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Opportunities and barriers to the use of natural disaster insurance as non-technical means of protection against floods in Poland

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The genesis of the problem



Source: <http://www.raciborz.com.pl/>



Source: <http://www.avinwestor.com/projekty.html>

2% of Polish area under water

Material losses **12 mld zł**

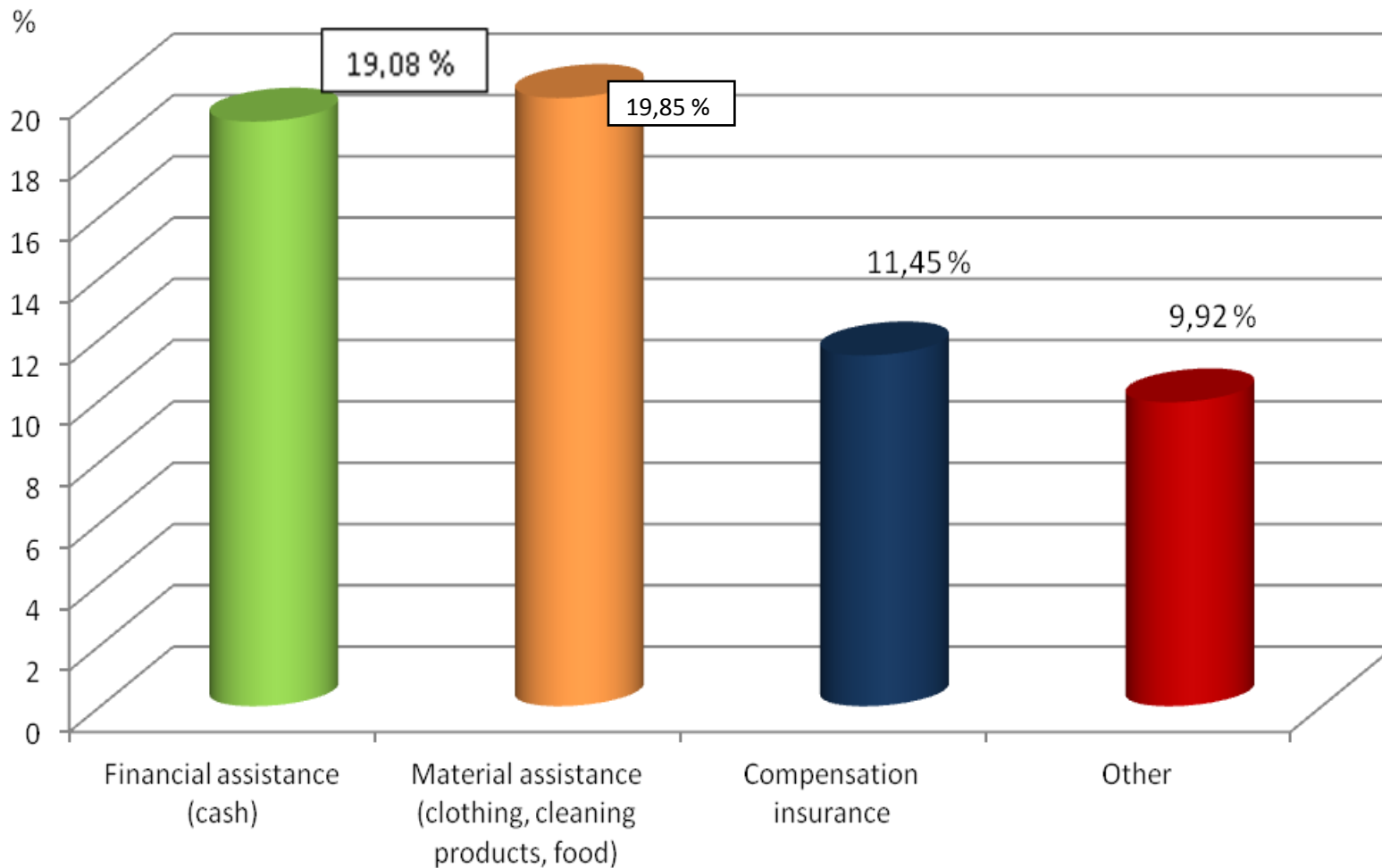
Private property – insured **25 %**

Property businesses – insured **50 %**

Year	Area	Material losses
May and June 2010	Regions: małopolskie, podkarpackie, dolnośląskie, śląskie	PLN 12 billion
August 2010	Bogatynia	PLN 225 million

