

Changes in flood preparedness due to a focusing event

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Objective

- This study investigates the flood preparedness of private households and businesses along the Elbe River in 2002, after a long period of relatively low flood discharges, and in 2006, just a few years after a severe flood event.
- In particular, this study was inspired by the focusing event framework, i.e. examining how the commercial and private sector responded to and learned from the major flood disaster in 2002 as a focusing event.



Focusing Event Framework

- The framework was developed to explain policy change over time.
- Kingdon (1995): A “focusing event” is an event such as a crisis or disaster, natural or man-made, that shifts attention away from the status quo. Crises, as focusing events, are powerful initiators of agenda change.
- The major characteristic of a focusing event, is that it provides a push in calling attention to a problem. While a problem may be hovering just under the radar of decision makers, without a push from a crisis or disaster, the problem may never rise on the decision agenda and warrant policy responses.
- However, the immediate needs of the community may overshadow any longer term attention to the problem
- One of the most important aspects of focusing events in regard to policy change is the role of policy learning, and the question of whether or not an individual or institution learns from one event to another

Learning theory

Argyris and Schön (1978, 1996) learning model

- **single loop learning** in which implementation errors are addressed within a given set of goals
- **double loop learning** in which the existing goals are scrutinised
- **deuteron learning** in which the learning process is revised



Research area and data

Computer aided telephone interviews

All cases selected which were affected during both floods

Flood 2002:

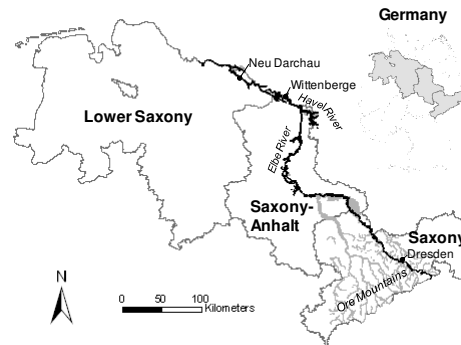
- 235 private households
- 103 businesses

Flood 2006:

- 112 private households
- 41 businesses

Topics:

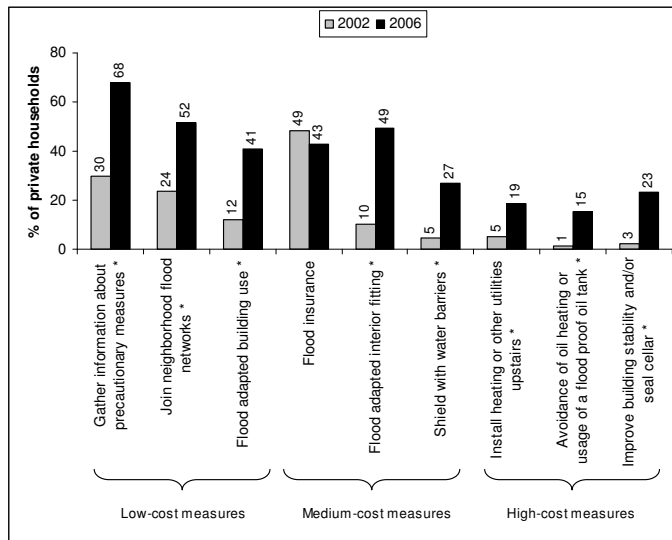
- flood damage and impact
- household/company characteristics
- precautionary measures
- early warning
- emergency measures
- etc.



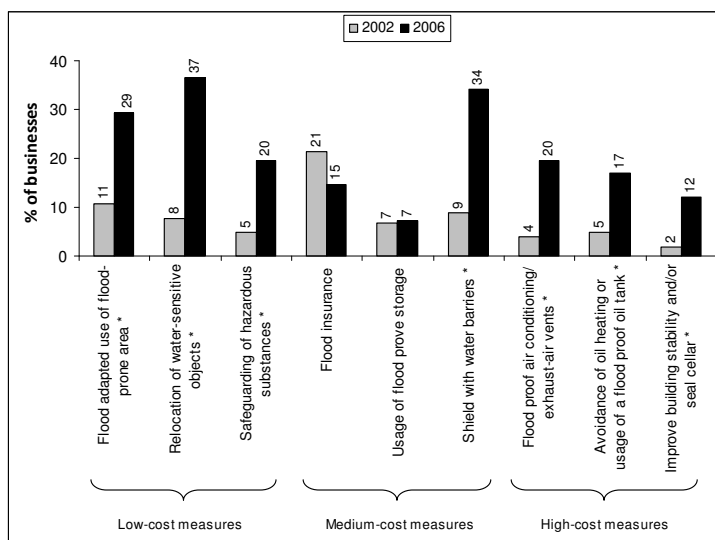
Flood risk awareness

	Private households		Businesses	
	2002	2006	2002	2006
Percentage of households/businesses with flood-experience [%]	6*	90*	18*	89*
Percentage of households with a previous flood loss of >1000 € [%]	0.4*	64*	n.r.	n.r.
Average time since last experienced flood [years]	23	4	45*	3*
Percentage of households/businesses without flood experience knowingly located in a flood prone area [%]	33*	64*	30	75
Percentage of households/businesses that perceive it is very likely to be flooded again [%]	14*	69*	28*	75*
Percentage of households convinced of the effectiveness of private precautionary measures [%]	38*	53*	n.r.	n.r.

