SEGRO Physical Climate Risk Screening Report

Savills Sustainability

March 2025

SEGRO savills

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Use of additional datasets

For the purposes of this report, additional datasets have been utilised. Savills has accessed and downloaded the appropriate data, and the client location data has been used by Savills to extract the location specific datasets presented in this report and associated workbooks.

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The additional datasets are:

- Copernicus Climate Data Store
- Aqueduct Water Risk Atlas
- British Geological Survey
- Met Office Climate Data
- IPCC Interactive Digital Atlas
- Georisques, French government portal
- Climate Impact Atlas (Climate Adaptation Services), Netherlands

CONTENTS

EXECUTIVE SUMMARY

SEGRO has appointed Savills Sustainability to undertake a physical climate risk assessment for its EU and UK portfolio of logistical estates. A previous portfolio assessment took place in 2022. This report focuses on the identification of exposure to a range of physical climate risks at estate, country and portfolio level and explores how these risks may change over time compared to the current baseline. Estates which have been identified with significant exposure to one or more physical climate hazard have been highlighted in estate watchlists. The watchlists aim to identify which estates will require a further vulnerability assessment as part of the next step, a portfolio vulnerability review, which will take place from 2025.

Since 2022 there have been changes to the composition of the portfolio and new scenarios have been incorporated into this assessment. The scenarios used in 2022, Representative Concentration Pathways (RCPs), are based on greenhouse gas concentrations and each pathway displays a projected global mean temperature increase by 2100. The new Shared Socioeconomic Pathway (SSP) scenarios, which were included in the IPCC's Sixth Assessment Report (AR6), were produced to be used in conjunction with RCPs and incorporate socioeconomic factors such as population, education and economic growth. These factors are used to understand how these choices might result in different greenhouse gas emission pathways and the subsequent global temperature rise associated with each scenario. Further detail on the new scenarios can be found in Section 2 – Methodology Overview (p.13–16).

Whilst the new scenarios aim to align closely to the RCP scenarios, the use of new scenarios in the 2024 portfolio screening does need to be accounted for when comparing the results. Therefore, commentary is provided on any significant impacts when comparing the 2022 and 2024 portfolio screening results. There are also other changes in methodology such as underlying hazard data and risk banding movements, which are likely to impact the overall portfolio risk distribution compared to 2022.

For climate risk management and disclosure requirements, including TCFD (Task Force on Climate-related Financial Disclosures) and ISSB (International Sustainability Standards Board) IFRS S2 Climate-related Disclosures, it is essential to understand if and how physical climate risk exposures in SEGRO's portfolio may have changed since the 2022 assessment. Section 3 – Portfolio Comparison (Jun 2024–Dec 2022) (p.17–21) of this report compares the outcomes of the 2022 portfolio screening to the 2024 portfolio screening.

In addition to the hazards assessed in 2022, a wider scope of hazards have been assessed this year due to the inclusion of more hazards available within Munich Re (Cold Stress and Storm Surge) as well as hazards from additional data sources. The additional hazards also align with the EU Taxonomy hazard classifications of temperature, wind, water and solid mass-related climate hazards. Section 4 – Physical Climate Risk Screening (p.22–64) explores the results of portfolio screening across all these hazards. The results are also presented at country level in Section 5 – Country Profiles (p.65-73).

It is important to assess physical climate risks over a range of climate scenarios to account for the uncertainty associated with climate model projections and the non-linearity of climate change impacts. In this report all scenarios (SSP1–2.6, SSP2-4.5, SSP3–7.0 and SSP5–8.5) and timeframes (2030, 2040, 2050, 2100) are shown in detail, where available. The estate watchlists, which identify estates with significant exposures to one or more hazard, all focus on the 2050 timeline and intermediate scenarios (RCP4.5 and SSP2–4.5). SEGRO's approach to the scenario analysis' results in this report is set out below:

- Scenario RCP8.5 or SSP5–8.5: Estates identified with significant exposure to hazards under this scenario are to be monitored.
- Scenario RCP4.5 or SSP2–4.5: Estates identified with significant exposure to hazards under this scenario are compiled into estate watchlists and require further vulnerability assessment.

EXECUTIVE SUMMARY

An important step in understanding how climate change could impact SEGRO's portfolio is identifying where physical climate risk exposures are projected to increase when compared to today's climate. Physical climate risk should be assessed over a variety of scenarios (described below) as there are still uncertainties associated with climate change.

CLIMATE SCENARIOS

> 4 — ***Business as usual scenarios (RCP8.5; SSP3–7.0; SPP5–8.5)*** reflect greenhouse gas emissions remaining high and warming levels of 4°C or above. Under these scenarios physical climate risks are high, with incremental shifts in risk exposure for temperature-related climate hazards and increased variability and intensity for water-related climate hazards and Tropical Cyclones.

> 2 — ***Intermediate scenarios (RCP4.5; SSP2–4.5)*** reflect delayed but progressive action on climate change and aligns closely to trends of our world today.

< 2 — ***Optimistic or Sustainability scenarios (RCP2.6; SSP1–2.6)*** reflect where sustainable choices and policies are implemented, limiting warming at the end of 2100 to less than 2°C. Under these scenarios, the impacts of climate change are reduced and the associated physical climate risks, except for Cold Stress which remains a material hazard until 2050.

Table 01 shows the change in number of estates' exposure risk to climate hazards in 2050, under the intermediate scenario (SSP2–4.5 or RCP4.5) compared to the current baseline. Drought Stress and Annual Water Stress show the largest increases from the baseline, with a large proportion of the portfolio shifting into higher risk exposure bands by 2050. This is closely followed by Heat Stress, Heat Wave and River Flood with several estates moving into the Medium and High risk categories. The table does not include all hazards assessed in this report as comparison to the baseline is not possible for hazards without future projections e.g. Extratropical Storm and Sea Level Rise which is only modelled for 2100 timeline.

Table 01: Portfolio Exposure Risk Summary (for change from baseline)

Hazard Classification	Description of Physical Hazard	Climate Scenario	Year	Change in No. of Estates from Baseline				
				No or Very Low	Low	Medium	High	Very High
Temperature-Related Climate Hazards	Heat Stress	SSP2-4.5	2050	↓-65	↑+20	↑+31	↑+14	0
	Heat Wave	RCP4.5	2050	↓-12	↓-100	↑+87	↑+25	→0
	Cold Stress	SSP2-4.5	2050	→0	↑+3	↑+12	↓-15	→0
	Cold Wave (Frost Days)	SSP2-4.5	2050	↑+101	↓-73	↓-1	↓-25	↓-2
	Fire Weather Stress	SSP2-4.5	2050	↓-42	↑+35	↑+7	→0	→0
Wind-Related Climate Hazards	Tropical Cyclone	RCP4.5	2050	→0	→0	→0	→0	→0
Water-Related Climate Hazards	Precipitation Stress	SSP2-4.5	2050	→0	↓-5	↑+5	→0	→0
	Flash Flood	RCP4.5	2050	↓-7	↑+6	↓-7	↑+8	→0
	Storm Surge (Defended)	SSP2-4.5	2050	→0	→0	→0	N/A	→0
	Annual Water Stress*	SSP5-8.5	2050	↓-7	↓-9	↓-2	↓-51	↑+69
	Drought Stress	SSP2-4.5	2050	↓-2	↓-174	↑+126	↑+46	↑+4
	River Flood (Defended)	RCP4.5	2050	↓-16	N/A	↑+14	↑+2	→0

*Annual Water Stress is not available for SSP2-4.5, SSP5-8.5 is used instead.

EXECUTIVE SUMMARY

INTERMEDIATE SCENARIO (2050) EXPOSURE RISK

The table below spotlights the count of estates within each risk band across the hazards for the intermediate scenario (SSP2–4.5 or RCP4.5) for the 2050 timeline. Where future projections are not available, the current risk exposure is shown and in the case of Annual Water Stress SSP5-8.5 is used as SSP2-4.5 scenarios are not available for this hazard.

Table 02: Portfolio Exposure Risk Summary (for 2050 under **intermediate** scenarios)

Hazard Classification	Description of Physical Hazard	Climate Scenario	Count of Estates in Each Risk Banding				
			No or Very Low	Low	Medium	High	Very High
Temperature-Related Climate Hazards	Change in Annual Maximum Temperature	SSP2-4.5	0	65	124	0	0
	Heat Stress	SSP2-4.5	0	106	69	14	0
	Heat Wave[1]	RCP4.5	0	77	87	25	0
	Cold Stress	SSP2-4.5	0	11	157	21	0
	Cold Wave (Frost Days)[2]	SSP2-4.5	127	32	27	3	0
	Fire Weather Stress	SSP2-4.5	55	113	13	8	0
Wind-Related Climate Hazards	Tropical Cyclone	RCP4.5	189	0	0	0	0
	Extratropical Storm	Current	0	31	158	0	0
	Tornado	Current	0	80	N/A	109	0
Water-Related Climate Hazards	Precipitation Stress	SSP2-4.5	0	142	33	12	2
	Flash flood	SSP2-4.5	64	50	41	33	0
	Storm Surge (Defended)	SSP2-4.5	181	0	2	N/A	6
	Sea Level Rise[3]	RCP4.5	183	0	0	1	5
	Annual Water Stress[4]	SSP5-8.5	37	16	22	30	84
	Drought Stress	SSP2-4.5	0	0	139	46	4
	Hail	Current	0	66	108	15	0
	River Flood (Defended)	RCP4.5	156	N/A	20	5	8
Solid Mass-Related Climate Hazards	Landslide	Current	183	4	2	0	N/A
	Subsidence[5]	RCP4.5	N/A	5	158	23	N/A

Traffic Scores	
(dark green)	No Or Very Low
(light green)	Low
(yellow)	Medium
(orange)	High
(red)	Very High

[1] Time horizon 2041–2060.
[2] Time horizon 2041–2060.
[3] Time horizon 2100.
[4] Annual Water Stress is not available for SSP2-4.5, SSP5-8.5 is used instead.
[5] Europe soil moisture proxy dataset, time horizon covers 2041–2070.

EXECUTIVE SUMMARY

BUSINESS AS USUAL (2050) EXPOSURE RISK

The table below shows the count of estates within each risk band across the hazards assessed for the portfolio screening. The portfolio risk distribution is presented here, where possible, for a high emission/business as usual scenario (SSP5-8.5 or RCP8.5) for 2050 timeline. Where future projections are not available, the current risk exposure is shown.

Table 03: Portfolio Exposure Risk Summary (for 2050 under business-as-usual scenarios)

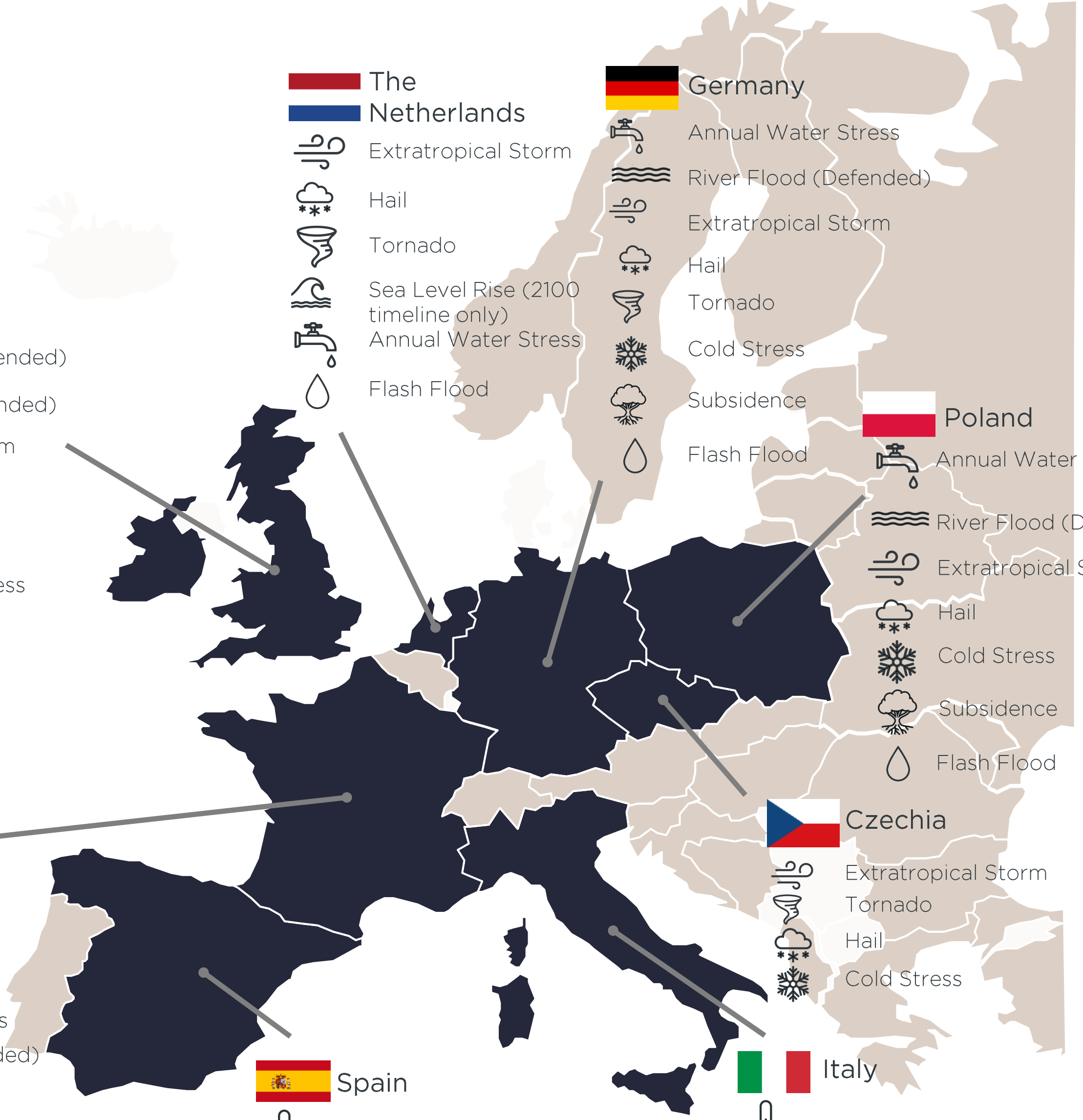
Hazard Classification	Description of Physical Hazard	Climate Scenario	Count of Estates in Each Risk Banding				
			No or Very Low	Low	Medium	High	Very High
Temperature-Related Climate Hazards	Change in Annual Maximum Temperature	SSP5-8.5	0	0	61	28	100
	Heat Stress	SSP5-8.5	0	75	98	16	0
	Heat Wave[1]	RCP8.5	0	15	133	41	0
	Cold Stress	SSP5-8.5	0	23	153	13	0
	Cold Wave (Frost Days)[2]	SSP5-8.5	128	37	22	2	0
	Fire Weather Stress	SSP5-8.5	8	141	32	8	0
Wind-Related Climate Hazards	Tropical Cyclone	RCP8.5	189	0	0	0	0
	Extratropical Storm	Current	0	31	158	0	0
	Tornado	Current	0	80	N/A	109	0
Water-Related Climate Hazards	Precipitation Stress	SSP5-8.5	0	139	36	12	2
	Flash flood	SSP5-8.5	64	50	39	35	0
	Storm Surge (Defended)	SSP5-8.5	181	0	3	N/A	5
	Sea Level Rise[3]	RCP8.5	183	0	0	1	5
	Annual Water Stress	SSP5-8.5	37	16	22	30	84
	Drought Stress	SSP5-8.5	0	0	96	77	16
	Hail	Current	0	66	108	15	0
	River Flood (Defended)	RCP8.5	152	N/A	23	6	8
Solid Mass-Related Climate Hazards	Landslide	Current	183	4	2	0	N/A
	Subsidence[4]	RCP8.5	N/A	8	143	35	N/A

Traffic Scores	
(green)	No Or Very Low
(light green)	Low
(yellow)	Medium
(orange)	High
(red)	Very High

[1] Time horizon 2041–2060.
[2] Time horizon 2041–2060.
[3] Time horizon 2100.
[4] Europe soil moisture proxy dataset, time horizon covers 2041–2070.

ESTATE WATCHLIST SUMMARY

The estate watchlists identify the estates which have material exposure to one or more physical climate risks under an intermediate scenario (RCP4.5 or SSP2-4.5) for 2050 and will require a further vulnerability assessment. The map below shows a summary of material physical climate hazards by country, where estates in Italy and France are exposed to the most physical climate hazards. Italy is exposed to 11 physical climate hazards. Further information on physical climate hazards by country can be found in Section 5 (Country Profiles).



Map 01: Material hazards in each country

01
INTRODUCTION

INTRODUCTION

PHYSICAL CLIMATE RISKS

Climate change is expected to increase the frequency and severity of extreme weather events and result in long term shifts in our climate. These changes pose significant impacts for the real estate sector which are defined as physical climate risks, either acute (relating to extreme weather events e.g. tropical cyclones or floods) or chronic (long term shifts in climate patterns e.g. sea level rise or increasing temperatures).

Examples of impacts for real estate assets include:

- Stranded assets/high insurance costs
- Significant damage and repair costs
- Extreme damage to buildings and wider infrastructure
- Soil subsidence affecting asset stability
- Opportunity for structural deformation; energy costs due to cooling
- Damage to water infrastructure and building structure from freeze-thaw events.

There are also increasing expectations from regulators and stakeholders for organisations to understand their potential exposures to physical climate risks and disclose progress identifying and managing such risks. This has led to an emergence of international climate risk reporting standards and regulatory requirements such as the Task Force on Climate-related Financial Disclosures (TCFD) and the International Financial Reporting Standards (IFRS) S2 Climate-related Disclosures issued by the International Sustainability Standards Board (ISSB) under the IFRS Foundation.

In Europe organisations meeting certain eligibility criteria are required to identify, assess and disclose their exposure to climate-related risks under the EU Taxonomy Climate Change Adaptation (TCCA) objective and the Corporate Sustainability Reporting Directive (CSRD) disclosure requirements.

REPORT AIMS

This report outlines the results of a portfolio-wide physical climate risk screening exercise that assesses the potential physical climate risks across 189 assets.

The screening exercise highlights assets which have high exposure to one or more physical climate hazards, and which may require further detailed analysis and adaptation measures to reduce any identified risks.

The approach follows the requirements of the EU Taxonomy's criteria of physical climate hazards and Savills own best practice approach to hazard identification and risk ranking.

SCREENING APPROACH

Assessing physical climates risks is not only a key step for climate reporting requirements but also can be used to inform adaptation and mitigation measures to improve the assets resilience to climate change over its lifecycle.

The infographic below explains the concept of physical climate risk assessments and risk management. In this report, Savills has conducted a physical climate risk exposure assessment to identify which Estates are exposed to one or more physical climate hazards from the list in EU Taxonomy Section II, Appendix A, for time periods aligned to asset expected lifespan.

The assessment combines predominantly Munich Re climate change and natural hazard datasets with alternative data sources, for example European wide datasets from Copernicus Climate Data Store and the IPCC Digital Interactive Atlas used to supplement specific hazards.

The hazards were assessed over multiple IPCC climate scenarios (RCP and SSPs) and time horizons (current baseline, 2030, 2040, 2050 and 2100) where available. No data was verified by Savills as part of this assessment.

PHYSICAL CLIMATE RISK ASSESSMENT APPROACH

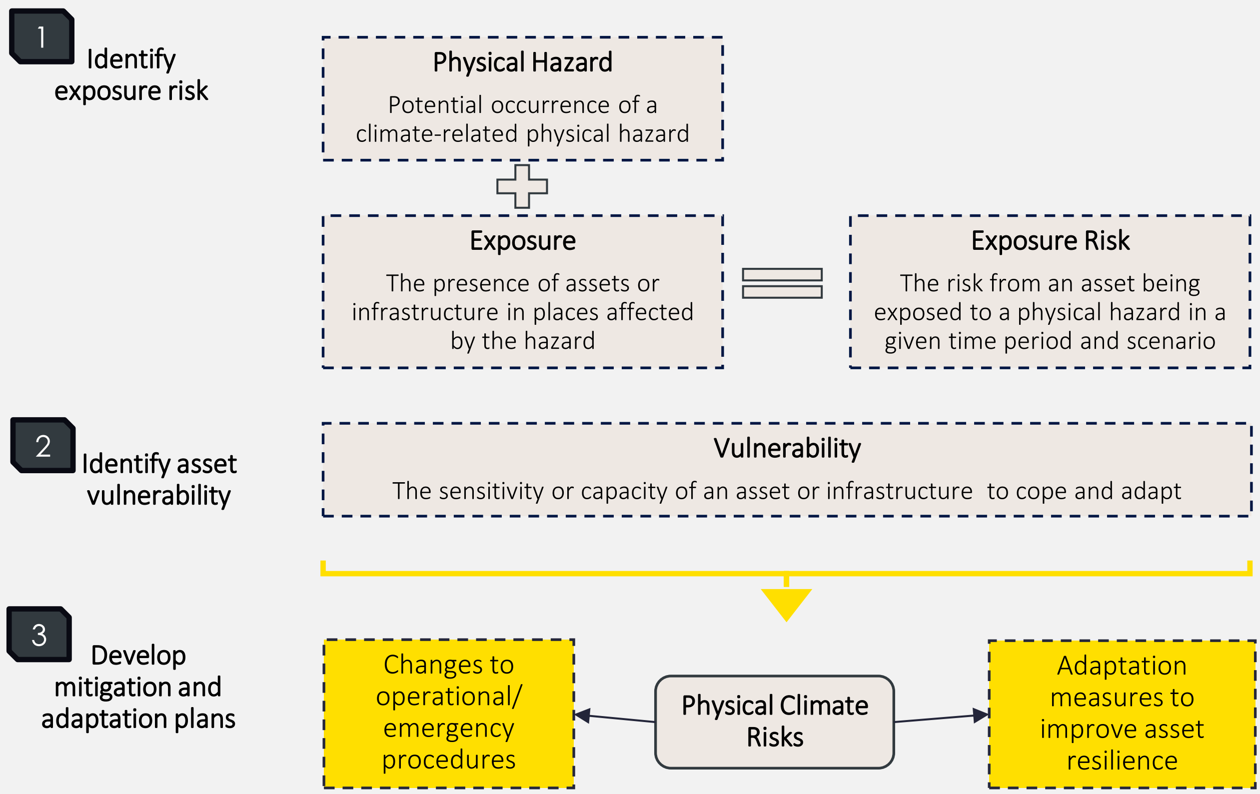


Figure 01: Physical Climate Risk – Hazard, Exposure and Vulnerability

SEGRO PORTFOLIO

SEGRO owns and manages big box and urban warehouses assets which are located in and around major cities and key transportation hubs in the UK and across continental Europe. Estates are typically used for retail, logistic, manufacturing and distributor, and wholesale purposes.

SEGRO's European portfolio is comprised of 189 industrial warehouses and big box estates located across eight European countries: Czechia, Germany, Spain, France, Italy, the Netherlands, Poland and UK (portfolio data as of May 2024).

Estates are individual big box or industrial warehouses in SEGRO's portfolio. It is noted that some estates in the SEGRO portfolio consist of a cluster of assets located adjacent to each other. However, for the purpose of this report and the portfolio screening exercise these have been kept as distinct single point estates, to be able to differentiate physical climate risks which vary on a localised scale, such as River Flood which is modelled on a 30-metre grid resolution.

The bulk of estates are located in the UK (61) and France (44), followed by Germany (32), Italy (19) Poland (16), Spain (9), Netherlands (7) and Czechia (1).

The estate at the highest latitude is located in Germany just outside of Hamburg, at a latitude of 53.5° and the lowest latitude is an estate located outside of Madrid in Spain at a latitude of 40.3°.

Table 04: Number of Estates by Country

	Czechia	Germany	Spain	France	UK	Italy	The Netherlands	Poland
No. Of Estates	1	32	9	44	61	19	7	16

Map 02: Segro European Portfolio Locations ©OpenStreetMap contributors

02
METHODOLOGY OVERVIEW

METHODOLOGY OVERVIEW

GLOBAL CLIMATE MODELS

A global climate model is a mathematical representation of the major climate system components such as the atmosphere, land surface, ocean, and sea ice, and their interactions. Climate models use well-defined processes based on physical laws to define the behaviour of the weather and climate – thereby understanding how the climate has changed historically and may change in the future. Climate models use scenarios – stories about plausible versions of the future (populations, land use, economic growth) – to model what future atmospheric conditions might look like. Climate models are calibrated using historical observation data before being run into the future.

SCENARIO ANALYSIS

Scenario analysis informs the understanding of risks and uncertainties under different hypothetical futures. Scenario analysis provides insights on site exposure and vulnerability to climate hazards and the implications of climate change.

The physical climate hazard datasets used in this assessment are based on IPCC scenarios: RCPs (Representative Concentration Pathways) for atmospheric greenhouse gas concentrations and SSPs (Shared Socioeconomic Pathways) for socioeconomic choices and trends.

In this report the IPCC scenarios are used to assess the impacts of climate change under the following narratives:

< 2 **Sustainability** *(RCP2.6 or SSP1–2.6)*

Low to Moderate scenario where sustainable choices limit warming at the end of 2100 to less than 2°C relative to the pre-industrial period.

> 2 **Intermediate** *(RCP4.5 or SSP2–4.5)*

Intermediate scenario where decarbonisation is slower, leading to warming at the end of 2100 between a range of 2–3.5°C relative to the pre-industrial period.

> 4 **Business as Usual** *(RCP8.5 or SSP5–8.5 and SSP3-7.0)*

Most severe scenarios where greenhouse gas emissions remain high, leading to warming at the end of 2100 of up to or more than 4°C relative to the pre-industrial period.

MUNICH RE PROJECTIONS

The projection years for the SSP and RCP scenarios are 2030, 2040, 2050 and 2100. The projections are a hybrid composite of local high-resolution models, e.g. CORDEX (Coordinated Regional Climate Downscaling Experiment, ~25–55 km horizontal resolution) and global climate models: CMIP5 (Coupled Model Intercomparison Project Phase 5), or where available CMIP6 (Coupled Model Intercomparison Project Phase 6).

Data for the reference period are based on well-established current NATHAN model data (for Tropical Cyclone, River Flood and Sea Level Rise) and on ERA5 and ERA5-Land ECMWF atmospheric reanalysis data (for Heat Stress, Precipitation Stress, Fire Weather Stress, Cold Stress).

The reference period for the climatological parameters is 1995–2014, aligning to IPCC AR6, and 20-year periods are used for the projections for more robust trend estimates. The scores also contain current values, allowing the user to compare two points in time and thus evaluate the changes in different climate scenarios.

METHODOLOGY OVERVIEW

NEW SCENARIOS AND CLIMATE MODELS

The IPCC released the Sixth Assessment Report (AR6) in 2021 which included the new Shared Socioeconomic Pathways (SSP) scenarios. The new SSP scenarios were designed to be used in conjunction with the RCP to explore how socioeconomic factors (such as population, economic growth, education, urbanisation and technological development), will impact global greenhouse gas emissions.

The SSP scenarios were incorporated with RCP scenarios into the new CMIP6 (Coupled Model Intercomparison Project Phase 6) model to inform the results in the 2021 IPCC sixth assessment report (AR6). The combined SSP–RCP scenarios are denoted as SSPx-y where SSPx is the socioeconomic pathway and y is the representative concentration pathway (RCP) as seen in Figure 02.

Munich Re have used the new SSP–RCP scenarios and CMIP6 (Coupled Model Intercomparison Project Phase 6) model for the calculation of the five Climate Stress Indices (Heat Stress, Drought Stress, Precipitation Stress, Fire Weather Stress and Cold Stress) which are included in this assessment.

Shared Socioeconomic Pathways

- **SSP1 – Sustainability:** global economies shifts gradually to a sustainable path where due to rapid decarbonisation, emission peak early and decline throughout rest of century.
- **SSP2 – Middle of the road:** aligns closely to trends of our world today. Decarbonisation is slower but emissions generally decline towards 2100.
- **SSP3 – Regional Rivalry:** economic inequality worsens leading to increasing conflicts. Carbon dioxide emissions double by 2100.
- **SSP5 – Rapid Growth:** worst case scenarios where carbon emissions double by 2050. Economic growth is driven by fossil fuels.

