

REGIONAL CLIMATE RISK RESILIENCE REGIONAL WORKSHOP

Hydro-meteorological Emergency Situations in Tajikistan: 1997 – 2009

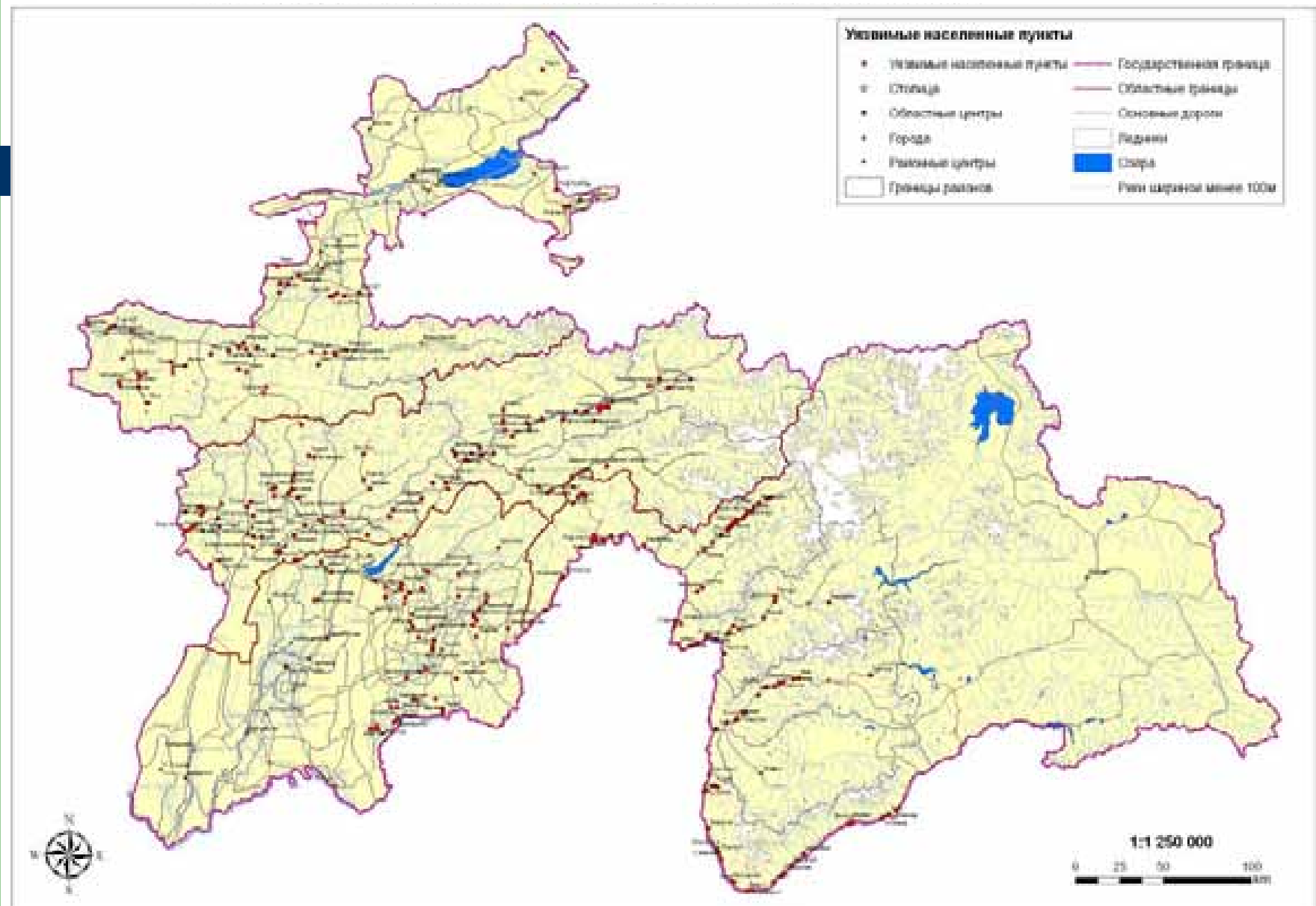
Deputy Head of IMAC CoES&CD GRT
Mirzohonova N.A.

Dushanbe 2010

Content

- Natural disasters (ES) in Tajikistan during 1997 – 2009
- Hydrometeorology Emergency Situations in Tajikistan during 1997 – 2009
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Settlements prone to natural disasters



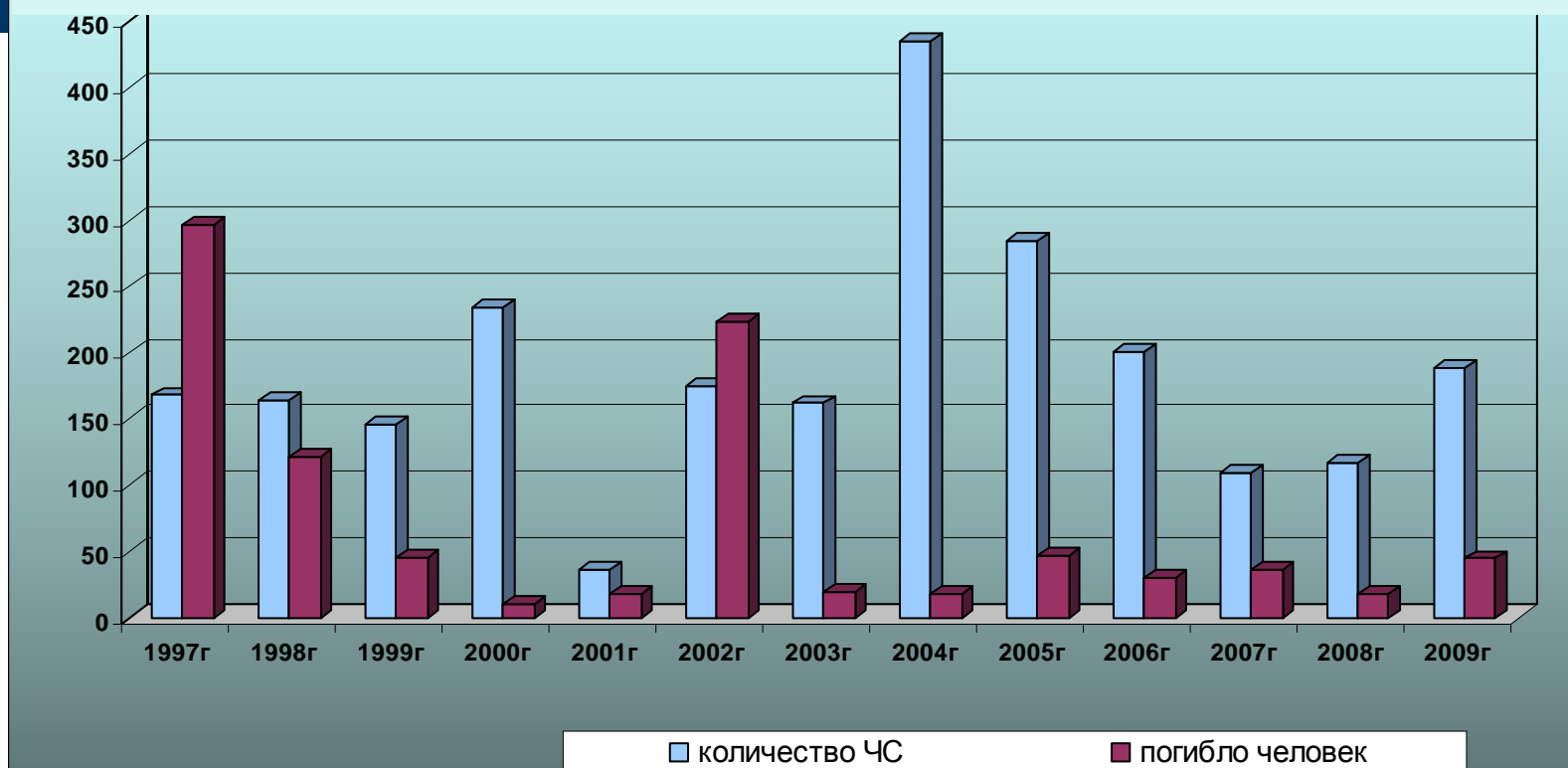
Number of natural disasters (ES) in Tajikistan during 1997 – 2009

- Total No. of natural disasters (ES) during the indicated period – 2,421
- In average - 186 ES per year
- Highest No. – 434 ES (2004)
- Lowest No. – 37 ES (2001)

No. of human deaths caused by natural disasters (ES) in RT during 1997 – 2009

- 932 human deaths during the indicated period
- In average – 72 fatalities per year
- Highest No. of fatalities – in 1997(296) and 2002 (223)
- Even during the calmest year of 2000 – 11 people died

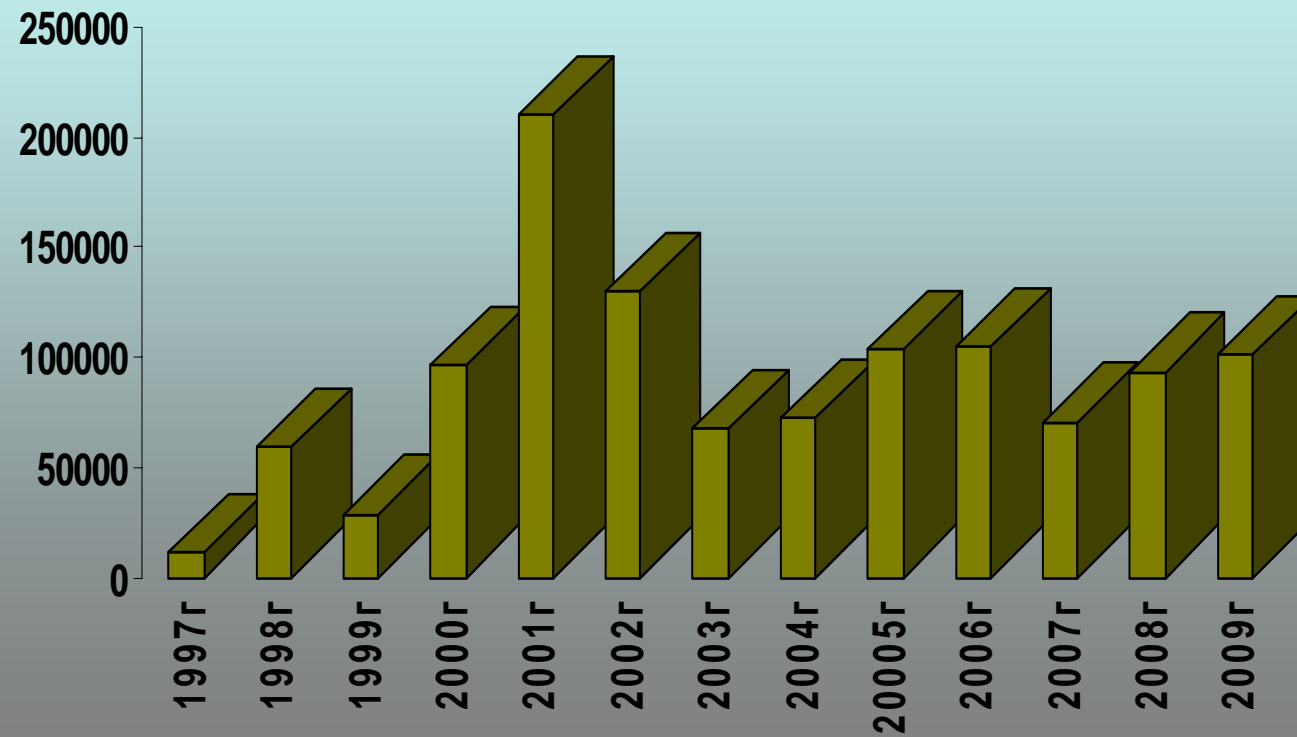
No. of natural disasters (ES) in RT during 1997-2009



