

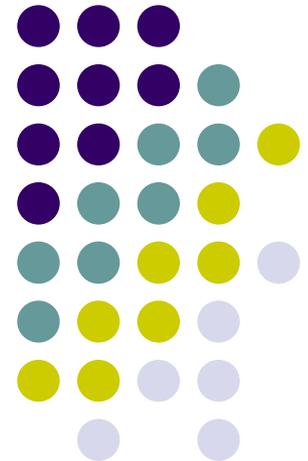
Central Asia Historical Emergency/Disaster Data

Muratbek Koshoev

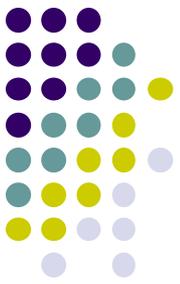
UN OCHA

Zoia Kretova

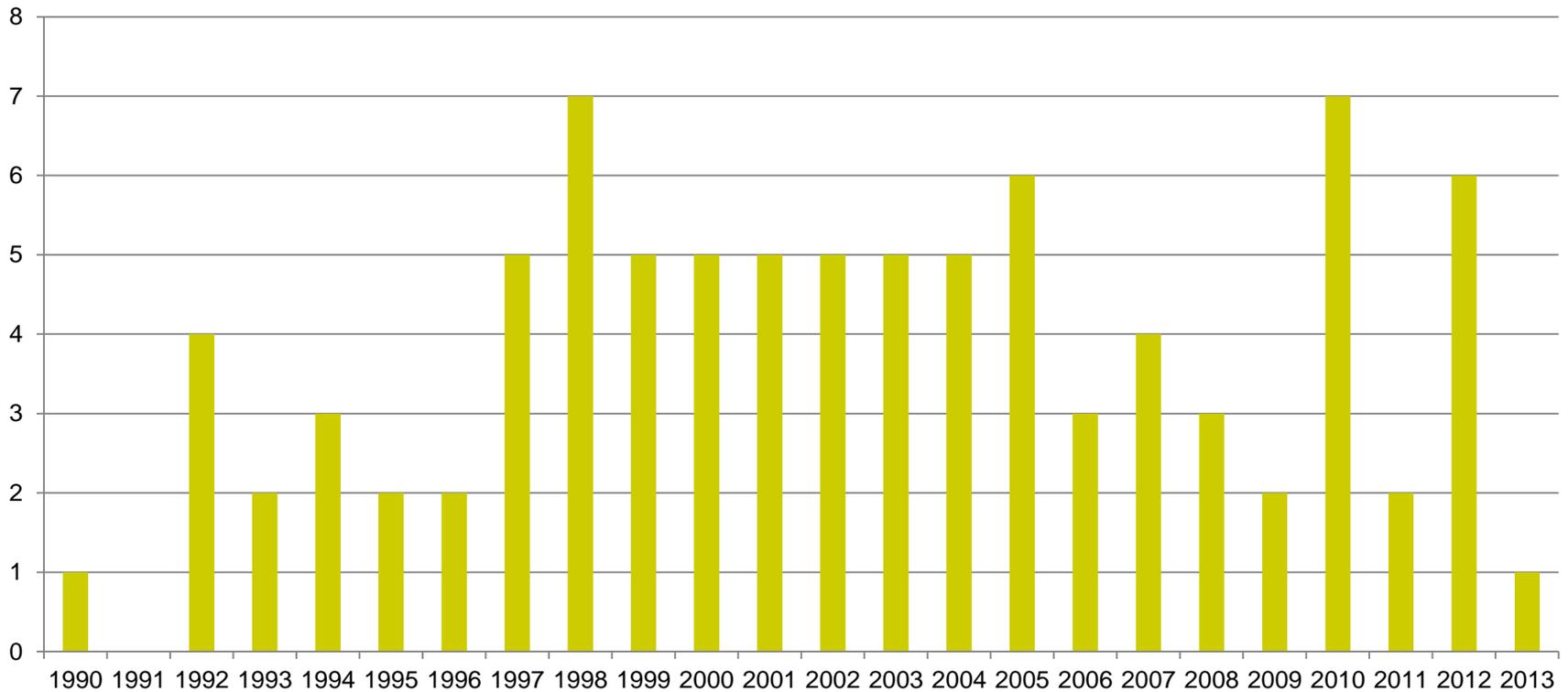
KyrgyzHydromet



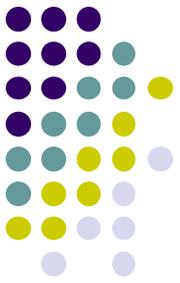
EM-DAT, The International Disaster Data Base <http://www.emdat.be/>



