



Bujične poplave u Sloveniji 2023

Slovenian floods 2023

Iskustvo i posledice

Experience & lessons learned

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Agenda

Historical view prior to summer of 2023

- Historic flood events
- Geographical and hydrological situation of Slovenia

The summer of 2023

- Sequence of events
- Losses

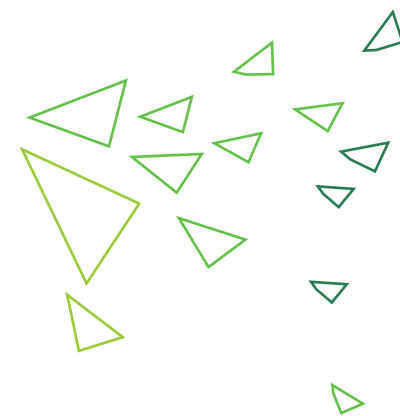
Consequences, lessons learned and future considerations





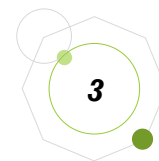
2023

H₂O Overflow



The background

A brief history of the Slovenian floods



A brief history of the Slovenian floods up to 2023



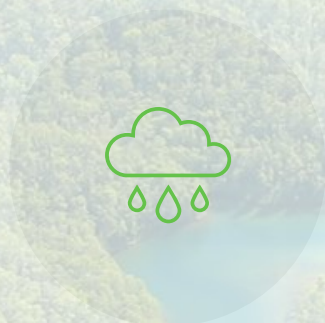
1990

EUR 580 m in direct damages



1998

EUR 180 m in direct damages



2007

EUR 200 m in direct damages



2012

EUR 310 m in direct damages



2014

EUR 255 m in direct damages

Direct damages



EUR 1,8 bln

last 25 years



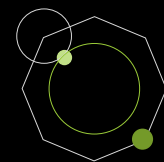
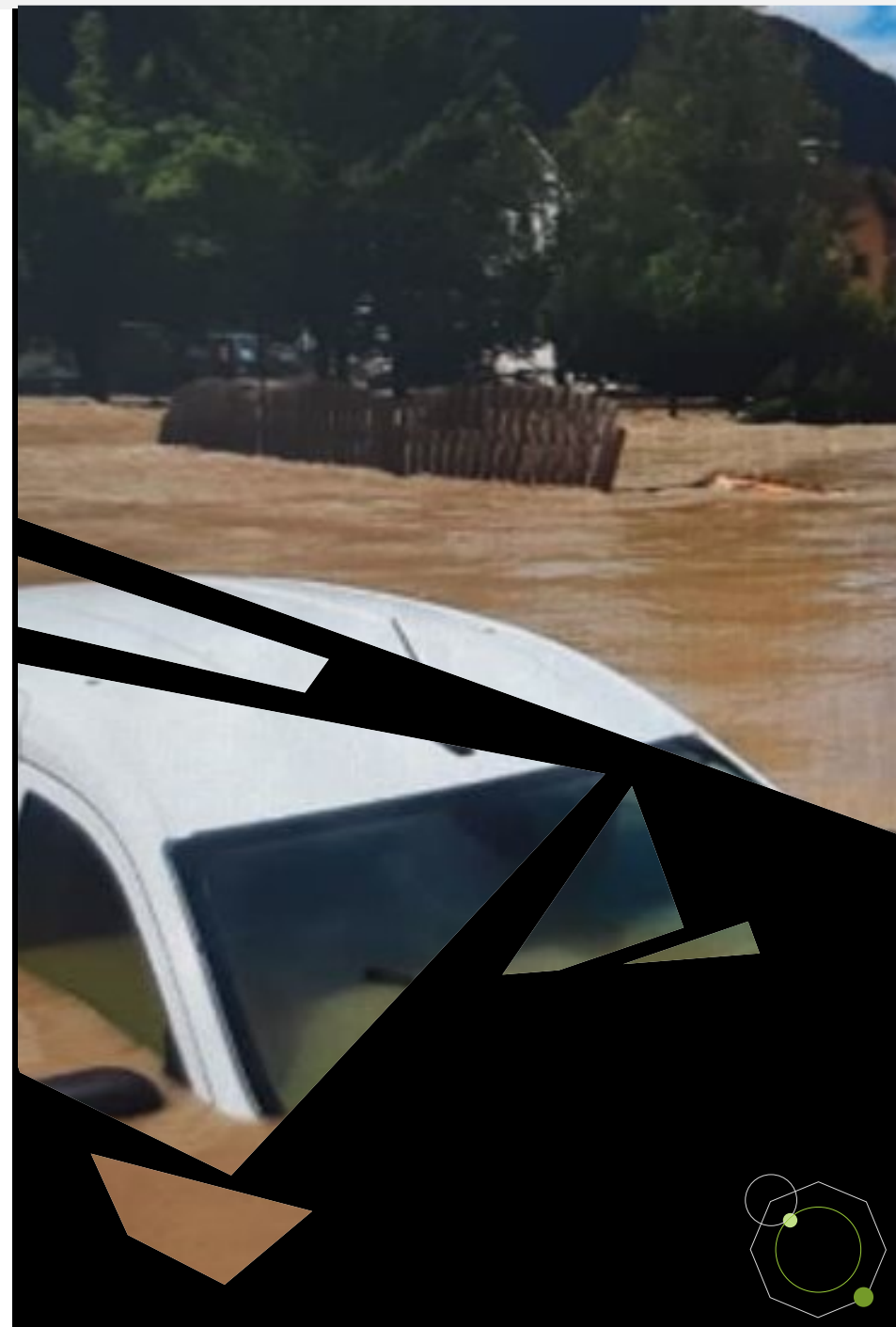
EUR 1 bln

