



Effects of the Nature-Based Solutions on the ecosystem services

An evaluation of the Piave River catchment (Italy) in a 2050 scenario

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CSGI



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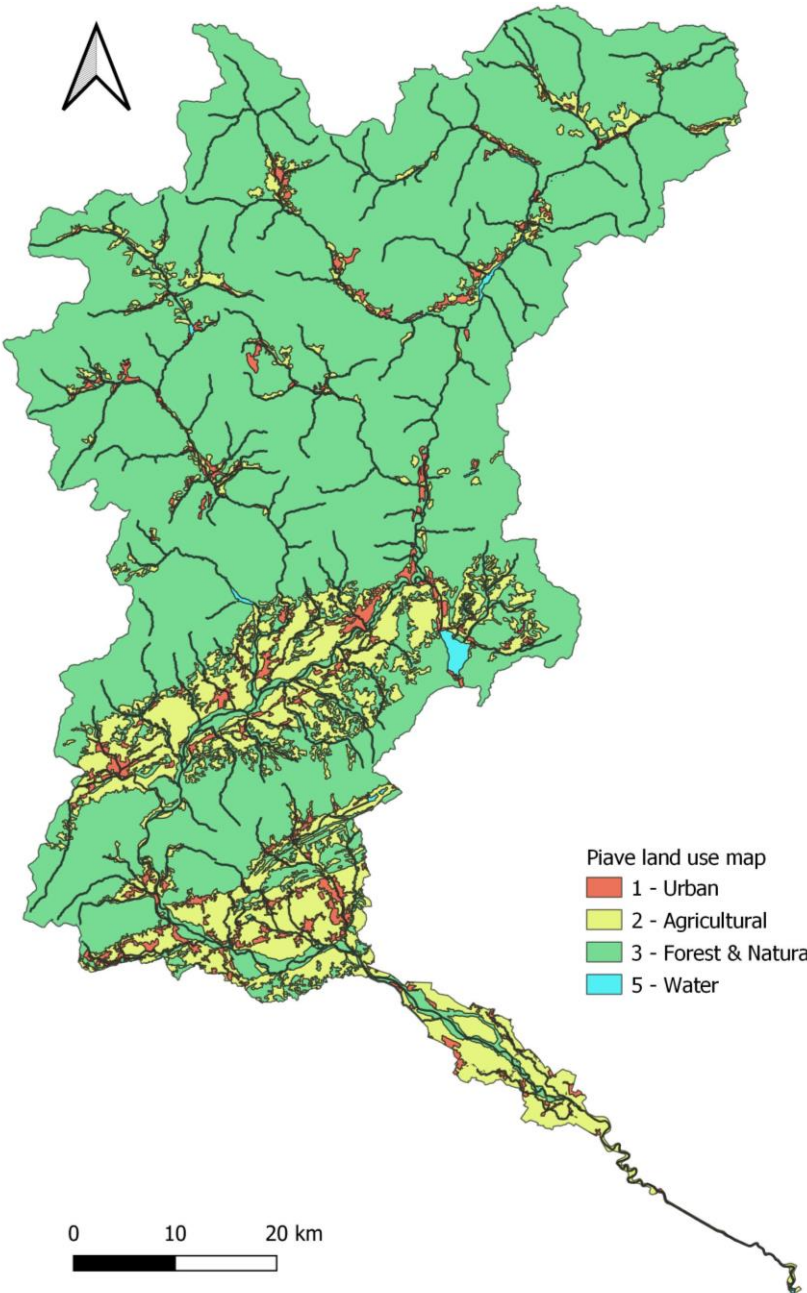


Autorità di bacino distrettuale delle Alpi Orientali

Vienna, 27 May 2022

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PIAVE RIVER CATCHMENT



General issues

- Water quality & quantity
- Eutrophication
- Flood risk
- Salt intrusion
- Habitat loss, degradation and fragmentation
- Invasive species
- Sediment loss
- Land use changes

Expected results

Demonstration of the value of ecosystem services, evaluated by carbon storage and nutrients load in Piave river ecosystem

NATURE-BASED SOLUTIONS (NBS)

