

Ponderful

PONDS FOR CLIMATE

Creating a national plan for ponds Recommendations from the PONDERFUL programme

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This webinar is about:

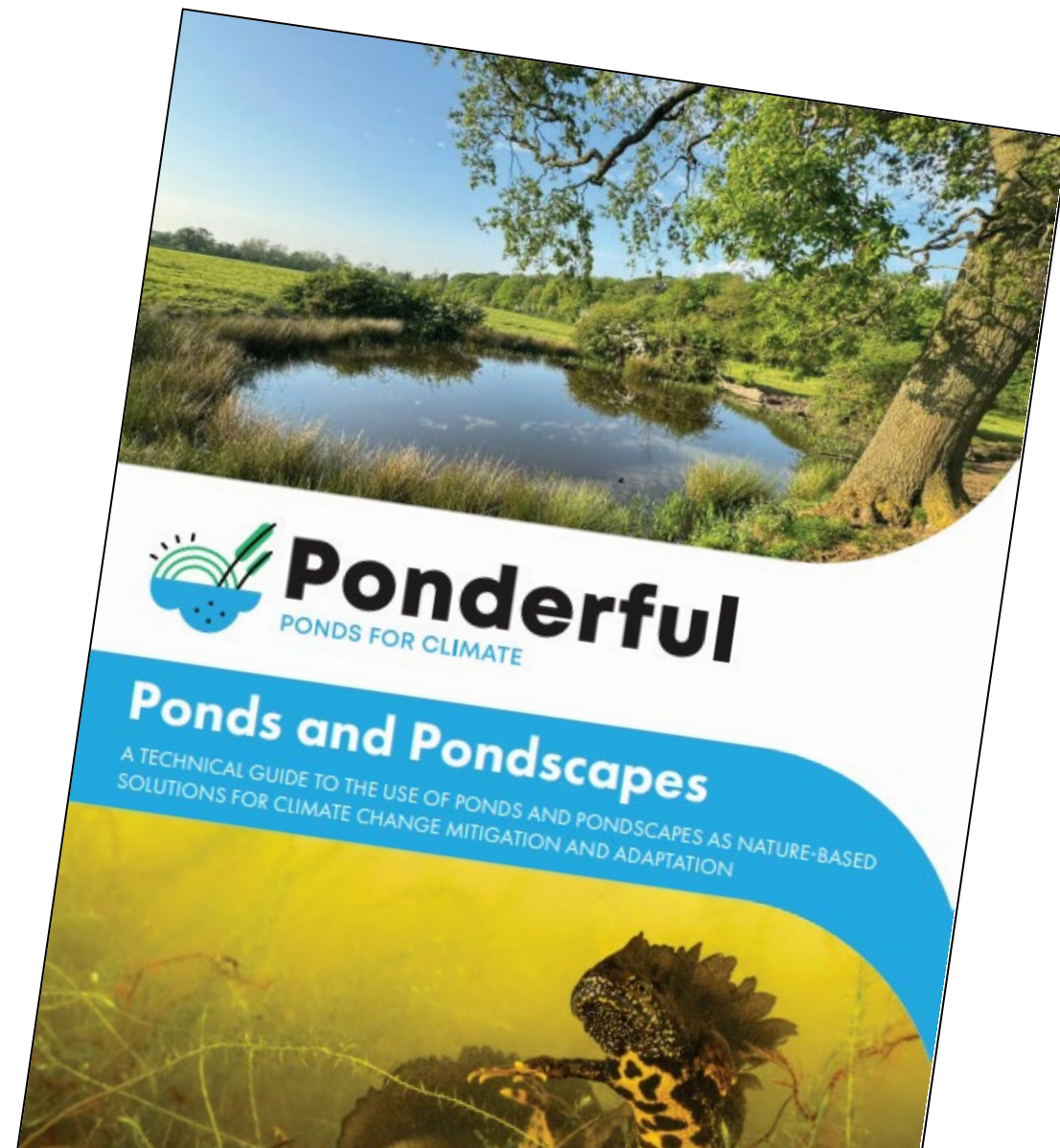
- Development of National Plans for Ponds
- Policy and practical issues we need to take account of in developing those plans
- Review main policies which contribute to the protection of ponds in Europe and more widely
- The main gaps in policy
- Next steps to ensure programmes of pond protection, management and creation embedded in national and international policy and practice



With much more detail about the practical methods in this document.....

