

Shift

CLIMATE CHANGE AND HUMAN RIGHTS

*AVOIDING PITFALLS FOR
FINANCIAL INSTITUTIONS*

THE LEADING CENTER OF EXPERTISE ON THE UN GUIDING PRINCIPLES ON BUSINESS AND HUMAN RIGHTS

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Introduction

This is a companion piece to Shift's report "[*Climate Action and Human Rights: How the UN Guiding Principles can help companies respect human rights when responding to climate change*](#)".

The information in the *Climate Action and Human Rights* report is equally relevant for financial institutions. However, as intermediaries in the world economy, **financial institutions face specific challenges and opportunities when integrating their responses to both climate change and human rights risks.**

Shift explored some of these in a dedicated session of its Financial Institutions Practitioners Circle in June 2022, with member banks and export credit agencies. This paper is based, in part, on the findings from that workshop as well as insights gained from Shift's bilateral work with financial institutions and its own independent research.

Finally, this paper is aimed at readers that are familiar with the UNGPs' terminology. See Shift's "Beginners Guide to the UNGPs"¹ for more background on human rights and the UNGPs.

The need for a human rights perspective

Climate change is a cross-cutting and systemic risk that can have knock-on effects across regions, sectors and businesses. As the Bank for International Settlements observed: "*climate change represents a colossal and potentially irreversible risk of staggering complexity.*"² As a result, climate change risk in financial institutions has been increasingly scrutinized by supervisory authorities and regulators in recent years.³

Many banks have made net zero commitments and joined alliances such as the Glasgow Financial Alliance for Net Zero (GFANZ) that are aimed at accelerating the decarbonization of the economy. There is also increasing pressure from stakeholders on financial institutions regarding the greenhouse gas emissions generated by their portfolios.

¹ See <https://shiftproject.org/resources/ungps101/>

² See <https://www.bis.org/publ/othp31.pdf>

³ See for example, the ECB:

<https://www.bankingsupervision.europa.eu/press/pr/date/2022/html/ssm.pr221102~2f7070c567.en.html>;
<https://www.bankingsupervision.europa.eu/ecb/pub/pdf/ssm.thematicreviewcerreport112022~2eb322a79c.en.pdf>.

In June 2022, the Basel Committee on Banking Supervision (the primary global standard setter for the prudential regulation of banks), published principles for the management and supervision of climate related financial risks that are intended to serve as a common baseline for internationally active banks:

<https://www.bis.org/press/p220615.htm>

As financial institutions respond to the requirements of supervisors and stakeholders, their focus is often on the **financial** and **environmental** aspects of climate change. The impact of climate change on people, and how financial institutions can amplify or reduce that impact, is not always obvious, and generally receives less attention in climate strategies and risk management efforts. There also tends to be more focus on transition risk and less on physical risk, despite the fact that physical climate change is becoming an ever-larger threat.

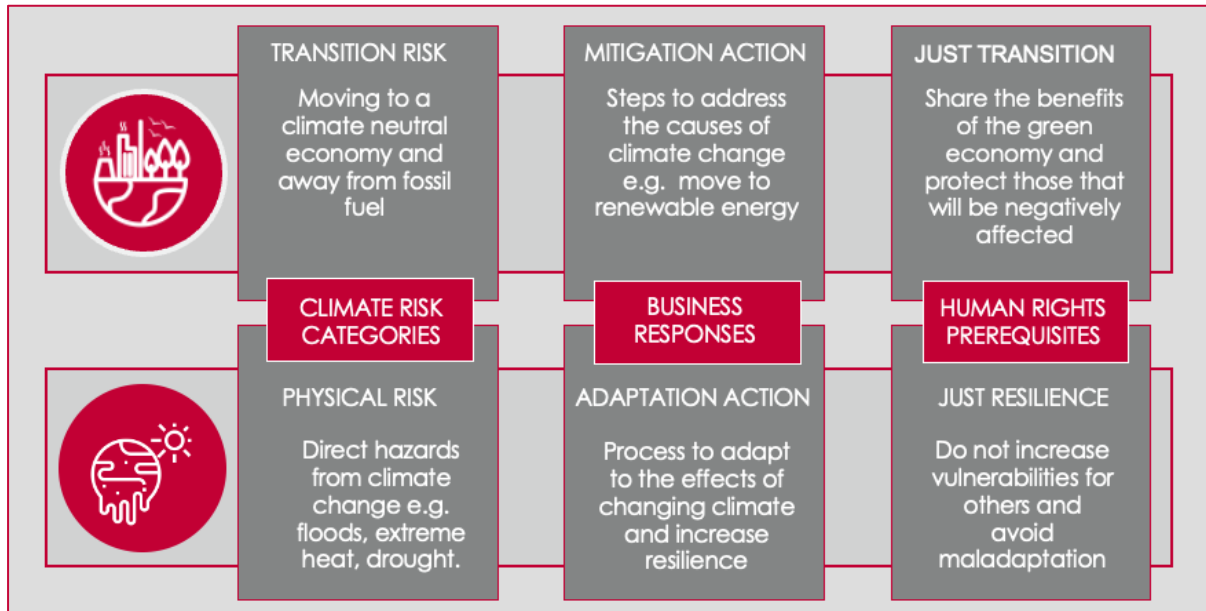
The UNGPs were endorsed at the UN Human Rights Council in 2011 following an extensive consultation process with businesses, governments and civil society, setting **the global, authoritative standard on business respect for rights**. They provide a helpful and practical framework for financial institutions to incorporate a social/human rights lens in their climate strategies, to achieve a just transition, and to avoid some of the pitfalls identified in this paper.

Terminology

The terms summarized below are the key climate-related concepts referenced in this paper in connection with the responsibility of all businesses to respect human rights when responding to climate change risks.

- **Transition risk** refers to risk arising from the extensive policy, legal, technological, and market changes needed to transition to a lower-carbon economy to reduce the amount of greenhouse gases that cause climate change. All these changes could affect economies and businesses. To address transition risk, companies take **mitigation action** to reduce the greenhouse gases that cause climate change.
- **Physical risk** refers to the changes in weather and climate that result from climate change that could affect economies and businesses. To address physical risk, companies take **adaptation action** to adjust to the effects of climate change.
- The term **Just Transition** typically refers to the idea that the transition to a low-carbon economy should happen in a way that fairly shares the benefits of the transition while supporting those who will be negatively impacted. In this report, we look at the ways in which respect for human rights across companies' **mitigation actions** is essential to achieve that objective.
- The term **Just Resilience** is increasingly used in policy documents in the context of physical risk and climate adaptation. In this report it refers to the expectation that companies should respect human rights in the context of their **adaptation action** and in doing business in an operating environment that is changing as a result of climate change.

