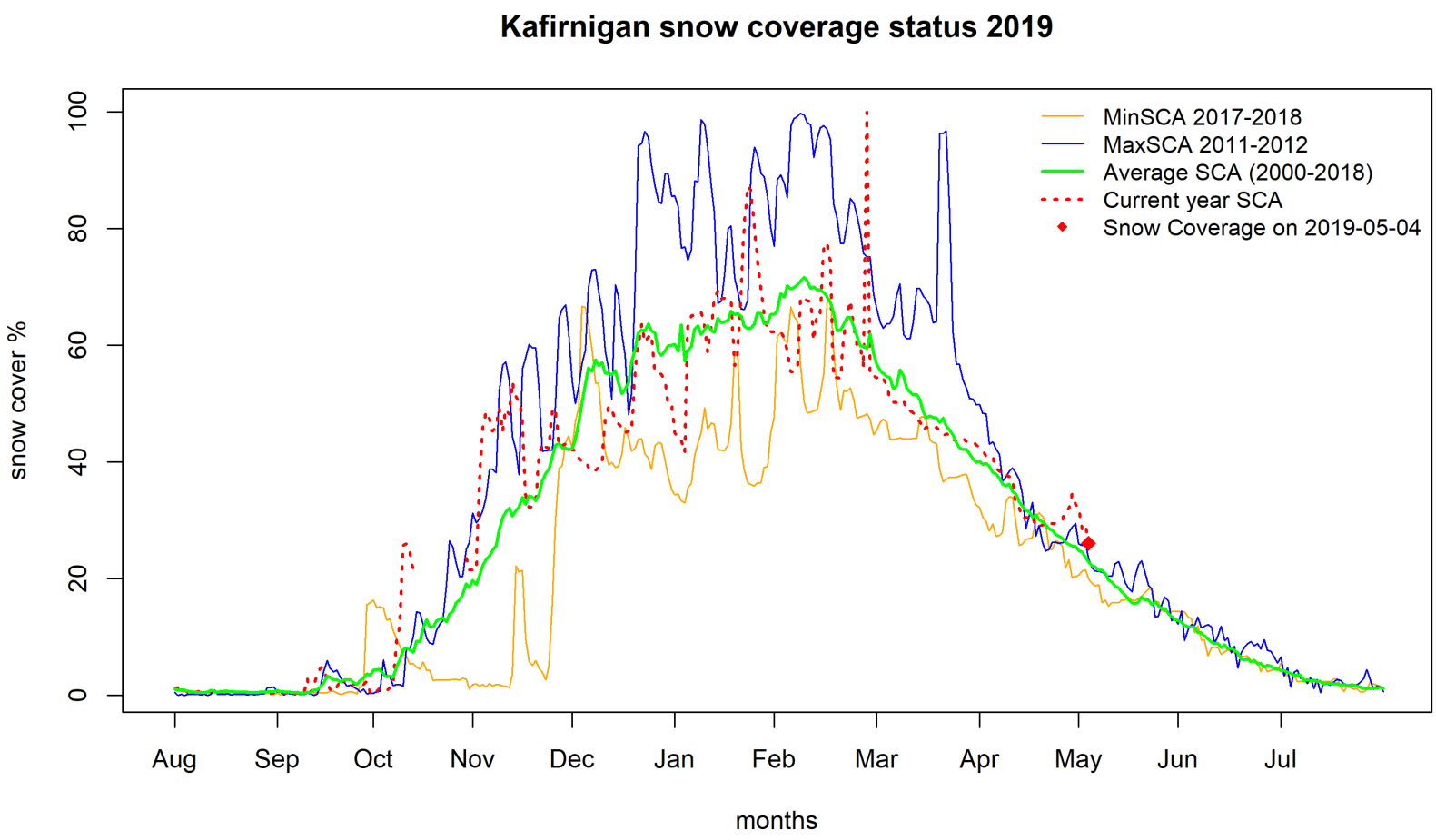
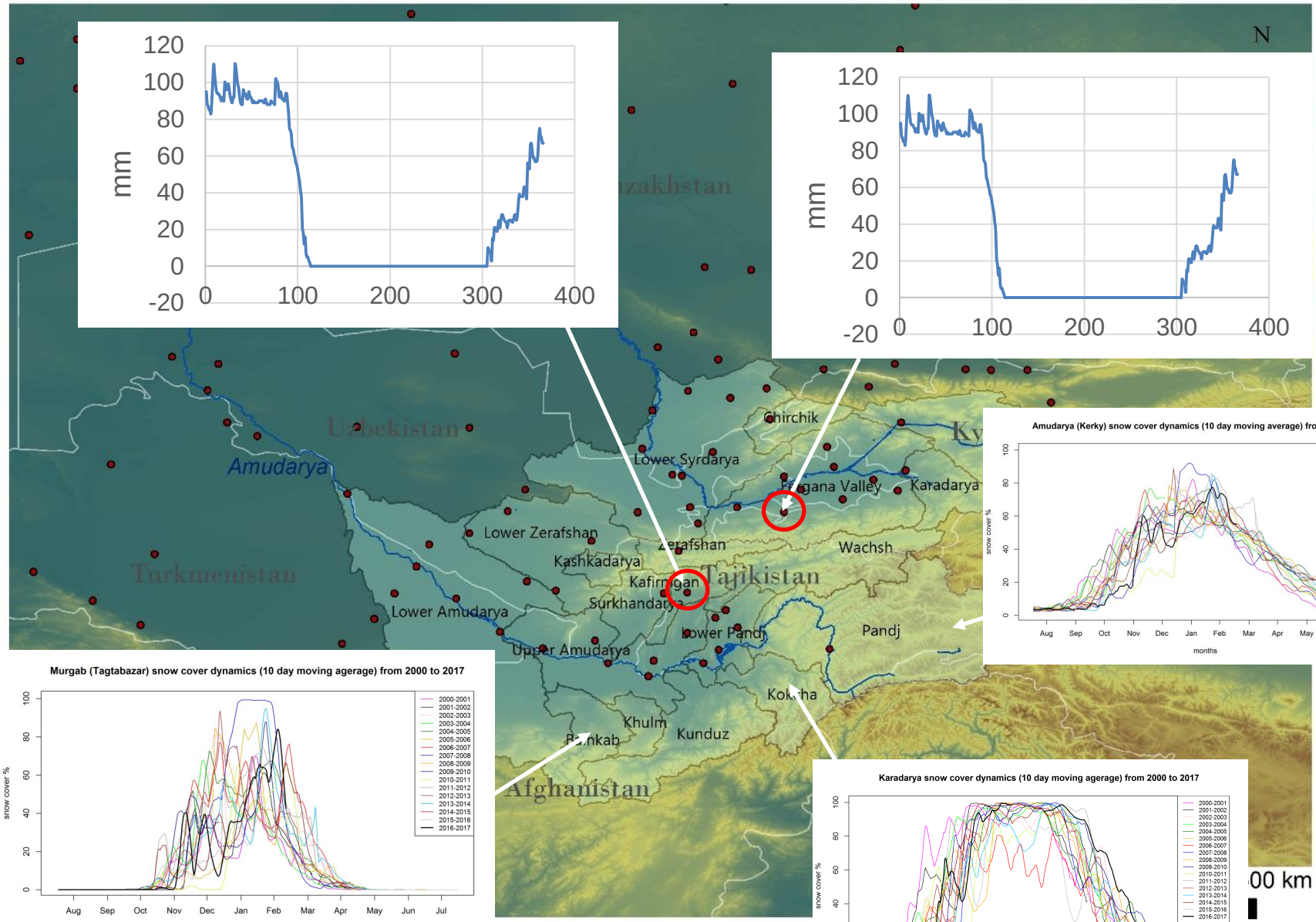
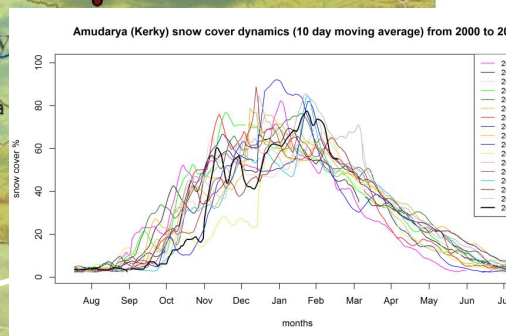
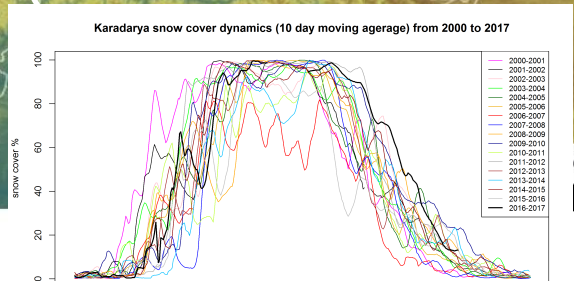
Monitoring of snow coverage in an operational mode