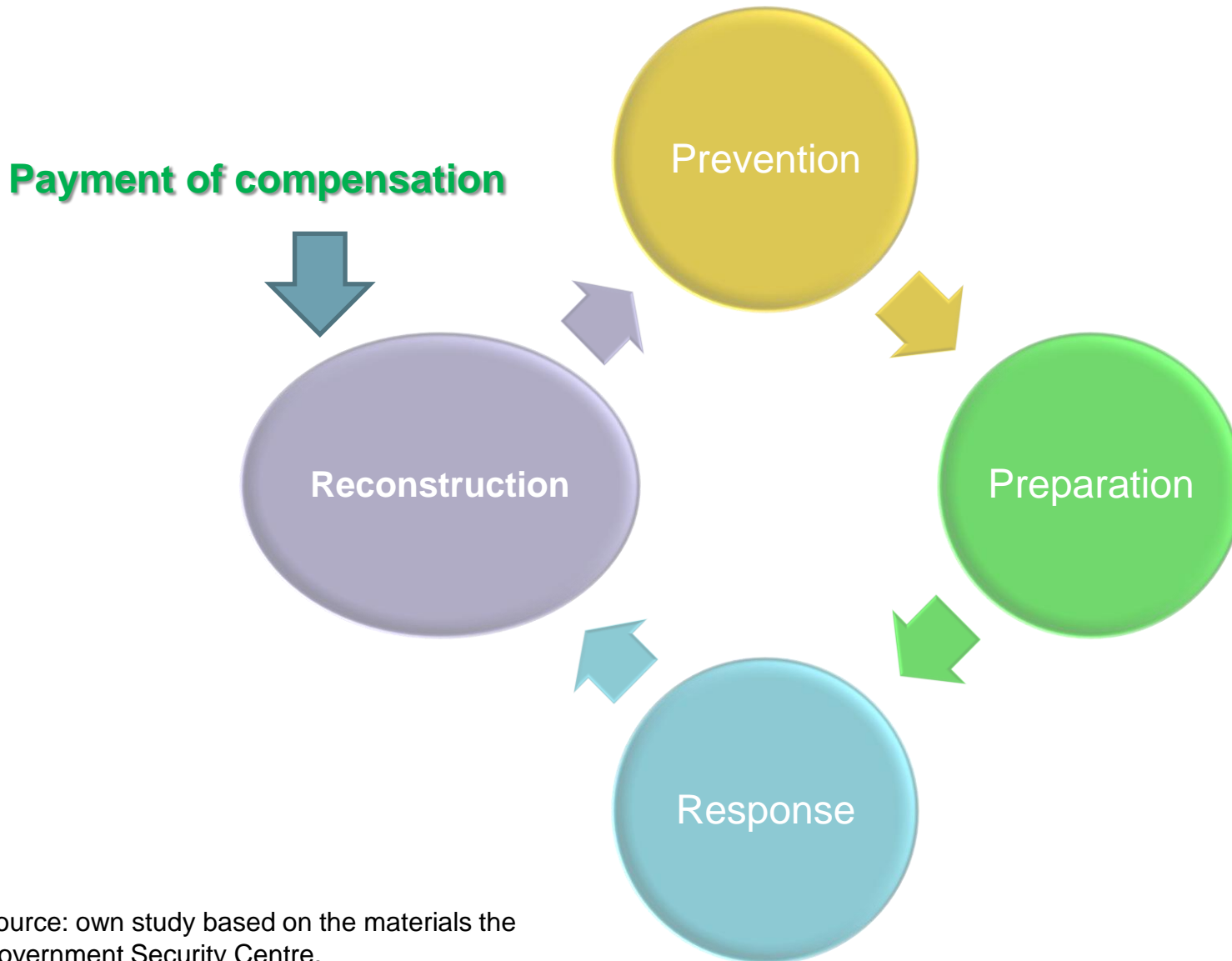
Source: own work based on: S. Bednarczyk i inni, Vademecum ochrony przeciwpowodziowej, oraz Komisja Nadzoru Finansowego, Informacja w sprawie szkód http://www.knf.gov.pl/Images/Szkody_powodziowe_31-12-11_tcm75-26039.pdf (reading 19.10.2011).

Forms of aid for flood victims



Source: A. Kułakowska-Bicz, *System finansowania strat ludności po zdarzeniach katastroficznych w świetle badań empirycznych*, Zeszyty Naukowe SGSP, Rocznik 2011, tom nr 41

Disaster management cycle



Compulsory insurance in Poland

Third party liability insurance of motor vehicle owners for damages arising out of the use of these vehicles

Third party liability insurance of farmers to ownership of the farm

Insurance of buildings included in the farm against fire and other accidents.

How many households are insured against floods?

What are the factors explaining different level of insurability?

In this context, the authors pay particular attention to the **opportunities and barriers** to the availability of non-technical means of protection for people living in flood risk areas, focusing especially on the problem of low levels of insurance purchase.