Figure 1: Terminology



Pitfall 1: Focusing on risks to the business - but missing risks to people

The UNGPs set out the responsibility of financial institutions – as business enterprises – to address impacts on people that they are involved with through their own activities and as a result of their business relationships, including with clients and portfolio companies. This includes impacts that arise as a result of **transition** or **adaptation**-related activities. To meet their responsibilities under the UNGPs, institutions should implement an ongoing risk management process, referred to as “*human rights due diligence*” in the UNGPs.

TRADITIONAL ENVIRONMENTAL, SOCIAL AND CLIMATE RISK MANAGEMENT

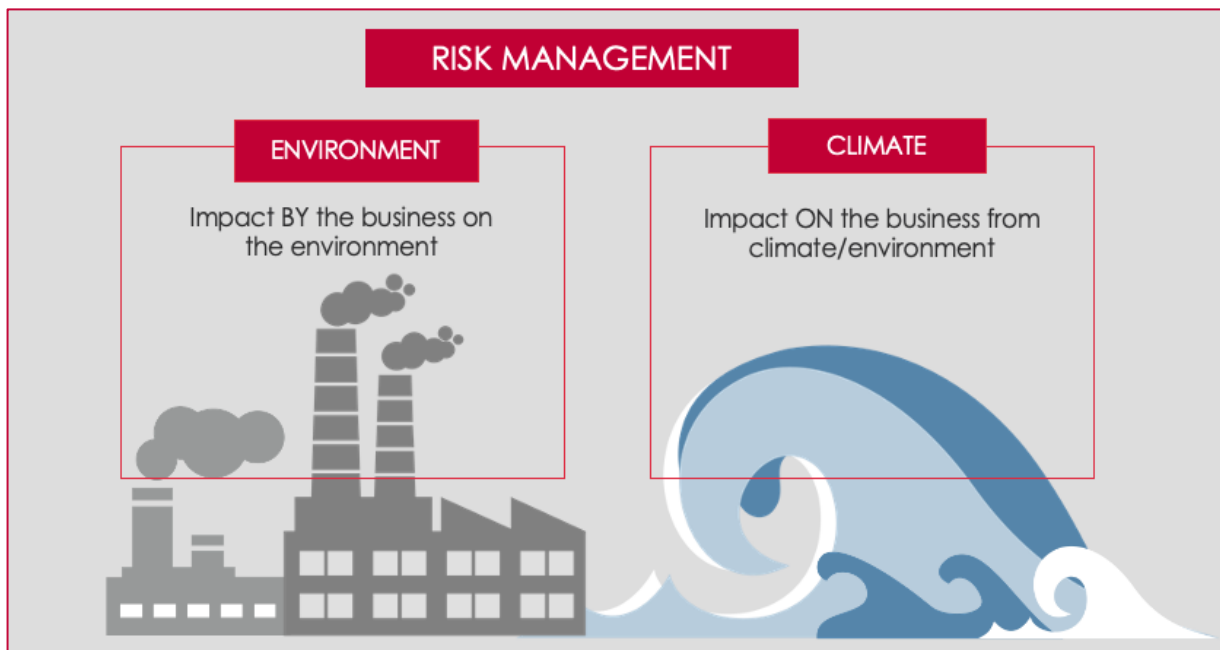
It is possible to include human rights due diligence in the wider enterprise risk management of financial institutions, as long as it goes beyond simply identifying and managing material risks to the institution itself, to also include **risks to people**. Environmental and social risk management systems in banks have traditionally been focused on assessing how environmental and social impacts generated **by** their borrowers or investees could create credit or reputational risks for the bank. As such, in the risk management process, the question is often: “*what are the risks for the bank that would result from impacts of the bank’s clients on the environment or people?*”

More recent climate change risk management processes expand the focus by considering the effect of climate change **on** the business activities of borrowers. Climate change risk management adds an additional assessment layer with the question: “*what are the risks for the*

bank that would result from impacts of the changing environment/climate on the borrower's business?"

As shown in the example below of a factory financed by a bank, the bank's traditional focus would be on the financial risks to the factory that may result from the impact of air pollution it generates, and any resulting risks to the bank itself. With climate risk management, the focus is expanded to also consider, for example, the impact of increased flood risk from climate change **on** that factory, and by extension on the bank.

Figure 2: Traditional Risk Management



In other words, risk management systems in banks are generally *inward* facing: they are usually set up to manage reputational risks that could result in material financial consequences for the bank. Binary “go/ no-go” decisions on clients have traditionally been based on a cost-benefit analysis, whereby the cost to the institution of preventing or mitigating a relevant risk is weighed against the cost to the institution if the risk materializes.⁴

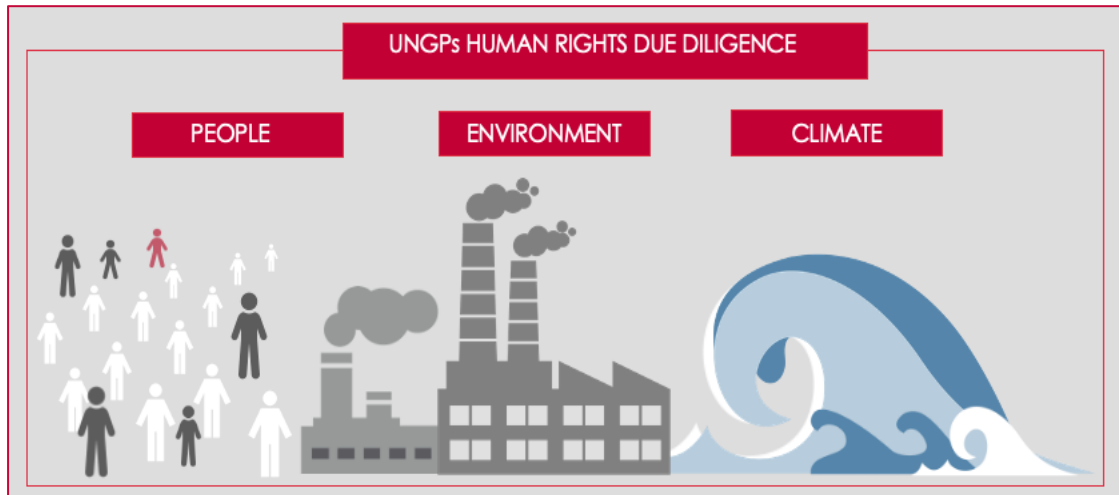
RISK MANAGEMENT INCORPORATING THE UNGPS

The UNGPs require financial institutions to adopt an *outward* facing risk management approach that factors in potential impacts on peoples' human rights to which the institution may

