



**Characterizing benefits and governance in the context of Payments for Watershed Services in Europe**

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**Alessandro Leonardi & Davide Pettanella (University of Padua),  
Laurence Smith (SOAS, University of London), Nicolas Robert (EFIMED), Genevieve Bennett, (Ecosystem Marketplace)**



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## Outline

- Research background and goals
- Method
- Main results
- Conclusions

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## Background – research issues

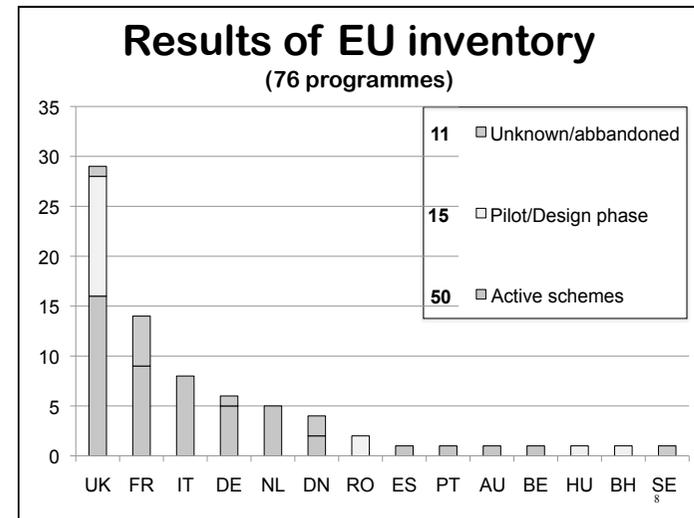
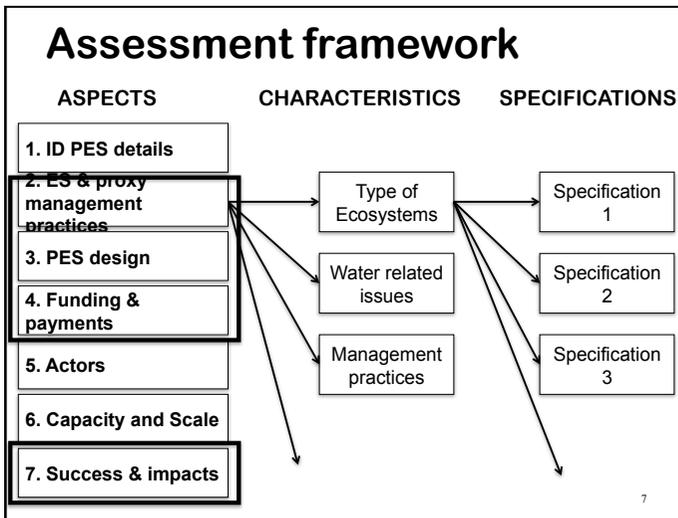
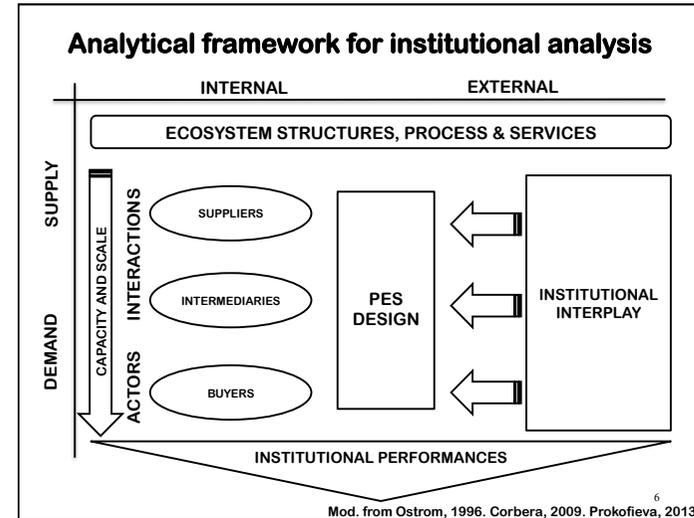
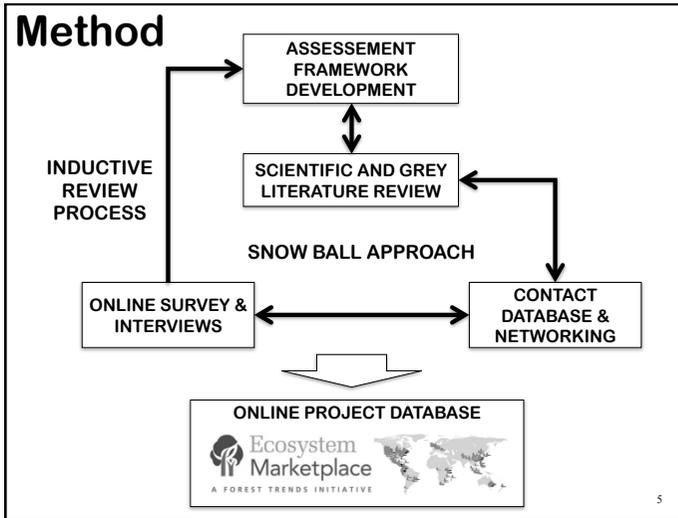
- **Increasing interest** on PES (Martin-Ortega et al. 2013)
- 75% of literature focuses on PES in DCs (only 4 scientific papers on PWS case studies in EU).
- Last 2012 Global State of Watershed Investments identified **only 15 active programmes in EU**
- Lack of clarity on what are the governance models of PWS in EU
- Need to better understand their coverage and impacts

