

## Risk Perception & Behaviour Survey of Surveyors. Risk-SoS 2020 Preliminary results

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# **Risk Perception & Behaviour Survey of Surveyors Risk SoS 2020 Preliminary results**

One of the key challenges in risk, vulnerability and resilience is how to address the role of risk perceptions and how perceptions influence behaviour. A central question is why people still fail to act in an adaptive manner to reduce future losses, even when there are ever richer risk information provided by several communication channels (e.g. websites, social media, mobile applications, television, and print news). The current fragmentation of the field makes it an uphill battle to cross-validate the results of the current collection of independent case studies. This, in turn, hinders comparability and transferability across scales and contexts, and hampers giving recommendations for policy and risk management. While we obviously cannot all run the very same questionnaire or focus groups because we have different research interests, our ability to work together and build cumulative knowledge could be significantly improved by having: (1) a common list of minimal requirements to compare studies and surveys, (2) shared criteria to address context-specific aspects of countries and regions, (3) a selection of survey questions or themes allowing for comparability and long-term monitoring. Following the First European Conference on Risk Perception, Behaviour, Management and Response, the aim of the Risk Perception & Behaviour Survey of Surveyors (SoS) was to provide answers to move towards this direction.



The 2020 SoS consisted of 30 questions and was disseminated in a snowball fashion to reach all the community, with an initial focus on Europe, from December 2020 to April 2021. Over this period, 149 experts from more than 25 countries have answered the survey, one quarter outside of Europe, with experience in individual or community perceptions of risk, climate impacts or hazards adaptation behaviour, using surveys, interviews, experiments or focus groups. The results are treated anonymously as no personal data was collected. They are shared and discussed with the community during regular Risk-SoS webinars.

#### Theoretical models and frameworks used (only > 10 are shown)

No particular theory (n=52)	Heuristics, biases, prospect theory (n=39)	Cultural theory (n=30)	Other (n=25)	Network and social network theories (n=19)	Impact of Covid-19 on research
			Protective ac-	Inequalities,	■ Yes
Protection moti- vation theory (n=42)	Psychometric paradigm (n=31)	Grounded theory (n=28)	model (n=18)	capabilities (n=17)	55 80 ■ No
			Social amplifi- cation of risk (n=18)	Pressure and release (n=12)	Don't know

Variables used to explain risk perception						
Variable	n	Variable	n	Variable	n	
Age	123	Livelihoods, occupation	75	Insurance	40	
Gender	119	Social capital	67	Health	39	
Education	117	Coping capacity	63	Disability	34	
Previous hazard experience	106	Resilience	57	Minorities	34	
Exposure to hazards	92	Home-ownership	52	Language proficiency	19	
Income	80	Anxiety, concerns, fears	50	Other	14	
Family, household composition	79	Housing size, floor, location	46	Do not know	2	
Vulnerability	78	Housing quality, resistance, context	41			

Participants experiences n		
Have designed a survey	Yes	134
on risk perception or	No	13
adaptive behaviour	Do not know	2
Implemented the curvey	Yes	62
at multiple times	No	86
at multiple times	Do not know	1
Conducted a formal test	Yes	50
of the explanations or	No	84 6
validity of a theory	Do not know	15
Did formally compare	Yes	25
two or more theories in	No	116
the same study	Do not know	8
Use risk perception as a	Yes	97
variable to explain	No	32
behaviour	Do not know	20

The Risk-SoS preliminary results are for the very first time mapping the theories, methods, questions, variables used by the community as well as shedding light on the diversity of the risk perception and behaviour research community and the variety of context and case studies.