⁴ See reflections on traditional bank decision making in our previous FIs Circle output on Using Leverage with Clients (page 1): https://shiftproject.org/wp-content/uploads/2021/07/FIs-Circle_Summer-2021_Using-Leverage-to-Drive-Better-Outcomes-for-People.pdf

be connected. Under a traditional risk management approach, the likelihood of financial loss might be low enough that the institution may decide not to take action to prevent or mitigate it. However, viewed through a UNGP lens, that same situation might represent such a severe risk to people’s health or livelihoods that the institution would have a responsibility to take action in response.

Figure 3: UNGPs Human Rights Due Diligence for Climate Change



In the context of responding to climate change, this is particularly important because some climate change-related actions or investments might reduce financial risk to banks – and might even have beneficial climate impacts – but still increase human rights risks. In taking risk management decisions at a portfolio level or adapting business strategies to respond to climate change, banks may overlook potential human rights impacts. For example:

- **Decreasing reliance on climate-vulnerable collateral:** if there are geographical areas in a mortgage portfolio that are at higher risk of sea level rise or floods, a bank may decide not to provide finance in those areas in future, which could result in a decrease in property values, leaving poorer homeowners financially destitute if they cannot refinance or repay their loans.
- **Setting a lower loan to value ratio for residential mortgages that do not meet sustainability criteria (for example through energy labels)** may mean that vulnerable clients that do not have access to capital to invest in upgrading the energy sustainability of their homes are excluded from the housing market.
- **Requiring that clients secure insurance** against extreme weather events (e.g. droughts for farmers) may result in **climate-vulnerable property owners being unable to secure or maintain financing** as climate change worsens and their assets become uninsurable.

- **Ill-considered transition plans:** Requiring clients in greenhouse gas-intensive industries to have an energy transition strategy without also making sure such strategies take account of the impact of the transition on low-paid workers and local communities that are economically dependent on their business.

Measures taken by banks to avoid the financial effects of climate change risk may also have human rights impacts. For example, a bank may grant only shorter-term loans in areas or sectors where the impacts of climate change will only become evident over a longer time horizon. Clients that receive these loans may not be able to refinance them when they mature, which could have serious effects on those already financially vulnerable.

Pitfall 2: Suffering from “carbon tunnel vision”: missing risks to people arising from the physical risks of climate change

Financial institutions typically do not own many physical assets and their own operations also do not generate as much greenhouse gas as companies in other industries. The main source of climate risk for financial institutions, therefore, comes from their loan and investment portfolios and the types of climate risks to which their clients are exposed. Institutions with many fossil fuel assets could be exposed to more *transition* risk and those with exposure to assets that are sensitive to the physical impacts of climate change, could be more exposed to *physical* climate change risk. However as explained in Appendix A, most businesses are likely to experience **both** physical risk **and** transition risk. The severity of the risks and whether there will be more physical risk or more transition risk, will depend on policy decisions taken to reduce greenhouse gases worldwide. Since financial institutions’ clients are likely to experience both types of risk, the same is true for financial institutions themselves.

According to participants in Shift’s FIs Circle workshop, significant internal resources and attention have been (appropriately) mobilized to align portfolios with net zero targets. However, physical climate risk and the human rights impacts of the **response** to climate change receive less attention. The European Central Bank recently assessed how 186 banks are tackling climate and environment risks.⁵ According to the report, banks have focused on transition risk and in particular on the impacts of policy changes and regulation on credit risk. Where physical risk is assessed, banks tend to have a narrow focus on the impact of floods and droughts on credit risk (thereby ignoring other climate hazards and other risk categories beyond credit risk).

The attention of financial institutions to transition risk is fully justified given the urgent work to be done: every year since the Paris Agreement was adopted, the 60 largest banks in the world

⁵ See here from the ECB:
<https://www.ecb.europa.eu/press/blog/date/2022/html/ecb.blog221102~7599e5851e.en.html>

provided more fossil fuel finance annually than they did in the years preceding the 2016 adoption of the agreement. (This is despite the fact that many banks have made commitments to be Paris-aligned, which would imply a decreasing trend in fossil fuel finance.)

Financial institutions have the opportunity to be a tremendous accelerator to finance a climate neutral economy. For example, banks that represent 95% of all lending to European corporates have the ambition to be Paris aligned, whereas only 8% of European corporates have set similar targets. This creates a gap of EUR 4 trillion between the potential demand and supply of Paris-aligned financing, which means financial institutions have to engage with their clients to transition to a climate neutral economy.⁶

However, despite the urgent need to focus on transition risk, financial institutions should also focus on the consequences of increasing physical climate change. Increasing heat, more frequent and longer droughts, rising sea levels and more frequent and severe floods could lead to significant impacts on human rights.⁷ Clients of financial institutions could be connected to impacts on vulnerable people through their actions (or failure to act) to prevent or mitigate impacts from physical risk, for example where these lead to unsafe working conditions, affect access to water or impact livelihoods. One way to gain a holistic view of physical risk and transition risk, is to work with climate change risk heat maps.

Constructing climate change risk heat maps is an emerging practice at banks that is being encouraged by bank regulators and supervisors.⁸ Adding an additional layer to financial climate risk heatmaps to integrate the impact on people as envisaged by the UNGPs, would enable banks to better identify how they may be connected with such impacts, and to take appropriate action.

