

Annex A4

Table of Contents

Product Description: Climate Financial Impact Edition.....	2
1. General.....	2
2. API Services of Climate Financial Impact Edition.....	3

Product Description: Climate Financial Impact Edition

Web Version (log-on) and API

1. General

1.1 Munich Re’s Location Risk Intelligence Platform is a software as a service solution (**SaaS**) capable to visualize and process natural hazards and climate risk data as defined in the various **data editions**. The Location Risk Intelligence Platform is offered in three subscription plans with different functionalities as Business, Corporate and Enterprise. Client chooses one of the three subscription plans.

1.2 The **Climate Financial Impact Edition** of the Munich Re Location Risk Intelligence is a software as a service (**SaaS**) solution and, as such, delivers climate financial impact-related results (scores and analyses) for specific requested locations.

1.3 The **Climate Financial Impact Edition’s** results are estimates based on Munich Reinsurance Company’s own or licensed data. The estimates can be used by the Client as a decision-making aid. MR Service cannot therefore pledge or guarantee, either explicitly or implicitly, the completeness or accuracy of information that it has properly compiled.

1.4 The Climate Financial Impact Edition includes the full Climate Change Edition, which itself includes the full Natural Hazards Edition.

NATHAN Hazard Scores	Munich Re’s NATHAN Hazard Scores consist of in total twelve (12) major perils (Earthquake, Volcano, Tsunami, Tropical Cyclone, Extratropical Storm, Hail, Tornado, Lightning, Wildfire, River Flood, Flash Flood and Storm Surge) which are provided per single asset/location. In a portfolio view, the proportional risk distribution within the portfolio to the respective hazard score is displayed.
NATHAN Risk Scores	Munich Re’s NATHAN Risk Scores for Overall, Earthquake, Storm and Flood are provided for a single asset/location and portfolio basis and corresponding reports are available.
Hazard and Risk Score Display	Results can be displayed as “Zone” or “Traffic Light” score. Zones represent a peril-specific classification of the respective hazard and vary between four (4) and seven (7) Zones. Traffic Light represents a consolidated and harmonized view with five (5) scoring categories over all hazard perils combined supporting the comparability of different hazards next to each other.
Climate Hazard Scores	Munich Re’s Climate Hazard Scores for eight (8) perils, current plus four (4) different projection years (2030, 2040, 2050 and 2100) and four (4) different climate scenarios (SSP1-/ RCP 2.6, SSP2-/ RCP 4.5, SSP3-/ RCP 7.0, SSP5-/ RCP 8.5)

	Tropical Cyclone RCP	River Flood RCP	Sea Level Rise RCP	Fire Weather Stress Index SSP	Drought Stress Index SSP	Heat Stress Index SSP	Precipitation Stress Index SSP	Cold Stress Index SSP
Current	✓	✓	x	✓	✓	✓	✓	✓
SSP1-/ RCP 2.6, Year 2030	x	x	x	✓	x	✓	✓	✓
SSP1-/ RCP 2.6, Year 2040	x	x	x	✓	x	✓	✓	✓

SSP1-/ RCP 2.6, Year 2050	x	x	x	✓	x	✓	✓	✓
SSP1-/ RCP 2.6, Year 2100	x	x	✓	✓	x	✓	✓	✓
SSP2-/ RCP 4.5, Year 2030	✓	✓	x	✓	✓	✓	✓	✓
SSP2-/ RCP 4.5, Year 2040	x	x	x	✓	✓	✓	✓	✓
SSP2-/ RCP 4.5, Year 2050	✓	✓	x	✓	✓	✓	✓	✓
SSP2-/ RCP 4.5, Year 2100	✓	✓	✓	✓	✓	✓	✓	✓
SSP3-/ RCP 7.0, Year 2030	x	x	x	✓	x	✓	✓	✓
SSP3-/ RCP 7.0, Year 2040	x	x	x	✓	x	✓	✓	✓
SSP3-/ RCP 7.0, Year 2050	x	x	x	✓	x	✓	✓	✓
SSP3-/ RCP 7.0, Year 2100	x	x	x	✓	x	✓	✓	✓
SSP5-/ RCP 8.5, Year 2030	✓	✓	x	✓	✓	✓	✓	✓
SSP5-/ RCP 8.5, Year 2040	x	x	x	✓	✓	✓	✓	✓
SSP5-/ RCP 8.5, Year 2050	✓	✓	x	✓	✓	✓	✓	✓
SSP5-/ RCP 8.5, Year 2100	✓	✓	✓	✓	✓	✓	✓	✓

Table I – Availability of scenarios / timelines for each hazard

✓ = Available
x = Not Available

Climate Expected Loss	Tropical Cyclone, Expected LossRCP	River Flood, Expected LossRCP
Current	✓	✓
SSP2-/ RCP 4.5, Year 2030	✓	✓
SSP2-/ RCP 4.5, Year 2050	✓	✓
SSP2-/ RCP 4.5, Year 2100	✓	✓
SSP5-/ RCP 8.5, Year 2030	✓	✓
SSP5-/ RCP 8.5, Year 2050	✓	✓
SSP5-/ RCP 8.5, Year 2100	✓	✓

Table II – Availability of scenarios / timelines of climate expected loss

✓ = Available
x = Not Available

2. API Services of Climate Financial Impact Edition

2.1 General API Services

General	DistanceToCoast, PopulationDensity, NathanElevation
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2.2 Specific Climate Financial Impact Edition API Services