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## Research goals

- 1. What are the characteristics of Payments for Watershed Service (PWS) in Europe? (service provided, actors, scale, market, benefits and impacts)**
- 2. Which are the governance models of PWS in Europe?**
- 3. Can we identify clear links between impacts and success of PWS and their governance?**

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### Ecosystems and human impacts

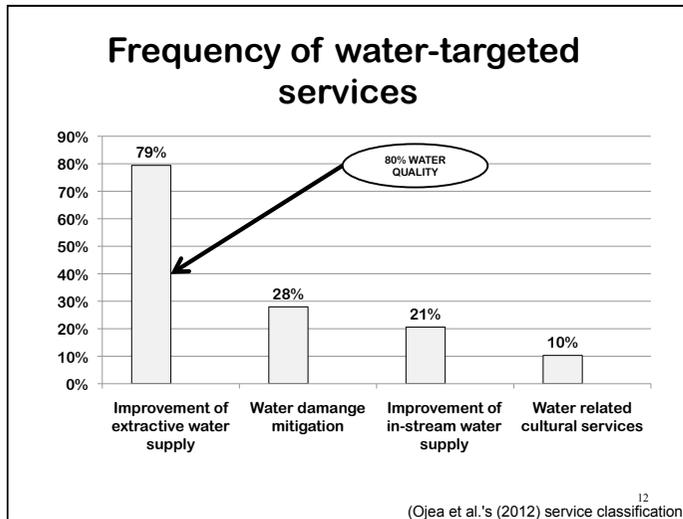
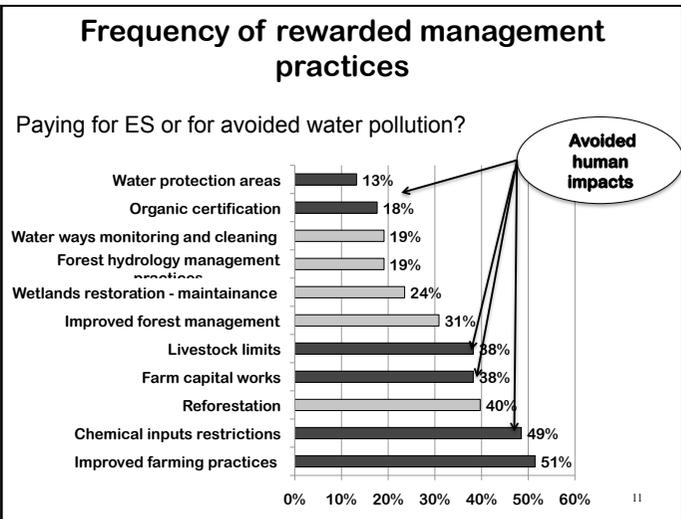
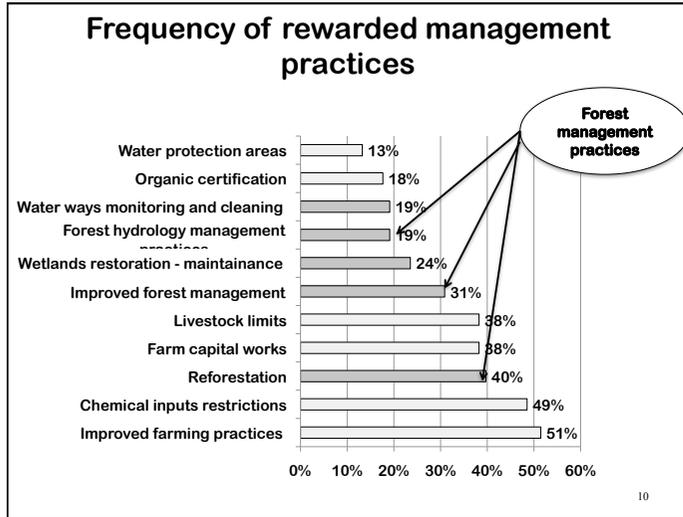
**Type of ecosystem targeted:**