Risk heat maps can be segmented across sectors and/or countries. For example, where a bank has exposure to:

- Oil and gas in a Middle Eastern state, it may classify the transition risk as high because the assets could be at risk of becoming stranded if policies are adopted to move to cleaner forms of energy. Physical risk may be low, if the assets are not located in areas where there are particular climate hazards.
- Irrigated farming in reclaimed deserts in South America, physical risk may be classified as high because temperatures are likely to increase and water could become scarcer. Transition risk may be classified as low because the bank's loans are set to be repaid well before any changes in market demand or the bank may have security over its loan

⁶ See <https://www.oliverwyman.com/our-expertise/insights/2021/mar/running-hot.html>

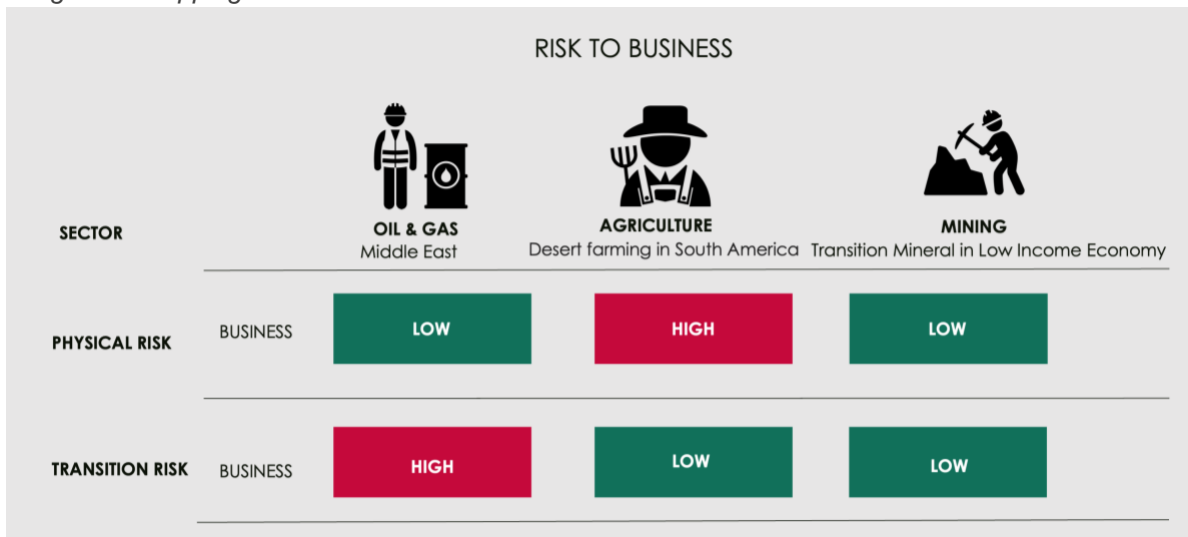
⁷ See Shift's main [Climate Action and Human Rights report](#).

⁸ See <https://www.bis.org/bcbs/publ/d518.htm>

that could be realized if the borrower is unable to repay due to poor harvests as a result of climate change.

- Mining of a transition mineral in a low-income economy, physical risk may be classified as low if the mines are not located in areas with high exposure to physical climate hazards. Transition risk would also be low because demand for the mineral is likely to increase significantly from technologies needed in a climate neutral economy.

Figure 4: Mapping with a Risk to Business Lens



However, if a similar heat map is constructed for potential **human rights impacts** in the portfolio, the result is significantly different as shown below.

Figure 5: Mapping with a Risk to People Lens



- In the **oil and gas** sector, transition risk for people arises where stranded assets lead to a loss of livelihoods for workers and communities. The bank should engage with its

clients on the fair treatment of workers in such a scenario (*Just Transition*). However, if it also considers impacts on people arising from physical risks of climate change, it may discover that as intense heat becomes more common, workers are at risk of having to work in dangerously high temperatures. The bank should also engage with the borrower on its strategies to create safer working conditions for workers (*Just Resilience*).

- In the **agriculture** sector, workers may again be exposed to Transition Risk, for example where job losses occur if European consumers boycott imported produce due to high emissions from air freight (*Just Transition*). There could be a high risk to people from the physical effects of climate change as they harvest crops in extreme heat. Here the bank should engage with relevant clients in its portfolio on creating safe working conditions (*Just Resilience*).
- Finally, physical risks may be extremely high for people working in mines – particularly in geographies with lower standards of occupational health and safety – due to higher temperatures or increasing cases of vector borne diseases due to climate change (*Just Resilience*).

Pitfall 3: Prioritizing action on impacts based on their proximity to the bank rather than their severity

After a financial institution identifies potential impacts on people, the next step is to consider what action to take to address them. A common pitfall for all businesses is to focus on those impacts that are closest to its operations or that are the easiest to fix. As explained in the *Climate Action and Human Rights* paper, the UNGPs are clear that when impacts on people cannot be addressed all at once, the focus should be on those impacts that would be most severe.

Consider a hypothetical example in which the bank's immediately available resources for engagement dictate that it must work out which of the issues in Figure 5 above it should focus on first. The bank may be inclined to focus on impacts that are most directly in the control of their clients and therefore easiest to influence, such as physical risk to workers in the oil and gas sector, where the bank would be able to negotiate with a few key clients and agree concrete steps to improve health and safety at sites. However, a human rights lens requires that the bank prioritize based on the **severity** of the potential impacts on people (considering their scale (how grave they would be), scope (how widespread they would be) and remediability (how hard they would be to put right)) and, secondarily, the **likelihood** of their

occurrence⁹. In that case, the bank may in fact conclude that it should rather be focusing first on physical risk to vulnerable mine workers in the low-income country and/or to agricultural workers harvesting produce in climate-impacted areas.

