

SAR data application for hydrological issues

Inland excess water detection

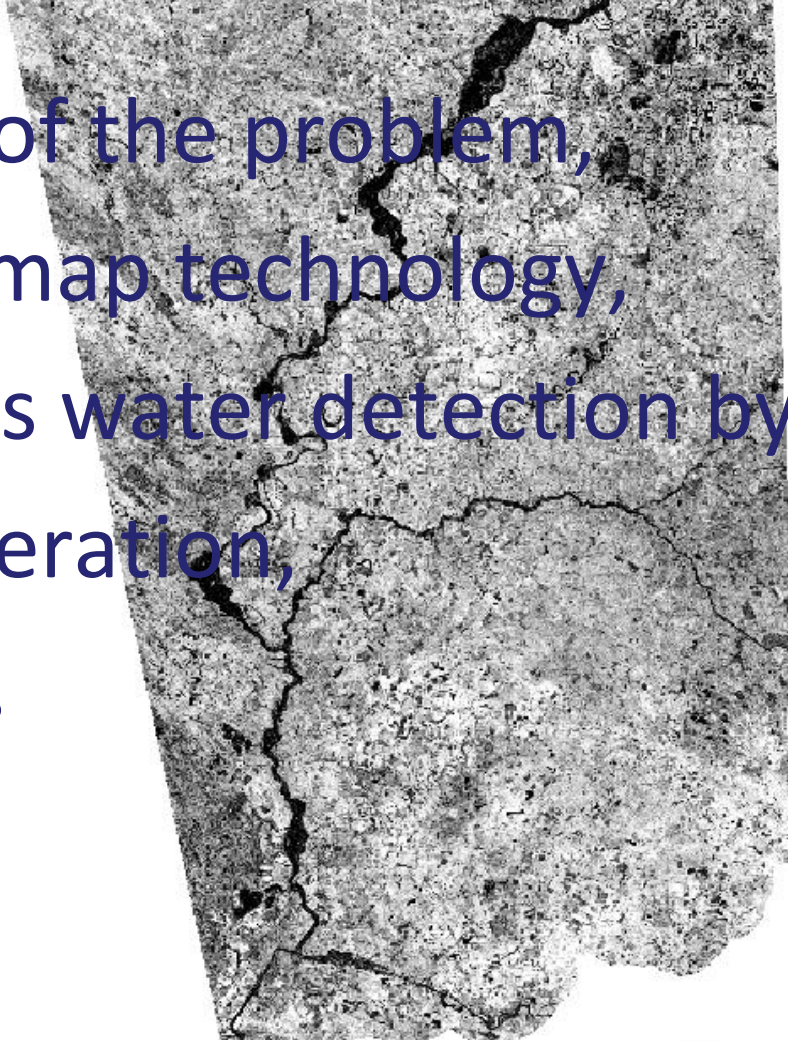
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Outline

SCERIN-4 Capacity Building Workshop, Zvolen, Slovakia, July 19-22, 2016 / Levente Ronczyk PhD email: h2o@gamma.ttk.pte.hu



- Description of the problem,
- SAR and sarmap technology,
- Inland excess water detection by SAR.
- Product generation,
- Conclusions.

