





## IPCC 5th Assessment Report:

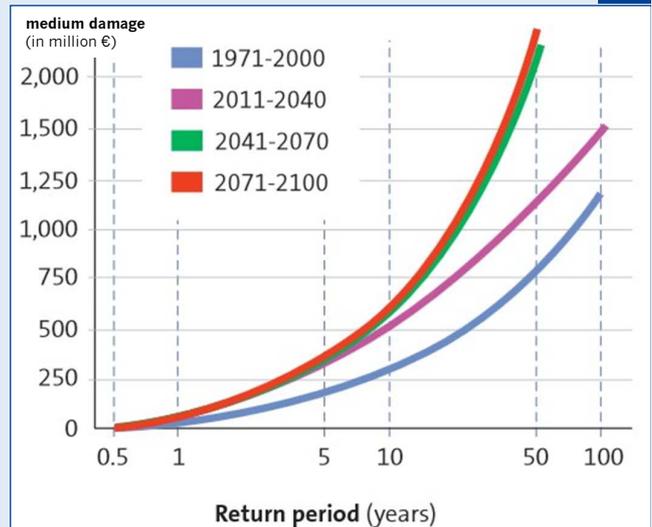
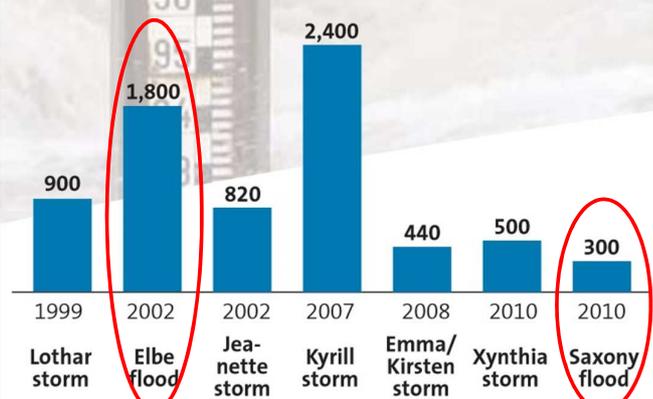
- global warming
- sea level rise
- increase in extreme weather events

Source: GDV 4

Source: GDV

### Major natural hazards in Germany

Insurance claims in million Euros



“Location in a designated flood plain area results in lower property values”

- flooding parameters
- market situation
- “flooding amnesia”
- insurance premiums
- protective measures

5

### **methods:**

- expert interviews, simple statistical methods, hedonic pricing, repeat sale

- more than 1.550 real estate valuation experts
- response rate: **32%** (502)

location in a designated flood plain area (no flood event)

