

My deliverable presentation

Risks & Opportunities





Agenda



D1 Functions

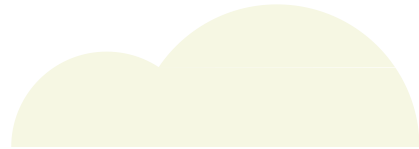
D2 Findings

AOB Suggestions /
Thoughts



D1

Functions

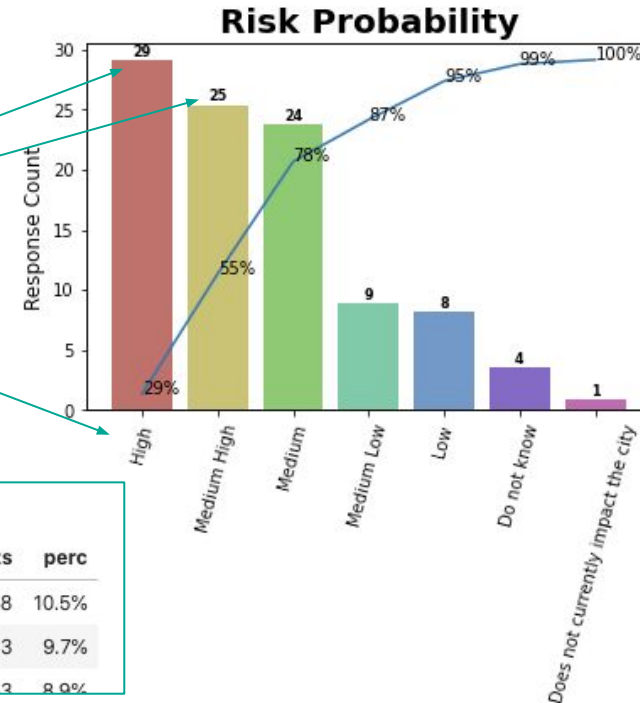


D1: Functions

- `plot_pareto(data, xlabel, ylabel, title, orient="v")` => create seaborn pareto plot

- helper functions:

- `add_patches(fig)`
- `label_rotation(fig, axis, rotation)`
- `get_distribution_df(data)`



Unique answers: 36
Total count: 6344

	counts	perc
Extreme Precipitation > Rain storm	668	10.5%
Water Scarcity > Drought	613	9.7%
Extreme hot temperature > Heat wave	663	10.4%

D1: Functions

`get_compare_columns(data, col1, col2)`

	account_number	row_number	row_name	question_number	question_name	column_number	column_name	response_answer	year	entity	
	228442	1093	5	NaN	2.1	Please list the most significant climate hazar...	1	Climate Hazards	Storm and wind	2019	Atlanta
	264492	1093	6	NaN	2.1	Please list the most significant climate hazar...	1	Climate Hazards	Extreme Precipitation	2019	Atlanta
	410540	1093	4	NaN	2.1	Please list the most significant climate hazar...	1	Climate Hazards	Extreme hot temperature	2019	Atlanta
	431848	1093	2	NaN	2.1	Please list the most significant climate hazar...	1	Climate Hazards	Extreme hot temperature	2019	Atlanta
	574570	1093	1	NaN	2.1	Please list the most significant climate hazar...	1	Climate Hazards	Water Scarcity	2019	Atlanta
	
	1040540	848476	2	NaN	2.1	Please list the most significant climate hazar...	5	Social impact of hazard overall	Population displacement	2020	Cañas
	1045658	848476	3	NaN	2.1	Please list the most significant climate hazar...	5	Social impact of hazard overall	Increased resource demand	2020	Cañas
	1105967	848476	3	NaN	2.1	Please list the most significant climate hazar...	5	Social impact of hazard overall	Population displacement	2020	Cañas
	1300289	848476	2	NaN	2.1	Please list the most significant climate hazar...	5	Social impact of hazard overall	Increased resource demand	2020	Cañas
	1502201	848476	3	NaN	2.1	Please list the most significant climate hazar...	5	Social impact of hazard overall	Increased risk to already vulnerable populations	2020	Cañas