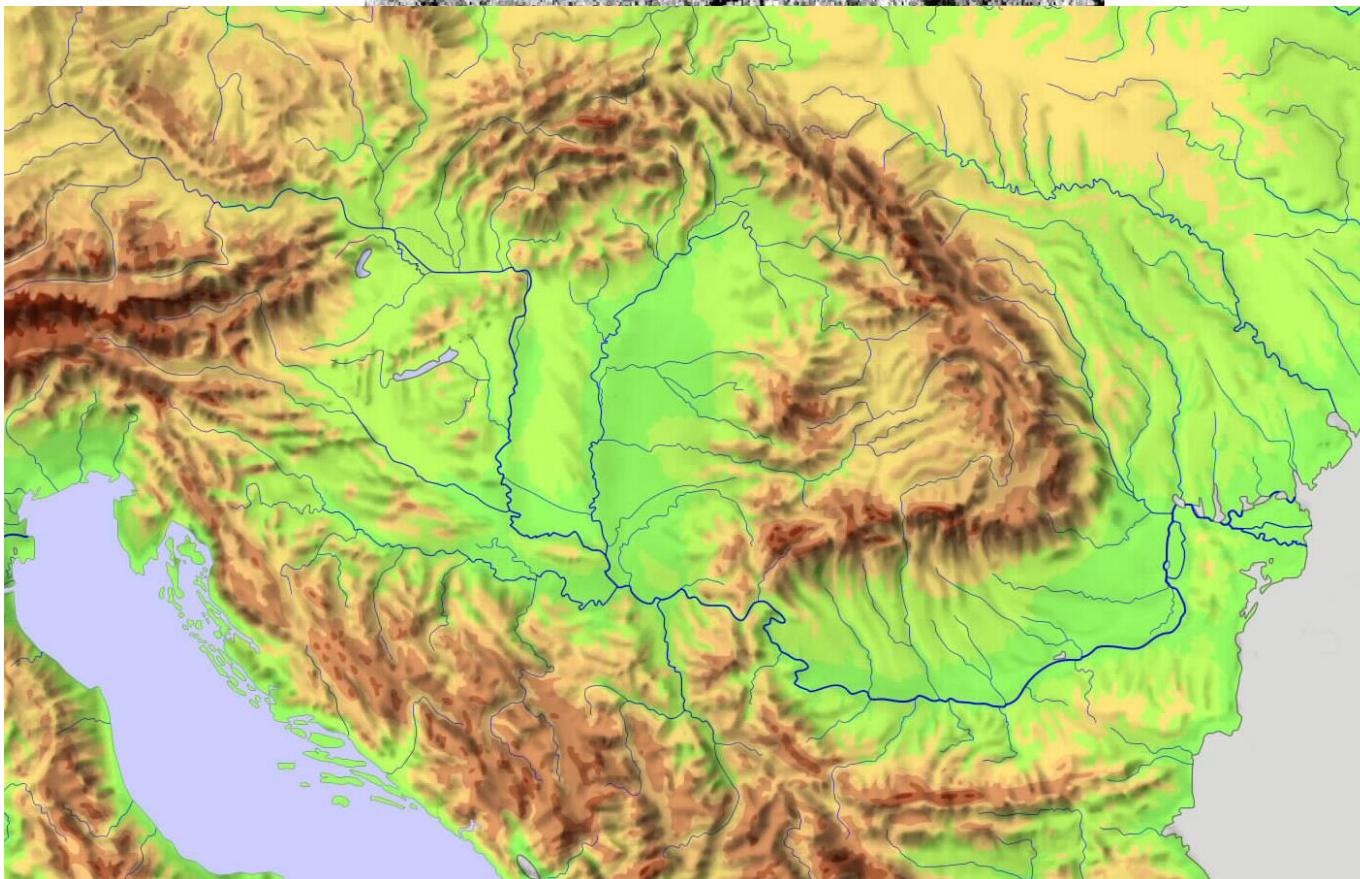


Unique physical geographical aspects of Hungary

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- Lowland country (84% of the territory under 200 m)