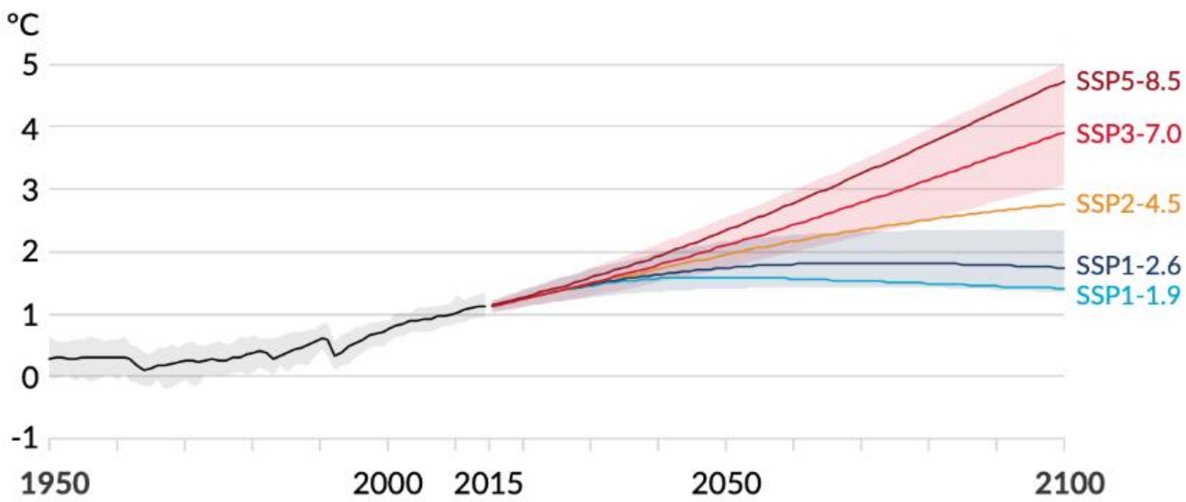


Figure 02: IPCC AR6, Figure SPM.8 – Global surface temperature change relative to 1850-1900, historical and SSP scenario projections.

METHODOLOGY OVERVIEW

As highlighted in the previous page, the IPCC have released new SSP scenarios which, for some hazards, have been incorporated into underlying hazard methodologies. Table 05 below provides an overview of the physical climate hazards assessed in this portfolio screening and scenario generations used for both the 2022 assessment and current 2024 assessment.

The table also highlights the threshold for each hazard which has been defined to identify which estates have significant exposure to each physical climate hazard and will require an assessment which considers the vulnerability component. Hazards which are relevant for TCFD disclosures have been highlighted, outlining those included in the TCFD report for the previous reporting year.

Table 05: Hazard methodology and threshold definitions.

Hazard Classification	Description of Physical Hazard	Climate Scenario 2022	Climate Scenario 2024	Definition of Significant Exposure	Extracted for TCFD Disclosures
Temperature-Related Climate Hazards	Change in Annual Maximum Temperature	-	SSP	High and above	
	Heat Stress	RCP	SSP	High and above	Yes
	Heat Wave	-	SSP	High and above	
	Cold Stress	RCP	SSP	High and above	Yes
	Cold Wave (Frost Days)	-	RCP	High and above	
	Fire Weather Stress	RCP	SSP	High and above	Yes
Wind-Related Climate Hazards	Tropical Cyclone	RCP	RCP	High and above	
	Extratropical Storm	Current	Current	Medium and above	
	Tornado	Current	Current	Medium and above	
Water-Related Climate Hazards	Precipitation Stress	RCP	SSP	High and above	Yes
	Flash flood	Current	SSP	Medium and above*	Yes
	Storm Surge (Defended)	-	SSP	High and above	Yes
	Sea Level Rise	RCP	RCP	High and above	Yes
	Annual Water Stress	-	SSP	Very High	
	Drought Stress	RCP	SSP	High and above	Yes
	Hail	Current	Current	Medium and above	
	River Flood (Defended)	RCP	RCP	Medium and above	Yes
Solid Mass-Related Climate Hazards	Landslide	-	Current	Medium and above	
	Subsidence	-	RCP	High and above	
	Soil moisture (subsidence proxy)	-	RCP	High and above	

*Medium and above for Europe estates except for UK estates where the threshold is High and above.

03

PORTFOLIO COMPARISON (JUN 2024 – DEC 2022)

PORTFOLIO COMPARISON (JUN 2024 – DEC 2022)

SUMMARY

The results of the 2024 portfolio screening have been compared to the previous portfolio screening based on a December 2022 portfolio. Since the previous assessment, there have been several updates which will drive changes as seen in the comparison tables below:

- Portfolio movements: The portfolio has undergone changes since 2022 from a total of 197 estates to 189 estates. This reduction of 16 estates is due to disposal (expected or completed) or estate consolidation, partly offset by eight newly acquired estates.
- Stress Indices methodology updates: Munich Re has updated hazard methodologies for the Stress Indices incorporating additional parameters, the latest climate models (CMIP6) and scenarios (SSPs) and an updated reference period of 1995–2014 in alignment with IPCC AR6. Subsequently, the risk bands have also been adjusted (shown below), impacting risk distributions.
- River Flood methodology updates: Munich Re added a 50-year return period as Very High Exposure, moving the 100-year return period down to High Exposure.
- New hazards: Storm Surge and Cold Stress hazards are now available in 2024.

Old Hazard Bands (Stress Indices)

0 - 1.50	1.51 - 3.50	3.51 - 6.50	6.51 - 8.50	8.51 - 10.0

New Hazard Bands (Stress Indices)

0 - 1.50	1.51 - 3.50	3.51 - 6.00	6.01 - 8.00	8.01 - 10.0

Drought Stress

Portfolio as at Date	Climate Scenario	Average Risk Score	No. of Estates by Risk Rating (Change from Baseline)					Total Estates
			No or Very Low	Low	Medium	High	Very High	
June 2024	SSP5-8.5	5.89 (↑2.87)	0 (↓-2)	0 (↓-174)	96 (↑83)	77 (↑77)	16 (↑16)	189
December 2022	RCP8.5	4.72	0	44	145	4	4	197

Drought Stress has the highest portfolio average risk score across all hazards (5.89 for the June 2024 screening under SSP5–8.5 2050). The risk also demonstrates the greatest change from baseline out of all hazards with no estates having No or Very Low and Low exposure by 2050 under high emission scenario SSP5–8.5. When comparing to the previous 2022 assessment, a larger proportion of the portfolio is in the High and Very High risk categories, driven by changes in underlying hazard and scenario methodology and the new risk bandings for all stress indices.

Fire Weather Stress

Portfolio as at Date	Climate Scenario	Average Risk Score	No. of Estates by Risk Rating (Change from Baseline)					Total Estates
			No or Very Low	Low	Medium	High	Very High	
June 2024	SSP5-8.5	2.86 (↑0.92)	8 (↓-89)	141 (↑63)	32 (↑26)	8 (→0)	0 (→0)	189
December 2022	RCP8.5	3.40	0	159	30	8	0	197

Fire Weather Stress has a portfolio average risk score of 2.86 with majority of the portfolio in the Low risk category by 2050 under SSP5–8.5. The risk is also increasing from the baseline with most estates moving into the Low and Medium categories by 2050 under SSP5–8.5. The risk distribution has not changed as significantly from the December 2022 assessment, but differences are due to changes in underlying hazard and scenario methodology and the new risk bandings for all stress indices.

PORTFOLIO COMPARISON (JUN 2024 – DEC 2022)

Heat Stress

Portfolio as at Date	Climate Scenario	Average Risk Score	No. of Estates by Risk Rating (Change from Baseline)					Total Estates
			No or Very Low	Low	Medium	High	Very High	
June 2024	SSP5-8.5	3.85 (↑1.37)	0 (↓-65)	75 (↓-11)	98 (↑60)	16 (↑16)	0 (→0)	189
December 2022	RCP8.5	4.00	0	82	107	8	0	197

Heat Stress is a significant hazard for the SEGRO portfolio, third to Drought and Cold Stress with a portfolio average risk score of 3.85 in the Medium risk category for the June 2024 assessment (a slight decrease from 2022). The risk is increasing from the baseline with most estates moving into the Medium and High categories by 2050 under SSP5-8.5. When comparing with the December 2022 results, there are more estates in the Medium and High risk categories for June 2024, mostly driven by the change in underlying hazard and scenario methodology and the new risk bandings.

Precipitation Stress

Portfolio as at Date	Climate Scenario	Average Risk Score	No. of Estates by Risk Rating (Change from Baseline)					Total Estates
			No or Very Low	Low	Medium	High	Very High	
June 2024	SSP5-8.5	3.53 (↑0.35)	0 (→0)	139 (↓-8)	36 (↑8)	12 (→0)	2 (→0)	189
December 2022	RCP8.5	3.26	0	154	33	7	3	197

Precipitation Stress has a portfolio average risk score of 3.53 for the June 2024 assessment under SSP5-8.5 2050, where majority of portfolio is within Low and Medium. The risk is observing less significant changes from the baseline with some estates moving from Low to Medium. The portfolio average risk score has increased since December 2022 to 3.53, highlighting that more of the portfolio sits in the Medium and higher risk categories in this year's analysis. Changes in risk distribution are driven by the change in underlying hazard and scenario methodology and the new risk bandings for stress indices.

Cold Stress

Portfolio as at Date	Climate Scenario	Average Risk Score	No. of Estates by Risk Rating (Change from Baseline)					Total Estates
			No or Very Low	Low	Medium	High	Very High	
June 2024	SSP5-8.5	4.32 (↓-0.7)	0 (→0)	23 (↑15)	153 (↑8)	13 (↓-23)	0 (→0)	189

Cold Stress is a significant hazard for the SEGRO portfolio with a portfolio average risk score of 4.32, second to Drought stress. However, it is the only hazard which is decreasing from the baseline with estates in the High risk category at the baseline moving to Medium and Low by 2050 under SSP5-8.5. This is in line with climate model projections where findings show that as global temperatures rise, cold wave events and cold stress occurrences are expected to decrease in UK (Met Office, Online, undated) and Europe (European Environment Agency, Online, 2021). Cold Stress is a new hazard in Munich Re's Climate Change Edition so only results for June 2024 are shown here.

PORTFOLIO COMPARISON (JUN 2024 – DEC 2022)

Sea Level Rise (Year 2100)

Portfolio as at Date	Climate Scenario	Average Risk Score	No. of Estates by Risk Rating (Change from Baseline)					Total Estates
			No or Very Low	Low	Medium	High	Very High	
June 2024	RCP8.5	1.00	183	0	0	1	5	189
December 2022	RCP8.5	1.00	191	0	0	1	5	197

The majority of SEGRO's portfolio remains to have No or Very Low exposure to Sea Level Rise. The same six estates identified in the 2022 assessment are found to have High and Very High exposure to Sea Level Rise due to low elevations and proximity to the North Sea. The climate scenario approach and underlying hazard methodology has not undergone any updates. No changes from the baseline are presented as Sea Level Rise is only modelled for the 2100 period by Munich Re.

Tropical Cyclone

Portfolio as at Date	Climate Scenario	Average Risk Score	No. of Estates by Risk Rating (Change from Baseline)					Total Estates
			No or Very Low	Low	Medium	High	Very High	
June 2024	RCP8.5	0.75 (➔0)	189 (➔0)	0 (➔0)	0 (➔0)	0 (➔0)	0 (➔0)	189
December 2022	RCP8.5	0.75	197	0	0	0	0	197

All estates have no exposure to Tropical Cyclone. Tropical cyclones require specific conditions to develop, including warm sea surface temperatures. Over land tropical cyclones tend to weaken and exist mainly around the tropical latitudes where temperatures are higher. Tropical cyclones which form in the Atlantic Ocean rarely impact land-locked areas of Europe within cooler climates, where the SEGRO European estates are located.

Storm Surge (Defended)

Portfolio as at Date	Climate Scenario	Average Risk Score	No. of Estates by Risk Rating (Change from Baseline)					Total Estates
			No or Very Low	Low	Medium	High	Very High	
June 2024	SSP5-8.5	1.03 (↑0.01)	181 (➔0)	0 (↓-1)	3 (↑1)	N/A	5 (➔0)	189

Storm Surge is a new hazard within the Munich Re Climate Change Edition so only presented for the June 2024 assessment. The table presents the defended view for storm surge risk, which factors in any local coastal defences that are in place such as dunes, flood walls or raised defences. The results show that most of the portfolio has no exposure to storm surge risk under SSP5-8.5 2050, except for eight estates located close to coastlines in the UK and Germany.

PORTFOLIO COMPARISON (JUN 2024 – DEC 2022)

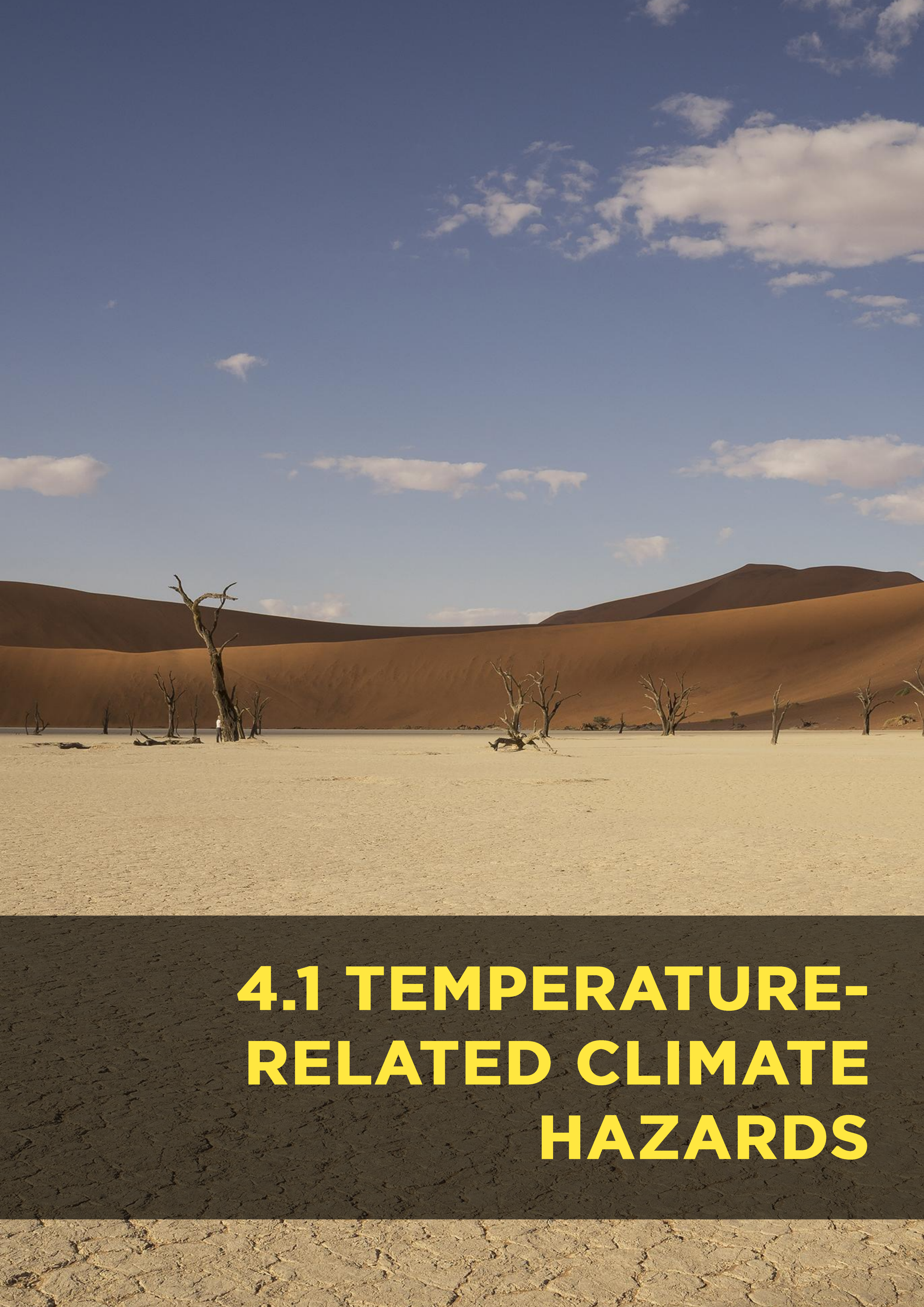
River Flood (Defended)

Portfolio as at Date	Climate Scenario	Average Risk Score	No. of Estates by Risk Rating (Change from Baseline)					Total Estates
			No or Very Low	Low	Medium	High	Very High	
June 2024	RCP8.5	1.76 (↑0.48)	152 (↓-21)	N/A	24 (↑18)	6 (↑3)	7 (→0)	189
December 2022	RCP8.5	1.66	174	N/A	4	N/A	19	197

River flood (Defended) has a portfolio average risk score of 1.76 for the June 2024 assessment under SSP5-8.5 2050, a slight increase from the December 2022 assessment. The key change since 2022 is underlying methodology updates due to the introduction of a 50-year return period zone as a Very High category, moving the 100-year return period zone to High and changing the portfolio's risk distribution.

04

PHYSICAL CLIMATE RISK SCREENING



4.1 TEMPERATURE-RELATED CLIMATE HAZARDS

CHANGE IN ANNUAL MAXIMUM TEMPERATURE

HAZARD BACKGROUND

As the climate changes, parts of the world which are not used to such climatological stresses are experiencing more frequent heat events, including hot, humid days and nights. Geographies which are experienced in such parameters are seeing temperatures increase even further and/or the number of days of high temperatures increasing. These events impact human health, the economy, agriculture and the environment.

Munich Re is able to provide additional Heat Stress parameters within their Climate Expert Model. This model compliments the information outlined previously regarding Heat Stress.

The additional parameters assessed:

- Annual Maximum Temperature
- Annual Maximum Temperature – mean change

The Annual Maximum Temperature increase is developed using the annual maximum of daily maximum temperature (No. of Days above 30°C) of near-surface air temperature.

Table 06: Count of estates under each scenario/timeframe by change in annual maximum temperature (from current) in °C.

Change in Annual Maximum Temperature	Very Low			Low	Medium	High	Very High
	0.01 to 0.50	0.51 to 1.00	1.01 to 1.50	1.51 to 2.00	2.01 to 2.50	2.51 to 3.00	> 3.01
SSP1-2.6 Year 2030	0	4	160	23	2	0	0
SSP1-2.6 Year 2040	0	0	28	141	20	0	0
SSP1-2.6 Year 2050	0	0	1	102	80	6	0
SSP1-2.6 Year 2100	0	0	0	142	42	5	0
SSP2-4.5 Year 2030	0	11	177	1	0	0	0
SSP2-4.5 Year 2040	0	0	73	116	0	0	0
SSP2-4.5 Year 2050	0	0	0	65	124	0	0
SSP2-4.5 Year 2100	0	0	0	0	0	35	154
SSP3-7.0 Year 2030	0	12	143	32	2	0	0
SSP3-7.0 Year 2040	0	0	7	146	36	0	0
SSP3-7.0 Year 2050	0	0	0	1	117	69	2
SSP3-7.0 Year 2100	0	0	0	0	0	0	189
SSP5-8.5 Year 2030	0	0	122	67	0	0	0
SSP5-8.5 Year 2040	0	0	0	51	118	20	0
SSP5-8.5 Year 2050	0	0	0	0	61	28	100
SSP5-8.5 Year 2100	0	0	0	0	0	0	189

Information supported by:
Munich Re Natural Hazards Fact Sheet V. 2020/06
Munich Re Location Info Data Documentation V.2023/10

CHANGE IN ANNUAL MAXIMUM TEMPERATURE

PORTFOLIO SCREENING RESULTS

Both Spain and Italy estates have the highest average current temperature as a starting point and are closely followed by France and Czechia. All four countries maximum temperatures (2100 SSP5) are expected to exceed 40°C. In the middle to high range is Germany and Poland with maximum temperatures (2100 SSP5) just below 40°C. The Netherlands and the UK are those least exposed, though they still experience a maximum change of over 5°C (SSP5 2100). The UK estates overall benefit from higher latitudes and exposure to the Atlantic, with maximum temperatures for all estates remaining just below 35°C. The 35°C threshold is used widely in the IPCC reports, both for its agricultural significance (critical temperatures for staple crops) and its impact on human health particularly in locations with high humidity, where sustained exposure to temperatures of 35°C or higher can be lethal (IPCC, AR6, WGII, Fact Sheet Health, online, accessed Aug 2024/Chapt 11 AR5) When looking at optimistic scenarios (SSP1–2.6) the same pattern of increase over time and for the same countries is reflected though with less intense increases.

Table 07: Country current average maximum temperatures in °C and change in annual maximum temperature by timeframe/scenario.

Change in Annual Max temp (Difference from Current in °C)	Czechia	Germany	Spain	France	UK	Italy	Netherlands	Poland
Annual Max Temp Current	32.5	32.33125	34.99	33.41	28.47	34.94	30.37	31.84
SSP1-2.6 Year 2030	1.30	1.24	1.81	1.33	1.31	1.67	1.64	1.38
SSP1-2.6 Year 2040	1.80	1.53	2.20	1.90	1.67	2.03	1.79	1.80
SSP1-2.6 Year 2050	1.90	1.78	2.39	2.14	2.02	2.44	2.19	1.92
SSP1-2.6 Year 2100	1.90	1.85	2.43	2.03	1.95	2.17	2.23	1.93
SSP2-4.5 Year 2030	1.30	1.13	1.40	1.33	1.18	1.36	1.21	1.29
SSP2-4.5 Year 2040	1.70	1.63	1.82	1.80	1.46	1.72	1.64	1.69
SSP2-4.5 Year 2050	2.20	2.16	2.37	2.32	1.99	2.27	2.06	2.31
SSP2-4.5 Year 2100	3.70	3.39	3.70	3.66	3.05	3.96	2.86	3.68
SSP3-7.0 Year 2030	1.50	1.16	1.80	1.36	1.32	1.72	1.49	1.47
SSP3-7.0 Year 2040	1.80	1.68	2.10	1.94	1.70	2.27	1.91	1.69
SSP3-7.0 Year 2050	2.60	2.30	2.77	2.58	2.25	2.78	2.40	2.62
SSP3-7.0 Year 2100	5.80	5.36	5.69	5.49	4.69	5.97	4.99	5.42
SSP5-8.5 Year 2030	1.60	1.51	1.53	1.58	1.41	1.64	1.44	1.54
SSP5-8.5 Year 2040	2.50	2.27	2.37	2.40	2.01	2.39	2.00	2.51
SSP5-8.5 Year 2050	3.10	3.07	3.21	3.29	2.43	3.37	2.54	3.37
SSP5-8.5 Year 2100	7.80	6.85	7.00	7.33	5.69	7.44	5.63	7.50

Exposure risk category	Hazard Score Category
Very Low	0.01 - 0.50
	0.51 - 1.00
	1.01 - 1.50
Low	1.51 - 2.00
Medium	2.01 - 2.50
High	2.51 - 3.00
Very High	> 3.00

HEAT STRESS

HAZARD BACKGROUND

Global warming is increasing the risk of Heat Stress which affects humans, infrastructure and ecosystems. Global average temperatures are rising and the intensity and frequency of heat waves are increasing.

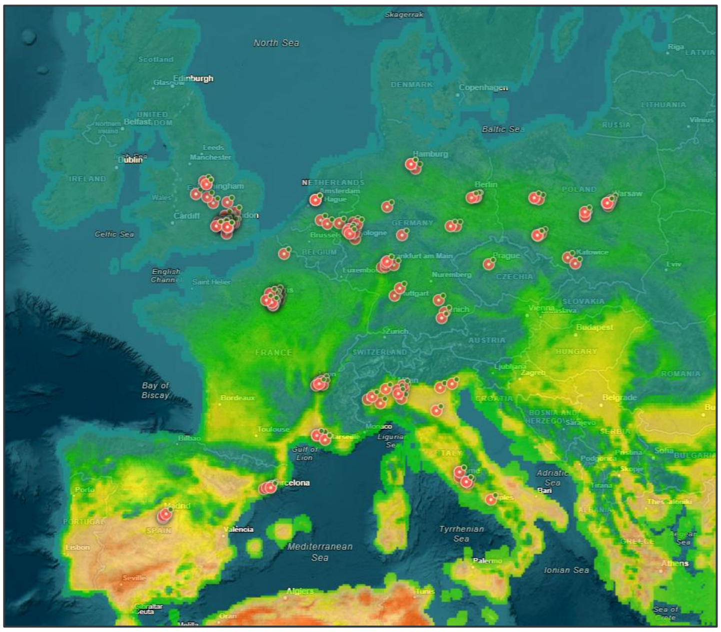
Munich Re provides detailed information on the meteorological threat caused by Heat Stress and also an integrated Heat Stress Index. Underlying Heat Stress parameters include Annual Maximum Temperature (Annual No. of Days above 30°C), Mean Daily Maximum Temperature (Annual No. of Days above 40°C) and Annual No. of Days in Heat Wave (Annual No. of Tropical Nights).

The Heat Stress Index combines relevant information from the parameters and classifies the climatological Heat Stress situation on a scale ranging from 0 (Very Low) to 10 (Very High). The parameters were chosen in accordance with scientific studies and climate extremes indices defined by the CCI/WCRP/JCOMM Expert Team on Climate Change Detection and Indices, with the aim of depicting Heat Stress consistently, locally and globally.

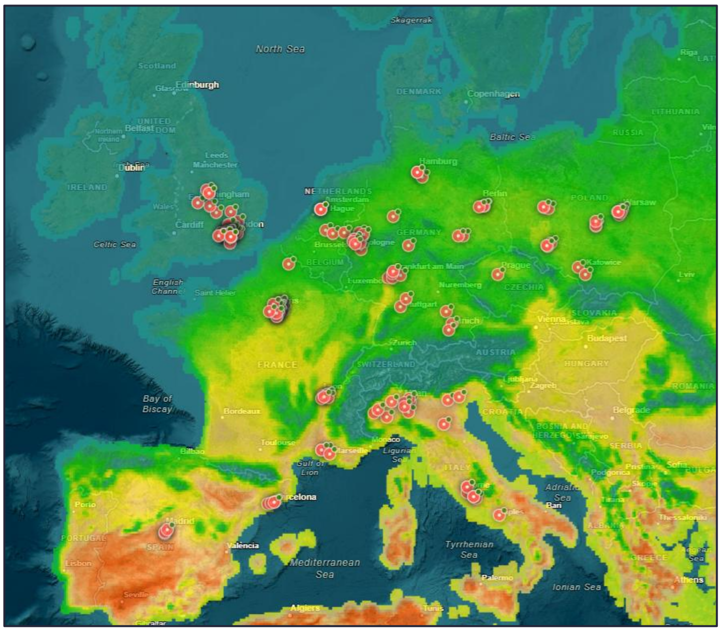
Thermal comfort is not assessed as part of this analysis.

Heat Stress refers in this report to the climatic hazard, and not the commonly referred to body heat stress.

Regardless of future levels of global warming, temperatures will rise in all European areas at a rate exceeding global mean temperature changes (IPCC Sixth Assessment WG1, Regional Fact Sheet Europe). Europe has historically experienced warming at twice the global average at around 0.5°C per decade (IPCC AR6, WGII, Fact Sheet Health, accessed August 2024)



Map 03: Heat Stress exposure risk for SEGRO portfolio in the current timeline



Map 04: Heat Stress exposure risk for SEGRO portfolio under scenario SSP2–4.5 by 2050

- 0.0 - 1.5 Very Low
- 1.6 - 3.0 Low
- 3.1 - 4.5 Low Medium
- 4.6 - 6.0 High Medium
- 6.1 - 7.5 High
- 7.6 - 9.0 Very High
- 9.1 - 10.0 Extreme

Information supported by:
Munich Re Natural Hazards Fact Sheet V. 2020/06
Munich Re Location Info Data Documentation V.2023/10

HEAT STRESS

PORTFOLIO SCREENING RESULTS

The current exposure risk to Heat Stress for SEGRO's estates predominantly falls within the Low to High risk bands. Modelled scenarios demonstrate a clear increase in the amount of estates in higher risk bands as emission projections and timescales increase. The key areas affected by Heat Stress are Spain, Italy and France. Europe has seen an increase in extreme heat events as a result of climate change, and the risk is expected to increase. The European Environment Agency completed a study of extreme heat events in Europe using climate model projections. The results found that “hot days with temperatures above 30 °C have increased throughout Europe. The number of hot days in Europe may increase four-fold by the end of the century under a high-emissions scenario” (European Environment Agency, 2023).