D1: Functions

			results col 1	corresponding results col 2
	select_key	year	hazard_cat	social_impact
0	2019_10495_1	2019	Extreme hot temperature	Increased risk to already vulnerable populations
1	2019_10495_1	2019	Extreme hot temperature	Increased demand for healthcare services
2	2019_10495_2	2019	Water Scarcity	Loss of traditional jobs
3	2019_10495_2	2019	Water Scarcity	Increased risk to already vulnerable populations
4	2019_10495_2	2019	Water Scarcity	Increased demand for healthcare services
...
8659	2020_848476_2	2020	Water Scarcity	Increased resource demand
8660	2020_848476_3	2020	Flood and sea level rise	Increased demand for healthcare services
8661	2020_848476_3	2020	Flood and sea level rise	Increased resource demand
8662	2020_848476_3	2020	Flood and sea level rise	Population displacement
8663	2020_848476_3	2020	Flood and sea level rise	Increased risk to already vulnerable populations



D2

EDA Findings

Risk Perspective

Target Recap

With reference to our mission statement:

1. help cities and corporates to optimize and communicate their mitigation and climate protection strategies
2. show intersection between the interests of the public sector and private companies to strengthen collaborations and to encourage to start new ones.
3. identify and visualize best practices that strike the best possible balance climate protection and aspects of social justice
4. generate new features and explain the insights gained from them
5. create relevant KPI
6. interpretation of unstructured free text responses
7. usage of cluster algorithms to get additional insights



Risk Perspective

Exploration Content:

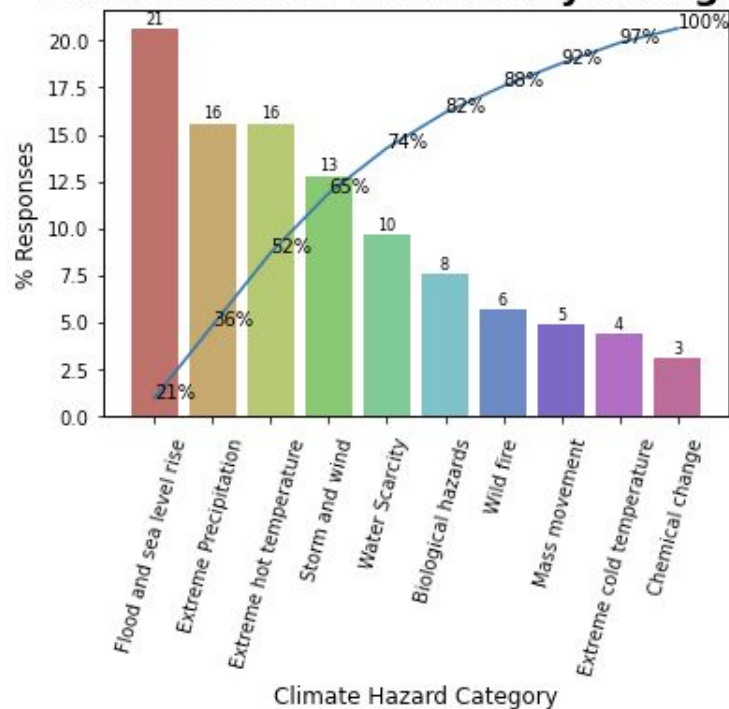
In this section, we will examine how cities and businesses assess their individual risks from ongoing climate change. We will focus in particular on differences and similarities between cities and businesses.

Motivation Purpose:

In order to encourage collaboration between cities and businesses, it is helpful to make clear to those involved their common motivation. In order to understand relevant drivers of activities, it is important to understand the risk assessment of stakeholders. From this, conclusions and theses on risks can finally be drawn, which are particularly important in the context of social justice.