REFORESTATION



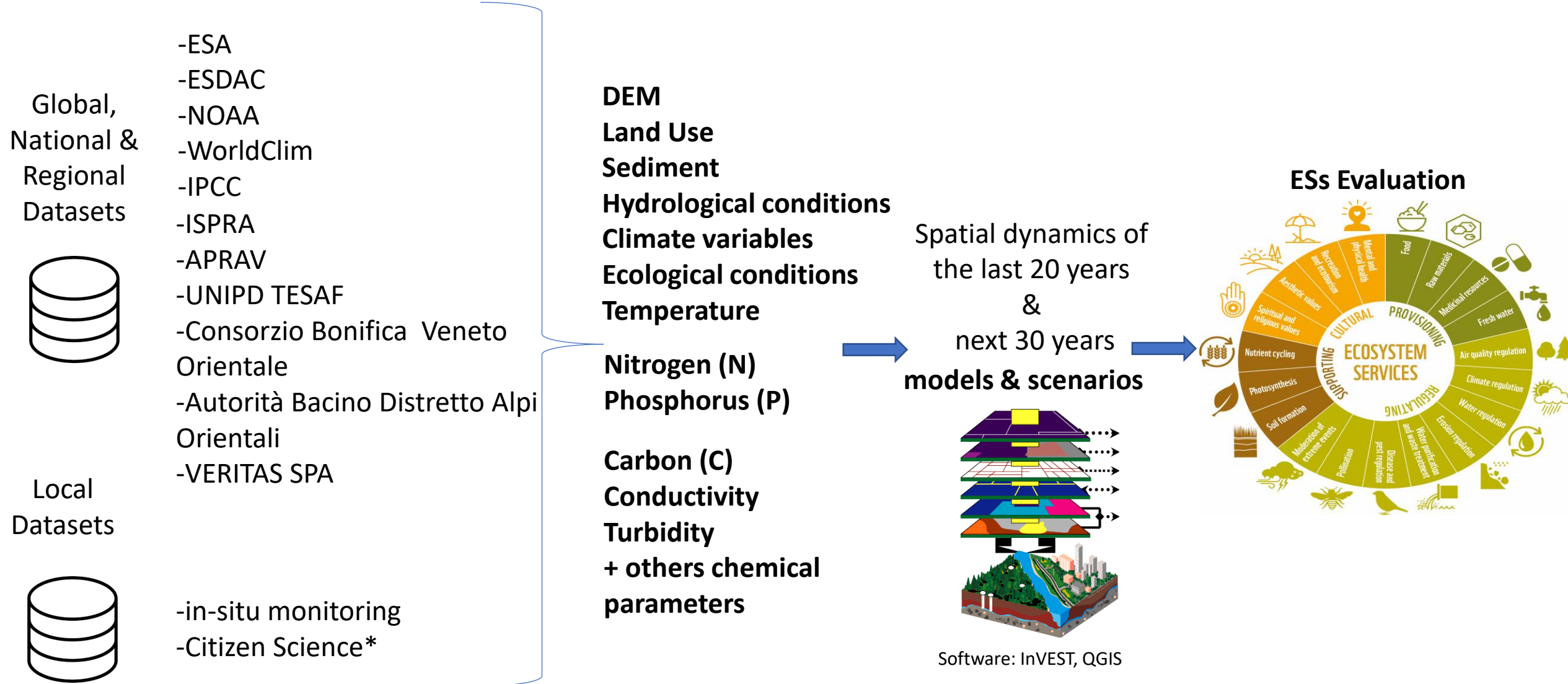
RIVER RESTORATION



FLOOD RETENTION BASIN



METHOD



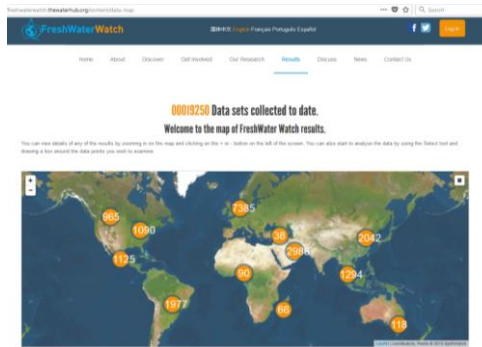
Concentration, load & retention

CITIZEN SCIENCE



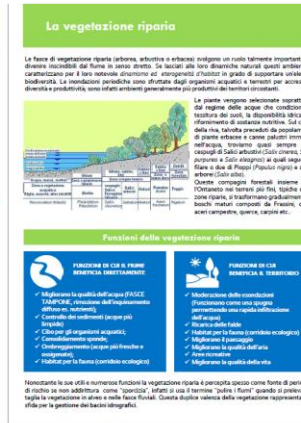
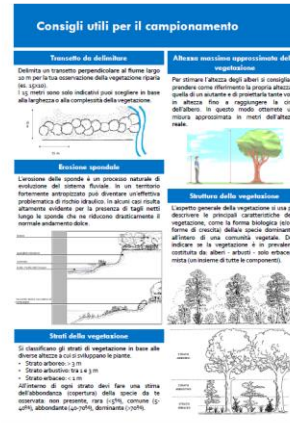
Freshwater quality monitoring

N, P, turbidity & more



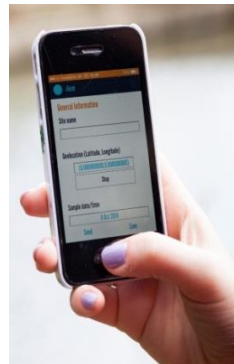
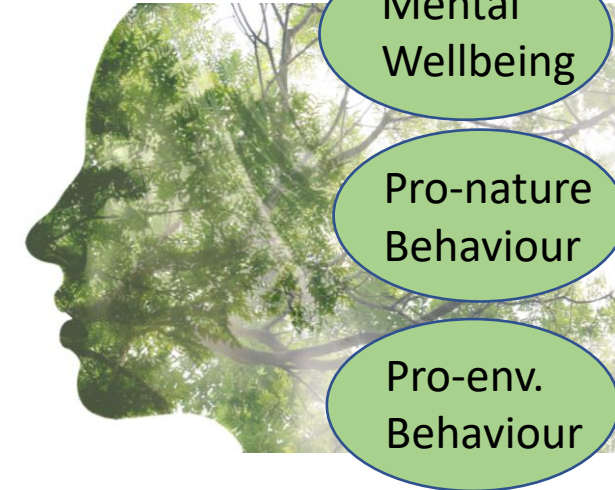
Riparian vegetation monitoring

