
Climate Resilience Metrics Framework

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 Resilience Metrics Guidance is intended to support companies in developing customized and robust metrics to measure resilience outcomes from climate risk response actions.

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

Context

BSR developed a resilience metrics framework to measure the outcomes of corporate climate resilience-related projects / actions at the business, community, and system levels.

Key Terminology

- **Resilience** is defined as the ability of a company, community, or system to anticipate, absorb, accommodate or recover from the effects of climate change in a timely and efficient manner, including through ensuring the preservation, restoration or improvement of its essential basic structures and functions.
- **Outputs** are the products, capital goods, and services that are delivered through the project, responding to the project-specific context of climate vulnerability to build climate resilience.
- **Outcomes** are the likely or achieved short- and medium-term effects of the project, responding to the project-specific context of climate vulnerability in order to build climate resilience. They may take the form of adjustments in physical, human, or environmental systems and associated economic benefits.

The following framework can be used by companies to select the best metrics to measure the impact of climate resilience-related interventions at company and community level.

Resilience Metrics Framework | Overview

The framework includes two steps, each with three sub-steps to guide a company through the process of developing a customized and robust metric to measure resilience outcomes.

Step 1: Identify the Resilience Theme and High-level Metric

- 1.1 Establish an understanding of the intended resilience outcome(s) of the project / activity.
- 1.2 Categorize the outcomes into the relevant Resilience Themes
- 1.3 Leverage the *Resilience Metrics Index* to identify existing metrics that align with your specific project activities and outcomes.

Step 2: Customize the Metric to Reflect Project Context

- 2.1. Key Considerations for developing customized resilience metrics.
- 2.2 Customize the metric to reflect your company's project / activity outputs and outcomes
- 2.3 Consider additional outcomes that benefit the company's own resilience and integrate them into company reporting

Framework | Step 1: Identify the Resilience Theme and High-level Metric (1/2)

The first step of the framework involves categorizing potential project outcomes into three high-level resilience themes and corresponding metrics.

Companies can take an outcome-driven or activity-driven approach to identifying the appropriate resilience metrics for their project. While it is best practice to design projects with a clear intention of potential resilience outcomes, many company projects have resilience co-benefits that can be measured.

1.1 Establish an understanding of the intended resilience outcome(s) of the project / activity.

- Outcome-driven Approach: What is the intended outcome(s) of the project / activity?
- Activity-driven Approach: How might a company project / activity contribute to building resilience for the planet, economy, or people?

1.2 Categorize the outcomes into the following Resilience Themes (refer to the descriptions on slide 20).

- In some cases, project activities may contribute to multiple themes. For example, a solar energy development project may contribute to both infrastructure and community resilience through the provision of reliable, clean, and affordable energy to the local community. In such cases, companies may measure multiple metrics to reflect the range of outcomes.
- The corresponding high-level metric and illustrative metrics for each theme are intended to provide an initial sense of how a company can measure resilience.

1.3 Leverage the *Resilience Metrics Index* to identify existing metrics that align with your specific project activities and outcomes.

- Sort the spreadsheet by the appropriate 'Theme' (column B), then sort by the "Category" (column C) to see a short-list of related metrics.
- This list includes a compilation of relevant metrics from existing impact and adaptation frameworks, such as the United Nations Sustainable Development Goals, the Task Force on Climate-related Financial Disclosures, and efforts to measure climate adaptation from leading development banks and governments.
- Embedded links provide more information about metric application and units of measurement

Framework | High-level Themes and Metrics (2/2)