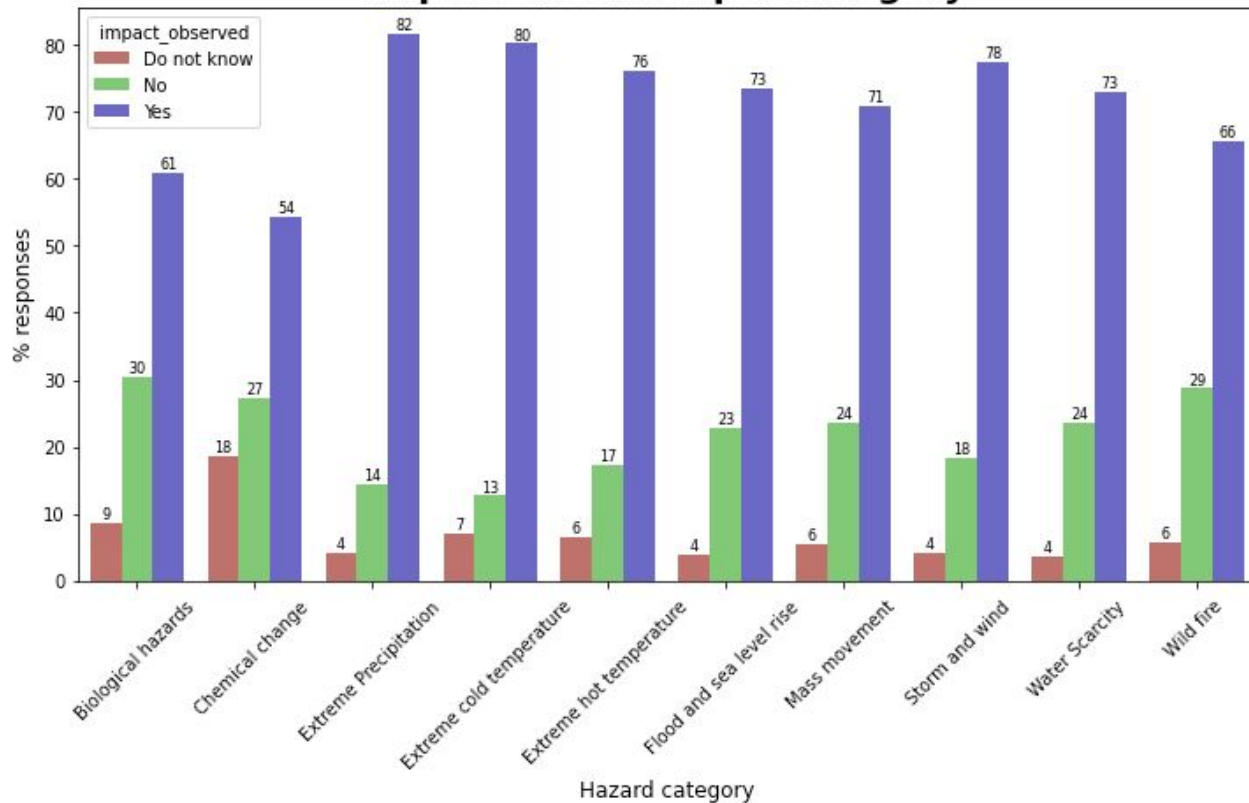


Cities Climate Hazards by Category



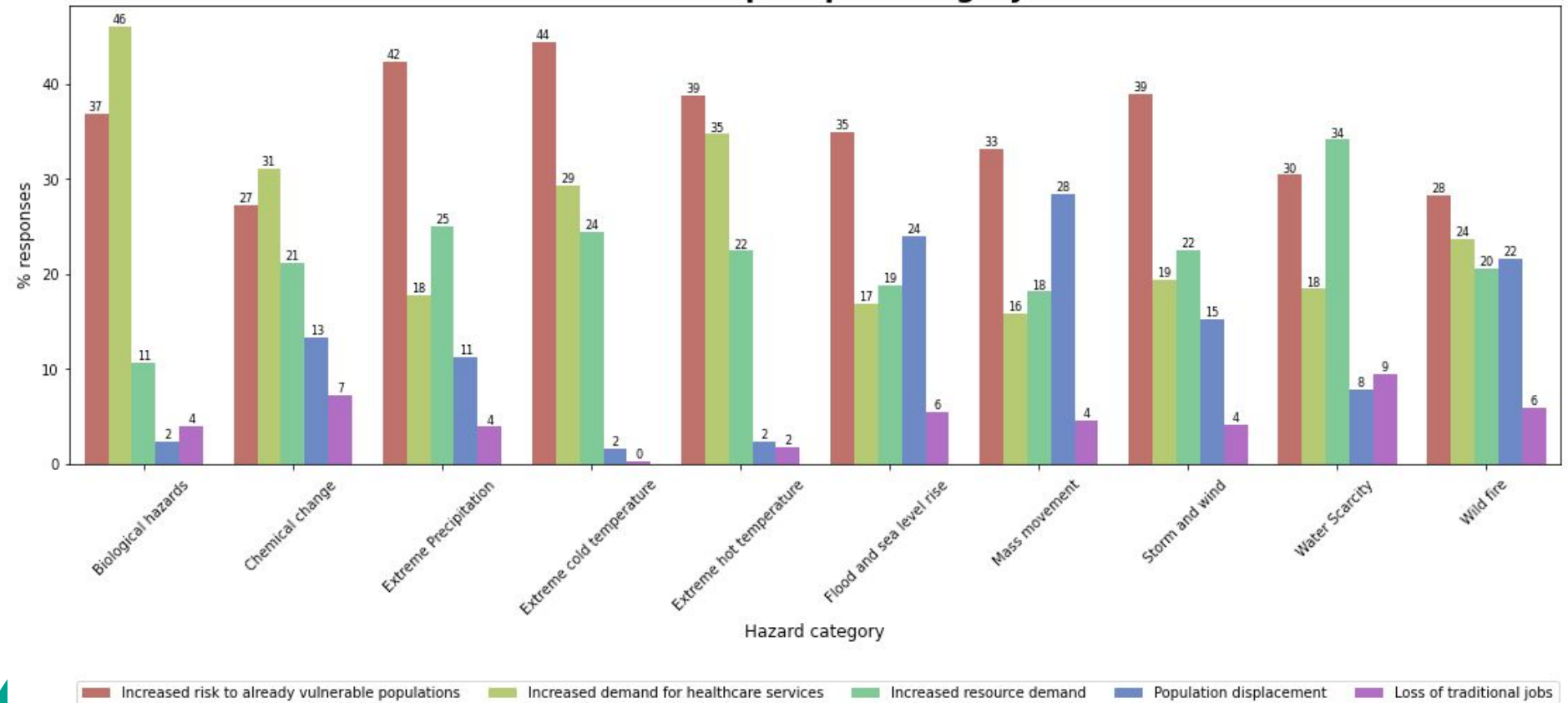
With only ten categories remaining, the results are getting much clearer. More than 20% of the cities are afraid of flood and sea level rise, extreme precipitation and hot temperatures are also mentioned above average. Of particular importance are the threats posed by extremely high temperatures, water scarcity and mass movement. It can be assumed that socially disadvantaged groups and poorer countries in particular are affected by these effects much more strongly and frequently than the world's strong industrialised nations.

