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Project co-funded by European Union funds (ERDF, IPA)

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■ Danube Transnational Programme area



## **IDES** - Improving water quality in the Danube river and its tributaries by integrative floodplain management based on Ecosystem Services

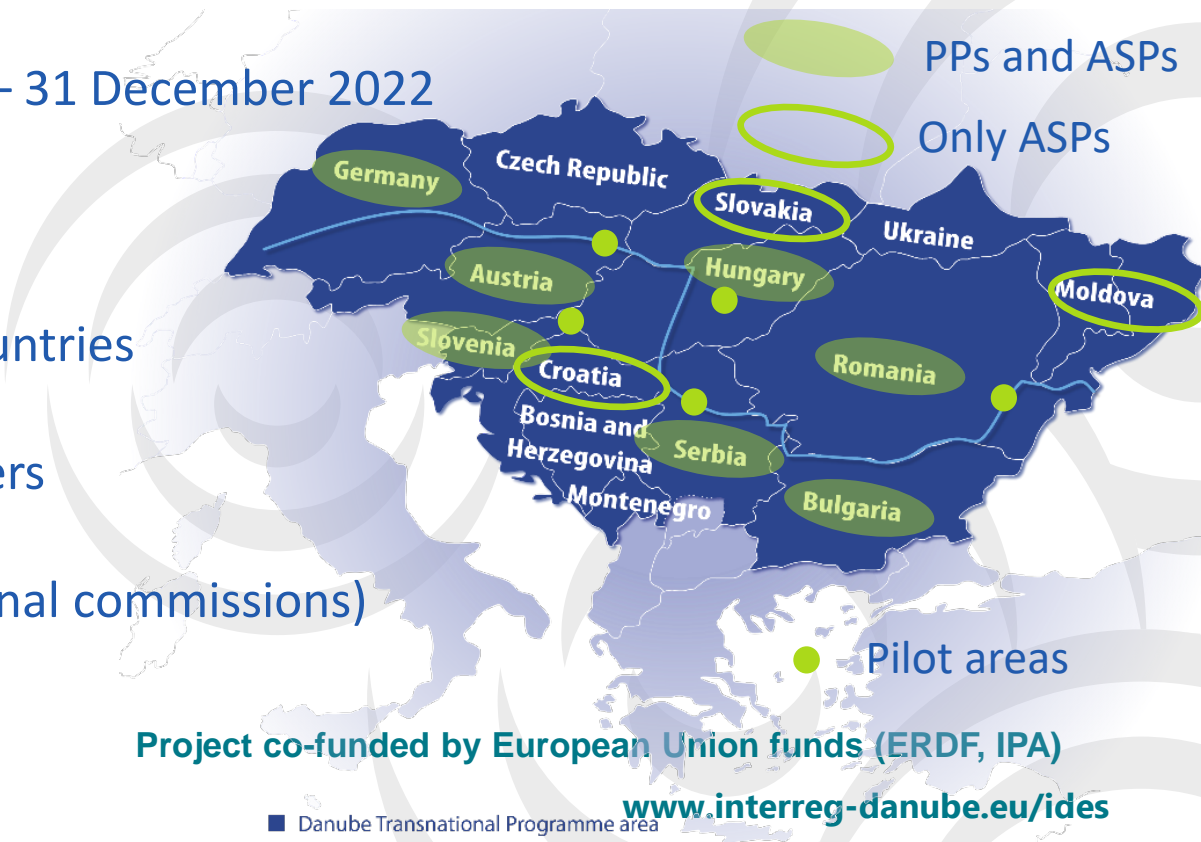
Project Duration: 1 July 2020 – 31 December 2022

Project Budget: 1,95 Mio. €

11 Project Partners from 7 countries

14 Associated Strategic Partners

(10 countries and 2 international commissions)