Table 08: Overview table – No. of estates by risk category

Heat Stress	No/Very Low Exposure (1) Dark Green	Low Exposure (2) Light Green	Medium Exposure (3) Orange	High Exposure (4) Red	Very High Exposure (5) Dark Red
	0 – 1.50	1.51 – 3.50	3.51 – 6	6.01 – 8	8.01 – 10.0
Current	65	86	38	0	0
SSP1-2.6 Year 2030	9	138	33	9	0
SSP1-2.6 Year 2040	5	125	46	13	0
SSP1-2.6 Year 2050	2	122	51	14	0
SSP1-2.6 Year 2100	2	121	52	14	0
SSP2-4.5 Year 2030	19	128	37	5	0
SSP2-4.5 Year 2040	6	120	55	8	0
SSP2-4.5 Year 2050	0	106	69	14	0
SSP2-4.5 Year 2100	0	68	100	21	0
SSP3-7.0 Year 2030	21	126	32	10	0
SSP3-7.0 Year 2040	5	114	56	14	0
SSP3-7.0 Year 2050	0	97	75	17	0
SSP3-7.0 Year 2100	0	65	89	31	4
SSP5-8.5 Year 2030	7	130	47	5	0
SSP5-8.5 Year 2040	0	100	74	15	0
SSP5-8.5 Year 2050	0	75	98	16	0
SSP5-8.5 Year 2100	0	2	143	36	8

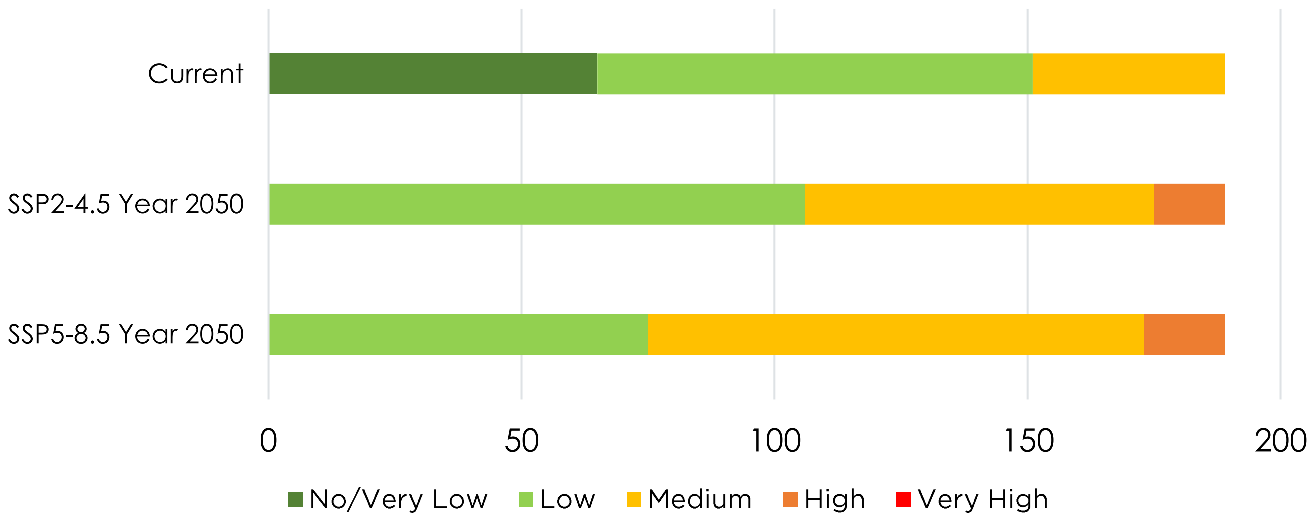


Figure 03: Heat Stress – No. of estates by risk category

HEAT WAVE

HAZARD BACKGROUND

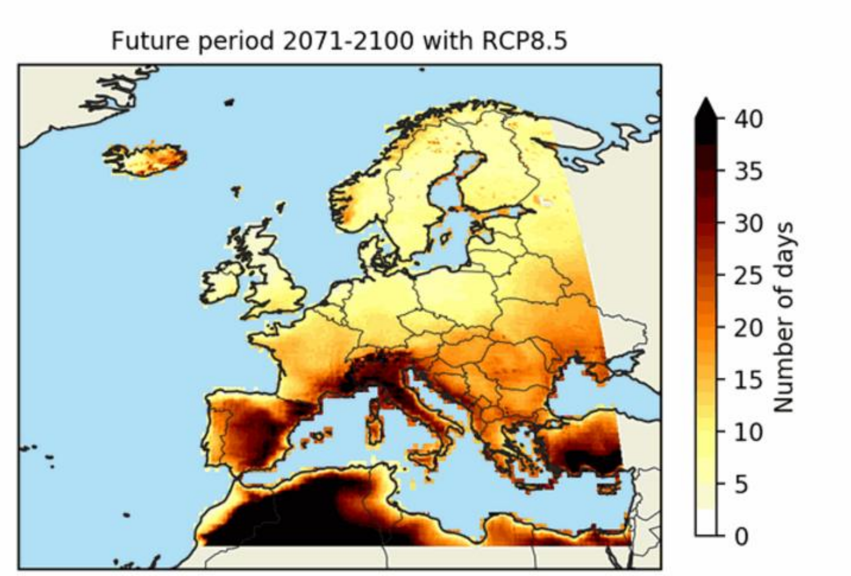
Heat waves are becoming more intense and widespread globally due to the impacts of climate change. In the UK, an extreme heat event in July 2022 resulted in temperatures reaching 40°C for the first time in the UK since records began (40.3°C in Coningsby, Lincolnshire). Europe experienced some of the hottest temperatures of summer 2023, with parts of Greece, eastern Spain, Sardinia, Sicily and southern Italy seeing temperatures above 45°C (Copernicus News, 2023).

Overall, globally there is a lack of rigorous definitions for heat waves and cold spells. Here a heat wave is defined, using the approach from Copernicus, as a prolonged period of extremely high or extremely low temperature for a particular region. The dataset from Copernicus combines multiple definitions and allows the user to compare European-wide definitions with national/regional definitions. For instance, the Met Office defines a heat wave as an extended period of unusually hot weather for the time of year. In the UK, a heat wave is declared when daily maximum temperatures exceed the temperature threshold for that region for at least three consecutive days.

COPERNICUS HEAT WAVE DATASET

Heat wave exposure risk for Europe utilizes Copernicus dataset. The dataset contains the number of hot spell days using different European-wide and national/regional definitions developed within the C3S European Health service. These heat wave and cold spell days are available for different future time periods and use different climate change scenarios.

First, the temperature statistics are calculated, either for the season or for the whole year, based on a bias-adjusted EURO-CORDEX dataset. Then, the statistics are averaged for 30 years as a smoothed average from 1971 to 2100. This results in a timeseries covering the period from 1986 to 2085. Finally, the timeseries are averaged for the model ensemble and the standard deviation to this ensemble mean is provided, with the standard deviation also smoothed out over a 20-year period.



Map 05: Number of Heat Wave days in Europe under RCP8.5 by 2071-2100. Source: Copernicus Climate Change Service, Climate Data Store, (2019): Heat waves and cold spells in Europe derived from climate projections. Copernicus Climate Change Service (C3S) Climate Data Store (CDS). DOI: 10.24381/cds.9e7ca677

HEAT WAVE

PORTFOLIO SCREENING RESULTS

All estates within SEGRO's European portfolio have a baseline exposure risk (averaged over a period from 1986–2014) to Heat Wave within Very Low and Low exposure categories. This represents 0–3 heat wave days per year where a heat wave day is "*the count of days under climatological heat waves conditions (number of days). A climatological heat wave is a period of at least three consecutive days exceeding the 99th percentile of the daily maximum temperatures of the May to September season during a reference period.*" Across the portfolio, as temperature rise and extreme heat event severity and frequency increases, the exposure risk to Heat Wave increases over time for both RCP4.5 and RCP8.5 scenarios. By 2050 under RCP4.5, twenty-five estates in the portfolio reach the High exposure category, which relates to 6–15 heat wave days per year on average where all are within the southern parts of Europe (France, Spain and Italy). Note that time periods are averaged over approximate twenty-year periods (baseline 1986–2014, 2030 is averaged across 2020–2040, 2050 is averaged across 2041–2060 and 2070 is averaged across 2061–2080).

Table 09: Overview table – No. of estates by risk category

Heat Wav	No/Very Low Exposure (1) Dark Green	Low Exposure (2) Light Green	Medium Exposure (3) Orange	High Exposure (4) Red	Very High Exposure (5) Dark Red
	0–1	1–3	3–6	6–15	15–33
RCP4.5 Baseline 1986–2014	12	177	0	0	0
RCP4.5 Year 2030	0	147	41	1	0
RCP4.5 Year 2050	0	77	87	25	0
RCP4.5 Year 2070	0	4	153	32	0
RCP8.5 Baseline 1986–2014	10	179	0	0	0
RCP8.5 Year 2030	0	149	39	1	0
RCP8.5 Year 2050	0	15	133	41	0
RCP8.5 Year 2070	0	0	12	146	31

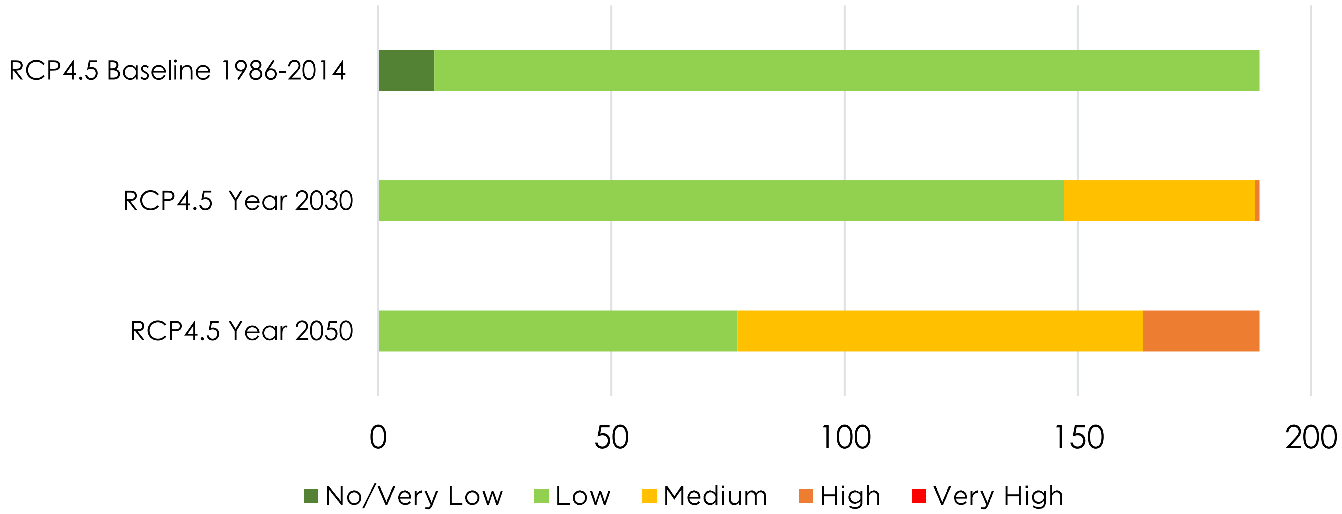


Figure 04: Heat Wave – No. of estates by risk category

COLD STRESS

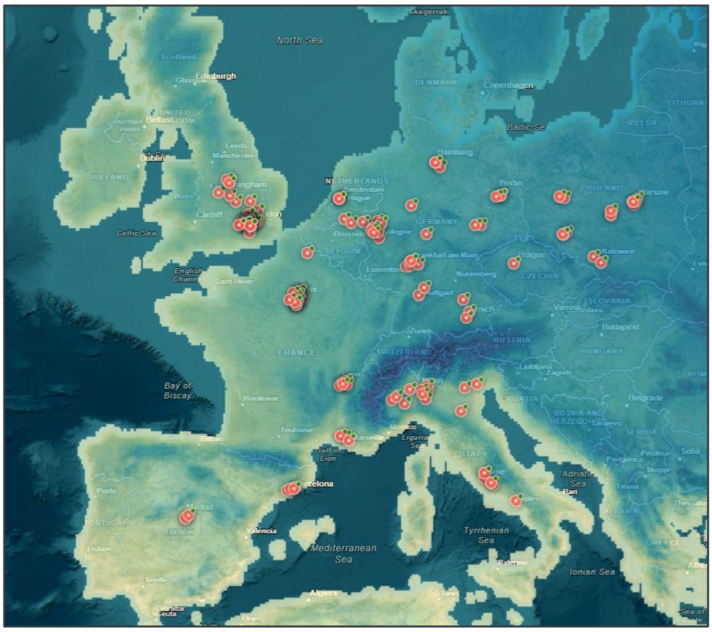
HAZARD BACKGROUND

Extreme cold weather events can cause disruption to transport, infrastructure and health services whilst increasing energy demands for heating buildings. Freeze-thaw events for example, can cause water pipes to freeze and burst, leading to extensive flooding and damage to buildings and the surrounding areas.

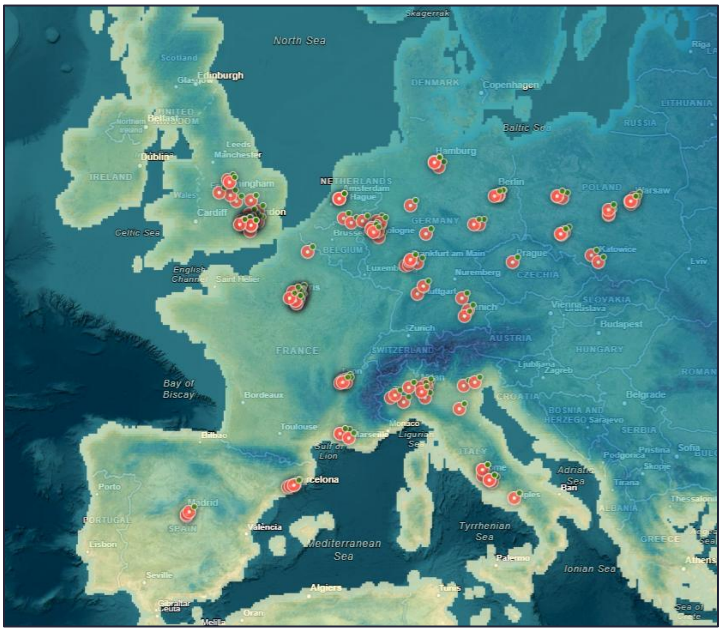
Increasing global temperatures are likely to cause changes in the severity and frequency of cold stress events, however projected impacts vary between regions. The IPCC AR6 report has concluded with high confidence that the frequency of cold spells and frost days will decrease under all the greenhouse gas emissions scenarios and time horizons (IPCC AR6, WG1, European Regional Fact sheet, online, 2021).

Munich re provides detailed information on the meteorological threat caused by cold stress and also an integrated cold stress index. Underlying cold stress parameters include annual minimum temperature, annual mean daily minimum temperature frost days (daily minimum temperature below 0°C).

The Cold Stress Index combines relevant information from the parameters and classifies the climatological cold stress situation on a scale ranging from 0 (Very Low) to 10 (Extreme). The index information has been supplemented by showcasing the change in No of Frost Days, and Annual Frost Days, where frost days are defined as days where the minimum temperature is below 0°C. Thermal comfort within the building is not assessed as part of this analysis.



Map 06: Cold Stress exposure risk for SEGRO's portfolio in the current timeline



Map 07: Cold Stress exposure risk for SEGRO's portfolio in 2050 under scenario SSP2–4.5

- 0.0 - 1.5 Very Low
- 1.6 - 3.0 Low
- 3.1 - 4.5 Low Medium
- 4.6 - 6.0 High Medium
- 6.1 - 7.5 High
- 7.6 - 9.0 Very High
- 9.1 - 10.0 Extreme

COLD STRESS

PORTFOLIO SCREENING RESULTS

Unlike other physical climate hazards, exposure to cold stress is expecting to decrease over time. As global temperatures increase across all scenarios, cold stress occurrences are projected to decrease in severity and frequency. For this reason, it is appropriate to consider cold stress under both business-as-usual (SSP5-8.5) and optimistic scenario (SSP1–2.6) where global warming is reduced, and cold stress risk is greatest. The results found twenty-four estates have High exposure to Cold Stress by 2050 under SSP1–2.6. are all estates in Poland and Czechia, as well as seven estates in south and east Germany. The estates are located in Central Europe which historically experiences very cold winters associated with continental climate over central and eastern parts of Europe.

Table 10: Overview table – No. of estates by risk category

Cold Stress	No/Very Low Exposure (1) Dark Green	Low Exposure (2) Light Green	Medium Exposure (3) Orange	High Exposure (4) Red	Very High Exposure (5) Dark Red
	0 – 1.50	1.51 – 3.50	3.51 – 6	6.01 – 8	8.01 – 10.0
Current	0	8	145	36	0
SSP1–2.6 Year 2030	0	13	148	28	0
SSP1–2.6 Year 2040	0	13	148	28	0
SSP1–2.6 Year 2050	0	13	152	24	0
SSP1–2.6 Year 2100	0	15	153	21	0
SSP2–4.5 Year 2030	0	11	151	27	0
SSP2–4.5 Year 2040	0	11	153	25	0
SSP2–4.5 Year 2050	0	11	157	21	0
SSP2–4.5 Year 2100	0	33	145	11	0
SSP3–7.0 Year 2030	0	13	149	27	0
SSP3–7.0 Year 2040	0	15	153	21	0
SSP3–7.0 Year 2050	0	23	153	13	0
SSP3–7.0 Year 2100	2	110	77	0	0
SSP5–8.5 Year 2030	0	13	149	27	0
SSP5–8.5 Year 2040	0	18	150	21	0
SSP5–8.5 Year 2050	0	23	153	13	0
SSP5–8.5 Year 2100	0	135	54	0	0

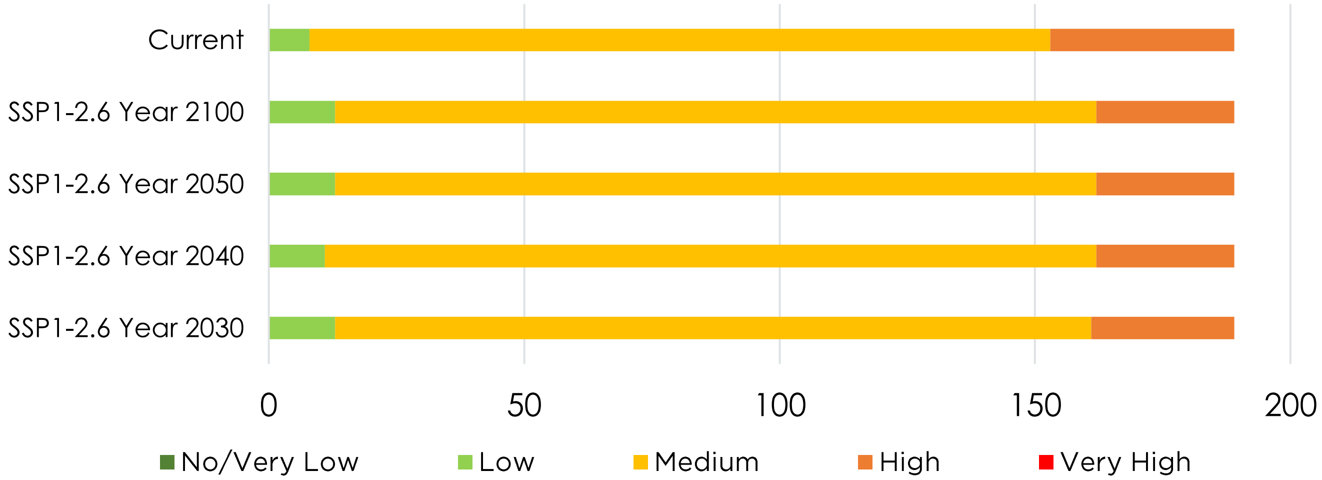


Figure 05: Cold Stress – No. of estates by risk category, SSP1–2.6 only

COLD WAVE (FROST DAYS)

HAZARD BACKGROUND

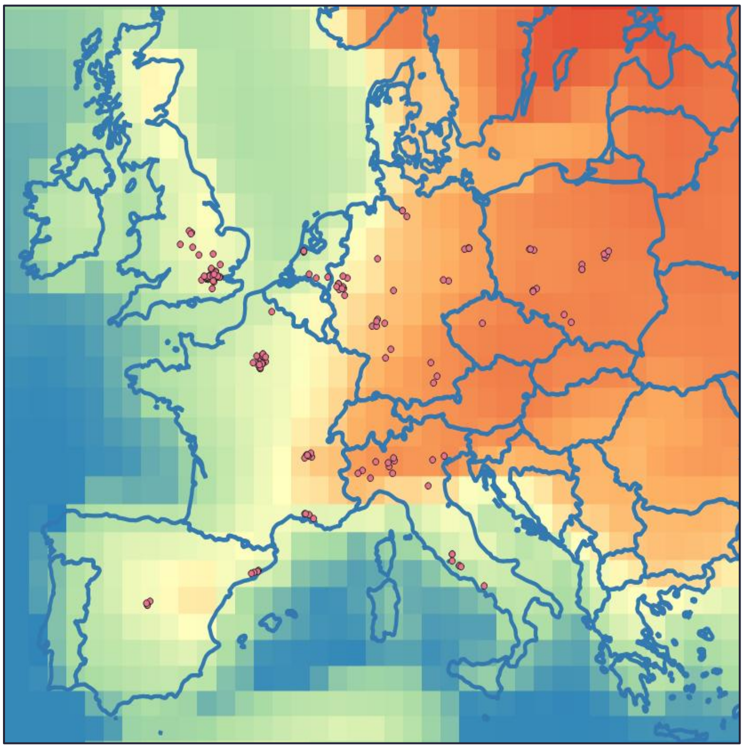
For completeness to EU Taxonomy hazard definitions, the IPCC Interactive Digital Atlas (CMIP6) datasets have been used to supplement Munich Re cold stress variable in describing cold wave/frost events. This dataset looks at mean annual frost days and change in mean annual frost days, where frost days are defined as days where the minimum temperature is below 0°C.

A Copernicus Climate Data Store dataset for cold waves at EU scale is available; this utilises country/regional cold wave definitions and is more relevant for colder countries or those with national definitions of cold wave.

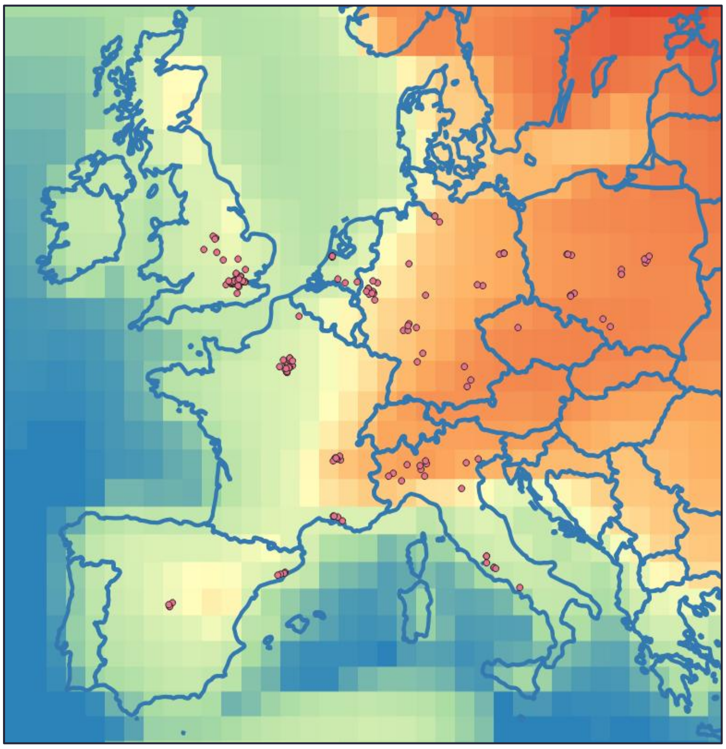
As the cold wave dataset shows very limited information for this portfolio it has been excluded from the analysis.

The IPCC dataset covers SSP1-2.6, SSP2-4.5, SSP3-7.0, SSP5-8.5 for three time periods: Near Term (2021-2040), Medium Term (2041-2060) and Long Term (2081-2100). The change in annual frost days is the change from a baseline period of 1981-2010.

Exposure to this risk is mostly consistent with latitude and altitude of the estates, with estates further north or at higher elevations being currently more exposed to frost days.



Map 08: IPCC annual mean change in frost days SSP2-4.5 2041-2060 compared to average annual baseline frost days 1981-2010.



Map 09: IPCC annual mean change in frost days SSP5-8.5 2041-2060 compared to average annual baseline frost days 1981-2010.

Least change in frost days
(Top value: 0 days)

Highest change in frost days
(End of band value -102 days)

COLD WAVE (FROST DAYS)

PORTFOLIO SCREENING RESULTS

Exposure to Cold Wave risk (as seen through the annual number of frost days) for SEGRO's estates predominantly falls within the No/Very Low to Medium risk bands. The exposure risk for Cold Stress is observed to decrease over time under all scenarios as climate change is expected to result in a decrease in frequency and intensity of extreme cold periods. Whilst cold stress risk is decreasing over time, the risk remains at Medium for some estates, predominantly in Northern Europe. There are no estates with Very High exposure (identified as estates located in regions that experience more than 120 annual frost days). There are twelve estates that are identified with High exposure to frost days under SSP1-2.6 2030, reducing to three estates in the High exposure category from 2041 onwards. Under all other scenarios by the end of the century there are no estates in the High exposure category.

Table 11: Numbers of estates by annual number of Frost days by timeframe and scenario.

