Attempt to application of SWAT model in lack of exact data situation in southern Poland
Content

- Introduction
- Materials and methods
- Results
- Conclusions
Attempt to application of SWAT model in lack of exact data situation in southern Poland

- Include remote sensing data
- Take place in boundary region
- Help solving local problems
Problem – water management

- Poland is in Europe one of the countries with smallest water resources
- WFD – need to be implemented
- Low amount of data
- Problems with good management
- Modeling as a solution?
Modeling

• in Poland still not so popular
• relatively quick results
• money savings
• helps in decision process

but:
• problems with getting the data
• accuracy of results
Objective

Test accuracy of the results with low resolution data on relatively small catchment
Test watershed

- Ropa river catchment
- southern Poland, close to Slovakia border
- about 1000 km$^2$
- upper part is a part of Natura 2000
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Data

- remote sensing – DEM, land use,
- soils – recalculated properties to fit American classification
- meteorology – free data from outside of watershed
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Calibration results – quantity of water

- some water rising are missing (lack of meteorological data from catchment area)
Calibration results – quality of water
Nitrogen load
Conclusions

- Correct water balance
- Model suitable for quantity analyses
- Quality analyses on reliable level
- Shows potential as a tool for water management
- Cautious approach to the final results
Thank you for attention