



Bayer Climate Scenario Description

Taking the Green Road (SSP1-2.6)

- // Average mean temperature increase in **2040: 1.5°C; in 2060: 1.7°C; in 2100: 1.8°C** (best estimate)
- // **Full decarbonization by 2050** (reduction of 90% CO₂e compared to 2019). **Carbon Capture** with high permanency at competitive cost and at scale available in 2040
- // **High transitional impacts** across the world leading to a higher pressure to change and innovate business towards a net zero society (earlier action & coordinated policies)
- // **Lower physical impacts**
- // Quick technological advances incl. hydrogen and electrification, consequently, energy demand increases by 4 times
- // Fast growth of alternative fuels. First generation biofuels act as transition technology before being phased out
- // Population growth reaches **8.5 billion by 2050**. Focus on SDGs, inequality is reduced and emphasis on **human well-being**
- // Food systems move on accelerated path towards low-GHG emission systems incl. changes in animal feedstock, lower food waste, changing diets and food innovations
- // **Full circularity**, less resource intensive consumption

A Rocky Road (SSP3-7.0)

- // Average mean temperature increase in **2040: 1.5°C; in 2060: 2.1°C; in 2100: 3.6°C** (best estimate)
- // Significant amount of greenhouse gases are **still emitted** into the atmosphere
- // **No-additional-climate-policy** scenario; lower and regional different transitional impacts (governments partially fail to introduce strict policies)
- // **High physical impacts** (increased acute and chronic physical changes with knock on effects)
- // Innovation continues as today. Lack of push and additional investments for fast adaptation of green innovative technology
- // High population growth (**10 billion by 2050**), inequalities persist or worsen over time. Regional focus on achieving energy and food security at the expense of broader-based development
- // **Unequal food security** on current levels of diets, low-GHG emission food systems only partially implemented
- // **Limited circularity** improvements, resource intensive consumption continues to significant extend

We aim to further enhance our scenario description and our scenario analysis. The scenarios are built on the [IPCC AR6 report](#) and many further sources relevant for the industries we are working in. To enhance our activities, we have joined the [Value Chain Risk to Resilience network hosted by Business for social Responsibility \(BSR\)](#).