The study was conducted as part of a project funded by the National Center for Science awarded on the basis of the number of decisions DEC-2012/05/D/HS4/01328.

Title grant: "Socio-economic determinants of social sensitivity to the flood, with a particular focus on the role of communication in shaping"



Source: <https://www.siepomaga.pl/powodzianie>

- ❑ Survey: face-to-face interviews with 808 households in areas affected by floods during last 20 years
- ❑ Our research focused on flood vulnerability and resilience of households



Questions:

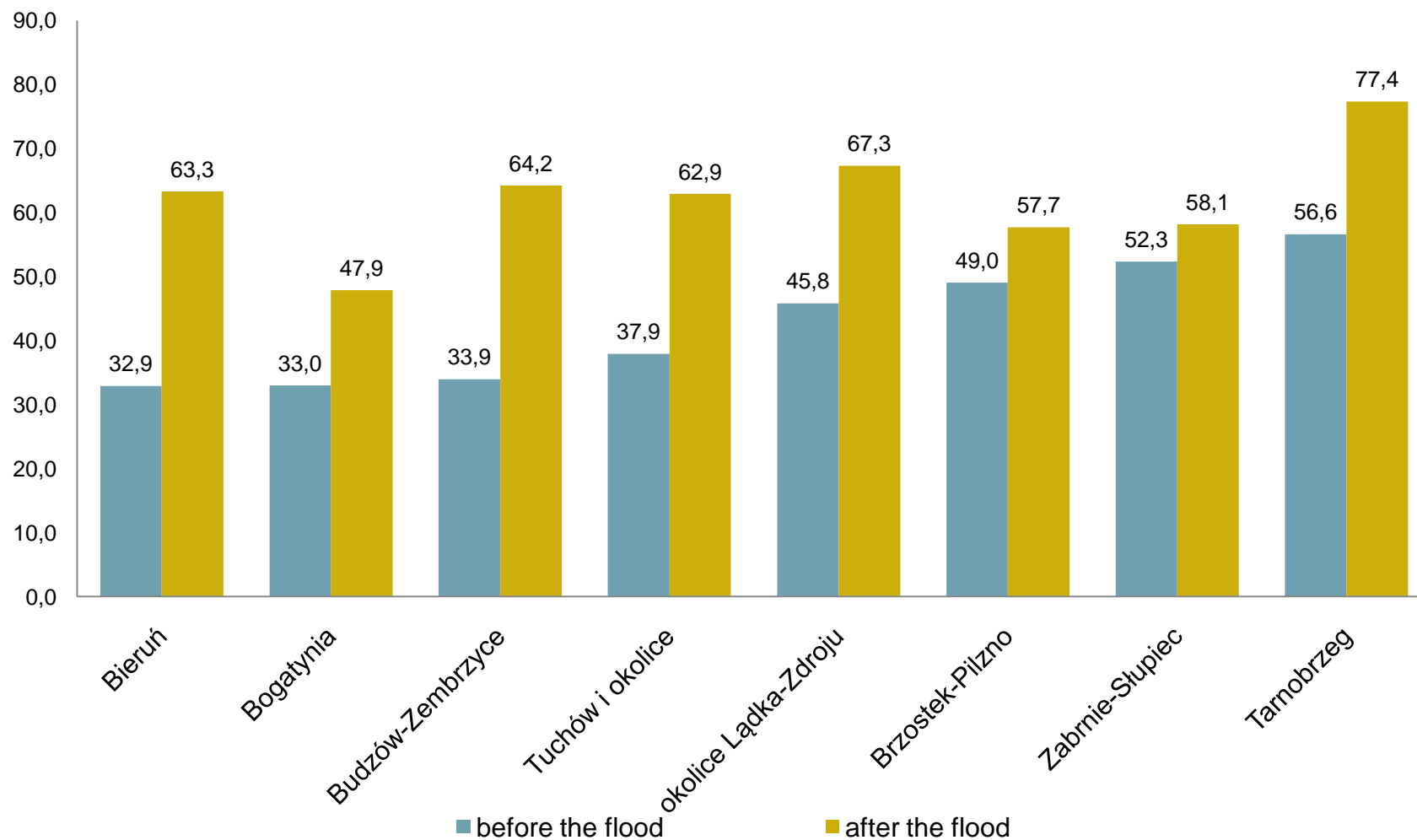
1. Has yours household been affected by flood during past several years?
2. Were you insured at the time when you were flooded? Are you insured now?
3. Is there something that can be done to decrease flood losses?
4. Do you think that over the next several years your town/village and its surroundings could be flooded?
5. What is the main source of your household income?
6. Are you an owner of this flat/house?



