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Valorizzare la gestione transfrontaliera per la tutela e il ripristino dei siti Natura 2000 nell'area MAB delle Alpi Giulie e del Carso

Krepitev čezmejnih vezi za ohranjanje in obnavljanje območij Natura 2000 v širšem obmejnem prostoru

IMPLEMENTING A WATER-RELATED PAYMENT FOR ECOSYSTEM SERVICES BETWEEN A PROTECTED AREA AND A WATER SERVICE OPERATOR

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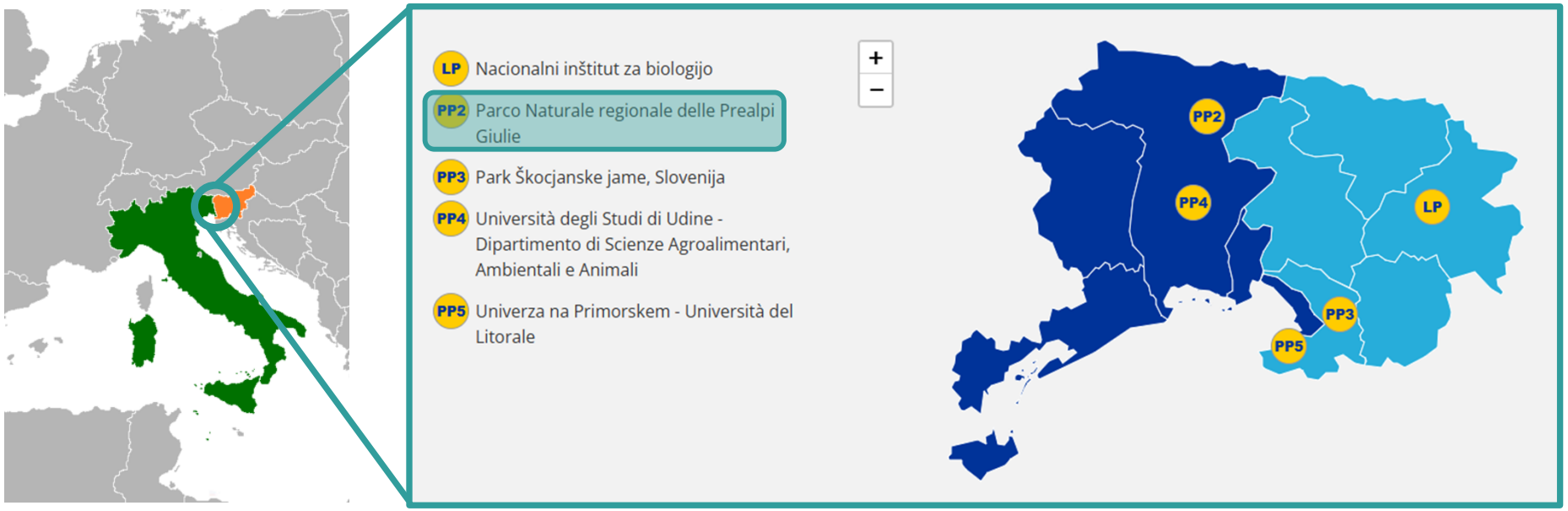
PROJECT AREA

NAT2CARE pj 2017-2020: Mobilization of citizenship for the recovery and the conservation of the Natura 2000 transboundary areas
https://2014-2020.ita-slo.eu/en/nat2care

E-NAT2CARE pj **2023-2025:** Strengthening cross-border management for the conservation and restoration of Natura 2000 sites within the MAB area of the Julian Alps and the Karst
https://www.ita-slo.eu/en/e-nat2care



