



Context

- Insufficient financing is a significant barrier for nature-based solutions uptake
- Why? Pondscapes (like other NbS) pose challenges for financing
 - → Pondscapes generate "public" goods, which are undervalued by markets (e.g. biodiversity conservation)
 - → **Scattered benefits**: Pondscapes generate multiple benefits for many beneficiaries
 - → Benefits are difficult to measure
 - → Relatively **small project size**
- Call for significant increase in private investment to meet NbS financing gap but some concerns.
- Limited research on ponds





Research questions

- 1. How much do pondscapes cost? What are the budgetary requirements of Pondscape NbS implementation?
- 2. **How are pondscapes currently paid for?** How are ponds and pondscapes currently funded/financed as nature-based solutions?
- 3. What is the future role of private finance? How could innovative financing instruments pay for pondscape NbS in the future?

Methodology

- Literature review
- Semi-structured interviews with demosite leaders at 11 pondscapes in EU, Uruguay, Turkey
- Co-creation workshops in three demosites (in Spain, Turkey, UK)





SUSTAINABLE FINANCE INVENTORY

Find the complete Ponderful Sustainable Finance Inventory at the <u>Ecologic Institute website</u> or click on the instruments below to learn more

Objectives:

- Identify options for how pondscape NBS can be financed
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Contains:

- 22 Financing instruments
- 26 Real-world examples
- Interactive online version and a tool

MAIN CATEGORY	CATEGORY DEFINITIONS	INSTRUMENTS	+EXAMPLE
1. Income instruments	Instruments for raising revenue that can then be used to finance NbS. Some can be used by landowners (1.1, 1.4, and 1.5); others can only be levied by government-sanctioned associations	1.1 User fees	+Altnabrocky
		1.2 <u>Business improvement</u> <u>districts</u>	+Vauxhall
	(1.2 and 1.3) or governments (1.6).	1.3 Betterment levies	+Wimbledon
		1.4 Development rights and leases	+SANPark
		1.5 Sale of market goods	+Bavaria
		1.6 Other revenue raising	+UK Network Rail +Port Townsend
2. Contracting	Legal agreements that reduce or restructure the	2.1 Community asset	+Chapman Pond
approach (cost	costs of financing NbS, either by providing assets	transfer	- Chapman ond
reduction/ restructure)	or use of assets at below market rates (2.1) or by shifting financing of upfront costs in return for ongoing payments (2.2).	2.2 Public private partnership	+Valley State
3. Voluntary	Voluntary payments made of own free-will,	3.1 Philanthropic	+Living Danube
contributions/ donations	whether a direct beneficiary of the NbS (3.2) or simply to contribute (3.1, 3.3)	contributions	
dollations	simply to contribute (3.1, 3.3)	3.2 Voluntary beneficiary contributions	+Haweswater
		3.3 Crowdfunding	+Treflach Wetland
4.Tradable	Revenue is raised by selling the 'rights' to	4.1 Payment for ecosystem	+Vittel
Rights/permits and payment for	ecosystem services generated by the NbS. This payment can be relatively informal (4.1) or	services 4.2 Transfer-based	+MoorFutures
ecosystem	through structured markets for climate	instruments: voluntary	+Moorrutures
services	mitigation (4.2), for offsetting damage to biodiversity elsewhere (4.3), or for reducing water pollutants (4.4).	carbon markets	
		4.3 <u>Transfer-based</u> instruments: Biodiversity	+Eco-Accounts
		offsets and habitat banking	+District Licensing
		4.4 Transfer-based	+Pennsylvania
		instruments: Water quality	
5. Subsidies	Subsidies are a financial contribution from the	5.1 Environmental subsidies	+Petra Marada
5. Subsidies	government to a person, company or organisation to promote socially beneficial		
	outcomes. They can be ongoing payments (or tax	5.2 Tax concessions	+West Australia
	breaks) linked to outcomes or production (5.1, 5.2)		
6. Grants	Direct contribution from government (local,	6.1 Grants	+Hunte-Leda
	national, or EU) to a recipient in return for		
	undertaking a specific activity. Grants are generally one-off payments (though they may be		
	paid in instalments), and often competitive (6.1).		
7. Debt	Transfer of capital in return for a promise to repay that capital over time, generally with interest. This can involve direct lending from a lender to a borrower (7.1) or be mediated	7.1 Loans and green loans	+Linnunsuo
instruments		7.2 Bonds and green bonds	+Winona Wetland +DC Bond
		7.2 bonds and green bonds	+TCF Green Bond
9 Ownership	through debt markets (7.2).	9.1 Import investiga	
8. Ownership models (equity	Financing raised by selling an ownership share of the NbS, potentially with a claim to some of its profits. This can be motivated by a desire to have	8.1 Impact investing	+Sumatra Merang
finance)		8.2 Commercial investing	+Mill Creek
	impact (8.1) or be purely commercial (8.2)		

