
Climate Risk Mitigation Guidance

Developed by BSR in collaboration
with member companies



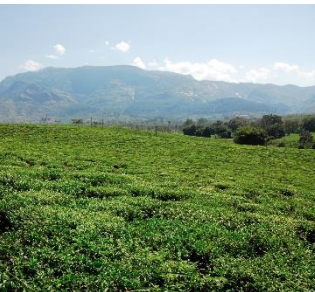
About This Document

BSR is publishing a suite of materials that can be used to support companies to manage climate risks.

The Climate Risk Mitigation Guidance is intended to support operational functions responsible for risk mitigation decisions to establish response plans with a climate lens.

This document was created by BSR with support from the following companies. These companies came together under a vision to achieve company value chains and communities that sustain each other thrive in the face of climate change; and a mission to build climate resilience for communities, farmers, and workers along value chains by:

- Assessing climate risks and integrating them into business processes
- Developing standard approaches, methodologies and metrics for business action on resilience
- Promoting collaboration among business



Anheuser-Busch InBev

Bayer AG

The Coca-Cola Company

Etsy, Inc.

Mars

McDonald’s Corporation

PepsiCo

Primark

Santam, Ltd.

Target

WWF

Introduction

After a company has identified and prioritized its climate risks, through a climate risk assessment and/or scenarios analysis, it will need to start selecting and implementing appropriate risk mitigation responses. A challenge with this next step is that individuals/teams responsible for making risk mitigation decisions and/or implementing risk mitigation responses may not have a strong understanding of the cascading impacts and critical dependencies associated with climate-related risks (e.g. extreme weather variability; droughts; increased frequency and severity of natural disaster events; etc.).

Traditional risk mitigation frameworks do not incorporate unique climate considerations, resulting in an open need for guidance on key climate-related criteria when choosing a response / mitigation approach to a climate risk. BSR developed guidance and recommendations for selecting a climate risk mitigation response.

In most cases, leadership has already determined the prioritization of and appetite for climate risks. Teams responsible for risk mitigation decisions may include (but are not limited to) ERM, sourcing / procurement, finance, regional leads, and on-the-ground-teams. These teams often understand the specific context and viable options for managing the risks and are ultimately responsible for implementing mitigation responses. The following guidance is designed to ensure that longer-term value chain resilience is considered when choosing a risk response and that appropriate teams are equipped to make the business case for an effective risk response.

In the context of this workstream, mitigation refers to a strategy to prepare for and lessen the effects of threats faced by a business.

Step 1

To decide on an appropriate climate risk mitigation response, develop a thorough understanding of the risk by considering the following criteria and associated guiding questions.

Climate Criteria 1: Obligations to Stakeholders

When determining a risk response, it is imperative to understand how the risk impacts stakeholders, as well as their expectations and responsibilities in responding to the risk. Risk responses should align with generally accepted industry standards, stakeholder expectations, and the entity's mission, vision, and core values.

Which stakeholders are **affected** by this risk? Are there disproportionate impacts?