2007
2009
2010
2012
2014

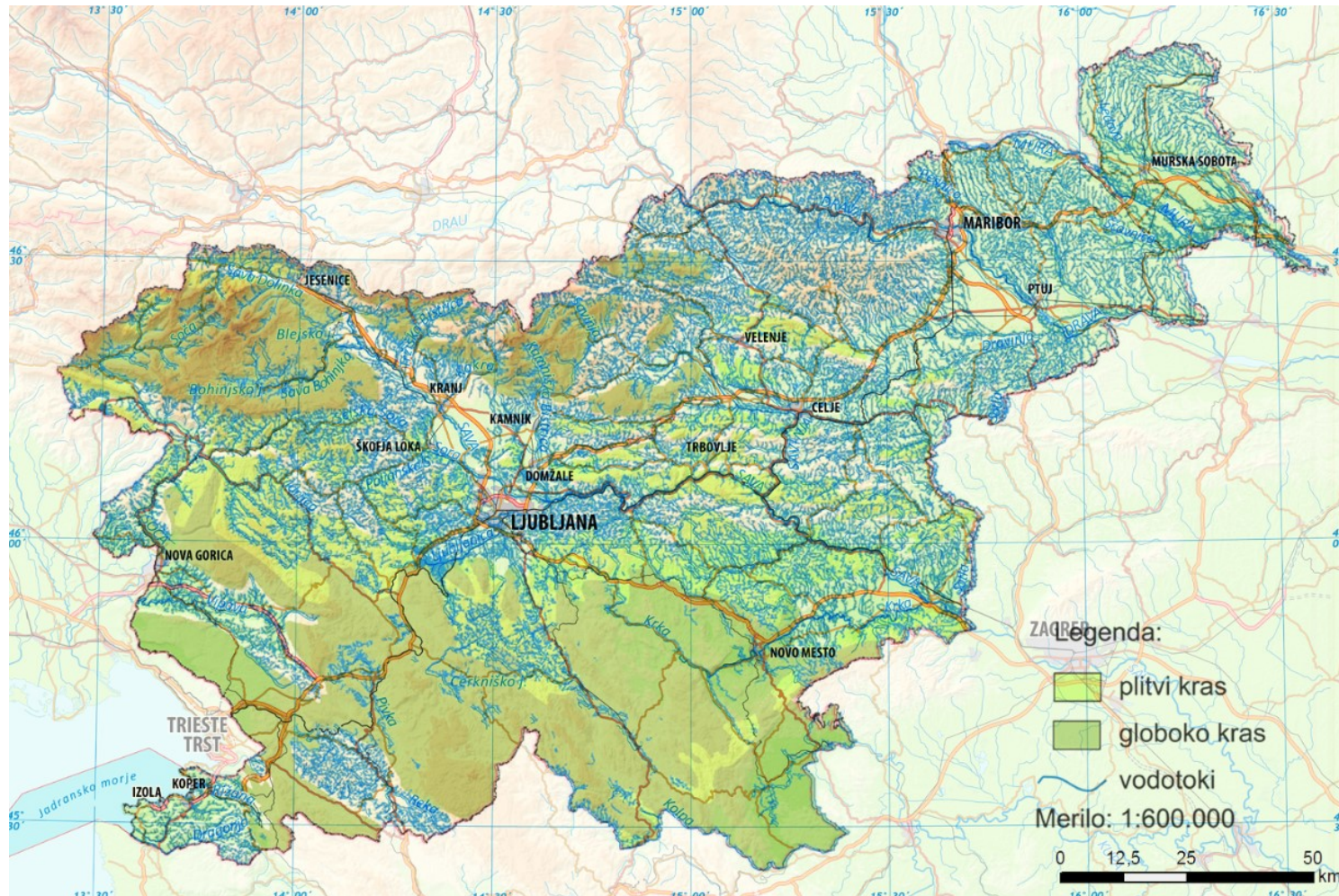


EUR 120 m

per year



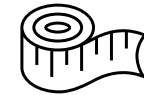
Slovenian river network



<https://eucbeniki.sio.si>

Rivers

26.989 km



Danube river network contribution

2% versus 5,5%



The meteorological view of summer 2023



2022

30 + years