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INSTRUMENT NAME: 1.1 USER FEES

Pondscape-specific definition: Compulsory or voluntary entrance fee, usage fee (e.g. guided tours), and/or accessing nands or nandscape sites generally for tourism and recreation.) Pondscape-specific definition: Compulsory or voluntary entrance fee, usage fee (e.g. guided tours), and/or fanc can be for one-off vicits or include annual permits (e.g. for fiching)

	annual permis	scape sites	
CATEGORY		s (e.g. for fishing).	uided tours
763(1.04)	Income inco	touri	sm and recording
ALSO-KNOWN-AS	Income instruments	s (e.g. for fishing).	ecreation. Use
INSTRUM.	ance fee		
APPROPRI	Develor		
Who can use this type of	Development rights a		
	Pondscape NGO	nd leases	
instrumenta	vevelone 100s	and -	
	Pr Office		
Who provides the finance?		Local/city/ regional govt. and agencies en, tourists), companies (e.g. private, guided tour fee etc)	
the finance?	rivate people ("egional govt	National ac-
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What form is the payment?	at a	courists), company	agencies
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What is the NOR WHAT	permit fe	e, puide a	e event planness
Acount of the state of the stat	Acc	souled tour fee etcl	(mers)
	ess and use of the site	- cic)	
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What to			
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meet to recoil	rements		
CCGIVIE			
PROJECT REQUIREMENTS: Nbs can			
What requires REQUIREMENTS			
What requirements must the pondscape project meet? OTHER REQUIREMENTS: NbS site additions	Muses a		
additions	Winds be attracting		
What REOLUBES electricity	infrastructure . acc	essible and	
OTHER REQUIREMENTS: What additional requirements are attached to the finance	infrastructure such as f, restaurants etc.	essible, and safe for visitors. This n parking, a bus connection, shops,	
are attached to the financing? Possii Project	bly high	8, a bus connections. This n	light
Project Project	t men transaction co	shops	toiler equire
How Certain	loust comply with	essible, and safe for visitors. This many parking, a bus connection, shops, its (fencing, ticket sales, services, et d'use legislation, as public access a egulated (e.g. public right to free au (5-12months)	tonets,
How quickly do recipients	landscapes miet	d-use leader sales seed	
receive money? Fast (<	might be n	Rulated a publication, as publication	tc.)
Filmoney? Fast (ca	4month .	e.g. public rick access a	nd
FUNDING TIMELINE: When does the recipient receive the fund.	- Media	right to free a	the use of
oes the real Ongoin		13-12manu	
receive the funding?		egulated (e.g. public right to free ac (S-12months) - Slow (12months) 's visited/used. This may be season	
unding? Sular paymer	nts en	122months	(+)
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what types of NBS is the financing for?	are site i	s visited/way	
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s applying for Simple	161	00k-€999k) Very large	
	Medium	00k-€999k) Very large	
EXIST NOW IN EU?	redium	(€1million+)	
KEEE		Cons	
REFERENCES: Ketture Yes		Complex	
fine M. & Illes		No nities for innovative biodiversity reliefs, marketed products, and es developed in the context of a light project	
inancing: ecoloris A	(eds.) (2017)		
rees and charge all fi	scal transfer Opportun	No	
project for the European NV.B.3/ETU/2015/0014), London	npilation (EFT) to	for innovation	7
NV.B.3/ETILIZA	Committee Cases	reliefs, marketer biodiversity	1
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4	"Stitute for Euro"	(Project in the context of	
	- u opean	No nities for innovative biodiversity reliefs, marketed products, and es developed in the context of a Policy (IEFF)	
NV.B.3/ETU/2015/0014)		Brussels /	

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Instrument: 1.1 User fees

Example name: 1.1.1 In-stream enhancement of Altnabrocky River, Owenmore Catchment, Ireland

Example description: To combat declines in the population of wild salmon throughout Ireland, the Fisheries Ireland state agency promotes projects that aim to enhance salmon habitats, such as the restoration of 160m of the Altnabrocky River. Ireland Fisheries manages the Salmon and Sea Trout Rehabilitation, Conservation and Protection Fund (SSTRCPF), which it uses to pay for such projects, and which receives approximately 50% of its