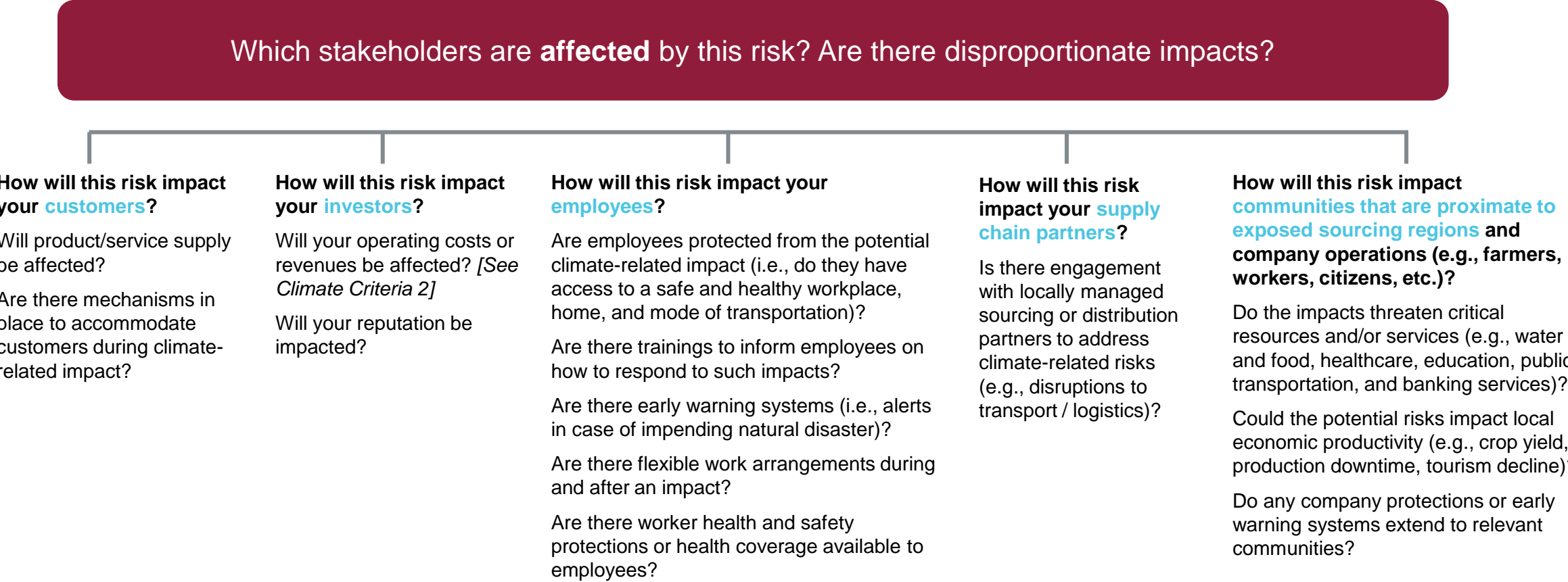
Which **external** stakeholders have a role to play in **responding** to this risk?

What **expectations** are there for the company, on its role to respond to the climate-related risk? What is your **company's responsibility** to respond to this risk, as a corporate citizen and relative to other players?

Which **internal** stakeholders have a role to play in **responding** to this risk?

How might a risk response impact the company's ability to uphold **industry standards related to other sustainability topics**?

Climate Criteria 1: Obligations to Stakeholders



- BSR Recommendations:**
- Assess and maintain awareness of stakeholders disproportionately affected by climate risk due to systemic inequities.
 - Engage with key stakeholders to properly understand the potential impacts of risks, to inform (1) the potential costs/benefits based on impacts to stakeholders and (2) which stakeholders should be engaged in the response plan. Refer to BSR’s [Five-Step Approach to Stakeholder Engagement](#) for guidance.

Climate Criteria 1: Obligations to Stakeholders

Which **external** stakeholders have a role to play in **responding** to this risk?

Is this risk something your team could mitigate on its own, or does it **require support** from supply chain partners, communities or governments, or other stakeholders?

Have supply chain partners been engaged to understand shared exposure to the climate risk and potential stakeholder impacts of various risk responses options? Are there 'no-regret' responses that benefit all parties?

Has the local community been engaged to understand shared exposure to the climate risk and potential stakeholder impacts of various risk responses options? Are there 'no-regret' responses that benefit all parties?

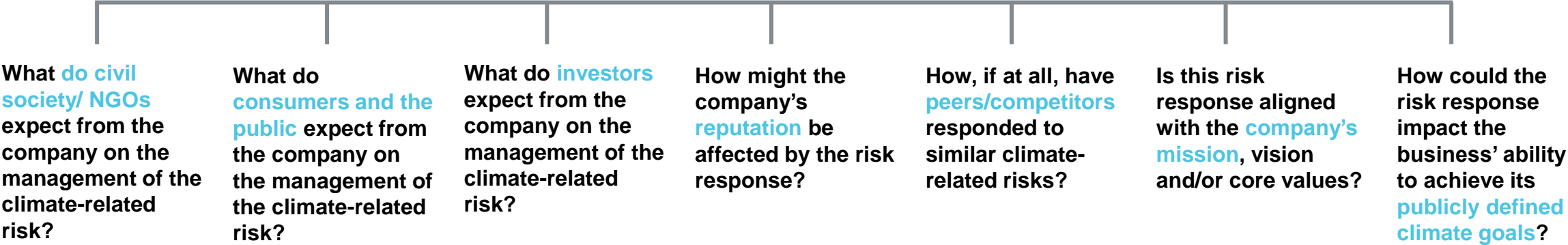
Is this risk something that could/should be mitigated by **local government or policy** (e.g., exposed critical services or infrastructure, such as the electricity generator)?