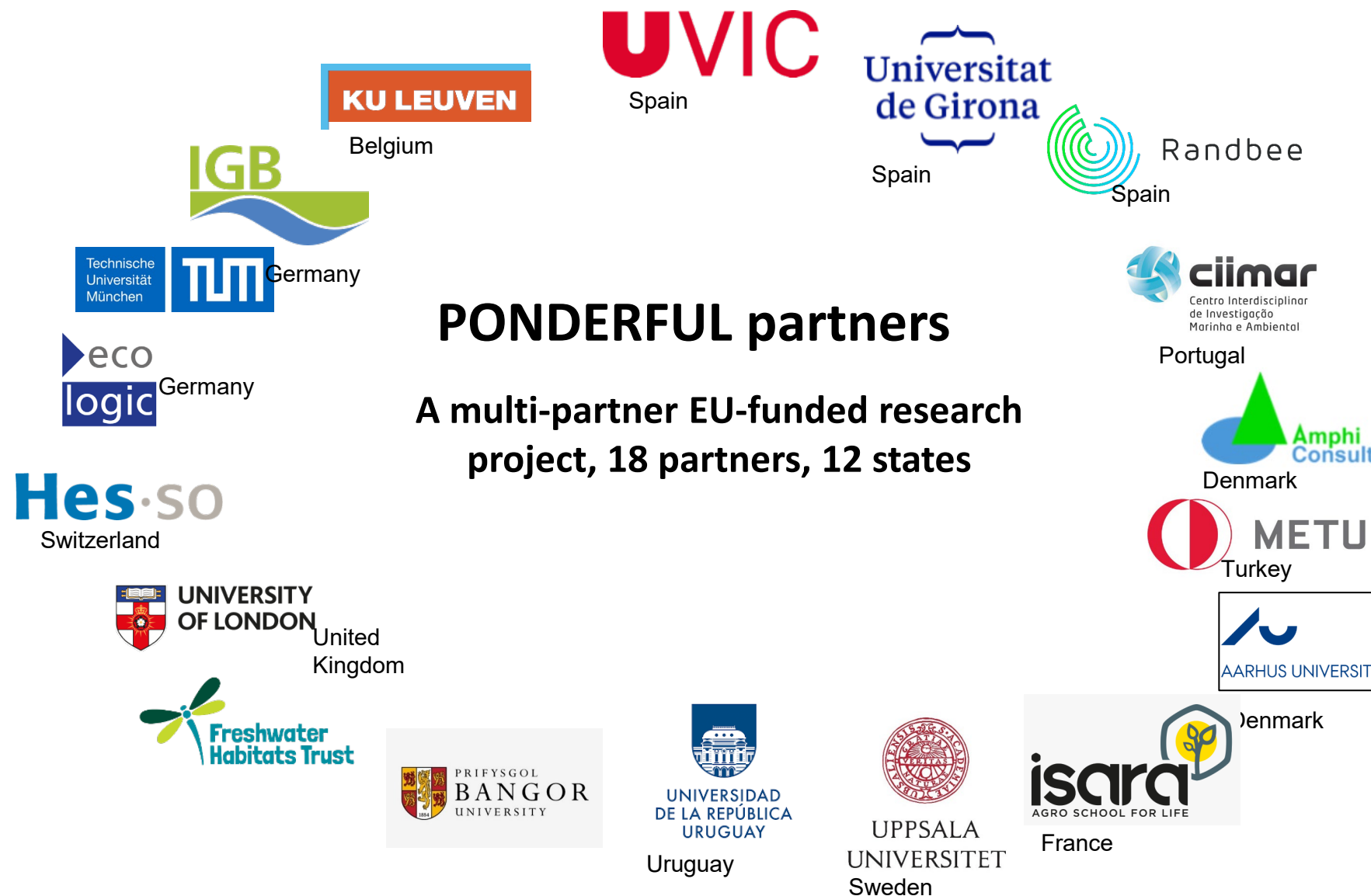
CONTENTS

1. Introduction - setting the scene	15
1.1 What are nature-based solutions?	15
1.2 What are ecosystem services and Nature's Contributions to People?	16
1.3 Who is this technical handbook for and how should it be used?	19
2. Ponds and pondscapes - an overview	23
2.1 What is a pond?	23
2.2 What are pondscapes?	23
2.3 Threats to ponds	24
2.4 Managing, restoring and creating ponds and pondscapes	27
3. Ponds and pondscapes as nature-based solutions to address societal challenges	29
3.1 Introduction to ponds and pondscapes as nature-based solutions	29
3.2 Ponds and pondscapes as providers of ecosystem services and Nature's Contributions to People: overview	32
3.3 Ponds and pondscapes as nature-based solutions for climate change adaptation and mitigation	33
3.4 Ponds and pondscapes as nature-based solutions for habitat creation and maintenance	36
3.5 Best strategies and tips to improve ecosystem services and Nature's Contributions to People delivered by ponds	41
4. Practical techniques for managing, restoring and creating ponds and pondscapes for climate change adaptation	53
4.1 The principles of management, restoration and creation for ponds and pondscapes	53
4.2 Assessing and monitoring ponds and pondscapes	72
4.3 Managing and restoring ponds and pondscapes	79
4.4 Creating ponds and pondscapes	86
4.5 Practical considerations to prepare for pond management, restoration and creation	93
4.6 Pond designs for ponds and pondscapes: using CLIMA-ponds	93
5. Cost and practical constraints: financing and promoting pondscape schemes	99
5.1 Practical challenges and costs of implementing ponds	99
5.2 Promoting pond and pondscape nature-based solutions	103
6. Pondscapes as nature-based solutions: success stories from the PONDERFUL DEMO sites	105
6.1 Pondscapes for biodiversity	106



