Factors influencing European organizations' use of climate information services (CIS)

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Scan for more details

Research questions

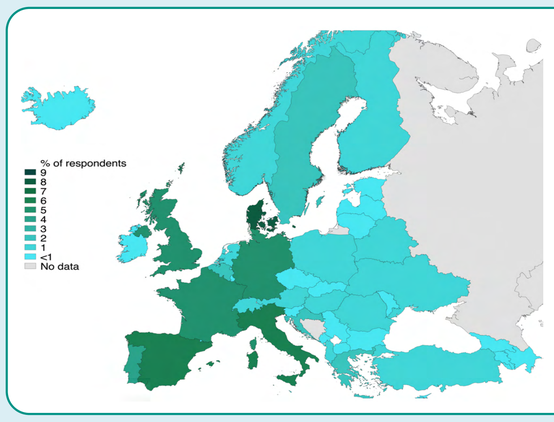
RQ1: What factors influence organizations' decisions around whether or not to use CIS?
RQ2: What are the differences in factors affecting the use of different types of CIS by organizations?
RQ3: How does the use of different types of CIS influence the evaluation of CIS?

Methods

RQ1: Binary logit model, Y=1 if use CIS
RQ2: Binay logit model, Y=1 if use the specific type of CIS
RQ3: Ordered logit model, Y=1 "Strongly disagree" to 5 "Strongly agree"

Samples

- 1864 respondents from climate-sensitive organisations in Europe
- recruited through the Qualtrics platform, Oct 2023 to Jan 2024



77% from the **private** sector

68% from **medium to large** organisations (more than 50 employees)

77% **actively use** weather and/or climate information in their roles

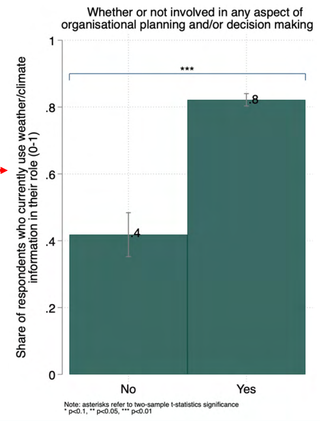
Factors influencing whether or not to use CIS

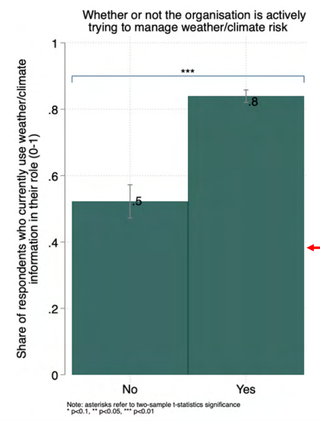
Individuals' characteristics

Owner, Director, Policy-maker
Have 16-20 years of experience
Involved in decision making

Organisations' characteristics

Located in South Europe
Local to National operation scale
Middle size (10-249 employees)
Followed climate adaptation policies, standards, TCFD





Risk concerns, experience and management

Concerned about economic risks
Concerned about environmental risks
Processes were impacted by climate events
Take months to years to feel the impact
Actively manage climate risks

Notes:
Variables that **INCREASE** the likelihood of using climate information services
Variables that **DECREASE** the likelihood of using climate information services

Factors influencing different types of CIS used

Sources

	NMHS	C3S	IPCC	Private companies/ consultancies	Organisations' own data
Observations	−				
Reanalysis	−	+	+		
Subseasonal forecast	−	+			−
Seasonal forecast	−		+		
Interannual/Decadal prediction	−		+		
Climate projection	−		+		−

− Compared with weather forecasts, the climate information in that row is **LESS likely** to be obtained from the source shown in the column.
+ Compared with weather forecasts, the climate information in that row is **MORE likely** to be obtained from the source shown in the column.
Blanks: The coefficient is not statistically significant.

Communications

	Raw data	Written text	Orally	Visually
Observations				−
Reanalysis	−	+		
Subseasonal forecast	−			−
Seasonal forecast	−			
Interannual/Decadal prediction	−			
Climate projection				

− Compared with weather forecasts, the climate information in that row is **LESS likely** to be communicated in the format shown in the column.
+ Compared with weather forecasts, the climate information in that row is **MORE likely** to be communicated in the format shown in the column.
Blanks: The coefficient is not statistically significant.

Objectives of usage

	Informs risk management	Informs management of day-to-day activities	Informs longer-term strategic planning	Analysed within organisations	Analysed by another organisation or consultant
Observations	−				+
Reanalysis	−	−			+
Subseasonal forecast	−		+	+	+
Seasonal forecast	−		+	+	+
Interannual/Decadal prediction	−	−		+	
Climate projection		−	+	+	

− Compared with weather forecasts, the climate information in that row is **LESS likely** to be used for the objective shown in the column.
+ Compared with weather forecasts, the climate information in that row is **MORE likely** to be used for the objective shown in the column.
Blanks: The coefficient is not statistically significant.

Types of CIS used influencing CIS quality evaluation

	Weather forecast	Observations	Reanalysis	Subseasonal forecast	Seasonal forecast	Interannual /Decadal prediction	Climate projection
Confidence	☺		☺	☺		☺	☺
Affordable	☺	☺		☺	☺		☺
Easy to access	☺	☺					
Timely	☺						
Understandable	☺			☺		☹	
Relevent to timescale of interest	☺	☺			☺		☺
Relevent to geographical scale of interest	☺	☺					
Trustworthy	☺						☺
Sufficient accuracy/ reliability	☺	☺		☺	☺		
Usable	☺	☺			☺	☺	☺
Useful for decision making	☺	☺		☺			☺
Tailored to meet the needs of our organisations	☺	☺			☺		

☺ The use of the climate information in that row **INCREASES** respondents' **agreement** with the criteria shown in the column.
☹ The use of the climate information in that row **DECREASES** respondents' **agreement** with the criteria shown in the column.
Blanks: The coefficient is not statistically significant.

Key findings

- Senior users and economic concerns can pose obstacles to CIS usage.
- Respondents show distinct preferences regarding the source, communication method, and objective of use for each type of CIS.
- Enhancing understandability is particularly important for interannual/decadal prediction.

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