2023/I

+0,8 °C
2003 & 2022
1978



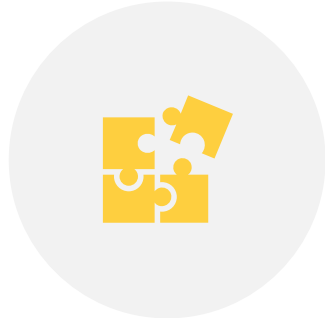
2023/II

164%
1989
2013 & 2022



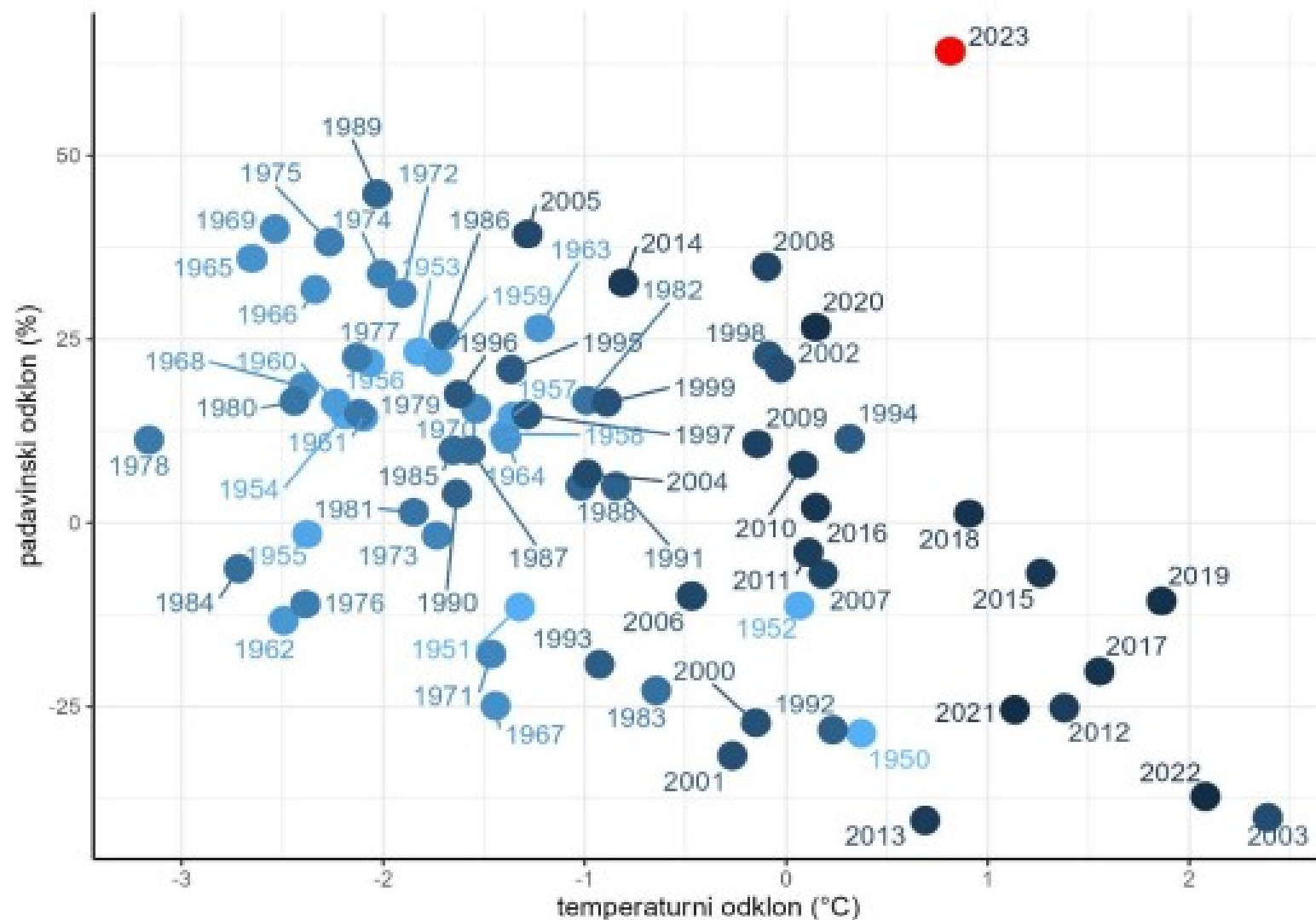
2023/III

N +40%
189%
212%

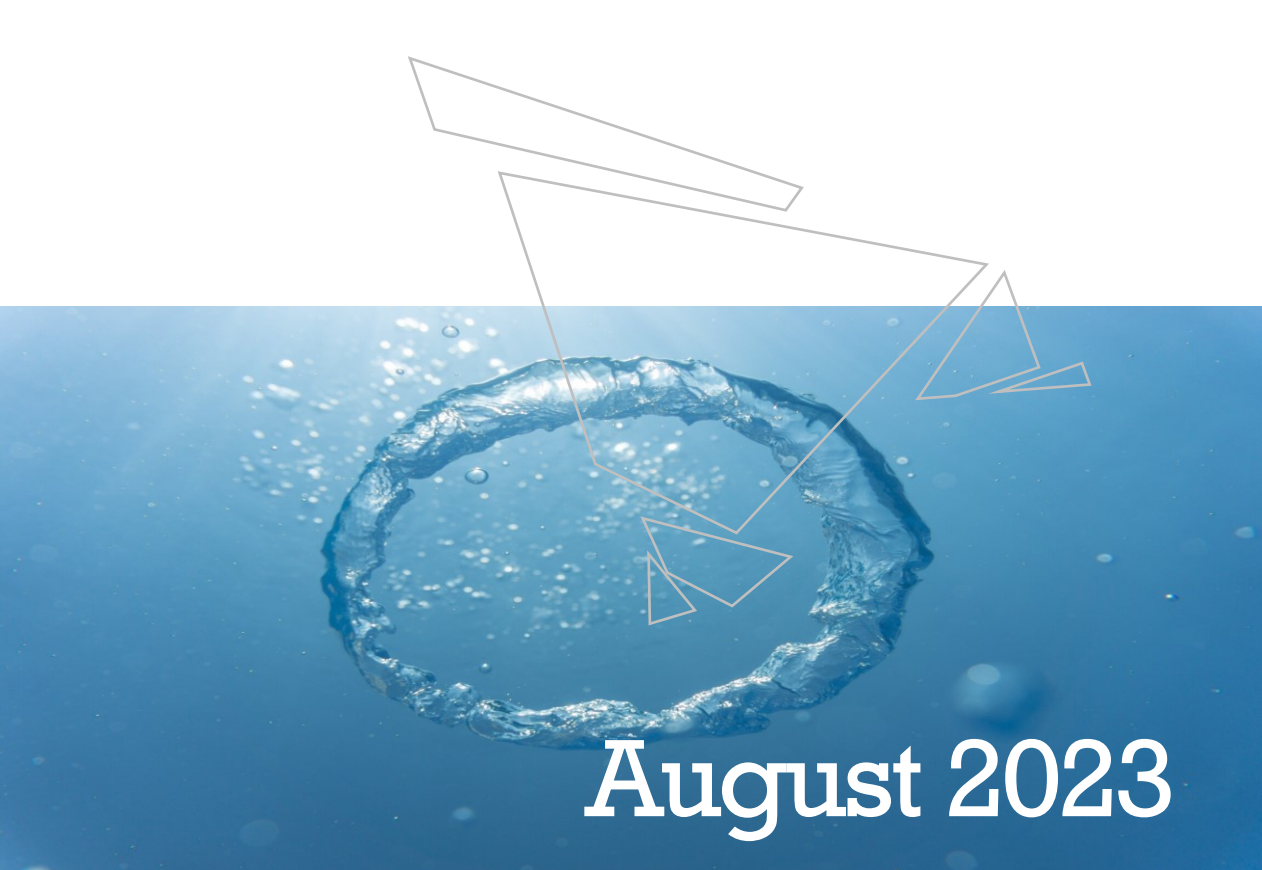


2023/IV

Deviation - precipitation & temperature



<https://meteo.arso.gov.si/>