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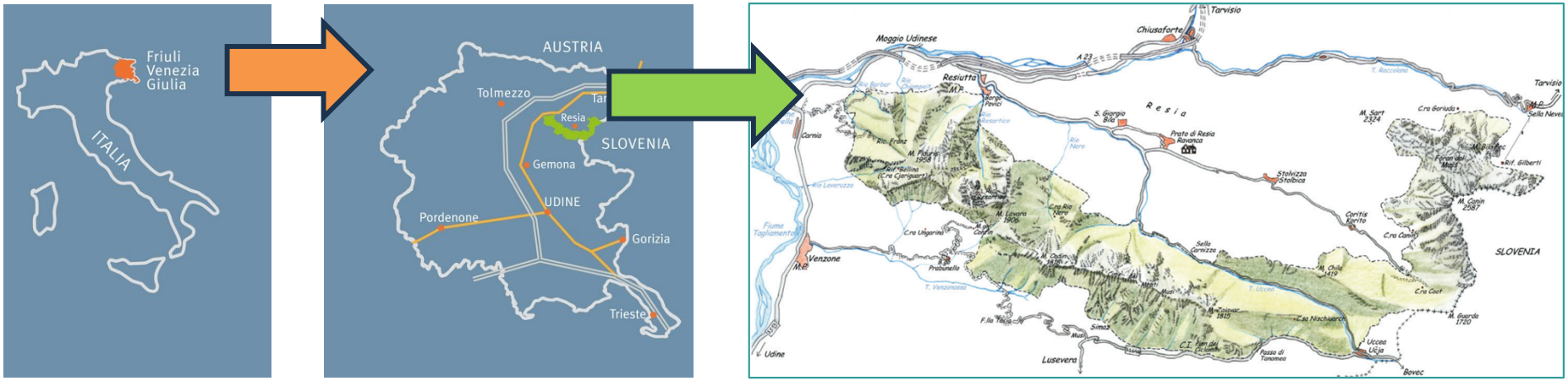
PILOT AREA

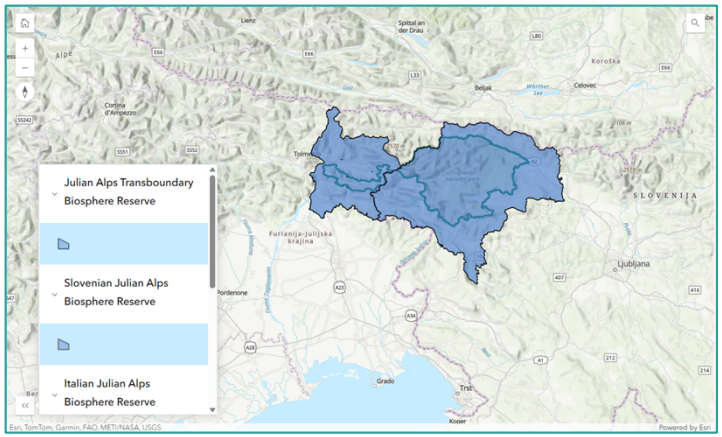


Julian Prealps nature Park

- Established by Regional Law n. 42/1996
- Area: ha 9,404 and 6 municipalities

Julian Alps Transboundary Biosphere (Slovenia-Italy)

- Established by Unesco in 2024
- Area: ha 277,000 and 109,060 inhabitants



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PROJECTS AIM

NAT2CARE pj

Cross-border actions improving conservation status of habitats and species

Integrated management of ecosystems
Mapping and assessing ESs
Introducing PES approach