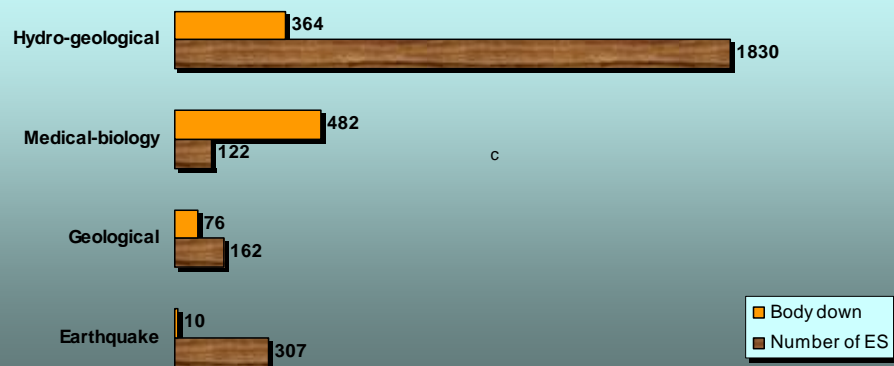
Damages caused by natural disasters (ES) in RT during 1997 – 2009

- Total damages during the indicated period amounted to 1bln. 147mln. and 851.7 thousand somoni
- Average annual damages - 88mln.296 thousand somoni
- Highest damages – in 2001 (209mln.930.5 thousand somoni
- Lowest damages - in1997 – 11mln.200thousand somoni

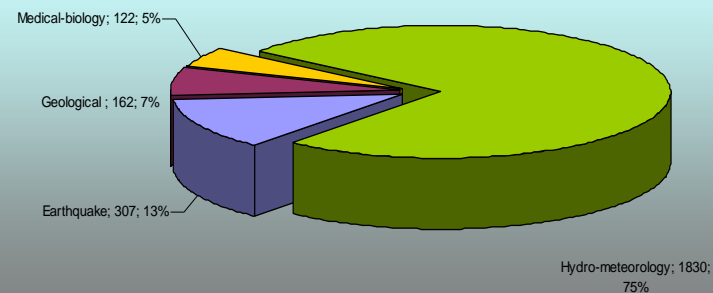
Damages caused by natural disasters (ES) in RT during 1997-2009
(in thousands of somoni)



Number of Emergency Situations 1997 - 2009



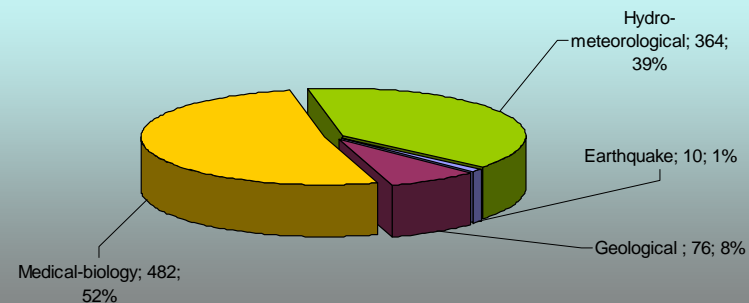
Emergency situation damage amount in RT 1997 - 2009rr



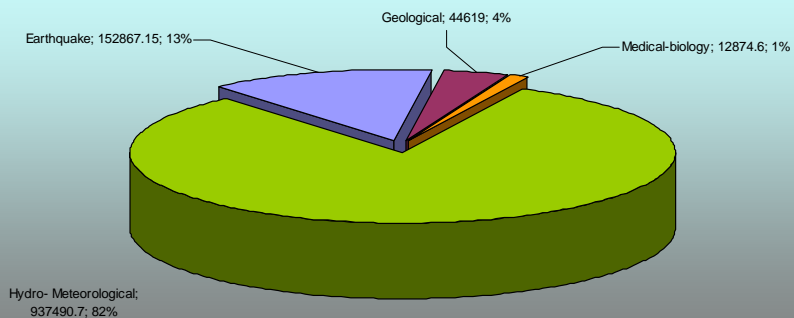
Damages caused by natural disasters (ES) in RT during 1997-2009 (in thousands of somoni)



Body down amount from emergency situations in RT 1997 - 2009rr



Damage amount in Tajikistan from natural hazard ES 1997 - 2009rr (thousand somoni)



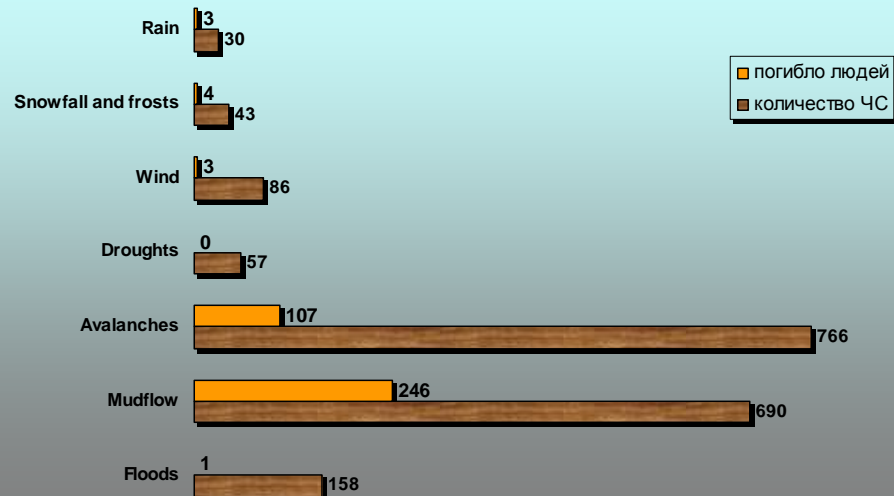
No. of hydro-meteorological ES in RT during 1997 – 2009

- Total no. of ES caused by bad weather conditions during the indicated period - 1830
- Highest No. (2004) – 410 ES.
- Lowest No.(2001) – 26 ES
- Hydro-meteorological ES make 72% of total No. of natural disasters (ES)

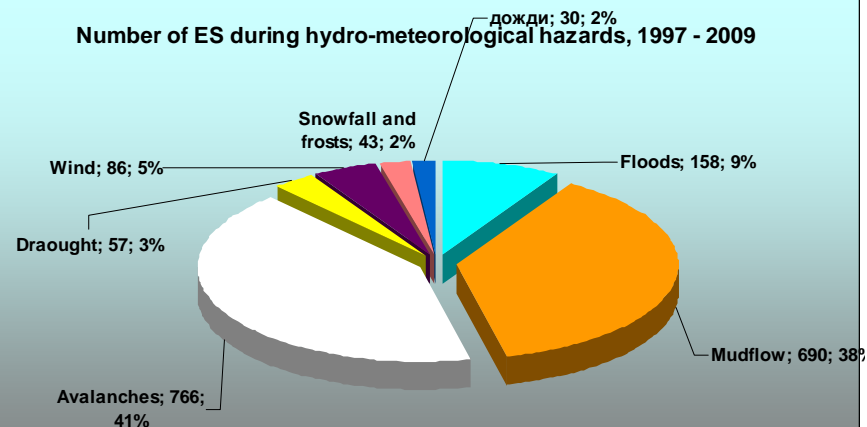
No. of fatalities caused by hydro-meteorological ES in RT during 1997 – 2009

- 364 people died as a result of hydro-meteorological ES, which makes 39% of all deaths caused by natural disasters (ES)
- Highest No. of deaths caused by HMES – 110 people in 1998
- Lowest - 1 person in 2000

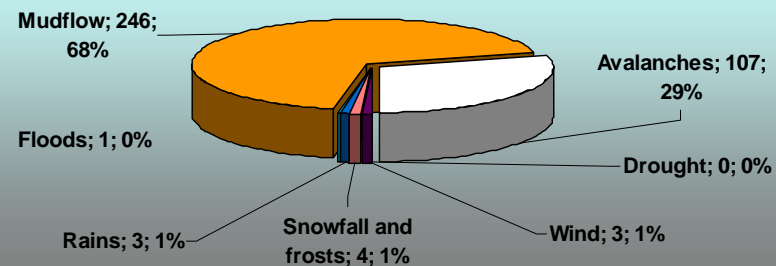
Number of ES and human casualties from hydro-meteorological hazards in Tajikistan 1997 - 2009



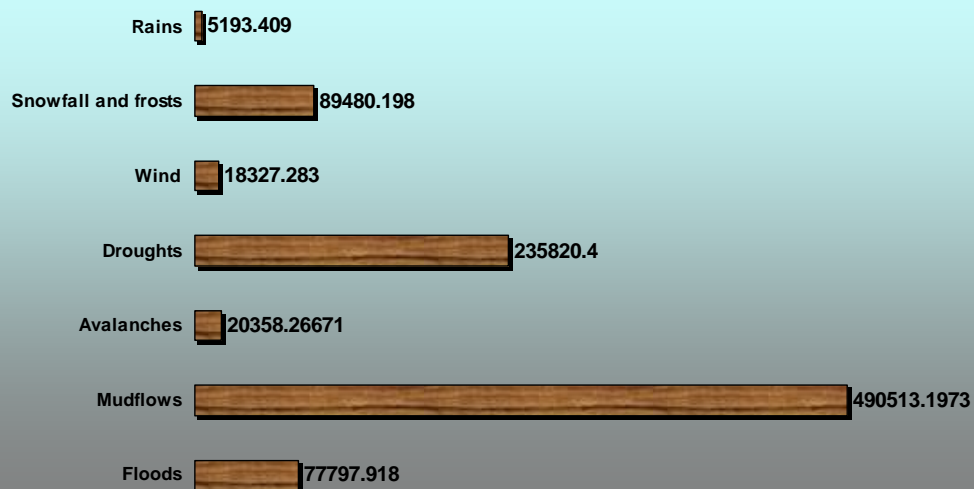
Number of ES during hydro-meteorological hazards, 1997 - 2009



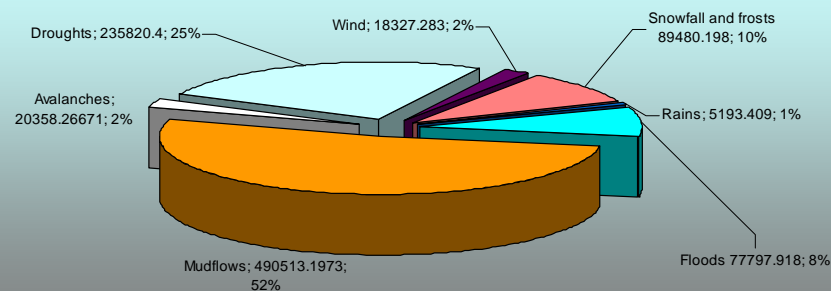
Number of human casualties from hydro-meteorological hazards 1997 - 2009