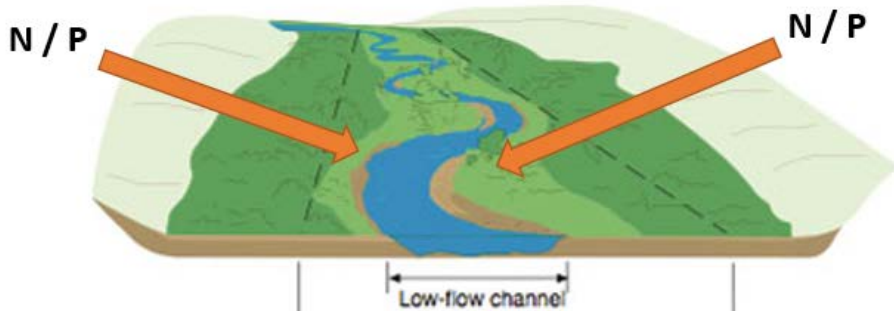
# Background

## Floodplains

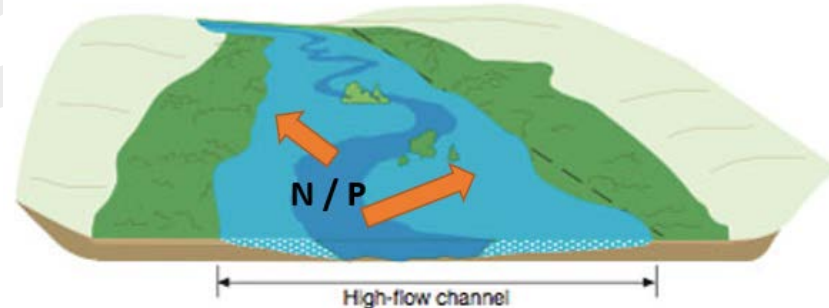
- Are able to **retain nutrients** from the catchment and the river and contribute to **improve water quality**
- Many interests (and legal objectives) in floodplains  
Modified and threatened
- **Only intact/active floodplains provide many services to human**



Catchment sources



Riverine sources during floods





**Slow progress in implementation** due to conflicting human interests in floodplains.

Thus, we need:

- Integration of all interests/sectors
- Synoptic visualization: trade-offs and synergies
- Comparison of different scenarios

**>> Decision support for ecology and society at the regional planning level**

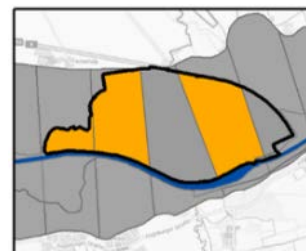
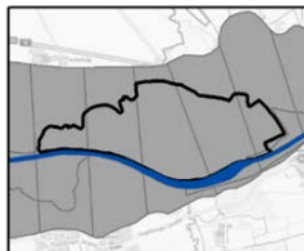
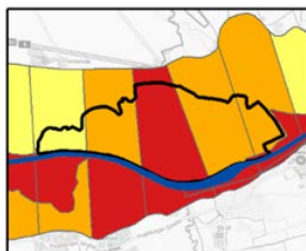
## Ecosystem services

### Status quo

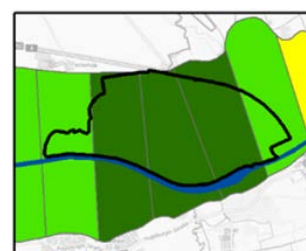
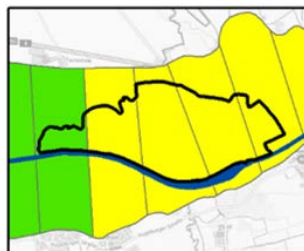
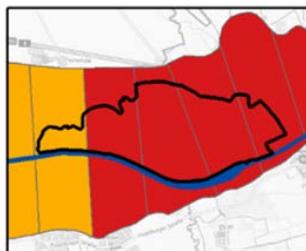
### Scenario 1

### Scenario 2

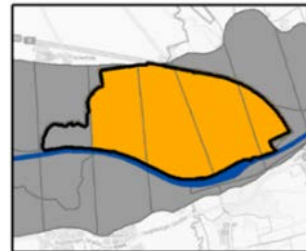
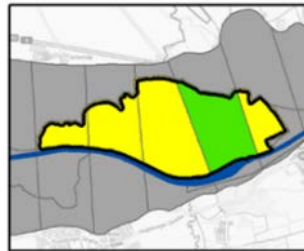
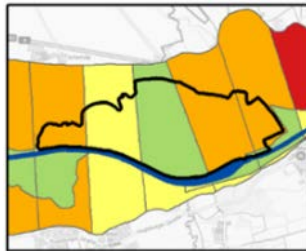
Cultivated crops