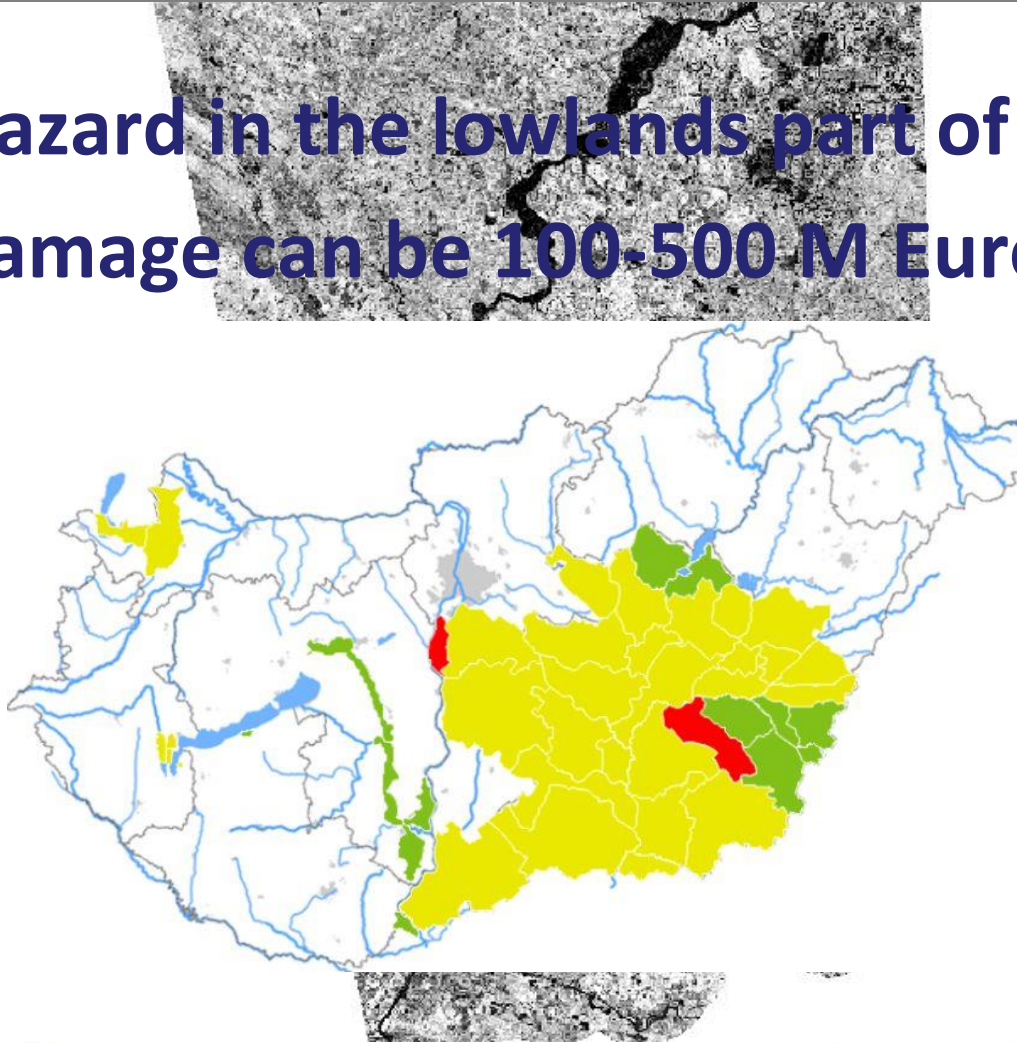


Inland Excess Water problem

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- Serious hazard in the lowlands part of Hungary
- Annual damage can be 100-500 M Euro