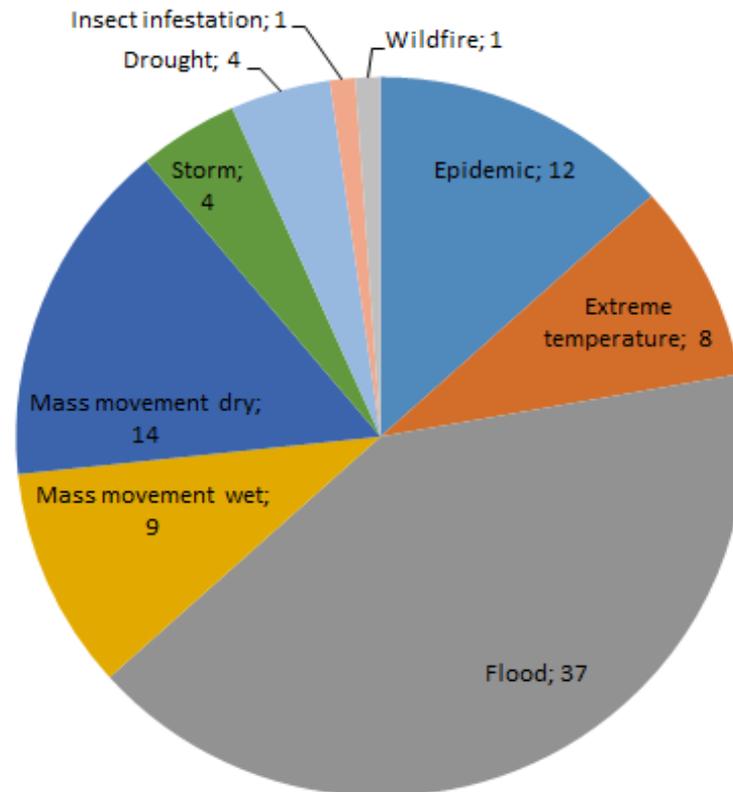
**Number of Emergencies/Disasters in Central Asia
1990-2013**



EM-DAT, The International Disaster Data Base <http://www.emdat.be/>



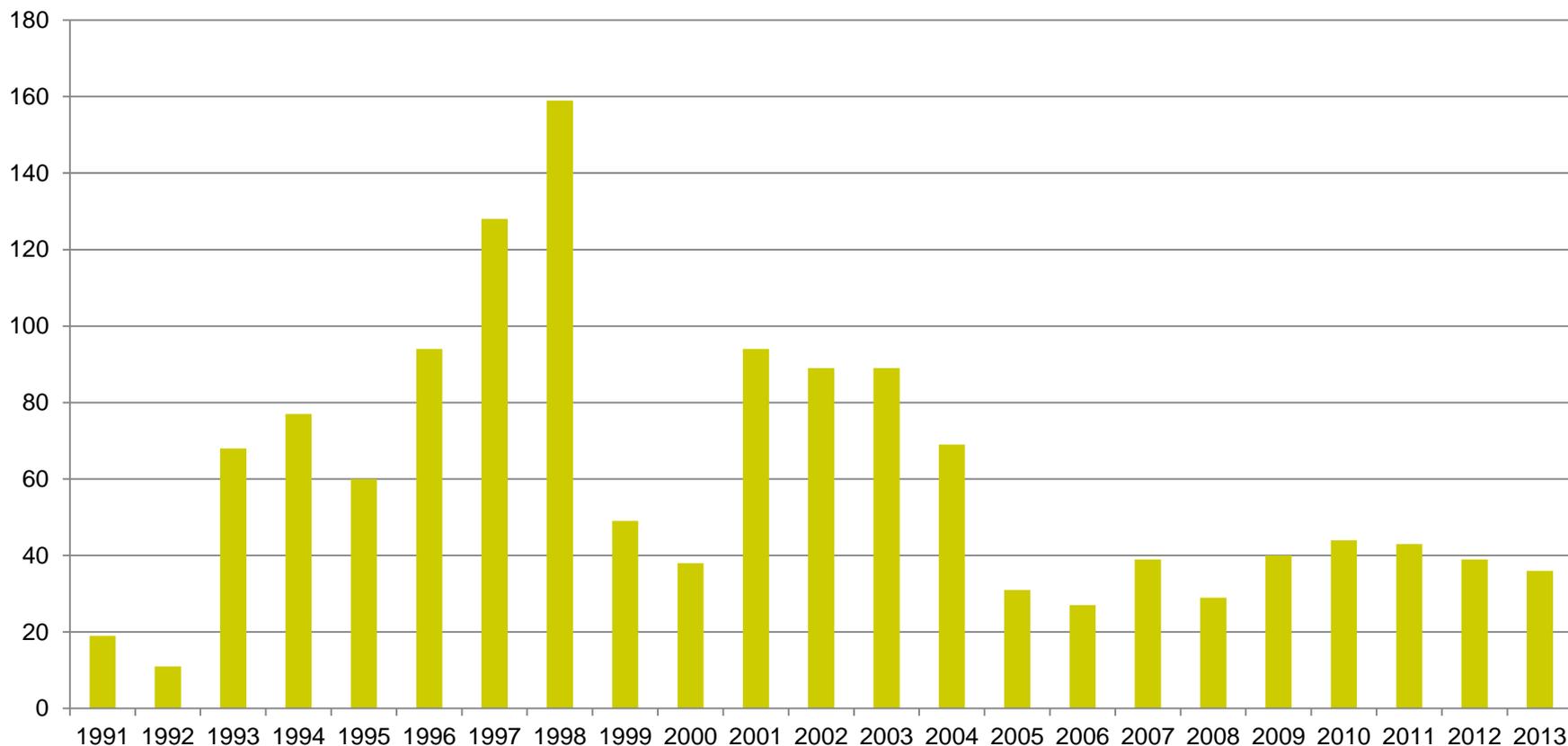
Main Disaster Types



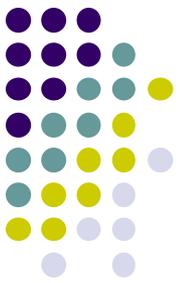
Kazakhstan Hydrometeorological and Geological Emergencies/Disasters Data, source: annual emergency analysis reports, <http://emer.gov.kz/>