SNOW OBSERVATIONS







T AND P REPRESENTED BY SNOW EVOLUTION

- **Point information not representative**
- **Interpolations lead to uncertainties**

$$SCA = f(P, T)$$

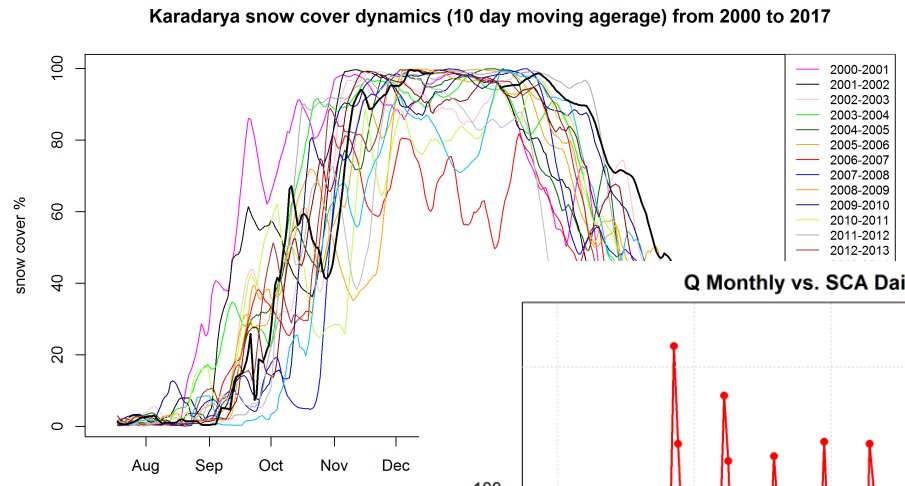
- **Increase in snow cover distribution**
  - Precipitation event in this period
  - Spatial signiture of precipitation events

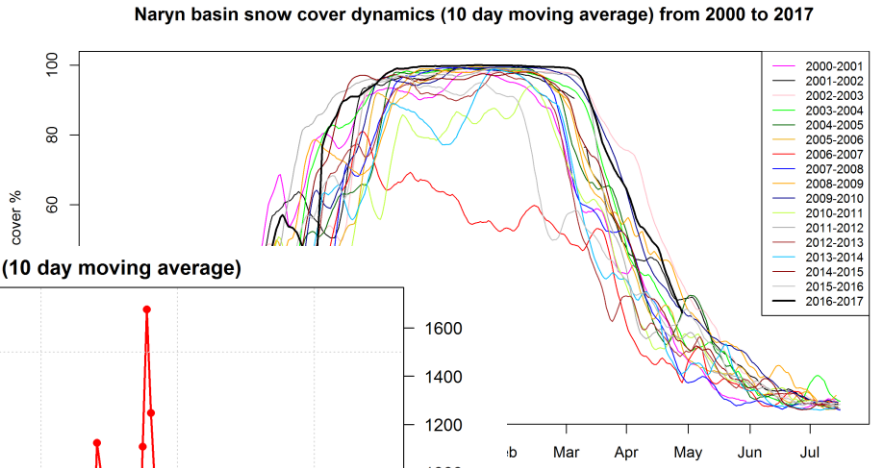
- **Decrease in snow cover distribution**
  - Temperature increase in this period
  - Spatial distribution of temperature changes