NDC DECE	of its
NBS DESCRIPTION	DN
LOCATION	Owenmore Catchment, Ireland
NBS TYPE	Creation Creation
ECOSYSTEM TYPE	Destances
NBS BENEFITS	Wild salmon spawning beds and neighbouring riverbanks Biodiversity Management
NBS DESCRIPTION	
	to rebuild some in a combat erosion of riverbant
SCALE (SIZE)	Use of local rock structures to combat erosion of riverbanks; redistribution of gravel to rebuild spawning beds; lowering of riverbanks to reduce the impact of flooding. 160 m of river
NBS PERFORMANCE	of flooding.
CRITERIA	Wild salmon population size.
NBS PERFORMANCE	The program is consider
FILL	The program is considered to be successful but no quantitative performance indicators have been reported.
FINANCING DESCR	SETTON
SOURCE OF FINANCING	
DE CURVE	Private and commercial fishers and fishery organisations, who pay 20€-50€ per day The recipient was the second or the second o
RECIPIENT	
	The recipient was the GlenAlt Syndicate, an association of Irish fishers, who received Fund (SSTRCPF). The Fund is many first that the syndicate is a second for the syndicate in the syndicate is a second for the syndicate in the syndicate is a second for the syndicate in the syndicate is a second for the syndicate in the syndicate is a second for the syndicate in the syndicate is a second for the syndicate in the syndicate is a second for the syndicate in the syndicate is a second for the syndicate in the syndicate is a second for the syndicate in the syndicate is a second for the syndicate in the syndicate is a second for the syndicate in the syndicate is a second for the syndicate in the syndicate is a second for the syndicate in the syndicate is a second for the syndicate in the syndicate is a second for the syndicate in the syndicate is a second for the syndicate in the syndicate is a syndicate in the syndicate in the syndicate is a syndicate in the syndicate in the syndicate is a syndicate in the syndicate
	funding from the Salmon and Sea Trout Rehabilitation, Conservation and Protection about 50% of its funds through for
	Fund (SSTRCPF). The Fund is managed by Irish state agency Fisheries Ireland, received about 50% of its funds through fees for recreational and commercial fishing.
SCALE (FINANCING)	about 50% of its funds through fees for recreational and commercial fishing activities, €18,571
TIMELINE	o specifically.
FINANCING	One-off
REQUIREMENTS	Examples of project types that are eligible for funding from the SSTRCPF: Fish passage improvement
	Fish passage improvement
	Spawning enhancement
	Fencing (protection of research
	Riparian zone improvement (e.g. selective tree pruning) Removal/control of aquatic impassion.
	Removal/control of aquatic invasive species In-stream structures (
	Riverbank protection (cots
NANCING	Feasibility studies, reporting measures, log revetments, etc.)
RFORMANCE	remormance was and
ANSACTION	Performance was not reported for this specific project, or generally for the total Transaction costs are not reported. Generally to see the second
	administration of licenses, grants, project monitoring, enforcement of user fees, etc.
	enforcement of user fees, etc.