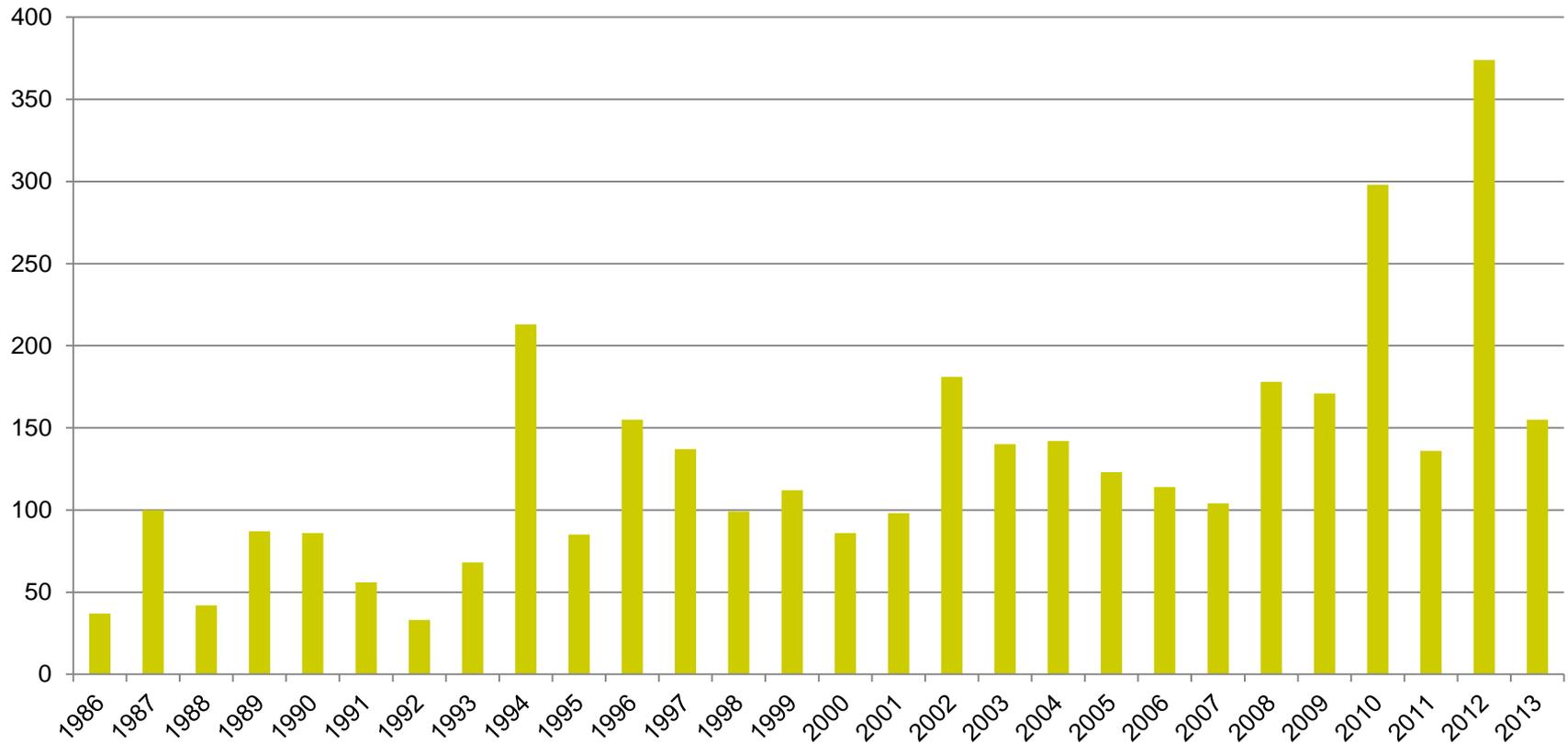
Number of Emergencies in 1991-2013



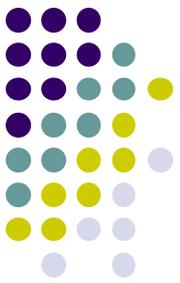
Kyrgyzstan Hydrometeorological Emergencies/Disasters Data,
source: annual emergency analysis reports, www.mes.kg,
publication: “Basics of Disaster Management”, Bishkek, 1999