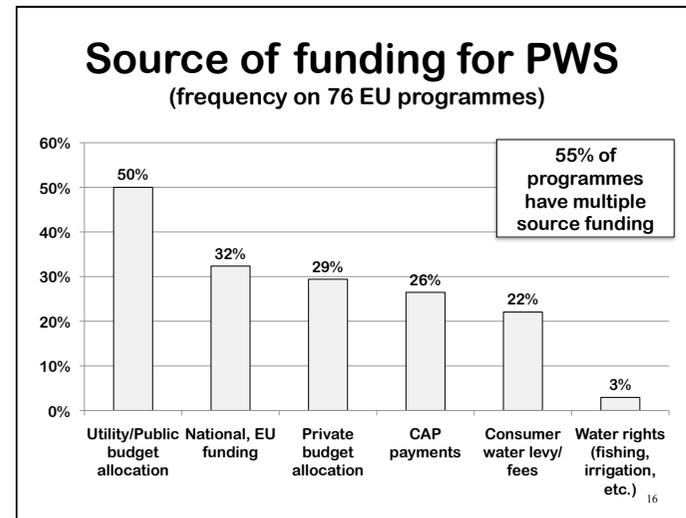
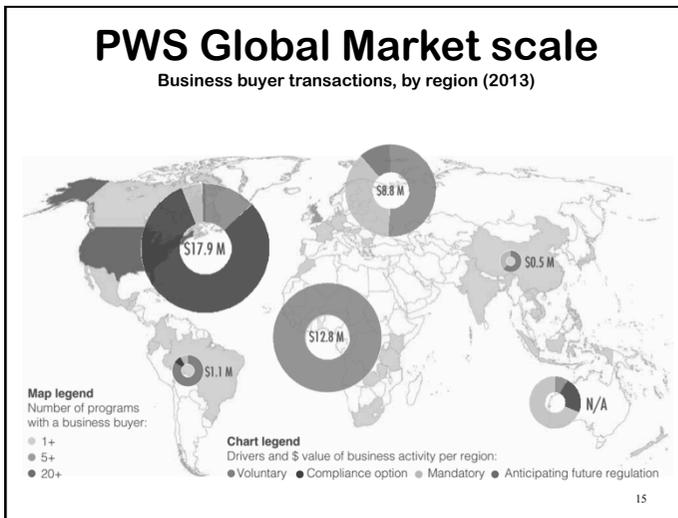
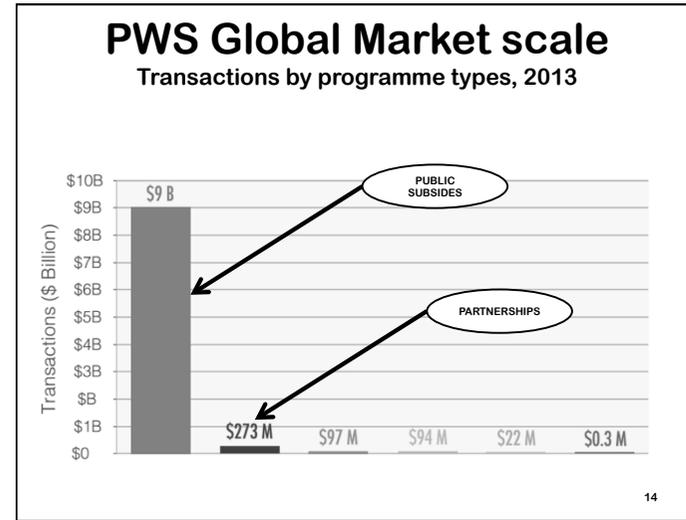
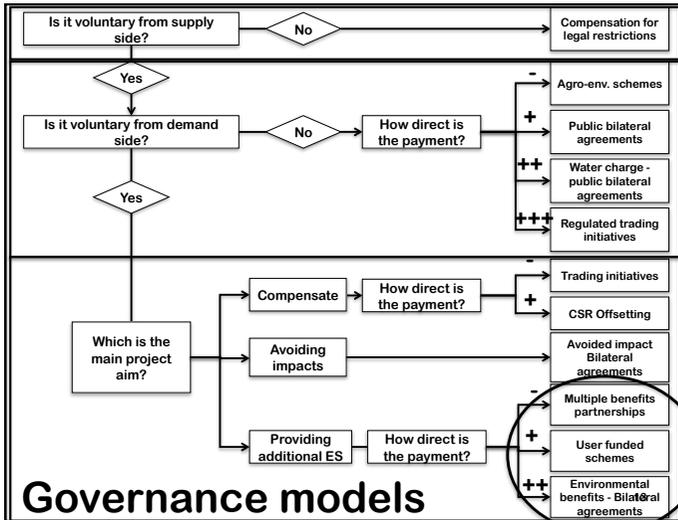
- 50% focus on agricultural catchments
- 30% on forests
- 20% on water bodies and wetlands

