



INSTRUMENT NAME: 4.1 PAYMENT FOR ECOSYSTEM SERVICES (PES)

Pondscape-specific definition: PES are a voluntary transaction where a user (e.g., a beneficiary) pays a provider of ecosystem services (e.g. a Pondscape landowner or manager) for natural resource management that delivers offsite services (Wunder 2014). Offsite services can be understood as ecosystem services, such as water quality improvements, pollination, cultural or spiritual values, among others. Payments can be input-based (e.g., based on the costs of managing a pondscape) or result-based, i.e., depending on the achieved level of ecosystem service provision (Illes et al., 2017). Payment for ecosystem service agreements create incentives for providers (e.g., pondscape NbS developers) to maintain or increase ecosystem service supply, paid for by those who enjoy the external benefits that they generate.

Payment for ecosystem services can take many different forms, including bilateral agreements between a singular beneficiary and singular provider; collective action PES, where an institution combines resources from multiple beneficiaries (private parties, NGOs, government bodies) to pay landowners for management actions that deliver ecosystem services; or market-approaches (see the Transfer-based instruments factsheets).

Note: we discuss publicly funded PES under Grants; here we focus on privately funded PES.

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| CATEGORY | Tradable rights/permits and payments for ecosystem services | | | |
| ALSO-KNOWN-AS | PES | | | |
| RELATED INSTRUMENTS | Biodiversity offsets; habitat banking; voluntary beneficiary contribution; water quality trading systems | | | |
| APPROPRIATE FOR: Who can use this type of financing instrument? | Pondscape developer | NGOs and non-profits | Local/city/ regional govt. and agencies | National govt. and public agencies |
| SOURCE OF FINANCE: Who provides the finance? | Any actor who wants to voluntarily fund provision of ecosystem services (note: we discuss publicly funded PES under <i>grants</i> ; here we focus on privately funded PES). | | | |
| PAYMENT FORM: What form is the payment? | Cash OR offset credit or certificate (which can then be sold for cash). | | | |
| IN RETURN FOR WHAT? What is the NBS project obliged to deliver in return? | Ecosystem-service provision – any ecosystem service (e.g., biodiversity provision, climate adaptation, climate mitigation, other). | | | |
| RECIPIENT REQUIREMENTS: What requirements must recipients meet to receive finance? | Any landowner generating ecosystem services can participate. | | | |
| PROJECT REQUIREMENTS: What requirements must the pondscape project meet? | <p>If PES are <u>input-based</u> (i.e. pondscape developer receives payment for taking actions e.g. installing ponds), then fewer requirements (just must demonstrate you have taken actions that will lead to ecosystem service provision).</p> <p>If PES are <u>result-based</u>:</p> <p>Measurable impacts: The pondscape project needs to be able to demonstrate measurable change or continuation of ecosystem service provision. This can increase complexity and cost for NbS providers.</p> | | | |
| OTHER REQUIREMENTS: What additional requirements are | <p>Access to users of ecosystem services willing to pay providers (i.e. pondscape NbS developers)</p> <p>May require technical expertise in PES standards and certification processes.</p> <p>Landowners may have to finance the development of the project upfront (and verify results) before receiving offset credits or certificates that they can sell.</p> | | | |