Target species

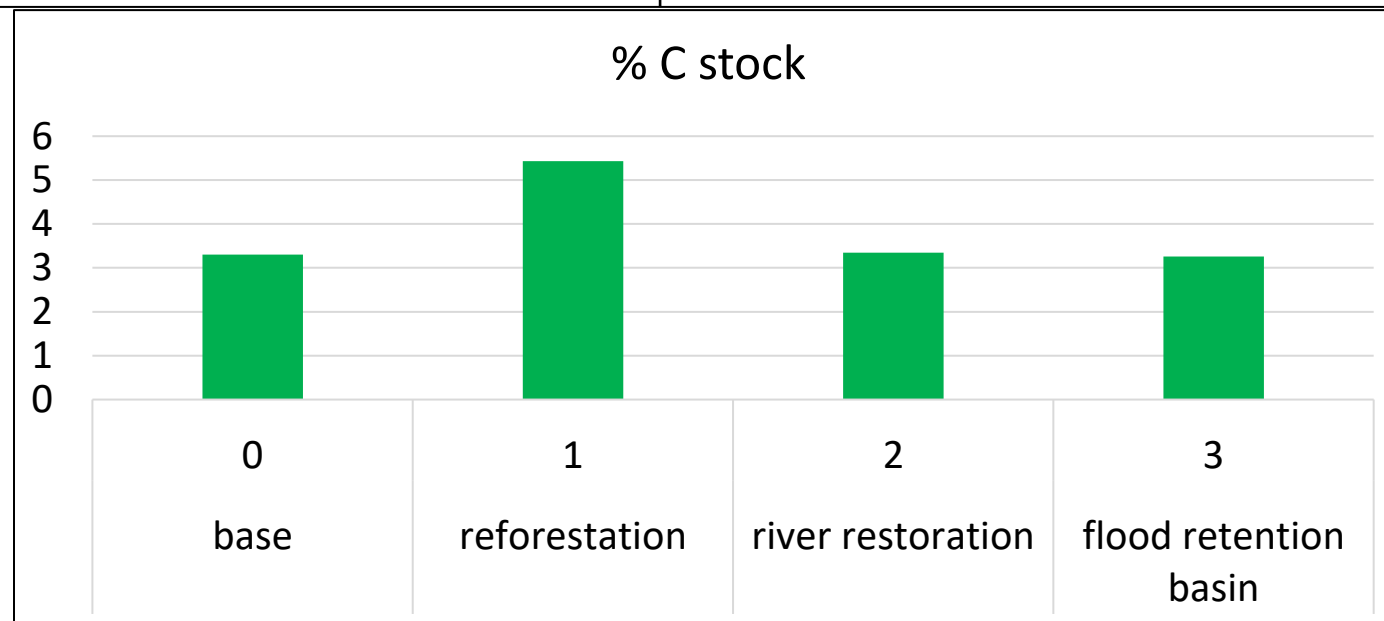