| BSR has identified the following three resilience themes and corresponding, high-level metrics for measuring resilience outcomes. The metrics are broadly applicable to a wide range of projects / activities and reflect robust outcome measurement approaches. The complementary <i>Resilience Metrics Index</i> should be used to reference existing metrics that align with more specific company activities. | | |
|---|---|--|
| Theme | Description | High-level Outcome Metrics |
| Ecosystem (Planet) | Climate-resilient ecosystems have the capacity to absorb stresses and adapt to maintain function in the face of changing climate conditions. <ul style="list-style-type: none"> Examples of ecosystem infrastructure interventions include the reduction of resource use and pollution, and increasing the proportion of land, animals, and water sources protected. Value of the resilience intervention can be measured by the proportion of the natural resource that has been restored or protected (i.e. water, forests, animals, agricultural land, and oceans). | Total value (or #) of natural resources restored / protected. <p>Illustrative Metrics:</p> <ul style="list-style-type: none"> Water: reduction of water stress, effluents, withdrawal, and the protection of water-related ecosystems Land: reduction of effluents, sustainable farming / forestry practices, acres of protected land Animals: reduction of endangered species and improvements in biodiversity Proportion of the population with access to clean air, safe drinking water* |
| Infrastructure and Built Environment (Economy) | Climate-resilient infrastructure is designed, built, and operated in a way that anticipates, adapts, and withstands disruptions caused by changing climate conditions. <ul style="list-style-type: none"> Examples of resilient infrastructure interventions include improvements in transportation, electricity, housing, and telecommunication systems. Value of the resilience intervention can be measured by the reduction in physical damages to / downtime of key assets or the proportion of population with access to key infrastructure services (i.e. public transport / internet / adequate housing / waste management). | Total value (or #) of new climate resilient physical assets / infrastructure built or strengthened. <p>Illustrative Metrics:</p> <ul style="list-style-type: none"> Renewable energy share in total energy consumption Proportion of population with access to affordable, reliable, clean energy, public transportation, internet, adequate housing, waste management, healthcare services* |
| Livelihoods of People and Communities (People) | Climate-resilient individuals and communities have capacity to absorb disturbances and adapt to ongoing change while retaining the same function, structure, identity, and feedbacks. <ul style="list-style-type: none"> For example, maintaining access to clean water, food, healthcare, education, and employment through extreme weather events and long-term variations in climate conditions. Value of the resilience intervention can be measured by the proportion of the population with health, food, water, and income security. | Proportion (or #) of population adopting climate resilient livelihood options / technologies / practices. <p>Illustrative Metrics:</p> <ul style="list-style-type: none"> The proportion of the population that has access to a steady / livable income, capital, insurance, healthcare, education, households with air conditioning* The community's unemployment rate, per capital income, mortality rate, air quality, food security* |
| DEI Notes | Diversity, equity, and inclusion outcomes may be embedded in the above themes if the focused activities are relevant to groups facing systemic inequality and inequity (race, gender, sex, ethnicity, age, indigenous peoples, disability, and nationality). | *These metrics can be disaggregated by race, gender, sex, ethnicity, age, indigenous peoples, disability, and/or nationality to demonstrate DEI-related outcomes. |

Framework | Step 2: Customize the Metric to Reflect Project Context (1/4)

Resilience metrics should reflect the specific project / activity context. This step provides a series of questions and corresponding resources intended to guide companies through the key considerations needed to develop robust and contextualized metrics to measure resilience outcomes.

2.1. Key Considerations for developing customized resilience metrics.

Using (a) an existing metric from the index or (b) the high-level thematic metric as a starting-point, consider the following questions to identify any modifications needed to develop a robust and contextualized project-specific metric:

Who is impacted by the outcome?

- What type of stakeholder is experiencing the outcome?
- What is the geographical location where the stakeholder experiences the social and/or environmental outcome?
- What are the socio-demographic and/ or behavioral characteristics and/or ecosystem characteristics of the stakeholder to enable segmentation (e.g. are there segments of the population facing systemic inequality)?

What is the local and global context?

- What is the level of the outcome being experienced by the stakeholder prior to engaging with, or being affected by the company's activities (i.e. what is the baseline outcome)?
- What is the stakeholder's view of whether the outcome they experience is important (relevant to other outcomes)? Where possible, the people experiencing the outcome provide this data, although third-party research may also be considered. For the environment, scientific research provides this view.
- What is the level of outcome that the stakeholder considers to be a positive / additive outcome? Anything below this level should be considered a negative outcome. The outcome threshold can be an international standard.
- Does the outcome relate to a Sustainable Development Goal target?

Framework | Step 2: Customize the Metric to Reflect Project Context (2/4)

2.1. Continued...

How significant is the outcome?

- What is the scale of individuals or the ecosystem experiencing the outcome?
- What is the expected depth / degree of change that will occur?
- What is the duration of time for which the stakeholder experiences the outcome?