Detection by SAR

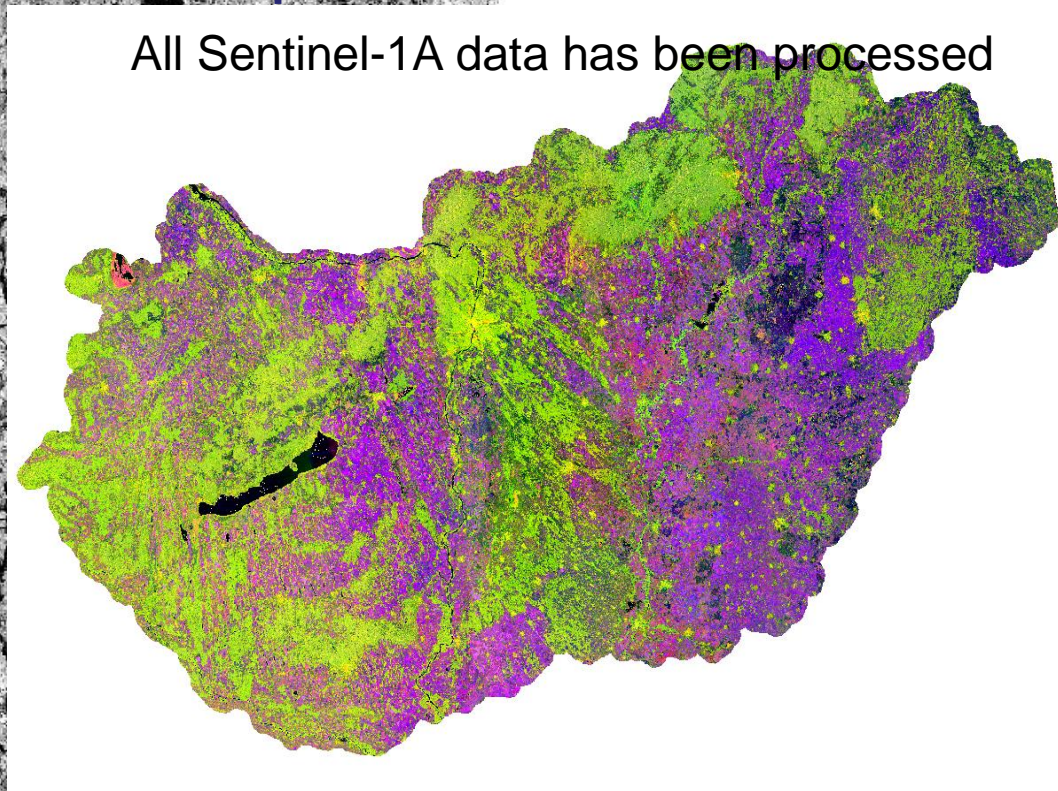
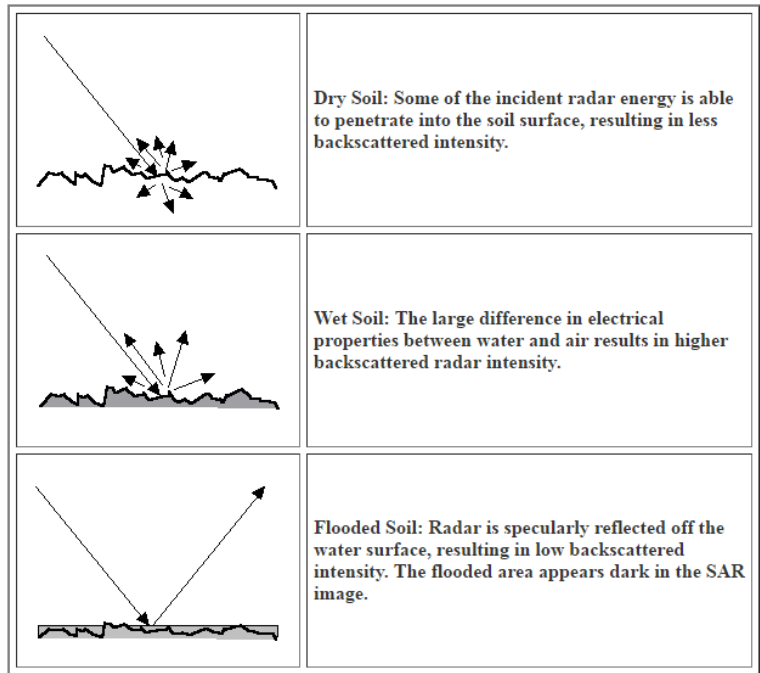
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Water surface > low backscatter