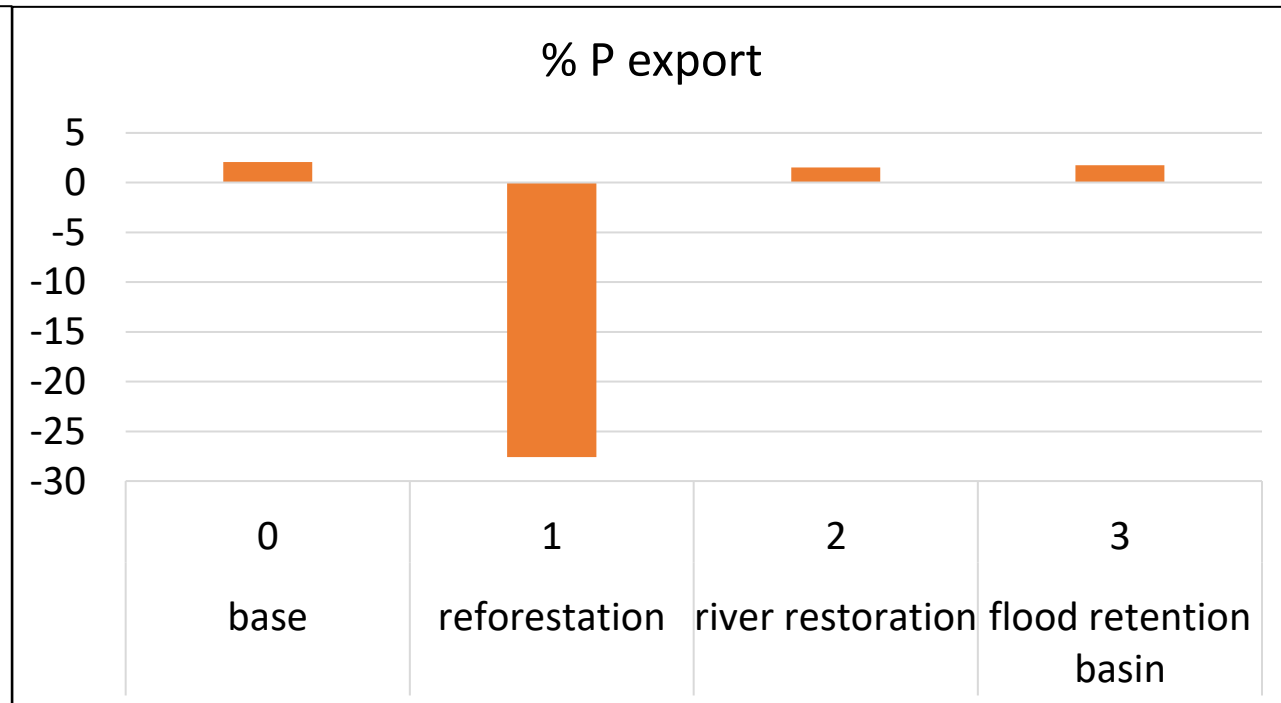
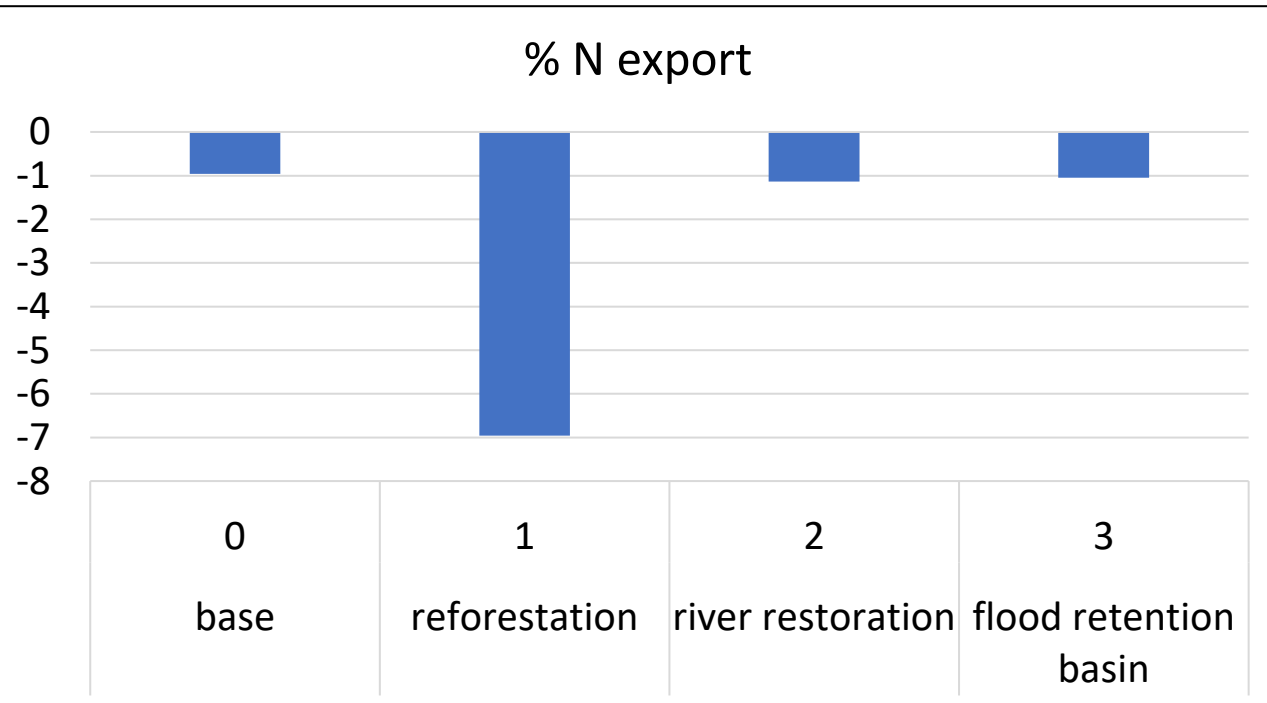