Figure 6: Illustrative Prioritization Map



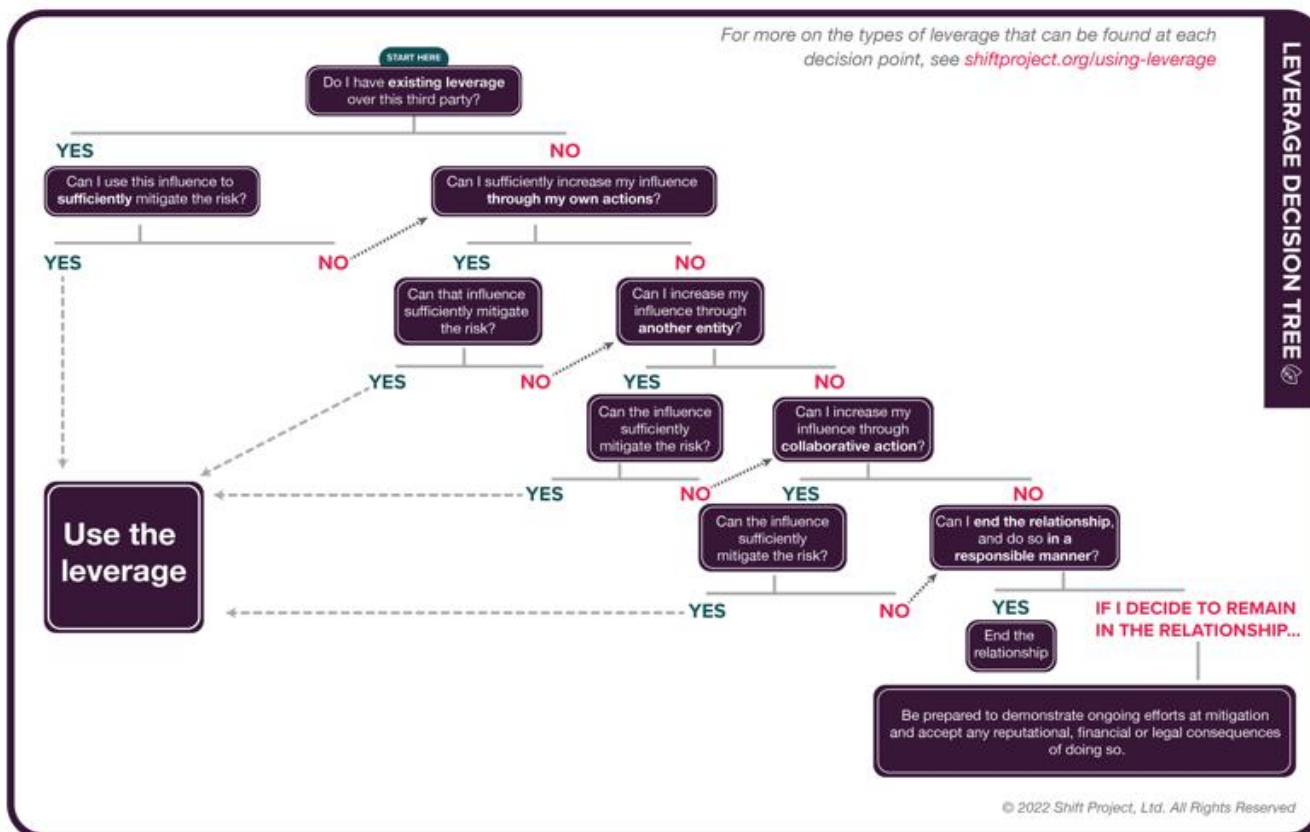
The bank and even its client may be several steps removed from these impacts. However, under the UNGPs they each have a responsibility to use **leverage to try to improve the situation for severely affected people**. Ten years of experience with implementing UNGPs have given rise to a body of learning on the use of leverage by banks¹⁰ and opportunities for building leverage, including commercial, contractual, expertise, relationship and collaborative leverage. The last of these is particularly relevant in cases of endemic impacts such as those in the mining example. This learning should be drawn upon to inform mitigation efforts around social impacts associated with climate change.

Finally, the bank may need to make difficult decisions about which client relationships to maintain, and which to terminate, in light of severe actual or potential impacts on people associated with client inaction on transition or physical risk. The UNGPs make clear that where an organization lacks, and cannot create, the leverage necessary to reduce harms, then it should consider ending the business relationships that are leading to the harm, while taking account of any additional human rights impacts of doing so.

Figure 7: Leverage Decision Tree

⁹ As explained in the *Climate Action and Human Rights* report, when prioritizing risk to people, the severity of impacts on people is weighted more heavily than the likelihood of its occurrence, such that low likelihood but high severity impacts should fall amongst those that are prioritized.

¹⁰ See Shift's previous FI's Circle publication on Using Leverage with Clients to Drive Better Outcomes for People: <https://shiftproject.org/resource/using-leverage-to-drive-better-outcomes-for-people/>



As illustrated in the figure above, the UNGPs also leave open the possibility that a business relationship may be crucial and unable to be terminated whether for legal or operational reasons. This might be the case, for example, where a form of renewable energy is known to be critical for the just transition but its production is commonly connected to severe, state-sponsored forced labor. In such a case, the UNGPs require that companies, including financial institutions, justify their continued connection through their leverage efforts. In this case, that may include pushing portfolio companies to ensure they can trace the value chains of their products and, where problematic sources are identified, that they develop alternative sources of supply over time. For FIs especially, it will also involve exploring the role they can play in making capital available for a transition away from regions associated with the impacts.