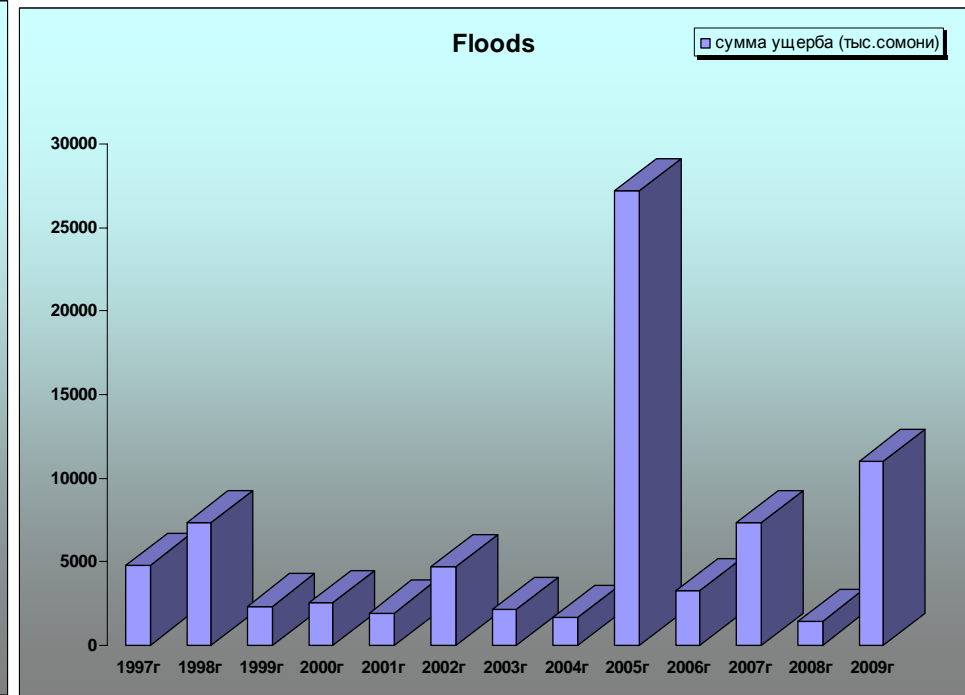
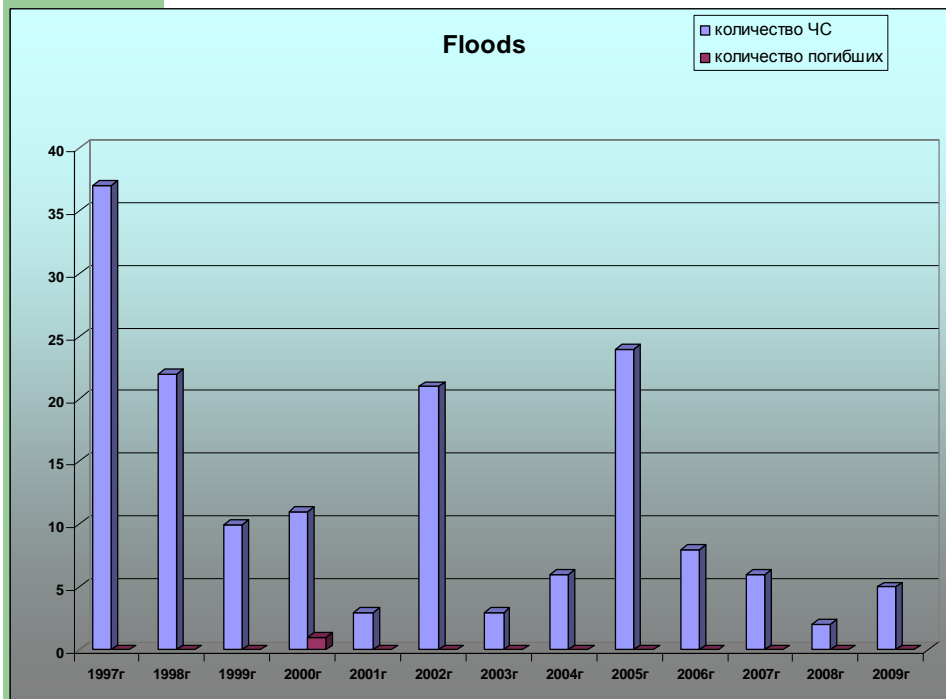
Damage cost from hydro-meteorological hazards, 1997 - 2009



Damage cost from hydro-meteorological hazards, 1997 - 2009

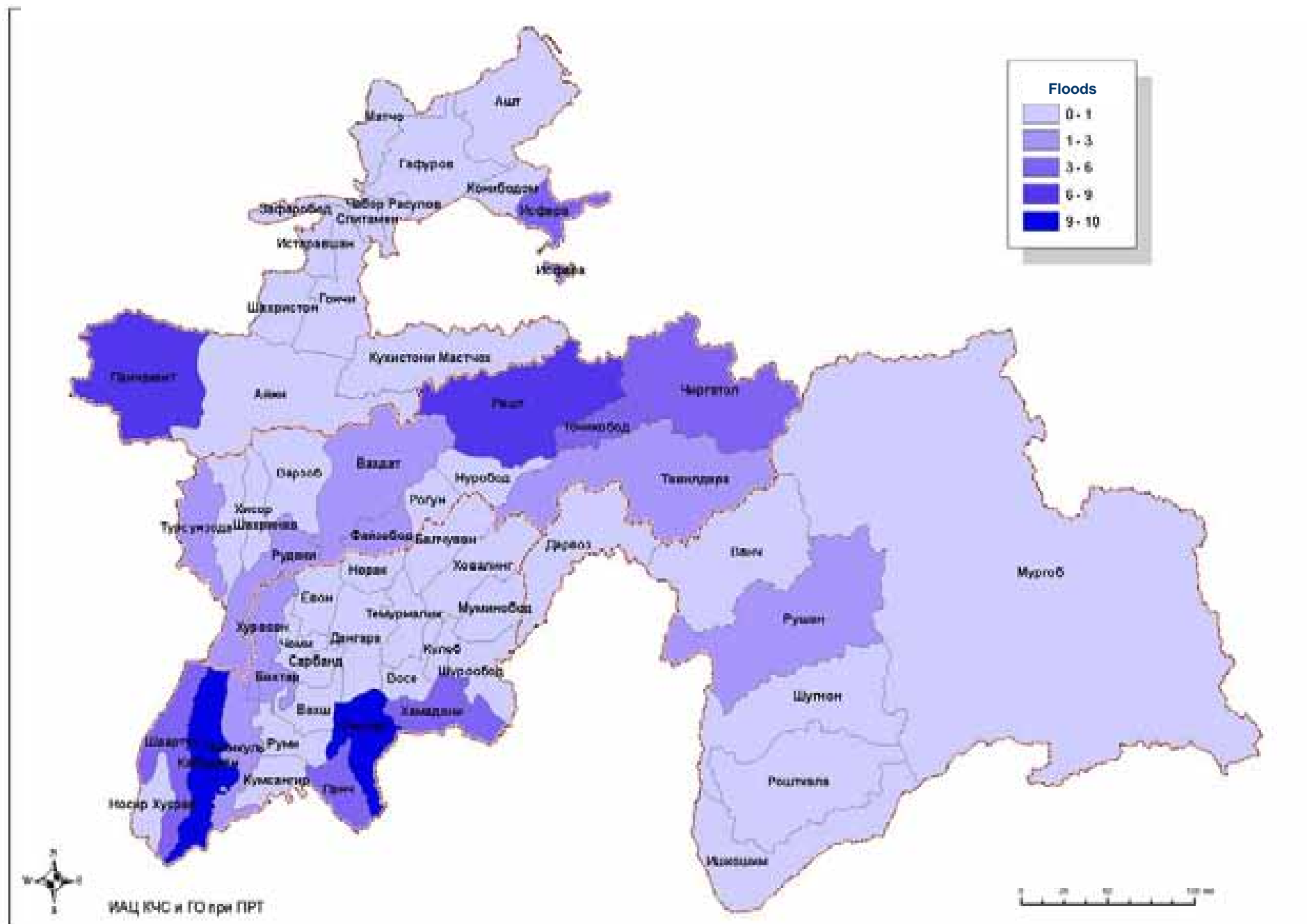


Data on ES, human deaths and damages in RT during 1997 – 2009. FLOODS



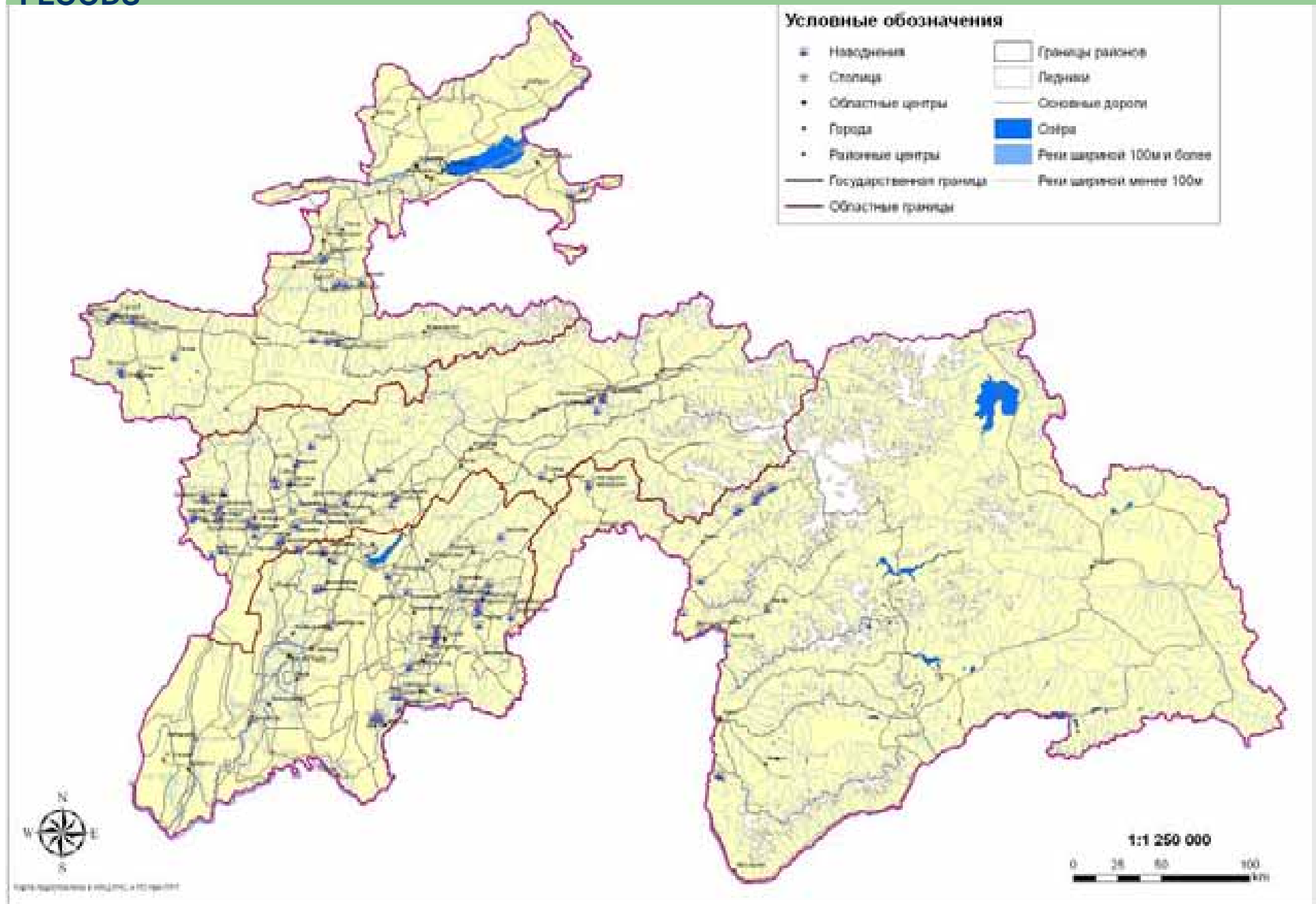
No. of natural disasters (ES) in RT during 1997-2009