Open access SAR data

All Sentinel-1A data has been processed



http://www.crisp.nus.edu.sg/~research/tutorial/sar_int.htm

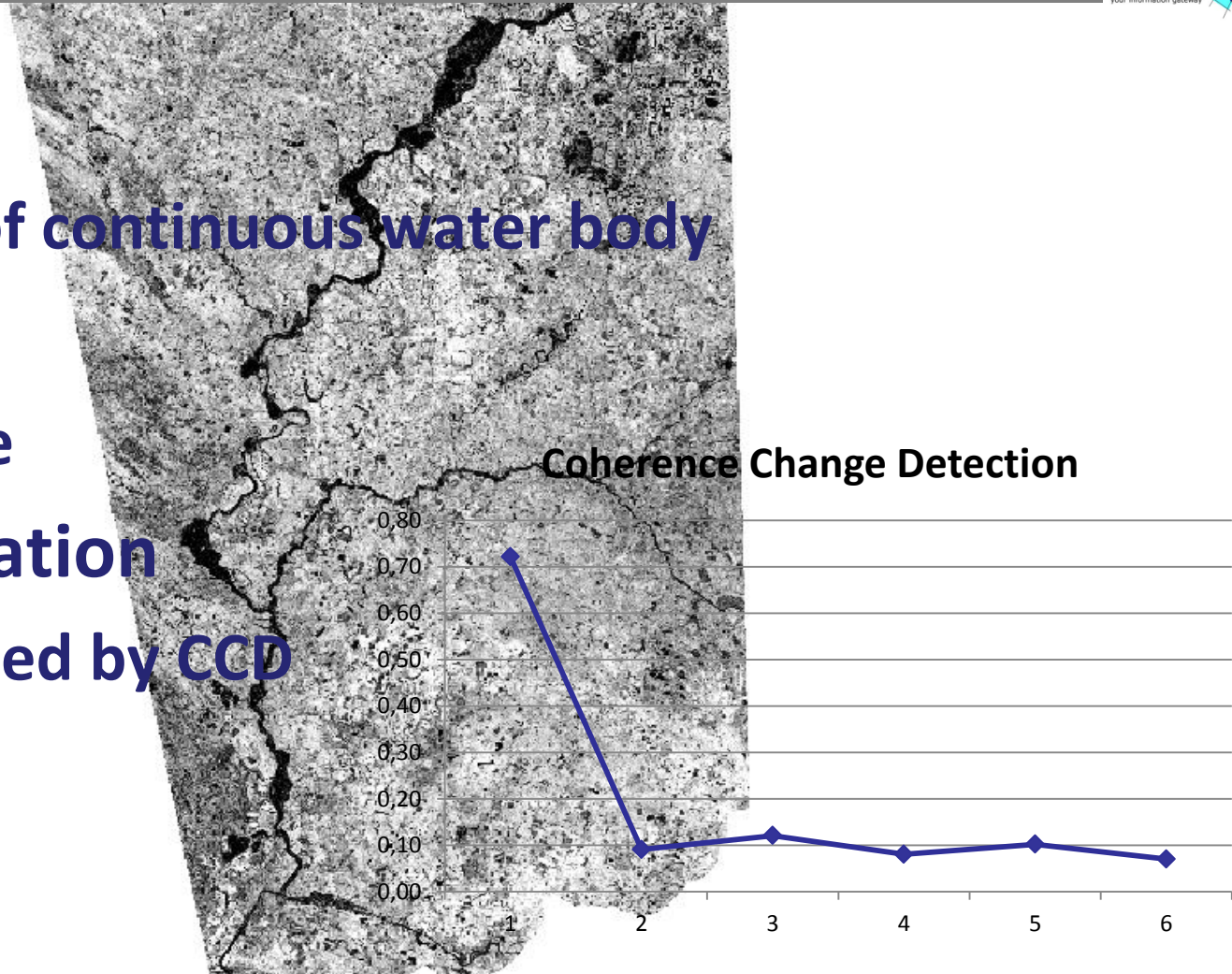


Water body separation

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- Dry period
 - Separation of continuous water body
- Wet period
 - Decision tree
- Simple calculation
 - Also supported by CCD