Do **partnerships or programs** exist between the entity, employees, the community, or industrial zone to manage local climate related impacts?

BSR Recommendation: When taking an action that will impact other players, include stakeholder perspectives in response planning process, to avoid any unintended consequences and ensure proper license to operate.

Climate Criteria 1: Obligations to Stakeholders

What **expectations** are there for the company, on its role to respond to the climate-related risk? What is your **company's responsibility** to respond to this risk, as a corporate citizen and relative to other players?



BSR Recommendations:

- Consider ways to manage the disproportionate impacts of climate risk on stakeholders, which is increasingly an expectation of companies in responding to climate risks
- Engage with key stakeholders to properly understand their expectations. Refer to BSR's [Five-Step Approach to Stakeholder Engagement](#) for guidance.

Climate Criteria 1: Obligations to Stakeholders

Which **internal** stakeholders have a role to play in **responding** to this risk?

Is this risk something your team could mitigate on its own, or do you need support from other business units?

BSR Recommendation: Align with other relevant functions on risk responses to ensure the company is taking a targeted approach, to pool resources and achieve efficiencies where applicable.

Climate Criteria 1: Obligations to Stakeholders

How might a risk response impact the company's ability to uphold **industry standards related to other sustainability topics?**

For example, if the company accepts a risk of increased frequency & severity of heat waves, and workers ultimately deal with difficult and potentially unsafe work conditions, this may be an infringement on the UN Guiding Principles on Business and Human Rights.

BSR Recommendation: Consider the following common industry standards: UN Guiding Principles on Business and Human Rights • UN Women's Empowerment Principles • Sustainable Development Goals

Climate Criteria 2: Cost Benefit Analysis

Risk response decisions must consider the full scope of climate-related costs and benefits to the entity, to demonstrate the business case and obtain buy-in. The costs and benefits to the environment and society may also be considered when assessing potential response options.

What **climate projections** are used to assess the potential costs / benefits of the mitigation response?

What is the **payback period** for the cost-benefit analysis? Is it long enough to capture the financial benefits of a mitigation response?

What are the expected **financial benefits** of the available mitigation responses?

What is the **opportunity cost** of inaction (i.e., how much could it potentially cost the business if this risk materialized)?

Climate Criteria 2: Cost Benefit Analysis

What **climate projections** are used to assess the potential costs / benefits of the mitigation response?

Are you using at least two different climate projections to quantify the potential risk?

Climate projections are simulations of Earth's climate in future decades based on assumed scenarios for the concentrations of greenhouse gas emissions. There are several climate projections from various sources, which simulate scenarios where global average temperatures increase by 1.5 °, 2°, 3° or 4° Celsius.

BSR Recommendation: Given the uncertain nature of physical climate impacts and the inevitable errors with climate projections, companies should consider multiple climate projections in the assessment of potential risk impacts that reflect varying degrees of warming.

Companies should consider using climate scenarios to further analyze business resilience and identify risks and opportunities in the face of said climate projections.

- Refer to ***Climate Risk Integration Framework - Guidance for Projection Parameters*** – for more guidance.

Climate Criteria 2: Cost Benefit Analysis

What is the **payback period** for the cost-benefit analysis? Is it long enough to capture the financial benefits of a mitigation response?

Climate risks will likely impact businesses in the medium to long-term, as opposed to other risks that might be more imminent. Extending the payback period of cost-benefit analyses can help capture the full financial impacts of a mitigation response.