FLOODS



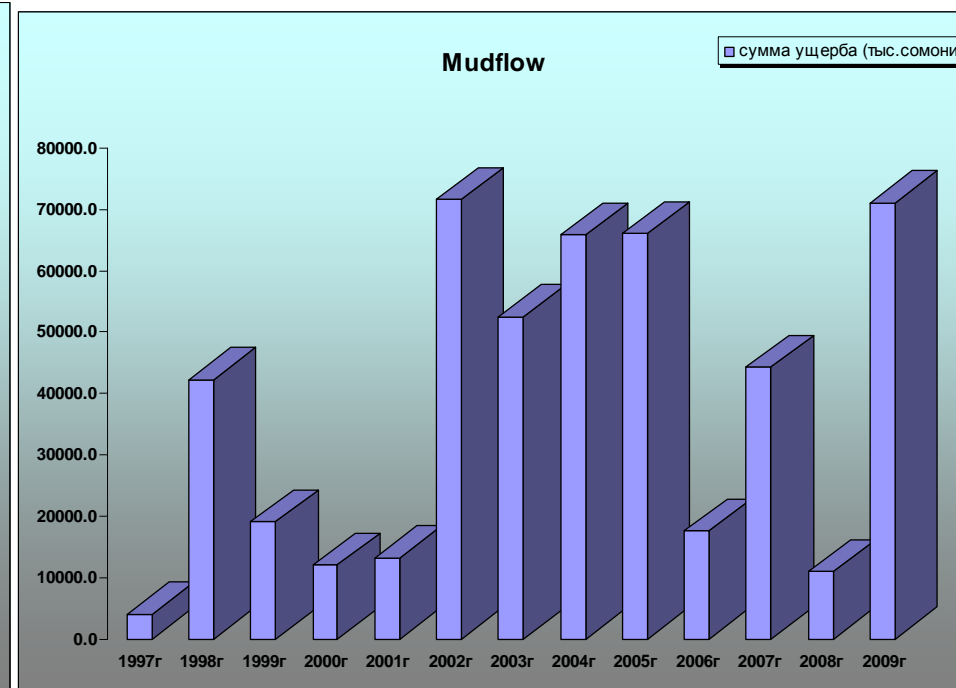
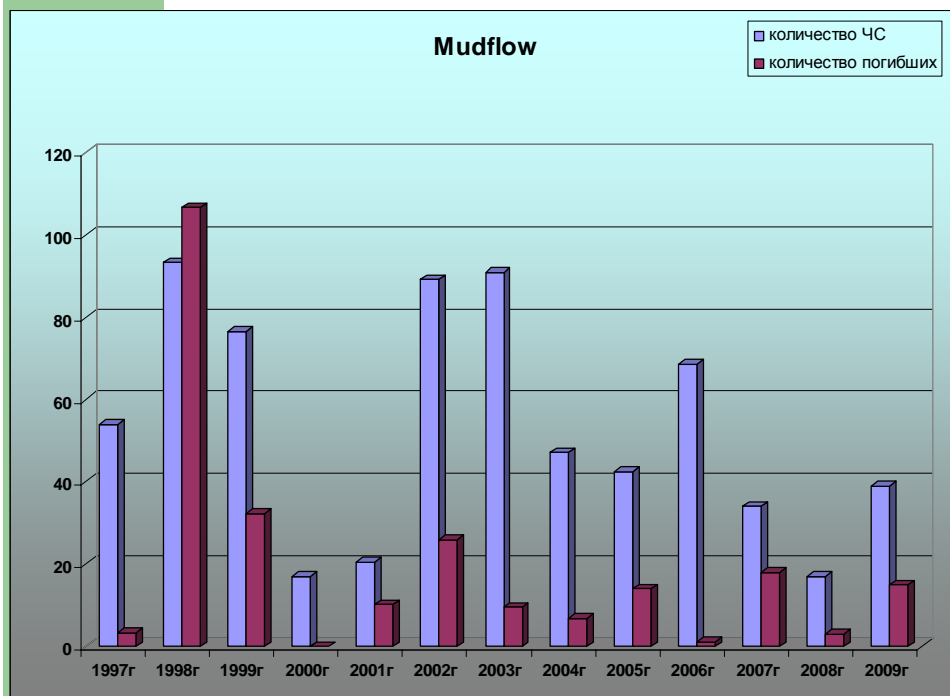
Settlements prone to natural disasters.

FLOODS



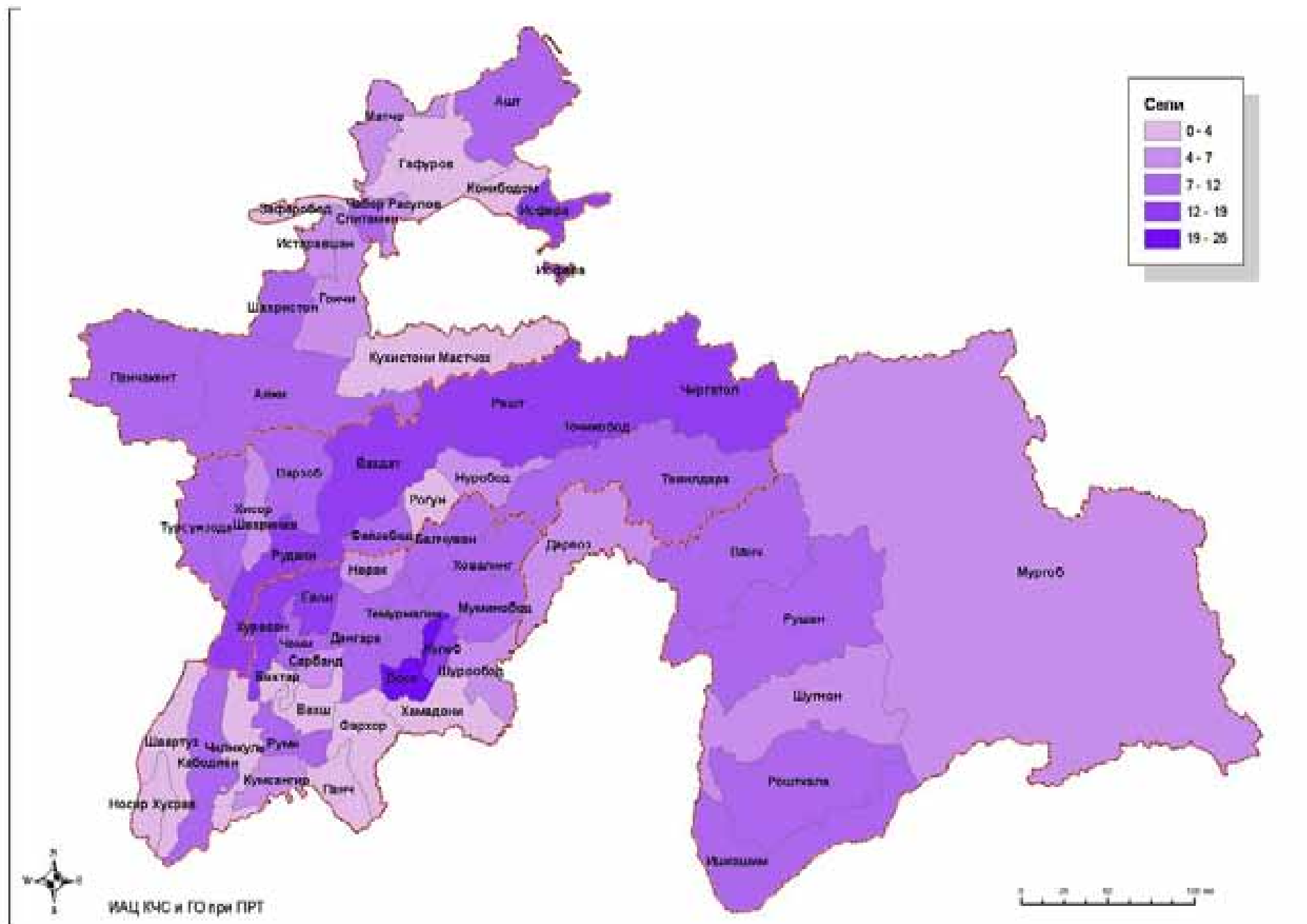
Data on ES, human deaths and damages in RT during 1997 – 2009.

MUDFLOWS.



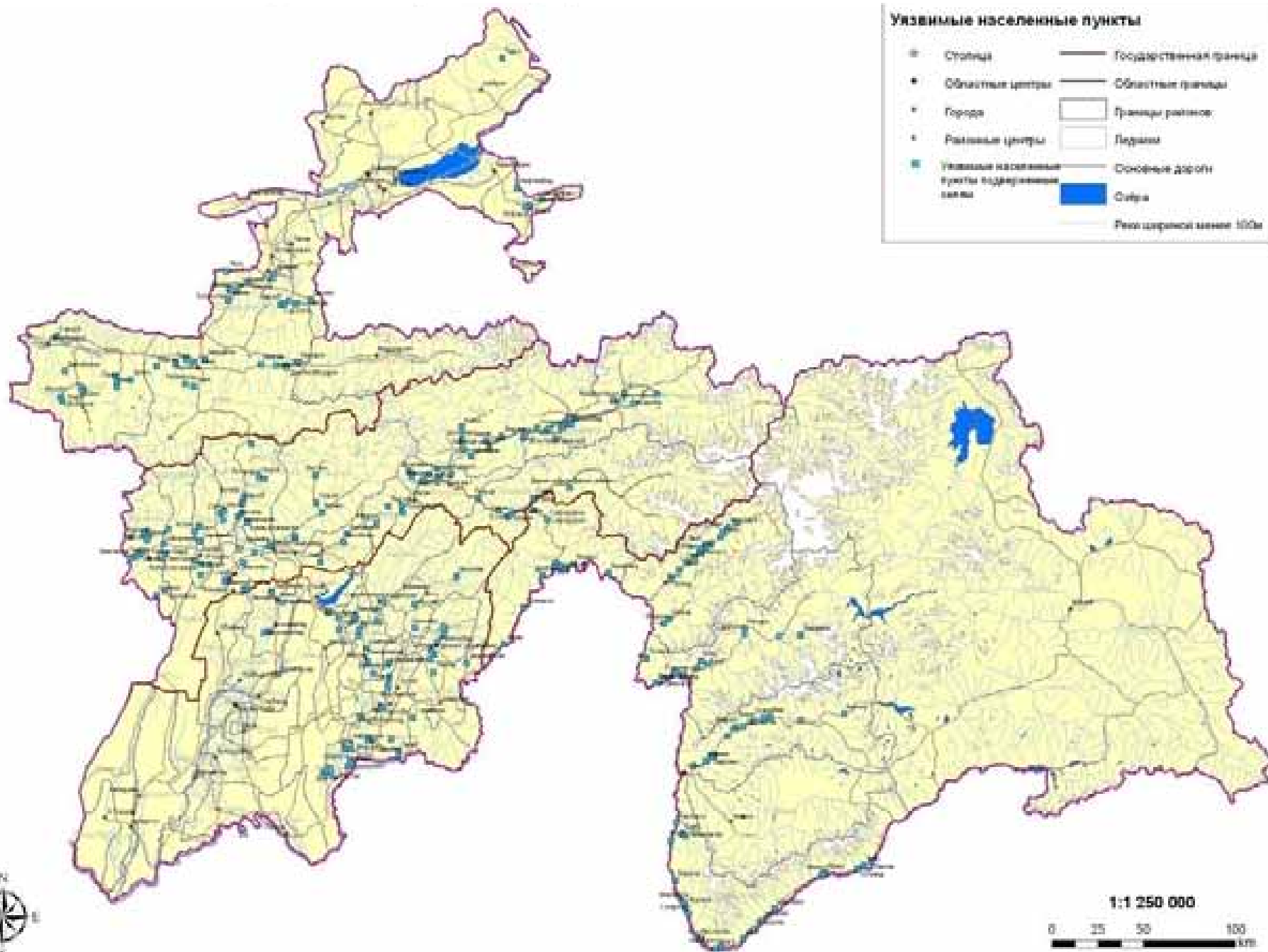
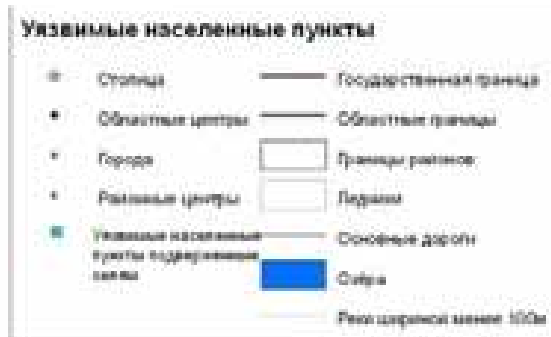
No. of natural disasters (ES) in RT during 1997-2009