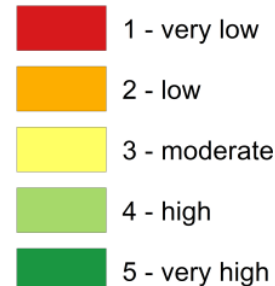
Flood retention



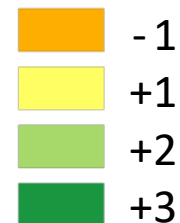
Habitat provision



Status quo



Scenarios  
Difference



# Main objective of IDES

Improve water quality management along the Danube and its tributaries by applying an Ecosystem Service based integrative floodplain management (IDES tool).

- >> mitigating conflicts and demonstrating synergies
- >> sustainable, efficient and integrative management



## Work Package T1:

**Assessment of water quality in floodplains and of water quality related Ecosystem Services, development of the IDES tool**

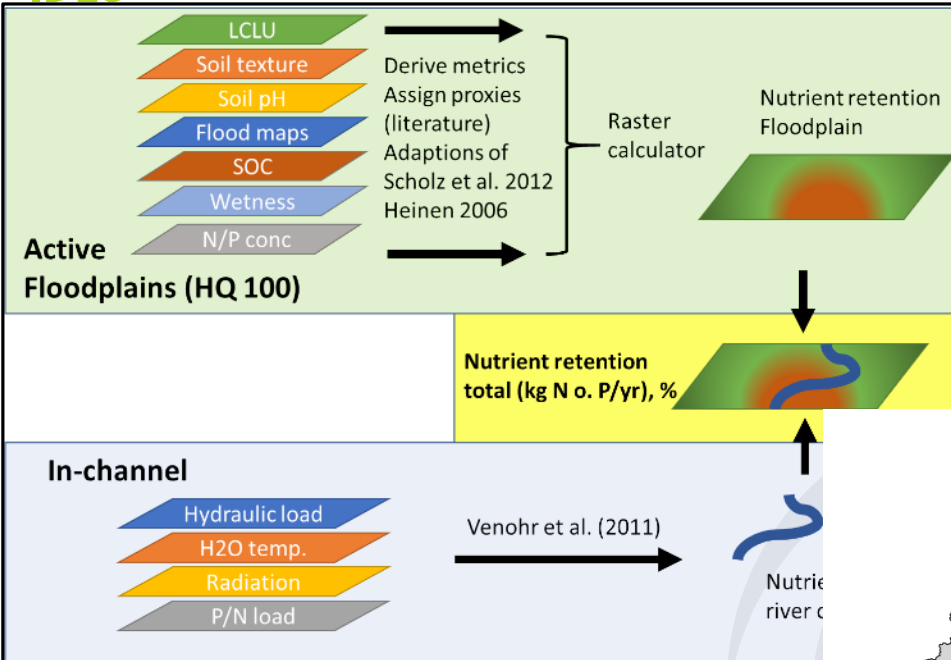
***Outputs 1.1. Ecosystem Service based integrative floodplain management tool (IDES tool)***