#### Elements captured with the risk perception questions



#### Methods used



#### Maximal sample size, number of interviews or respondends



	Timing constraint	76	
	Funding constraint	68	
	Statistical power testing		
How was	Previous experience	47	
size chosen	From the literature	40	
	Ad hoc or empirical sample	40	
	Comparison with other studies	31	
	Other	9	
	Do not know	3	_
	Face-to-face	97	
	Online survey	61	
	Focus groups, workshops	45	
Preferred method of	Phone, call, telco	25	
adminis-	Email	19	_
tering	Mail, mailbox	15	F
studies	Collective interviews	15	
before	Lab experiment	12	
Covid-19	Video or audio self-recording	7	
	Do not know	6	
	Other	4	
	From published review studies	88	-
	From published tables and results of specific studies	52	
Have	No specific comparison	36	
compared the results	From discussion with the authors of published studies	36	
studies on risk perception with the data from others	From published supplementary or additional data	15	
	From requesting the data, answers, questionnaires	15	
	Other	8	Fa
	Performing replication, repeata- bility, or reproducibility studies	6	
	Do not know	3	_
	Floods	91	(
	Climate, climate change impacts	77	
	Earthquakes, volcanos, landslides	39	
	Storm, cyclones, weather events	37	
	Drought, extreme temperatures	37	
	Epidemics, pandemics	24	
Types of	Multiple hazards	32	
hazards	Pollution, environmental disasters	23	
(only >5	Other	19	
are	Fires, wildfires	15	
showinj	Submersion, sea level rise	14	С
	Hazard agnostic, no specific haz.	12	
	Industrial accidents	12	
	Compounded, cascading events	9	
	Terror, military, attacks		
	Nuclear accidents	8	
	Traffic and transport accidents	6	_

**Most important explanatory variables** (> 6 are shown)

	As 1st	As 2nd	As 3rd
Previous hazard experience	32	18	10
Education	13	13	9
Age	18	9	<mark>4</mark>
Gender	11	15	5
Vulnerability	5	9	13
Coping capacity	5	6	13
Social capital	<mark>4</mark>	10	5
Exposure to hazards	5	7	6
Anxiety, concerns, fears	5	6	5
Income	2	6	5
Livelihoods, occupation	<mark>3</mark>	2	7
Other	<mark>4</mark>	3	5
Family, household, composition	2	<mark>4</mark>	<mark>4</mark>
Resilience	1	<mark>4</mark>	5

# **Explanatory variables for cross-study comparability** (> 6 are shown)

	As 1st	As 2nd	As 3rd
Do not know	53	55	54
Previous hazard experience	16	9	<mark>11</mark>
Education	<mark>11</mark>	<mark>8</mark>	9
Vulnerability	8	8	8
Coping capacity	2	6	16
Social capital	12	7	3
Exposure to hazards	3	7	10
Age	11	7	1
Gender	8	7	1
Livelihoods, occupation	6	6	3
Resilience	0	5	10
amily, household, composition	5	5	3
Anxiety, concerns, fears	1	<mark>4</mark>	5
Income	<mark>4</mark>	<mark>3</mark>	2
Insurance	<mark>4</mark>	2	2

#### **Questions/themes for cross-study comparability** (> 6 are shown)

	nd As 3rd
Do not know <mark>49 50</mark>	54
Awareness <mark>24 7</mark>	<mark>3</mark>
Information, knowledge 13 14	<mark>6</mark>
Response, coping 1 7	20
Previous experience 13 8	<mark>5</mark>
Adaptive behaviour (actual) <mark>7</mark> 5	<mark>13</mark>
Exposure (perceived) <mark>8</mark> 9	2
Trust <mark>7</mark> 5	<mark>4</mark>
Consequences, severity, impacts <mark>4 6</mark>	<mark>3</mark>
Solidarity, social support <mark>3</mark> 5	<mark>5</mark>
Exposure (actual) <mark>3</mark> 4	<mark>5</mark>
Responsability 2 5	2
Fear <mark>2 2</mark>	<mark>4</mark>
Frequency, probability 2 3	<mark>3</mark>
Worry <mark>B</mark> 2	2
 Efficacy (self) <mark>2 3</mark>	2

#### How were the interviews, questionnaires, focus groups designed?

From the	From discussion			
literature	with co-authors			
(n=115)	(n=96)			
From (own)	From other			
previous studies	studies to			
(n=84)	compare (n=78)			
On my own (n=70)	From discu- ssions with colleagues from my field (n=52)		From discu- ssions with people from different fields (n=41)	
From discussions with practicioners or decision-makers (n=56)	Fro ssi peop ren	om discu- ions with ole in diffe- t countries (n=33)	Fro ssi p my	om discu- ding to ions with eople in v country (n=21) Accor- ding to funders especi- fication (n=14)

The objective is to co-produce with the community and respondents the analysis, identifying the common items allowing for comparability and long-term monitoring, publishing a list of shared questions, specifications, variables to include in future studies, aiming for the production of a common baseline, studying variations from one







context to another, significantly improving our ability to work together, building cumulative policy-relevant actionable knowledge, robust evidence-based knowledge for action on risk perception, adaptive behaviour, resilience and adaptation. *This is an ongoing collective effort, we wish to thank all anonymous respondents.* 

#### How did you select the explanatory variables?





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