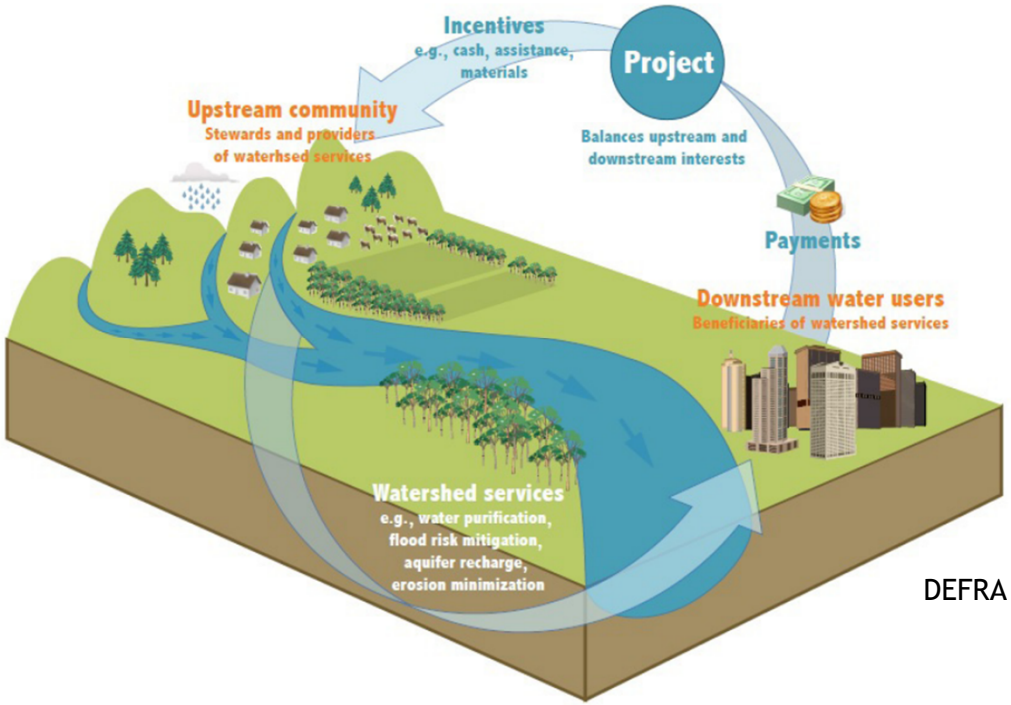
E-NAT2CARE pj

Applying PES

Up-stream community who generates the ES

Down-stream community who benefits od the ES

- recognizes the economic value through payment mechanism
- PES



DEFRA (2013), *Payments for Ecosystem Services: A Best Practice Guide*, London, UK.

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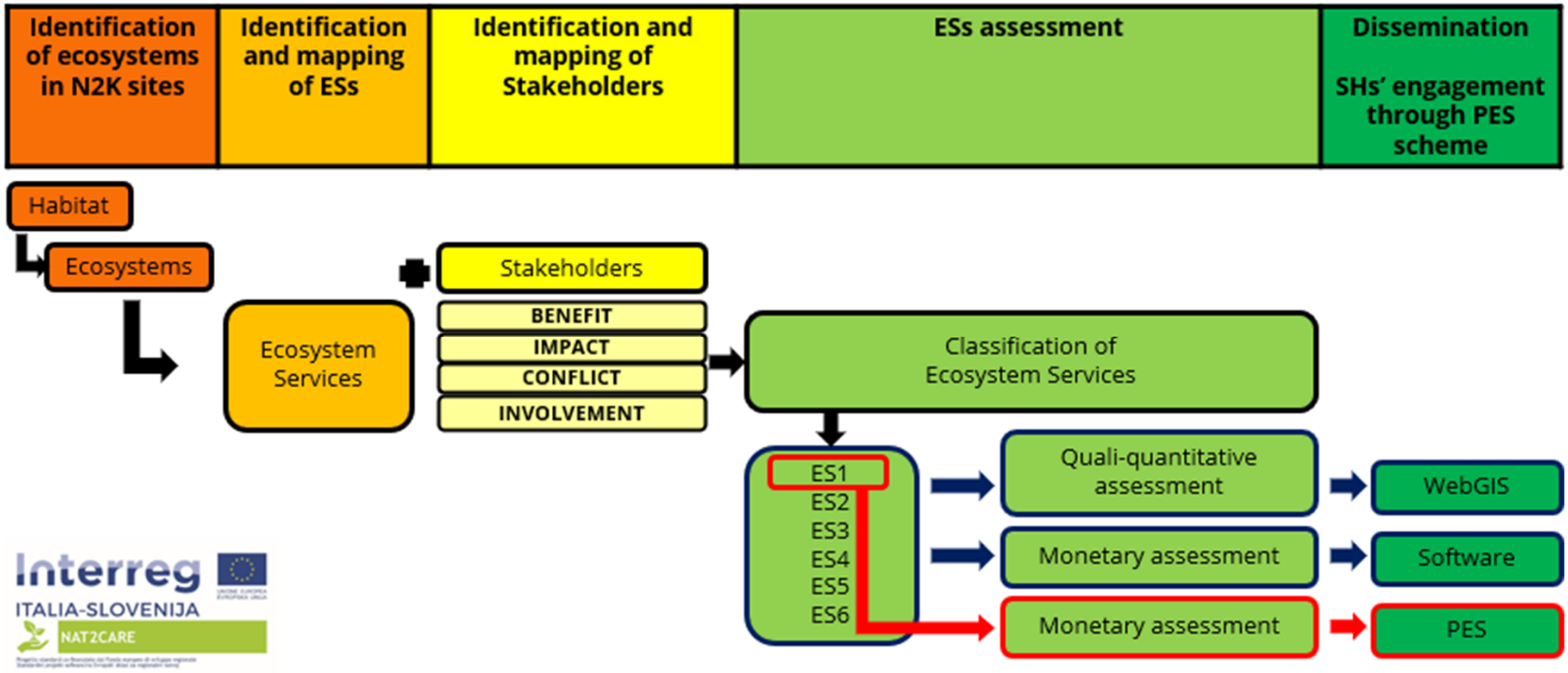
INTEGRATED MANAGEMENT OF ECOSYSTEMS

- Identifying the beneficiaries, impacts and conflicts in the use of the resource, together with the willingness of stakeholders to participate in the ecosystems management within protected areas



