Climate Assessment – Key Steps

1 Scenario Analysis

The selection of the scenarios used in our assessment follows the recommendations from the International Financial Reporting Standards Foundation for climate disclosures S2 (under the formerly known TCFD approach) to use two scenarios per type of risk, with one being a 'well-below 2°C' scenario and the other, with an emissions trajectory where global average temperature increase to 4°C above the pre-industrial average.

2 Risks and Opportunities Screening
(Data sources and tools)

To identify possible climate risks and opportunities, a variety of data sources and tools were used according to physical and transition risks as well as opportunities. These sources included the World Bank's Climate Change Knowledge Portal, the IPCC WGI Interactive Atlas, The World Bank, Climate Transparency and Climate Policy Tracker. Additionally, stress-testing was used in the priority sample to deepen physical risks results.

3 Assessment and Modeling

Following the guidance of ISO14090 and ISO14091, risks and opportunities were assessed based on magnitude/likelihood, exposure and vulnerability (sensitivity and adaptive capacity) of the hazard or trend. For physical risks, hazard types assessed include extreme heat, cold spells and frosts, floods, landslides, aridity, droughts, wildfires and sandstorms, and future trends. In the case of transition risks, the International Institute for Applied Systems Analysis' NGFS Scenario Explorer was used to extract information on transition-related climate change risks. Finally, identified opportunities were classified into four categories: market, law and policy changes, social value changes and technology changes.

Supply Chain Analysis

A high-level overview of climate risks linked to our main value chains (PVC, Polyolefins and Fluorspar, which are the most critical to our business), was performed to inform potential impacts to suppliers, infrastructure, and consumers. Higher risks that may impact Orbia's supply chains include transportation issues, especially related to extreme climatic events such as floods, hurricanes, and cold spells; damage or destruction of facilities, infrastructure, and physical assets; and production disruption linked to extreme weather events.

4 Results

Below is a high-level overview of the key risks and opportunities identified. For further detailed results and quantification, see our Climate Risk & Opportunity Assessment page here.

The most significant physical risks identified are those associated with rising temperatures (extreme heat and drought) and precipitation changes (floods and landslides impacting supply chains or causing disruptions to local infrastructure).

High-rated transitional risks are more stringent law and policy, raw materials price volatility and shift in consumer demand for low carbon (or low GWP), circular and bio-based products.

Main climate-related opportunities include increased demand for innovations in low-carbon and climate-adaptation technologies, reduced costs and taxes derived from using lower-emission sources of energy, and positive reputational benefits resulting in potential increase in profit margins.

Visit our Climate Action section for examples of actions to mitigate climate risks.
Visit our Sustainable Solutions section for examples of portfolio developments related to climate opportunities.