### Sediments and morphology of flash flood near Kromołów (southern Poland) after 18 years

#### Tomasz Kalicki, Artur Zieliński, Ireneusz Olszak, Paweł Przepióra, Łukasz Podrzycki, Sławomir Chwałek, Marcin Frączek











# Valley no. 1

Kromołów

Geoportal.gov.pl 2015



#### **Upper section**





Profile KR 4





### Lower section



#### Kromołów area





Zniszczenia dokonane przez powódź w 1996 r. Poprzednia zapamiętana powódź miała miejsce w 1912 r.

Profile KR 2

Profile KR 3

0

450 m a.s.1

500 m



### **Upper section**

# KROMOŁÓW 2 Kr 2



Profile KR 1

Profile KR 4

#### Older valley floor

#### **Middle section**

Erosional cut

50 m

0









#### Kromołów KR 4

34263375

Profile KR 4









Kromołów

Geoportal.gov.pl 2015

## **Upper section**

#### **Middle section**

Older valley floor

Erosional cut Older valley floor

#### **Lower section**

Ground shaft

Erosional cut

Older valley floor

# **Ground shafts**

100

200

300 m



# Conclusions

- Pleistocene fluvial-denudational valley (dellen) rejuvenated from the Subatlantic by flash floods – erosion in the head (Kr 2) and accumulation in the middle section (Kr 3, Kr 1)
- Accumulative forms of flash flood from 1996 are covered with vegetation and erosional ones are consolidated by man and cover with concrete
- Anthropogenic activities in first valley will not prevent another flood, on the contrary, the concentration of runoff will increase the speed and size of runoff during the next catastrophic event.
- Second valley is much more better prepared for another disaster, by build there ground shafts with outflow infrastructure.

# Thank you for attention