make them ideally placed to advise on and advocate for supportive policies for vulnerable SMEs. Banks and other financial institutions could explore how best to use this guide as a tool to support calls for policy action and advocate for the value of societal resilience.

Further ways in which banks can support SMEs

- Thought leadership & collaboration: Banks can collaborate with regulators, offering advisory services and best practices to shape a just transition. Initiatives such as JETPs²⁵ exemplify the larger role banks can play. Given the high costs and potential low returns of financing a just transition, banks can also consider collaborative approaches with multilateral agencies and governments.
- Re-thinking credit risk: As SMEs with significant transition risks adapt their models, banks must also pivot, adopting forward-looking evaluation methods.
- Leveraging fintech and climate tech: Digital channels, fintech and climate tech can address many transition challenges. Banks can connect global opportunities with client needs, fostering a more seamless transition.
- Building customer collaboration: Banks can facilitate connections across value chains, integrating impacted SMEs into larger corporate networks that can offer support during the transition.

²⁵ JETPs are a nascent financing cooperation mechanism that aims to help a selection of heavily coal-dependent emerging economies make a just energy transition. The goal is to support these countries' self-defined pathways as they move away from coal production and consumption in a way that addresses the social consequences involved, such as by ensuring training and alternative job creation for affected workers and new economic opportunities for affected communities.

Wider relevance of the guide

The approach presented in the guide can be useful for a multitude of stakeholders – not only for banks but also policymakers and SMEs themselves.



Policy Relevance

By applying the SME Vulnerability Index and vulnerability indicators, policymakers can gain a more granular understanding of the challenges that SMEs face. They can use these insights to draft more precise, effective and inclusive policies. By understanding the varying levels of vulnerability, policymakers can strategically prioritise investments and resource allocation to support the most vulnerable sectors' adaptation and mitigation efforts. This targeted intervention makes best use of scarce public resources. Lastly, policymakers can leverage this guide to build advocacy strategies and campaign for policy changes. By demonstrating a clear understanding of SME vulnerabilities, they can effectively engage other stakeholders, such as banks and investors, to drive collaborative efforts toward a net-zero transition.



Corporate Relevance

For larger corporations, this guide could be used to gain insight into the vulnerabilities of SMEs within their supply chains, enabling them to support or incentivise suppliers to become more resilient.



SME Relevance

For SMEs, the guide can shed light on their vulnerabilities and aid them in understanding the risks they face. It can serve as a starting point for dialogue and collaboration with their banks, policymakers and investors, helping them to secure support in their transition to sustainable practices.

Conclusion

SMEs play a central role in the global economy. Without them, there is no transition to net zero or economy-wide climate resilience.

However, SMEs face significant climate-related transition risks, and certain SMEs are acutely vulnerable due to their socioeconomic circumstances. A just transition involves addressing both the distributional impacts and the inclusion dimension of transition. This requires identifying the needs of marginalised groups, such as SMEs facing high climate-related transition risks, and enabling them to participate in defining net-zero actions. This approach is critical for gaining the acceptance of civil society and ensuring that the transition is seen as not only necessary but also as an opportunity to create a more equitable and sustainable future.

Banks play a crucial role in this process and face reputational and financial risks if they do not pursue a just transition. Supporting acutely vulnerable SMEs and the broader community through the transition can help banks maintain their social licence to operate and forge stronger bonds with clients and communities.

Supporting acutely vulnerable SMEs in their journey to net zero requires a nuanced, informed and flexible approach from banks. By identifying SME vulnerabilities, mapping out logical places of action and engaging in iterative testing and reflection processes, banks can play an active role in facilitating a just transition.

This guide supports banks to do this by:

1. Providing a structured approach to acknowledging and identifying SMEs that are acutely vulnerable to the net-zero transition (Phase 1).