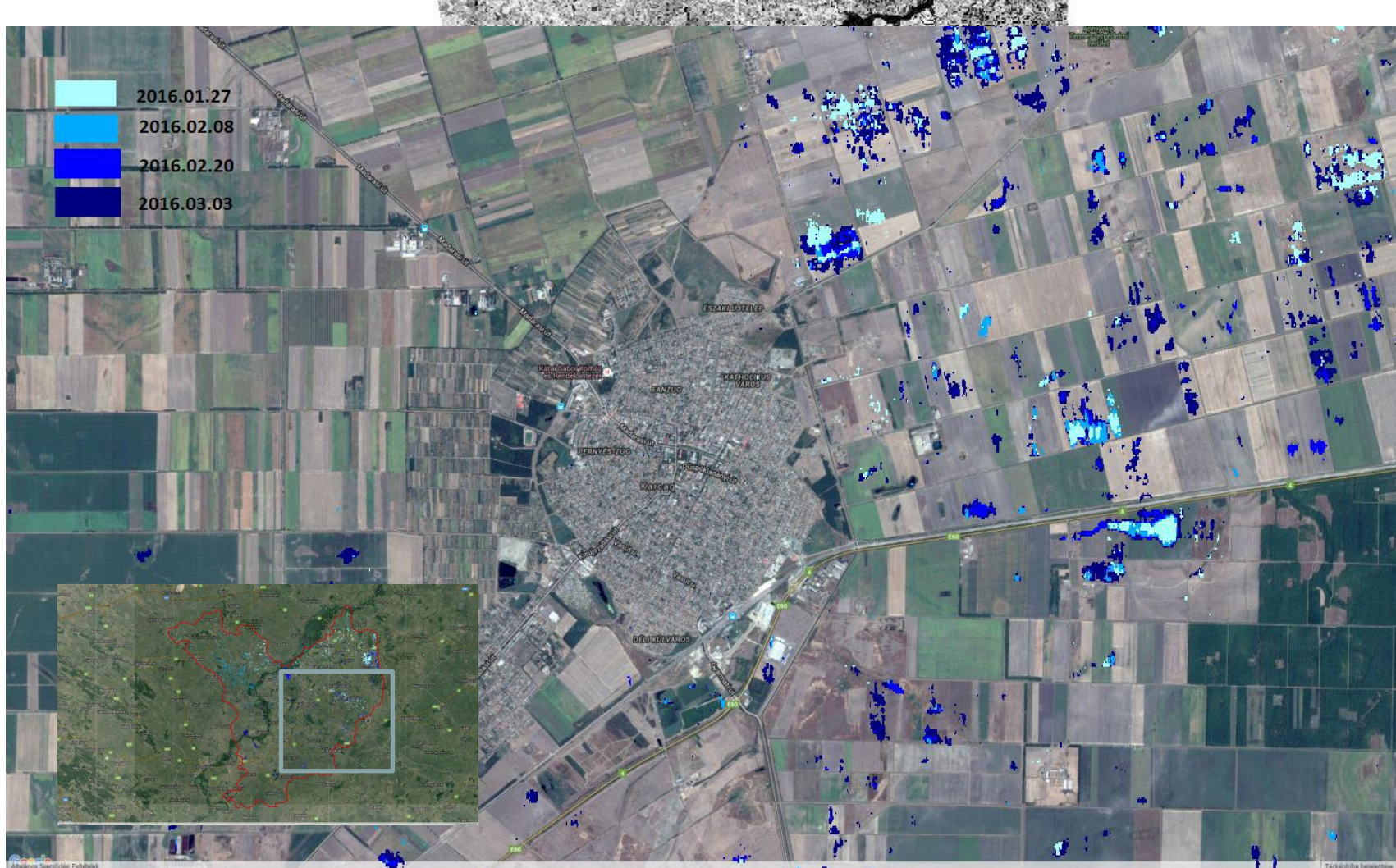
S1A VV RGB (04.11 / 08.02 / 03.03)