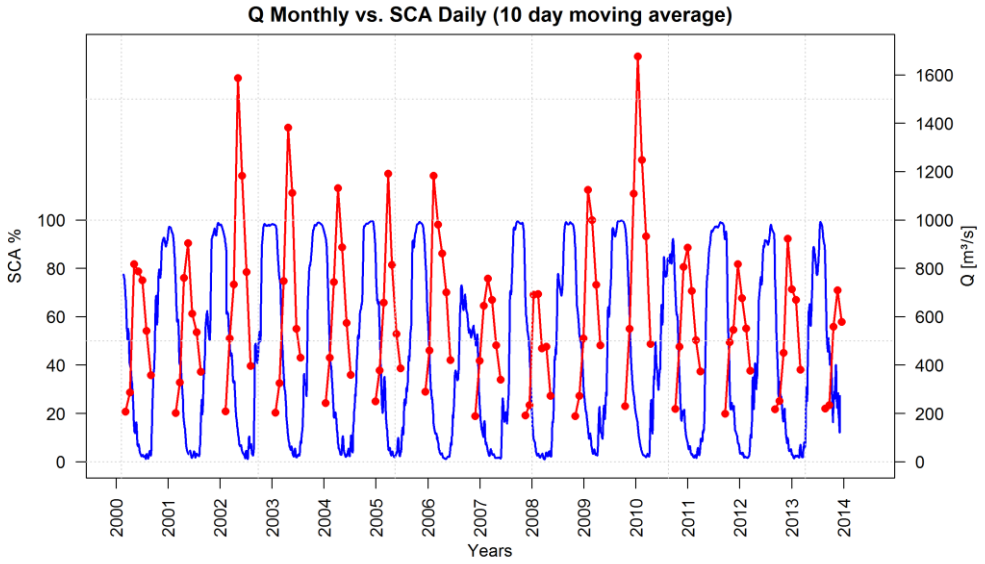
SCA influences overal energy budget on Earth‘s surface

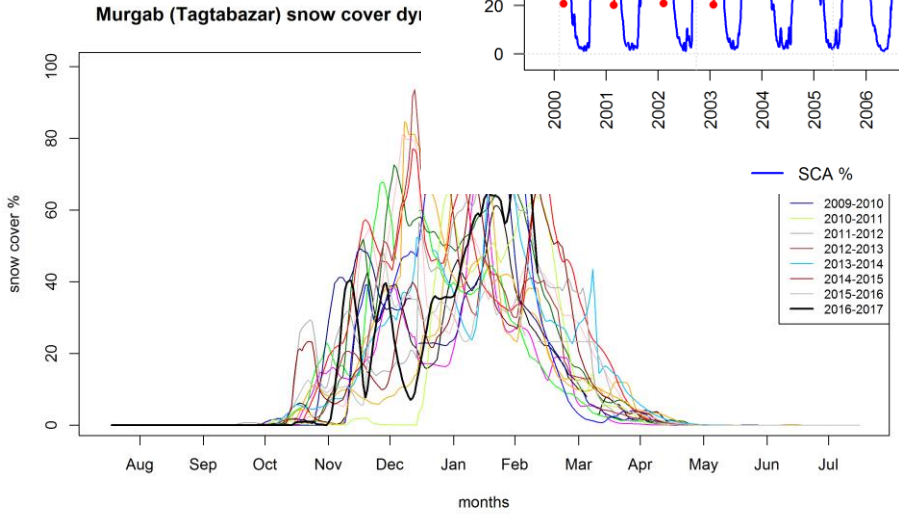
RS based SCA observations at remote areas possible