2. Mapping logical places of action on a just transition for SMEs within five aspects of their business and operational model (strategy, risk management, product offer, customer service model and employees). Here, banks can leverage their understanding of SME vulnerabilities – acquired during Phase 1 – to reconfigure their approach to identify actionable strategies to support acutely vulnerable SMEs in specific sectors and geographies. This is Phase 2.
3. Offering a process by which bank action on a just transition for SMEs can be improved over time. This is Phase 3.



Phase 1

Acknowledge and identify SME vulnerability

- Empirical focus
- Specific and in-depth
- Wider relevance



Phase 2

Map logical places for action within the bank vulnerability

- Land across the bank
- Help ascertain capacity building needs
- Align with climate and nature workstreams



Phase 3

Test and reflect on the meaningful participation of acutely vulnerable SMEs

- Blueprint for meaningful participation
- Inform future direction

Through the application and adaptation of the approach and early steps detailed by this guide, banks can begin to facilitate a just transition for acutely vulnerable SMEs and assert their role as key partners to communities and civil society, contributing to a more resilient, inclusive and sustainable global economy.

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Glossary of terms used

| | |
|---|--|
| Net-zero transition | The UN (2023) defines net zero as achieving a balance between the amount of greenhouse gas emissions produced and the amount removed from the atmosphere (by a given time (e.g., 2050)). There are two different routes to achieving net zero, which work in tandem: reducing existing emissions and actively removing greenhouse gases. |
| Just transition | The just transition is an umbrella term for other concepts marrying environmental concerns with social justice – including environmental justice and climate justice. It includes a) recognising that all groups of people need inclusive access to opportunities, resources and benefits from the transition to a green economy and b) considers the distributional impacts on different groups of people. In different geographical contexts, where there is a diverse range of socioeconomic and political structures alongside a myriad of cultures, the meaning of just transition needs to be flexible to reflect differences in and between countries/places. |
| Distributional impacts | Distributional impacts refer to the fair allocation of the benefits and harms associated with transitions including addressing issues of access, historical injustices, the current allocation of transition outcomes and the consideration of future impacts of transition processes. |
| Inclusion | Inclusion here refers to the (1) recognition in existing banking operations and decision-making of SMEs facing high climate-related transition risks and additional social, environmental and economic vulnerabilities and (2) a focus on enabling their participation in the processes that will shape the SME experience of the net-zero transition, from bank products or service offer to the wider context that banks can influence. |
| Marginalised (vulnerable) groups | Marginalised (vulnerable) groups are organisations or communities that experience discrimination and exclusion (social, environmental and economic) because of unequal power relationships across economic, political, social, environmental and cultural dimensions in each geographical and sectoral context. |
| Identification | Identifying the decarbonisation needs and social, environmental and economic vulnerabilities of SMEs facing high climate-related transition risks in diverse sectoral and geographical contexts. |
| Meaningful participation | A process put in place to ensure that acutely vulnerable SMEs are engaged in decision-making that impacts them. The meaningful nature of the engagement refers to doing so in an inclusive and equitable manner. |
| Small-medium enterprise (SME) | Different organisations and countries set their own guidelines for defining SMEs, often based on headcount, sales or assets. The research adopts the International Finance Corporation (World Bank) definition ²⁶ of an SME of meeting two of the following three criteria: employees (10–300), total assets (US\$ 100,000–US\$ 15 million), annual sales (US\$ 100,000–US\$ 15 million) or if the loan to it falls within the relevant SME loan size proxy (< US\$ 100,000–< US\$ 2 million). |
| Acutely vulnerable SMEs | SMEs who face high climate-related transition risks and social, environmental and economic factors that make them acutely vulnerable to those transition risks. |
| Climate-related transition risks | The Task Force on Climate-related Financial Disclosures (TCFD) notes that transitioning to a lower-carbon economy may entail extensive policy, legal, technology and market changes to address mitigation and adaptation requirements related to climate change. Depending on the nature, speed and focus of these changes, transition risks may pose varying levels of financial and reputational risk to organisations. |