Research areas

Area of study	Catchment	Type of floods	Province	Historical region	Type locality
Bieruń	Gostyńka - Wisła	flash flood	śląskie	Górny Śląsk	medium-sized town
Bogatynia	Miedzianka	flash flood	dolnośląskie	Dolny Śląsk	medium-sized town
Brzostek-Pilzno	Wisłoka	flash flood	podkarpackie	Galicja	village
Budzów-Zembrzyce	Paleczka	flash flood	małopolskie	Galicja	village
okolice Łądko-Zdroju	Biała Łądecka	flash flood	dolnośląskie	Dolny Śląsk	village/small town
Tarnobrzeg	Wisła	slow-rising flood	podkarpackie	Galicja	medium-sized town
Tuchów i okolice	Biała	flash flood	małopolskie	Galicja	small town
Zabrze-Słupiec	Breń - Wisła	slow-rising flood	podkarpackie	Galicja	village

Share of insured households by research areas

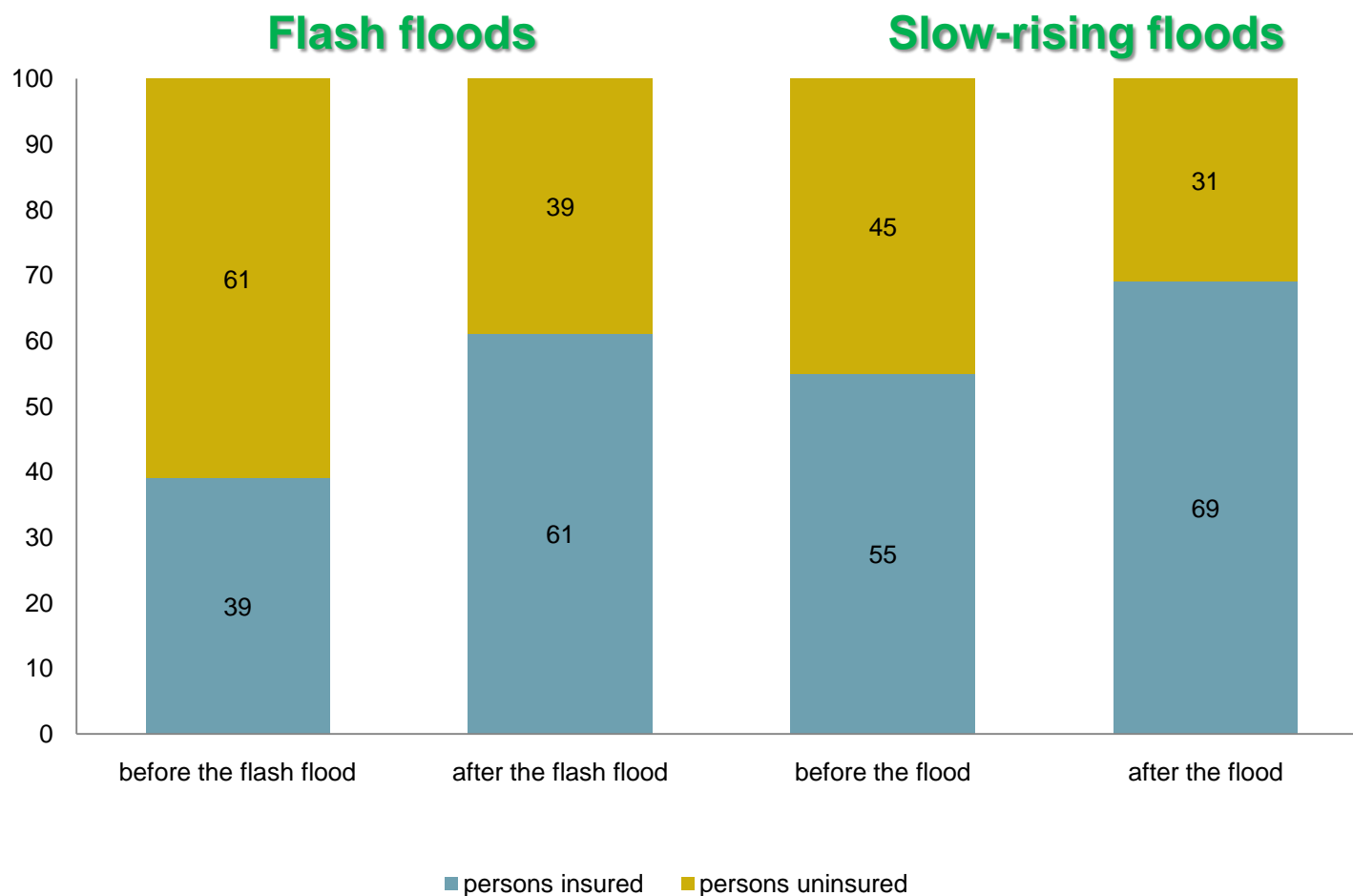


Increase of insured households after the flood

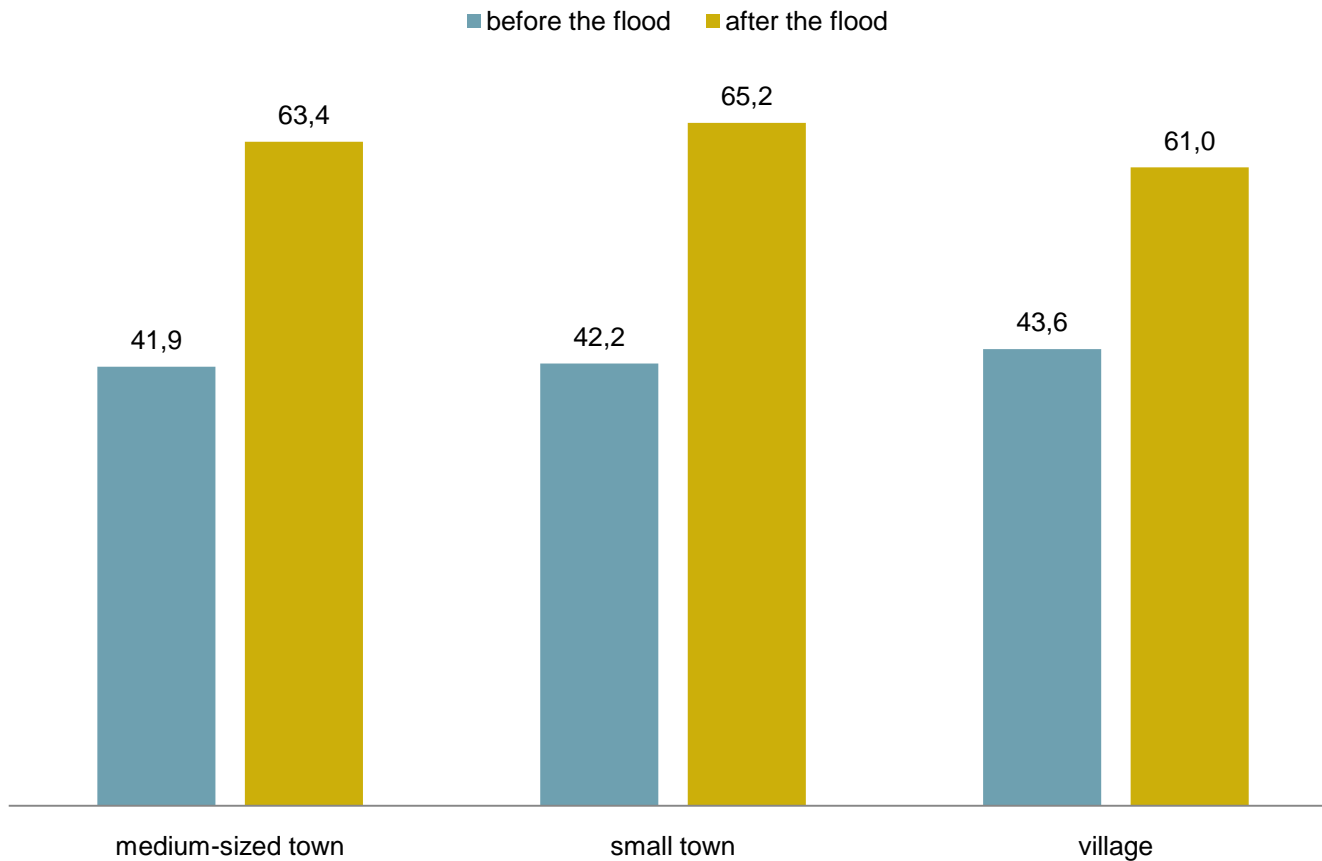
- ❑ Zabrze-Słupiec - **5,8 pp**
- ❑ Brzostek-Pilzno - **8,7 pp**
- ❑ Bogatynia - **14,9 pp**
- ❑ Tarnobrzeg - **20,8 pp**
- ❑ Łądek-Zdrój and its surroundings - **21,5 pp**
- ❑ Tuchów and its surroundings - **25,0 pp**
- ❑ Budzów-Zembrzyce - **30,3 pp**
- ❑ Bierań - **30,4 pp**