Annual No. Of Frost Days		No/Very Low Exposure (1)	Low Exposure (2)	Medium Exposure (3)	High Exposure (4)	Very High Exposure (5)
		Less than 30 FD	30 to 60 FD	60 to 90 FD	90 to 120	higher than 120
Baseline	1981-2010	26	105	28	28	2
SSP1-2.6	Year 2021-2040	112	37	28	12	0
SSP1-2.6	Year 2041-2060	127	25	34	3	0
SSP1-2.6	Year 2081-2100	127	31	28	3	0
SSP2-4.5	Year 2021-2040	113	36	37	3	0
SSP2-4.5	Year 2041-2060	127	32	27	3	0
SSP2-4.5	Year 2081-2100	130	38	21	0	0
SSP3-7.0	Year 2021-2040	113	35	33	8	0
SSP3-7.0	Year 2041-2060	127	35	24	3	0
SSP3-7.0	Year 2081-2100	148	38	3	0	0
SSP5-8.5	Year 2021-2040	113	36	37	3	0
SSP5-8.5	Year 2041-2060	128	37	22	2	0
SSP5-8.5	Year 2081-2100	165	24	0	0	0

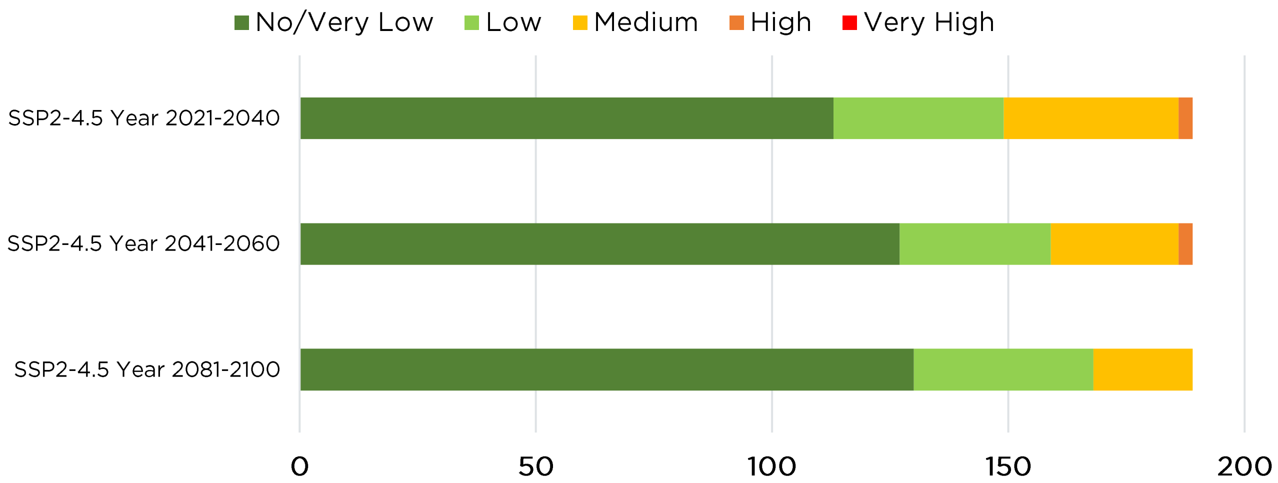


Figure 06: Cold Wave – No. of estates by risk category, SSP2-4.5 only

FIRE WEATHER STRESS

HAZARD BACKGROUND

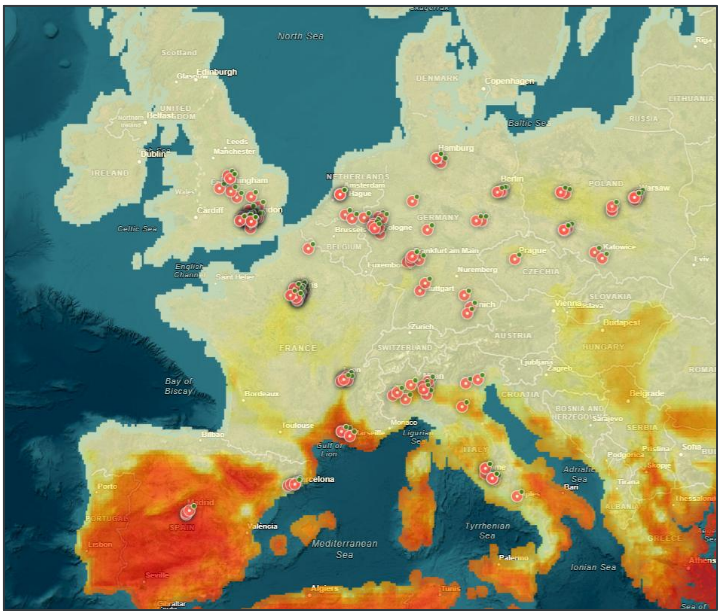
Wildfires are a destructive physical hazard, which can occur naturally and be caused by humans. Fire events are often accompanied by secondary environmental effects including erosion, landslides, impaired water quality and smoke damage.

According to the European Commission's Joint Research Centre, climate change alters the relevant meteorological conditions impacting the ignition and spread of wildfires (San-Miguel-Ayanz *et al.*, 2022).

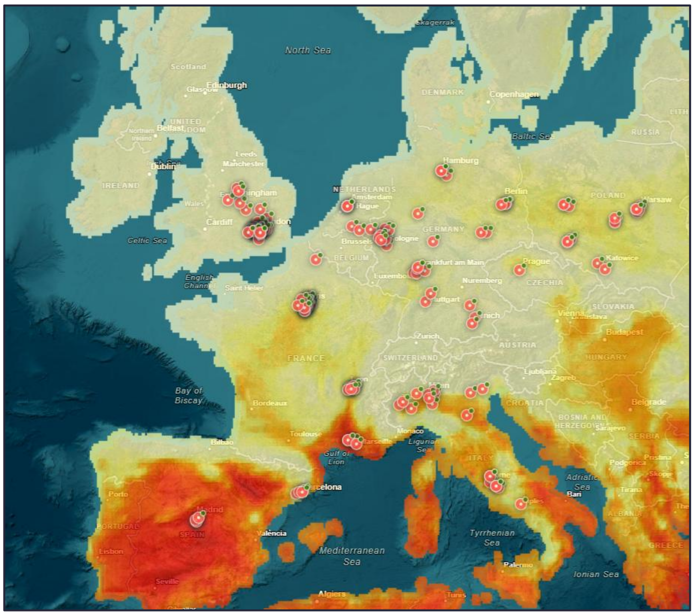
Munich Re provides data on the basis of fire danger modelling detailed information on wildfire conditions as well as an integrated Fire Weather Stress Index. The Fire Weather Stress Index is based on the Fire Weather Index (FWI), which describes the climatological conditions for wildfire.

The FWI is a widely used numeric rating, combining the probability of ignition, the speed and likelihood of fire spread and the availability of fuel. The FWI is modelled on the basis of daily information about temperature, precipitation, humidity and wind. The changes for the projection periods are derived from the respective data from the latest high-resolution local and global climate models.

The Fire Weather Stress Index combines relevant information derived from the FWI time series and classifies the fire weather stress situation on a scale ranging from 0 (Very Low) to 10 (Very High).



Map 10: Fire Weather Stress exposure risk for SEGRO portfolio in the current timeline



Map 11: Fire Weather Stress exposure risk for SEGRO portfolio in 2050 under SSP2-4.5

- 0.0 - 1.5 Very Low
- 1.6 - 3.0 Low
- 3.1 - 4.5 Low Medium
- 4.6 - 6.0 High Medium
- 6.1 - 7.5 High
- 7.6 - 9.0 Very High
- 9.1 - 10.0 Extreme

FIRE WEATHER STRESS

PORTFOLIO SCREENING RESULTS

The current exposure risk to Fire Weather Stress for SEGRO's estates predominantly falls within No/Very Low to Low risk bands. The estates show varying levels of increased Fire Weather Stress across different scenarios and time horizons. Eight SEGRO estates have been identified within SEGRO's portfolio to have High exposure to Fire Weather Stress by 2050 under high emission scenario SSP2–4.5. The estates are located in Spain and southern France. Wildfires have historically occurred in south of France near Marseille, more notably in August 2016 and August 2020 (BBC News, online, 2016). Mediterranean countries like Portugal, Spain, Italy, Greece and France are currently most vulnerable to wildfires. The number of days with high to extreme wildfire danger is projected to rise in these southern countries of Europe, as a result of higher temperatures and increased drought periods (European Commission, digital, undated).

Table 12: Overview table – No. of estates by risk category

Fire Weather Stress	No/Very Low Exposure (1) Dark Green	Low Exposure (2) Light Green	Medium Exposure (3) Orange	High Exposure (4) Red	Very High Exposure (5) Dark Red
	0 - 1.50	1.51 – 3.50	3.51 – 6	6.01 - 8	8.01 – 10.0
Current	97	78	6	8	0
SSP1–2.6 Year 2030	86	85	10	8	0
SSP1–2.6 Year 2040	30	137	14	8	0
SSP1–2.6 Year 2050	30	135	16	8	0
SSP1–2.6 Year 2100	86	84	11	8	0
SSP2–4.5 Year 2030	83	91	7	8	0
SSP2–4.5 Year 2040	71	100	10	8	0
SSP2–4.5 Year 2050	55	113	13	8	0
SSP2–4.5 Year 2100	7	120	54	8	0
SSP3–7.0 Year 2030	35	137	9	8	0
SSP3–7.0 Year 2040	27	142	12	8	0
SSP3–7.0 Year 2050	13	147	21	8	0
SSP3–7.0 Year 2100	2	95	83	5	4
SSP5–8.5 Year 2030	83	89	9	8	0
SSP5–8.5 Year 2040	29	131	21	8	0
SSP5–8.5 Year 2050	8	141	32	8	0
SSP5–8.5 Year 2100	0	70	104	7	8

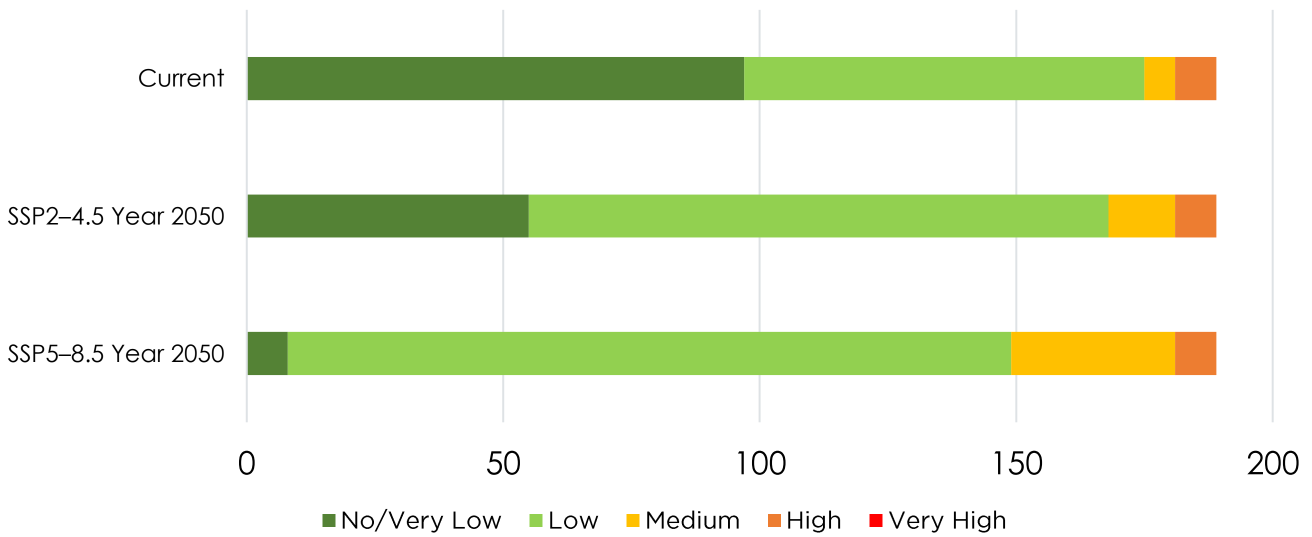


Figure 07: Fire Weather Stress – No. of estates by risk category

4.2 WIND-RELATED CLIMATE HAZARDS

TROPICAL CYCLONE

HAZARD BACKGROUND

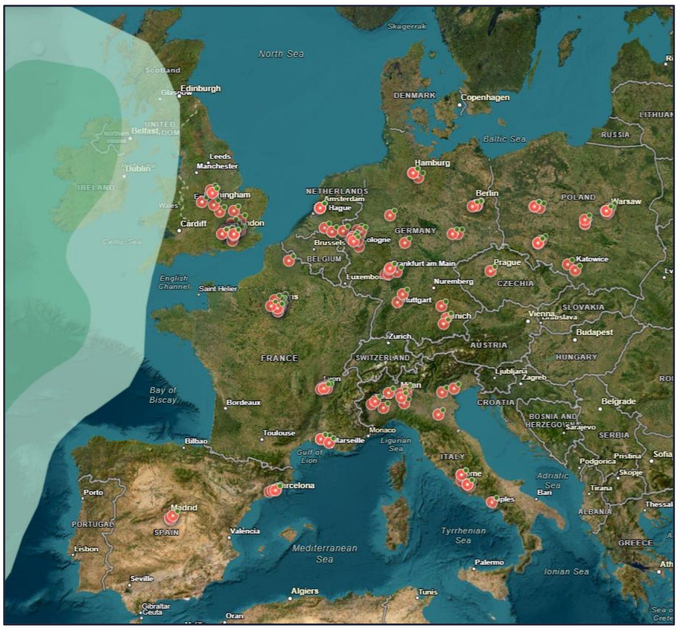
Tropical cyclones occur when the area of low pressure on either side of the equator becomes heated over warm tropical ocean, causing thundery showers. When these showers group together they cause clusters of thunderstorms which create a flow of very warm, moist, rapidly rising air, leading to the development of a centre of low pressure, or depression, at the surface. As the depression strengthens it becomes a tropical storm and then a hurricane or typhoon.

Coastal regions and islands are particularly exposed as they are affected not only by the direct impact of a storm but also by the additional hazards of storm surges and pounding waves. Munich Re uses exposure risk analysis represented on a five-level scale to determine the expected probability of a tropical cyclone for an area.

The main variables of the exposure analysis are:

- Forward wind
- Maximum wind speed
- Minimum central pressure
- Radius of maximum wind speeds
- Track of the centre in 3-to 6-hourly intervals (in exceptional cases, 12-hourly intervals)

Map 12: Tropical Cyclone exposure risk for SEGRO's portfolio in the current timeline



Map 13: Tropical Cyclone exposure risk for SEGRO's portfolio in 2050 under scenario RCP4.5

- No Hazard
- Zone 0: 76 - 141 km/h
- Zone 1: 142 - 184 km/h
- Zone 2: 185 - 212 km/h
- Zone 3: 213 - 251 km/h
- Zone 4: 252 - 299 km/h
- Zone 5: ≥ 300 km/h

TROPICAL CYCLONE

PORTFOLIO SCREENING RESULTS

Portfolio results show that all estates in the portfolio have been identified with No exposure to tropical cyclone across all timelines and scenarios. Tropical cyclones require specific conditions to form, including high sea temperatures above 27°C for energy, low wind shear and proximity to the equator for Coriolis force. For this reason, tropical cyclones tend to develop in tropical regions at least 5°–30° latitude north or south of the equator (Met Office, Development of tropical cyclones, online, undated). When tropical cyclones move into higher latitudes and inland, such as Europe, they tend to downgrade to extratropical storms or dissipate altogether, due to losing a key energy source provided by the warmer sea temperatures near the equator. Therefore, tropical cyclones do not tend to occur in Europe where the SEGRO portfolio is located.

Table 13: Overview table – No. of estates by risk category

Tropical Cyclone	No/Very Low Exposure (1) Dark Green	Low Exposure (2) Light Green	Medium Exposure (3) Orange	High Exposure (4) Red	Very High Exposure (5) Dark Red
	-1, 0	1	2,3	4	5
Current	189	0	0	0	0
RCP4.5 Year 2030	189	0	0	0	0
RCP4.5 Year 2050	189	0	0	0	0
RCP4.5 Year 2100	189	0	0	0	0
RCP8.5 Year 2030	189	0	0	0	0
RCP8.5 Year 2050	189	0	0	0	0
RCP8.5 Year 2100	189	0	0	0	0

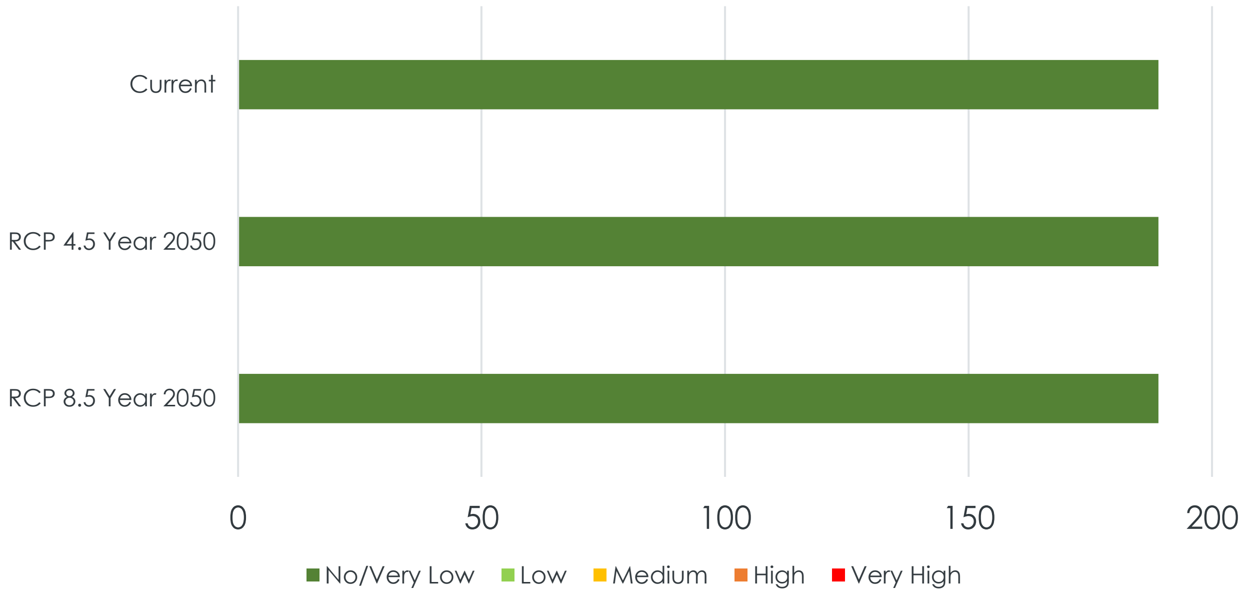


Figure 08: Tropical Cyclone – No. of estates by risk category

EXTRATROPICAL STORM

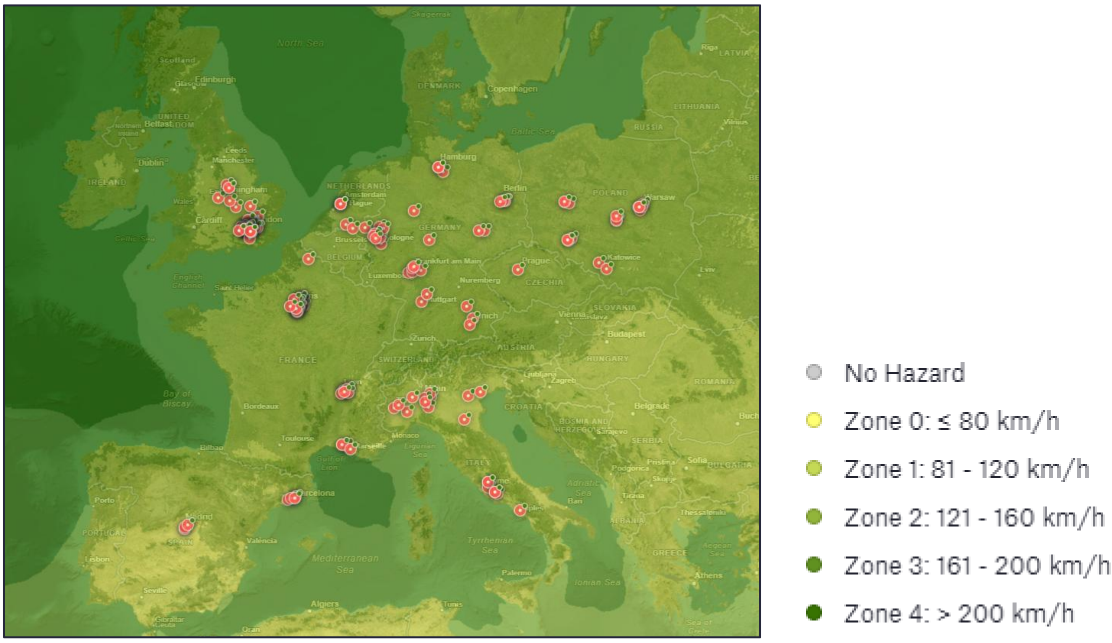
HAZARD BACKGROUND

Extratropical storms are created in the transition region between subtropical and polar climatic zones, i.e. in the latitudes between about 30° and 70°. In these regions, cold polar air masses collide with tropical air masses, forming extensive low-pressure systems.

The storm intensity within these systems is proportional to the temperature difference between the two air masses. Therefore, storm intensities are greatest in late autumn and winter when the oceans are still warm but the polar atmosphere is already extremely cold. This is why extratropical storms are also referred to as winter storms. Blizzards and ice storms are variants of this type of storm and their potential for damage is often underestimated.

Munich Re extratropical storm map is classified into five zones based on peak wind speeds (3–sec gust in km/h). The most exposed areas with respect to extratropical storms are located between 30° and 70° north and south of the equator. The final resolution of the storm maps is 0.01 degrees (roughly 1km).

Extratropical storm is assessed under current timeline period as there is a lack of data and consensus for climate change projections of extratropical storm intensity and severity. The IPCC AR6 report found there is low confidence in past changes of maximum wind speeds and other intensity related characteristics of extratropical cyclones (IPCC Sixth Assessment Report, 2024). In the UK, The National State of the Climate report states that there are no compelling trends in storminess when considering maximum gust speeds over the last four decades (Met Office, UK and Global extreme events, online, undated).



Map 14: Extratropical Storm exposure risk for SEGRO's portfolio in the current timeline

PORTFOLIO SCREENING RESULTS

Table 14: Overview table – No. of estates by risk category

Extratropical Storm	No/Very Low Exposure (1) Dark Green	Low Exposure (2) Light Green	Medium Exposure (3) Orange	High Exposure (4) Red	Very High Exposure (5) Dark Red
	-1, 0	1	2	3	4
Current	0	31	158	0	0

TORNADO

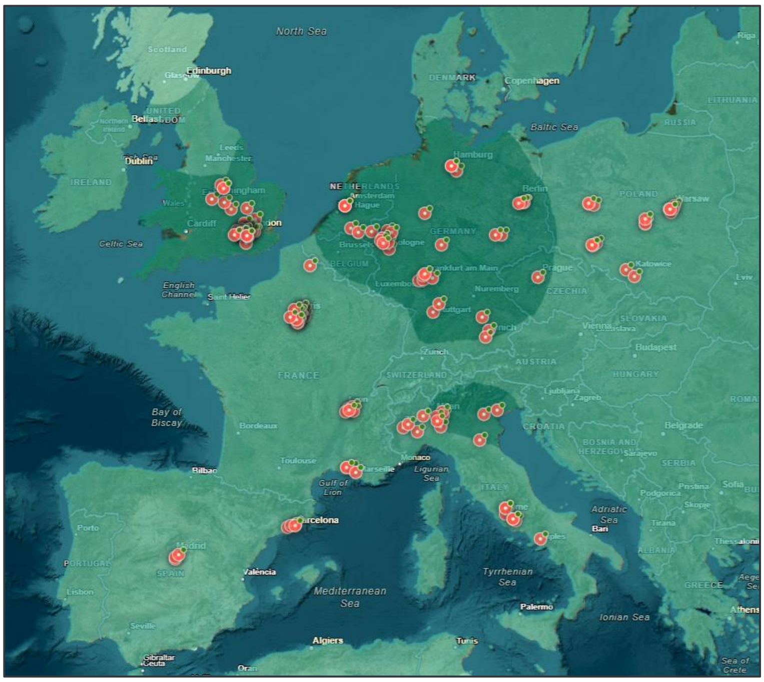
HAZARD BACKGROUND

A tornado is a rapidly rotating column of air that reaches between the base of a storm cloud and the Earth's surface. They form in very unsettled weather conditions as part of severe thunderstorms. Tornadoes occur worldwide at latitudes between 20° and 60° but are most frequent in the USA. Tornadoes are very localized but extremely intense. The direct damage caused by the high wind speeds is exacerbated by the sharp drop in air pressure at the centre of the funnel.

Munich Re map tornado zones based on frequency and intensity interpolated from meteorological data. Historical events are also taken into account. The frequency and intensity of tornadoes are mapped on a scale from 1 (low) to 4 (high) based on the number of tornadoes per 10,000km²/year.

Typically, a tornado is 20 to 100 metres wide at the surface, lasts for a few minutes and has a track of around a mile. Wind speeds typically range from 75 to 100 mph. However, they can be over 2 miles wide, track for over 60 miles and have wind speeds in excess of 300 mph.

In Europe the average number of reported tornadoes is around 300 per year according to the European Severe Storms Laboratory (European Commission, Horizon Magazine, 2013). These tend to be less frequent and damaging than other parts of the world such as the USA. Scientific research on climate change impacts on Tornadoes is currently in its infancy (globally). Challenges exist due to the complex atmospheric conditions needed for tornadoes to form.



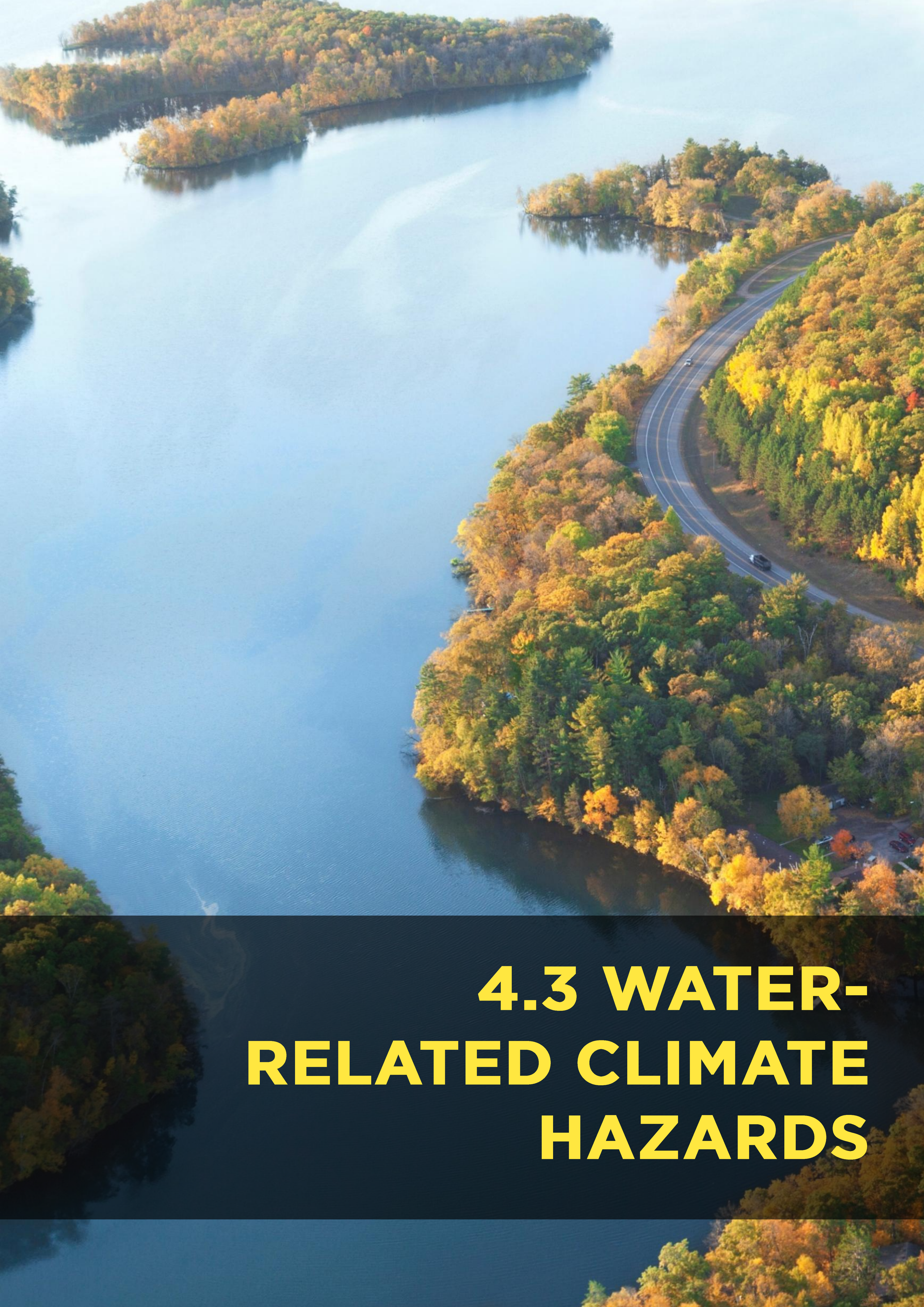
- Zone 1: 0.1 – 0.5
- Zone 2: 0.6 – 2.0
- Zone 3: 2.1 – 10.0
- Zone 4: > 10.0

Map 15: Tornado exposure risk for SEGRO portfolio in the current timeline (no future trends available)

PORTFOLIO SCREENING RESULTS

Table 15: Overview table – No. of estates by risk category

Tornado	No/Very Low Exposure (1) Dark Green	Low Exposure (2) Light Green	Medium Exposure (3) Orange	High Exposure (4) Red	Very High Exposure (5) Dark Red
	1	2	n/a	3	4
Current	0	80	n/a	109	0



4.3 WATER-RELATED CLIMATE HAZARDS

PRECIPITATION STRESS

HAZARD BACKGROUND

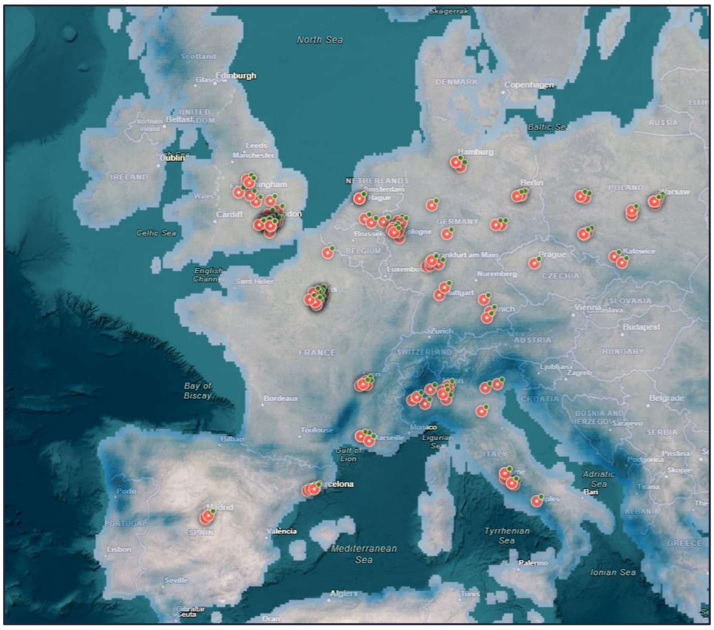
Due to global warming and particularly warmer oceans, air contains more moisture. This is likely to lead to an intensification of high-precipitation events and an alteration of the frequency of such events.