Connectedness to nature

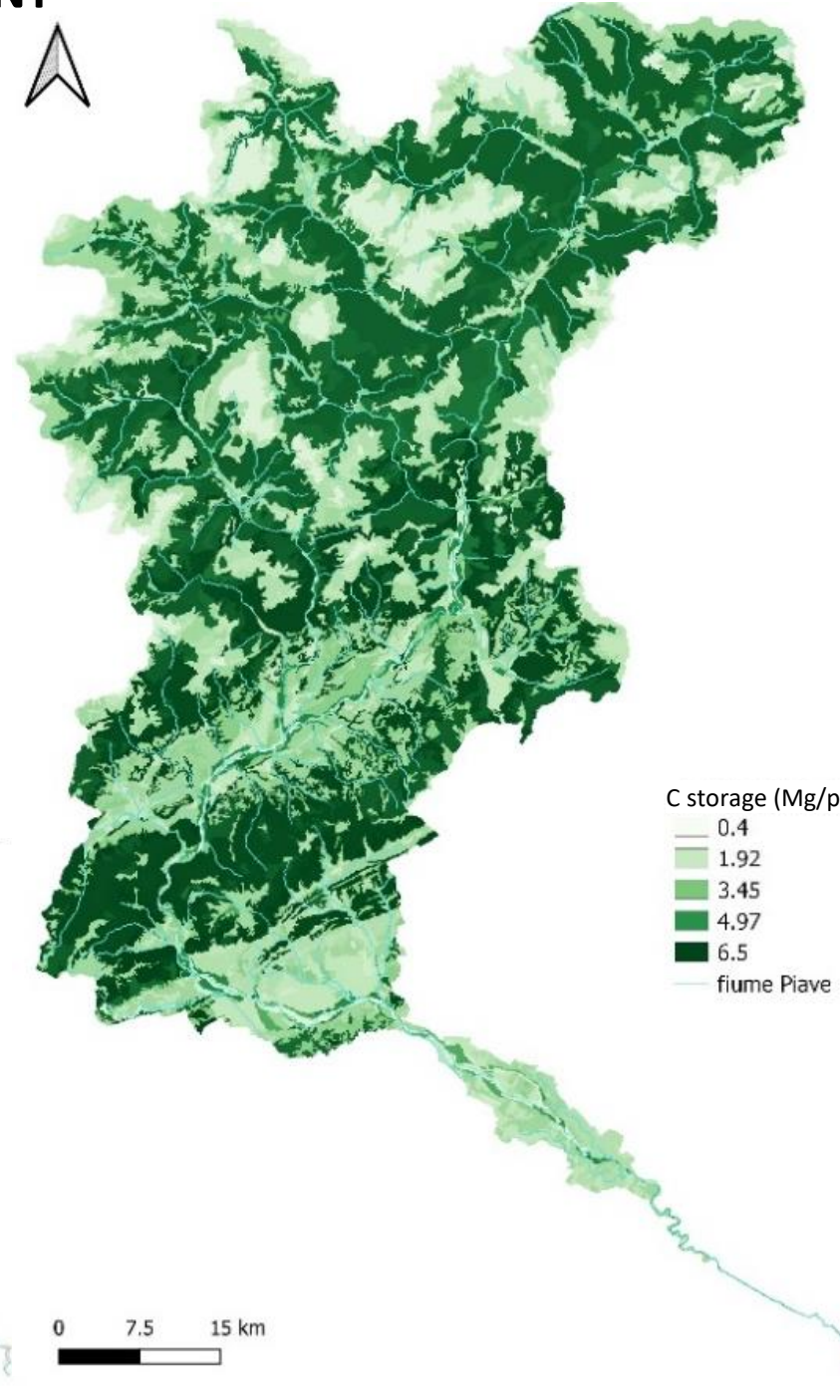