Share of insured households by type of floods



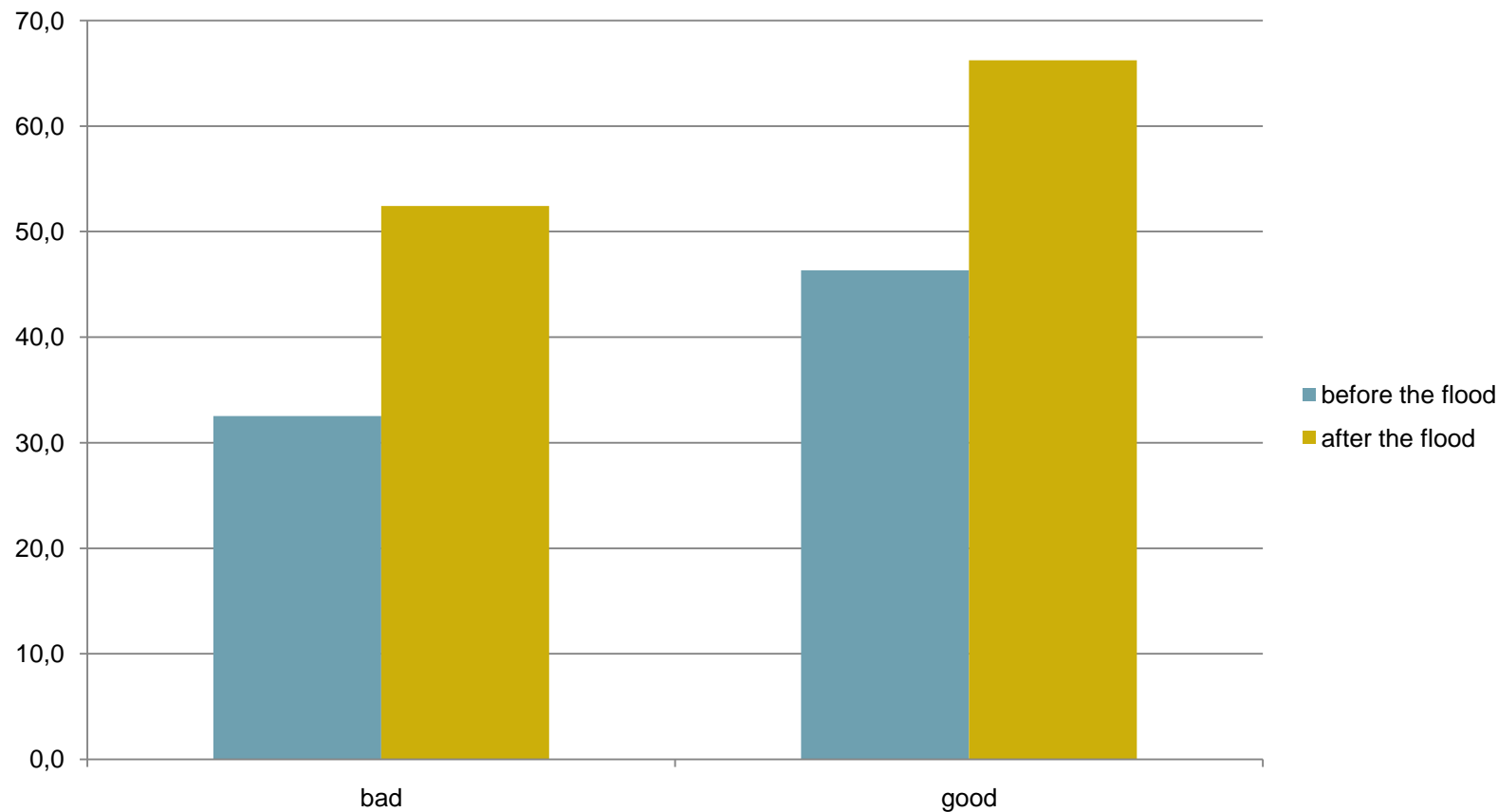
Share of insured households by size of the community



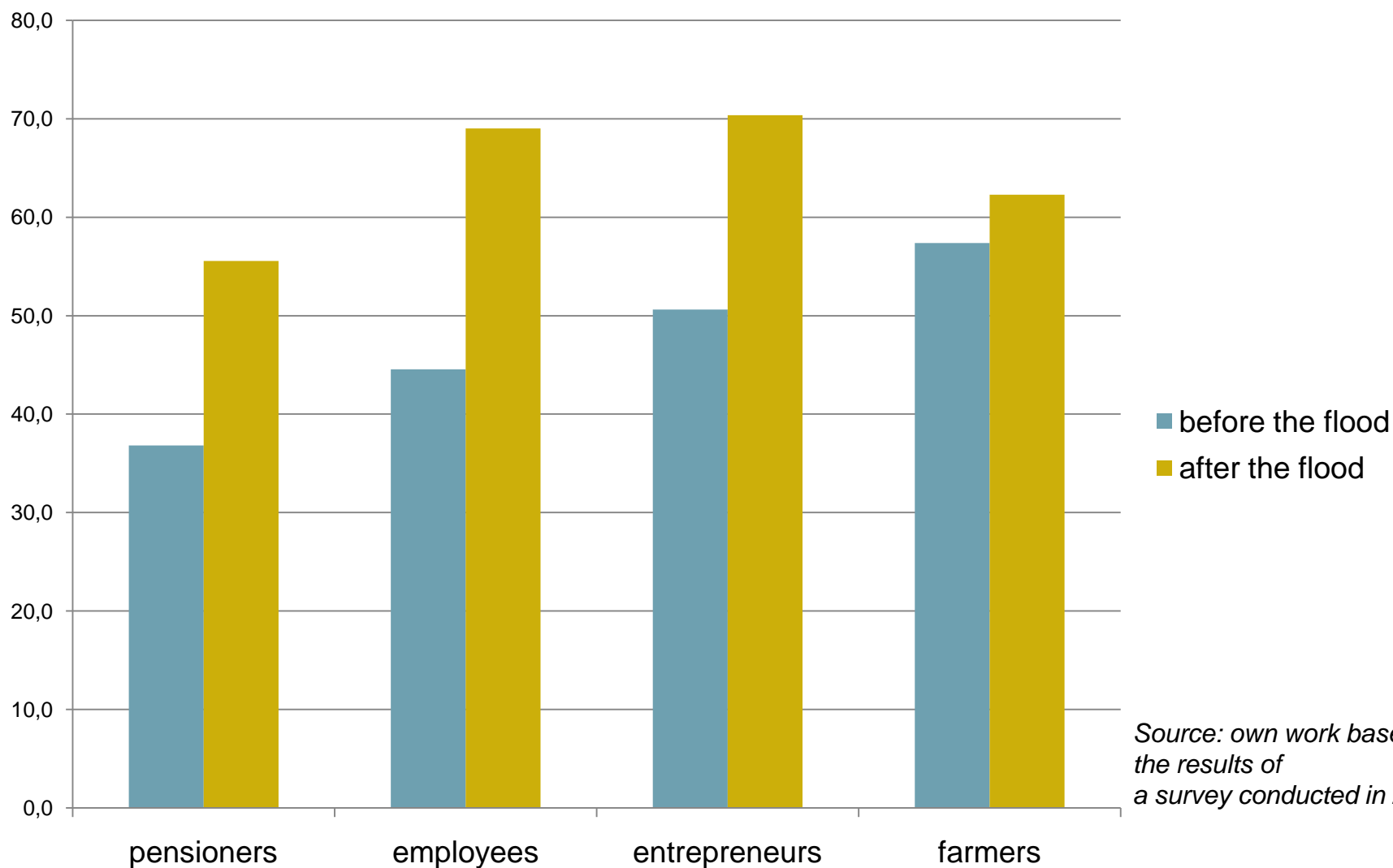
Source: own work based on the results of a survey conducted at the turn of the year 2014.