Precautionary measures of households



Precautionary measures of businesses



Early warning and preparation

	Private households		Businesses	
	2002	2006	2002	2006
Percentage of households/businesses that received no warning [%]	12	13	24	12
Average lead time of households/businesses that received a warning [h]	43	47	45*	60*
Percentage of households that knew what to do , when they received the warning [%]	26*	73*	n.r.	n.r.
Percentage of businesses with an emergency plan in place [%]	n.r.	n.r.	9*	24*
Percentage of businesses that had undertaken emergency exercises before [%]	n.r.	n.r.	2	5

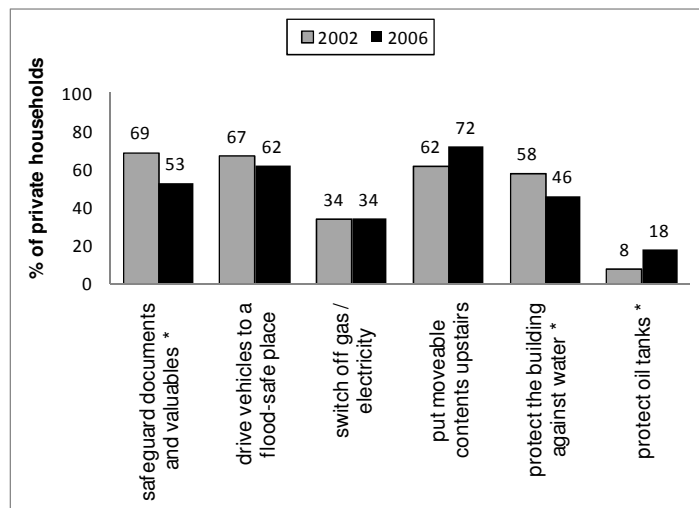
Effort for emergency measures

	Private households		Businesses	
	2002	2006	2002	2006
Percentage of households/businesses undertaking emergency measures [%]	90	95	79	93
Average number of people involved in emergency measures	5	6	18	13
Average time spent on emergency measures [h]	17*	34*	23*	34*
Average cost of emergency measures [1000 €]	n.r.	n.r.	5	9

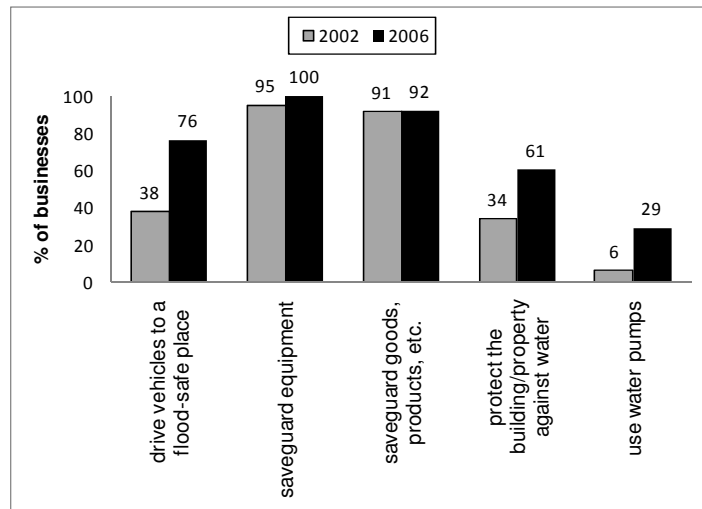
Effectiveness of emergency measures

	Private households		Businesses	
	2002	2006	2002	2006
Percentage of households that effectively saved their contents [%]	51*	92*	n.r.	n.r.
Percentage of households that effectively prevented water entering the building [%]	16*	59*	n.r.	n.r.
Percentage of businesses that effectively saved their equipment [%]	n.r.	n.r.	36*	76*
Percentage of businesses that effectively saved their goods/products/stock [%]	n.r.	n.r.	41*	77*

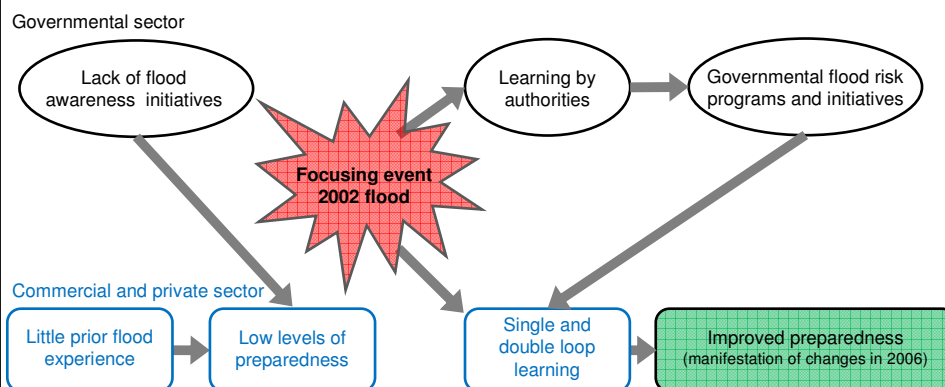
Emergency measures of households



Emergency measures of businesses



Changes due to the focussing event



Conclusions

- The focusing event perspective enables a differentiated analysis of the aspects of learning due to a disaster.
- Preparedness improved significantly after the focusing event.
- A high percentage of the private households adopted precautionary measures.
- However, 29% of the businesses still had not taken any precautionary measures to reduce damage before the flood in 2006.
- Particularly for businesses, regulatory programs and programs encouraging proactive behaviour should be implemented.

Thank you for your attention!



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