location in a designated flood plain area and a flood event

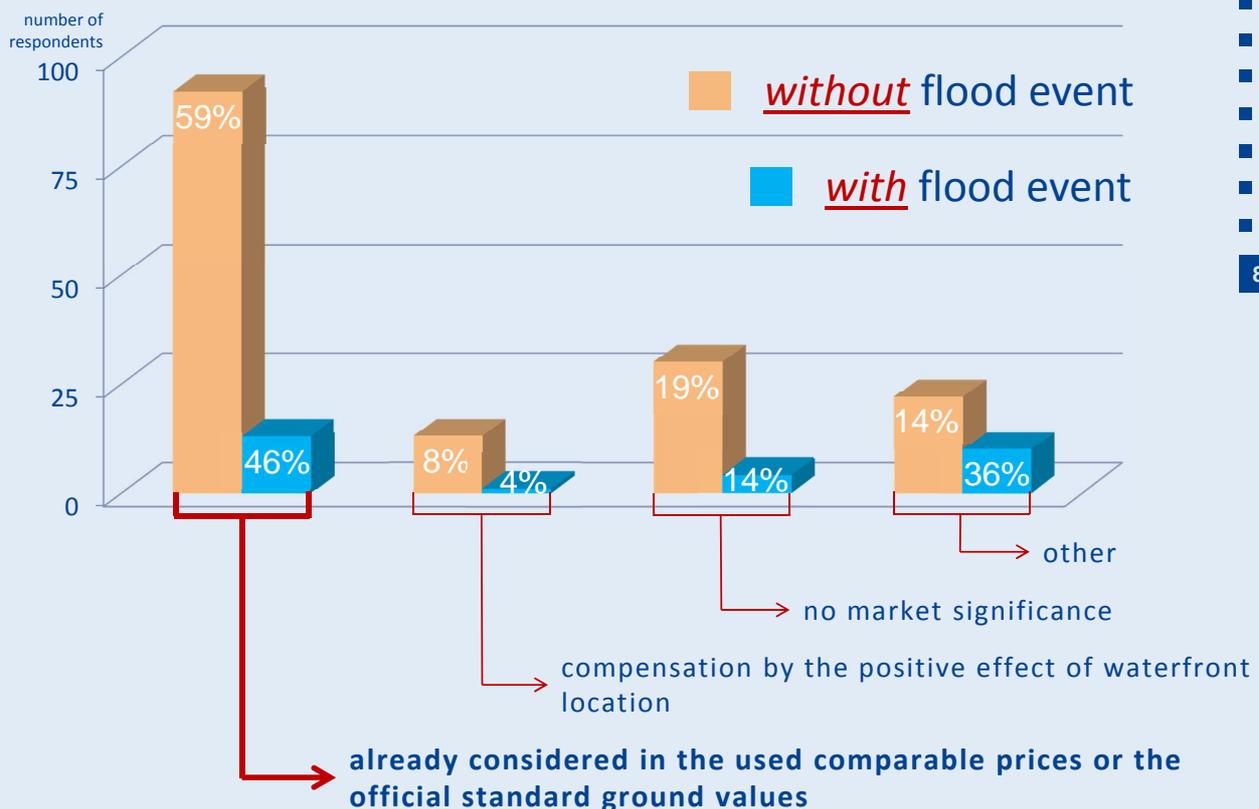
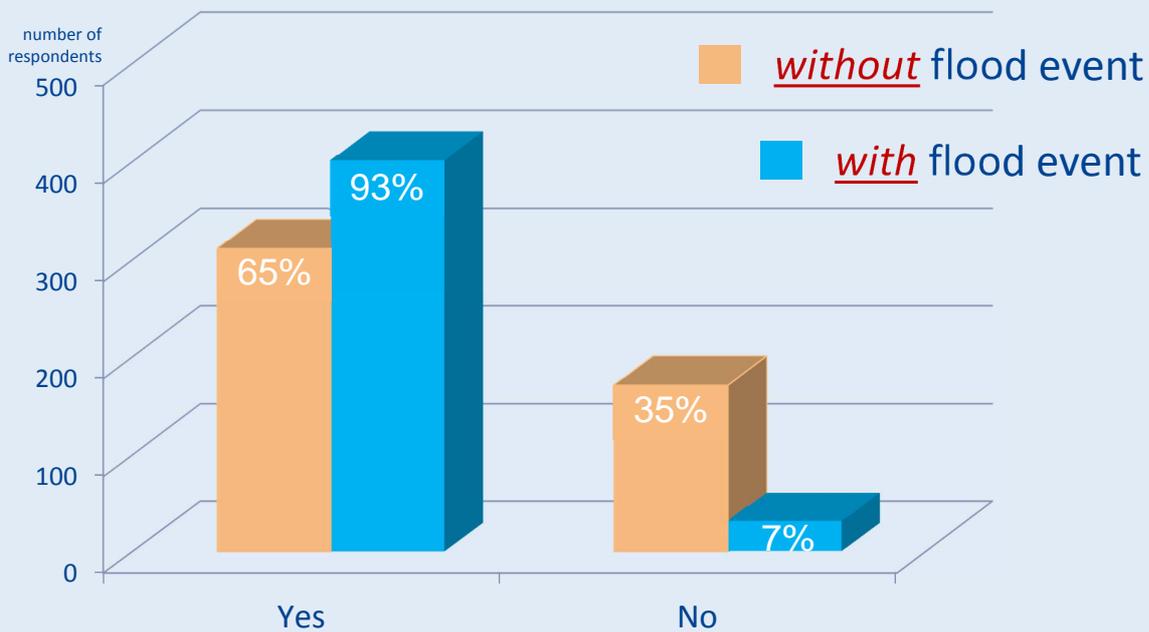
- Consideration within the valuation process?
- If yes, at what point?
- If no, why?