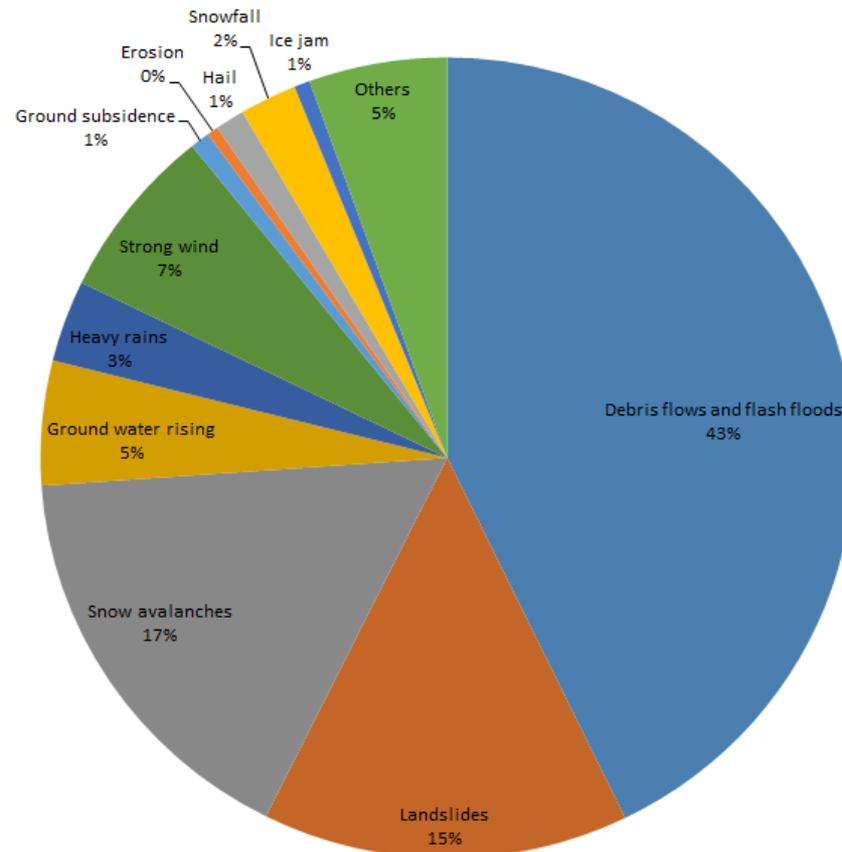
Number of Emergencies/Disasters in 1986-2013



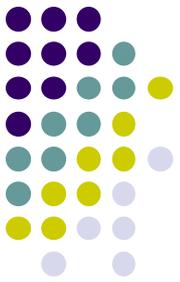
Kyrgyzstan Hydrometeorological Emergencies/Disasters Data, source: annual emergency analysis reports, www.mes.kg, publication: “Basics of Disaster Management”, Bishkek, 1999



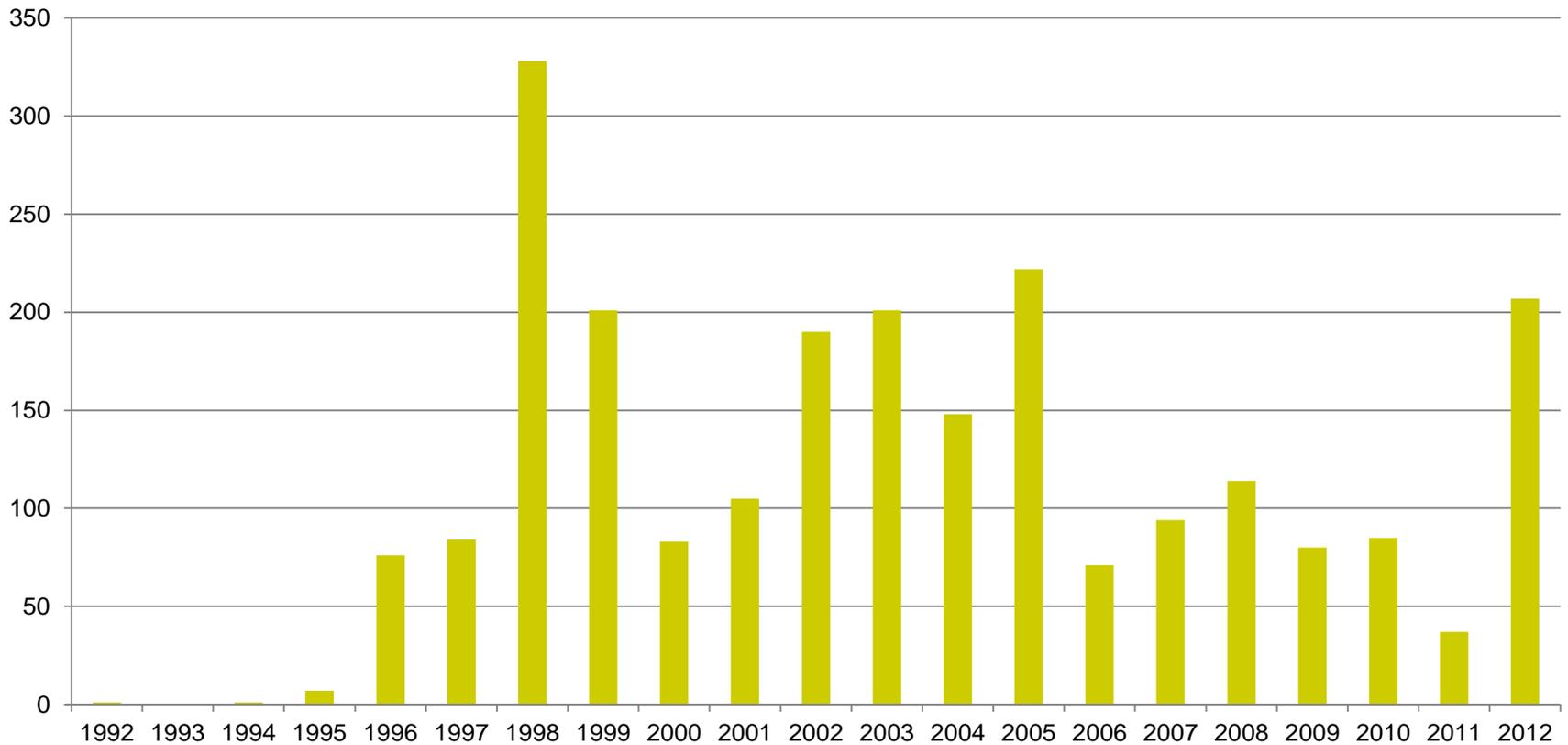
Main sources of Emergency/Disasters



**Tajikistan Hydrometeorological Emergencies/Disasters Data,
source: non-published data shared by UNDP international
consultant, Mr. Kelly**