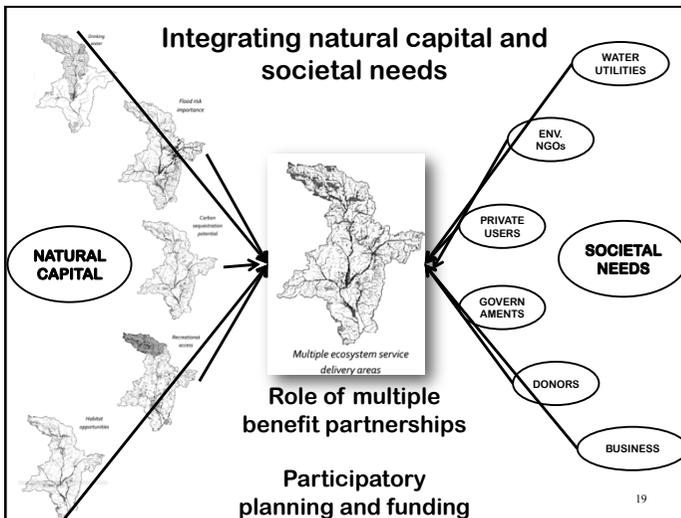
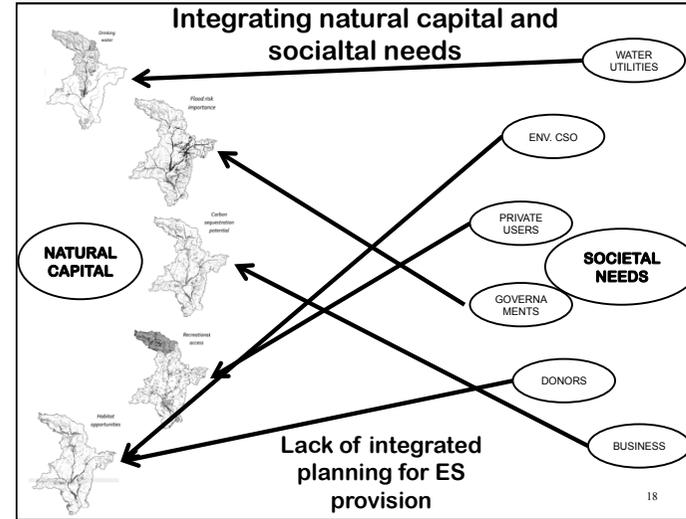
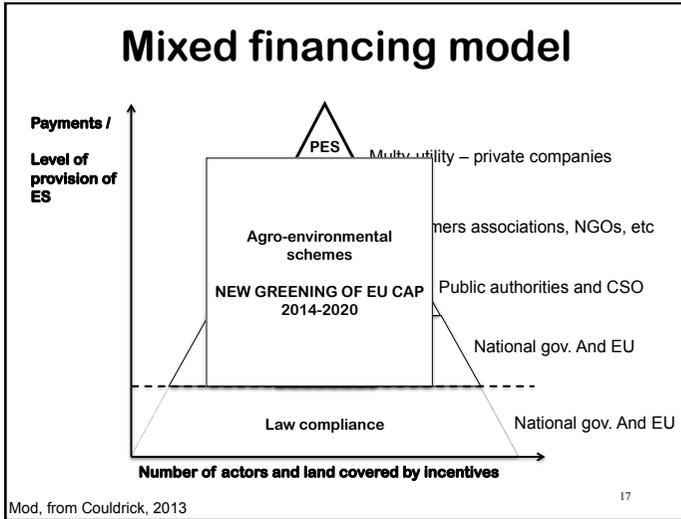