About PONDERFUL

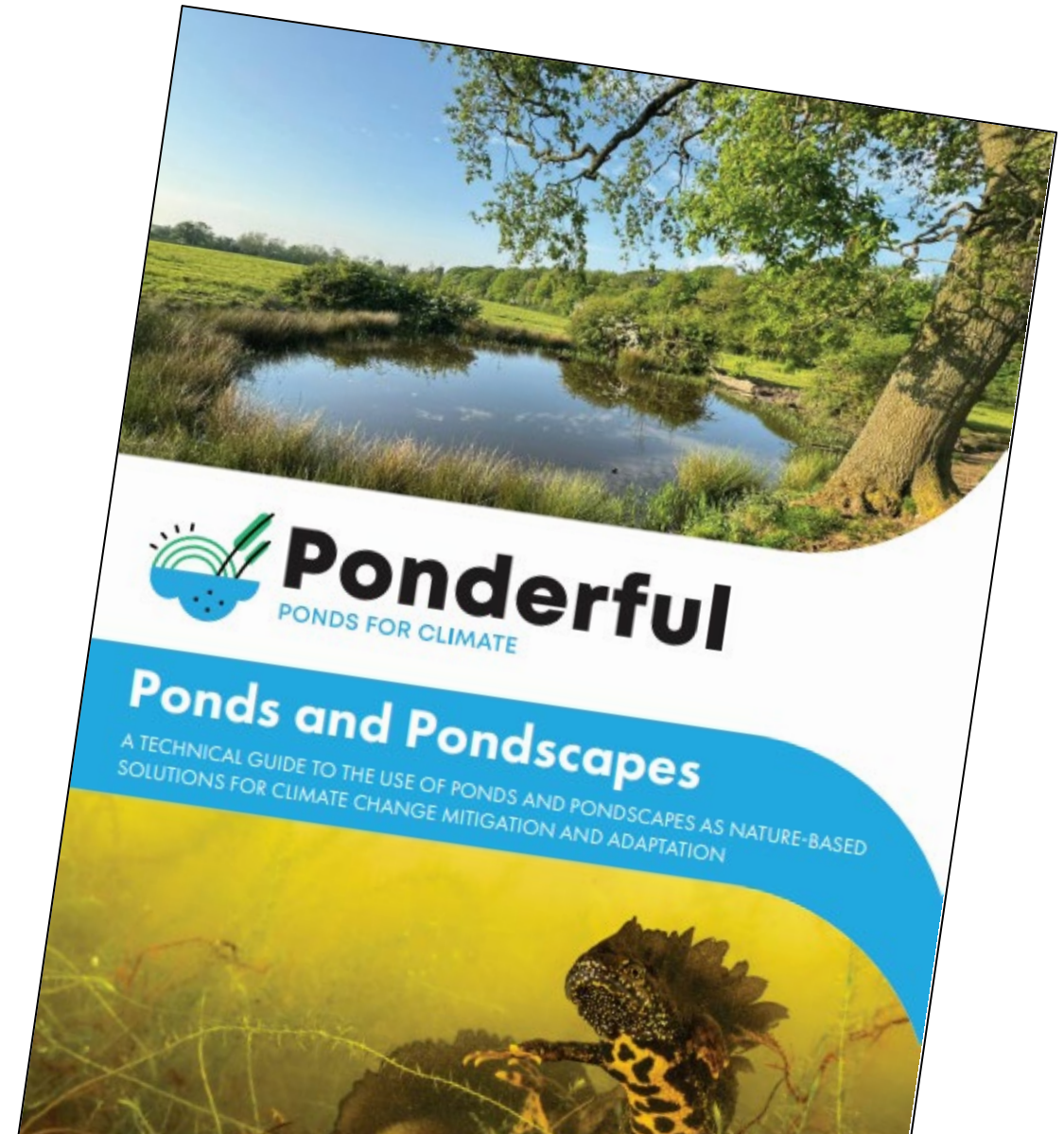
- PONDERFUL (POND Ecosystems for Resilient Future Landscapes in a changing climate) is a Horizon 2020 'Research and Innovation Programme' project.
- It investigated how ponds and pondsapes can be used as nature-based solutions for climate change adaptation, and for delivering ecosystem services and Nature's Contributions to People (including biodiversity conservation).
- Ponds are small standing waters, up to five hectares in area, which may be permanent or seasonal, created naturally or human-made. A pondscape is a network of ponds, spread across the landscape, providing habitats for freshwater biota, and multiple ecosystem services for people. The PONDERFUL project ran from 2020 to 2024 and was funded by the European Union Horizon 2020 programme under the topic 'Inter-relations between climate change, biodiversity and ecosystem services'.
- Ponds are the most numerous type of waterbody on Earth, perhaps representing 30% of the total area of standing water. In Europe, ponds support around 70% of freshwater species. They also support a larger proportion of rare, endemic and threatened species than lakes or rivers. Despite this, ponds have traditionally been undervalued.



Why do we need plans for ponds?

Simple answer.....