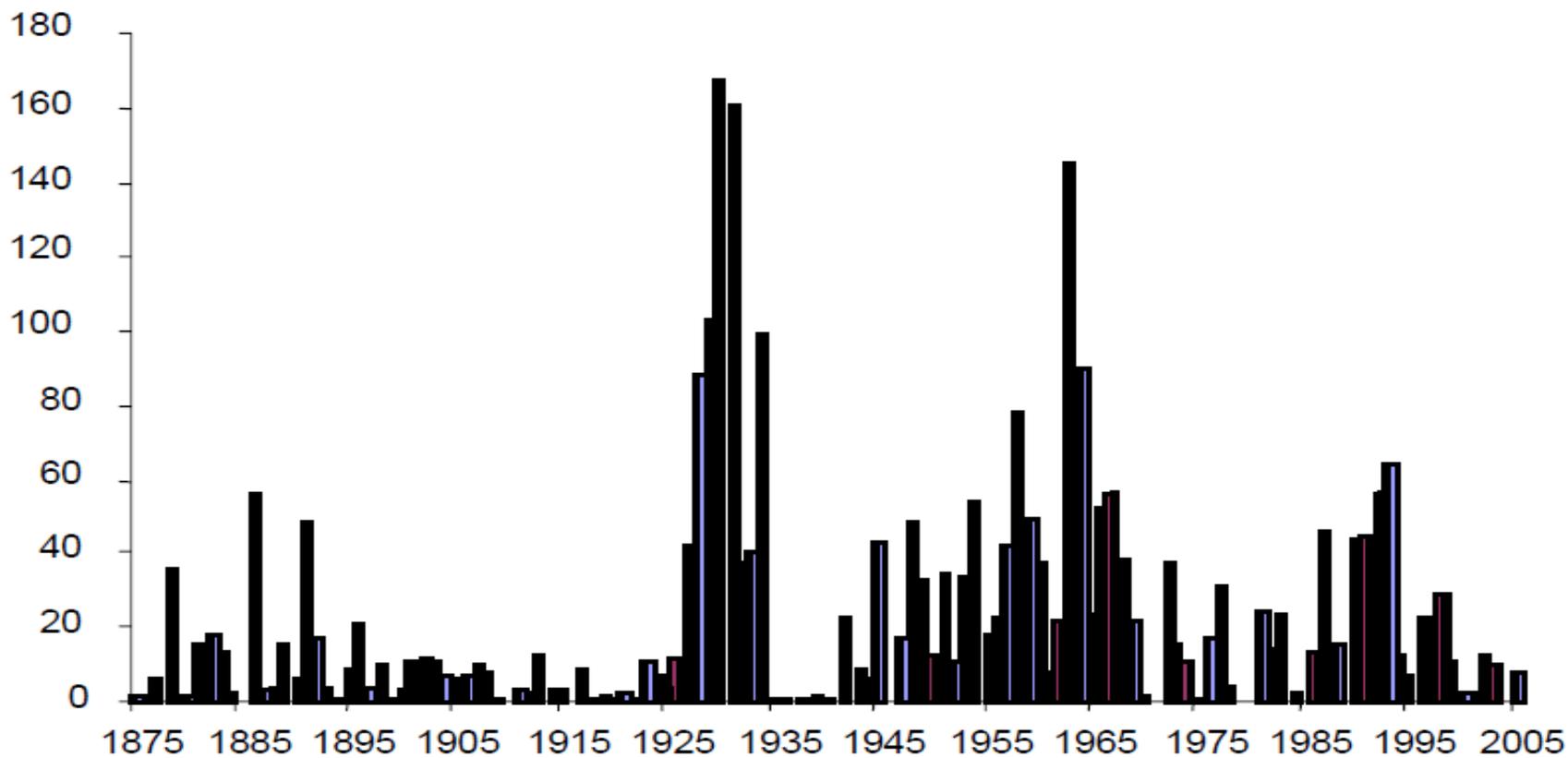
Number of Emergencies/Disasters in 1992-2012



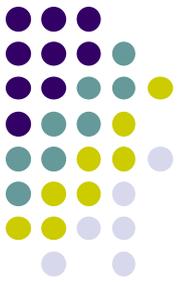
**Uzbekistan Debris and Mud Flows Data, source: publication
“Climate Change and Its Effects To Hydrometeorology Process....in
Uzbekistan” by V.E. Chub, Tashkent, 2007**



Number of Debris and Mudflows in 1875-2005



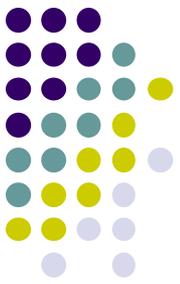
Please be sure in methodology applied and data quality to ensure that your analyses of the data will not lead to inaccurate conclusions



For a disaster to be entered into the EM-DATA database at least one of the following criteria must be fulfilled:

- Ten (10) or more people reported killed.
- Hundred (100) or more people reported affected.
- Declaration of a state of emergency.
- Call for international assistance.