The impact of climate change on precipitation is very heterogenous globally, which is caused by its fine-scale features. This makes it essential to use high-resolution climate models to capture the climate change impacts, which might lead to soil erosion and increased flood risk.

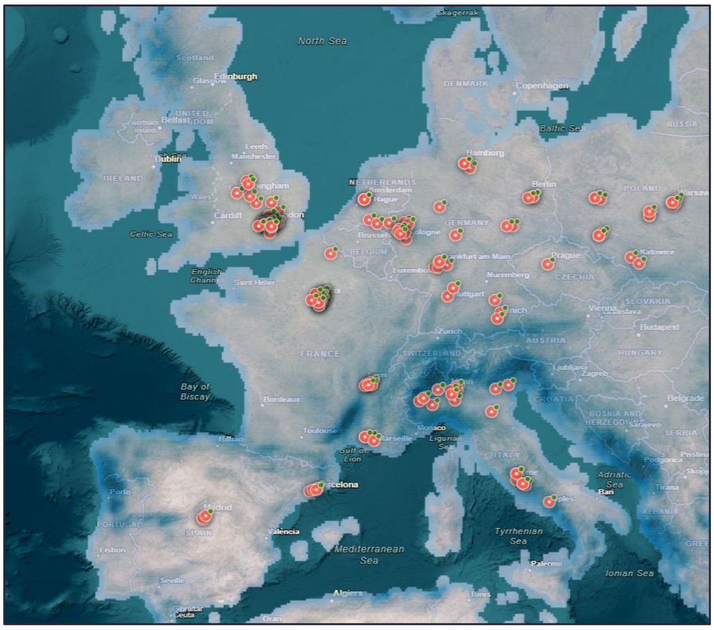
Munich Re provides information on the threat caused by heavy precipitation in the form of detailed precipitation information as well as an integrated Precipitation Stress Index.

The Precipitation Stress Index combines relevant information from the parameters characterising heavy precipitation and classifies the precipitation stress situation on a scale ranging from 0 (Very Low) to 10 (Very High). Underlying parameters include Maximum Daily Precipitation p.a. (> 30mm precipitation per day).

The parameters were chosen in accordance to scientific studies and climate extremes indices defined by the CCI/WCRP/JCOMM ETCCDI, with the aim of depicting heavy-precipitation stress consistently, locally and globally.



Map 16: Precipitation Stress exposure risk for SEGRO's portfolio in the current timeline



Map 17: Precipitation Stress exposure risk for SEGRO's portfolio in 2050 under scenario SSP2-4.5

- 0.0 - 1.5 Very Low
- 1.6 - 3.0 Low
- 3.1 - 4.5 Low Medium
- 4.6 - 6.0 High Medium
- 6.1 - 7.5 High
- 7.6 - 9.0 Very High
- 9.1 - 10.0 Extreme

PRECIPITATION STRESS

PORTFOLIO SCREENING RESULTS

The portfolio results show that most of the portfolio is identified to have Low exposure risk for Precipitation Stress, across all scenarios. Under the intermediate scenario SSP2-4.5, thirty-three estates are in the Medium risk category and twelve estates, all in Italy, have been found with High exposure risk and two with Very High. When comparing to the current period, the portfolio risk distribution does not change substantially but Precipitation Stress overall does increase. The majority of risk distribution movements are estates moving from the Low to Medium risk category over time and across all scenarios.

Table 16: Overview table – No. of estates by risk category

Precipitation Stress	No/Very Low Exposure (1) Dark Green	Low Exposure (2) Light Green	Medium Exposure (3) Orange	High Exposure (4) Red	Very High Exposure (5) Dark Red
	0 - 1.50	1.51 - 3.50	3.51 - 6	6.01 - 8	8.01 - 10.0
Current	0	147	28	12	2
SSP1-2.6 Year 2030	0	142	33	12	2
SSP1-2.6 Year 2040	0	140	35	12	2
SSP1-2.6 Year 2050	0	139	36	12	2
SSP1-2.6 Year 2100	0	139	36	12	2
SSP2-4.5 Year 2030	0	144	31	12	2
SSP2-4.5 Year 2040	0	140	35	12	2
SSP2-4.5 Year 2050	0	142	33	12	2
SSP2-4.5 Year 2100	0	136	39	11	3
SSP3-7.0 Year 2030	0	141	34	12	2
SSP3-7.0 Year 2040	0	141	34	12	2
SSP3-7.0 Year 2050	0	139	36	11	3
SSP3-7.0 Year 2100	0	123	51	12	3
SSP5-8.5 Year 2030	0	144	31	12	2
SSP5-8.5 Year 2040	0	140	35	12	2
SSP5-8.5 Year 2050	0	139	36	12	2
SSP5-8.5 Year 2100	0	120	54	11	4

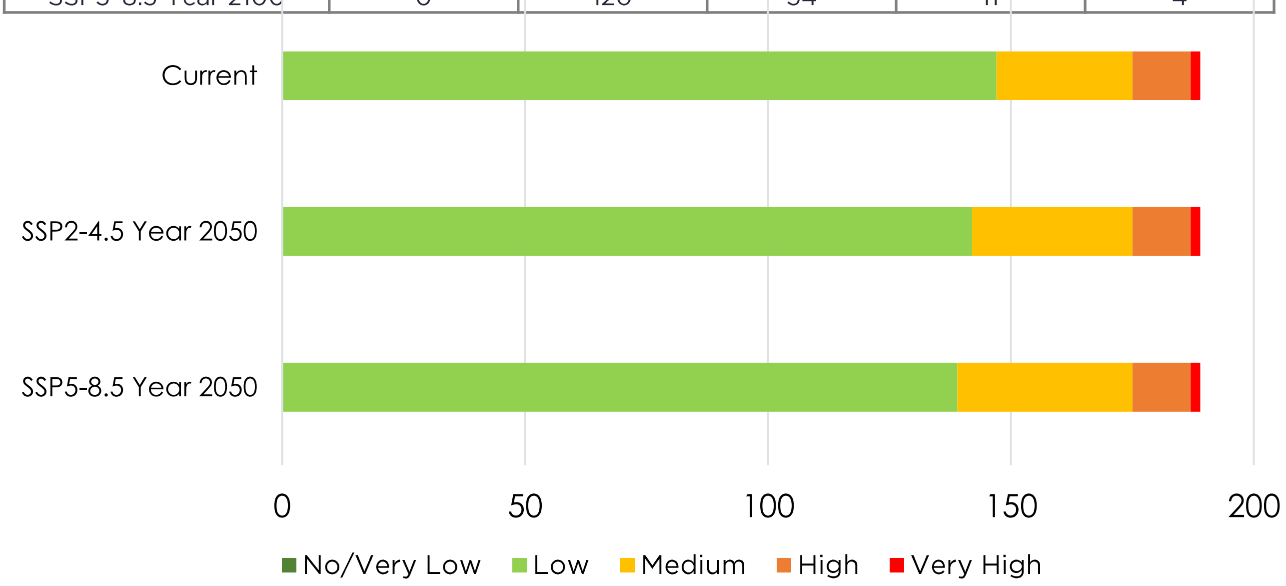


Figure 09: Precipitation Stress – No. of estates by risk category

FLASH FLOOD

HAZARD BACKGROUND

Flash floods are caused by heavy or excessive rainfall that is unable to drain away fast enough. The subsequent flood event happens in a short period of time, from minutes to six hours after a heavy rainfall event. These events are characterized by fast moving masses of water that swell with debris and follow riverbeds, roads or other terrain pathways until the water level goes down and losses its energy.

Flooding from surface water is difficult to predict as rainfall location and volume are challenging to forecast. Climate change is expected to increase the intensity of rainfall events which could trigger flash floods. Service areas, access roads, flat roofs and carparks are the areas most likely to be exposed to surface flooding. One of the factors behind worsening flash floods is the increasing rate of impermeable/artificial surfaces and associated reduction of green or blue spaces.

There are natural and human-made features that can put an area at higher risk of flash flooding, including:

- Rivers or valleys that are narrow and steep
- Small rivers in towns and cities with lots of buildings and pavements
- Reduced permeability of the soil, due to artificialisation and/or where soil types cannot absorb water easily, like clay and rock
- Areas with few trees or vegetation
- Areas of intensive agriculture
- Areas that contain mines
- Human-made alterations to rivers and streams, such as channels

MODELLING APPROACH

JBA Flood Data was used to model surface water flooding (flash flood) across SEGRO locations for the following scenarios and timelines:

- Scenarios: SSP2-4.5 (intermediate scenario) and SSP5-8.5 (high emission scenario)
- Timelines: Baseline, 2030, 2050 and 2100

The modelling approach involved applying 300m and 500m buffer areas around estate latitude/longitudes provided to incorporate any risk of flash flooding beyond the immediate property outline (e.g. access roads) as well as where estates are a collection of assets beyond the latitude/longitude point. The 300m buffer zone aligns with JBA's view of risk for industrial site sizes in UK and Europe based on industry best practice. The output extracts Flood Depth statistics (intensity) for each return period flood map e.g. 1 in 200-year event (frequency), to describe the flash flood frequency and intensity profile for each SEGRO location (buffer area).

The underlying data layers have the following properties:

- 5m resolution flood maps for the Czech Republic, France, Germany, Italy, and United Kingdom. All other countries (Netherlands, Spain, Poland) are mapped at 30m resolution.
- River and surface water layers for Europe. And in the case of the UK also groundwater and coastal layers, canal failure and dam break maps.

The resulting data are risk scores for each estate on a scale of 1 to 20.

No or Very Low (0 to 2)	Low (3 to 5)	Medium (6 to 8)	High (9 to 14)	Very High (15-20)

The JBA flood risk scoring approach for Europe and the UK differ. In order to provide additional insights for the UK, the UK JBA modelled flood depths have been classed to match the Environment Agency risk categories for flood depths as follows:

No or Very Low (0-0.3m)	Low (0.3 - 0.6m)	Medium (0.6 - 0.9m)	High (0.9 - 1.2 m)	Very High (>1.2m)

FLASH FLOOD

PORTFOLIO SCREENING RESULTS

The JBA surface water (flash flood) risk scores for a 1 in 200-year return period for the portfolio are presented in two tables, Table 17 is Europe estates only and Table 18 is European and UK estates risk scores combined. The European portfolio, indicates that for all scenarios and time periods the majority of assets are in the No or Very Low to Low risk bands, with 13 to 14 assets in the Medium or above range. UK estates all score 8 to 10 on the JBA risk banding score, placing the UK estates in the Medium and High risk exposure bands. For the European portfolio, there is some increase in exposure over time when compared to the current baseline but most of this change is estates moving from No or Very Low band to the Low band; the number of estates with Medium exposure remains comparable to the current baseline with one estate in France moving from the Low to Medium risk category by 2030 across all scenarios. There is one single European estate with current High exposure in France that is carried through the scenarios; there are two estates that move from the Medium exposure range to the High exposure band under SSP5-8.5 by 2100, these are in Italy and Poland.

Table 17: Overview table – No. of estates by risk category (excluding UK estates)

Flash Flood	No/Very Low Exposure (1) Dark Green	Low Exposure (2) Light Green	Medium Exposure (3) Orange	High Exposure (4) Red	Very High Exposure (5) Dark Red
	0 – 2	3 – 5	6 – 8	9 -14	15- 20
Current	71	44	12	1	0
SSP2-4.5 Year 2030	69	45	13	1	0
SSP2-4.5 Year 2050	64	50	13	1	0
SSP2-4.5 Year 2100	64	50	13	1	0
SSP5-8.5 Year 2030	66	48	13	1	0
SSP5-8.5 Year 2050	64	50	13	1	0
SSP5-8.5 Year 2100	58	56	11	3	0

Table 18: Overview table – No. of estates by risk category (including UK estates)

Flash Flood	No/Very Low Exposure (1) Dark Green	Low Exposure (2) Light Green	Medium Exposure (3) Orange	High Exposure (4) Red	Very High Exposure (5) Dark Red
	0 – 2	3 – 5	6 – 8	9 -14	15- 20
Current	71	44	48	25	0
SSP2-4.5 Year 2030	69	45	43	31	0
SSP2-4.5 Year 2050	64	50	41	33	0
SSP2-4.5 Year 2100	64	50	39	35	0
SSP5-8.5 Year 2030	66	48	43	31	0
SSP5-8.5 Year 2050	64	50	39	35	0
SSP5-8.5 Year 2100	58	56	33	41	0

FLASH FLOOD

PORTFOLIO SCREENING RESULTS

To better understand the UK surface water flood risk, JBA flood depths for 1 in 200-year period returns were extracted, and a risk banding has been applied based on Environment Agency banding for flood depths (see below). Table 19 provides a view of the assets with Medium and High JBA risk scores flood depths and the spread of the estates across different levels. The UK estate watchlist focuses on estates with High and Very High maximum flood depths.

Table 19: No. of UK estates by JBA risk category and associated flood depth category

Flash Flood	JBA surface water risk exposure category	No/Very Low Exposure (1) Dark Green	Low Exposure (2) Light Green	Medium Exposure (3) Orange	High Exposure (4) Red	Very High Exposure (5) Dark Red
		No or Very Low (0- 0.3m)	Low (0.3 - 0.6m)	Medium (0.6 -0.9m)	High (0.9 - 1.2 m)	Very High (>1.2m)
Current	Medium (6-8)	0	8	12	14	2
	High (9-14)	0	0	0	2	22
SSP2–4.5 Year 2030	Medium (6-8)	0	7	13	8	2
	High (9-14)	0	0	0	2	28
SSP2–4.5 Year 2050	Medium (6-8)	0	7	13	7	1
	High (9-14)	0	0	0	0	32
SSP2–4.5 Year 2100	Medium (6-8)	0	5	15	6	0
	High (9-14)	0	0	0	1	33
SSP5–8.5 Year 2030	Medium (6-8)	0	7	13	7	3
	High (9-14)	0	0	0	2	28
SSP5–8.5 Year 2050	Medium (6-8)	0	5	15	6	0
	High (9-14)	0	0	0	1	33
SSP5–8.5 Year 2100	Medium (6-8)	0	4	11	7	0
	High (9-14)	0	0	0	5	33

Environment Agency (2013): Flood maps for surface water: how they were produced.

Depth (m)	Threshold
0-0.3	Flooding would: • typically exceed kerb height (standard kerb height is 125mm) • likely exceed the level of a damp-proof course • cause property flooding in some areas
0.3-0.6	At 0.30m flooding is likely to cause property flooding. This is based on average property threshold levels.
0.6-0.9	Property-level flood resilience measures are typically effective up to a water depth of 0.60m above floor level. Above depths of 0.60m these measures are likely to be much less effective and structural damage is more likely to occur. However, as floor levels vary, the maximum flood depth where resilience measures are still effective may be in a range between 0.60m and 0.90m above ground level
0.9-1.2 >1.2	Very likely to exceed the maximum flood depth where property-level flood resilience measures are still effective

SEA LEVEL RISE

HAZARD BACKGROUND

Global mean sea level increased by 20cm between 1901 and 2018 and the trend is continuing at an unprecedented speed. Human influence was very likely the main driver of increases since at least 1971 (IPCC, 2023).

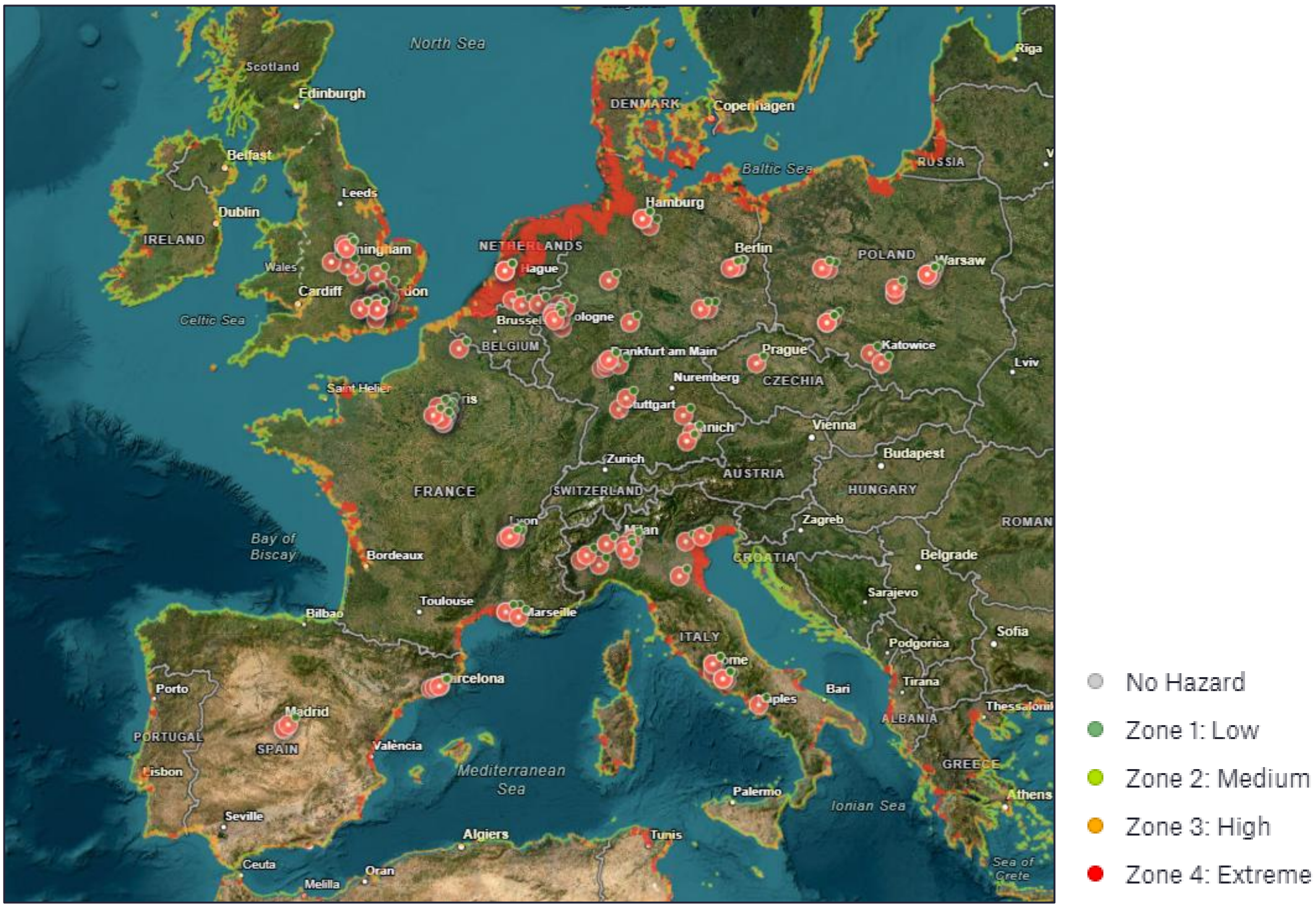
Sea Level Rise is primarily caused by processes linked to global warming, such as the melting of glaciers and ice sheets, and the thermal expansion of water. Furthermore, Sea Level Rise has a knock-on effect on the rate or intensity of coastal erosion, inundations, storm floods, tidal waters encroachment into estuaries and river systems as well as contamination of freshwater reserves.

Sea Level Rise can affect coastal regions worldwide and regions will experience varying impacts based on their topography and mitigation measures.

Munich Re provides hazard information on a 30m resolution for flooding hazard by sea level rise globally. The extent of potentially flooded areas are given by storm surge events with a 100-year return period.

Sea Level Rise zones are modelled based on high-resolution elevation data from the ALOS elevation model and Sea Level Rise projections from climate model and Sea Level Rise projections from climate models. This enables the identification of five different hazard classes describing the potential hazard level by Sea Level Rise, from no hazard to extreme hazard.

The Sea Level Rise hazard information is available for the three RCP scenarios (RCP2.6, RCP4.5 and RCP8.5) and the projection year 2100.

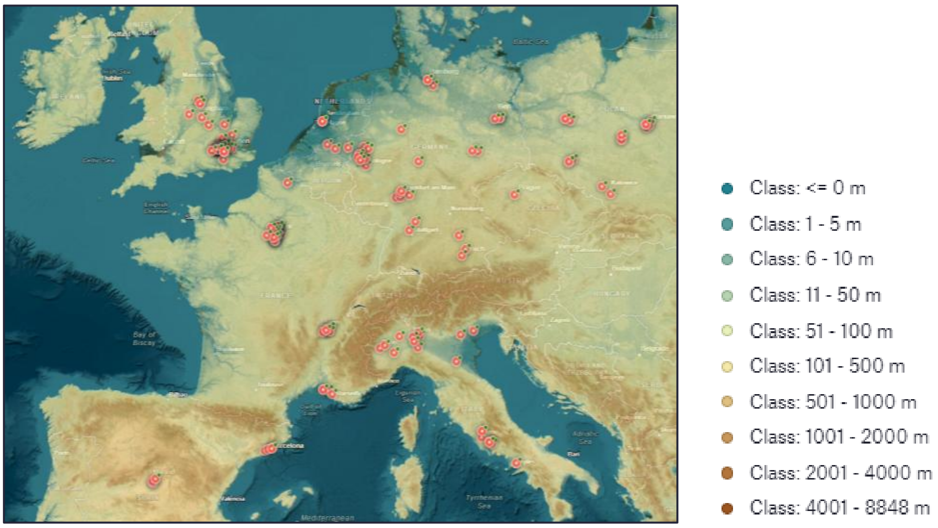


Map 18: Seal Level Rise exposure risk for SEGRO's portfolio in 2100 under scenario RCP4.5

SEA LEVEL RISE

PORTFOLIO SCREENING RESULTS

Sea Level Rise has been assessed across all scenarios for the 2100 time period only. The results show that almost all but five estates in the portfolio are not at risk of Sea Level Rise largely due to being located further in land and/or located on higher elevation. Five estates in the Netherlands are found to have High and Very High exposure risk. These estates are located on low lying land with elevations of below 10m or below sea level. However, it is noted that Sea Level Rise is only modelled for the 2100 timeline so the risk associated with these estates is for a long term view and may be beyond the estates operational lifetime.



Map 19: Munich RE Global Digital Elevation Map with SEGRO estate locations.

Table 20: Overview table – No. of estates by risk category

Sea Level Rise	No/Very Low Exposure (1) Dark Green	Low Exposure (2) Light Green	Medium Exposure (3) Orange	High Exposure (4) Red	Very High Exposure (5) Dark Red
	-1	1	2	3	4
RCP2.6 Year 2100	184	0	0	4	1
RCP4.5 Year 2100	184	0	0	0	5
RCP8.5 Year 2100	184	0	0	0	5

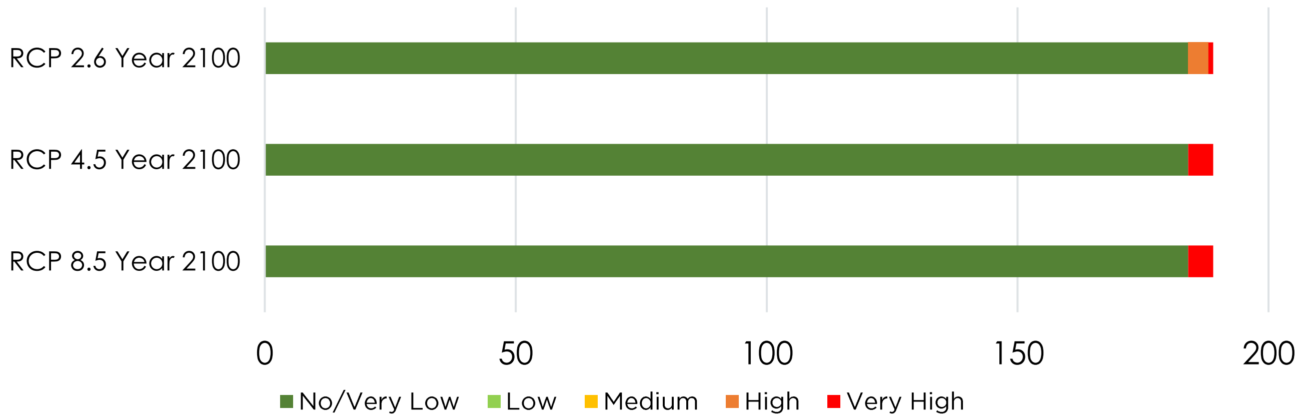


Figure 10: Sea Level Rise – No. of estates by risk category

STORM SURGE

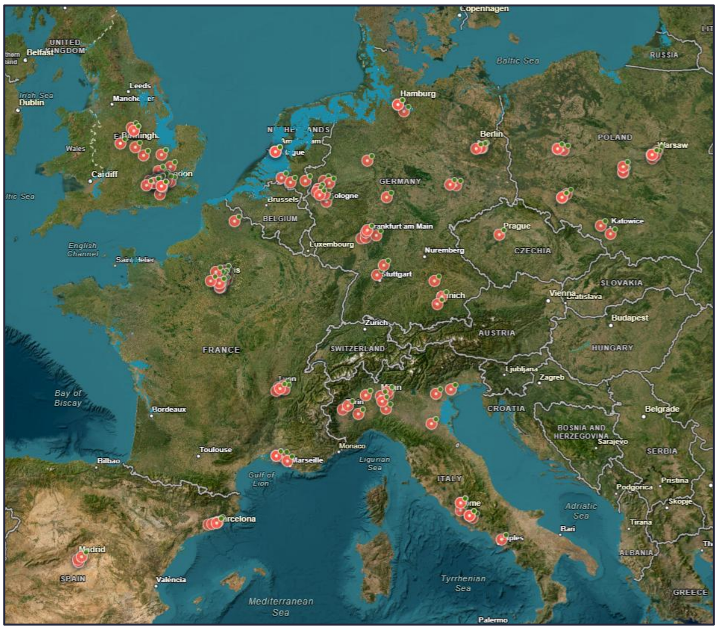
HAZARD BACKGROUND

Storm surge is a change in sea level occurring along coastal areas, caused by low pressure systems, high winds and/or high tidal conditions. The height of a storm surge can measure up to several metres and depends on many factors such as the size and strength of the storm, the direction it approaches the coast and the shape of the coastline and seabed. Storm Surges can lead to extensive flooding and are dangerous for many living in coastal areas.