MUDFLOWS

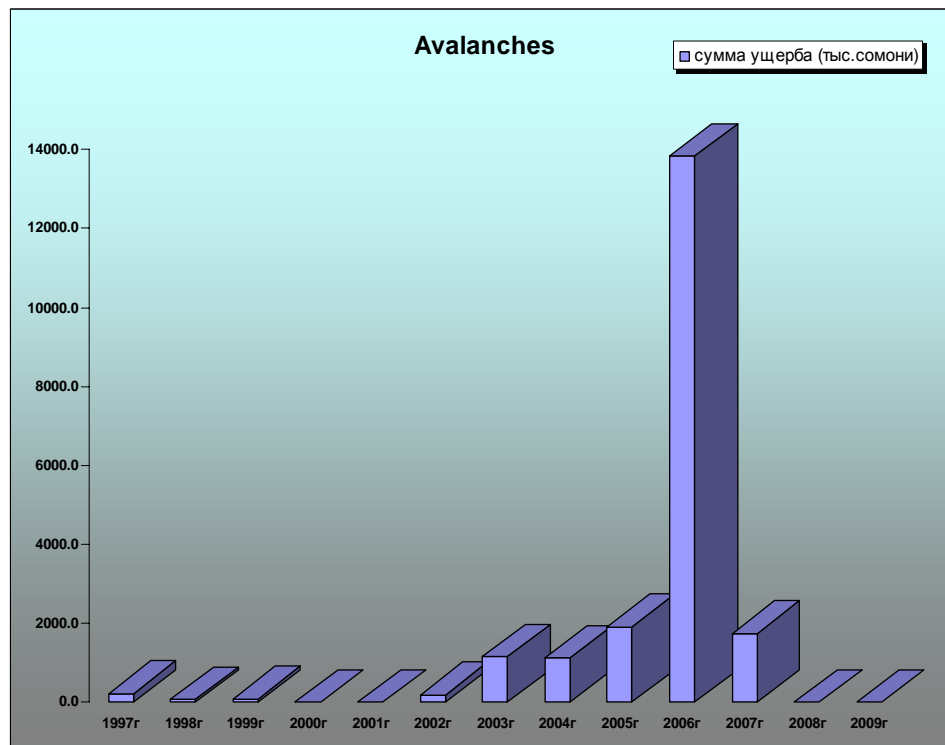
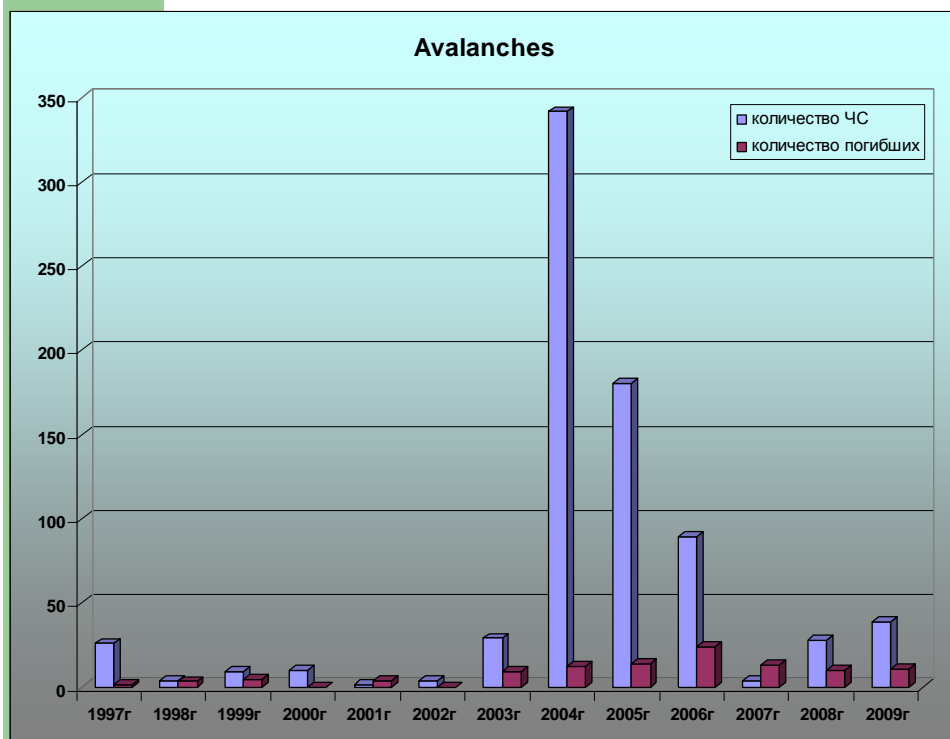


Settlements prone to natural disasters.