Impact observed per category

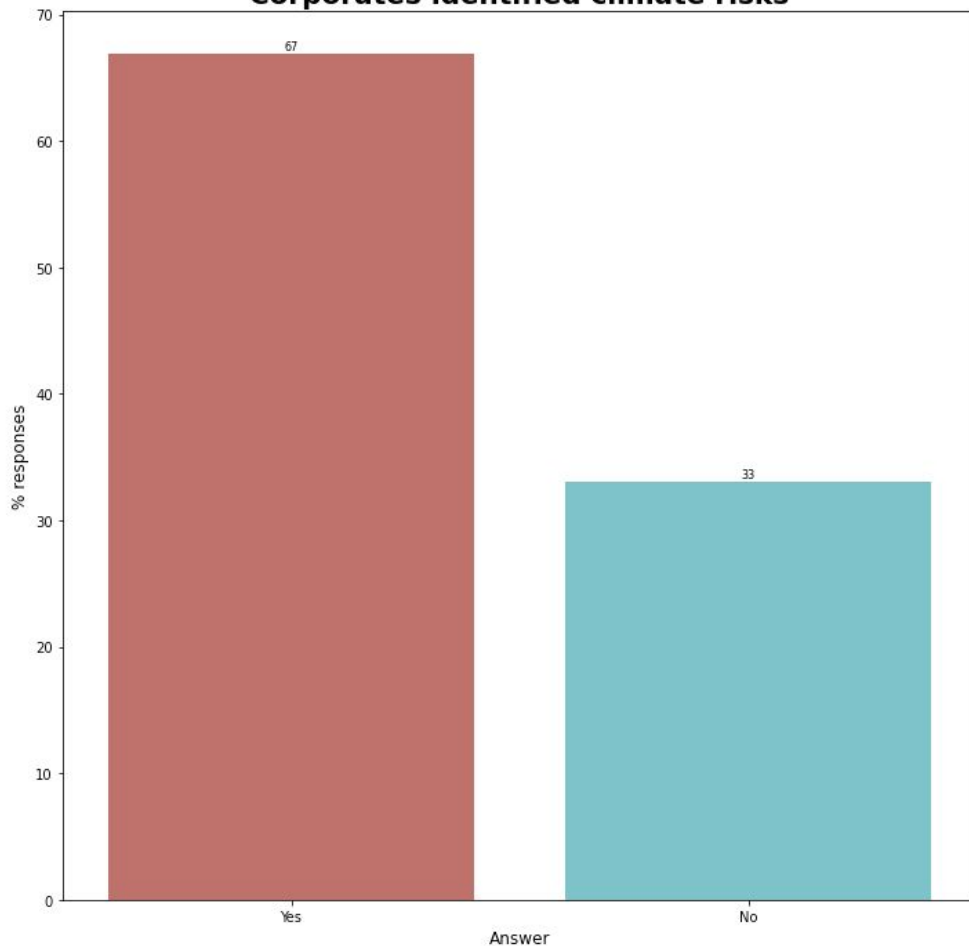


Extreme weather conditions (precipitation, cold, heat) already had a negative impact on the participating city in over 80% of their entries. In comparison, biological hazards, chemical changes and wildlife have occurred significantly less frequently. In comparison to the threats mentioned above, these may be treated with lower priority.

Social impact per category

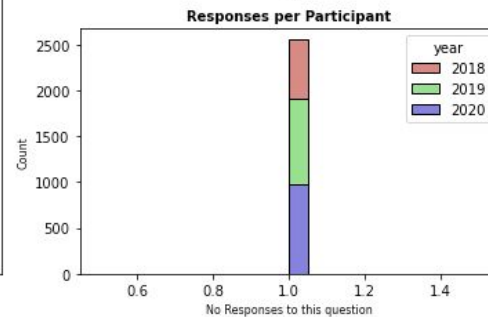
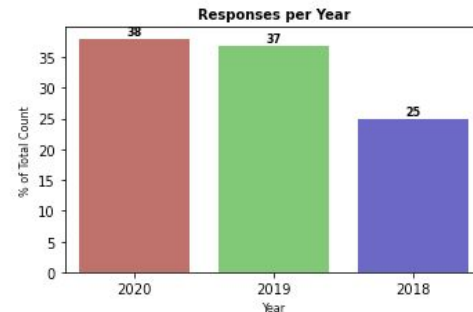
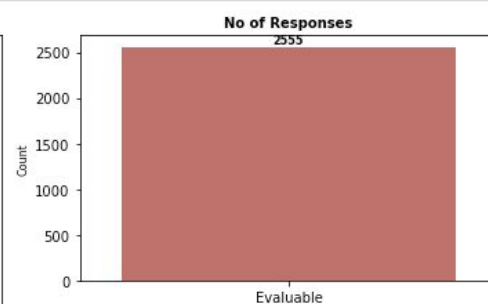