The study was conducted at the research group 808 households.

Share of insured households by economic situation

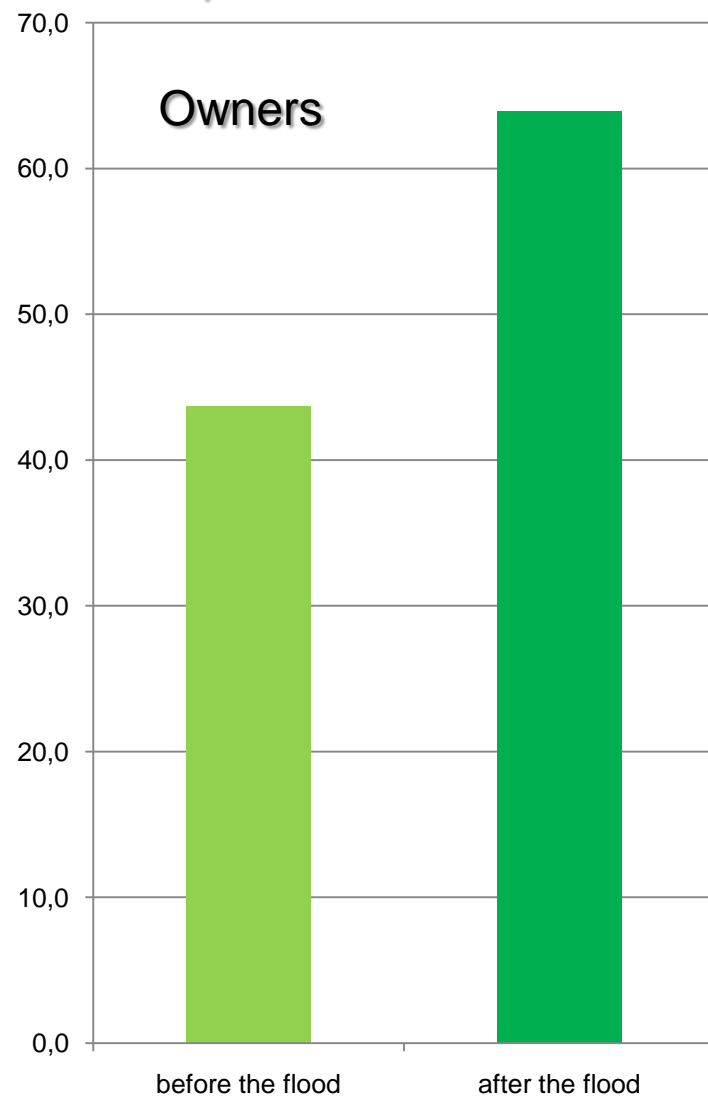
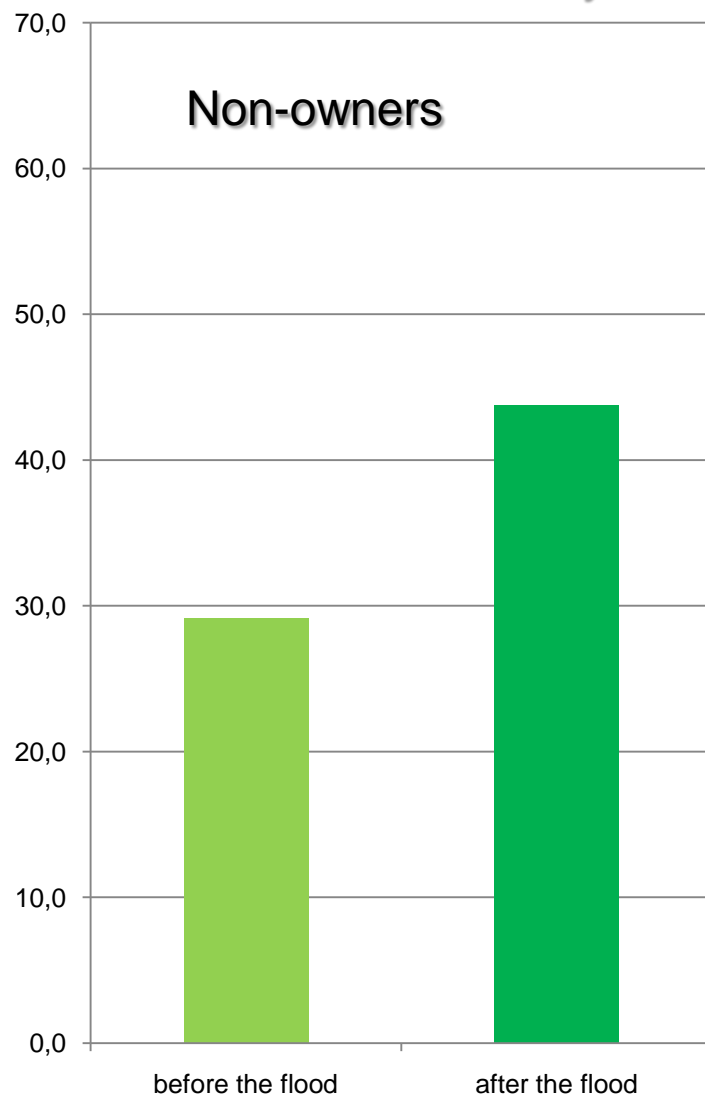


Share of insured households by main source of income



Source: own work based on the results of a survey conducted in 2014.