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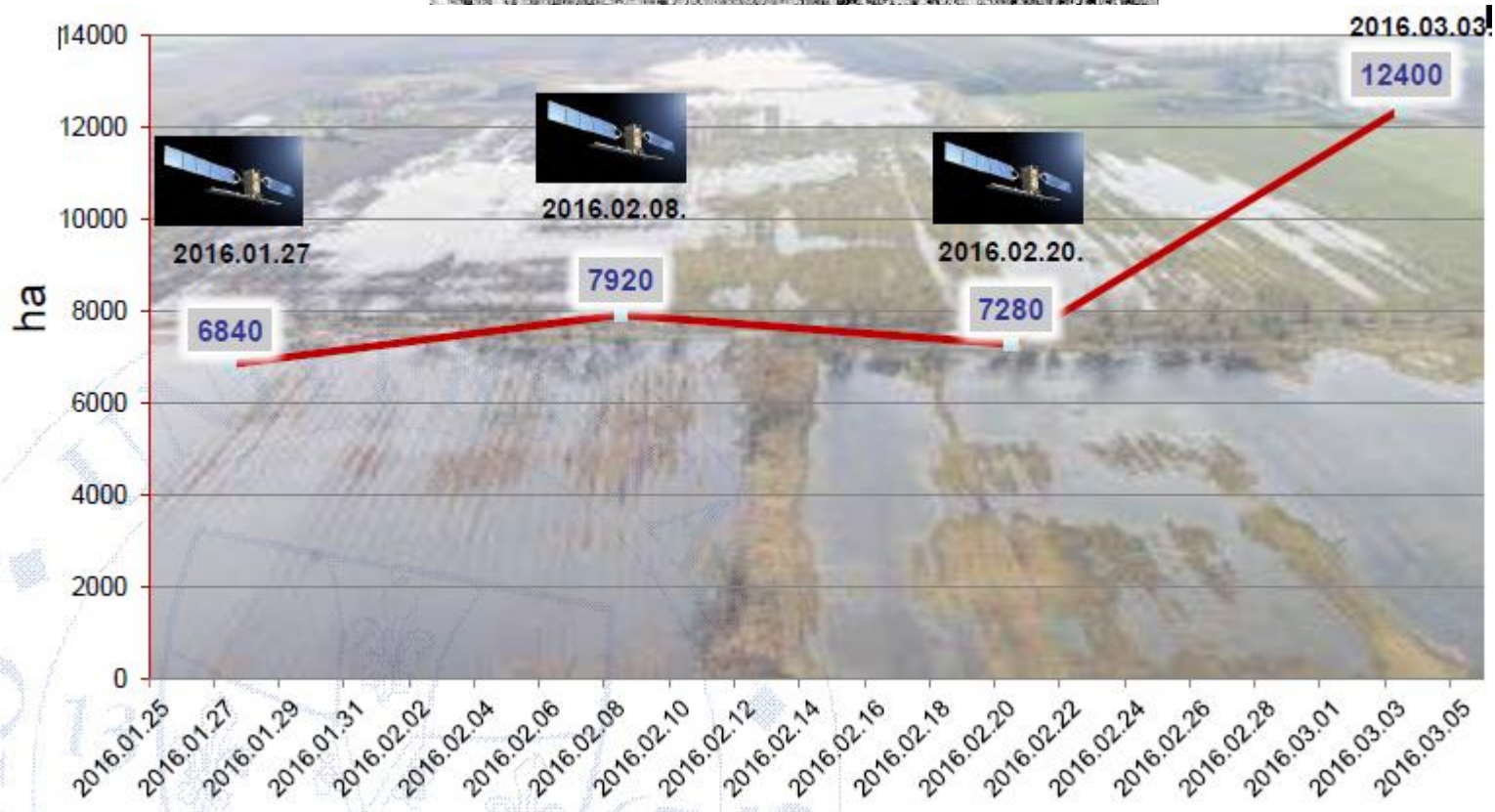
Product development