***Output 1.2. National training courses for key actors in the water sector on IDES application***





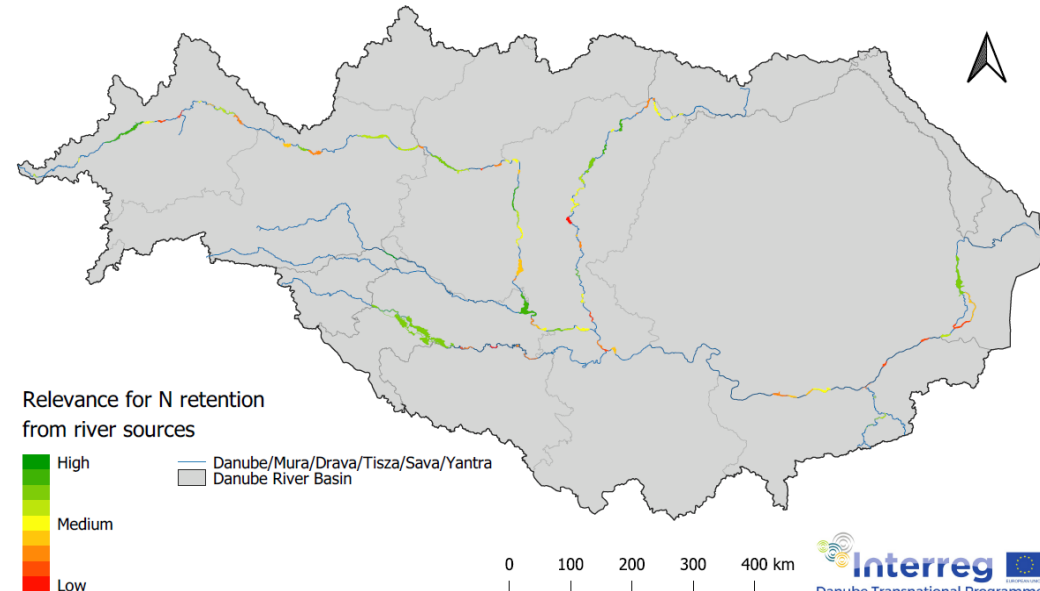
## IDES



## Derive indicators to prioritize sites

- N/P retention in FP & rivers
- N/P concentration
- Upland (local) N/P emission

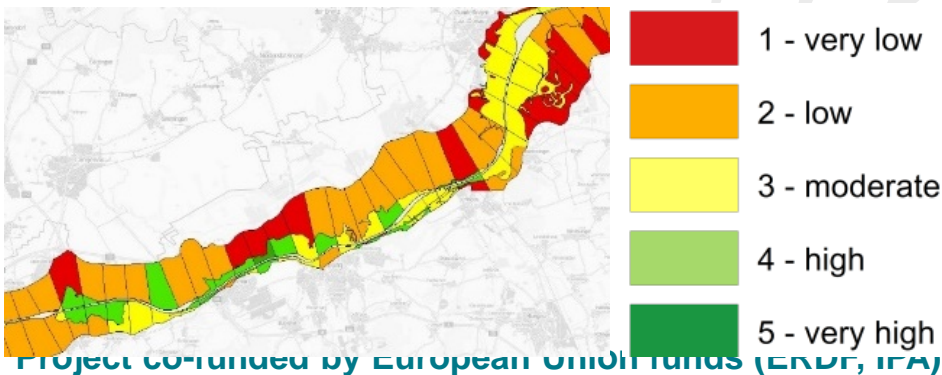
D.T1.1.1 Prioritization of active floodplains for N retention from river sources on river basin scale





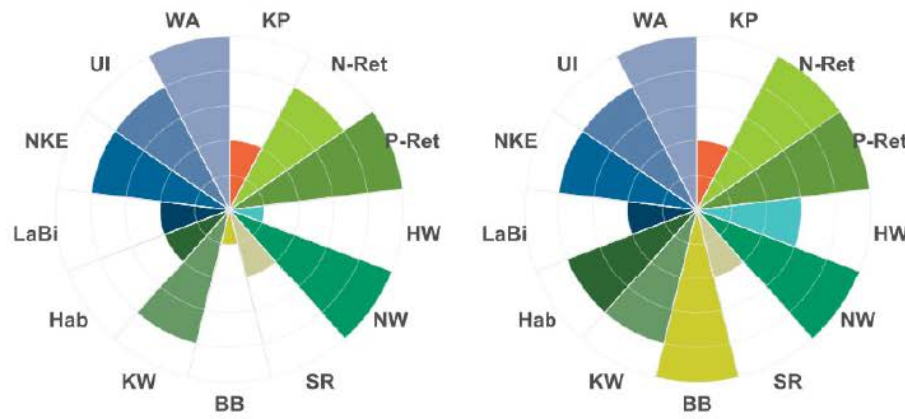
## ES evaluation framework and method (IDES tool)

- Identification of 23 Ecosystem services of relevance for water quality
- Floodplain segments
- Scale 1 - 5
- **Indicator-based approach** adapted from River Ecosystem Service Index (RESI)



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## Work Package T2:

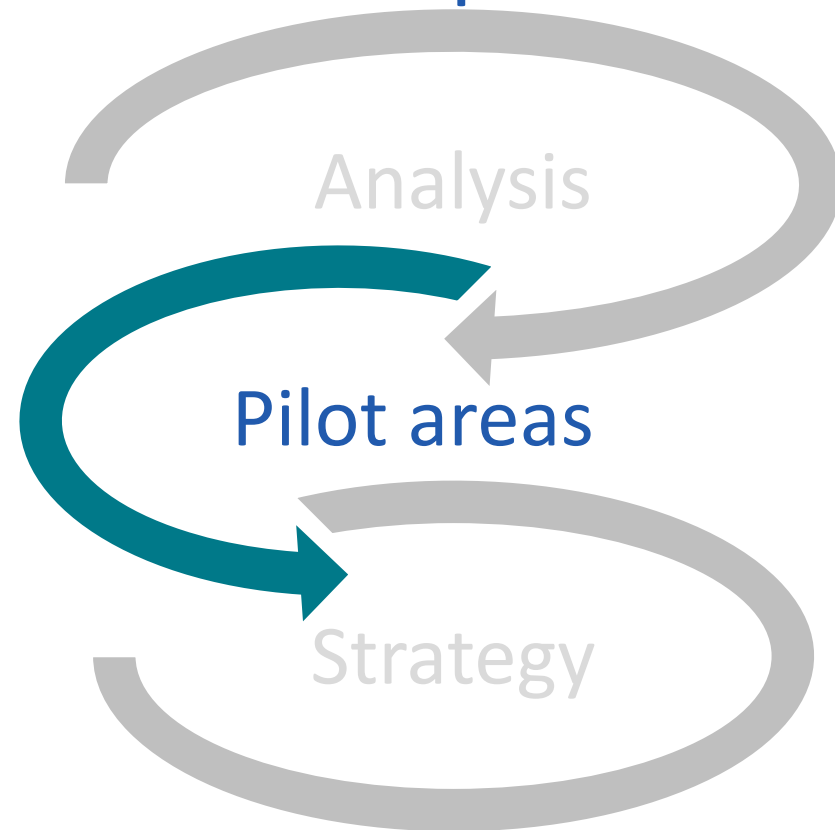
### Identification of water quality management actions in pilot areas

**Output 2.1:** Stakeholder workshops in pilot areas focusing on water quality and ES

**Output 2.2:** Water quality management concepts in pilot areas

**Output 2.3:** Pilot implementation of the IDES tool in five pilot areas

**Output 2.4:** IDES manual, including best practice examples / recommendations



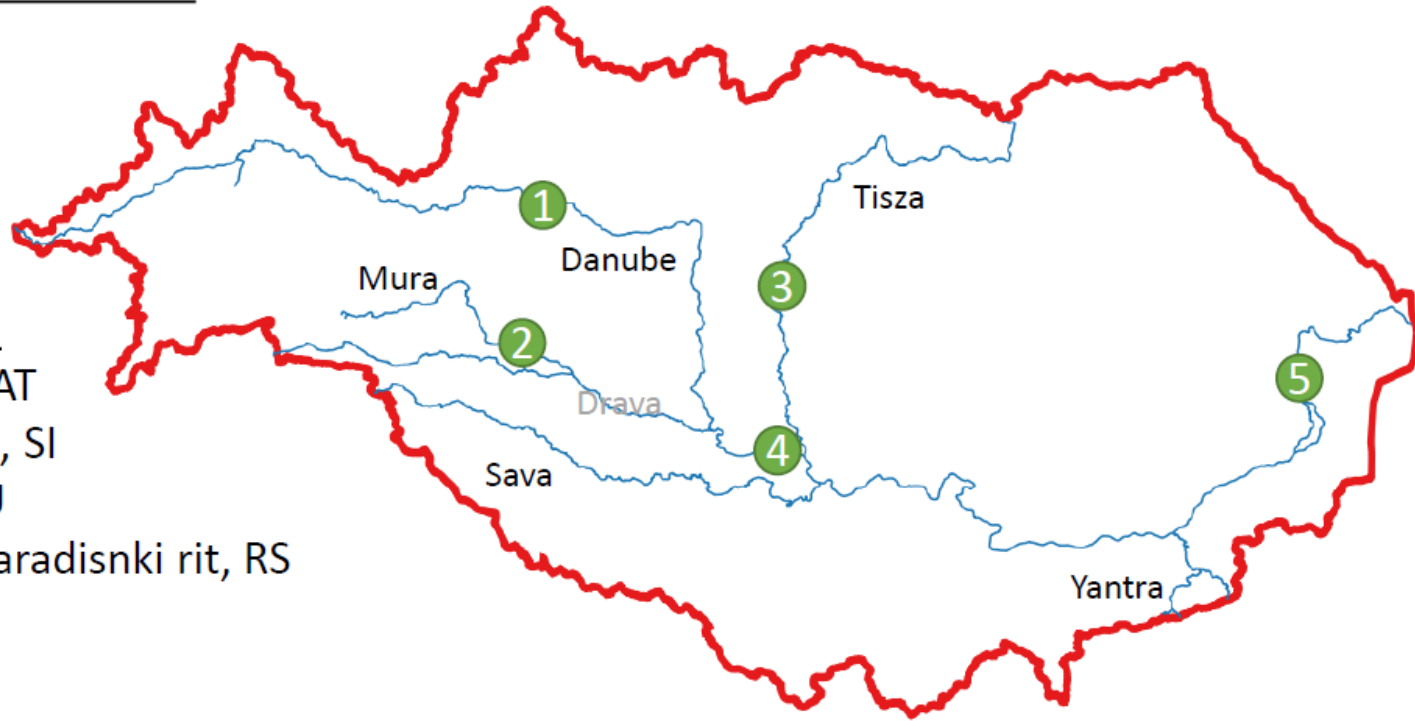
## Investigated river systems and pilot areas