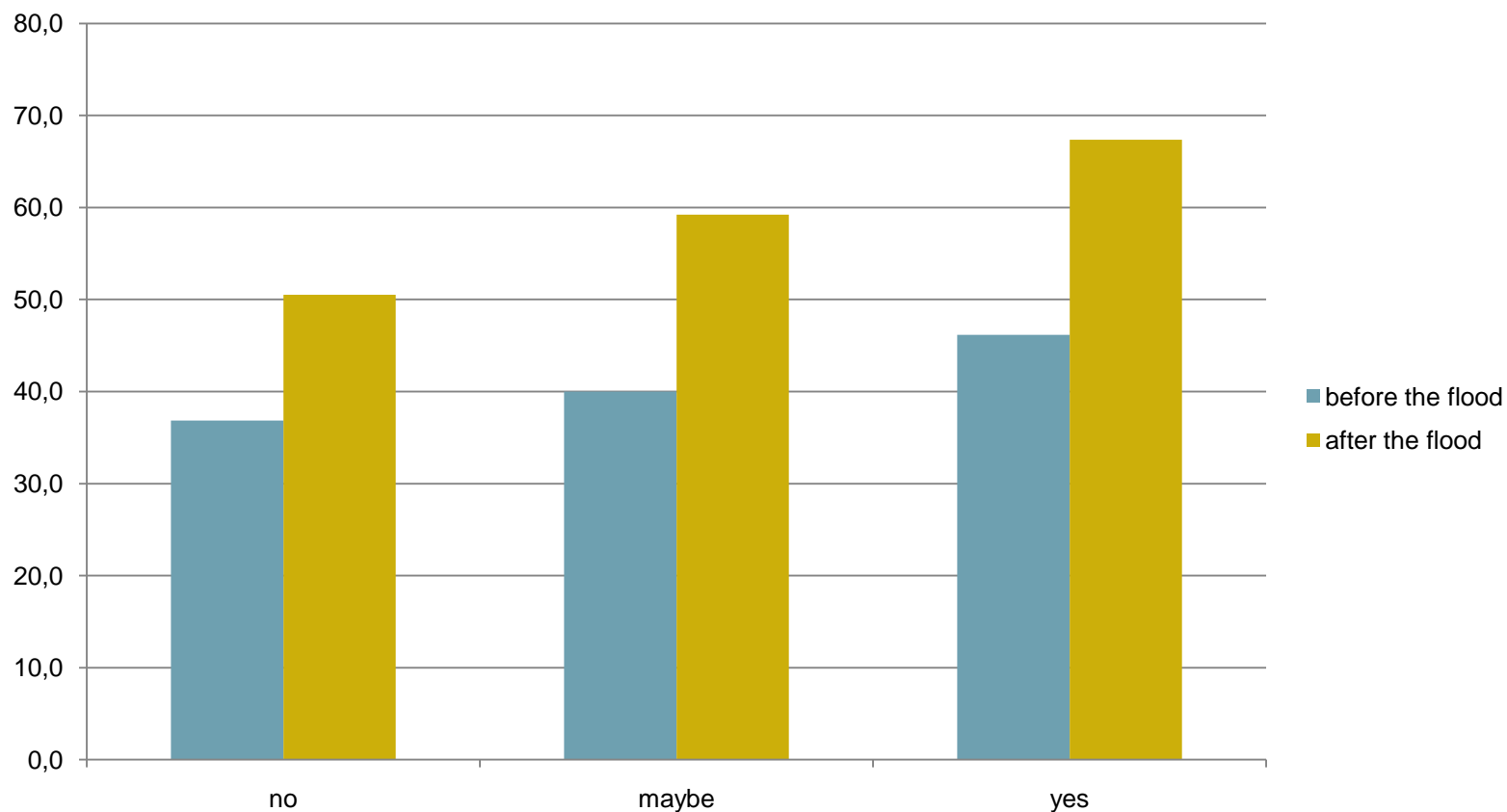
Share of insured households by flat/house ownership



Source: own work

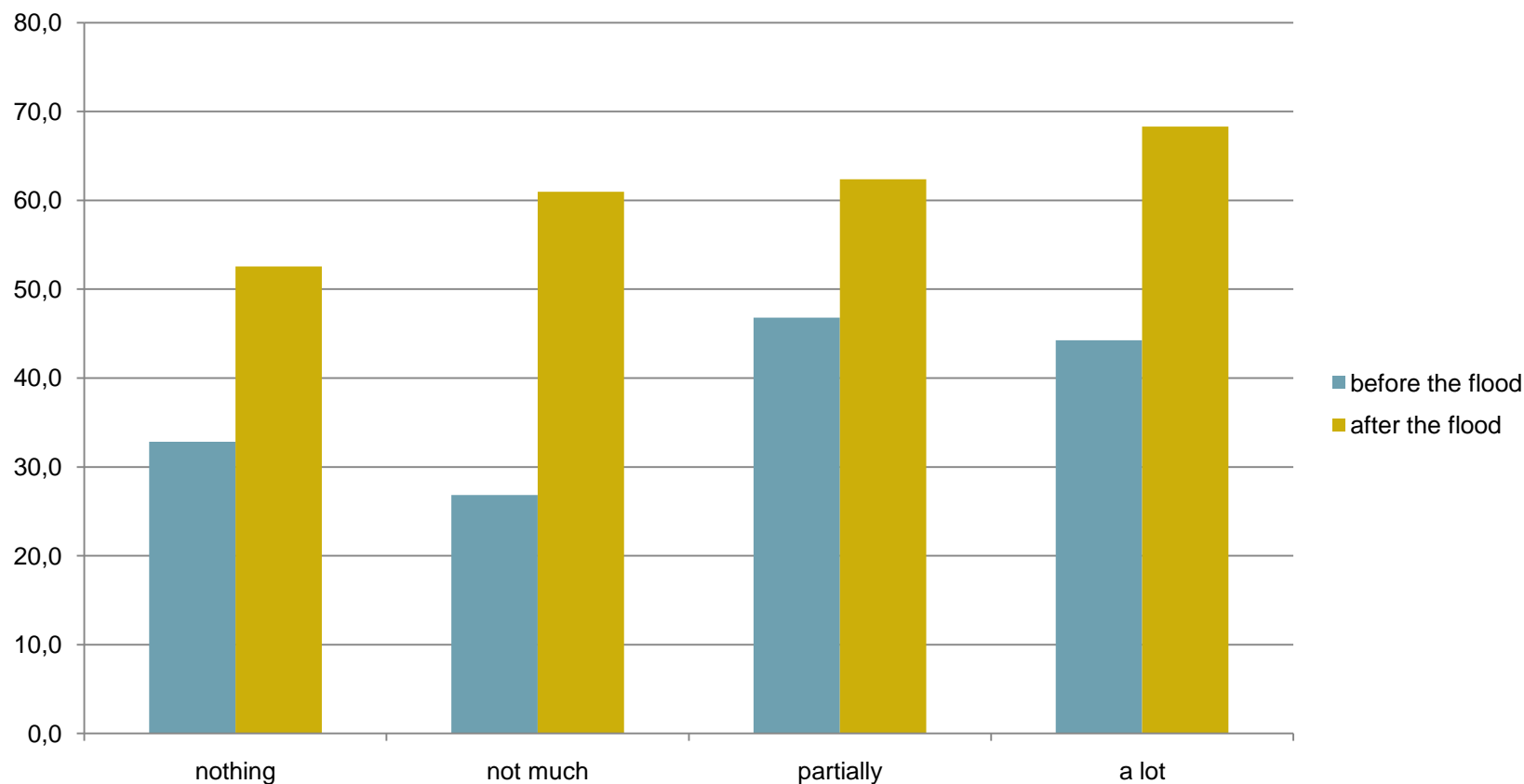
Share of insured households by risk perception