6

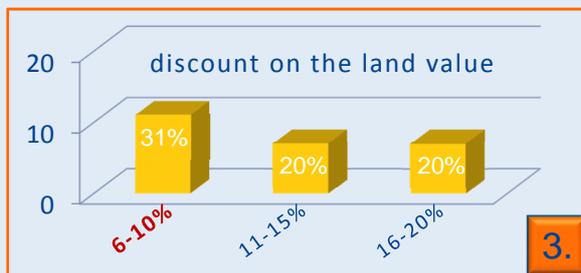
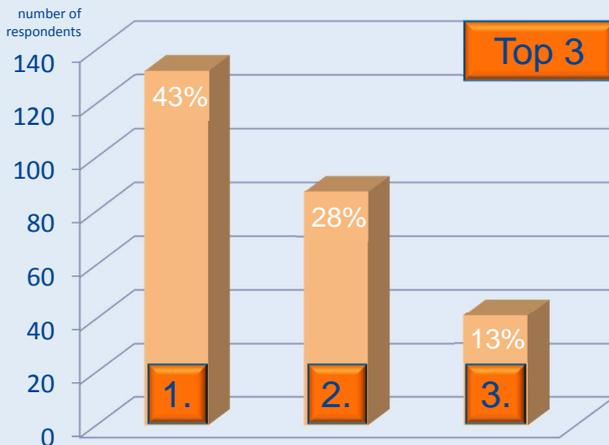
### specific questions:

- insurance premiums
- time period for recovery of property values after a flood event
- extension of marketing period

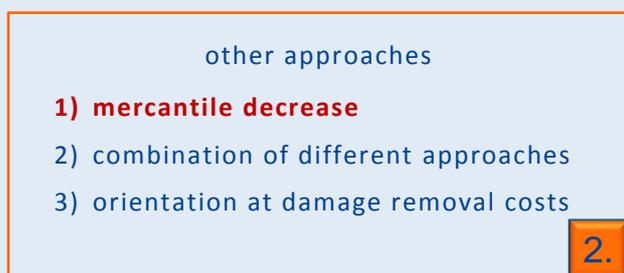
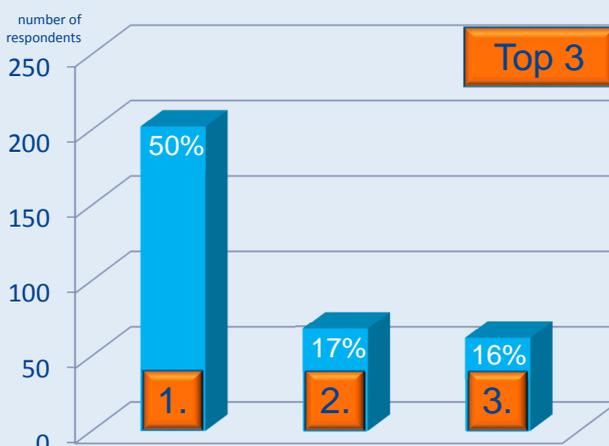
Would you consider this circumstance within the valuation process by decreasing the property value?



How would you consider this situation?