BSR Recommendation: Companies should use time horizons that align with physical climate impacts, the full lifetime of an asset, and the sectors and geographies of operation. Other aspects to consider can include the time necessary to fulfill strategic objectives, product lifecycle, organization lifecycle, changes in technology, risk acceptance and time / financial / information limitations.

- Refer to ***The Climate Risk Integration Framework – Defining Timeframe for Risk Assessment*** – for more guidance.

Climate Criteria 2: Cost Benefit Analysis

What are the expected **financial benefits** of the available mitigation responses?

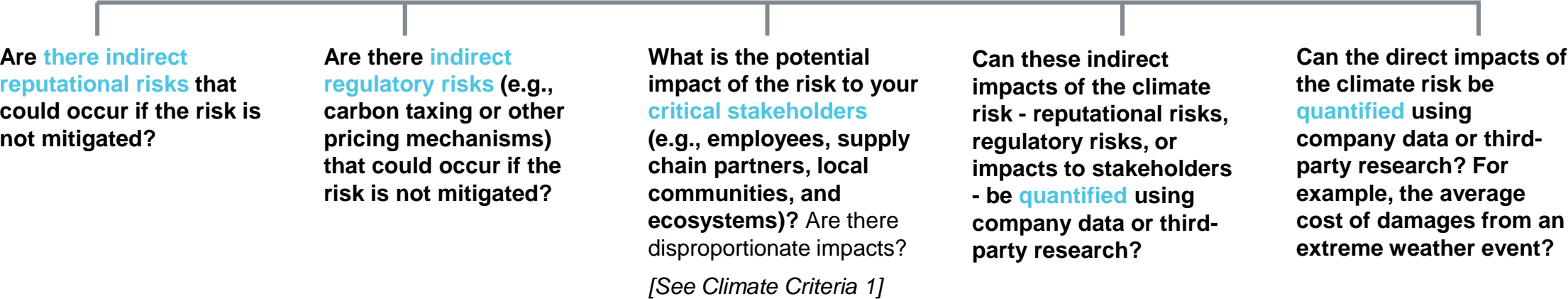
What are the **tangible business benefits** of the mitigation response, such as increased sales, competitive advantage, or decreased operating costs?

What are the **intangible business benefits** of the mitigation response, such as improved employee safety and morale, increased business continuity / customer satisfaction, and enhanced business resilience?

BSR Recommendation: Companies should use the ***Resilience Metrics Framework*** to quantify the benefits of enhanced business and community resilience to climate impacts. This can be included as a financial benefit in the cost-benefit analysis and therefore a factor in the decision-making process.

Climate Criteria 2: Cost Benefit Analysis

What is the **opportunity cost** of inaction (i.e., how much could it potentially cost the business if this risk materialized)?



BSR Recommendation: Companies should integrate environmental and social externalities into the calculation of opportunity cost to ensure that stakeholder impacts are considered in decision-making.

- Social costs may include job loss, healthcare costs, prevalence of disease.
- Environmental costs may include pollution, soil depletion, water scarcity, greenhouse gas emissions.
- Social benefits may include increase in leisure time, feelings of safety and security, affordable housing, lower rates of disease.
- Environmental benefits may include improved air and water quality, enhanced biodiversity.

Climate Criteria 3 through 6

The below additional criteria will also impact the appropriate risk response. Please refer to the **Climate Risk Integration Framework**, where BSR provides guidance for ERM and/or Leadership teams to properly integrate these concepts into the process of identifying, analyzing and prioritizing climate risks.

Risk Prioritization

High priority risks typically require action plans that consist of investment in activities to Reduce or Pursue the risk. Those with near-term urgency should be the initial focus for determining a risk response. Medium and low priority risks may be Accepted and monitored for any changes.

Risk Severity

Risk severity is an assessment of the magnitude of the risk from direct physical climate impact, considering its likelihood; the exposure of people, assets, or economic activity to the hazard; and the extent to which systems are vulnerable to the hazard. Risk responses should reflect the size, scope and nature of the risk and its impact on the entity.