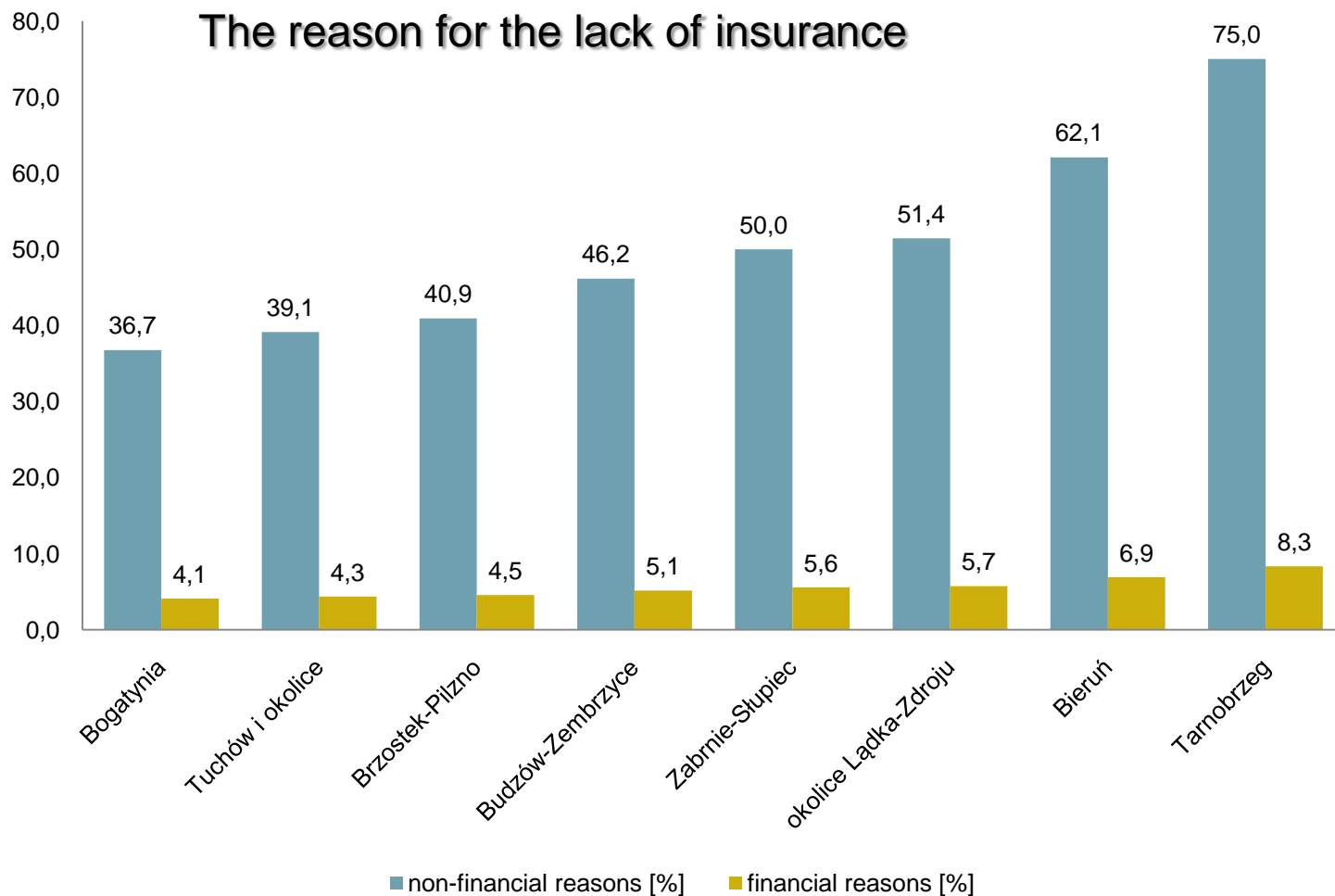
Will there be another flood in near future?



Share of insured households by risk perception

What can be done to decrease flood losses?





- ❑ **Negative experiences with insurance companies**
- ❑ **Negative perception of practices of insurance companies**
- ❑ **Perceived ineffectiveness of insurance policies**
- ❑ **Lack of awareness what is covered by compulsory insurance**
- ❑ **Do not need insurance other than agricultural insurance**
- ❑ **Ownership issues**
- ❑ **Subjective lack of need**



Source: <http://www.pobierz.info.pl/>



What factors influence the purchase of flood insurance?

Location

Type of floods

Personal experience

Flood risk perception

Economic situation



**Different
definitions of
floods**

**Financial
constraints**

**Bad practices
of insurance
companies**

**Form of
ownership**

Opportunities - review of the literature

**Reinsurance
funds**

**Public-private
partnership**

**ISOK (flood
risk
maps, flood
hazard maps)**

**System
approach**

**Compensation
laws in one act**

Opportunities - review of the literature

Education

**Institutional
cooperation**

**Compulsory
insurance**

**Regional policy
- CityPolisa
Gdańsk**

**Soft incentives
eg. Tax credits**

Thank You For Attention!