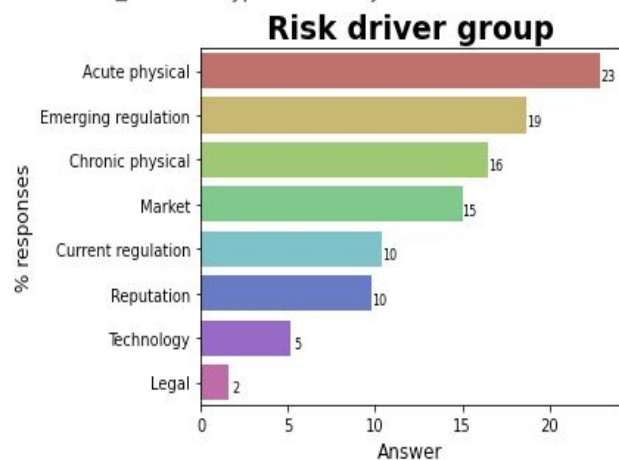
Corporates identified climate risks



Number responses: 2555

In more than 2,500 surveys (between 2018 and 2020), 67% of companies stated that they had identified climate-related risks with substantial financial or strategic influence. From this we can conclude that companies also feel threatened and are likely to show willingness to change and cooperate.





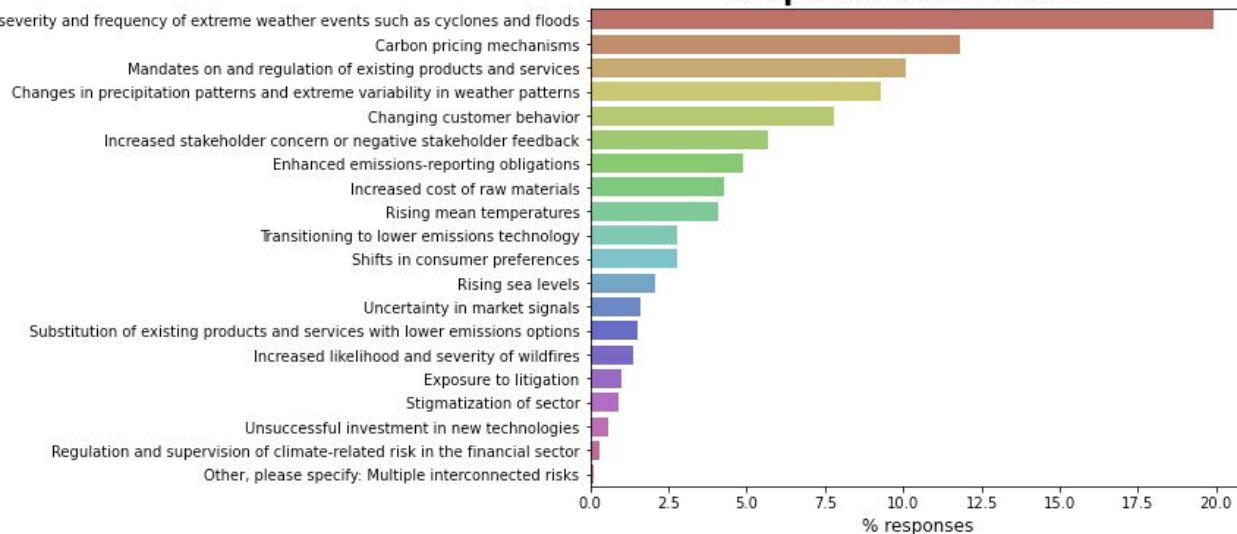
Number responses: 2166

Answers reflected by plot: 100.0%

Four pillars characterise the risk profile of companies: Physical damage, emerging regulation, market risks and technology. While cities and companies paint a similar picture in terms of concerns about physical damage and unfavourable technological development, companies' concerns about regulation and market changes partly conflict with the objectives of socially responsible climate protection.



Corporates risk drivers



Number responses: 2166

Answers reflected by plot: 92.99999999999999%

Focusing on the top 20 responses (reflecting 93% of all answers to this question) it shows up clearly that companies are most afraid of the effect of extreme weather events, just like the cities. They are also afraid of new climate-related regulatory mechanisms, including those relating to carbon emissions. While this view of the companies opposes collaborative behaviour, other aspects are likely to encourage it: As many companies fear climate-related changes in consumer behaviour, close cooperation with external stakeholders will become increasingly important for the success of companies in the future.