Risk Appetite











Risk appetite is defined as the types and amount of risk that an entity is willing to accept or reject in pursuit of its strategy and business objectives, setting the boundaries for acceptable decision-making. This is typically set by Boards and management, considering the business strategy and objectives. If risk severity is within the organization's appetite, entities may Accept the risk. If severity is greater than the appetite, entities may Reduce or Share the risk.

Business Context

Risk responses are selected or tailored to the business context, which includes the industry, geographic footprint, regulatory environment, and operating structure.

Exemplary Impacts of Physical Climate Risks on Business & Stakeholders

Physical climate risks have common impacts to business and stakeholders; these may have some unique nuances according to the specific climate risk, but remain largely the same

Potential Impacts to Business	Directly Affected Stakeholders	
Outdoor workers unable to work or lower labor capacity (e.g., work breaks to avoid heatstroke)	 Employees	 Supply Chain
Indoor workers struggle to work in uncomfortable conditions (e.g., heat wave) or other health and safety at risk (e.g., homes damaged; shifts in disease vectors)	 Employees	 Supply Chain
Workers unable to travel to work	 Employees	 Supply Chain
Damage or disruption along the supply chain (e.g., degraded agricultural performance; lands; supplier buildings and assets; distribution and travel routes)	 Supply Chain	 Community
Increased cost/lower supply of raw materials (e.g., due to limited supply from supply chain disruptions) or costs of operating (e.g., HVAC energy costs in heat wave)	 Customers	
Impacts to infrastructure services or assets in operating communities (e.g., power systems could become less productive under very hot conditions)	 Community	
Damage to company-owned assets or operations	N/A	
Increased insurance premiums / reduced availability of insurance on assets in “high-risk” locations	N/A	

Step 2

Determine which of the following is the best climate risk response, based on your answers to the questions in Step 1 and the following recommendations.

Reference Materials

Leverage the *Climate Risk Intervention Actions Index* to see a comprehensive list of acute & chronic physical climate risks and corresponding examples of high-level mitigation actions.

Note, these actions are focused on systemic adjustments to enhance long-term business resilience. They are not intended to cover immediate actions to support the continuity of the business during a physical climate impact / disaster.

Physical Risks included in Actions Index

Acute Risks	<ul style="list-style-type: none">• Increased frequency & severity of hurricanes, floods, tornadoes, extreme precipitation, extreme wind, hail, dust storms• Increased frequency & severity of heat waves• Increased frequency & severity of landslides• Increased frequency & severity of forest fires• Extreme sea level
Chronic Risks	<ul style="list-style-type: none">• Extreme variability in weather patterns• Changes in precipitation patterns• Changes in disease distribution (e.g. vector-borne diseases)• Increasing air pollution• Water scarcity & droughts• Ocean acidification• Rising mean temperatures• Rising sea levels• Land degradation• Ice and permafrost melt

Risk Response Option 1: Accept or Absorb

Take no action to change the severity of the risk

Additional Context	BSR recommends to Accept when...	BSR does not recommend to Accept when...
<ul style="list-style-type: none">• When risks are within the risk appetite and not likely to become more severe• Requires close monitoring of assumptions that led the organization to accept the risk<ul style="list-style-type: none">○ If these assumptions change, a different response might be needed	<ul style="list-style-type: none">• Cost/benefit analysis indicates a mitigation response would require high costs to the business (including opportunity costs) and minimal benefits• Risk of impact to stakeholders is relatively low and inconsequential	<ul style="list-style-type: none">• Risk of impact to stakeholders is significant, and the company has a responsibility/obligation to help mitigate

Risk Response Option 2: Avoid

Remove the risk

Additional Context

- When an organization has zero-tolerance for a risk
- This could include stopping business with suppliers / partners who do not meet certain criteria

BSR recommends to Avoid when...

- Investing in a new product, service, supplier, etc. Avoid investments which are more prone to physical climate risks
- **Example:** In 2018 Swiss Re announced that it would not provide insurance to businesses with more than 30% exposure to thermal coal across all business lines
- **Example:** When determining a new location for a retail shop, a business should avoid locations with high flood risk

BSR does not recommend to Avoid when...