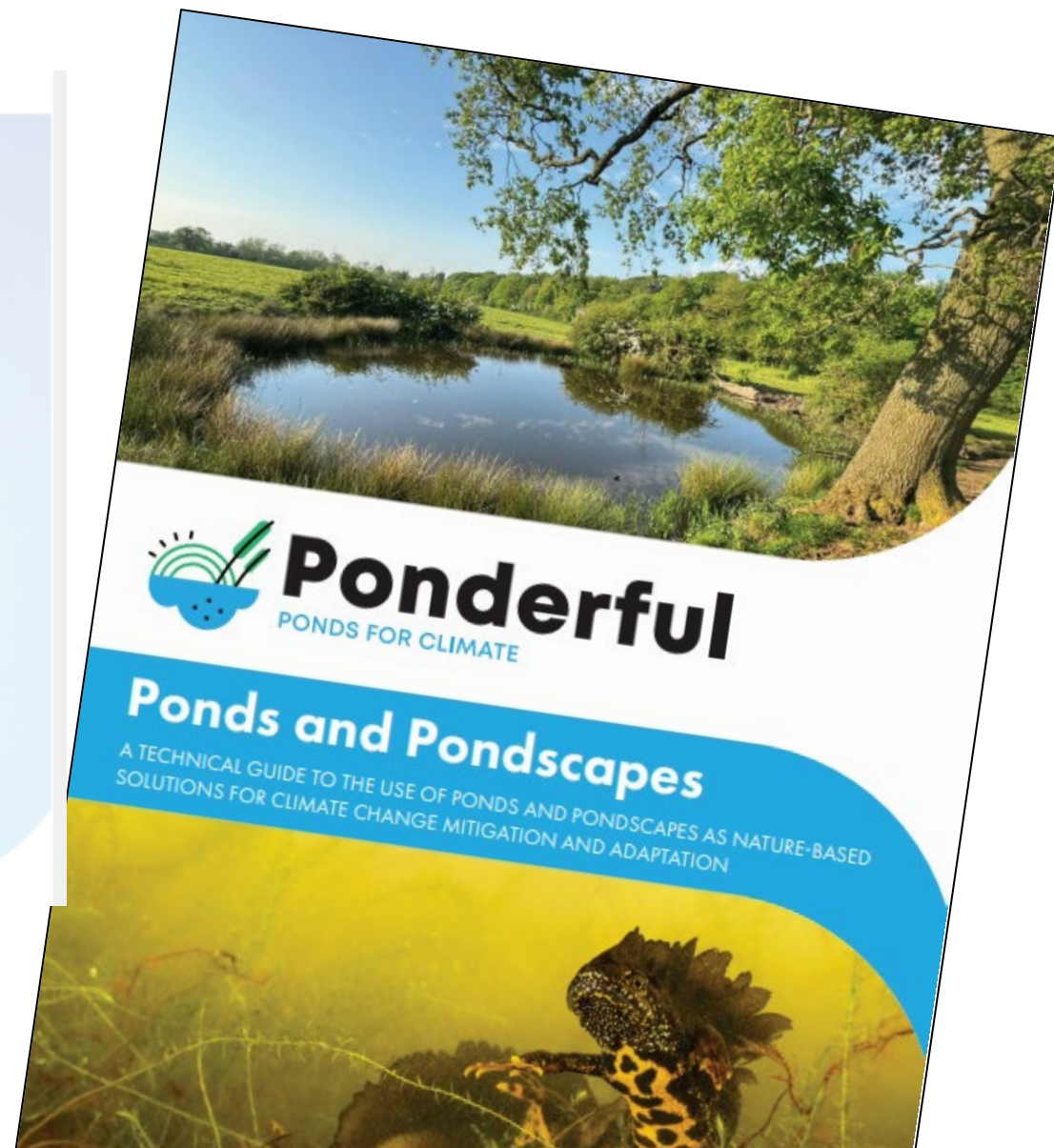
....because existing policies and plans don't provide adequate protection



BOX 1. WHAT IS A POND?

Ponds are small standing waters with a surface area from 1 m² to 5 ha that may be permanent or temporary, man-made or naturally created (Kelly-Quinn et al, 2017¹; Richardson et al, 2022²).

This definition includes both semi-permanent and temporary ponds. In Europe, temporary ponds are common throughout the continent, in wet and dry climates, but are best known in drier Mediterranean regions. Temporary ponds usually dry up in summer whereas semi-permanent ponds dry up every 5 to 10 years. Both support specialised pond communities, including many rare and threatened species. This definition also include ponds with brackish waters. Ponds are usually shallow (up to 5 m deep) but occasionally deeper examples occur.



What is a pondscape?