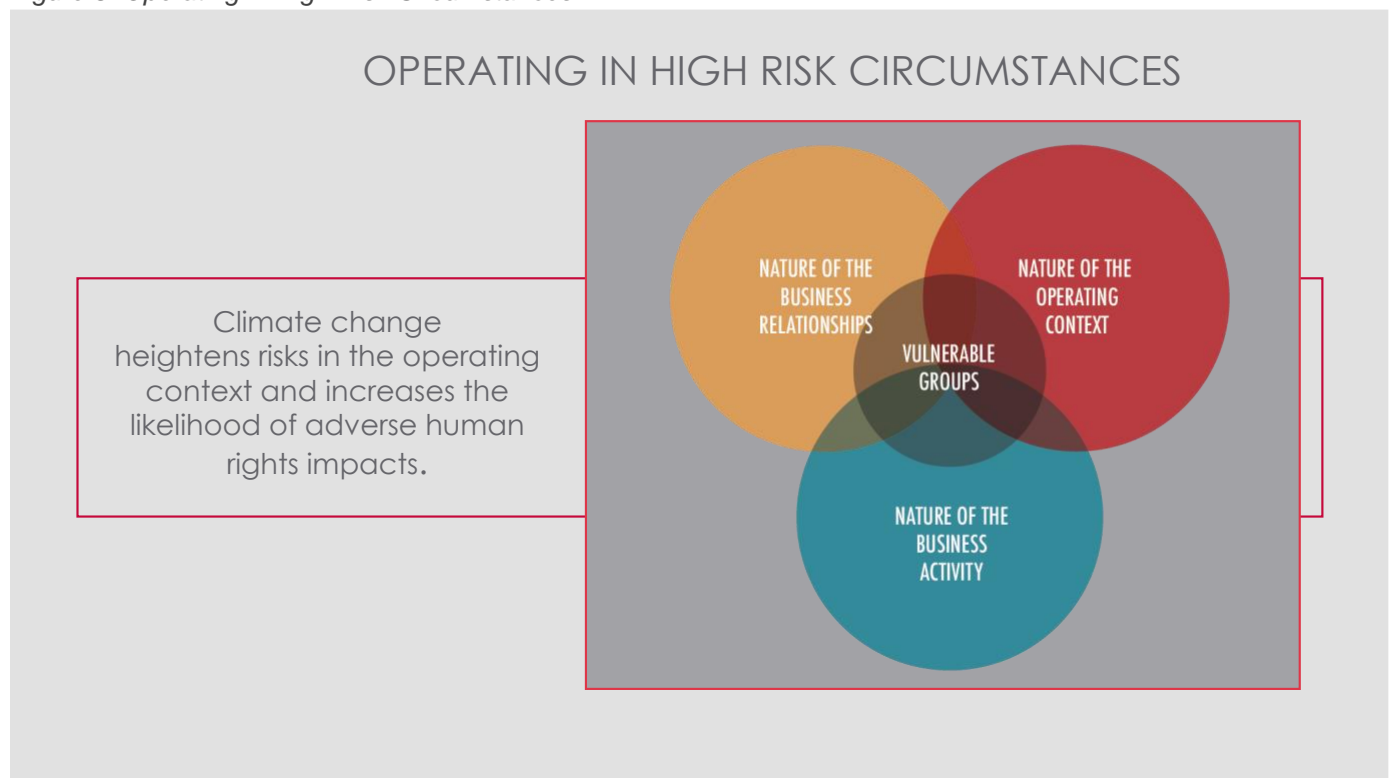
Pitfall 4: Overlooking indirect climate risk transmission channels in human rights due diligence

Risk transmission channels are “*the causal chains that explain how climate risk drivers give rise to financial risks that impact banks directly or indirectly through their counterparties, the*

assets they hold and the economy in which they operate.”¹¹ Because financial institutions are often several steps removed from the direct impacts of climate change, there is a danger that certain human rights impacts could be overlooked.

The UNGPs guide companies to consider the potential increased risk of impacts on people arising from higher-risk operating **contexts** and the **vulnerability** of certain groups of people in those contexts, particularly where those groups are already subject to marginalization and inequality. Transmission channels are a useful way of understanding the broader context within which banks operate, and of ensuring that policies and actions are considered within that context. As a human rights due diligence tool, they can help to ensure that banks do not increase the vulnerability of people or fail to adjust expectations in light of climate impacts on people in those situations.

Figure 8: Operating in High Risk Circumstances

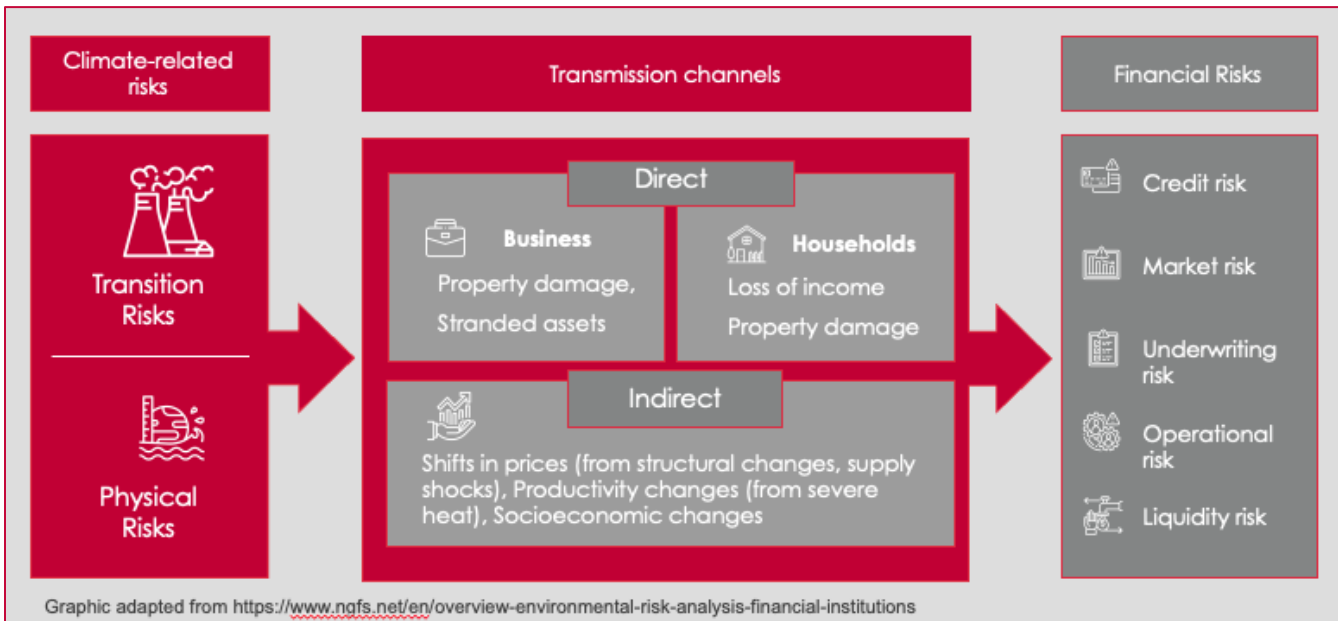


TRANSMISSION CHANNELS FOR FINANCIAL RISK

The transmission of climate change risk to the portfolios of financial institutions can happen both directly and indirectly.

¹¹ See <https://www.bis.org/bcbs/publ/d517.pdf>

Figure 9: Transmission Channels for Financial Risk



Transition risks can be transmitted:

- **Directly** through exposure to firms with business models that are not built around the economics of low carbon emissions – for example when fossil fuel companies are not able to exploit their reserves due to changed legislation, or when companies’ operating costs would increase significantly if high carbon taxes were imposed. These firms could see their earnings decline, businesses disrupted, and funding costs increase because of policy action, technological change, and consumer and investor demands for climate action.
- **Indirectly** through the economy at large – for example the global shift away from fossil fuels to reach the targets set in the Paris accord could result in the majority of fossil fuel reserves becoming stranded, which could in turn impact economies that are dependent on the exploitation of such reserves. A sudden transition, or a transition that is not globally coordinated, could impact trade and the wider economy, which would in turn impact clients of financial institutions.