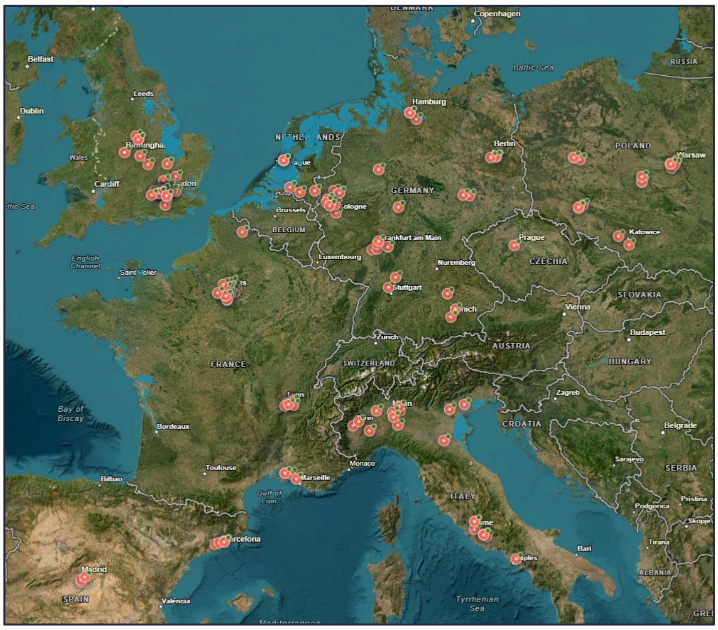
Munich Re's storm surge zones are based on 90m MERIT Digital Elevation Model (DEM) taking into account wind speed and bathymetry (underwater depth of lake or ocean floors).

Munich Re have classified the hazard into three categories; Zones 100, 500 and 1000 and provide both undefended and defended storm surge hazard information. Please note the maps in this report show undefended only.

- Coasts in Zone 100 are exposed to a 100-year return period of storm surge (1% annual flood chance)
- Coasts in Zone 500 are exposed to a 500-year return period (0.2% annual flood chance)
- Coasts in Zone 1000 are exposed to a 1000-year return period (0.1% annual flood chance)



Map 20: Storm Surge (Undefended) exposure risk for SEGRO's portfolio in the current timeline.



Map 21: Storm Surge (Undefended) exposure risk for SEGRO's portfolio in 2050 under scenario SSP2-4.5.

- No Hazard
- Zone 1000 year return period
- Zone 500 year return period
- Zone 100 year return period

STORM SURGE

DEFENDED

PORTFOLIO SCREENING RESULTS

When assessing storm surge risk it is important to consider the coastal defences in place. The defended Storm Surge risk results show that much of the portfolio has No or Very Low exposure, except for eight estates located close to coastlines in the UK and Germany within the Medium and Very High risk bands. Two estates in Northern Germany have Medium exposure risk and six estates along the River Thames in the UK are within the Very High Storm Surge risk category for the SEGRO portfolio.

Table 21: Overview table – No. of estates by risk category

Storm Surge (Defended)	No/Very Low Exposure (1) Dark Green	Low Exposure (2) Light Green	Medium Exposure (3) Orange	High Exposure (4) Red	Very High Exposure (5) Dark Red
	-1	100	500	n/a	100
Current	181	0	2	n/a	6
SSP1-2.6 Year 2030	181	0	2	n/a	6
SSP1-2.6 Year 2040	181	0	2	n/a	6
SSP1-2.6 Year 2050	181	0	2	n/a	6
SSP1-2.6 Year 2100	181	0	2	n/a	6
SSP2-4.5 Year 2030	181	0	2	n/a	6
SSP2-4.5 Year 2040	181	0	2	n/a	6
SSP2-4.5 Year 2050	181	0	2	n/a	6
SSP2-4.5 Year 2100	181	0	2	n/a	6
SSP3-7.0 Year 2030	181	0	2	n/a	6
SSP3-7.0 Year 2040	181	0	2	n/a	6
SSP3-7.0 Year 2050	181	0	2	n/a	6
SSP3-7.0 Year 2100	181	0	2	n/a	6
SSP5-8.5 Year 2030	181	0	2	n/a	6
SSP5-8.5 Year 2040	181	0	2	n/a	6
SSP5-8.5 Year 2050	181	0	2	n/a	6
SSP5-8.5 Year 2100	181	0	2	n/a	6

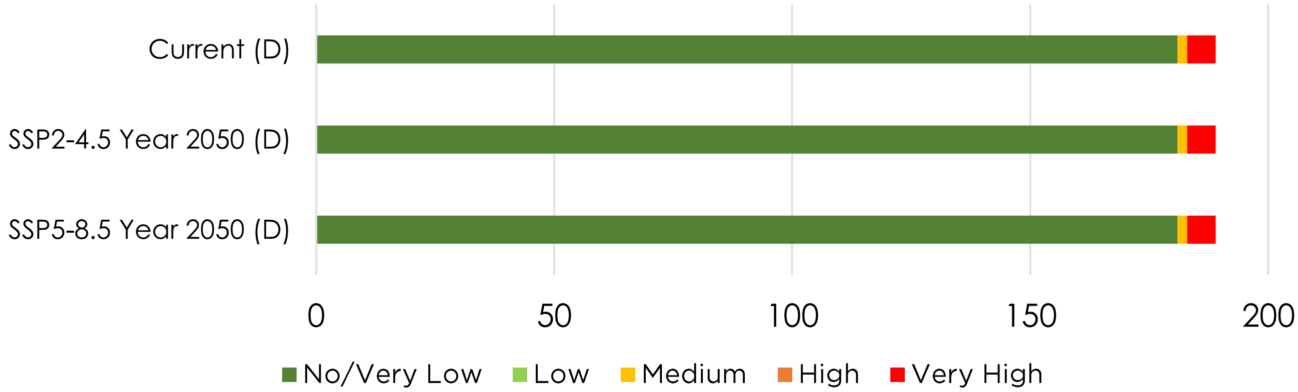


Figure 11: Storm Surge (Defended) – No. of estates by risk category

ANNUAL WATER STRESS

HAZARD BACKGROUND

Water stress occurs when the demand for freshwater exceeds the amount available and is a global challenge which is expected to be exacerbated by climate change.

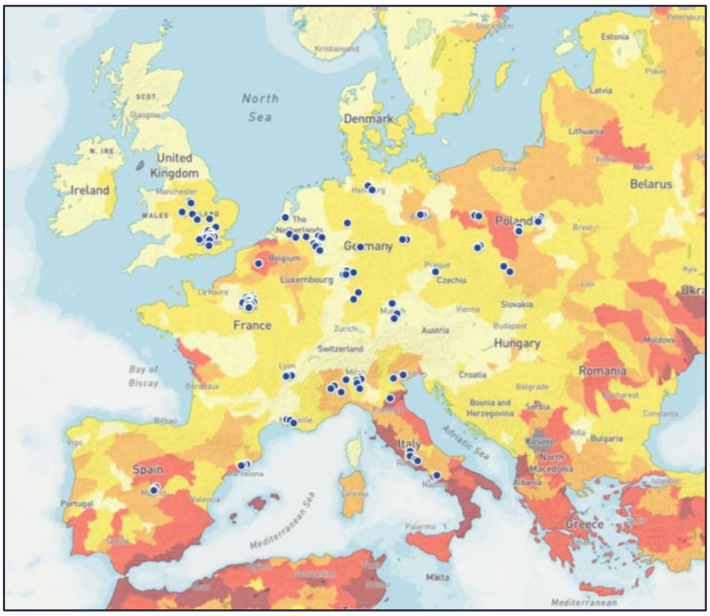
Annual water stress is measured as a ratio between total water withdrawals to available renewable surface and groundwater supplies:

- Water withdrawals include domestic, industrial, irrigation, and livestock consumptive and none non-consumptive uses.
- Available renewable water supplies include the impact of upstream consumptive water users and large dams on downstream water availability.

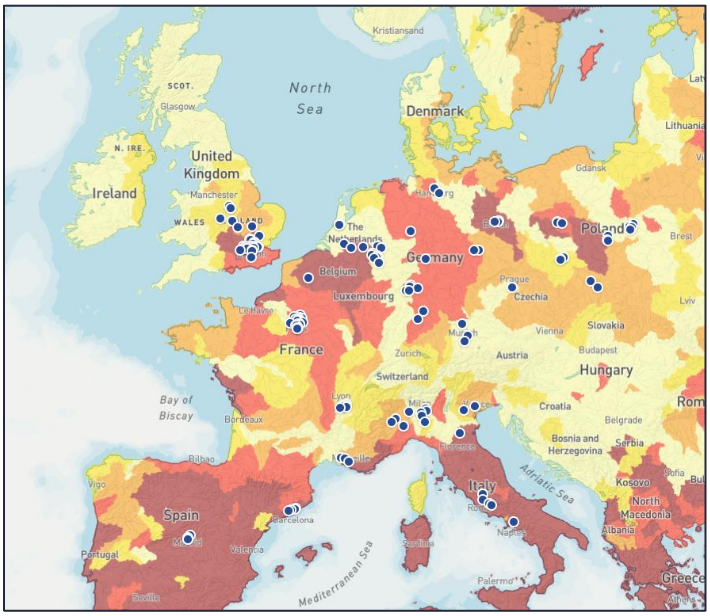
Munich Re uses Aqueduct's water risk tools to map areas of low to high annual water stress, classified into six categories. Higher values indicate higher annual water stress and more competition among users: Arid and Low Water Use, Zone 0: Low (<10%), Zone 1: Low-Medium (10–20%), Zone 2: Medium-High (20–40%), Zone 3: High (40-80%), Zone 4: Extremely High (>80%).

Changes in population and to the current uses of water such as farming practices or water intense industries and data centres can alter an areas water demand.

Water stress is available for scenarios SSP1-2.6, SSP3-7.0 and SSP5-8.5.



Map 22: Water stress for SEGRO portfolio (current).



Map 23: Water stress for SEGRO portfolio (SSP5–8.5 Year 2050)

- Arid and Low Water Use
- Zone 0: Low (<10%)
- Zone 1: Low - Medium (10-20%)
- Zone 2: Medium - High (20-40%)
- Zone 3: High (40-80%)
- Zone 4: Extremely High (>80%)

ANNUAL WATER STRESS

PORTFOLIO SCREENING RESULTS

Location based exposure results in the table below, indicate that estates are already located in areas with Very High annual water stress. Over time the portfolio's exposure increases, this is most noticeable by 2050 when the number of estates in extremely High risk exposure areas triples for SSP1-2.6 and SSP5-8.5 scenarios. Under SSP3-7.0 there is a slight improvement by 2080, reducing the exposure of the portfolio, reflecting an earlier and lower peak in GHG emissions. SSP2-4.5 is not available for this dataset.

Table 22: Overview table – No. of estates by risk category

Annual Water Stress	Zone 0: Low(<10%)	Zone 1: Low - Medium (10–20%)	Zone 2: Medium - High (20–40%)	Zone 3: High (40–80%)	Zone 4: Extremely High (>80%)
	<10%	10–20%	20–40%	40–80%	>80%
Current	44	24	25	81	15
SSP1–2.6 Year 2030	41	27	13	90	18
SSP1–2.6 Year 2050	37	15	19	36	82
SSP1–2.6 Year 2080	37	15	24	31	82
SSP3–7.0 Year 2030	41	26	14	87	21
SSP3–7.0 Year 2050	41	26	11	93	18
SSP3–7.0 Year 2080	43	25	13	92	16
SSP5–8.5 Year 2030	41	26	21	81	20
SSP5–8.5 Year 2050	37	15	22	31	84
SSP5–8.5 Year 2080	21	23	26	28	91

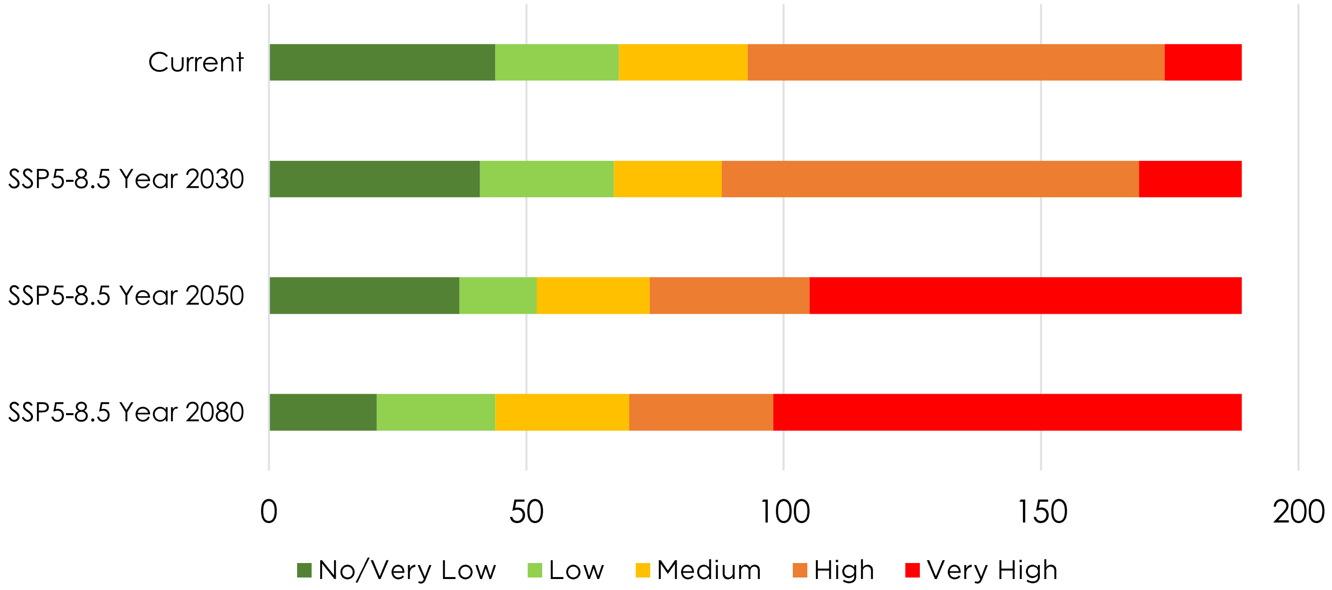


Figure 12: Annual Water Stress – No. of estates by risk category, SSP5–8.5 only

DROUGHT STRESS

HAZARD BACKGROUND

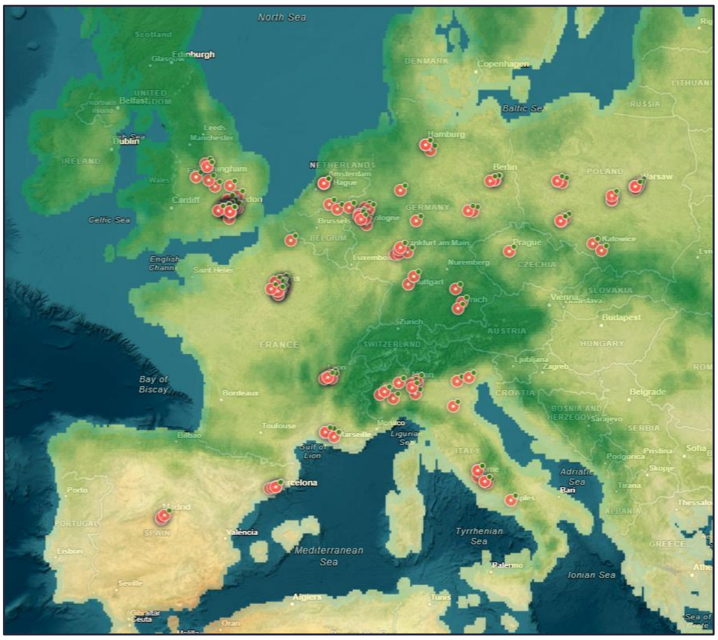
Increasing temperature in addition to changes in precipitation patterns can cause drier weather conditions leading to intense and frequent drought events, which can have severe economic, environmental and social impacts. Munich Re provides an integrated Drought Stress Index to identify the impact of climate change on current drought conditions globally.

The Drought Stress Index describes the change in the water balance, characterised by the change in precipitation and potential evapotranspiration. It is derived from the Standardized Precipitation Evapotranspiration Index (SPEI), which is the state-of-the-art index for describing drought conditions.

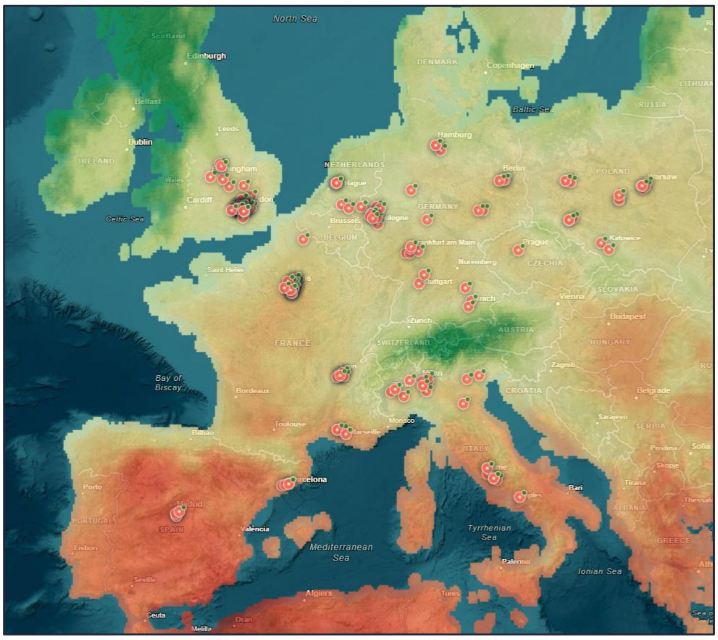
The SPEI is a multiscalar drought index which is used to determine the onset, duration and magnitude of drought conditions with respect to normal conditions, where the climatic water balance over the time period of 1970 to 2005 is considered as normal conditions.

The SPEI is based on climatic data, used to determine duration, intensity and severity of drought conditions. The SPEI is modelled on the basis of daily information about temperature, precipitation and humidity. This allows the identification of regions which will experience changes in drought conditions in the future for different SSP scenarios.

Using data from the latest high-resolution local and global (CMIP6) climate models to assess drought conditions for the projection periods, information about projected drought durations and severities are combined to the Drought Stress Index, ranging from 0 (Very Low) to 10 (Very High).*



Map 24: Drought stress risk for SEGRO portfolio in the current period.



Map 25: Drought stress risk for SEGRO portfolio in 2050 under scenario SSP2-4.5.

- 0.0 - 1.5 Very Low
- 1.6 - 3.0 Low
- 3.1 - 4.5 Low Medium
- 4.6 - 6.0 High Medium
- 6.1 - 7.5 High
- 7.6 - 9.0 Very High
- 9.1 - 10.0 Extreme

DROUGHT STRESS

PORTFOLIO SCREENING RESULTS

The exposure risk for drought stress changes rapidly when compared to the current exposure, with most of the portfolio in the Low exposure category . By 2030, across all scenario's exposure risk shifts to Medium with some estates in countries such as Spain, Italy and France moving into the High and Very High exposure from that point onwards. Drought Stress is available for four time periods but less scenarios than other hazards.

Table 23: Overview table – No. of estates by risk category

Drought Stress	No/Very Low Exposure (1) Dark Green	Low Exposure (2) Light Green	Medium Exposure (3) Orange	High Exposure (4) Red	Very High Exposure (5) Dark Red
	0 - 1.50	1.51 - 3.50	3.51 - 6	6.01 - 8	8.01 - 10.0
Current	2	174	13	0	0
SSP2-4.5 Year 2030	0	26	150	13	0
SSP2-4.5 Year 2040	0	18	150	17	4
SSP2-4.5 Year 2050	0	0	139	46	4
SSP2-4.5 Year 2100	0	0	98	72	19
SSP5-8.5 Year 2030	0	11	157	17	4
SSP5-8.5 Year 2040	0	0	131	54	4
SSP5-8.5 Year 2050	0	0	96	77	16
SSP5-8.5 Year 2100	0	0	4	80	105

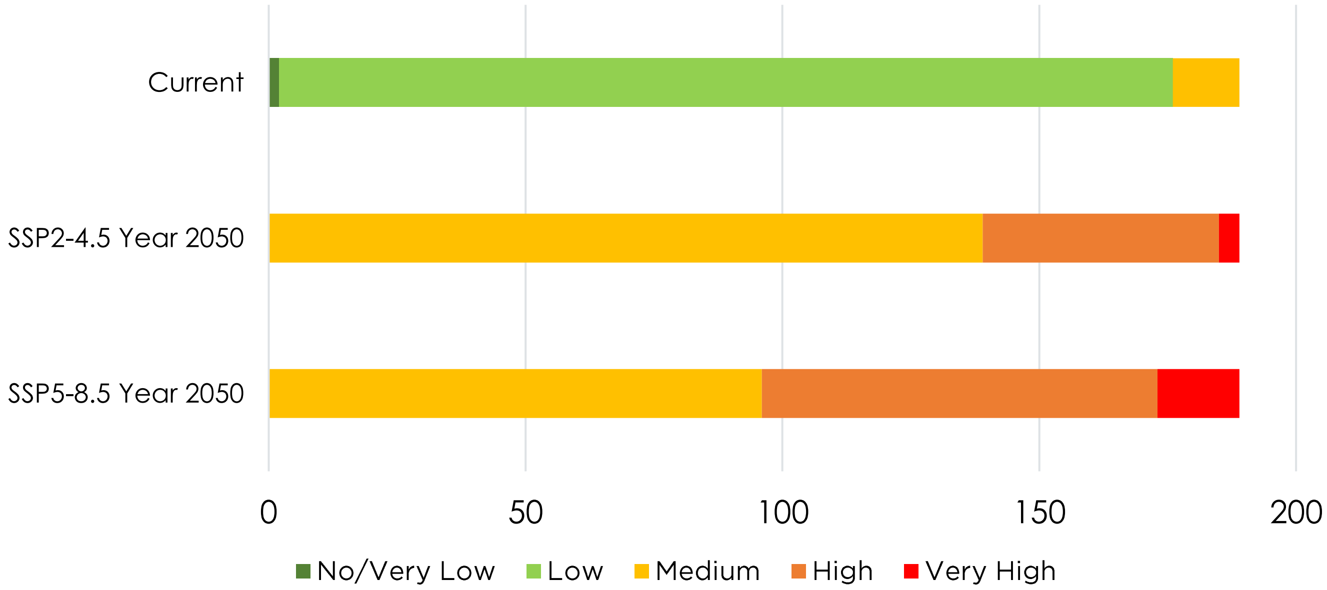


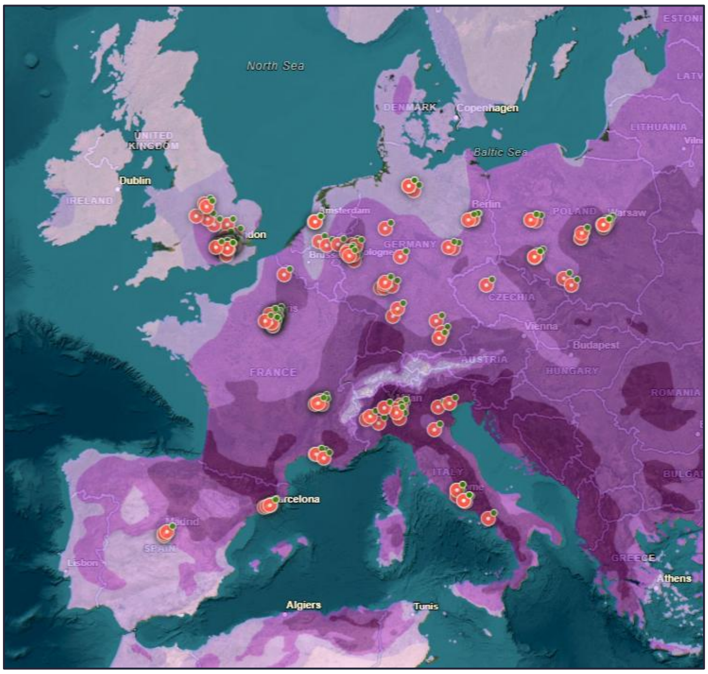
Figure 13: Drought Stress – No. of estates by risk category

HAIL

HAZARD BACKGROUND

Hail is solid precipitation in the form of balls or pieces of ice known as hailstones. Hail forms in thunderclouds when drops of water are continuously taken up and down through the cloud by updraughts and downdraughts. When they go to the top of the cloud they freeze. Eventually, the cloud can no longer hold the hailstones and they fall to the earth. Hailstorms cause extensive damage to agriculture, as well as to buildings and vehicles. Heavy hailstorms are usually triggered by wide cold fronts. Occasionally, local hot weather thunderstorms also lead to severe localized hailstorms.

Hail as a natural hazard is based on the frequency and intensity of hailstorms. On this basis, Munich Re Hailstone Map is based on a set of atmospheric conditions with the potential to create a hailstorm. This includes the global distribution of lightning activity (lightning per km² and year) and data sources including OTD/LIS data from NASA, a DEM (interpolated from SRTM data), global temperature data and global precipitation data. Hail is mapped by the frequency and intensity of hailstorms on a scale from 1 (low) to 6 (high).



- Zone 1: Low
- Zone 2
- Zone 3
- Zone 4
- Zone 5
- Zone 6: High

Map 26: Hail exposure risk for SEGRO portfolio (current timeline only)

PORTFOLIO SCREENING RESULTS

The portfolio screening results for hail show a large proportion of the estates have Medium exposure risk to hail in the current timeline and 15 estates in Italy have High exposure to hail. No estates have identified with No/Very Low exposure to hail risk. Future projections of hail are not available as there is a lack of scientific consensus on how best to model this hazard.

Table 24: Overview table – No. of estates by risk category

Hail	No/Very Low Exposure (1) Dark Green	Low Exposure (2) Light Green	Medium Exposure (3) Orange	High Exposure (4) Red	Very High Exposure (5) Dark Red
	1	2	3, 4	5	6
Current	0	65	109	15	0

RIVER FLOOD

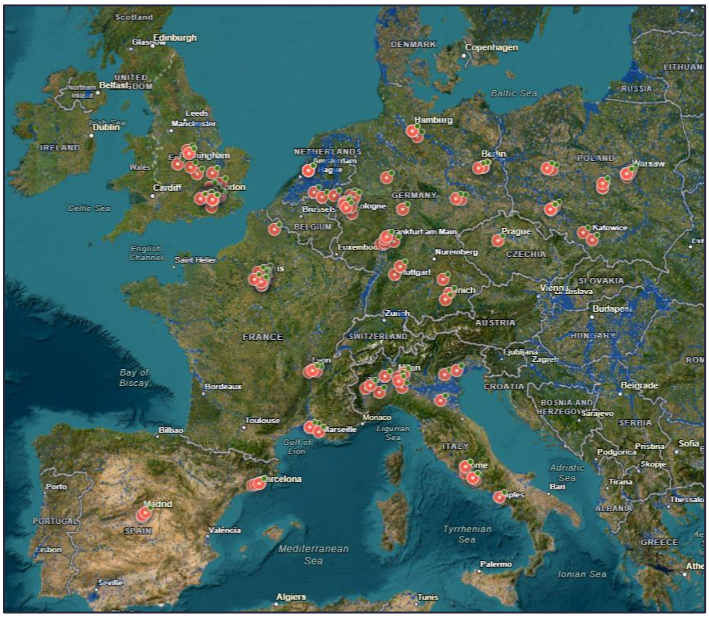
HAZARD BACKGROUND

River flood events occur when the capacity of rivers or streams to hold water is exceeded and water overflows the banks, leading to inundation to surrounding land. These events are usually caused by heavy rainfall or snowmelt.