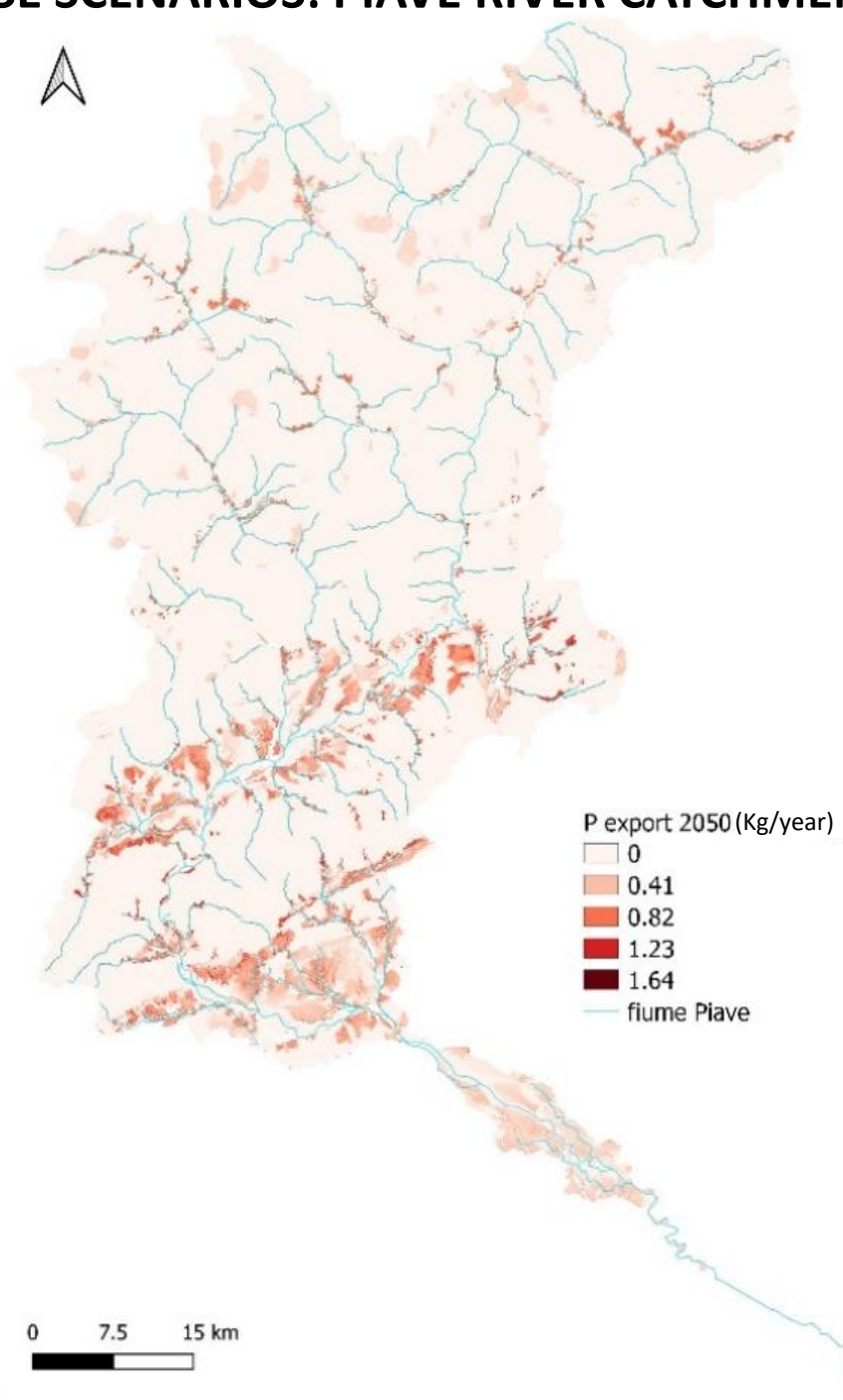
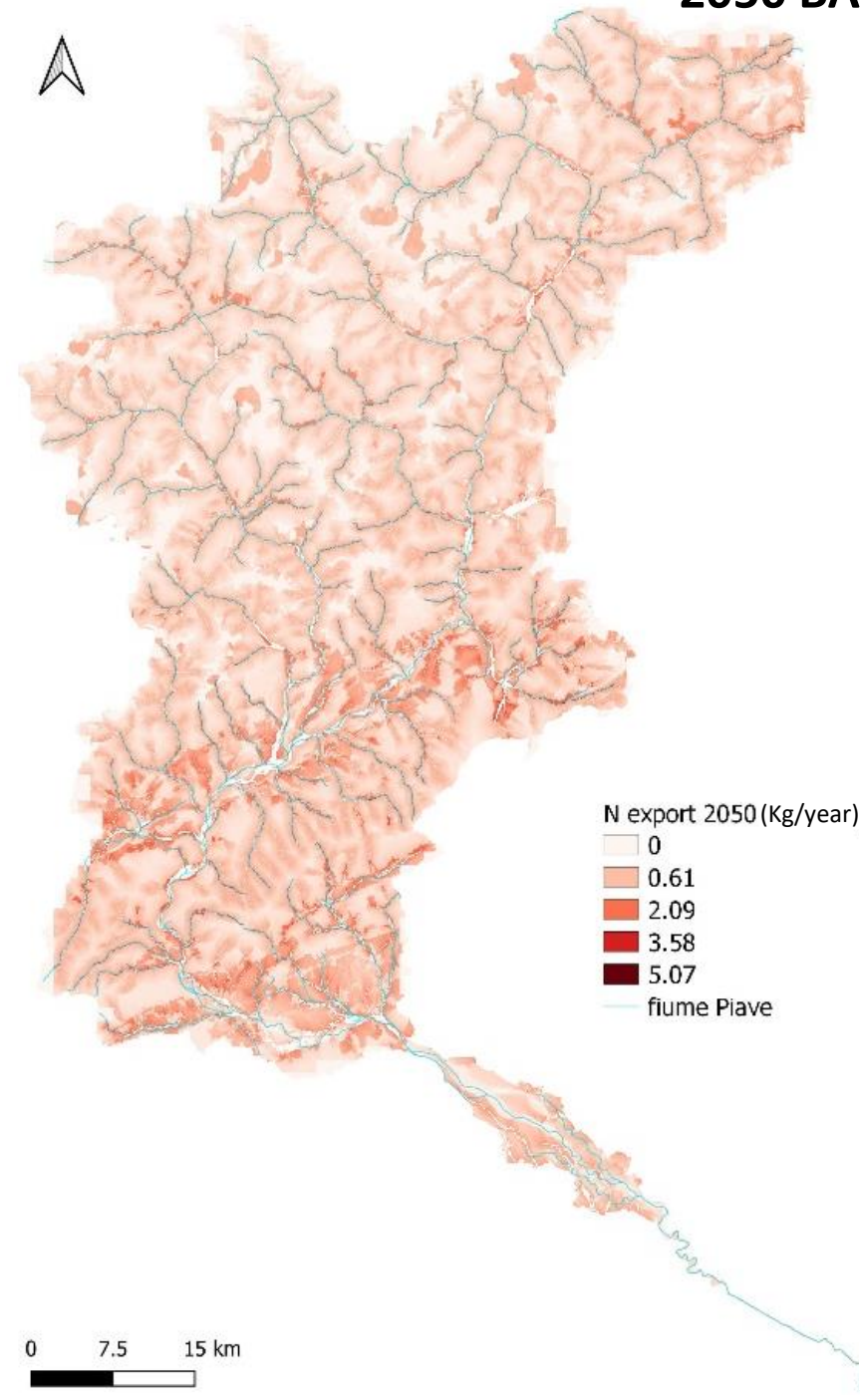
~ 2000 Questionnaires