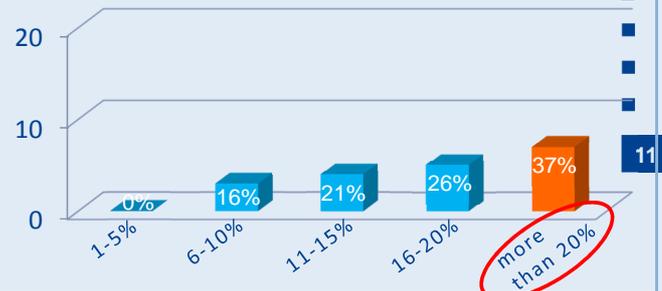
How would you consider this situation?



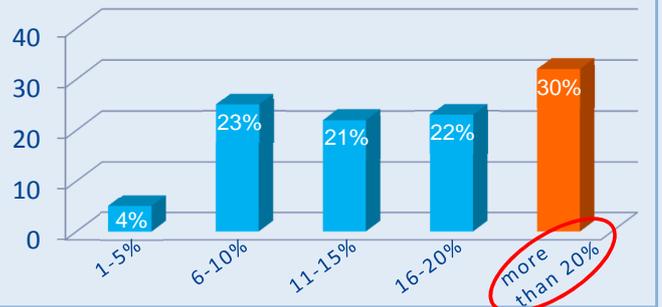
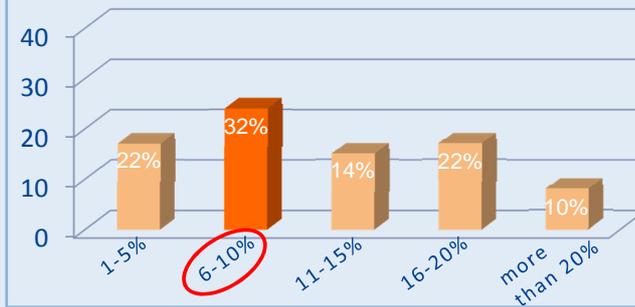
without flood event