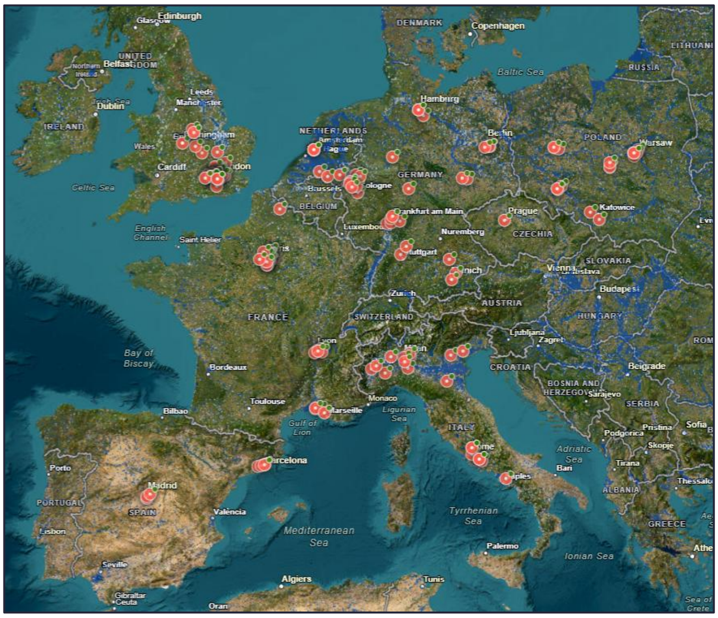
Munich Re's current river flood hazard data (provided by JBA Risk Management) offer flood hazard information with a 30m horizontal resolution. The river flood hazard is represented by four return period zones, ranging from zone 0 (areas of minimal flood risk) to zones 500, 100 and 50.

A 100-year return period indicates in any one year a 1/100 chance of an event; an annual risk of 1%.

Flood protection systems are defence structures to reduce flooding to areas and properties. Globally, the quality of defence information and the structures themselves is highly variable. Munich Re provides both defended and undefended river flood hazard information. Please note the maps in this report show undefended only.



Map 27: River Flood (Undefended) exposure risk for SEGRO portfolio in the current timeline.



Map 28: River Flood (Undefended) exposure risk for SEGRO portfolio in 2050 under high emission scenario SSP2–4.5

- Zone 0 minimal flood risk
- Zone 500 year return period
- Zone 100 year return period
- Zone 50 year return period

RIVER FLOOD

DEFENDED

PORTFOLIO SCREENING RESULTS

River Flood is assessed in this report in both the undefended and defended view. Table 25 shows the portfolio risk distribution to River Flood (Defended), in other words accounting for any flood defences that may be in place, where data is available. Most of the portfolio has no exposure to River Flood across all scenarios and timelines, however some estates fall with Medium and above category. Under SSP2-4.5 2050 twenty estates have been identified with Medium risk, five with High risk and eight with Very High risk. The estates with Very High River Flood risk are found in Poland, Germany, UK and Italy. The change from baseline is also show in this table, importantly not all estates have projections of increased River Flood risk compared to the baseline.

Table 25: Overview table – No. of estates by risk category

River Flood (Defended)	No/Very Low Exposure (1) Dark Green	Low Exposure (2) Light Green	Medium Exposure (3) Orange	High Exposure (4) Red	Very High Exposure (5) Dark Red
	0	n/a	500	100	50
Current	172	n/a	6	3	8
RCP4.5 Year 2030	154	n/a	22	5	8
RCP4.5 Year 2050	156	n/a	20	5	8
RCP4.5 Year 2100	152	n/a	24	5	8
RCP8.5 Year 2030	155	n/a	20	6	8
RCP8.5 Year 2050	152	n/a	23	6	8
RCP8.5 Year 2100	154	n/a	22	5	8

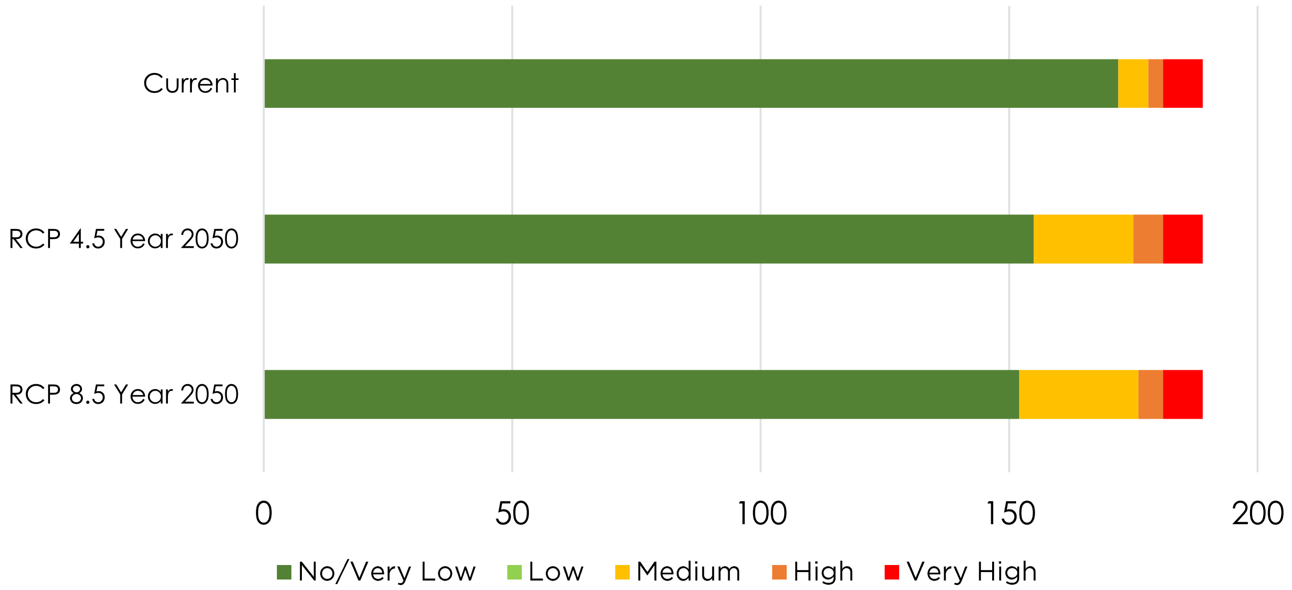
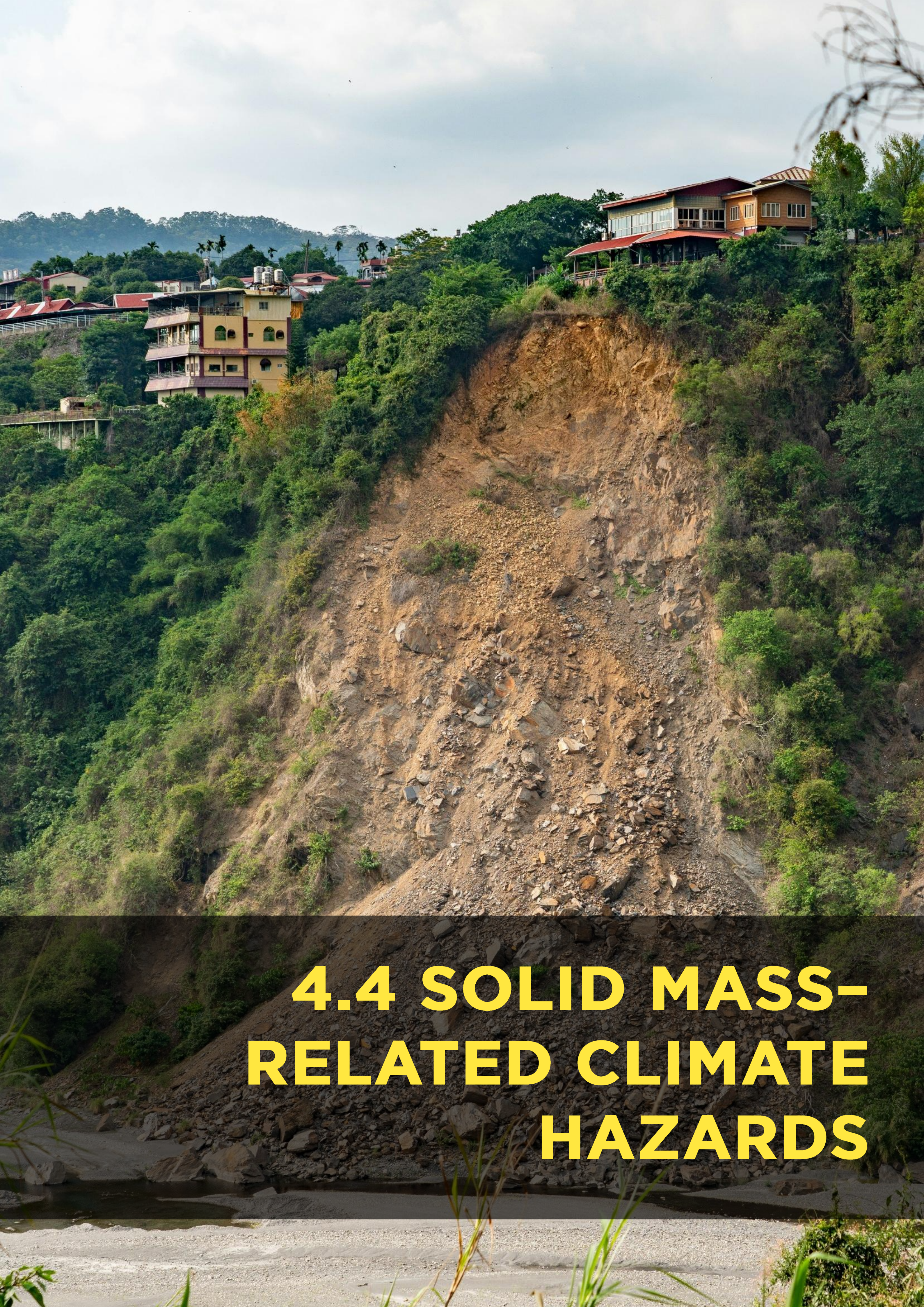


Figure 14: River Flood (Defended) – No. of estates by risk category



4.4 SOLID MASS-RELATED CLIMATE HAZARDS

LANDSLIDE

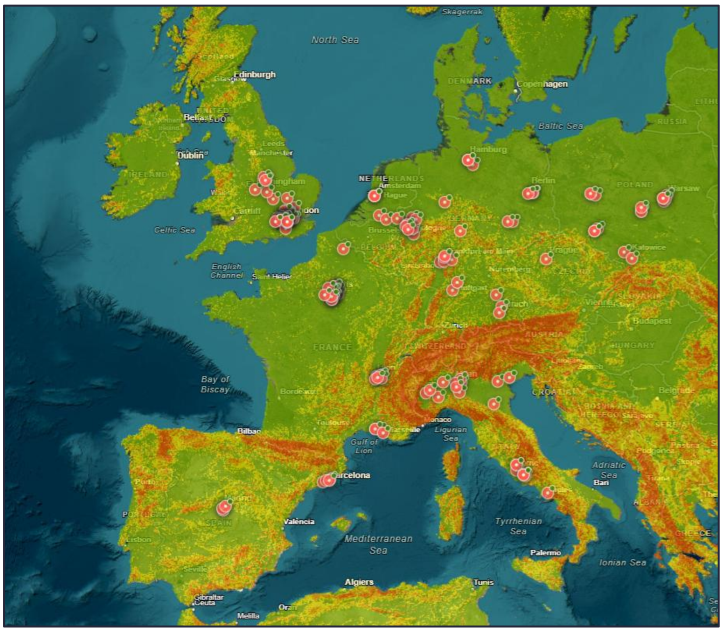
HAZARD BACKGROUND

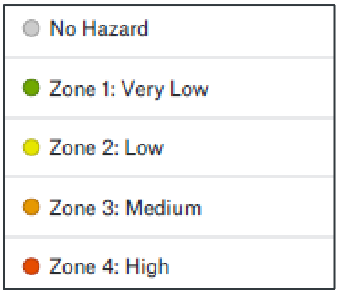
Landslides are a mass movement of rocks, earth or debris down a slope, occurring suddenly or over a long period of time.

Landslides can be caused by a range of factors including but not limited to heavy rainfall, earthquakes, volcanic activity, weathering such as freeze-thaw, erosion processes or human activity. The impacts from Landslide events are far reaching including infrastructure damage, loss life, impacts to agriculture and can even increase the risk of floods by blocking river channels.

Munich Re uses a global Landslide map to present a qualitative view of Landslide hazards. This map is provided by the Global Facility for Disaster Reduction and Recovery (GFDRR) and combines historical data on median annual rainfall-triggered Landslides between 1980-2018 and earthquake triggered Landslides.

There are four different zones for Landslide hazard: Zone 1: Very Low; Zone 2: Low; Zone 3: Medium; Zone 4: High.





Map 29: Landslide exposure risk for SEGRO portfolio in the current timeline.

PORTFOLIO SCREENING RESULTS

Portfolio results show that the majority estates in the portfolio have been identified with No exposure to Landslide current hazard (Table 26). There are four estates with a Low exposure to Landslide and two estates with Medium exposure.

Table 26: Overview table – No. of estates by risk category

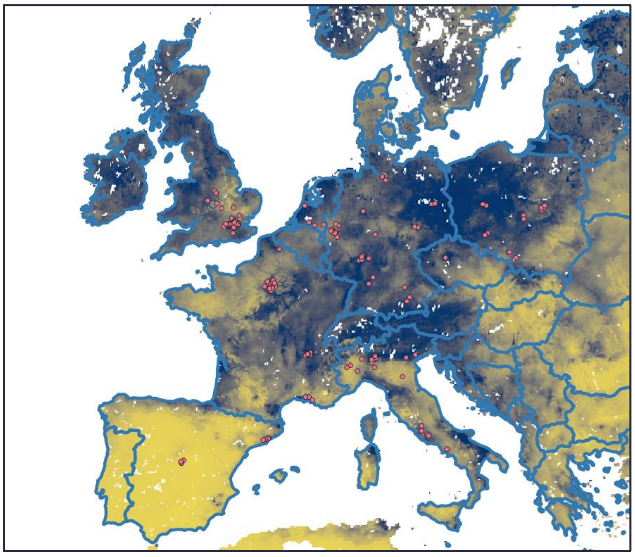
Landslide	No/Very Low Exposure (1) Dark Green	Low Exposure (2) Light Green	Medium Exposure (3) Orange	High Exposure (4) Red	Very High Exposure (5) Dark Red
	-1, 0, 1	2	3	4	n/a
Current	183	4	2	0	n/a

SUBSIDENCE (SOIL MOISTURE)

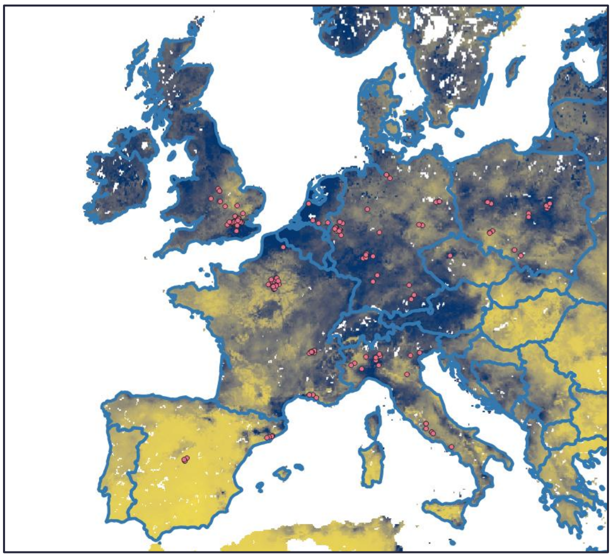
HAZARD BACKGROUND

At the European scale (UK included) subsidence is assessed in different ways. Overall, there is current subsidence risk opensource data at the national level (for France, the Netherlands), but very limited future subsidence projections (UK, the Netherlands). The variables used in the hazard definition and granularity of information vary between countries. The climate working group Resilience 4 Real Estate (part of ESREI) advise using a European wide mean soil moisture dataset as a proxy for future subsidence risk exposure. Mean soil moisture (available from the Copernicus Climate Change Service) is a Climate Impact Indicator derived from hydrological impact modelling, forced by bias adjusted regional climate simulations from the European Coordinated Regional Climate Downscaling Experiment (EURO-CORDEX). Climate Impact Indicators contain condensed climate information; these are provided as mean values over a 30-year time period. The reference period selected is 1971 to 2000 (Map 48), the future periods cover three fixed time periods: 2011 to 2040, 2041 to 2070 and 2071 to 2100, using RCPs 2.6, 4.5 and 8.5.

The mean soil moisture dataset is based on several different hydrological models with varying definitions. However, the most widely used definition of soil moisture describes it as the ratio between soil moisture in the root zone and the field capacity volume, aggregated into annual mean values. The analysis conducted looks at the relative change in mean soil moisture between the baseline and future time period. For example, a -200% decrease implies the soil in the area is expected to experience twice as dry conditions relative to the baseline period. Please note extreme wet and extreme dry conditions are both related to subsidence risk as alternating periods of each contribute to the shrink-swell effect.



Map 30. Historical mean annual soil moisture 1971 to 2000. Colour scheme shows drier areas in yellow and wetter areas in dark blue changing to maximum of a ratio of 9 to 0. SEGRO estate locations in red points.



Map 31. Mean annual soil moisture RCP4.5 2041 to 2070. Colour scheme shows drier areas in yellow and wetter areas in dark blue changing to maximum of a ratio of 9 to 0. SEGRO estate locations in red points.

High soil moisture

Low soil moisture

SUBSIDENCE (SOIL MOISTURE)

PORTFOLIO SCREENING RESULTS

Baseline historical soil moisture across already shows that there are many parts of southern Europe with relatively low mean soil moisture. The models do not include geological information, so that a large reduction in soil moisture may be worse where the underlying geology can also be compressed, and where the current moisture is usually high. The models show an increase in dry conditions from the 2041 period onwards. Notably mediterranean areas such as Italy seem to experience wide variations from mean increases in soil moisture under some scenarios that abruptly move to drier conditions later in time.

Unlike other variables, where an overall directional trend over time is observed, soil moisture shows very differently depending on the scenario, with RCP2.6 showing the overall increased soil moisture for 2041–2100 timeframes and under RCP4.5 and 8.5 for the same period showing decreased soil moisture. It is noted three UK estates were located in areas with no data returns, sample for this hazard is 186 estates.

Table 27: Overview table – Count of estates in each exposure category. Exposure score categories reflect mean soil moisture change from historical baseline

Soil Moisture ratio	Very dry	Dry	Somewhat dry	Humid	Very humid
	<-10.01	-10 to -2.001	-2 to 0	0.01 to 2	2.001<
RCP2.6 2011-2040	15	140	23	8	0
RCP2.6 2041-2070	4	104	26	31	20
RCP2.6 2071-2100	4	128	19	11	24
RCP4.5 2011-2040	4	56	53	32	41
RCP4.5 2041-2070	23	152	5	6	0
RCP4.5 2071-2100	15	140	20	2	9
RCP8.5 2011-2040	4	110	40	15	17
RCP8.5 2041-2070	31	140	8	3	4
RCP8.5 2071-2100	119	62	5	0	0

It is observed on the distribution of the scores by scenario (Figure 15) that there is an overall trend of reduction (drying out) in mean soil moisture which may lead to shrinkage and compaction of the soil under the estates.

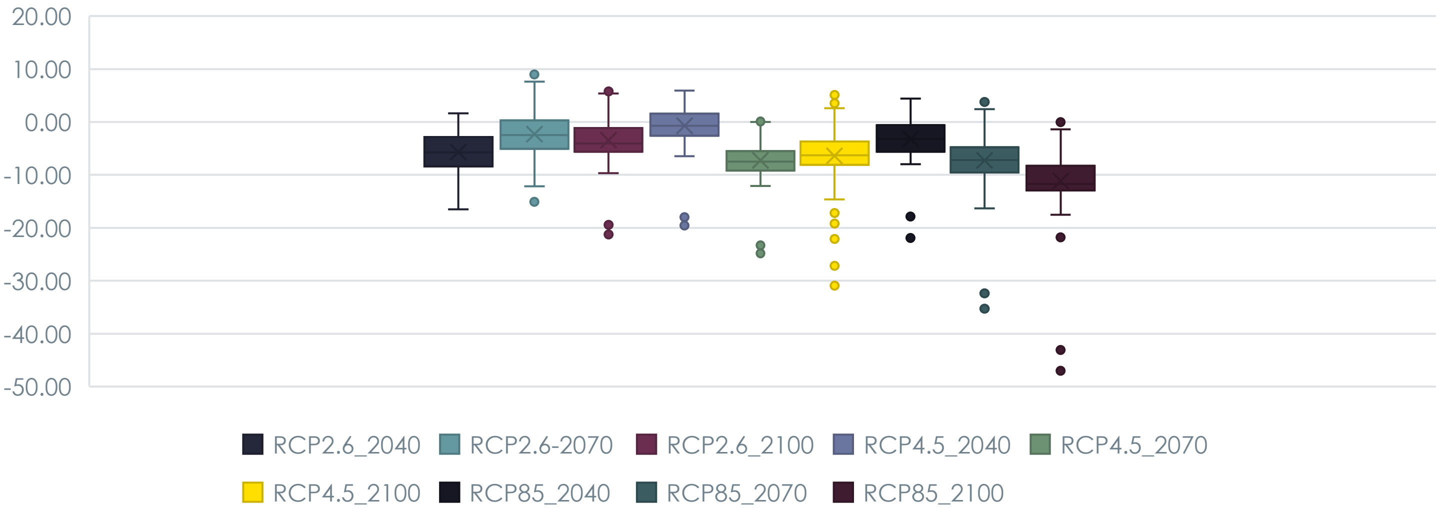


Figure 15: Mean change in soil moisture ratio from baseline across scenarios and time periods

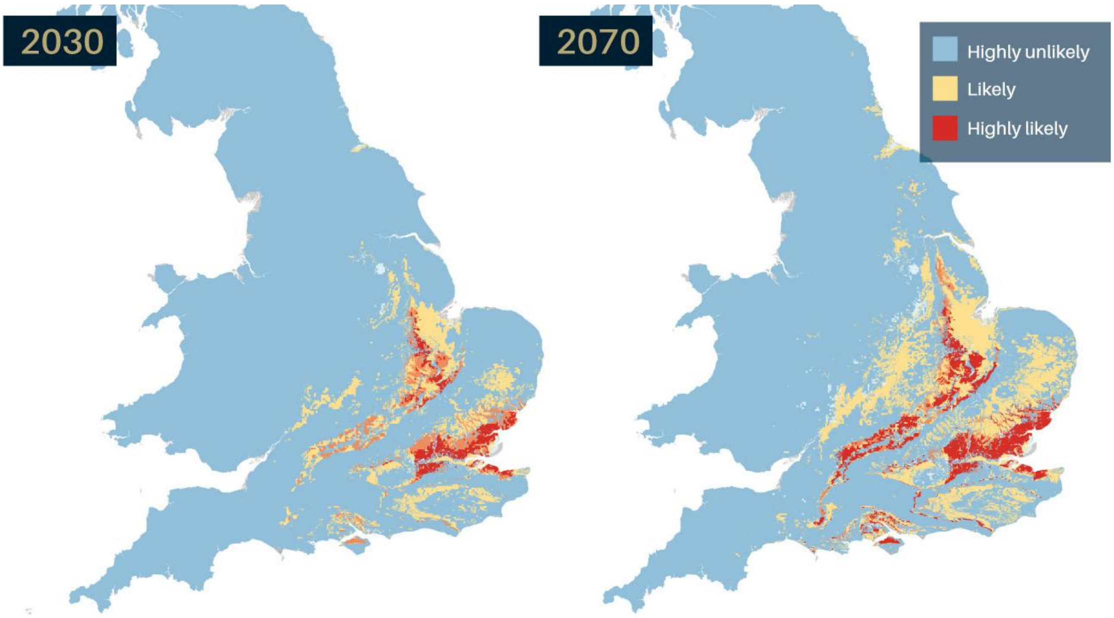
SUBSIDENCE - UK

HAZARD BACKGROUND

Subsidence is a key geohazard in the UK, resulting in damage to property foundations when they are pulled down by shrink-swell effects in the ground. Climate change is projected to exacerbate the impacts of shrink-swell in the UK as future projections indicate increases in warm and dry periods in the summer as well as heavier rainfall events, which could lead to more shrink-swell effects.

In the UK the British Geological Survey (BGS) published maps, exhibiting how climate change could cause an increase shrink-swell and subsidence-related issues for homes and properties in the UK over the next 50 years. The maps are based on geotechnical information on ground movement and future projections of rainfall and temperatures over UK Climate Projection (UKCP) for a high emission scenario – RCP8.5.

The results seen in Map 32 show that properties in areas in London and the Southeast, specifically Kent, are most susceptible to subsidence. These areas are built on clay-rich soil which as explained can see more shrink-swelling effects after alternating extreme wet and dry periods.



Map 32: Subsidence risk projections for 2030 and 2070 under RCP8.5. Source BGS © UKRI – Contains Ordnance Survey data © Crown copyright and database right 2022

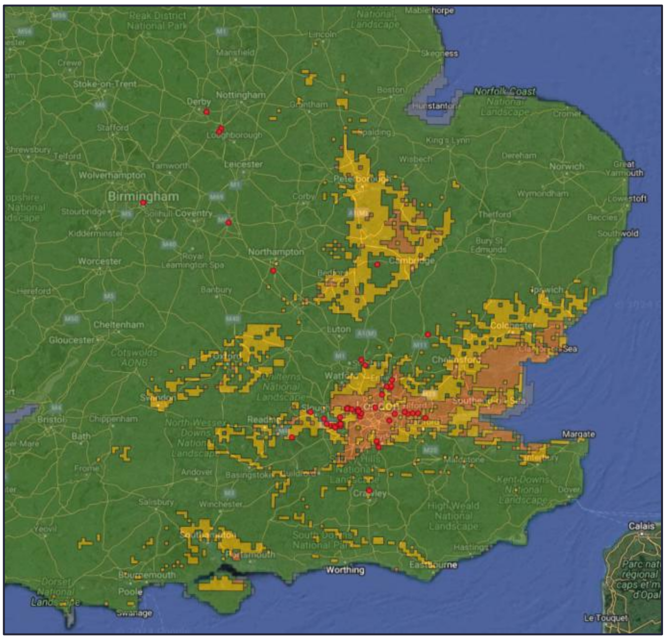
SUBSIDENCE - UK

PORTFOLIO SCREENING RESULTS

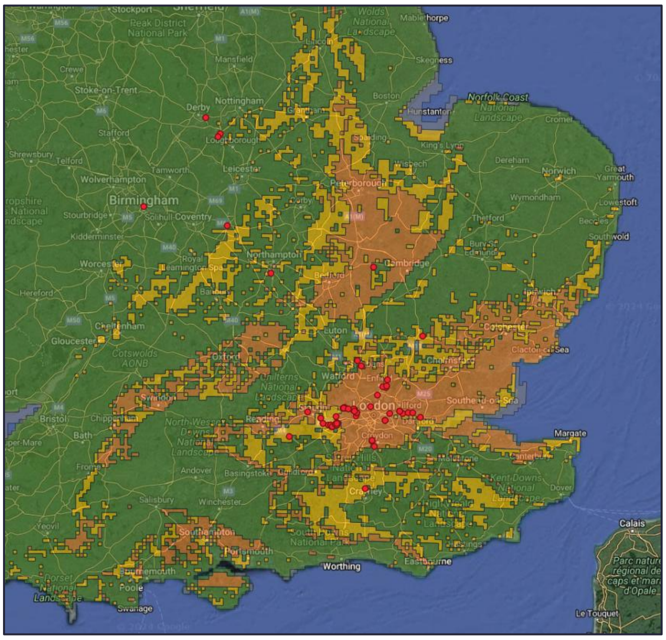
The UK estates are located mostly in London, where the soil has significant clay levels and the Midlands. There is no current risk exposure available in this dataset. Table 28 highlights subsidence for RCP8.5 and two time periods 2030 and 2070, there is no RCP4.5 for this dataset. The risk bandings, expressed as likelihood of subsidence conditions being present shows a shift over time with estates moving from the “improbable” band to “possible” and “probable” by 2070.