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PARCO NATURALE PREALPI GIULIE

INTEGRATED MANAGEMENT OF ECOSYSTEMS

FILL IN THE DATA ACCORDINGLY TO THE "WP3.2_GUIDELINES"
FILL IN ONLY WHITE CELLS. DON'T FILL IN ANY DATA IN GREY CELLS

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	select from the cascade menu
	fill in the text

PP code	Ecosystem	ES code	SH category	Stakeholder	Issues (description)				Issues (code)				BICI Score
		ES code			Benefit	Impact	Conflict	Involvement	Benefit	Impact	Conflict	Involvement	
PNPG	RIVERS AND LAKES	Ground (and subsurface) water for drinking	Entrepreneur	Water supply company					3	6	2	3	14
PNPG	GRASSLAND	Hydrological cycle and water flow regulation (Including flood control, and coastal protection)	Decision maker	RAFVG	Less erosion, less monay for recovering	Quite high	None	In politics of soil management	2	6	1	2	11
PNPG	GRASSLAND	Hydrological cycle and water flow regulation (Including flood control, and coastal protection)	Entrepreneur	Water supply company	Better flow regulation	Quite good	None	Medium	2	6	1	2	11
PNPG	GRASSLAND	Maintaining nursery populations and habitats (Including gene pool protection)	Entrepreneur	Farmer	Strategic for biodiversity of grass	Quality of pasturing can inluence	None	High	3	4	1	3	11
PNPG	GRASSLAND	Maintaining nursery populations and habitats (Including gene pool protection)	Decision maker	Park authority	Strategic for preservation of species and habitats	Management choisea can influence	None	High	3	4	1	3	11
PNPG	CROPLAND	Decomposition and fixing processes and their effect on soil quality	Entrepreneur	Farmer	Maintening soil quality by rotating crops	Abusing of pesticides	There isn't any conflict with other SHs	The involvement is expected, but the interest to be involved depends on each farmer	3	4	1	2	10
PNPG	GRASSLAND	Animals reared for nutritional purposes	Decision maker	Park authority	More sustainable management of the area, conservation of habitats	Can impact both positively or negatively	Only with sheep breeders	Medium	2	4	2	2	10
PNPG	GRASSLAND	Wild plants (terrestrial and aquatic, including fungi, algae) used for nutrition	Resident	Tourist	Recreational and gastronomical activity	None	With other users	High	2	2	2	3	9
PNPG	GRASSLAND	Wild plants (terrestrial and aquatic, including fungi, algae) used for nutrition	Entrepreneur	Farmers	Enforcement of the offer	Medium	Can impact negatively if grassland is misused	Low	2	4	2	1	9
PNPG	GRASSLAND	Pollination (or 'gamete' dispersal in a marine context)	Decision maker	Park authority	Important for biodiversity conservation	Management decision can influence	None	Medium	2	4	1	2	9
PNPG	GRASSLAND	Decomposition and fixing processes and their effect on soil quality	Entrepreneur	Farmer	Less use of chemical fertilizers	Farmers are the maintainers of thsi hbitat	None	Quite good on the topic	2	4	1	2	9

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PP code	Ecosystem	ES code ES code	SH categor	Stakeholder	Issues (description)				Issues (code)				BICI Scor
					Benefit	Impact	Conflict	Involve-ment	Benefit	Impact	Conflict	Involve-ment	
PNPG	RIVERS AND LAKES	Ground (and subsurface) water for drinking	Entrepreneur	Water supply company					3	6	2	3	14

- Most relevant ES: Ground water and surface water for drinking purposes
- Provider: Julian Prealps nature Park
- Beneficiary: Company managing the Integrated Water Service (IWS) which recognizes the role played by the NP in safeguarding the ecosystem and the related ES

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PES SCHEME

PRINCIPLE	DESCRIPTION
Voluntary transaction	Agreement is freely negotiated between the provider and the beneficiary of the service
Well-defined ES	Clear identification of the ES (*e.g.*, water, carbon, biodiversity)
Beneficiary as payer	Existence of at least one actor willing to pay to maintain the benefit
Service provider	Communities, landowners or institutions managing the ecosystem
Conditionality	Payment is linked to verifiable outcomes or practices (pay-by-result)
Additionality	The benefit must be additional compared to a business as usual scenario
Equity and transparency	Ensures distributive justice, local rights, and transparency in financial flows
Monitoring and verifiability	Monitoring and measuring impacts to ensure effectiveness

Wunder S. (2015), *Revisiting the concept of payments for environmental services*, in "Ecological Economics", vol. 117, pp. 234-243.