FinancialScores	ClimateExpectedLossTropicalCycloneCurrent, ClimateExpectedLossTropicalCycloneRCP45Y2030, ClimateExpectedLossTropicalCycloneRCP45Y2050,
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	<p>ClimateExpectedLossTropicalCycloneRCP45Y2100, ClimateExpectedLossTropicalCycloneRCP85Y2030, ClimateExpectedLossTropicalCycloneRCP85Y2050, ClimateExpectedLossTropicalCycloneRCP85Y2100, ClimateExpectedLossRiverFloodCurrent, ClimateExpectedLossRiverFloodRCP45Y2030, ClimateExpectedLossRiverFloodRCP45Y2050, ClimateExpectedLossRiverFloodRCP45Y2100, ClimateExpectedLossRiverFloodRCP85Y2030, ClimateExpectedLossRiverFloodRCP85Y2050, ClimateExpectedLossRiverFloodRCP85Y2100</p>
ClimateTimeline	<p>TropicalCycloneCurrent, TropicalCycloneRCP45Y2030, TropicalCycloneRCP45Y2050,, TropicalCycloneRCP45Y2100, TropicalCycloneRCP85Y2030, TropicalCycloneRCP85Y2050, TropicalCycloneRCP85Y2100RiverFloodCurrent, RiverFloodRCP45Y2030, RiverFloodRCP45Y2050, RiverFloodRCP45Y2100, RiverFloodRCP85Y2030RiverFloodRCP85Y2050, RiverFloodRCP85Y2100, SeaLevelRiseRCP26Y2100, SeaLevelRiseRCP45Y2100, SeaLevelRiseRCP85Y2100</p>
Climate Change	<p>Indices:</p> <p>FireWeatherStressIndexCurrent, FireWeatherStressIndexSSP126Y2030, FireWeatherStressIndexSSP126Y2040, FireWeatherStressIndexSSP126Y2050, FireWeatherStressIndexSSP126Y2100, FireWeatherStressIndexSSP245Y2030, FireWeatherStressIndexSSP245Y2040, FireWeatherStressIndexSSP245Y2050, FireWeatherStressIndexSSP245Y2100, FireWeatherStressIndexSSP370Y2030, FireWeatherStressIndexSSP370Y2040, FireWeatherStressIndexSSP370Y2050, FireWeatherStressIndexSSP370Y2100, FireWeatherStressIndexSSP585Y2030, FireWeatherStressIndexSSP585Y2040, FireWeatherStressIndexSSP585Y2050, FireWeatherStressIndexSSP585Y2100</p> <p>DroughtStressIndexCurrent, DroughtStressIndexSSP245Y2030, DroughtStressIndexSSP245Y2040, DroughtStressIndexSSP245Y2050, DroughtStressIndexSSP245Y2100, DroughtStressIndexSSP585Y2030, DroughtStressIndexSSP585Y2040, DroughtStressIndexSSP585Y2050, DroughtStressIndexSSP585Y2100</p> <p>HeatStressIndexCurrent, HeatStressIndexSSP126Y2030, HeatStressIndexSSP126Y2040, HeatStressIndexSSP126Y2050, HeatStressIndexSSP126Y2100, HeatStressIndexSSP245Y2030, HeatStressIndexSSP245Y2040, HeatStressIndexSSP245Y2050, HeatStressIndexSSP245Y2100, HeatStressIndexSSP370Y2030, HeatStressIndexSSP370Y2040, HeatStressIndexSSP370Y2050, HeatStressIndexSSP370Y2100, HeatStressIndexSSP585Y2030, HeatStressIndexSSP585Y2040, HeatStressIndexSSP585Y2050, HeatStressIndexSSP585Y2100</p> <p>PrecipitationStressIndexCurrent, PrecipitationStressIndexSSP126Y2030, PrecipitationStressIndexSSP126Y2040, PrecipitationStressIndexSSP126Y2050, PrecipitationStressIndexSSP126Y2100, PrecipitationStressIndexSSP245Y2030, PrecipitationStressIndexSSP245Y2040, PrecipitationStressIndexSSP245Y2050, PrecipitationStressIndexSSP245Y2100, PrecipitationStressIndexSSP370Y2030, PrecipitationStressIndexSSP370Y2040, PrecipitationStressIndexSSP370Y2050, PrecipitationStressIndexSSP370Y2100, PrecipitationStressIndexSSP585Y2030, PrecipitationStressIndexSSP585Y2040, PrecipitationStressIndexSSP585Y2050, PrecipitationStressIndexSSP585Y2100</p>

	<p>ColdStressIndexCurrent, ColdStressIndexSSP126Y2030, ColdStressIndexSSP126Y2040, ColdStressIndexSSP126Y2050, ColdStressIndexSSP126Y2100, ColdStressIndexSSP245Y2030, ColdStressIndexSSP245Y2040, ColdStressIndexSSP245Y2050, ColdStressIndexSSP245Y2100, ColdStressIndexSSP370Y2030, ColdStressIndexSSP370Y2040, ColdStressIndexSSP370Y2050, ColdStressIndexSSP370Y2100, ColdStressIndexSSP585Y2030, ColdStressIndexSSP585Y2040, ColdStressIndexSSP585Y2050, ColdStressIndexSSP585Y2100</p>
Hazards	<p>NathanEarthquake, NathanVolcano, NathanTsunami, NathanTropicalCyclone, NathanExtratropicalStorm, NathanHail, NathanTornado, NathanLightning, NathanWildfire, NathanRiverFlood, NathanFlashFlood, NathanStormSurge, NathanActiveFaults, NathanSoilAndShaking</p>
Risk Scores	<p>NathanOverall, NathanEarthquake, NathanStorm, NathanFlood</p>

(Last updated: October 2023)