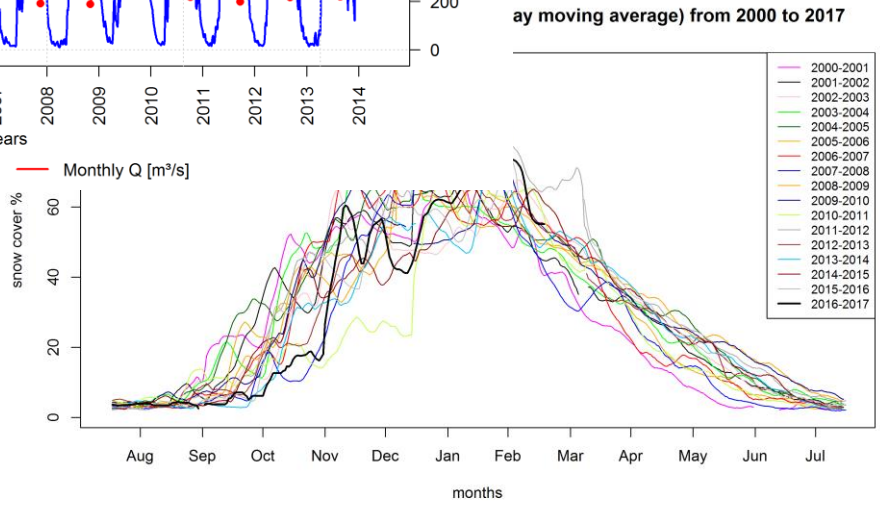
ВРЕМЕННЫЕ РЯДЫ СНЕЖНОГО ПОКРОВА





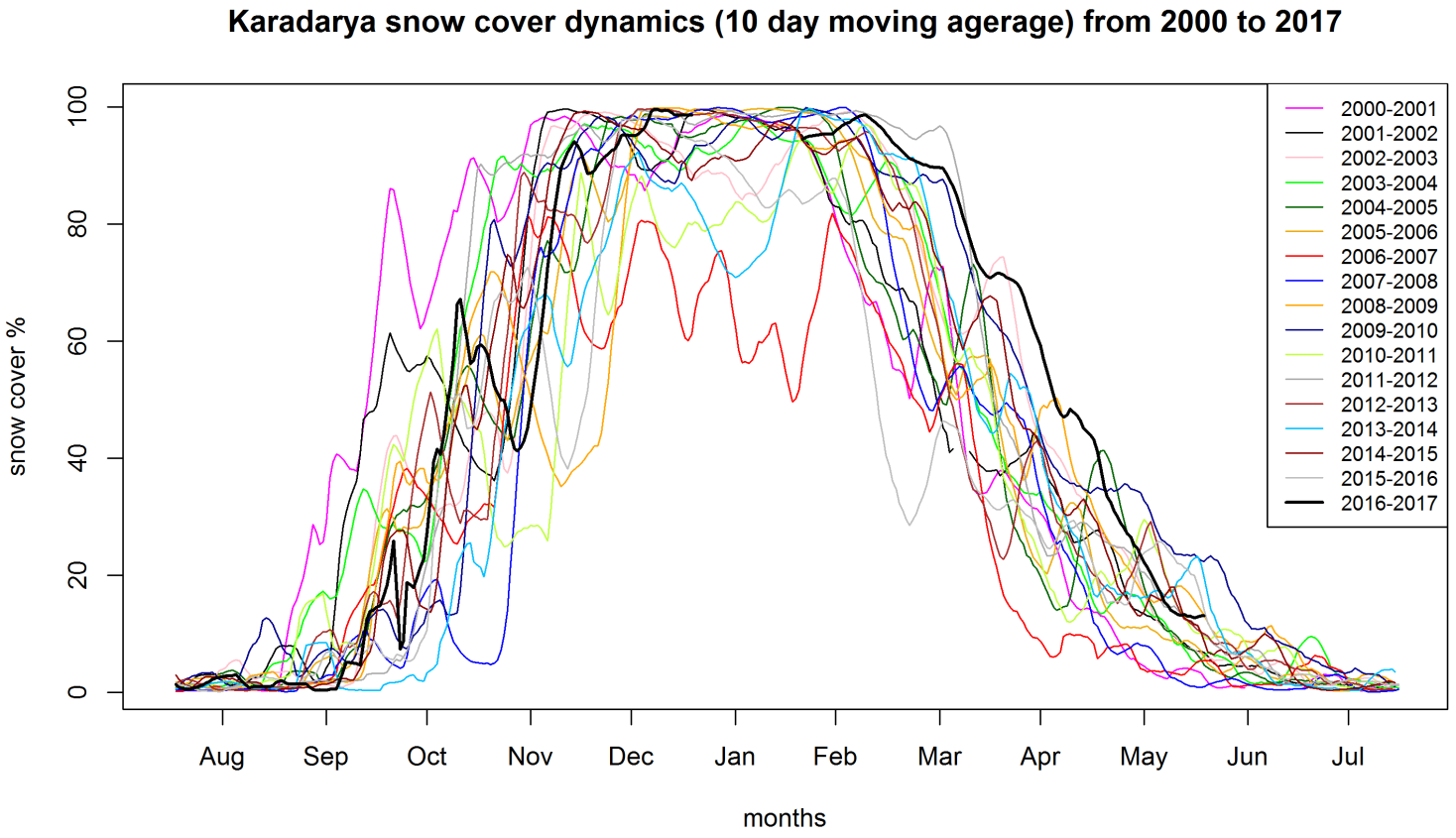






2016 / 2017 hydrological year one of the snow rich years in Central Asia!

A reason for regular floods?



