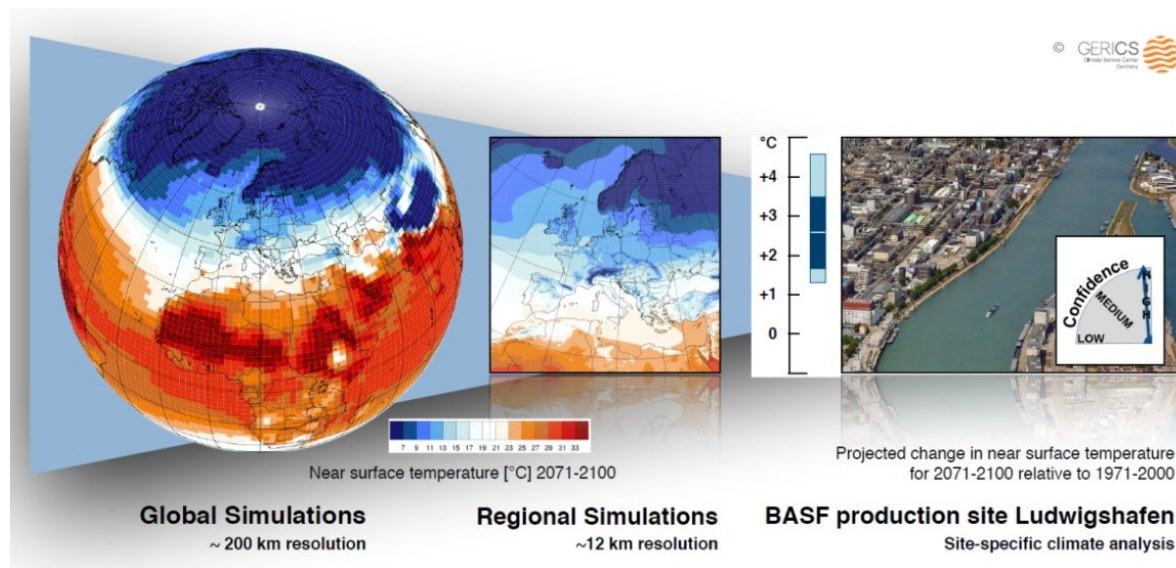


6.3 Preparing for Climate Change (BASF)

OECD GP Activity	UN SF Activity	UN SD Goals / Targets
6. Natech risk in emergency planning, preparedness, and response	4. Enhancing disaster preparedness for effective response	Non-specific targets relevant for Natech Risk Management (3.8, 6.3, 9.4, 11.5, 11.B, 12.4)

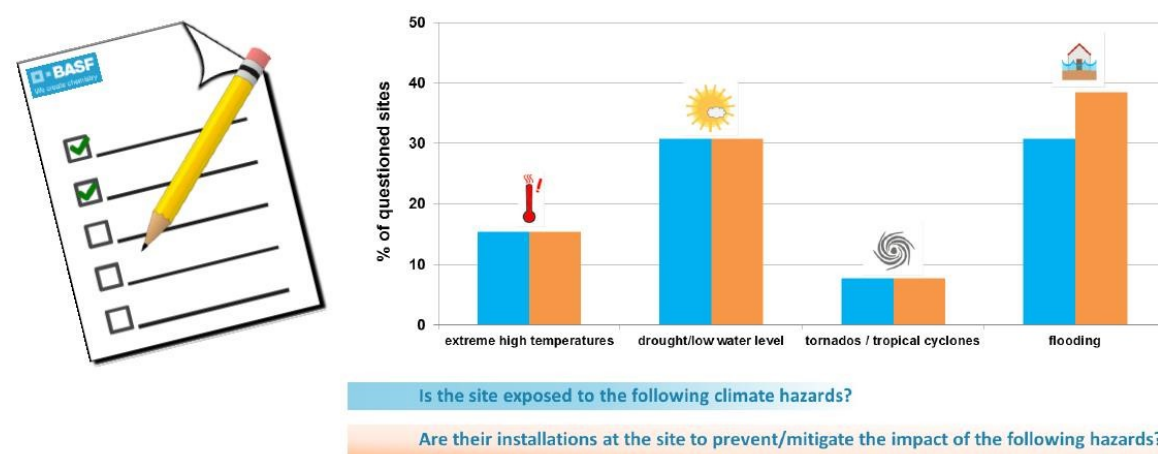
Classification according to OECD Guiding Principles, UN Sendai Framework Priorities/Activities, and UN SDGs and Targets