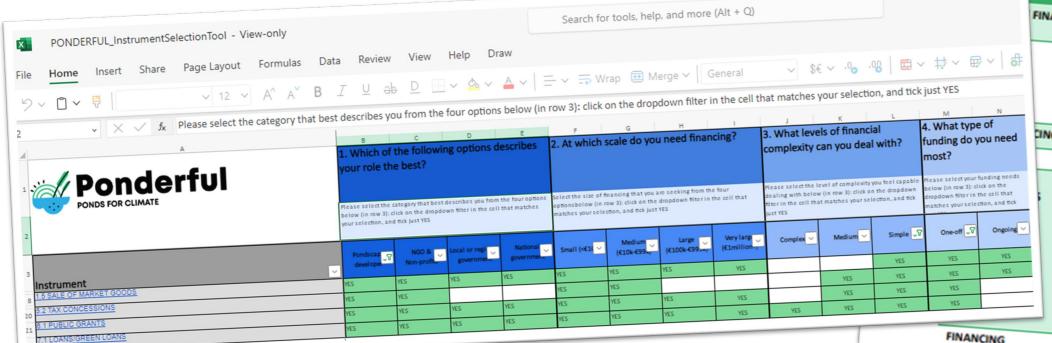


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EINANGING	

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YES Nat type of ing do you need	CING)	The recipient was the GlenAlt Syndicate, an association of Irish fishers, who received funding from the Salmon and Sea Trout Rehabilitation, Conservation and Protection about 50% of its funds through fees for recreational and commercial fishing activities, €18,571
?		One-off
select your funding needs (in row 3): click on the (in row 3): click on the cs your selection, and tick One off V VES VES VES VES VES VES VES V		Examples of project types that are eligible for funding from the SSTRCPF: Fish passage improvement Spawning enhancement Fencing (protection of riverbanks including fences, stiles, cattle drinkers) Riparian zone improvement (e.g. selective tree pruning) Removal/control of aquatic invasive species In-stream structures (weirs, deflectors, rubble mats, etc.). Riverbank protection (soft engineering measures, log revetments, etc.).
FINANCING PERFORMANCE TRANSACTION COSTS		Performance was not
		The standard of the standard o
		administration of licenses, grants, project monitoring, enforcement of user fees, etc.



1. How much do pondscapes cost?

- Range widely depending on context and project
- **Predominantly one-off costs** (average approx. 10:1 vs ongoing costs, with wide range)

Results

		Total upfront	Total ongoing
		(one-off)	(annual)
Pondscape	CH, Rhone de Verbois	5,705,779 €	830,246 €
	CH, Bois du Jussy	779,143 €	27,300 €
	BE, Gete Vallei	66,200 €	7,100 €
	BE, Pinkhakedon	66,200 €	30,100 €
	BE, Tommelen	3,100 €	600€
	UY, rural ponds	13,750 €	2,200 €
	ES, La Albera	184,384 €	21,672 €
	ES, La Pletera	109,815 €	33,466 €
	DK, Fyn	144,899 €	3,812 €
	UK, Water Friendly Farming	2,900,000 €	115,200 €
	DE, Schöneiche	1,351,775 €	61,559 €
Averages	Mean	1,029,550 €	103,023 €
	Median	144,899 €	27,300 €