with flood event

on the land value

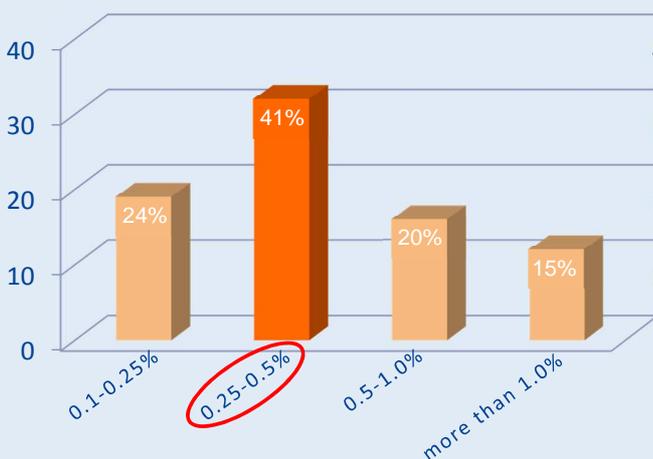


on the property value



without flood event

with flood event

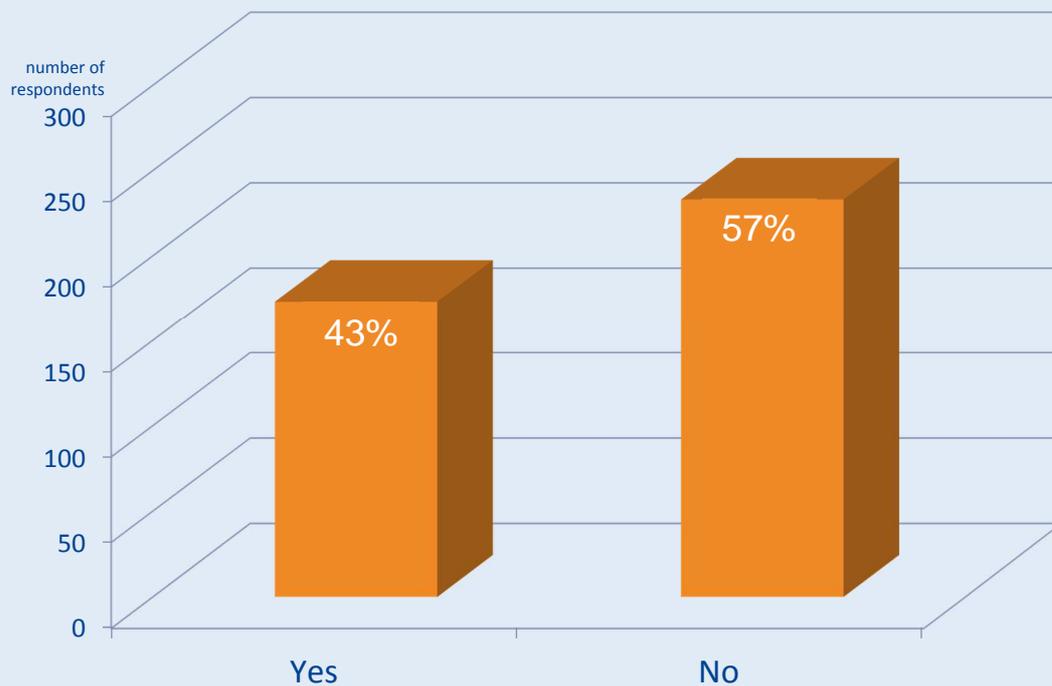


→ „a variation of 0.5% in the property yield results in a change of around 10% in the capitalized income value“

without flood event:  
discount between 5-10%

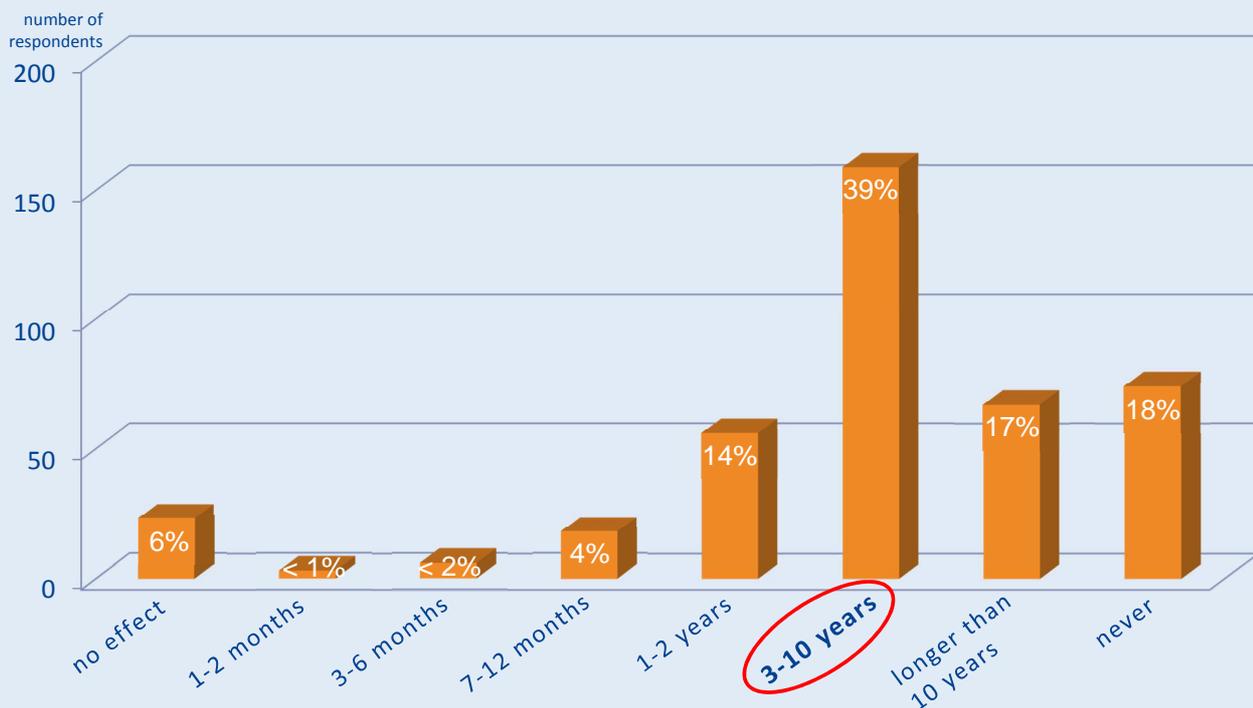
with flood event:  
discount between 10-20%

Do higher insurance premiums result in lower property values?