MUDFLOWS

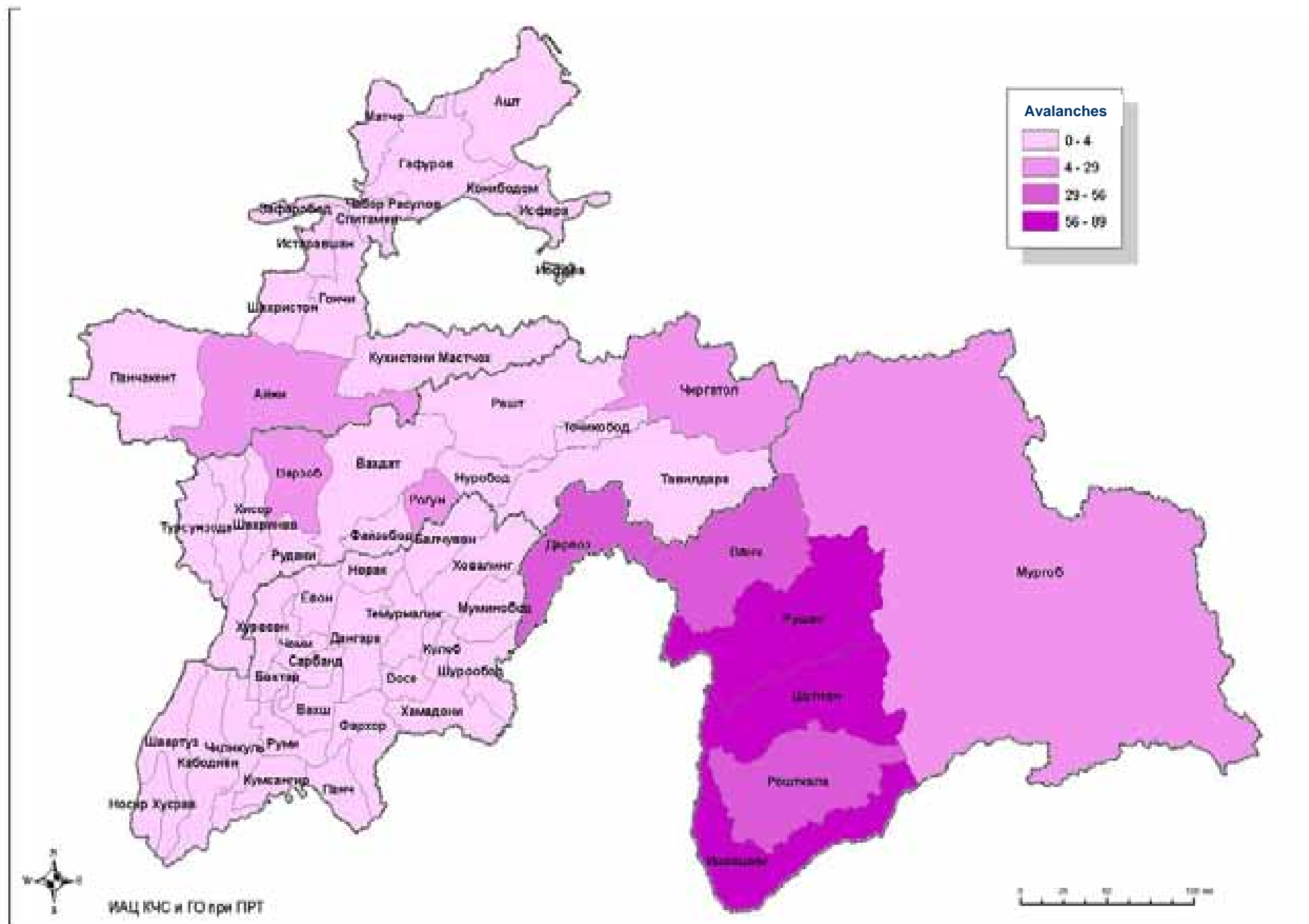


Data on ES, human deaths and damages in RT during 1997 – 2009. AVALANCHES



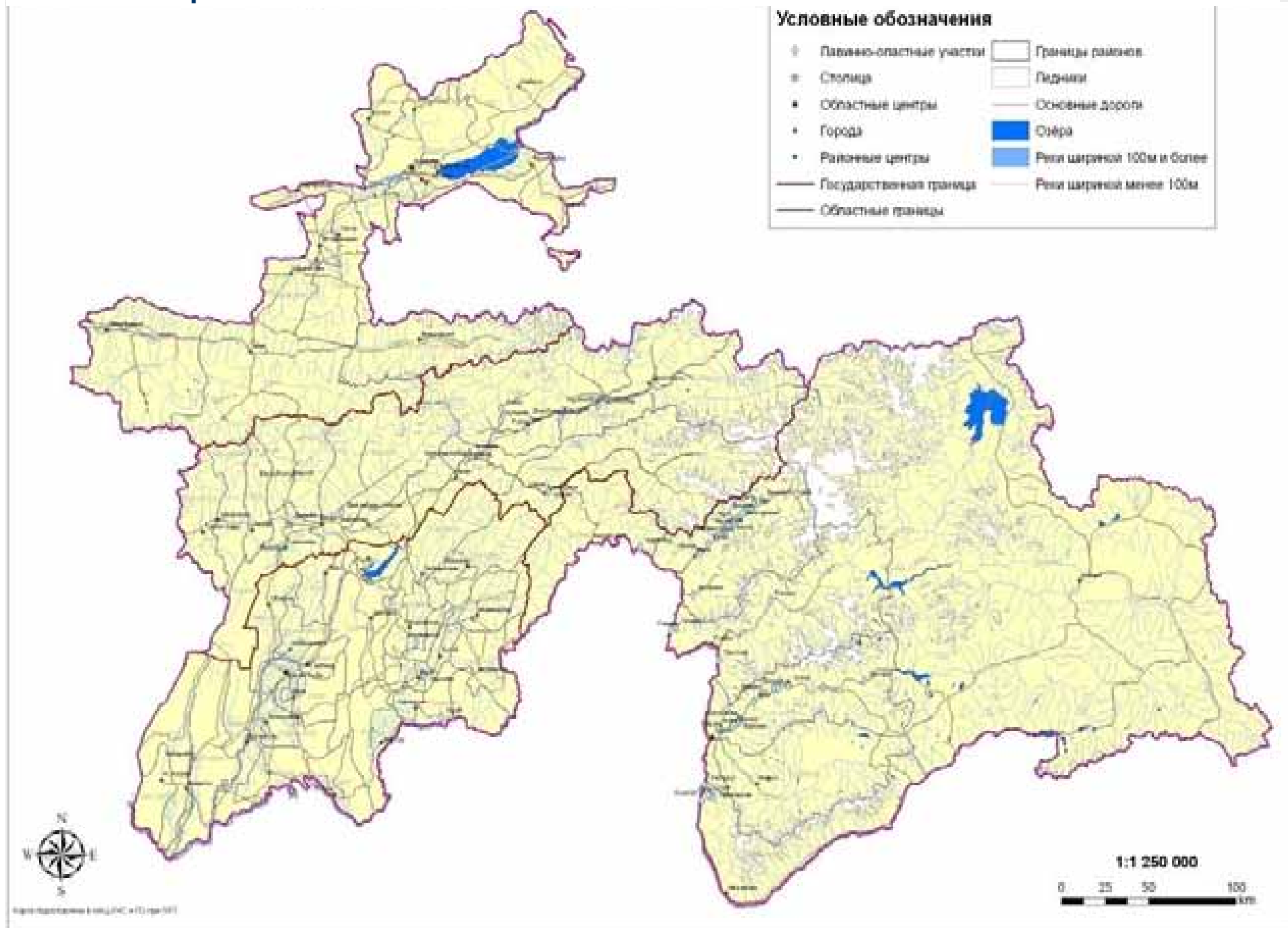
No. of natural disasters (ES) in Tajikistan during 1997-2009

AVALANCHES

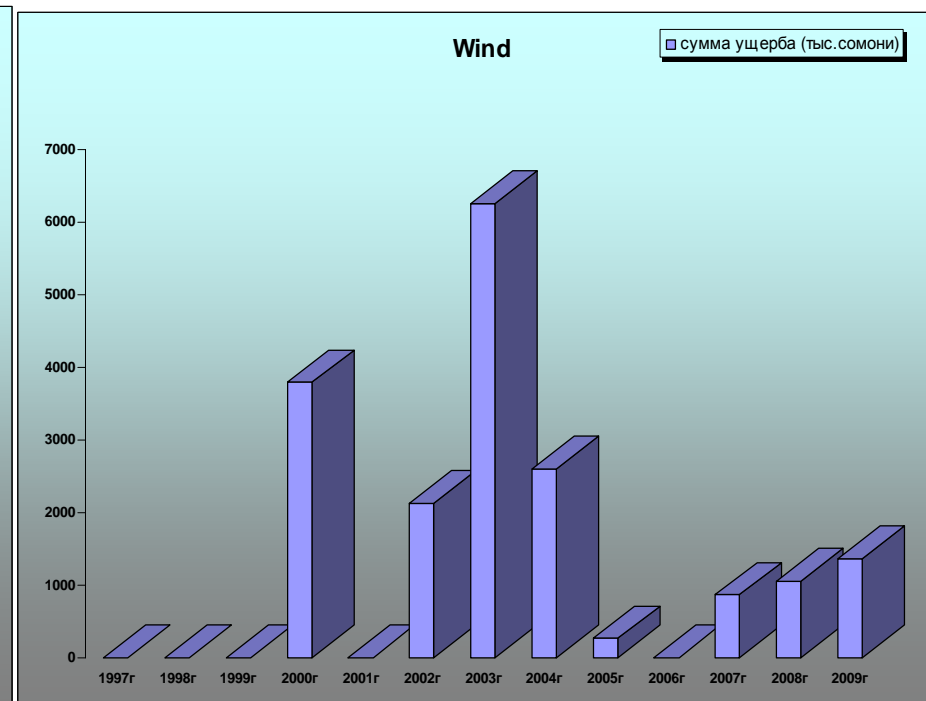
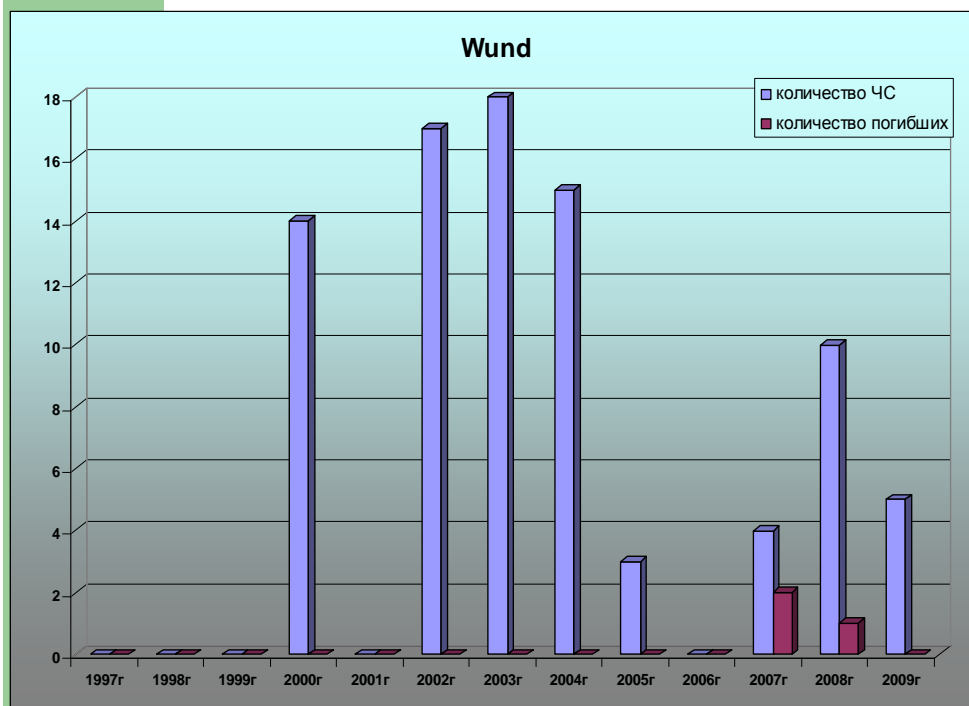


Settlements prone to natural disasters

AVALANCHES

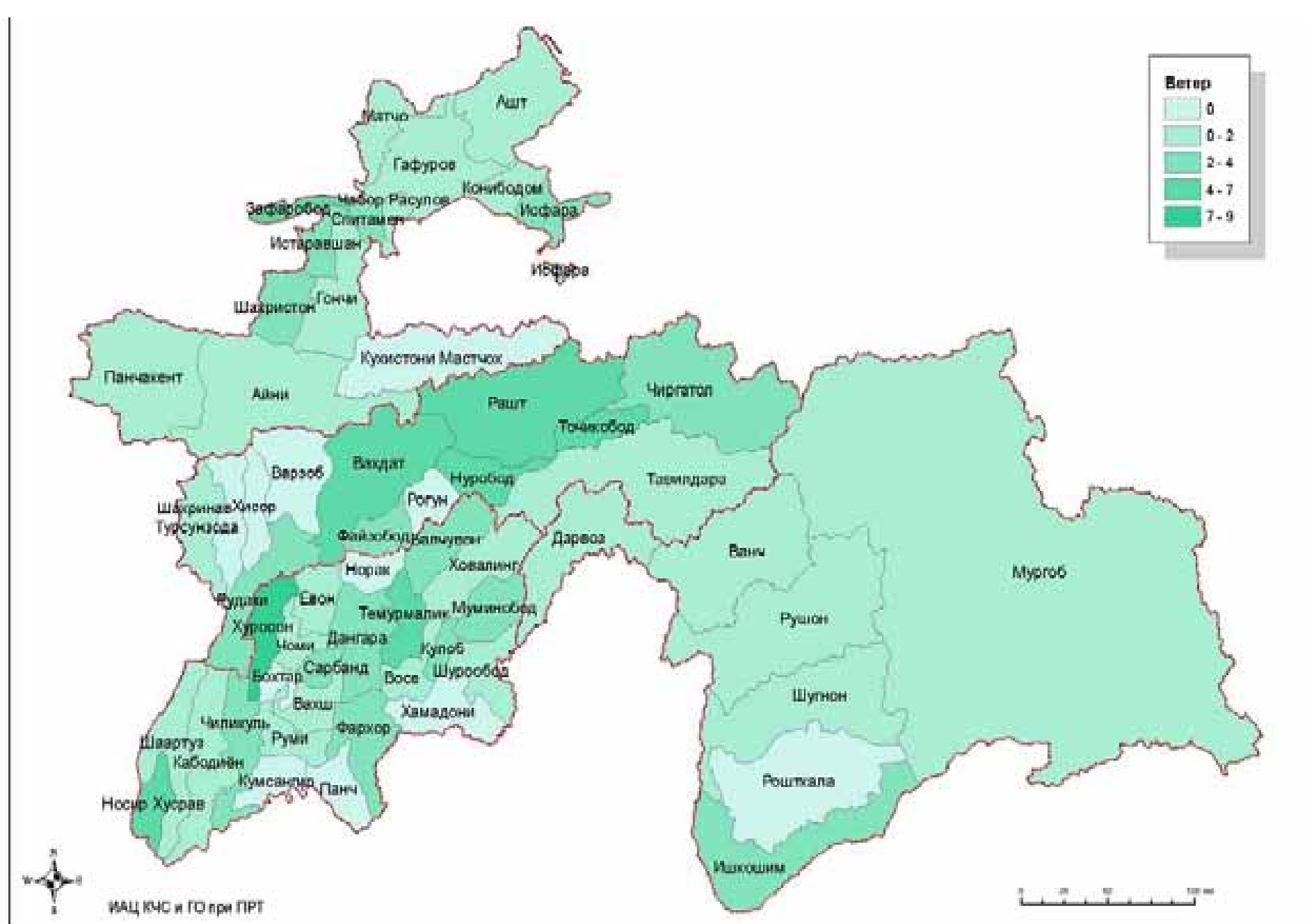


Data on ES, human deaths and damages in RT during 1997 – 2009. WINDS



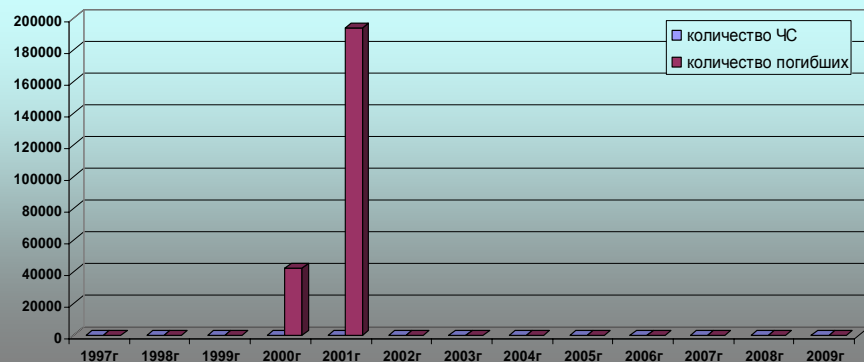
No. of natural disasters (ES) in Tajikistan during 1997-2009