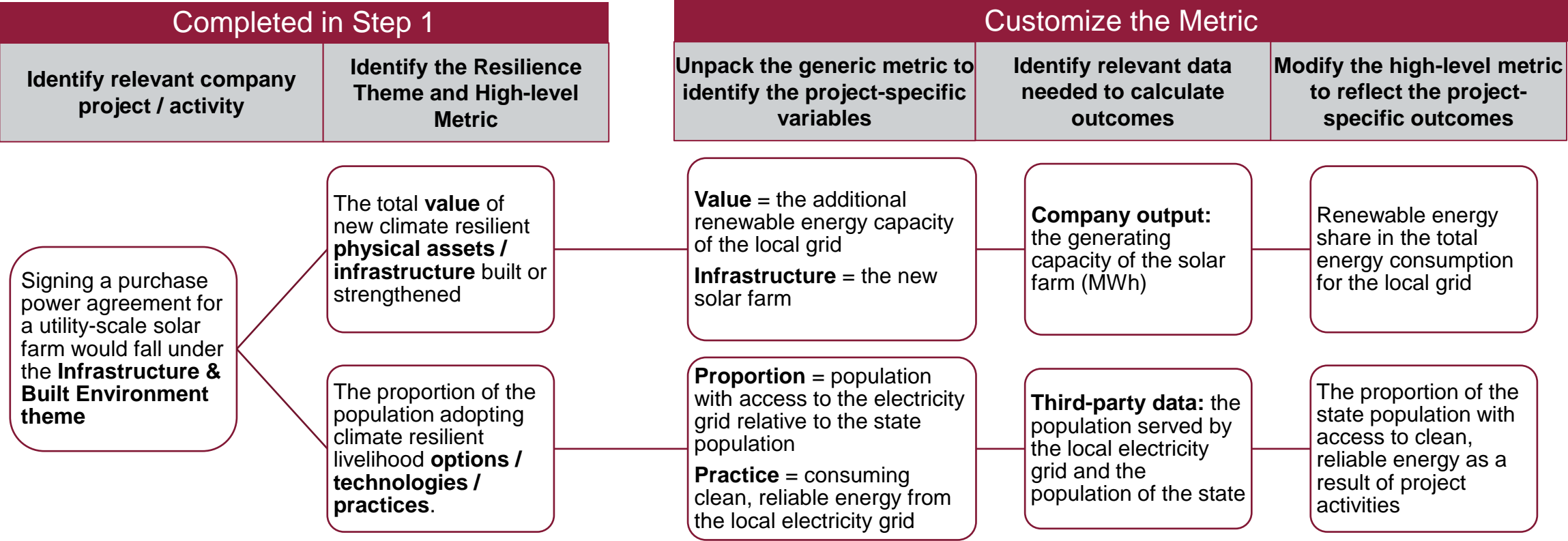
How would you measure the outcome?

- What are the project outputs (i.e. what are the products, capital goods, and services that are delivered by the company through the project / activity)?
- Can the outcomes be estimated based on output data or measured ex post?
- What is the availability and credibility of relevant third-party data required to measure the outcome (i.e. the government tracking of income per capita or the scientific measurement of water quality)?

Framework | Step 2: Customize the Metric to Reflect Project Context (3/4)

2.2 Customize the metric to reflect your company's project / activity outputs and outcomes

- Unpack the generic metric to identify project-specific variables.
- Identify the relevant data needed to calculate / estimate the outcomes. This will likely include company outputs and / or third-party data sources.
- Replace high-level / index metric language with the project-specific variables.



Framework | Step 2: Customize the Metric to Reflect Project Context (4/4)

Finally, it is important for companies to also capture internal, business benefits to resilience projects / activities – whether that's improved business resilience, risk mitigation, or measurement of project efficacy.

2.3 Consider additional outcomes that benefit the company's own resilience and integrate them into company reporting

- Did the project / activities change the input and output requirements of the company's products or services (e.g. improved resource and energy efficiency, multi-sourced components)?
- Did the project / activities improve the resilience of the company's assets, infrastructure, procurement, logistics, or investments?
- Do any of the output metrics help measure other internal business goals such as: project efficacy or ROI, reporting against specific frameworks, link-back to risk management strategy?

Additional Resources:

- Impact Management Project: [Using self-reported data in impact reporting](#)
- Impact Management Project: [Impact of an Enterprise Template](#)
- Global Impact Investing Network: [Iris+](#)