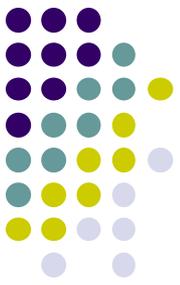
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Classification and thresholds:

- The same processes in the different categories (debris flows and snow avalanches in Geophysical and Hydrological groups, EM-Data)
- Earthquake considered as emergency if equal and more 2 (by MSK-64) and 6 (by MSK-64) in Kyrgyzstan
- Heavy rains: in Kazakhstan - 50 mm for plains and 30 mm/12 h for mountains, Kyrgyzstan - 15-29 mm\12 h, Turkmenistan 20 mm and more/12 h

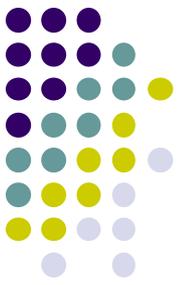
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Definition and reporting:

- No scientific definitions used to distinct debris flows and flash flood, floods, water level rising. As a result , these processes are reported jointly very often. The same regard to rockfalls and landslides (Kyrgyzstan).
- Integration of different process in one: rains, wind, hail, landslide, frost (Kyrgyzstan, Tajikistan)
- Reporting by administrative unit and/or by event (Kyrgyzstan, Tajikistan)
- Change in number of administrative units
- Traditional national definitions of hazards do not correspond to English and Russian
- Word “heavy rain” used in MoES data has nothing common with Hydromet thresholds in the great majority of cases reported (Kyrgyzstan)