Table 28: Overview table – No. of estates by risk category

Subsidence	No/Very Low Exposure (1) Dark Green	Low Exposure (2) Light Green	Medium Exposure (3) Orange	High Exposure (4) Red	Very High Exposure (5) Dark Red
	n/a	Improbable	Possible	Probable	n/a
RCP8.5 Year 2030	n/a	23	13	25	n/a
RCP8.5 Year 2070	n/a	8	21	32	n/a



Map 33: Estates in UK mapped against BGS Subsidence data for 2030 under high emission scenario RCP8.5.



Map 34: Estates in UK mapped against BGS Subsidence data for 2070 under high emission scenario RCP8.5.

SUBSIDENCE - FRANCE

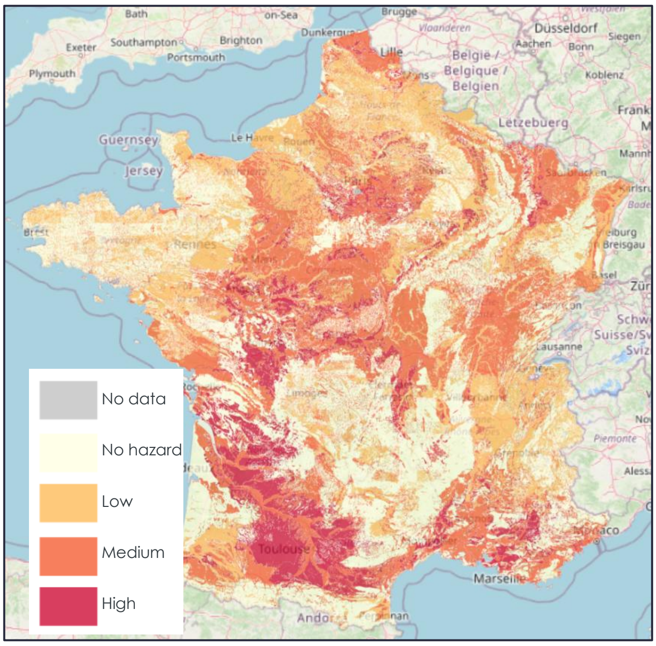
PORTFOLIO SCREENING RESULTS

In 2019, the Bureau de Recherches Géologiques et Minières (BRGM – French geological and mining research bureau) updated the existing hazard maps on the basis of new knowledge, including geolocalised claims data, to obtain a map of the exposure of clay formations to subsidence or the shrink-swell effect resulting from drought and soil rehydration.

The dataset takes into consideration geological and soil formation national datasets. The mapping of the exposure risk has resulted in the identification of: non-clay zones (with No or Very Low exposure) and Low, Medium and High exposure zones.

Table 29: Overview table – No. of estates by risk category

Subsidence	No/Very Low Exposure (1) Dark Green	Low Exposure (2) Light Green	Medium Exposure (3) Orange	High Exposure (4) Red	Very High Exposure (5) Dark Red
	No hazard (Nul)	Weak (Faible)	Average (Moyen)	Strong (Fort)	n/a
Current	2	14	25	3	n/a



Map 35: France current shrink-swell risk rating (R4RE, online, 2024)

05

COUNTRY PROFILES

COUNTRY SUMMARY FRANCE

There are 44 estates in France. The physical climate hazards which have been identified as significant (based on the threshold on p.16) for France SEGRO estates are:

- Heat Stress
- Heat Wave
- Fire Weather Stress
- Drought Stress
- Annual Water Stress
- River Flood (Defended)
- Hail
- Extratropical Storm
- Subsidence
- Flash Flood

Map 36: France estates

Table 30: Portfolio Exposure Risk Summary

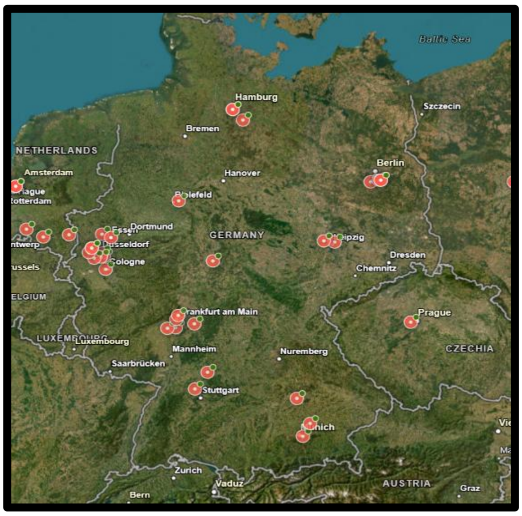
Hazard Classification	Description of Physical Hazard	Climate Scenario	Risk Band Count (↓↑Change from Baseline)					Country Average
			No/Very Low	Low	Medium	High	Very High	
Temperature-Related Climate Hazards	Heat Stress	SSP2-4.5 2050	0	2 (↓-30)	38 (↑+26)	4 (↑+4)	0	4.38 (↑+1.26)
	Heat Wave	RCP4.5 2050 *	0	0 (↓-44)	41 (↑+41)	3 (↑+3)	0	4.00 (↑+2.46)
	Cold Stress	SSP1-2.6 2050	0	4 (↑+2)	40 (↓-2)	0	0	4.66 (↓-0.25)
	Cold Wave (Frost Days)	SSP1-2.6 2050 *	34 (↑+33)	10 (↓-23)	0 (↓-10)	0	0	29.59 (↓12.01)
	Fire Weather Stress	SSP2-4.5 2050	1 (↓-1)	37 (↓-1)	2 (↑+2)	4	0	3.45 (↑+0.74)
Wind-Related Climate Hazards	Tropical Cyclone	RCP4.5 2050	44	0	0	0	0	0.75
	Extratropical Storm	Current	0	3	41	0	0	4.60
	Tornado	Current	0	44	n/a	0	0	2.50
Water-Related Climate Hazards	Precipitation Stress	SSP2-4.5 2050	0	30	14	0	0	3.41 (↑+0.24)
	Flash flood	SSP2-4.5 2050	25 (↓-3)	12 (↑+2)	6 (↑+1)	1	0	3
	Storm Surge (Defended)	SSP2-4.5 2050	44	0	0	n/a	0	0.75
	Sea Level Rise	RCP4.5 2100 **	44	0	0	0	0	0.75
	Annual Water Stress	SSP5-8.5 2080	9 (↓-4)	4 (↓-11)	15 (↑+2)	13 (↑+11)	3 (↑+2)	36.52% (↑+14%)
	Drought Stress	SSP2-4.5 2050	0	0 (↓-40)	11 (↑+7)	33 (↑+33)	0	6.2 (↑+2.9)
	Hail	Current	0	0	44	0	0	4.75
	River Flood (Defended)	RCP4.5 2050	42	n/a	0	2	0	1.03
Solid Mass-Related Climate Hazards	Subsidence (Soil Moisture)	SSP2-4.5 2070	n/a	0	38	6	n/a	-8.01

*Time horizon 2041-2060
** Only 2100 timeline available (no baseline view)

COUNTRY SUMMARY GERMANY

There are 32 estates in Germany. The physical climate hazards which have been identified as significant (based on the threshold on p.16) for Germany SEGRO estates are:

- Cold Stress
- Extratropical Storm
- Tornado
- Annual Water Stress
- Hail
- River Flood (Defended)
- Subsidence
- Flash Flood



Map 37: Germany estates

Table 31: Portfolio Exposure Risk Summary

Hazard Classification	Description of Physical Hazard	Climate Scenario	Risk Band Count (↓↑Change from Baseline)					Country Average
			No/Very Low	Low	Medium	High	Very High	
Temperature-Related Climate Hazards	Heat Stress	SSP2-4.5 2050	0	23 (↓-9)	9 (↑+9)	0	0	3.45 (↑+1.08)
	Heat Wave	RCP4.5 2050 *	0 (↓-32)	1 (↑+1)	31 (↑+31)	0	0	3.50 (↑+1.96)
	Cold Stress	SSP1-2.6 2050	0	0	21 (↑+8)	11 (↓-8)	0	5.84 (↓-0.28)
	Cold Wave (Frost Days)	SSP1-2.6 2050 *	9 (↑+9)	13 (↑+1)	10 (↓-6)	0 (↓-4)	0	50.20 (↓-16.89)
	Fire Weather Stress	SSP2-4.5 2050	3 (↑-17)	29 (↑+17)	0	0	0	2.09 (↑+0.64)
Wind-Related Climate Hazards	Tropical Cyclone	RCP4.5 2050	32	0	0	0	0	0.75
	Extratropical Storm	Current	0	0	32	0	0	4.75
	Tornado	Current	0	0	n/a	32	0	7.00
Water-Related Climate Hazards	Precipitation Stress	SSP2-4.5 2050	0	25 (↓-7)	7 (↑+4)	0	0	3.26 (↑+0.27)
	Flash flood	SSP2-4.5 2050	9 (↓-4)	20 (↑+4)	3	0	0	3
	Storm Surge (Defended)	SSP2-4.5 2050	30	0	2	n/a	0	1.00
	Sea Level Rise	RCP4.5 2100 **	32	0	0	0	0	0.75
	Annual Water Stress	SSP5-8.5 2080	14	0	0 (↓-2)	11 (↓-5)	7 (↑+7)	44.39% (↑+8.7%)
	Drought Stress	SSP2-4.5 2050	0 (↓-2)	0 (↓-30)	32 (↑+32)	0	0	5.12 (↑+2.51)
	Hail	Current	0	4	28	0	0	4.47
	River Flood (Defended)	RCP4.5 2050	29	n/a	1 (↓-1)	1 (↑+1)	1	1.33 (↑+0.07)
Solid Mass-Related Climate Hazards	Subsidence (Soil Moisture)	SSP2-4.5 2070	n/a	1	30	1	n/a	-8.29

*Time horizon 2041-2060
** Only 2100 timeline available (no baseline view)

COUNTRY SUMMARY UK

There are 61 estates in the UK. Most of these estates are in the south-east around London, including Heathrow Airport. Other locations are in the Midlands near Coventry, Rugby and Derby. The physical climate hazards which have been identified as significant (based on the threshold on p.16) for UK SEGRO estates are:

- Extratropical Storm
- Tornado
- Storm Surge (Defended)
- Annual Water Stress
- River Flood (Defended)
- Flash Flood
- Subsidence
- Hail

Map 38: UK estates

Table 32: Portfolio Exposure Risk Summary

Hazard Classification	Description of Physical Hazard	Climate Scenario	Risk Band Count (↓↑Change from Baseline)					Country Average
			No/Very Low	Low	Medium	High	Very High	
Temperature-Related Climate Hazards	Heat Stress	SSP2-4.5 2050	0 (↓-61)	61 (↑+61)	0	0	0	1.90 (↑+0.66)
	Heat Wave	RCP4.5 2050 *	0	58 (↓-3)	3 (↑+3)	0	0	2.85 (↑+1.53)
	Cold Stress	SSP1-2.6 2050	0	0	61	0	0	4.07 (↓-0.29)
	Cold Wave (Frost Days)	SSP1-2.6 2050 *	61 (↑+53)	0 (↓-53)	0	0	0	20.71 (↓-12.42)
	Fire Weather Stress	SSP2-4.5 2050	46 (↓-15)	15 (↑+15)	0	0	0	1.48 (↑+0.4)
Wind-Related Climate Hazards	Tropical Cyclone	RCP4.5 2050	61	0	0	0	0	0.75
	Extratropical Storm	Current	0	0	61	0	0	4.75
	Tornado	Current	0	0	n/a	61	0	7.00
Water-Related Climate Hazards	Precipitation Stress	SSP2-4.5 2050	0	61	0	0	0	2.74 (↑+0.34)
	Flash flood	SSP2-4.5 2050	0	7 (↓-1)	13 (↑+1)	7 (↓-9)	33 (↑+9)	1.5 (↑+0.14)
	Storm Surge (Defended)	SSP2-4.5 2050	55	0	0	n/a	6	1.56
	Sea Level Rise	RCP4.5 2100 **	61	0	0	0	0	0.75
	Annual Water Stress	SSP5-8.5 2080	0	6 (↓-1)	1 (↑+1)	0	54	75.08% (↑+27%)
	Drought Stress	SSP2-4.5 2050	0	0 (↓-61)	61 (↑+61)	0	0	4.87 (↑+2.01)
	Hail	Current	0	52	9	0	0	2.83
	River Flood (Defended)	RCP4.5 2050	44 (↓-11)	n/a	13 (↑+11)	0	4	2.14 (↑+0.72)
Solid Mass-Related Climate Hazards	Subsidence (Soil Moisture)	SSP2-4.5 2070	n/a	1	52	5	n/a	-7.17

*Time horizon 2041-2060
** Only 2100 timeline available (no baseline view)

COUNTRY SUMMARY ITALY

There are 19 estates in Italy. The physical climate hazards which have been identified as significant (based on the threshold on p.16) for Italy SEGRO estates are:

- Heat Stress
- Heat Wave
- Cold Wave
- Tornado
- Precipitation Stress
- Annual Water Stress
- Drought Stress
- River Flood (Defended)
- Hail
- Subsidence
- Flash Flood

Map 39: Italy estates

Table 33: Portfolio Exposure Risk Summary

Hazard Classification	Description of Physical Hazard	Climate Scenario	Risk Band Count (↓↑Change from Baseline) No/Very Low	Low	Medium	High	Very High	Country Average
Temperature-Related Climate Hazards	Heat Stress	SSP2-4.5 2050	0	0 (↓-2)	13 (↓-4)	6 (↑+6)	0	5.65 (↑+1.06)
	Heat Wave	RCP4.5 2050 *	0	0 (↓-19)	1 (↑+1)	18 (↑+18)	0	8.36 (↑+6.25)
	Cold Stress	SSP1-2.6 2050	0	4 (↑+2)	15 (↓-2)	0	0	3.84 (↓-0.46)
	Cold Wave (Frost Days)	SSP1-2.6 2050 *	7	2 (↑+1)	7 (↑+5)	3 (↓-4)	0 (↓-2)	54.84 (↓-14.7)
	Fire Weather Stress	SSP2-4.5 2050	0 (↓-2)	8 (↓-3)	11 (↑+5)	0	0	3.67 (↑+0.69)
Wind-Related Climate Hazards	Tropical Cyclone	RCP4.5 2050	19	0	0	0	0	0.75
	Extratropical Storm	Current	0	19	0	0	0	2.50
	Tornado	Current	0	11	n/a	8	0	4.39
Water-Related Climate Hazards	Precipitation Stress	SSP2-4.5 2050	0	0	5	12	2	6.75 (↑+0.34)
	Flash flood	SSP2-4.5 2050	7	11	1	0	0	3
	Storm Surge (Defended)	SSP2-4.5 2050	19	0	0	n/a	0	0.75
	Sea Level Rise	RCP4.5 2100 **	19	0	0	0	0	0.75
	Annual Water Stress	SSP5-8.5 2080	3	3	4 (↓-1)	1 (↓-2)	8 (↑+3)	82.55% (↑+17%)
	Drought Stress	SSP2-4.5 2050	0	0 (↓-19)	11 (↑+11)	8 (↑+8)	0	5.97 (↑+3.14)
	Hail	Current	0	0	4	15	0	6.53
	River Flood (Defended)	RCP4.5 2050	12	n/a	4	2	1	2.68 (↑+0.96)
Solid Mass-Related Climate Hazards	Subsidence (Soil Moisture)	SSP2-4.5 2070	n/a	2	16	1	n/a	-7.48

*Time horizon 2041-2060
** Only 2100 timeline available (no baseline view)

COUNTRY SUMMARY SPAIN

There are nine estates in Spain. The physical climate hazards which have been identified as significant (based on the threshold on p.16) for Spain SEGRO estates are:

- Heat Stress
- Heat Wave
- Fire Weather Stress
- Annual Water Stress
- Drought Stress
- River Flood (Defended)
- Hail
- Subsidence

Map 40: Spain estates

Table 34: Portfolio Exposure Risk Summary

Hazard Classification	Description of Physical Hazard	Climate Scenario	Risk Band Count (↓↑Change from Baseline)					Country Average
			No/Very Low	Low	Medium	High	Very High	
Temperature-Related Climate Hazards	Heat Stress	SSP2-4.5 2050	0	0	5 (↓-4)	4 (↑+4)	0	6.06 (↑+1.22)
	Heat Wave	RCP4.5 2050 *	0 (↓-4)	0 (↓-5)	5 (↑+5)	4 (↑+4)	0	5.14 (↑+4.14)
	Cold Stress	SSP1-2.6 2050	0	5 (↑+1)	4 (↓-1)	0	0	3.04 (↓-0.49)
	Cold Wave (Frost Days)	SSP1-2.6 2050 *	9 (↑+4)	0 (↓-4)	0	0	0	20.22 (↓-10.23)
	Fire Weather Stress	SSP2-4.5 2050	0	5	0	4	0	5.10 (↑+0.7)
Wind-Related Climate Hazards	Tropical Cyclone	RCP4.5 2050	9	0	0	0	0	0.75
	Extratropical Storm	Current	0	9	0	0	0	2.50
	Tornado	Current	0	9	n/a	0	0	2.50
Water-Related Climate Hazards	Precipitation Stress	SSP2-4.5 2050	0	4	5	0	0	3.40 (↑+0.1)
	Flash flood	SSP2-4.5 2050	9	0	0	0	0	1
	Storm Surge (Defended)	SSP2-4.5 2050	9	0	0	n/a	0	0.75
	Sea Level Rise	RCP4.5 2100 **	9	0	0	0	0	0.75
	Annual Water Stress	SSP5-8.5 2080	0	0	0 (↓-2)	2 (↑+2)	7	275.16% (↑+93%)
	Drought Stress	SSP2-4.5 2050	0	0	0 (↓-9)	5 (↑+5)	4 (↑+4)	7.78 (↑+3.19)
	Hail	Current	0	3	6	0	0	4.00
	River Flood (Defended)	RCP4.5 2050	8 (↓-1)	n/a	1 (↑+1)	0	0	1.19 (↑+0.44)
Solid Mass-Related Climate Hazards	Subsidence (Soil Moisture)	SSP2-4.5 2070	n/a	0	0	9	n/a	-7.53

*Time horizon 2041-2060
** Only 2100 timeline available (no baseline view)

COUNTRY SUMMARY POLAND

There are 16 estates in Poland. The physical climate hazards which have been identified as significant (based on the threshold on p.16) for Poland SEGRO estates are:

- Cold Stress
- Extratropical Storm
- Annual Water Stress
- River Flood (Defended)
- Hail
- Subsidence
- Flash Flood

Map 41: Poland estates

Table 35: Portfolio Exposure Risk Summary

Hazard Classification	Description of Physical Hazard	Climate Scenario	Risk Band Count (↓↑Change from Baseline)					Country Average
			No/Very Low	Low	Medium	High	Very High	
Temperature-Related Climate Hazards	Heat Stress	SSP2-4.5 2050	0	13 (↓-3)	3 (↑+3)	0	0	3.38 (↑+1.16)
	Heat Wave	RCP4.5 2050 *	0 (↓-8)	14 (↑+6)	2 (↑+2)	0	0	2.78 (↑+1.75)
	Cold Stress	SSP1-2.6 2050	0	0	0	16	0	6.64 (↓-0.39)
	Cold Wave (Frost Days)	SSP1-2.6 2050 *	0	0	16 (↑+16)	0 (↓-16)	0	77.81 (↓-22.25)
	Fire Weather Stress	SSP2-4.5 2050	0 (↓-5)	16 (↑+5)	0	0	0	2.63 (↑+0.81)
Wind-Related Climate Hazards	Tropical Cyclone	RCP4.5 2050	16	0	0	0	0	0.75
	Extratropical Storm	Current	0	0	16	0	0	4.75
	Tornado	Current	0	16	n/a	0	0	2.50
Water-Related Climate Hazards	Precipitation Stress	SSP2-4.5 2050	0	14 (↓-1)	2 (↑+1)	0	0	3.33 (↑+0.33)
	Flash flood	SSP2-4.5 2050	13	1	2	0	0	2
	Storm Surge (Defended)	SSP2-4.5 2050	16	0	0	n/a	0	0.75
	Sea Level Rise	RCP4.5 2100 **	16	0	0	0	0	0.75
	Annual Water Stress	SSP5-8.5 2080	6 (↓-3)	3 (↑+3)	2	3	2	29.90% (↑+5.6%)
	Drought Stress	SSP2-4.5 2050	0	0 (↓-16)	16 (↑+16)	0	0	5.33 (↑+2.17)
	Hail	Current	0	0	16	0	0	4.75
	River Flood (Defended)	RCP4.5 2050	13	n/a	1	0	2	2.03
Solid Mass-Related Climate Hazards	Subsidence (Soil Moisture)	SSP2-4.5 2070	n/a	1	14	1	n/a	-5.29

*Time horizon 2041-2060
** Only 2100 timeline available (no baseline view)

COUNTRY SUMMARY THE NETHERLANDS

There are seven estates in the Netherland. The physical climate hazards which have been identified as significant (based on the threshold on p.16) for Netherland SEGRO estates are:

- Extratropical Storm
- Tornado
- Sea Level Rise
- Annual Water Stress
- Hail
- Flash Flood

Map 42: Netherlands estates

Table 36: Portfolio Exposure Risk Summary

Hazard Classification	Description of Physical Hazard	Climate Scenario	Risk Band Count (↓↑Change from Baseline)					Country Average
			No/Very Low	Low	Medium	High	Very High	
Temperature-Related Climate Hazards	Heat Stress	SSP2-4.5 2050	0 (↓-4)	7 (↑+4)	0	0	0	2.41 (↑+0.81)
	Heat Wave	RCP4.5 2050 *	0 (↓-7)	4 (↑+4)	3 (↑+3)	0	0	2.67 (↑+1.28)
	Cold Stress	SSP1-2.6 2050	0	0	7	0	0	5.01 (↓-0.36)
	Cold Wave (Frost Days)	SSP1-2.6 2050 *	7 (↑+2)	0 (↓-2)	0	0	0	11.71 (↓-7.45)
	Fire Weather Stress	SSP2-4.5 2050	5 (↓-2)	2 (↑+2)	0	0	0	1.24 (↑+0.25)
Wind-Related Climate Hazards	Tropical Cyclone	RCP4.5 2050	7	0	0	0	0	0.75
	Extratropical Storm	Current	0	0	7	0	0	4.75
	Tornado	Current	0	0	n/a	7	0	7.00
Water-Related Climate Hazards	Precipitation Stress	SSP2-4.5 2050	0	7	0	0	0	3.07 (↑+0.34)
	Flash flood	SSP2-4.5 2050	0	6	1	0	0	4
	Storm Surge (Defended)	SSP2-4.5 2050	7	0	0	n/a	0	0.75
	Sea Level Rise	RCP4.5 2100 **	2	0	0	0	5	6.64
	Annual Water Stress	SSP5-8.5 2080	4	0	0	0 (↓-3)	3 (↑+3)	46.49% (↑+13%)
	Drought Stress	SSP2-4.5 2050	0	0 (↓-7)	7 (↑+7)	0	0	4.20 (↑+1.77)
	Hail	Current	0	6	1	0	0	2.82
	River Flood (Defended)	RCP4.5 2050	7	n/a	0	0	0	0.75
Solid Mass-Related Climate Hazards	Subsidence (Soil Moisture)	SSP2-4.5 2070	n/a	0	7	0	n/a	-2.10

*Time horizon 2041-2060
** Only 2100 timeline available (no baseline view)

COUNTRY SUMMARY CZECHIA

There is one estate in Czechia. The physical climate hazards which have been identified as significant (based on the threshold on p.16) for Czechia SEGRO estates are:

- Cold Stress
- Extratropical Storm
- Tornado
- Hail

Map 43: Czechia estate

Table 37: Portfolio Exposure Risk Summary

Hazard Classification	Description of Physical Hazard	Climate Scenario	Risk Band Count (↓↑Change from Baseline)					Country Average
			No/Very Low	Low	Medium	High	Very High	
Temperature-Related Climate Hazards	Heat Stress	SSP2-4.5 2050	0	0 (↓-1)	1 (↑+1)	0	0	3.6 (↑+1.1)
	Heat Wave	RCP4.5 2050 *	0	0 (↓-1)	1 (↑+1)	0	0	3.85 (↑+2.16)
	Cold Stress	SSP1-2.6 2050	0	0	0	1	0	6.50 (↓-0.3)
	Cold Wave (Frost Days)	SSP1-2.6 2050 *	0	0	1 (↑+1)	0 (↓-1)	0	76.00 (↓-22.01)
	Fire Weather Stress	SSP2-4.5 2050	0	1	0	0	0	2.7 (↑+0.7)
Wind-Related Climate Hazards	Tropical Cyclone	RCP4.5 2050	1	0	0	0	0	0.75
	Extratropical Storm	Current	0	0	1	0	0	4.75
	Tornado	Current	0	0	n/a	1	0	7.00
Water-Related Climate Hazards	Precipitation Stress	SSP2-4.5 2050	0	1	0	0	0	3.20 (↑+0.2)
	Flash flood	SSP2-4.5 2050	1	0	0	0	0	2
	Storm Surge (Defended)	SSP2-4.5 2050	1	0	0	n/a	0	0.75
	Sea Level Rise	RCP4.5 2100 **	1	0	0	0	0	0.75
	Annual Water Stress	SSP5-8.5 2080	1	0	0	0	0	4.39% (↑+0.9%)
	Drought Stress	SSP2-4.5 2050	0	0 (↓-1)	1 (↑+1)	0	0	5.80 (↑+3.00)
	Hail	Current	0	0	1	0	0	4.75
	River Flood (Defended)	RCP4.5 2050	1	n/a	0	0	0	0.75
Solid Mass-Related Climate Hazards	Subsidence (Soil Moisture)	SSP2-4.5 2070	n/a	0	1	0	n/a	-2.79

*Time horizon 2041-2060
** Only 2100 timeline available (no baseline view)

06

APPENDICES

GLOSSARY

Table 38: Terms and Acronyms

Term	Acronym	Definition
Acute and Chronic Risks		Chronic physical risks emerge from long term shifts in intensity of climate hazards such as Sea Level Rise or average Temperatures. Acute physical risks emerge from increases in severity and/or frequency of extreme weather hazards, such as Tropical Cyclones or River Floods.
Business as usual (baseline scenario)	BAU	In the context of transformation pathways, the term baseline scenarios refers to scenarios that are based on the assumption that no mitigation policies or measures will be implemented beyond those that are already in force and/or are legislated or planned to be adopted.
Hazard		The potential occurrence of a natural or human-induced physical event that may cause loss of life, injury, or other health impacts, as well as damage and loss to property, infrastructure, livelihoods, service provision, and environmental resource.
Representative Concentration Pathway	RCP	Scenarios that include time series of emissions and concentrations of the full suite of greenhouse gases (GHGs) and aerosols and chemically active gases, as well as land use/land cover (Moss et al., 2008). The word representative signifies that each RCP provides only one of many possible scenarios that would lead to the specific radiative forcing characteristics. The term pathway emphasises that not only the long-term concentration levels are of interest, but also the trajectory taken over time to reach that outcome (Moss et al., 2010).
RCP2.6	RCP2.6	One pathway where radiative forcing peaks at approximately 3 W m-2 before 2100 and then declines (the corresponding ECP [Extended Concentration Pathway] assuming constant emissions after 2100).
RCP4.5 and RCP6.0	RCP4.5 RCP6.0	Two intermediate stabilisation pathways in which radiative forcing is stabilised at approximately 4.5 W m-2 and 6.0 W m-2 after 2100 (the corresponding ECPs [Extended Concentration Pathways] assuming constant concentrations after 2150).
RCP8.5	RCP8.5	One high pathway for which radiative forcing reaches greater than 8.5 W m-2 by 2100 and continues to rise for some amount of time (the corresponding ECP [Extended Concentration Pathway] assuming constant emissions after 2100 and constant concentrations after 2250).
Shared Socioeconomic Pathways	SSP	New pathways (five in total) which explore how socioeconomic choices such as population, technological development and economic growth could lead to different emission pathways. The SSPs are designed to be used in conjunction with RCP to derive future warming trends based on socioeconomic factors, emissions and climate policies (mitigation and adaptation).

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