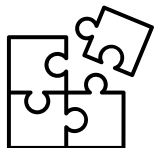


August 2023

The way of the water

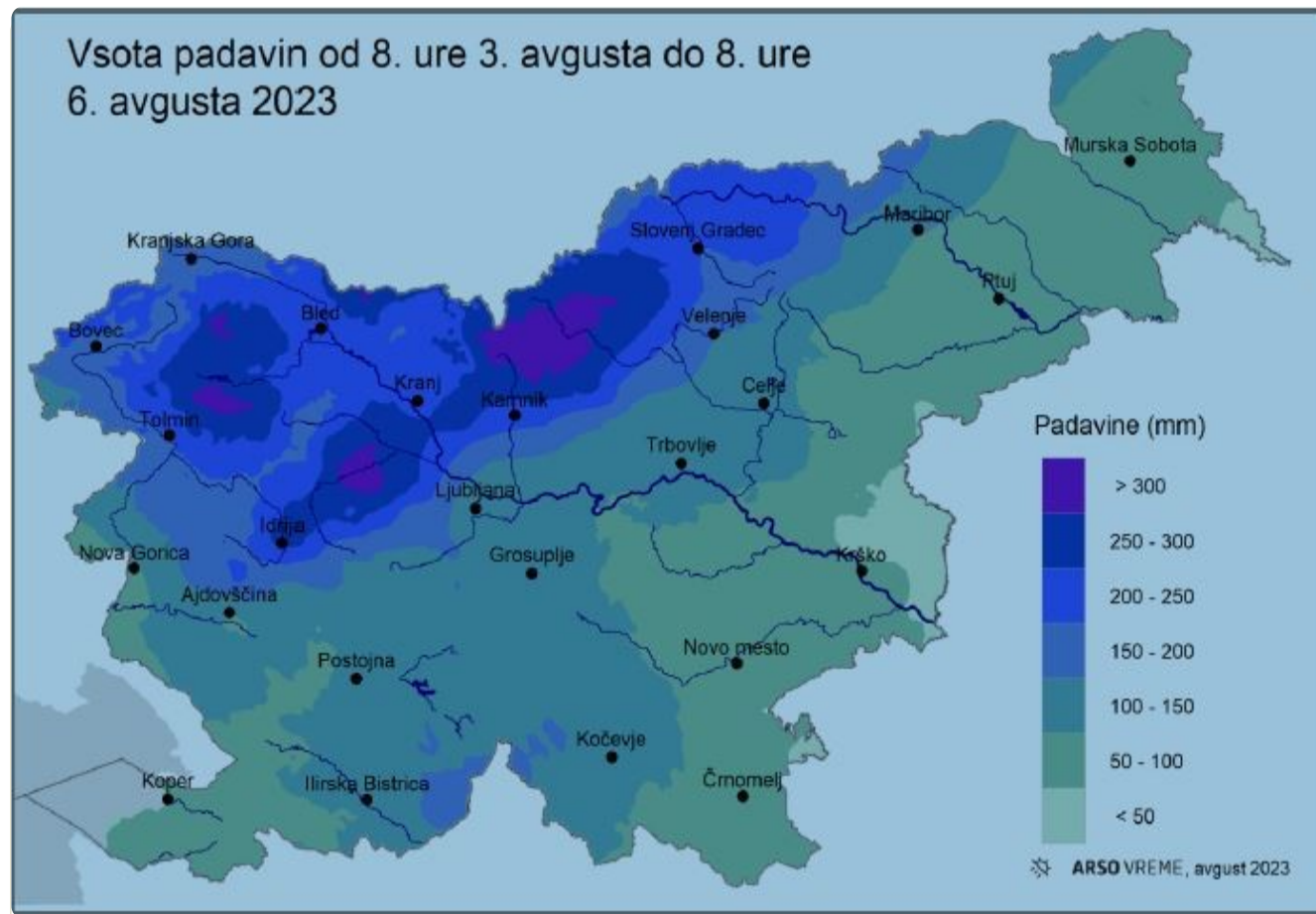


Puzzle of events on 3rd of August 2023



Weather extremes

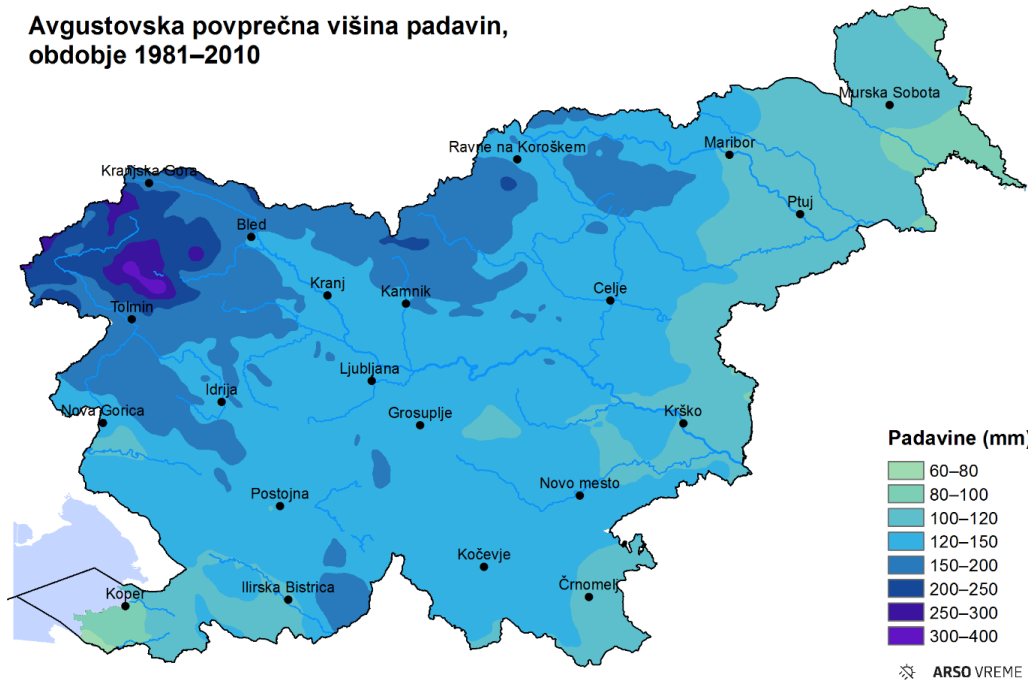
- Weather situation more typical for autumn or winter period than the summer period