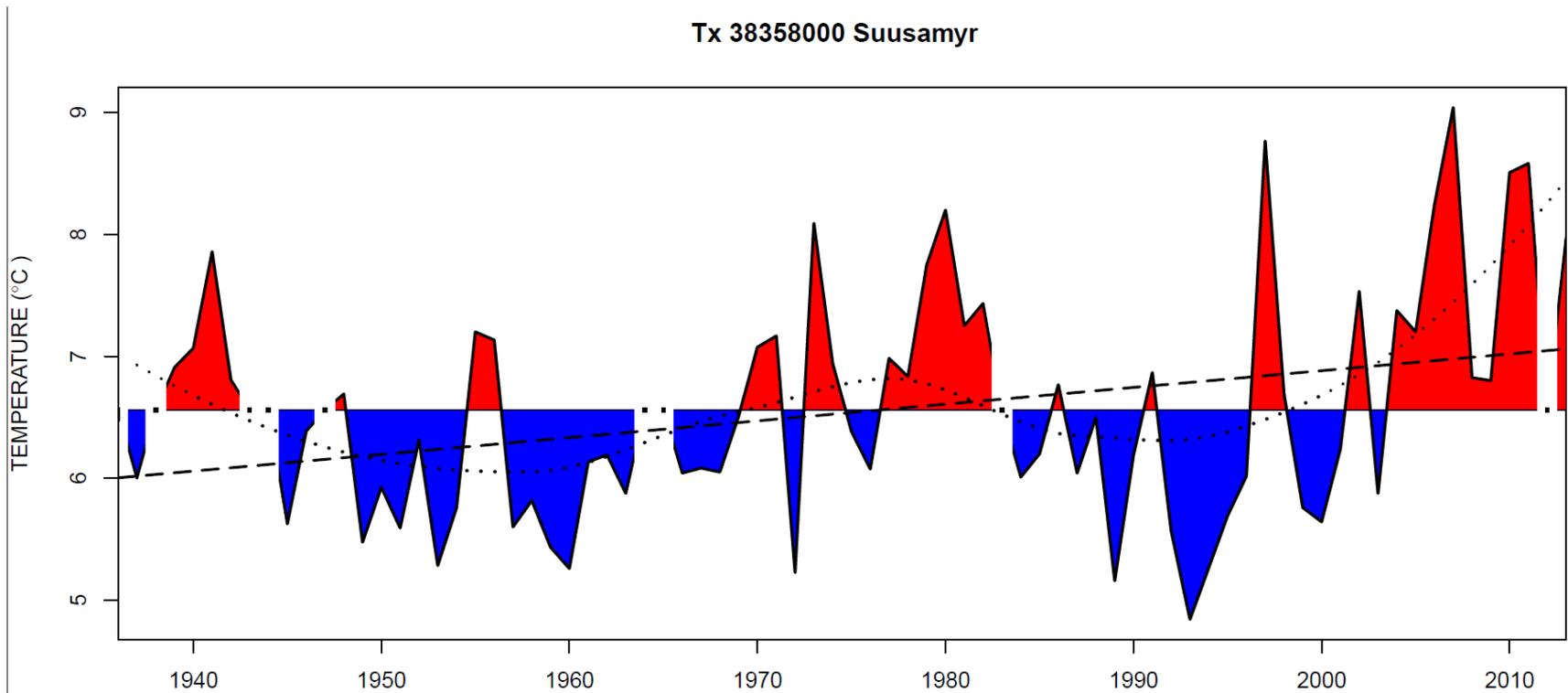
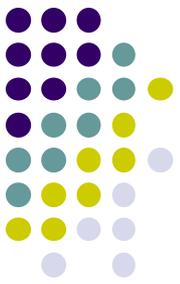
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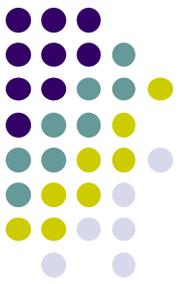
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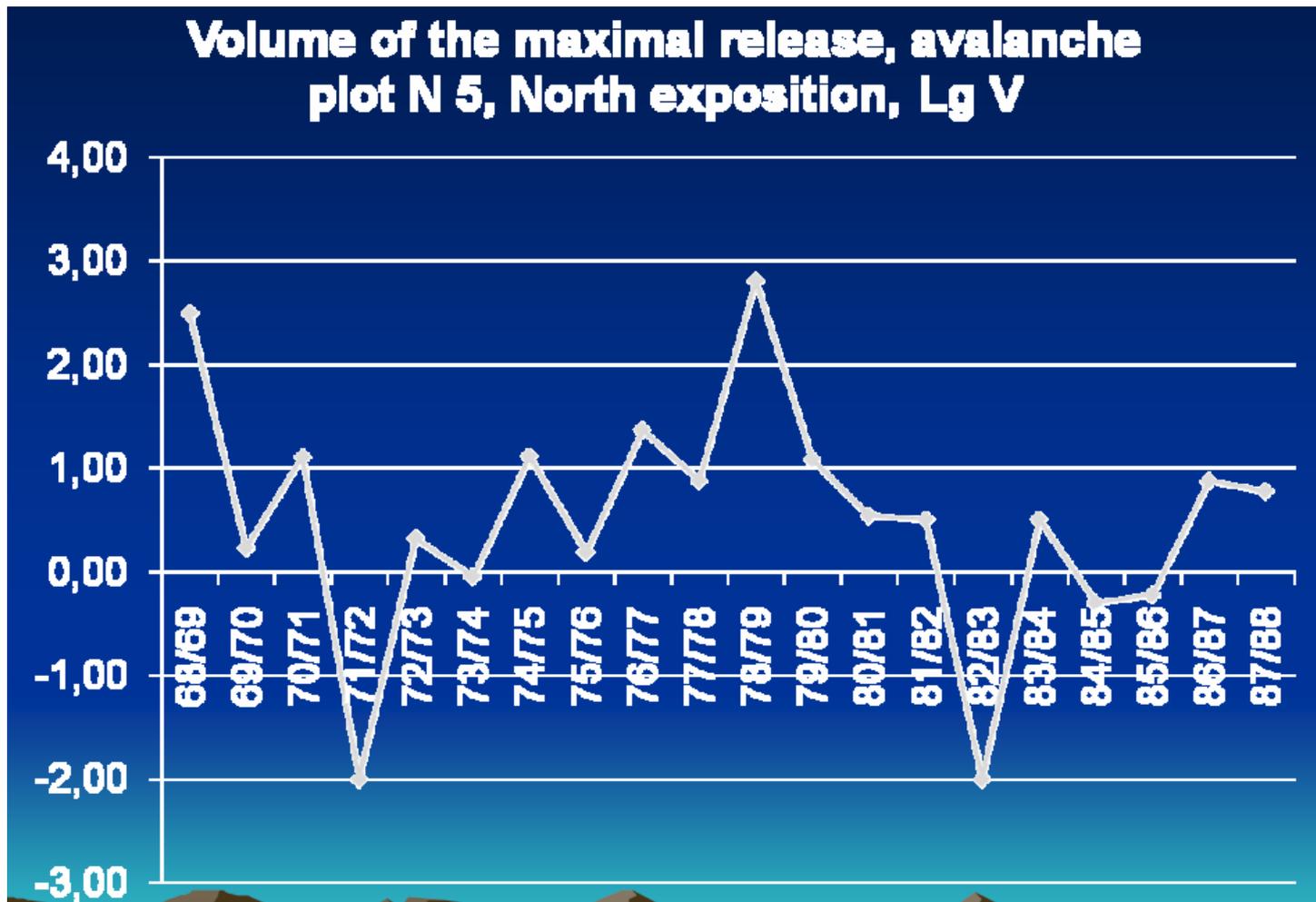
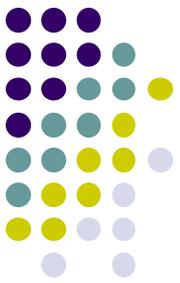


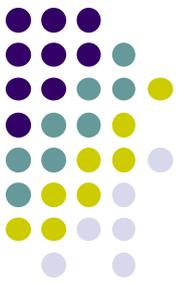
In the former USSR technique and equipment for measuring precipitation changed five times:

- measurement of precipitation twice per day (1936);
- replacement of devices, measuring precipitation (late 1940s - early 1950s)
- measurement of precipitation four times per day and wetting value corrections (0.2 mm for all types of precipitation, 1966)
- change in wetting value corrections (0.1 mm for solid precipitation, 1967);
- measurement of precipitation twice per day (1986);

By estimates done in 1960 -1970s precipitation quantity can vary by more than 50 per cent without taking into considerations mentioned above changes.