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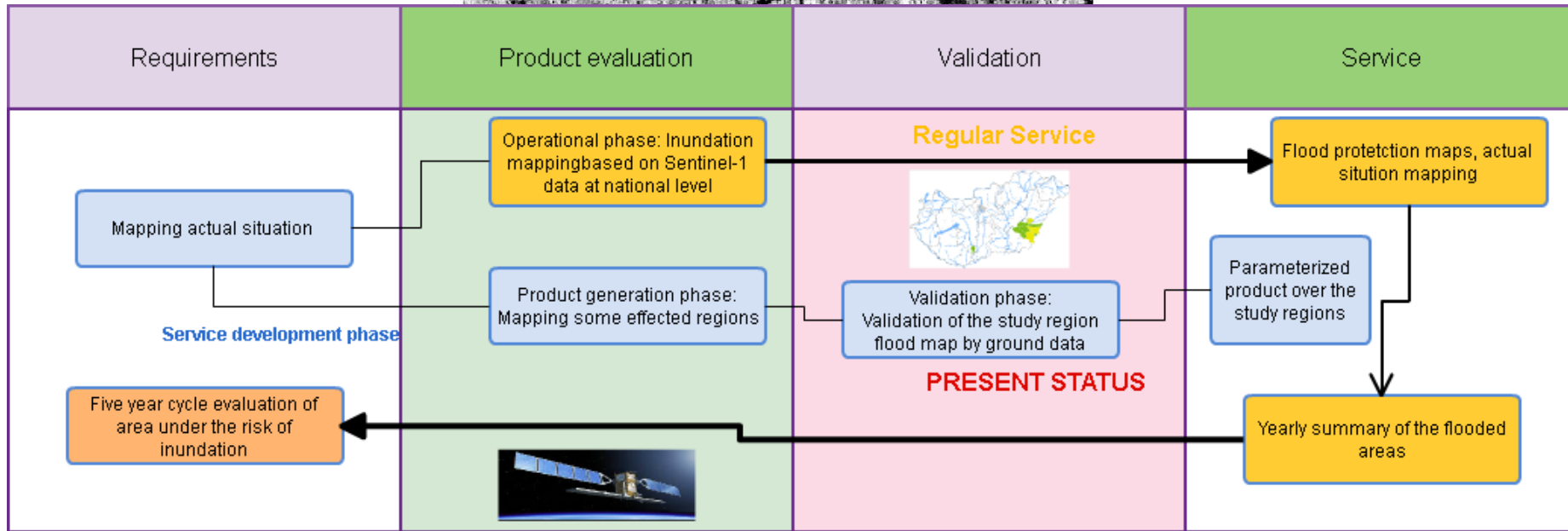
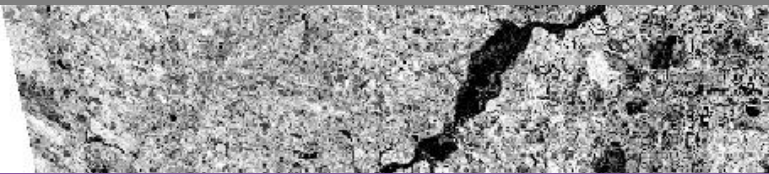
Product development

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Product development

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General Directorate of Water Management

University of Pécs



Ďakujem za pozornosť

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Technology is exist, but market generation a similar challenge,