**Human based impacts:**

- Nitrates 72%
- Chemicals 56%
- Biological 35%
- Hazard control 31%
- Phosphorous (26%) Groundwater (13%), Water color (12%) Lost recreational ES (10%);



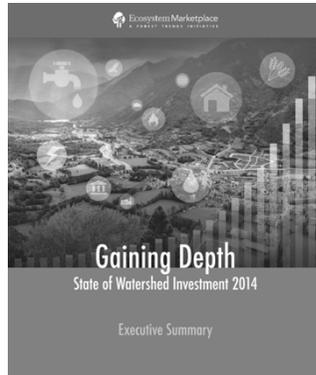




- ### Conclusions
- PWS, old concept in EU, but several governance models build upon CAP payments and EU funds
  - Multiple benefit projects provide better participatory land management and funding > from “payments” to public procurement & crowd funding
  - Forest and trees provide multiple benefits but are expensive management practices (compared to avoided use of chemicals) > need for co-benefits accounting
  - Multiple benefits project have a better ROI
  - Collaborative learning and participatory processes increase social capital
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## More information:

[www.ecosystemmarketplace.com](http://www.ecosystemmarketplace.com)



A Report by Forest Trends' Ecosystem Marketplace

Genevieve Bennett and Nathaniel Carroll

Contributing authors: Michael Bennett, Alessandro Leonardi, and Kevin Moull

Donors:

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Thanks you!

[alessandro.leonardi.83@gmail.com](mailto:alessandro.leonardi.83@gmail.com)

Presentation available at:  
Davide Pettenella website



## Criteria for literature review

- Search on: Scopus, Google Scholar, Google, and Science Direct.
- Systematic search using key words in 4 EU languages
- **Key words:**
  - **payments for water-related ecosystem services**
  - **payments for watershed services**
  - **payments for wetlands**
  - **cooperative agreements**
  - **Groundwater protection**

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## Snow ball approach

- **Networking at EU level:**
  - European Forest Institute Network,
  - Ecosystem Marketplace,
  - University of Padua and SOAS; University of London.
  - Field work in Italy, Spain and UK.
- **Contact with at least one per country (EU15):**
  - university expert team; and/or
  - environmental NGO; and/or
  - consulting firm working on PWS
- **Check websites of associations of water utilities**
- **Development of a contact database (92 contacts)**

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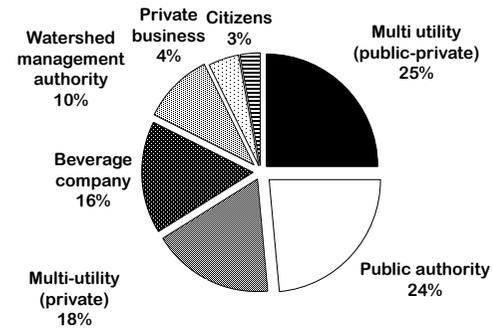
## Grey literature inventories

- CTFC, 2012. WORKING REPORT ON ECOSYSTEM SERVICES THAT MEDITERRANEAN FORESTS PROVIDE IN THE WATER ISSUE. Sylvamed.
- FAO, 2011. PAYMENT FOR ENVIRONMENTAL SERVICES: FIRST GLOBAL INVENTORY OF SCHEMES PROVISIONING WATER FOR CITIES.
- Greiber, T., van Ham, C., Jansse, G., Gaworska, M., 2009. Final report study on the Economic value of groundwater and biodiversity in European forests. Brussels.
- Payments, W., 2012. Charting New Waters State of Watershed Payments 2012.
- OECD, 2013. Providing Agri-environmental Public Goods through Collective Action. Geneva, Switzerland.
- DEFRA, 2013. Payments for Ecosystem Services: A Best Practice Guide. Annex - PES Case Studies. London, UK.

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## Actors – Buyers

- Type of buyer: 50% private 50% public;



## Payments

Type of payment	Units	Min	Max
Hectare based management practices	Average €/ha	€ 69	€ 839
	Min/Max €/ha	€ 15	€ 6.936
	N° of observations	11	24
Capital works or other no hectare based practices (fencing, capital works, etc.)	Average €/ Intervention	€ 1.404	€ 29.900
	Min/Max €/ Intervention	€ 35	€ 60.000
	N° of observations	8	10

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