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| attached to the financing? | | | | |
| SPEED: How quickly do recipients receive money? | Fast (<4months) – Medium(5-12months) – Slow (12months+) | | | |
| FUNDING TIMELINE: When does the recipient receive the funding? | One-off or ongoing. Some PES payments occur only once, while others are structured to provide long-term annual payments for landowners. | | | |
| NBS TYPE: What types of NBS is the financing for? | <u>Pondscape creation</u> | <u>Pondscape restoration</u> | <u>Pondscape management</u> | |
| SCALES: What scale of financing? | Small (<€10k) | Medium (€10k-€99k) | Large (€100k-€999k) | Very large (€1million+) |
| COMPLEXITY: How complex is applying for the finance | Simple | Medium | | Complex |
| EXIST NOW IN EU? | Yes | | No | |
| REFERENCES: | <p>Illes, A., Russi, D., Kettunen, M., and Robertson M. (2017) Innovative mechanisms for financing biodiversity conservation: experiences from Europe, final report in the context of the project “Innovative financing mechanisms for biodiversity in Mexico / N°2015/368378”. Brussels, Belgium https://ieep.eu/uploads/articles/attachments/dcc74b53-6750-4ccd-99b9-dc9e9d659dd4/IFMs_for_biodiversity_EUROPE_Illes_et_al_2017.pdf?v=63664510044</p> <p>Vaissière, A.-C., Quétier, F., Calvet, C., Levrel, H., & Wunder, S. (2020). Biodiversity offsets and payments for environmental services: Clarifying the family ties. <i>Ecological Economics</i>, 169, 106428. doi:10.1016/j.ecolecon.2019.10642</p> <p>Wunder, S. (2014) Revisiting the concept of payments for environmental services. <i>Ecological Economics</i>. http://dx.doi.org/10.1016/j.ecolecon.2014.08.016</p> | | | |





Instrument: 4.1 Payment for Ecosystem (PES) example

Example name: 4.1.1 Vittel (Nestlé Waters) PES

Example description: Agricultural intensification in the water catchment area of the Nestlé Waters’ Vittel water source in Northern France led to increased nitrogen pollution of soil and ground water resources. For this reason, Nestlé Water started a PES scheme to incentive farmers to adopt improved agricultural and land-use practices. Under these long-term contractual agreements, farmers reduce their chemical fertiliser input and change their crop management, among other actions, to decrease nitrification of local waters.

| NBS DESCRIPTION | |
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| LOCATION | Vittel, France |
| NBS TYPE | Creation Restoration Creation |
| ECOSYSTEM TYPE | Water catchment area with intensive agricultural land-use. |
| NBS BENEFITS | Improved quality of ground water resources. |
| NBS DESCRIPTION | Improved agricultural- and land-management practices reduce the nitrification of groundwater resources. |
| SCALE (SIZE) | The total size of the affected area is not reported but is likely to cover thousands of hectares. |
| NBS PERFORMANCE CRITERIA | Nitrate concentrations in ground water (measured daily); nitrate concentration in the soil. |
| NBS PERFORMANCE | The programme has been assessed to be successful. |
| FINANCING DESCRIPTION | |
| SOURCE OF FINANCING | Nestlé Waters, owner of the Vittel water brand. |
| RECIPIENT | Local farmers |
| SCALE (FINANCING) | Very large. Overall Vittel spent about 24 million € within the first seven years of the programme. Farmers receive on average €200/ha/year and may receive €150.000 per farm for modernisation investments. |
| TIMELINE | Contracts are long-term, ranging from 5 to 30 years. Depending on the specific agreements, some payments can be one-off (investments for farm modernisations) or on-going (for ongoing land-use practices). |
| FINANCING REQUIREMENTS | Farmers need to apply improved land management practices that are expected to reduce nitrate concentrations in the soil. Such practices include among others the replacement of maize animal feed with alfalfa and hay, the reduction of stocking rates to one head per hectare, a reduced use of agrochemicals and improved waste management. Farmers are paid to implement the practices (i.e. not result-based). |
| FINANCING PERFORMANCE | The estimated costs of the PES solution equals per m3 of purified drinking water equals €1.52. |
| TRANSACTION COSTS | The cooperation bears substantial transaction costs, which include among other things monitoring activities and the establishment of an intermediary agency (Agrivair institute) to facilitate the transactions between farmers and Nestlé Waters. No quantitative data has been published on these costs. |
| REFERENCE | Illes, A., Russi, D., Kettunen, M. and Robertson M. (2017) Innovative mechanisms for financing biodiversity conservation: experiences from Europe. Available here: https://ec.europa.eu/environment/nature/biodiversity/financing_en.htm Perrot-Maître, D. (2006) The Vittel payments for ecosystem services: a “perfect” PES case? Available here: https://pubs.iied.org/sites/default/files/pdfs/migrate/G00388.pdf |