### Danube and major tributaries:

- Tisza
- Sava
- Mura
- Yantra

### Selected pilot areas:

1. Donauauen NP, AT
2. Mura Floodplain, SI
3. Middle Tisza, HU
4. Koviljsko-petrovaradinski rit, RS
5. Braila Island, RO





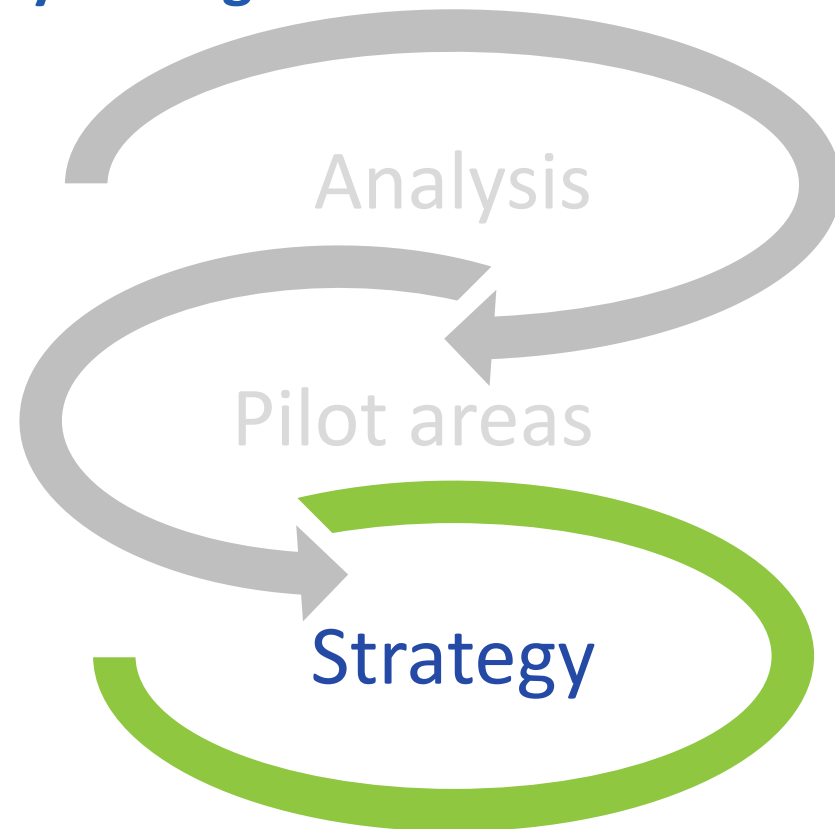


## Work Package 3:

### Strategy for an integrated water quality management in the Danube region

***Output 3.1: Transnational Stakeholder Workshop in September 2022 in Budapest***

***Output 3.2: Strategy to implement the IDES approach***



Thank you very much for your attention!



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