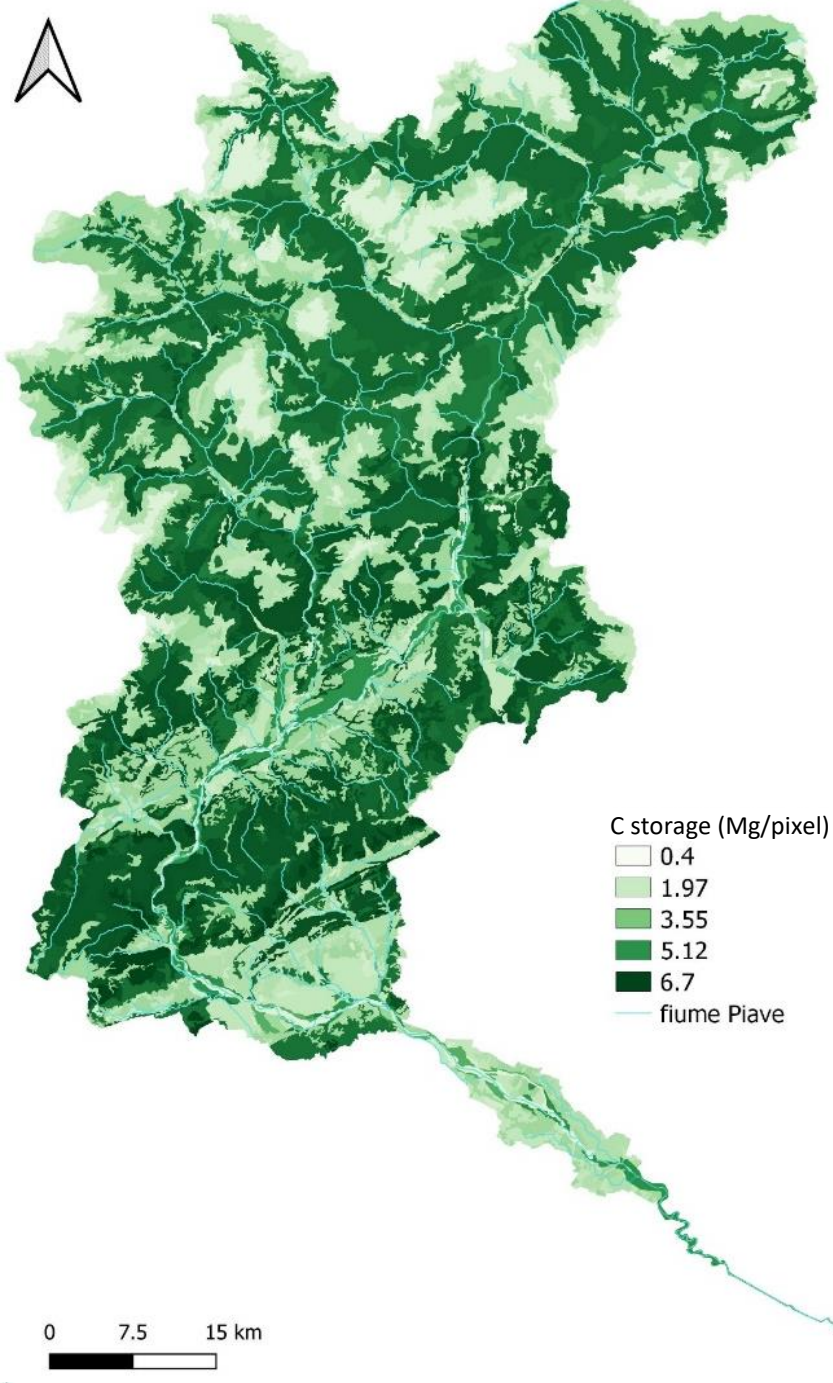
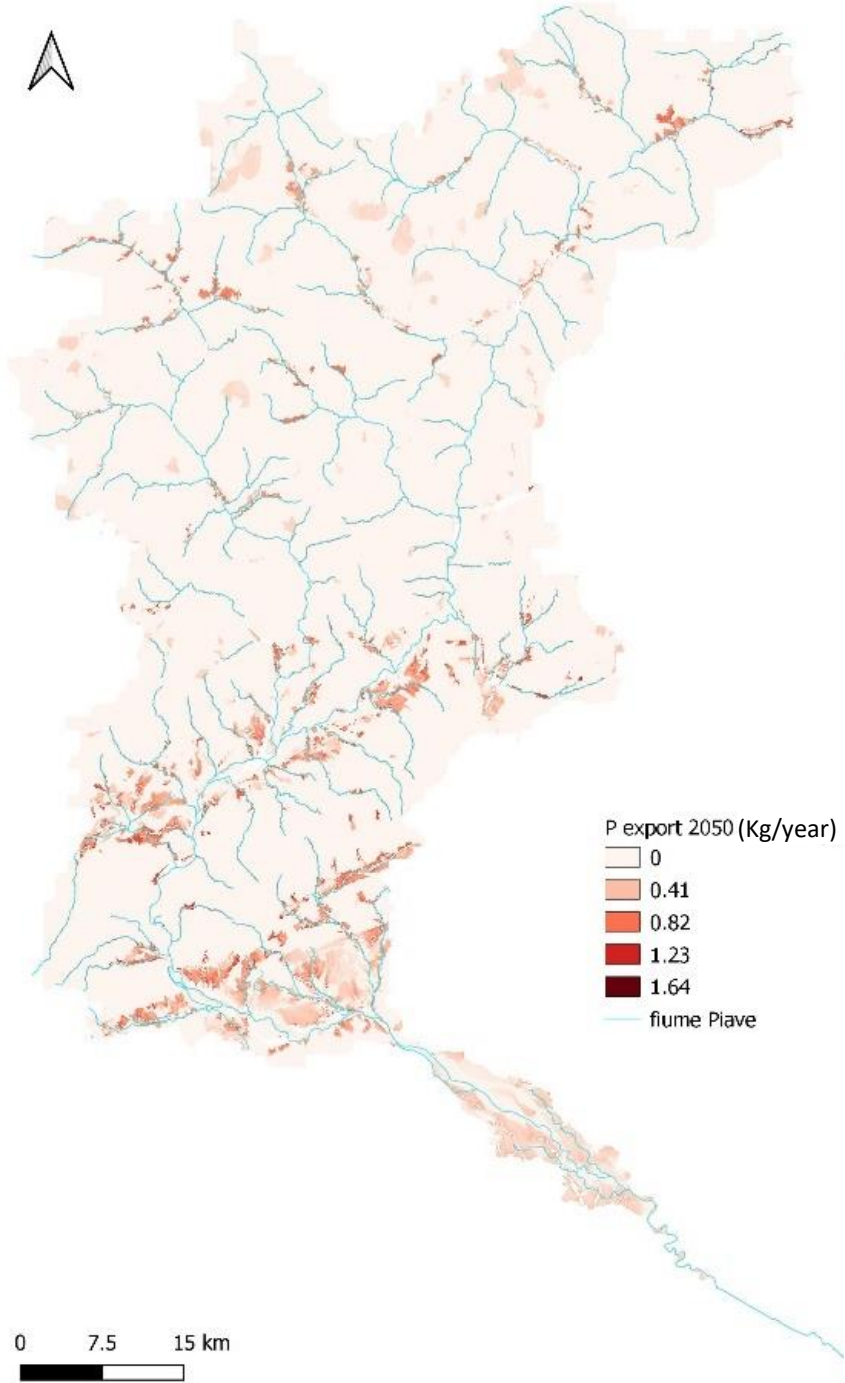
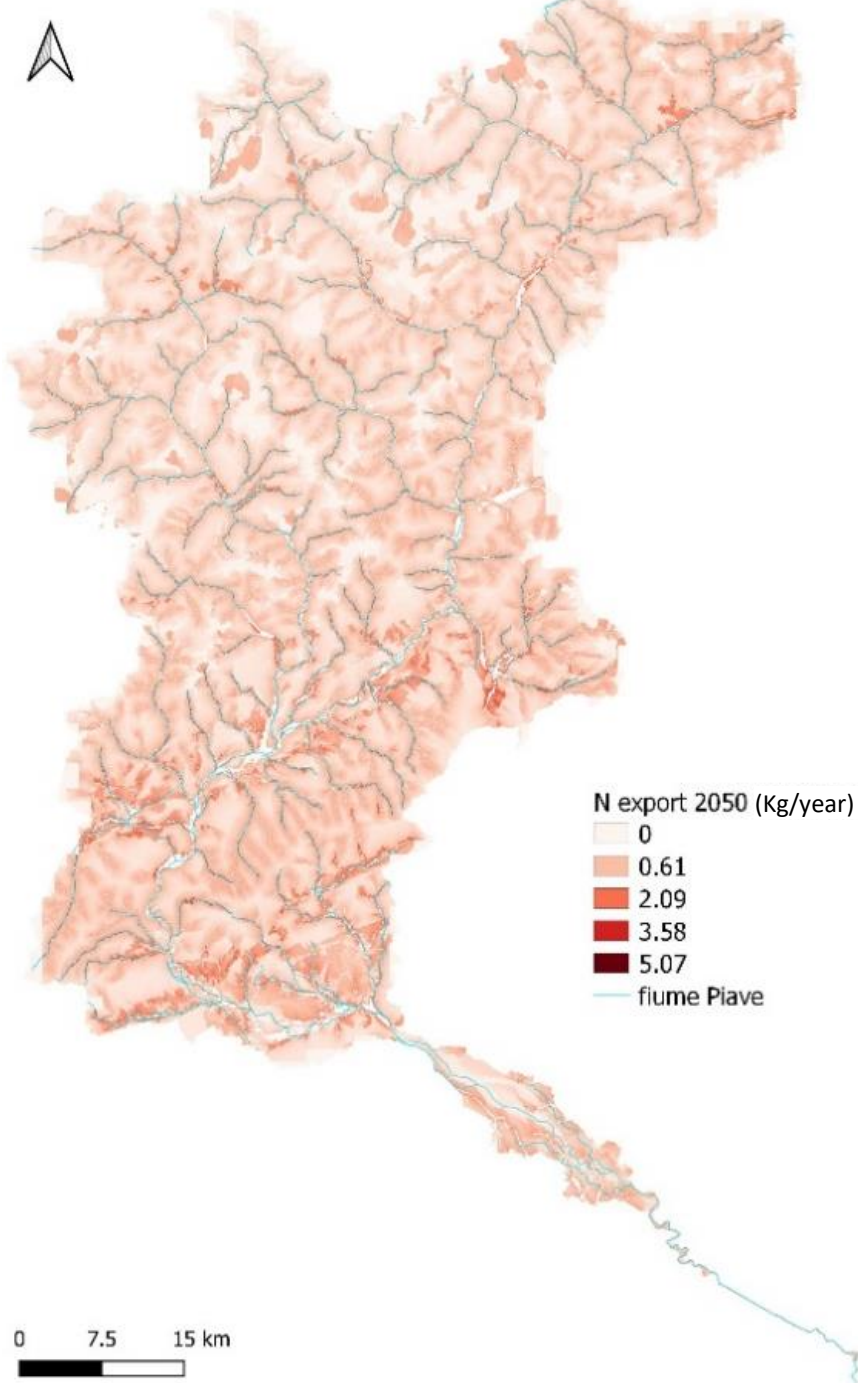
RESULTS



2050 BASE SCENARIOS: PIAVE RIVER CATCHMENT



2050 BEST SCENARIO (REFORESTATION): PIAVE RIVER CATCHMENT



CONCLUSIONS

- NBS provide multiple ecosystem services
- Citizen Science provides local scale data and participation
- Piave River catchment eutrophication & carbon capture best met by reforestation
- Reforestation nutrient reduction services valued at EUR 2,600,000
- Reforestation: Decadal trends in land abandonment
- Opportunities for multiple NBS



Thank you for your attention!

Questions?