Physical climate change risk can be transmitted:

- **Directly** through a financial institution’s exposure to companies, households, and countries that experience physical climate shocks. For example, rising sea levels and more frequent or extreme weather events can cause losses for homeowners and

reduce property values, leading to greater risks in mortgage portfolios. Physical risk can cause business disruption, supply chain disruption, asset destruction, and reconstruction/replacement costs for clients, which could affect their ability to repay loans.

- **Indirectly** through the effects of climate change on the wider economy and feedback effects within the financial system. For example, productivity and supply of labor can be reduced due to increased temperatures, and agricultural yields can be reduced, for example as a result of droughts or floods.

The potential direct and indirect impacts of physical climate change can clearly be seen in the case of sea ports. Sea ports handle around 80% of the world's goods, and disruptions at ports can have significant knock-on effects on surrounding economies. One study found that 55% of global trade passes through ports that have a high risk of a climate risk event. "High risk" as used in the study corresponds to roughly the level of exposure that South Carolina has to hurricanes. National food prices rose by 3% when Hurricane Katrina shut down three ports that process 45% of America's agricultural goods; Hurricane Harvey affected fuel prices to a similar extent.¹² This provides an indication of how climate-related disruptions to sea ports could impact the wider economy.

TRANSMISSION CHANNELS FOR HUMAN RIGHTS RISKS

These examples illustrate how climate change impacts can be transmitted to the portfolios of financial institutions. However, the same pathways can also transmit human rights risks.

The flash floods that hit South Africa in 2022 could be used as a hypothetical example of indirect transmission of *physical climate* risk. The floods significantly affected the port of Durban, which transports 60% of South Africa's exports. Shipment of a range of goods was severely disrupted, from cobalt mined in the DRC to citrus fruit exported to markets in Asia.¹³

A bank may have loans in its portfolio to some small business owners whose incomes are fully dependent on activities of the port. If these borrowers are not able to repay their loans, the bank should ensure that its collection practices take into account the wider economic situation in the region and that it continues to treat borrowers in a fair and respectful manner. It should also be cautious not to *increase* the vulnerability of its customers through its lending or collection practices. If the bank had loans in its mortgage portfolio against properties that were

¹² See <https://www.economist.com/finance-and-economics/2020/09/12/ports-are-highly-exposed-to-climate-change-and-often-ill-prepared>

¹³ Financial Times: "Flash floods in 'gateway' port Durban add to South Africa's economic woes" <https://www.ft.com/content/4d2de447-3c75-45e0-8b1f-b1c43ae1b8ce>

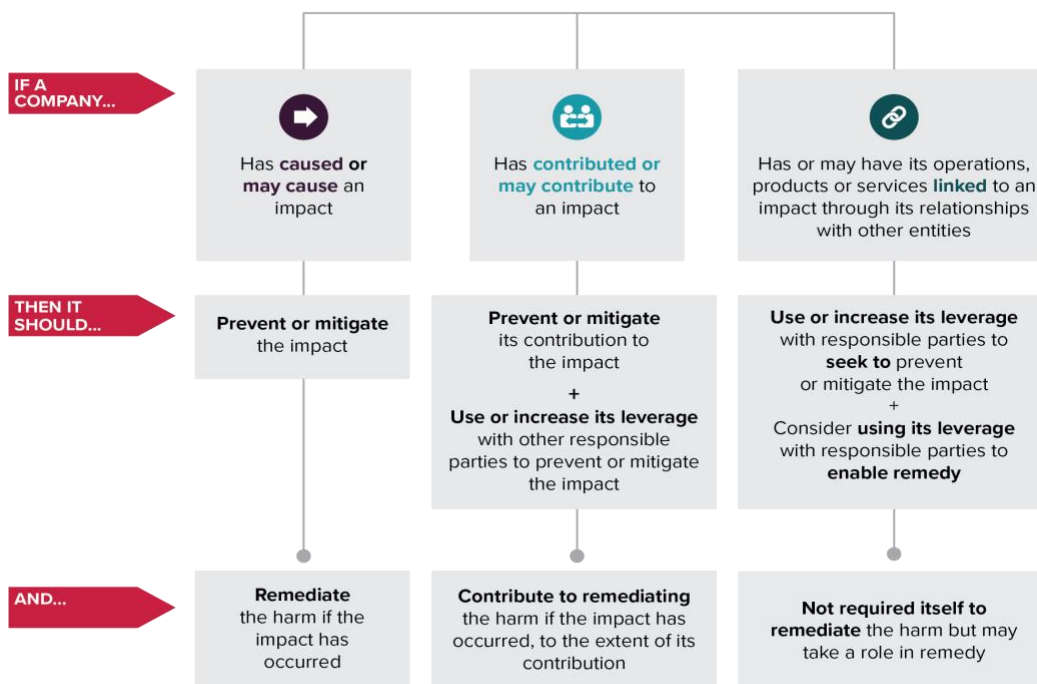
damaged in the floods, it should likewise consider that borrowers may not be able to pay installments as scheduled, and it should adjust its collection and restructuring practices accordingly.

The same logic should be applied to transmission channels of *transition risk*. Banks should not only consider the impact of the transition on *direct* borrowers and workers directly employed by businesses affected by the transition, but also consider that there may be borrowers in the wider portfolio that could be affected by the transition and adjust their lending and collection practices to avoid increasing the vulnerability of clients and retail customers.

Pitfall 5: Failing to consider FIs’ own contribution to impacts: increasing the vulnerability of clients through lending and collection practices

The UNGPs contain a framework for understanding an enterprise’s **connection to harm** and, importantly, the distinct responsibilities for action that flow from the form of connection.

Figure 10: Responsibilities Flowing from Form of Connection to Harm



In many cases, banks will be **linked** to impacts in their portfolio that occur, for example, in the value chains of their clients. There has been much discussion – now settled – about whether a

financial institution can **contribute** to impacts caused by the clients it finances: it can.¹⁴ It is essential for the credibility of the FI that it undertakes an analysis of its involvement with impacts, including in the context of climate change-related impacts, and asks itself the hard question of whether its own decisions or actions are playing a role in them, before determining the action it will take. Banks that overlook their potential contribution to climate change impacts do so at risk to themselves and to society.