Direct instrumental observation/hazards warnings and triggered emergencies



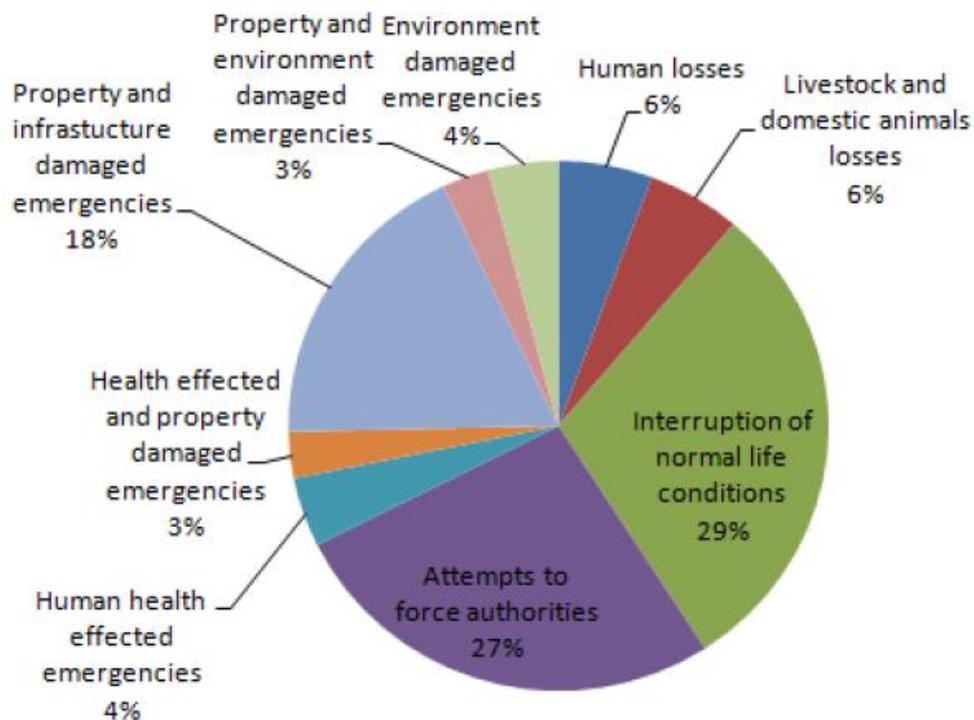
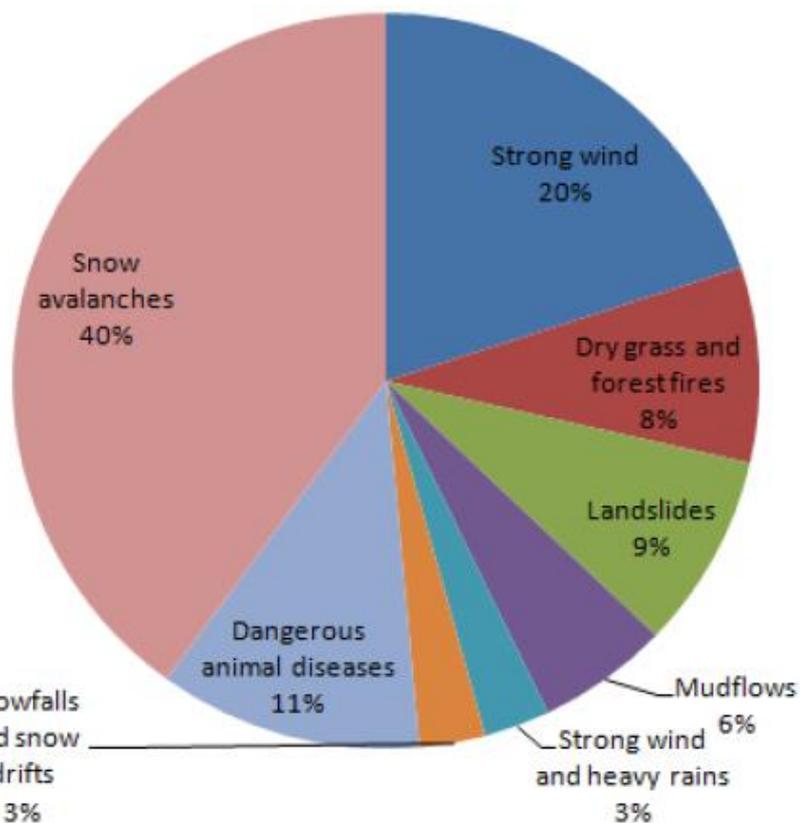


Direct instrumental observation/hazards warnings and triggered emergencies

- Number of maximal and catastrophic avalanches for 1975-1985 by Cadastre of Snow Avalanches of USSR, volume 13, 14. Middle Asia and Kazakhstan. Snow and Snow Avalanche Observation stations (Chim-Bulak, Kok-Suu, Kamchik, Ducant, Kyzylsu, Chimgan, Shabraz, Anzob, Novabad, Severtsova Glacier and etc.) data and terrestrial and helicopter based observations. **Even years: 294 (42%) Odd years: 407 (58%)**
- Humber of hazards warnings issued by KyrgyzHydromet

	Number of hazards warnings issued by KyrgyzHydromet	Number of cleared emergencies data by reported by MoES
2011	31	136
2012	54	374
2013	40	155

Different approaches to classification. Source: Risk Monitoring Update for March 2013. UN RCO, Bishkek, April 2014



Call to action



- To pay more attention and attract additional resources for secondary data clearance and scientific and technical justification of primary data collection
- Ensuring of homogenous data is crucial and necessity step before doing any study
- Instrumental observation of hazards/hazards warnings are the main or even single source to find reliable correlation between disaster/emergency and weather and climate patterns and to estimate possible risks
- Hydromet institutions and staff need more support to make data reliable
- Published studies on climate issues should be assessed in regards what data were used to make conclusions