Figure 1: Identification of climate trends at BASF site Ludwigshafen (cooperation with GERICS)



Source: Der Beitrag von Unternehmen zur Bewältigung des Klimawandels, ECONSENSE report © Climate Service Center Germany (GERICS)

Figure 2: Climate adaption surveys to facilitate awareness for climate risks at BASF sites



Source: Presentation slides: Climate Adaptation at BASF, Dr. M.Bangert, BASF SE, © BASF

Short Facts:	Natural Hazard(s) Considered:
Governance approach: Adaptation to climate change Source: BASF Entry into force: Targeted Stakeholders: Operators, in-house Scope of applicability: Enterprises, sites	<ul style="list-style-type: none"> • Temperature changes • Precipitation changes • Extreme weather events Climate change: Considered

Description

BASF operates more than 350 production sites in over 80 countries around the world. Given the global setup of the production base, physical risks from climate change are an intrinsic risk factor with potentially significant impacts for individual sites.

Climate-related risks are integrated into the company-wide risk identification, assessment, and management process, based on the international risk management standard COSO II Enterprise Risk Management (ERM) – Integrated Framework (2004). Following the principle of decentralized ERM, climate-related risks are usually managed by the local, regional and corporate units responsible for identifying and assessing them with the support of an internal expert network. These units take the first decision to mitigate, transfer, accept or control climate-related risks, and to prioritize risks in line with the policies and requirements laid out in the general ERM policies and requirements.

In general, the adaptation to climate-related risk at BASF is a three-step process. Create awareness of climate change as a relevant risk driver, e.g. by surveys at the sites. Quantify the exposure to physical climate risks at BASF sites and determine the resulting risks for operations and logistics. Adapt to relevant risks by either organizational, e.g. regular update of emergency management plans for extreme weather at the sites, or physical measures, e.g. flood barriers, increased cooling capacities, and alternative logistic solutions.

The corporate climate-related exposure assessment is provided by the BASF Management Team for Climate Protection, including experts from environment, health and safety (EHS), corporate sustainability strategy, advocacy, corporate technology, investor relations, new business, procurement, and regional representatives.

Examples of assessed risks:

- Most BASF sites require water for their production processes and cooling, and many sites use nearby waterways for logistics. Climate change is projected to have a long-term effect on regional precipitation patterns for many of the regions where our sites are located, including a reduction of the amount of precipitation in some regions (e.g. Gulf of Mexico, and the Mediterranean). Lower precipitation levels may ultimately limit availability of water at affected production sites and thus represent a risk that BASF must decrease production capacity and/or change mode of transport due to limited navigability of waterways.
- BASF operates production sites in regions potentially vulnerable to increased frequency of cyclones due to climate change. Respective changes in physical climate parameters can lead to more extreme weather conditions, which represent an inherent risk for production.

BASF-internal experts are in close cooperation with renowned research institutions in the context of risk assessment, using own observations and public information. Examples for cooperation with research institutions in Germany are:

- Development of a Site-Characteristic Climate-Fact-Sheet with the Climate Service Center Germany GERICS
- Partner in the research program IMPREX with the Bundesanstalt für Gewässerkunde, BFG to improve the forecast of hydrological extremes and the application of new forecast products in the industry
- Partner in MIKLIP II with GERICS to evaluate the current applicability of decadal climate forecasts in industrial applications.

Link/Contact:

BASF SE



Comments by the UN/OECD Natech-Steering Group:

Natech Risk Management is one element of the enterprises strategy to adapt to climate change at all sites.

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