- Surface of the Mediterranean Sea warm above average
- Weather front stayed over Slovenia for a continuous period of 36h



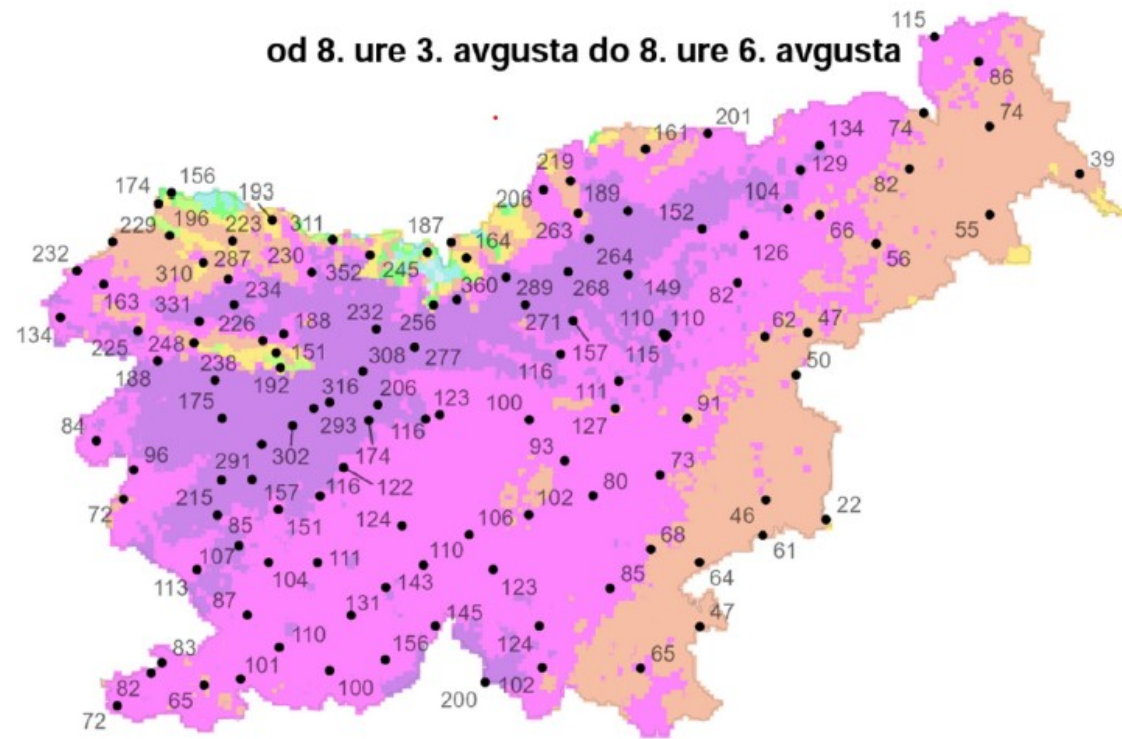
Downpours

Station	Rainfal duration (h)	Rainfall (mm)
Pasja Ravan	9,5	213
Ljubljana Airport	10,0	198
Suha	6,5	194
Kranj	24,0	184
Bukovski vrh	24,0	182
Osilnica	24,0	172