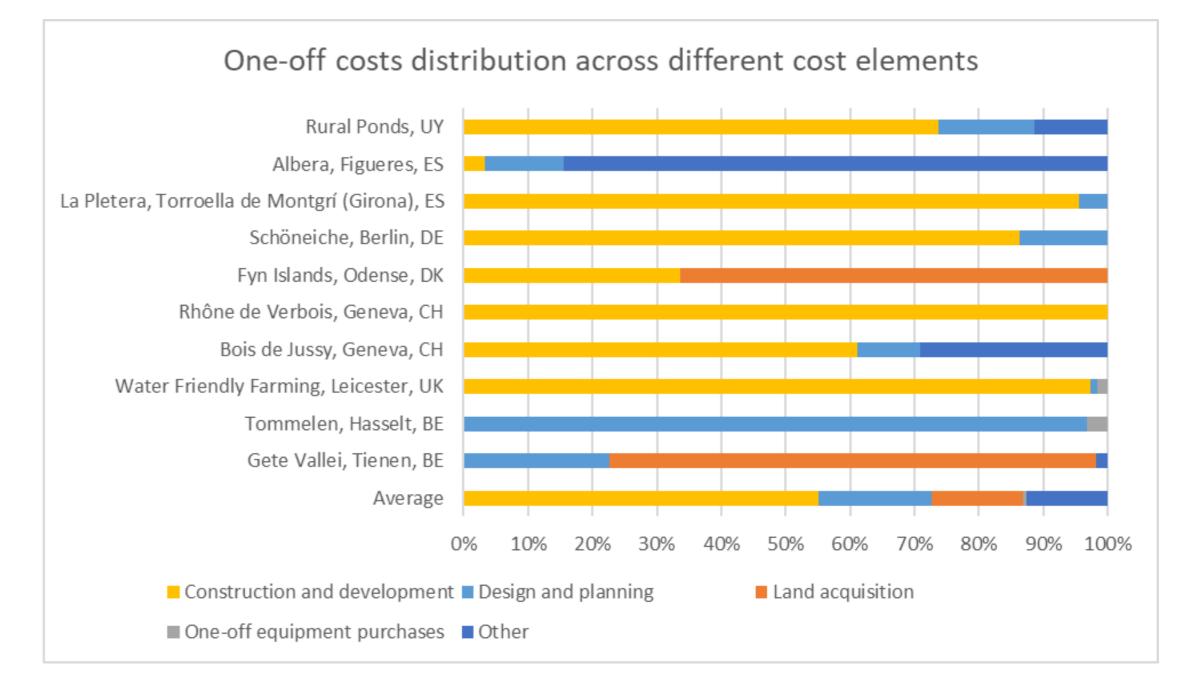




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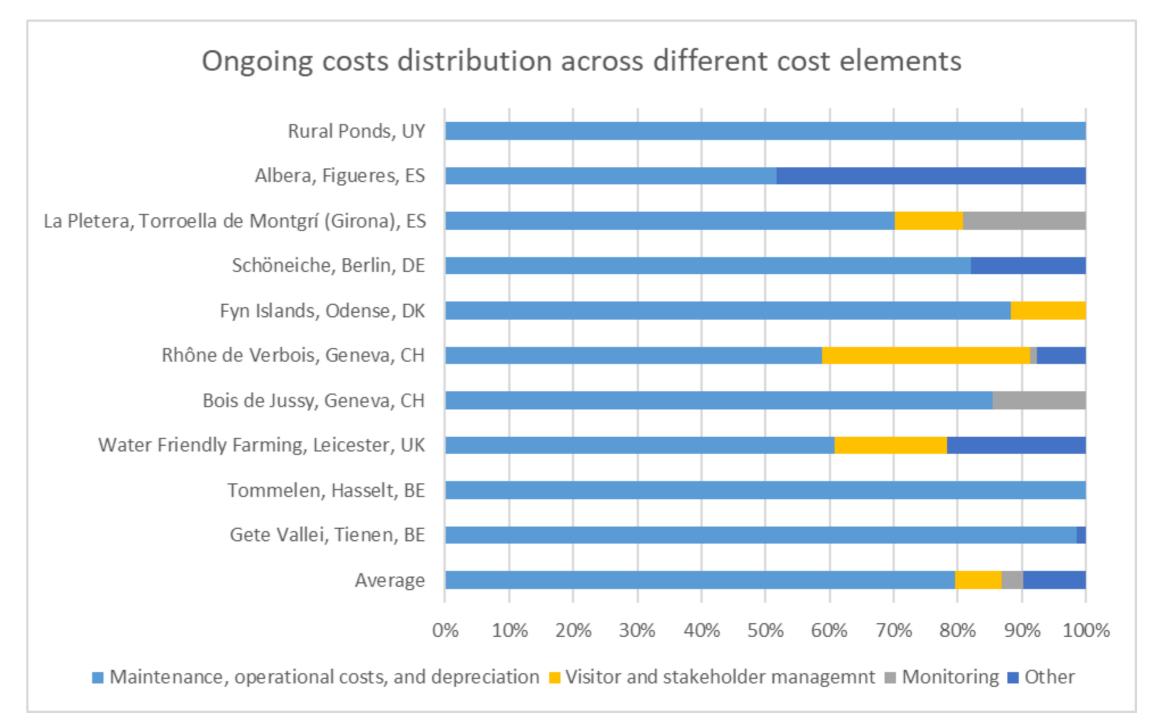




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- Ongoing costs predominantly maintenance, operational costs, and depreciation

Results







Results

2. How are pondscapes currently paid for? And 3. What is the future role of private finance?

- **Historically**: Reliance on grants, with some charitable contributions
- Future: Grants and charity remain most popular, some potential for private financing in the form income instruments
- Overall: Limited potential for private finance, especially debt finance/equity

Count (across 11 demosites) 15 25 1.1 User fees 1.2 Business improvement districts 1.3 Betterment levies 1.4 Development rights and leases 1.5 Sale of market goods and services 1.6 Other revenue raising measures 2.1 Community asset transfer 2.2 Public private partnership 3.1 Philanthropic contributions 3.2 Crowdfunding 3.2 Voluntary beneficiary contributions 4.1 Payment for ecosystem services 4.2 Voluntary carbon markets 4.3 Biodiversity offset and habitat banking 4.3 Water quality trading systems 5.1 Environmental subsidies 5.2 Tax concessions 6.1 Grants 7.1 (Green) bonds 7.1 (Green) loans 8.1 Impact investing 8.2 Commercial investing Past financing ■ Potential future financing

Figure: Financing pondscape NbS: past and potenial future financing instruments



Conclusions and discussion

Challenges

- Measuring costs and benefits
- Ongoing costs

Role for private finance?

- Pondscapes are primarily publicly funded
- Why? Generate primarily public goods, few tradeable goods and services, limited revenue opportunities
- Potential opportunities for private finance: Creation of environmental markets +/or integrated landscape projects

Overall conclusion

- Private financing not a magical solution
- Decisive role for public policy and public funding





THANK YOU

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