- Said action would entail divesting in a location or stopping work with a specific partner. Instead, it is best to work with the community and local partner to improve resilience. New locations or new partners could have the same or another issue in the future.

Risk Response Option 3: Pursue

Pursue resilience opportunities

Additional Context	BSR recommends to Pursue when...	BSR does not recommend to Pursue when...
<ul style="list-style-type: none">• When there is an opportunity to unlock value for entities	<ul style="list-style-type: none">• There is opportunity to achieve tangible or intangible business benefits and drive business value (e.g., revenue-generating opportunity; cost-reduction opportunity; enhancing the company's own climate resilience)• There is opportunity to enhance the resilience of suppliers or support other stakeholders (especially those disproportionately exposed) adapt to climate impacts	<ul style="list-style-type: none">• Cost-benefit analysis indicates high cost and minimal benefit of response• Stakeholder demand or expectations are not aligned with the response

Risk Response Option 4: Reduce or Accommodate

Take action to reduce the severity, impact or likelihood of the risk

Additional Context

- When the risk severity is greater than risk appetite.
- Risk reduction programs may include investments in the following at either the overall enterprise level, functional or geographical level:
 - **Strategy:** Establish new strategy or goal to reduce the risk
 - **People:** Assemble a team to conduct R&D or lead a new initiative
 - **Processes:** Establish expectations with code of conduct; adopt certification, chain of custody or audit programs to manage risks and enhance transparency
 - **Systems:** Implement management systems to provide ongoing monitoring of risks according to the code of conduct or other standards

BSR recommends to Reduce when...

- There's opportunity to engage stakeholders
- **Example:** Proactively reinforce buildings that are susceptible to severe weather disasters, rather than waiting to repair damages; incorporate resilience into capital design¹
- **Example:** Rent rather than own a fixed asset to optimize for resiliency¹
- **Example:** Diversify supplier base or sourcing locations and work with critical or strategic suppliers to develop business continuity planning to increase resilience in supply chains²

BSR does not recommend to Reduce when...

- Cost/benefit analysis indicates a reduction mitigation response would require high costs to the business (including opportunity costs) and minimal benefits

Risk Response Option 5: Transfer

Transfer a portion of the risk

Additional Context

- May eliminate some risk to individual companies by transferring to another

BSR recommends to Transfer when...

- It is used as an interim solution while pursuing opportunities or reduction actions
- **Example:** Purchase insurance for high-risk assets that are susceptible to severe weather disasters, while pursuing a longer-term mitigation opportunity
- **Example:** Outsource an activity / process that is less risky for external partners to take-on, while pursuing a longer-term mitigation opportunity

BSR does not recommend to Transfer when...

- As a long-term solution. Transferring a climate risk to another business or community does not protect the business from confronting the risk again in the long-term. Business cannot thrive without the stakeholders it depends on, meaning companies must work with their stakeholders to develop an appropriate risk response for all parties. There is a reputational risk and potential backlash from offloading a risk onto another party.
- The long-term solution should be to Pursue or Reduce.

Risk Response Option 6: Share

Collaborate externally

Additional Context

- May eliminate some risk to individual companies, which may be too large or complex for one entity to manage²
- Coordinated action bringing together multiple stakeholders could be needed to promote and enable mitigation¹

BSR recommends to Share when...

- Partnerships of multiple stakeholders and supply chain players can significantly scale investment and impact. Climate change risks are large and complex, with no easy answers to mitigate, often necessitating collaboration
- **Example:** Join an existing collaborative initiative to share best practices across industry groups and drive innovation¹
- **Example:** Collaborate to establish building codes and zoning regulations, mandate insurance or disclosures, or mobilize capital through risk-sharing mechanisms¹
- Other stakeholders are needed to achieve results. **Example:** Partner with other supply chain partners and peers to lobby governments for needed legislations

BSR does not recommend to Share when...

- The company has sufficient ability to reduce the risk on their own and collaboration would not significantly scale impact. In some cases, sharing can result in no one organization taking responsibility and less accountability across the board

Thank You



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