WINDS

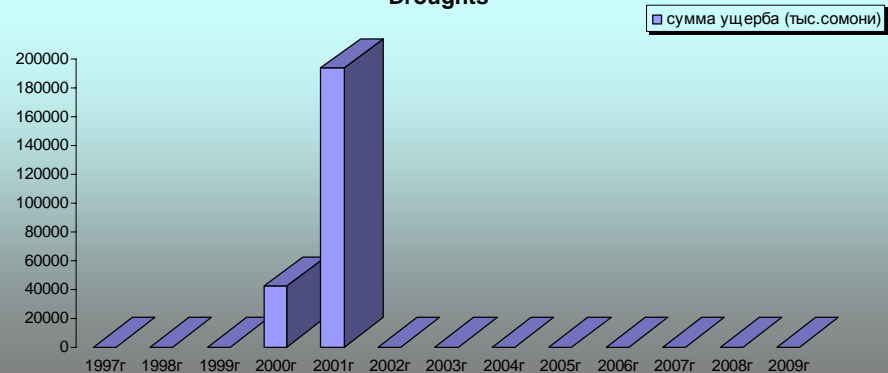


Data on ES, human deaths and damages in RT during 1997 – 2009. DROUGHTS. RAINS. SNOWFALLS AND FROSTS.