Avgustovska povprečna višina padavin, obdobje 1981–2010



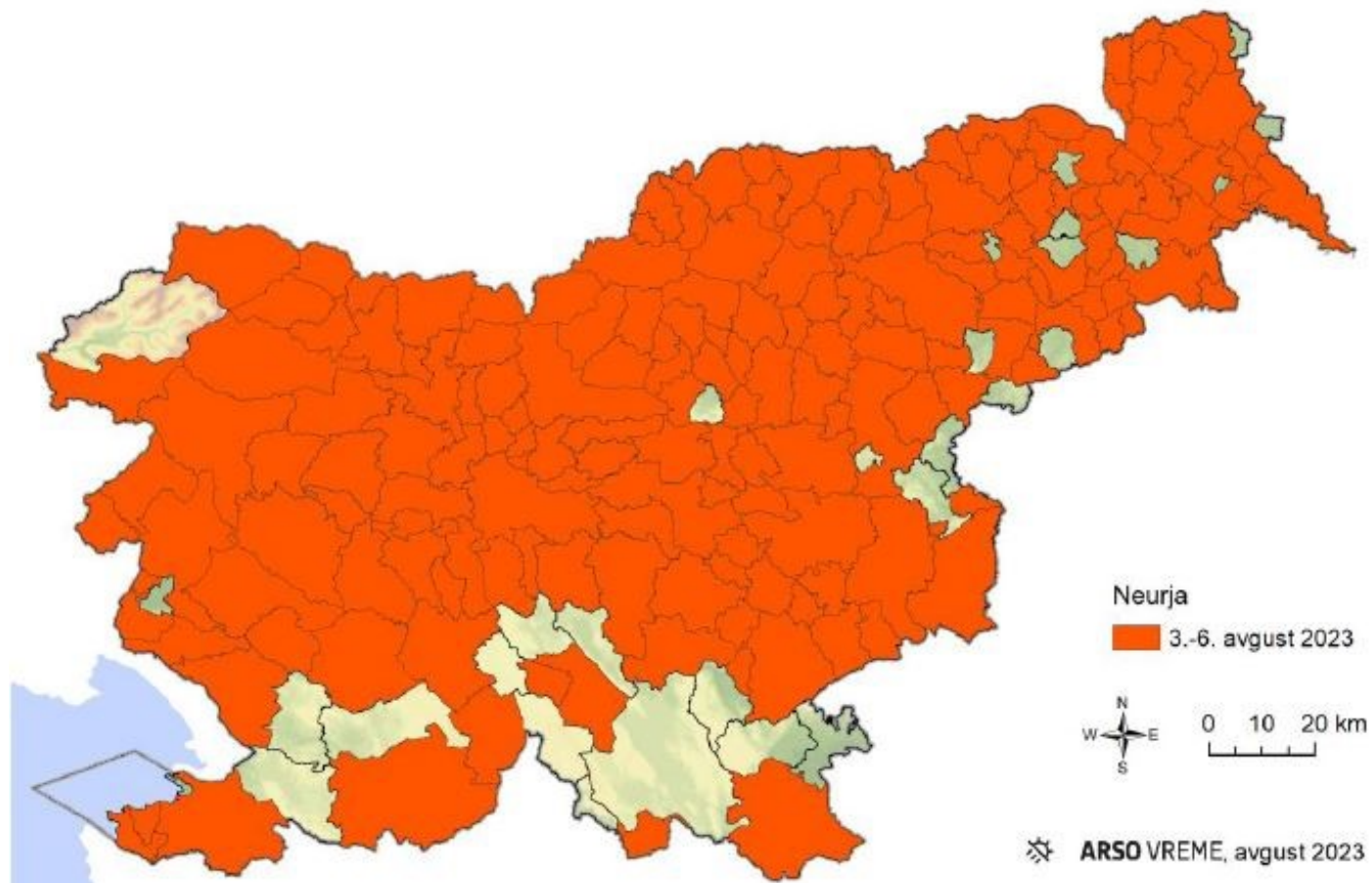
od 8. ure 3. avgusta do 8. ure 6. avgusta



Slovenia: 72-hour rainfall from 8 AM on August 3 to 8 AM on August 6

Source: ARSO

Flood losses by region



Damaged buildings:

- 16.230 by flood
- 756 by landslide

Flood losses by type



Loss of Life

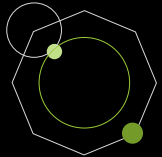


Losses to property

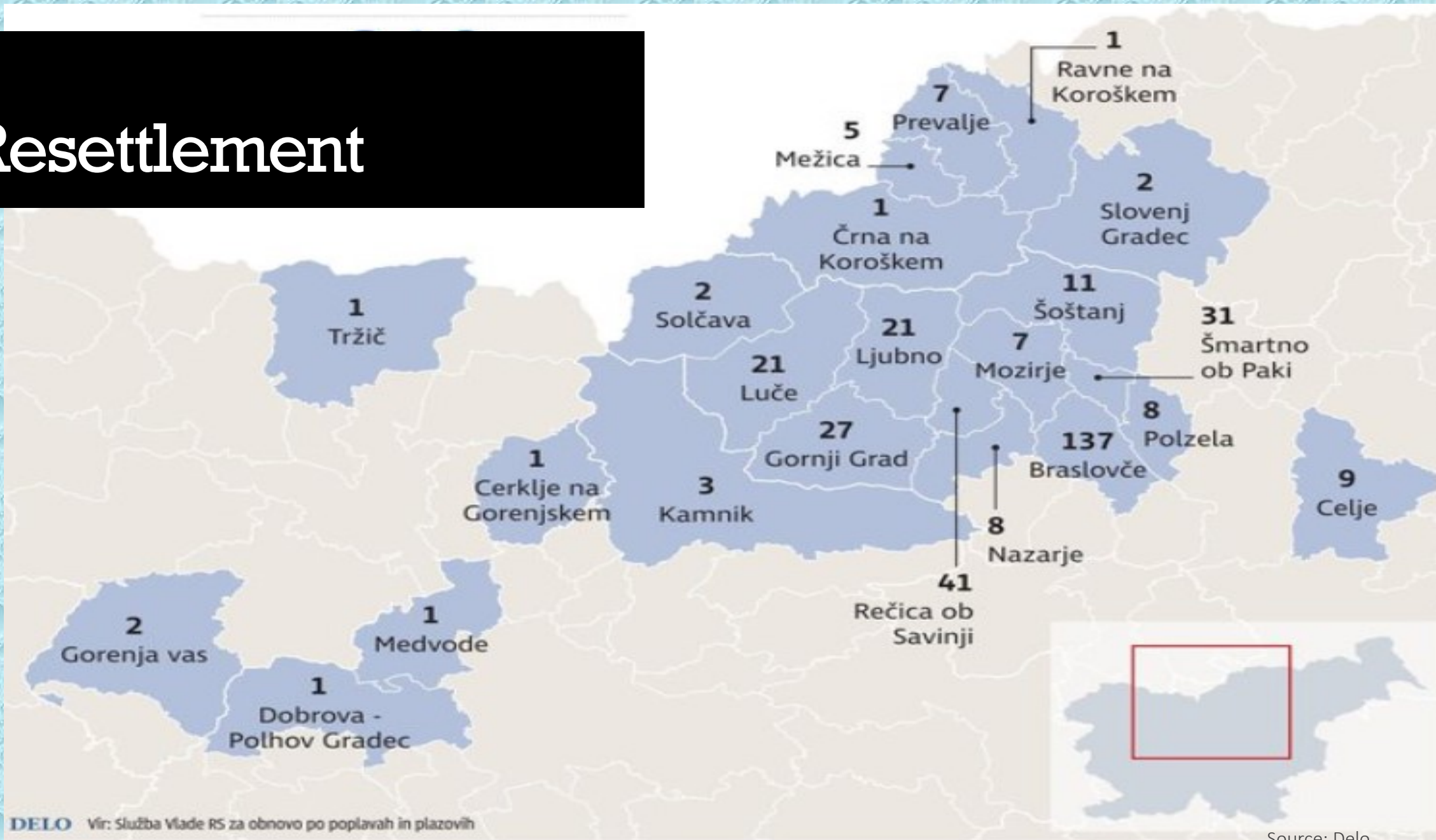
Flooding & landslide
MOD



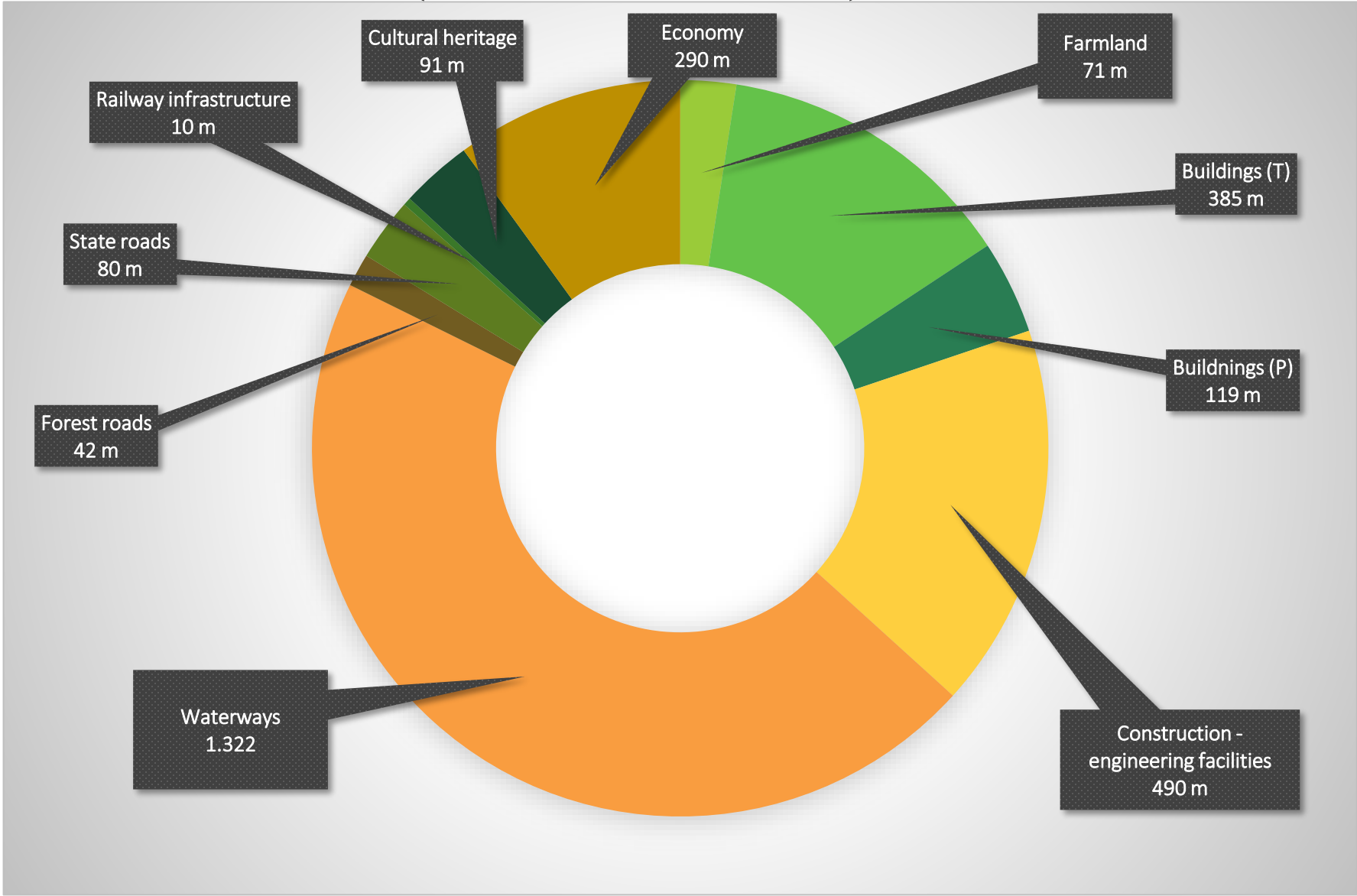
Losses to infrastructure



Resettlement



Direct losses (in million EUR)



Direct damages

EUR 2,998 bln



Estimated total loss

EUR 9,9 bln

Insurance & claims



Insured loss

est. EUR 300 m



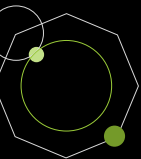
Flood insurance in the market

Building vs. contents
Frist loss insurance vs.
sum insured



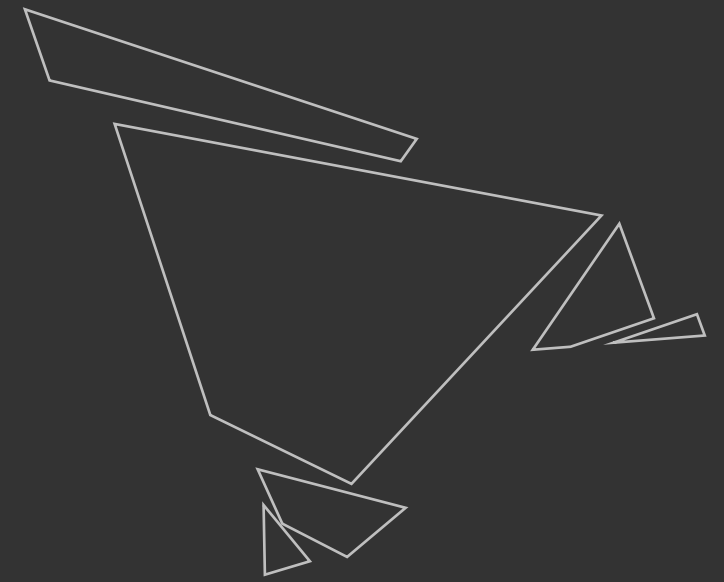
Claims processing

June, July, August



Flood maps vs. field data





The Aftermath

Consequences & Lessons learned

Future considerations

Indirect effects

Flood zones



Flood loss coverage



Reinsurance

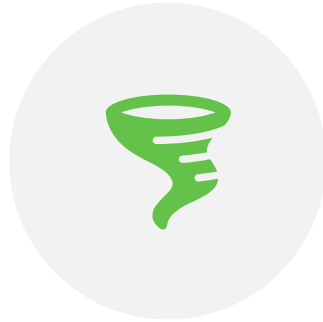
- Hard market in property insurance
- Loss adjustments



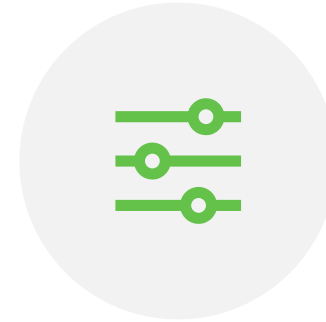
Main points to (re)consider



Reality check



**Climate change
induced NAT CAT**



**Future
insurance/reinsurance
solutions**



Summary


- 2023 floods in Slovenia has been the largest NAT CAT event in decades
- Flooding maps, flood models and flood insurance coverage stress tested
- Protecting insurance gap considering alternatives of (re)insurance solutions



Thank you for your attention

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