As explained in Shift's *[Climate Action and Human Rights](#)* report, vulnerability is a key component of physical climate change risks, whereby the existence of a climate hazard (such as likely floods or droughts) intersects with both exposure to that hazard and vulnerability to its effects. Banks' own actions can increase the vulnerability of their clients and customers to climate-related effects through their lending and collection practices, thereby contributing to any harms that result.

For example, consider a micro-loan to a small-holder coffee farmer who, at the time of borrowing, may have earned a steady income commensurate to the repayment obligations. If the farmer's coffee harvest is affected by climate change, she may become unable to repay the debt. In extending retail consumer loans and measuring the capacity of borrowers to pay, banks should consider consumers may need additional financial resources to respond to climate emergencies in calculating repayment capacity.

Conclusion

There are many challenges associated with the physical and transition risks of climate change and the potential for impacts on people are wide-ranging. The UNGPs – and the learnings developed over more than a decade of practice since their endorsement – provide a valuable foundation for better understanding and acting on these risks, including by financing climate adaptation and transition in a “just” way that seeks to prevent or mitigate severe impacts on people.

A human rights lens guides us to focus on risks to people (and not just risks to the bank) throughout value chains and associated with both transition and physical impacts; to consider the ways in which bank practice might contribute to these risks; to prioritize action in a robust, defensible way; and to ask the right questions when evaluating transition efforts, including who is vulnerable in the given context and whether efforts are ameliorating or exacerbating that vulnerability.

¹⁴ See <https://www.ohchr.org/sites/default/files/Documents/Issues/Business/InterpretationGuidingPrinciples.pdf>

In this way, banks can avoid reinforcing a false binary that pits environmental action against people's human rights, and ensure that transition and resilience efforts are indeed just.

Appendix A

To some extent, the business models, markets, sectors and locations of companies and their assets will determine whether they are likely to be more exposed to transition risk or physical risk, as shown in the table below.

| Transition Risk | Physical risk |
|--|--|
| <p>Companies in sectors with high greenhouse gas emissions (for example oil and gas, thermal power, metals smelting and cement) may be facing significantly higher costs of doing business if carbon taxes are increased or if existing subsidies are reduced.</p> <p>Companies that are linked to the use or exploitation of fossil fuels may be exposed to reputational risk from stakeholder perceptions.</p> | <p>As the climate changes, physical climate hazards like storms will become more frequent and more severe and sea levels will continue to rise, affecting companies with assets in locations that are vulnerable to these effects.</p> <p>Droughts may become more frequent and prolonged, affecting companies that use a lot of water or that are operating in areas that may have water shortages in future.</p> |
| <p>New climate efficient technologies could make existing technologies obsolete or affect market demand.</p> | <p>The spread of vector-borne diseases will increase and occur in previously unaffected areas, affecting the health of workers and, in turn, companies that rely on manual labor.</p> |
| <p>If governments implement policies to align with the Paris accord, large proportions of fossil fuel reserves would have to remain unexploited, resulting in a loss of value of those assets because they can no longer generate an economic return (stranded assets).</p> | <p>In some locations it may become unsafe for people to work outside due to dangerously high temperatures affecting companies that rely on manual labor, such as construction and farming.</p> |
| <p>Companies in the agricultural and forestry sectors may be affected by government policies that limit the conversion of land or exploitation of forests to meet emission reduction targets.</p> <p>Companies in the transport and aviation sectors may be affected by a transition away from fossil fuel-based modes of transport.</p> | <p>Agricultural yields and growing patterns will be affected by changing weather patterns, in turn affecting companies that have a dependence on agricultural commodities in their value chains.</p> <p>Supply chains and operations could be disrupted due to extreme floods, storms or hurricanes, even affecting companies that are located far from the physical weather event.</p> |

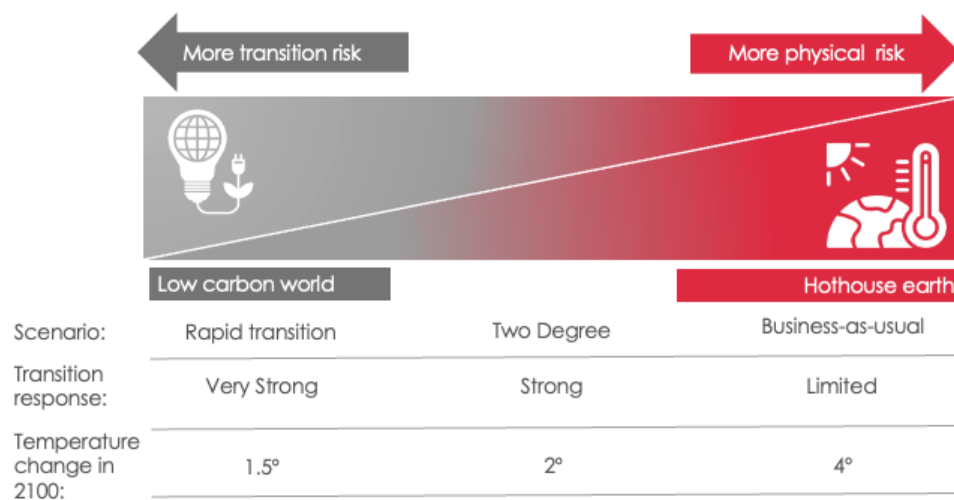
However, most businesses (bank clients) are likely to experience both transition risk *and* physical risk, and whether they experience more transition or physical risk will depend on policy decisions taken to reduce greenhouse gases worldwide. As illustrated in figure 11 below:

- if very strong policy action is taken –for example imposing carbon taxes, removing subsidies for polluting activities or stimulating adoption of carbon neutral technologies, it would result in a rapid transition and less greenhouse gases emitted into the atmosphere. This would mean higher transition risk, but more limited temperature increases, and lower physical risk. Physical risk will still be present though, because

some climate change is already unavoidable based on historical emissions;

- on the other hand, if there is limited policy action and business-as-usual continues, we will eventually end up in a hothouse world, with higher physical risk for all companies. Even in a scenario where limited policy action is taken, it is likely that there will still be some transition risk as governments around the world implement certain measures to reduce the greenhouse gases that cause climate change.

Figure 11: Policy Decisions Affecting Transition vs Physical Risk



Graphic adapted from <https://www.bis.org/publ/othp31.htm>