

Sustainability at Swiss Re

Monica Epple, Head Digital & Smart Analytics EMEA

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Defining: How do we use sustainability, ESG and the SDGs?

Sustainability

We aim to meet the **needs of the present without compromising the ability of future generations to meet theirs.**

We do so by taking a **strategic and forward-looking view**, and by considering our **economic, environmental and social impacts.**

Environmental, social & governance criteria (ESG)

We consider **ESG criteria in our business processes (e.g. investing, underwriting, sourcing)** to make them more sustainable and responsible, and as part of our risk considerations.

Sustainable Development Goals (SDGs)

We use the 17 UN Sustainable Development Goals to **understand our positive and negative business impacts**, and to identify **areas for business opportunities.**



Consider ESG criteria

For better decision making

Unlock the SDGs

To create positive business impact

Sustainability:
Creating long-term value

Sustainability analytics

Transition risk



GHG intensity benchmarking for commercial portfolios

Evaluate and compare the GHG intensity of commercial portfolios

Assess the transition risk

Analyse the impact of net-zero transition actions on to insurance demand

GHG intensity benchmarking for motor portfolios

Evaluate and compare the GHG intensity of motor portfolios

ESG & SDG



ESG assessment

Assess commercial portfolio and single risk according to ESG dimensions

ESG dimension deep-dive

Detailed assessment of ESG criteria most relevant for your organisation

Sustainable Development Goal calculator

Benchmark your business according to SDG standards

Biodiversity & Ecosystem Score

Assess the link between environment and commercial activities

Physical risk



Climate Risk Score

Exposure benchmarking of property portfolios to different aspects of climate change

Climate Change Scenario Analysis

Evaluate the impact of different scenarios on portfolios

Climate Risk Score

Insights into the potential impact of climate change on physical damage

The challenge

- Stakeholders (investors, clients, regulator) require view on the impact of climate change on physical damage losses in portfolios
- Developing the quantitative and qualitative foundation for such assessments takes time and requires know-how on climate data.
- There are also several factors that - in addition to climate change - will lead to a change in the risk landscape and hence need to be taken into account

Our solution

- Swiss Re's Climate Risk Score (CRS) with three components (wet, dry, sea-level) reflecting impact of climate change on different hazards
- Simple comparison of client's portfolio or a subsample to relevant benchmarks
- Linking CRS with Nat-Cat models to project expected loss impact
- Combining with socio-economic trends e.g. urbanization to reflect shift in exposure

Powering your next



Identifying of hotspots impacting the portfolio unfavorably



Insights when the portfolio starts to be strongly impacted



Project the impact on the expected loss over time

Climate Risk Scores: Separate sub-scores reflecting the impact of climate change on different hazards

Scores		
		
Extreme precipitation	Cold wave	Heat wave
		
Climate seasonal wetting	Severe wind	Drought
		
Flood	Sea level rise	Fire weather stress

+ underlying climate data like

- Extreme precipitation change
- Temperature change / Days with extreme temperature levels
- Duration of drought periods
- ...

- Three scenarios regarding climate change based on latest data representing different **CO₂ concentration pathways (SSPs)**:
- **SSP5-8.5**: plausible and accurate representation of the concentrations of CO₂ that would be reached on the business-as-usual path.
- **SSP2-4.5**: Intermediate pathway though the stabilization of CO₂ emissions (650 ppm CO₂) by 2100
- **SSP1-2.6**: Stringent pathway due to strict policies leading to carbon dioxide (CO₂) emissions decline to zero by 2100 and a below-2°C warming
- **Score runs from 0 to 10 with 10** meaning the most extreme increase in risk between 1995 and 2085 on a global scale (0-3 low to relatively important, 3-6 relatively important to major, 6-10 major to critical)

Climate Risk Scores: underlying variables

Scores					
 <p>Extreme precipitation</p>	<p>Change in extreme precipitation (90th percentil)</p>	 <p>Cold wave</p>	<p>Change in number of freezing days</p>	 <p>Heat wave</p>	<p>Heat wave frequency Heat wave duration</p>
 <p>Climate seasonal wetting</p>	<p>Mean precipitation change over boreal winter (Dec_Fev) and summer (June-Aug)</p>	 <p>Severe wind</p>	<p>Change in extreme wind</p>	 <p>Drought</p>	<p>Heat wave duration during abnormally dry seasons</p>
 <p>Flood</p>	<p>Mean precipitation change Exceedance probability of extreme precipitation SR's pluvial and fluvial flood zones</p>	 <p>Sea level rise</p>	<p>Sea Level Rise (storm surge and coastal flooding) coupled with SR's storm surge zones</p>	 <p>Fire weather stress</p>	<p>Dry score (exceedance probability of extreme temperature, atmospheric water capacity, number of dry days) coupled with SR's wildfire zones</p>

Climate Risk Scores analysis : Overall sample exposure - RCP 8.5 2050

Based on the analysis conducted for *RCP Scenario 8.5 for a 2050 time horizon*, client will be impacted differently by the three types of climate risks :

- **Dry scores are relatively homogeneous** across the different regions (difference of 16% between the highest and lowest scores). The average dry scores do not go as high as some wet scores do, but they are **relevant across the whole sample**.
- **Wet scores differ much more from region to region** (the average wet score in the North-East being twice as high as in London). The North-East region even goes **above the 3-level threshold** (relatively important risk) with an average score of 3.39.
- **Sea Level Rise scores are relatively low compared to dry and wet scores**, and affect a restricted number of assets.

RCP 8.5 2050

Region	TIV	DRY	WET	SLR
East of England	20%	2.06	2.17	
South-East	16%	2.07	2.49	1.50
London	14%	2.11	1.68	1.67
East Midlands	9%	1.95	2.61	0.62
North-West	9%	1.92	1.89	1.50
West Midlands	8%	1.96	1.71	
Scotland	7%	1.77	2.86	
South-West	6%	2.00	1.94	
Yorkshire and The Humber	4%	1.94	2.09	0.08
North-East	3%	1.98	3.39	
Wales	3%	1.99	2.30	



Note: the color grid above depicts a **relative exposure distribution across all CRS**, green being the lowest score and red the highest.

Dry score intensity
RCP 8.5 2050



Wet score intensity
RCP 8.5 2050



SLR score intensity
RCP 8.5 2050