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AGREEMENT

PRINCIPLE	DESCRIPTION
Voluntary transaction	The water-utility company recognizes the value of the ES provided by the NP and is willing to collaborate with the NP authority to develop projects for the sustainable management of water resources and biodiversity conservation
Well-defined ES	Provisioning of drinking water through water abstraction from springs located within the NP
Beneficiary as payer	The Integrated Water Service company acts on behalf of end-users
Service provider	The NP authority acts as service provider
Conditionality	The NP authority ensures the actual provision of the ES
Additionality	Voluntary transaction object
Equity and transparency	
Monitoring and verifiability	

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VOLUNTARY TRANSACTION: OBJECT

1. **Definition of the study area**: NP + Site of Community Importance (territory under the NP's jurisdiction)
2. **Identification of aqueduct intake** whose surface catchment lies within the study area defined in point 1
3. **Collection of data** and description of all the intakes identified in point 2, including the number of users supplied
4. **Definition of criteria** to focus on the most relevant (*e.g.* number of users served, type of users, territorial vulnerability, remoteness/marginality)
5. **Detailed description of the intakes** chosen in point 4 using the data provided by the Integrated Water Service company
6. **Analysis of land ownership** distinguishing between public and private property
7. **Identification of existing protection/conservation measures**: analysis of their effectiveness, and evaluation of their stage of completion/implementation (referring to the Conservation and Development Plan measures)
8. **Proposal of new measures and/or identification of critical issues** that prevented the implementation of existing measures
9. **Definition of criteria for delineating safeguard zones**
10. **Proposal of safeguard zones** for the intakes listed in point 4

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VOLUNTARY TRANSACTION: BUDGET

Cost-driven approach

- **Proposal of new measures and/or identification of critical issues** that prevented the implementation of existing measures
  - Specific objective
  - Description of the measure
    - Area interested
    - Activity and task
    - Stakeholders involved
  - Targets
  - Budget
  - Overall assessment of the effectiveness

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VOLUNTARY TRANSACTION: BUDGET

Benefit-driven approach

- To determine the maximum value of economic compensation, in 2019 a choice experiment was conducted to estimate the surplus that consumers attribute to drinking water sourced from a protected natural area
- Out of a population of 331,000 households, the survey was administered to a statistically representative sample of 511 respondents
- The results enabled the monetary valuation of the surplus perceived by citizens, expressed as

  "*management measures that safeguard water quality and potability guaranteed for 50 years*"

- Benefit associated with the opportunity to access drinking water from the protected area:
  - 105.64 € / household surplus / year

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DISCUSSION

From a regulatory perspective the design of this PES agreement is consistent:

- At the European level with Directive 2000/60/EC (Water Framework Directive), particularly regarding Article 9 "Recovery of costs for water services" which invites Member States to take account of the principle of recovery of the costs of water services, including Environmental and Resource Costs (ERC), having regard to the economic analysis conducted according to Annex III, and in accordance in particular with the polluter-pays principle
- At the national level with Ministerial Decree No. 39 of 24 February 2015, "Regulation establishing the criteria for defining Environmental and Resource Costs (ERC) for different water use sectors"
- At the national level with the Operational and Methodological Manual for the Implementation of Economic Analysis, published in 2018 by the Italian Ministry of the Environment
- This framework provides a solid empirical basis for the development of a PES scheme that is fair, effective, and sustainable in the long term
- The study contributes to the ongoing discourse on integrated water resource management and the use of economic instruments to recognize and enhance the value of ES

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NEXT STEPS

- Finalising the agreement by end of the 2025
- Working on recognition in the tariff of the Environmental and Resource Costs (ERC)
  - The value of water, currently reflected in the tariff that sustains the Integrated Water Service, is based solely on its economic value, ensuring full cost recovery (investments, operational and financial costs) meaning with:
    - Environmental costs: depuration costs
    - Resource costs: treatment and purification costs
    - However, ecological costs are not fully internalized
  - These hidden costs, which create a gap between the value and the price of water, can be quantified as the resources needed to implement measures mitigating the Integrated Water Service's ecological impact
  - First best practice was carried out in Italy (Park of the Brenta River)
  - We are working for the recognition of the PES cost into the ERC
  - The tariff is defined at national level by the Italian Regulatory Authority for Energy, Networks and Environment (ARERA) for 4 years

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Thank for your attention!

Implementing a Water-Related Payment for Ecosystem Services Between a Protected Area and a Water Service Operator

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