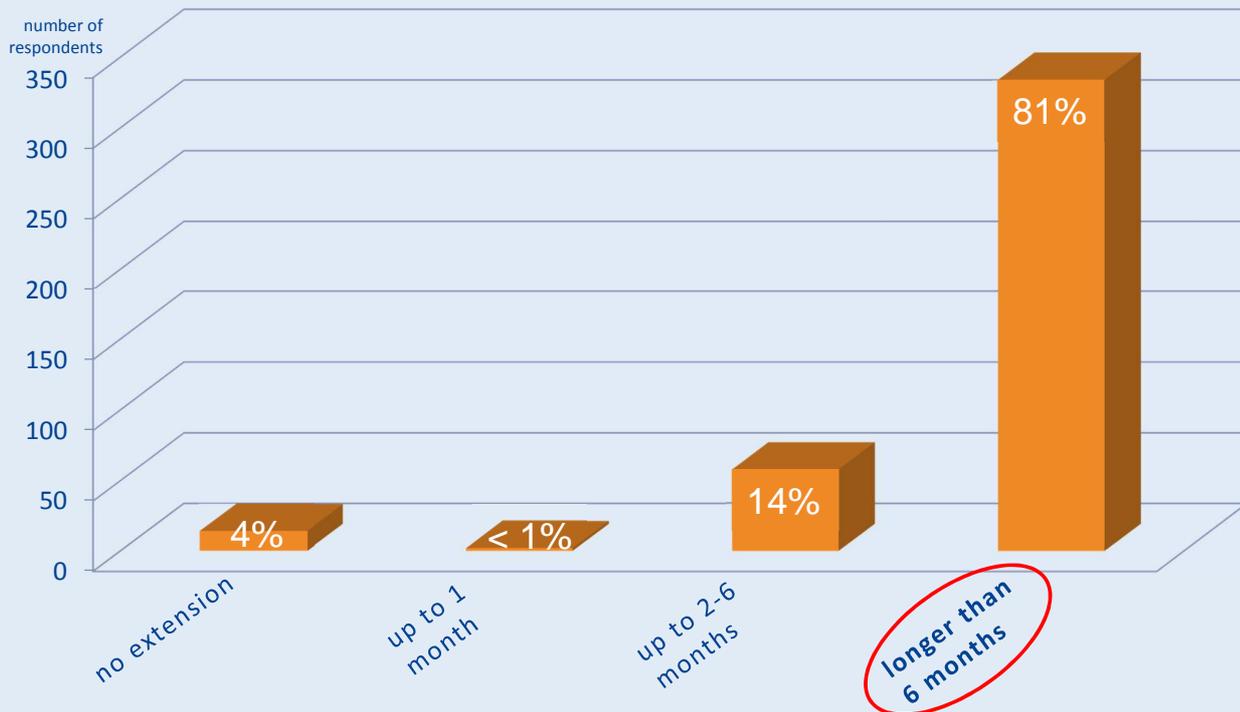
13

How long does it take until property values have recovered after a flood event?



14

How long can a flood event extend the marketing period of a property?



15

- flood risk has to be considered
- different options for a consideration
  - without flood event: **6-10%**
  - with flood event: **>20%**
- methods to determine the discount rate:
  - additional costs for flood protection measures
  - capitalization of the loss of income
  - damage removal costs
  - capitalization of additional insurance premium costs

16

➔ **consideration of the individual case**



**FLOODING AHEAD  
TURN AROUND  
DON'T DROWN**

## **Flood Risk and Property Values**

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