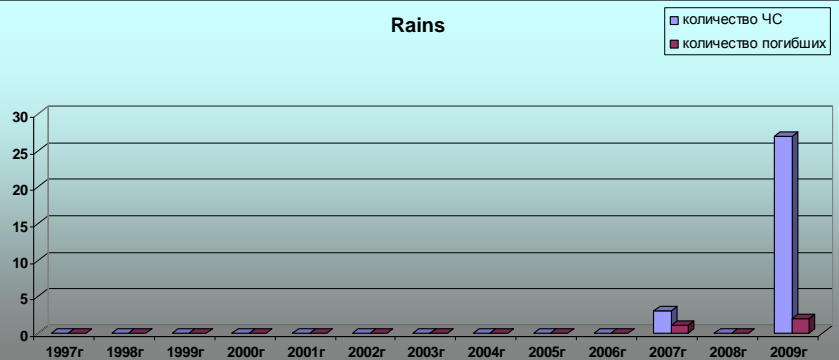
Frosts



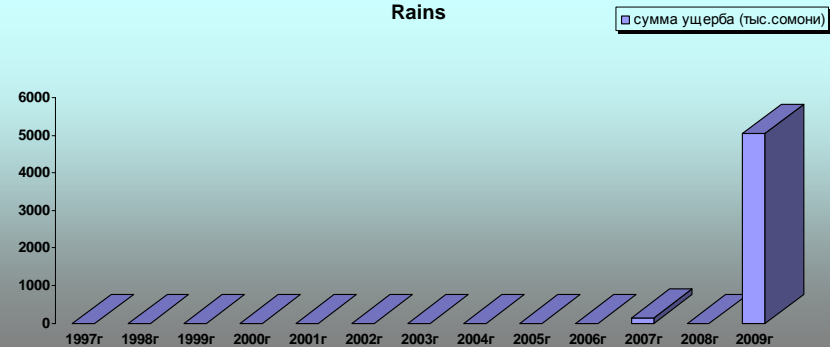
Droughts



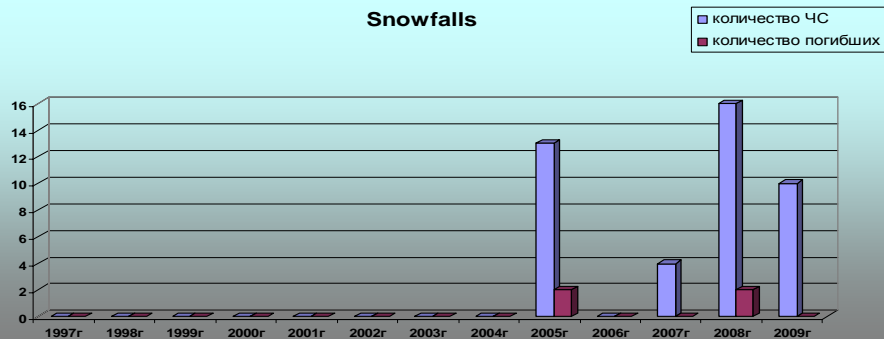
Rains



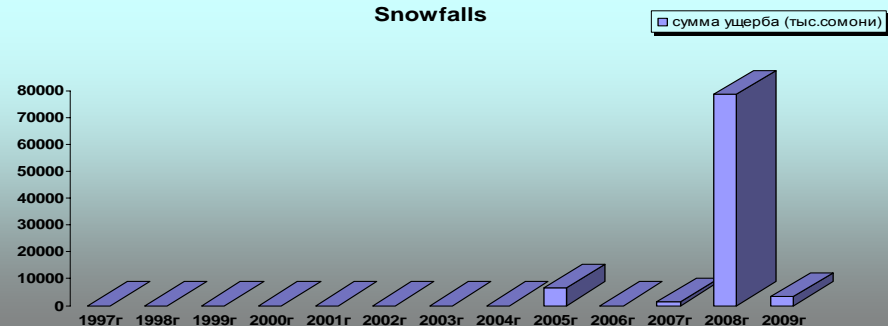
Rains



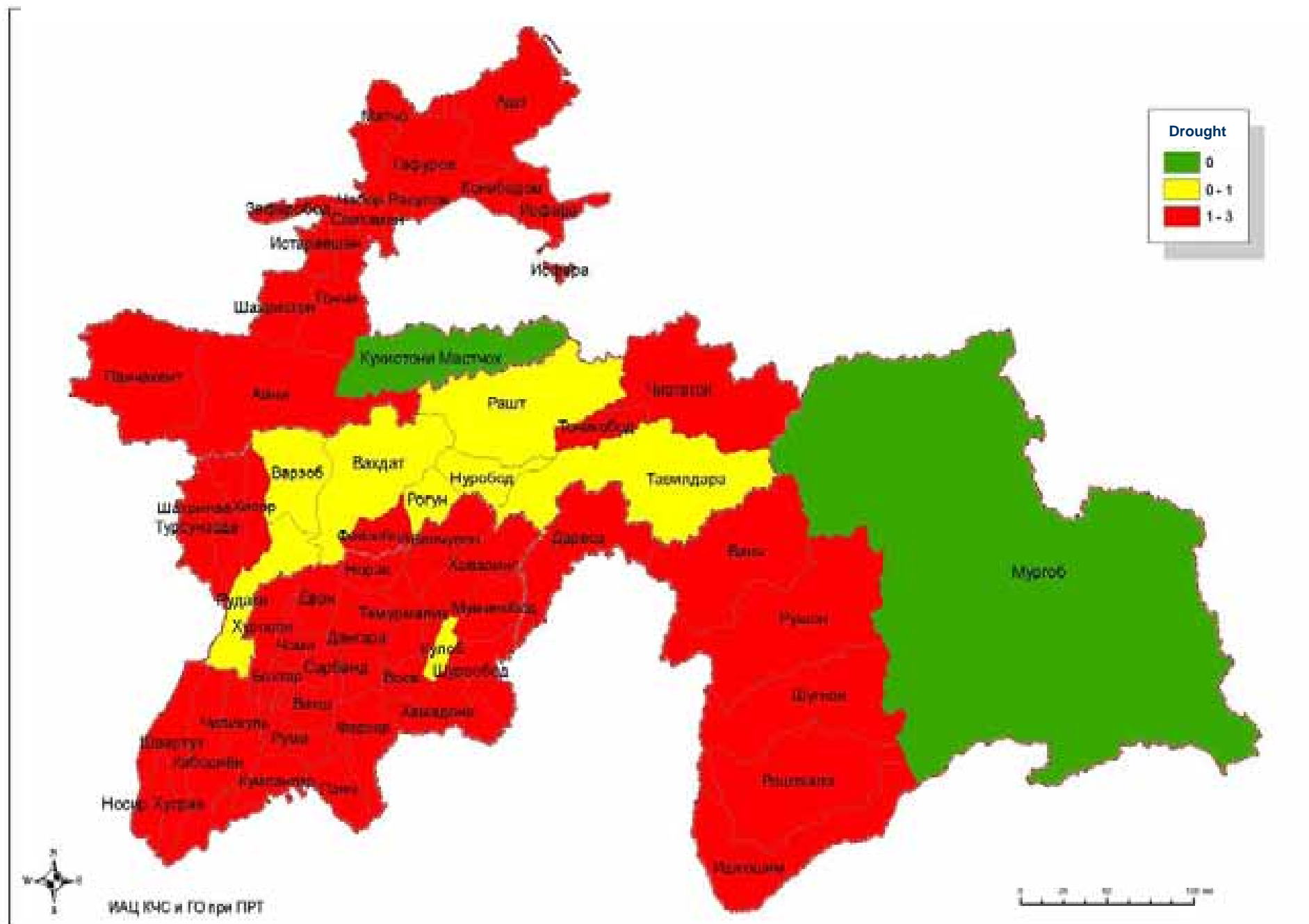
Snowfalls



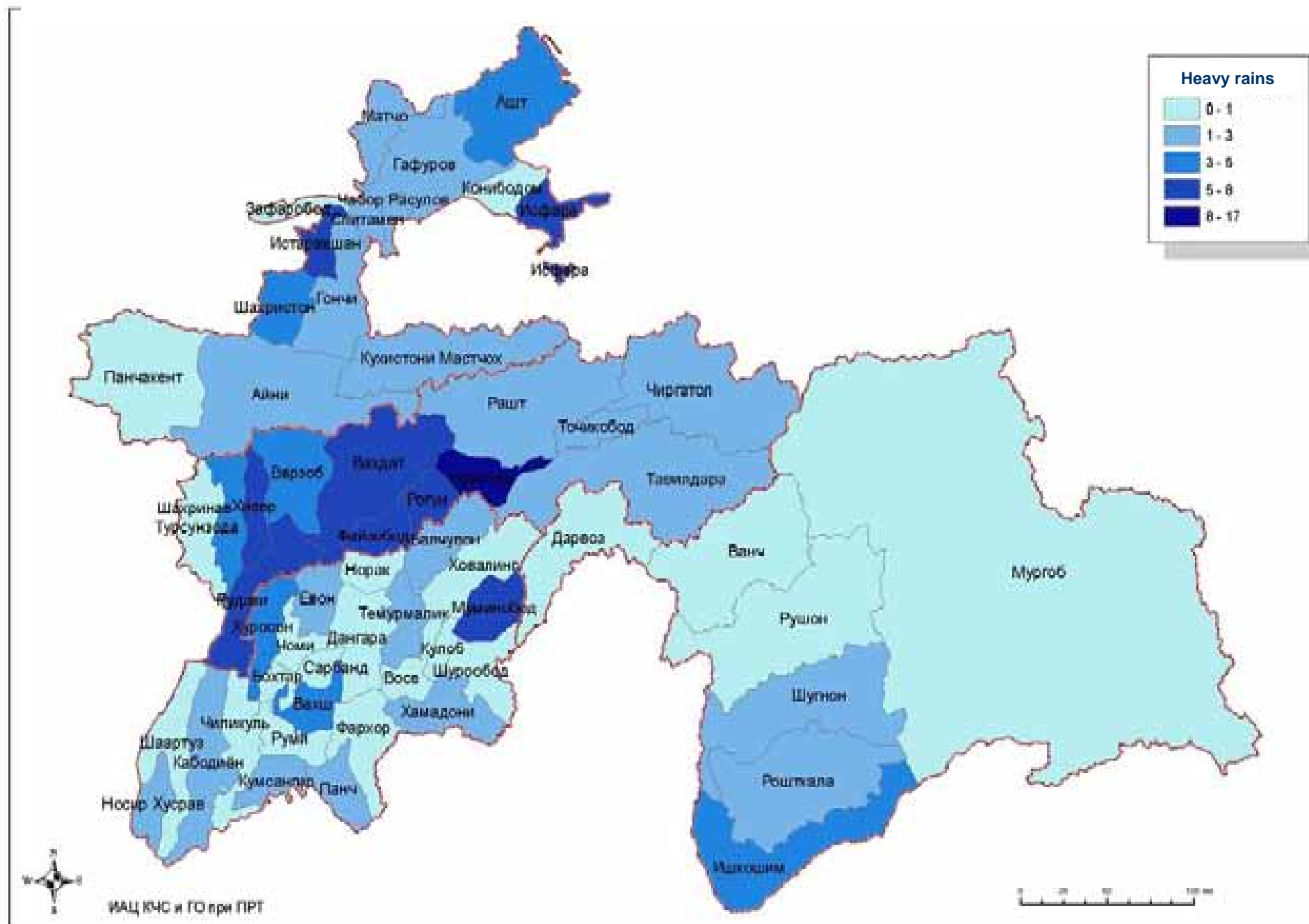
Snowfalls



DROUGHTS

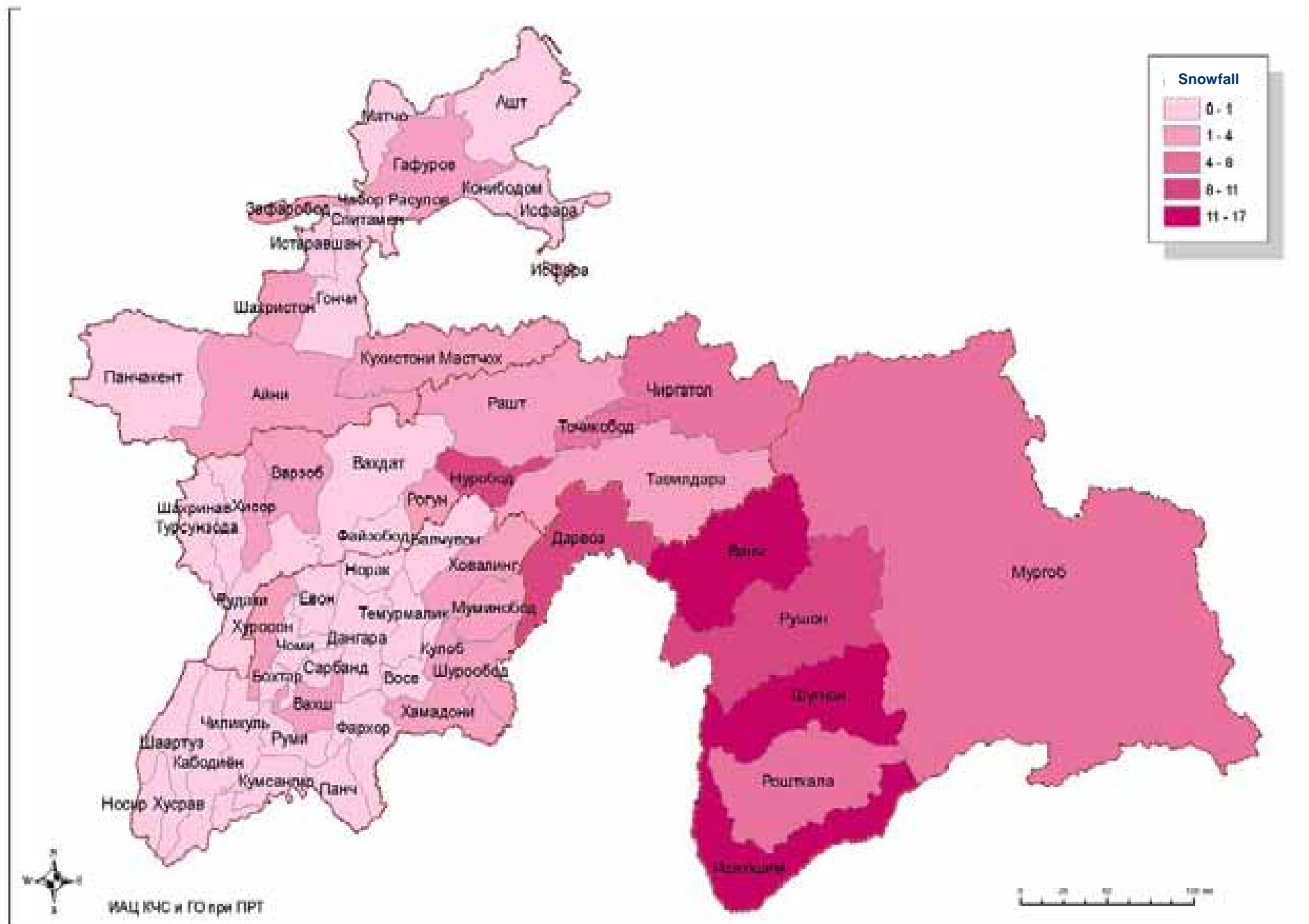


HEAVY RAINS



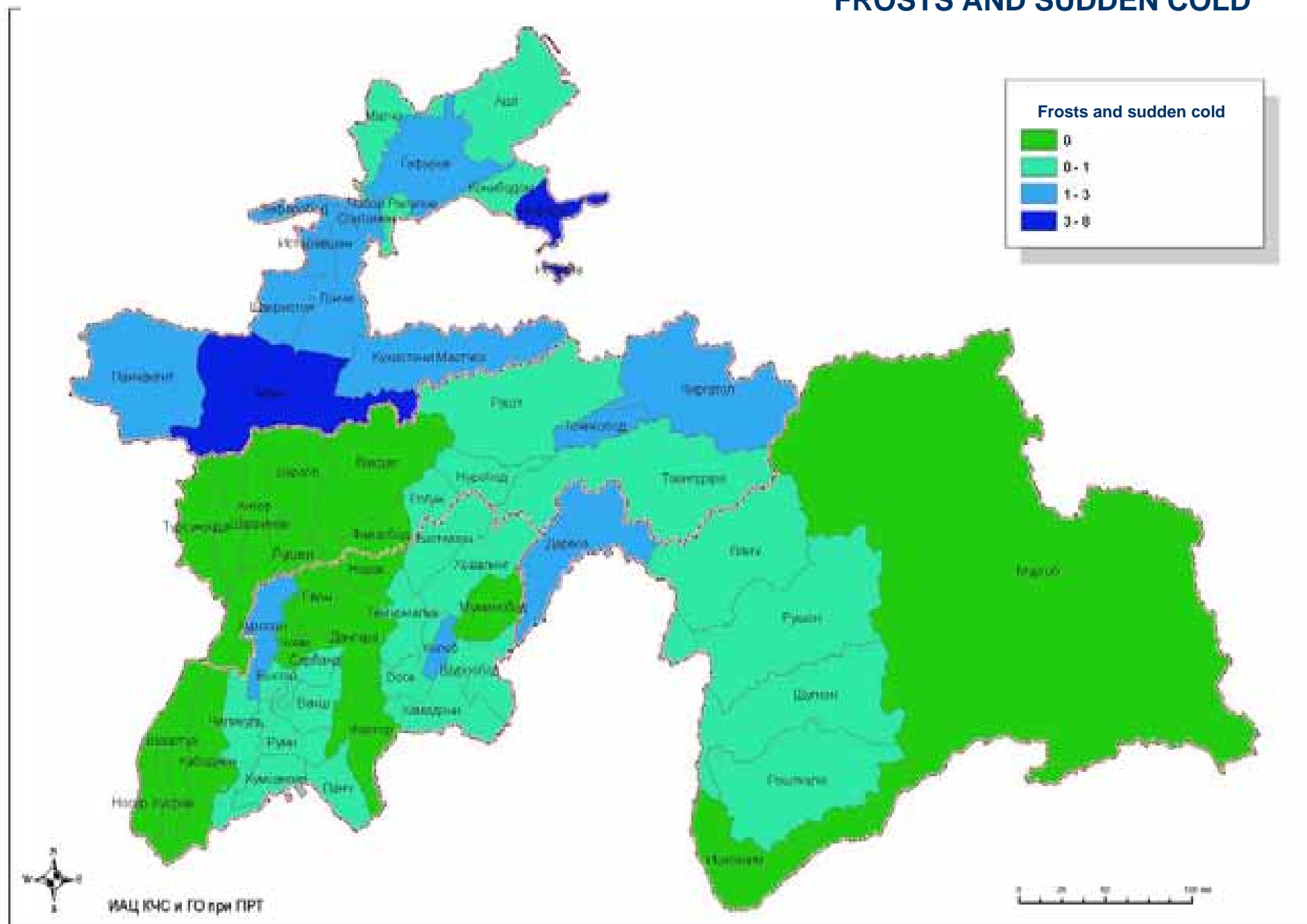
No. of natural disasters (ES) in Tajikistan during 1997-2009

SNOWFALLS



No. of natural disasters (ES) in Tajikistan during 1997-2009

FROSTS AND SUDDEN COLD



Conclusions

- Climate and weather factors cause the majority of natural disasters (ES) in Tajikistan resulting in huge damages and human deaths
- There has been very little research on interrelation between climate change and No. of ES, but for sure it needs additional research
- Monitoring and forecasting system needs improvement

Recommendations

- Improve natural disasters monitoring and forecasting systems by rehabilitating and upgrading hydro meteorological survey system
- Additional research to study climate change effects on the ES nature and frequency
- Develop and introduce ES forecasting tools in specific districts based on their climate situation and climate change specifics

This analysis has used data from the archives
(UZN&T CoES CD RT) and statistical reports from
1997 – 2009

Maps have been prepared by IMAC CoES CD RT

Thank you for your attention!!!