MODSNOW IMPLEMENTATION IN CENTRAL ASIA

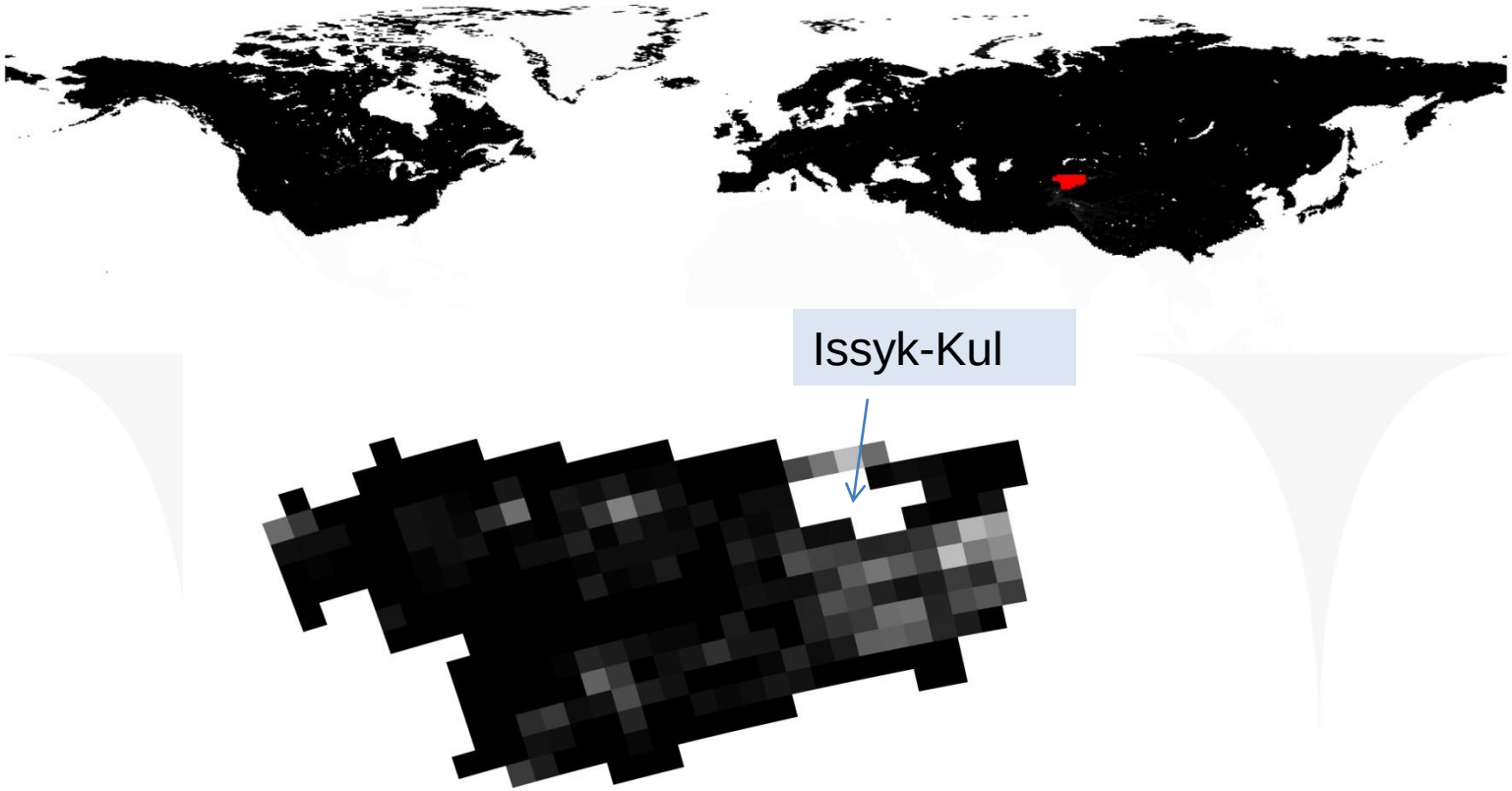
- Uzhydromet
- Kyrgyzhydromet
- Kazhydromet
- Turkmenhydromet
- CAIAG
- Institute of Geography (Almaty)

Conclusion

- Snow cover monitoring important for water availability analysis
- Snow Water Equivalent (SWE) parameter is more important to assess water storage in mountains
- Snow cover time series enhance seasonal water availability forecast

AMSR-E SWE

- Spatial resolution – 25 km
- Temporal resolution – 5 day, monthly
- Freely available



Thank you!