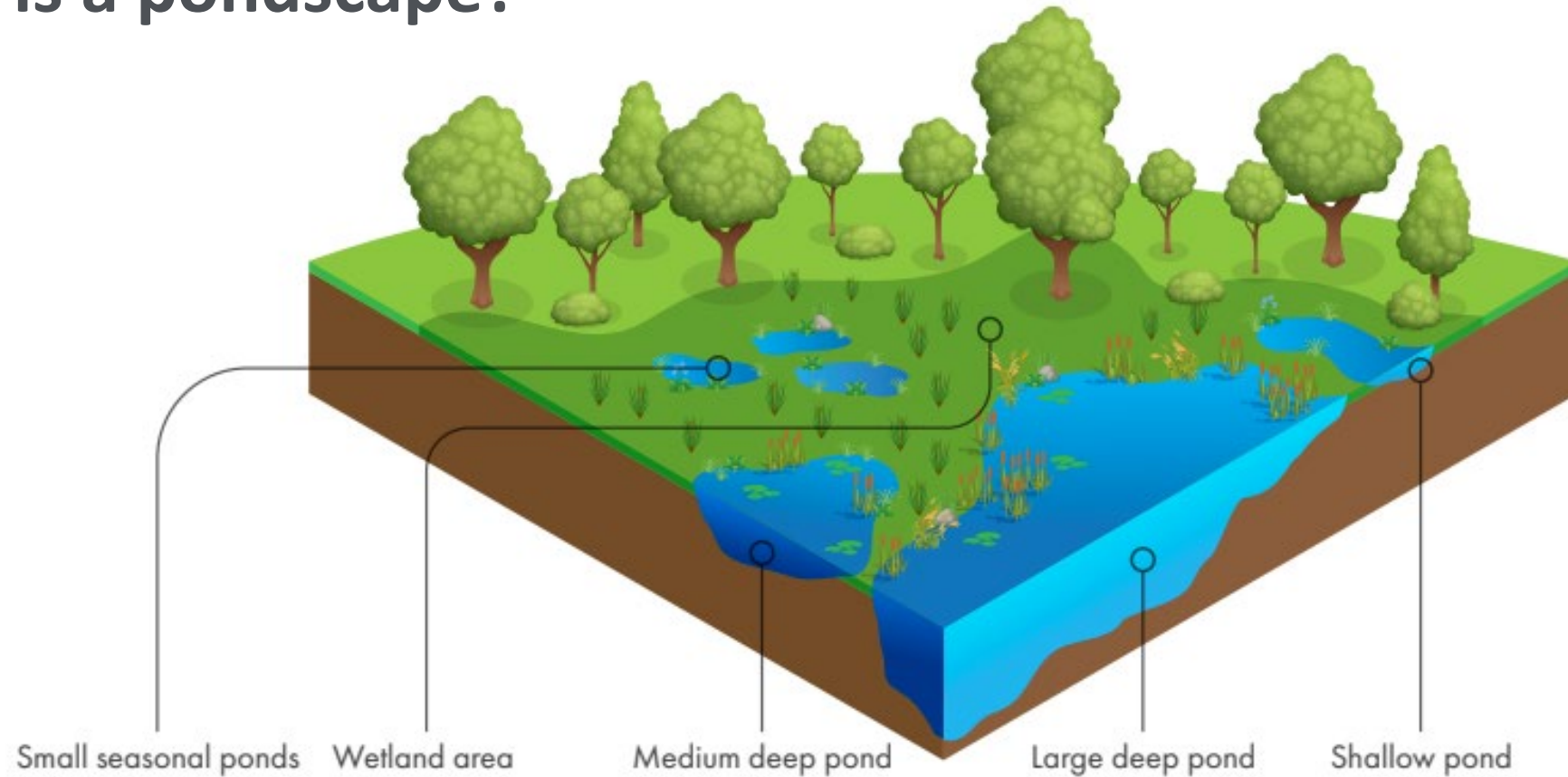
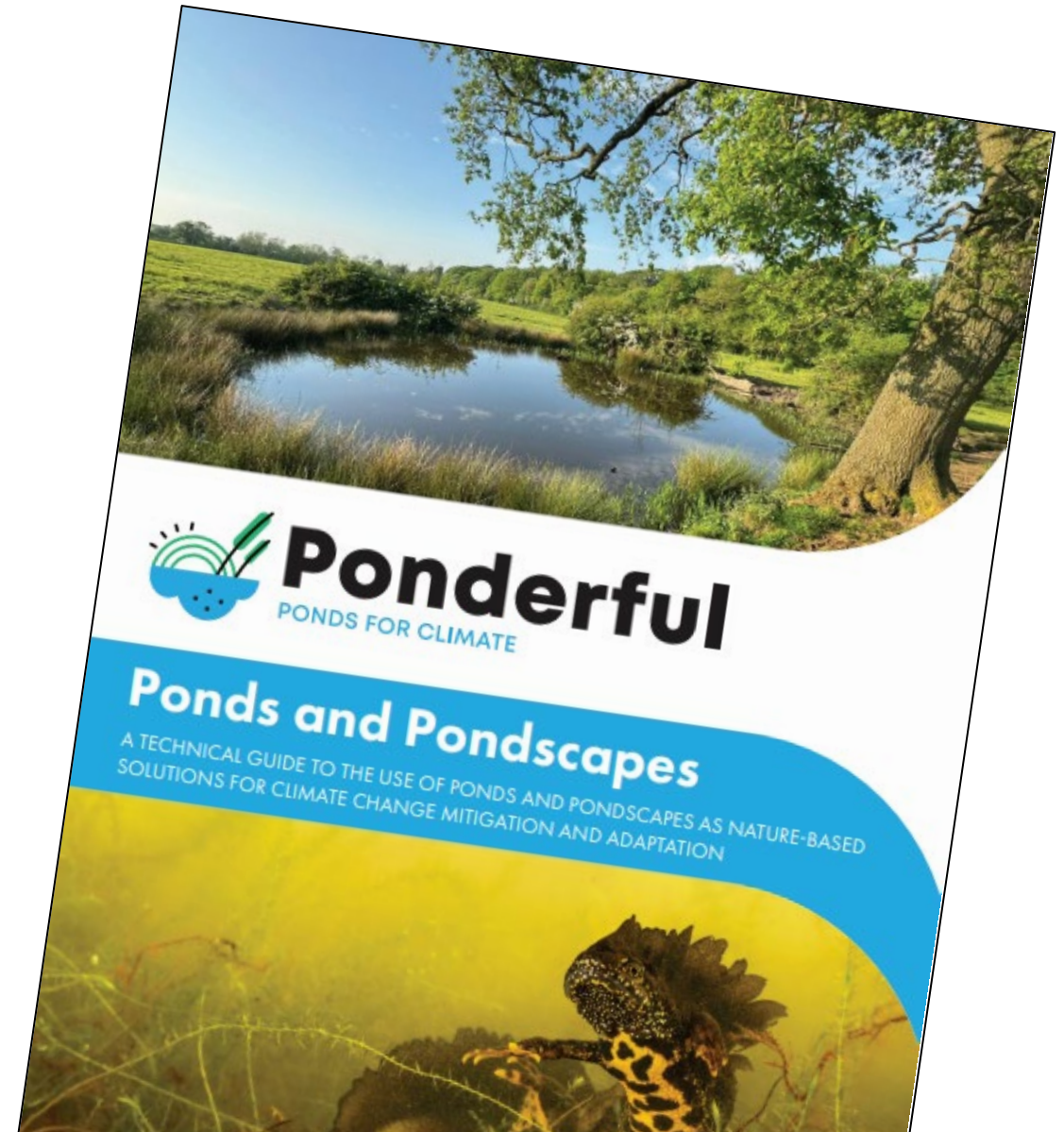


Fig. 2 - A pondscape comprises a diverse range of ponds of different ages, sizes, shapes and depths.

Why do we need plans for ponds?

Simple answer.....

....because ponds are important



Introduction

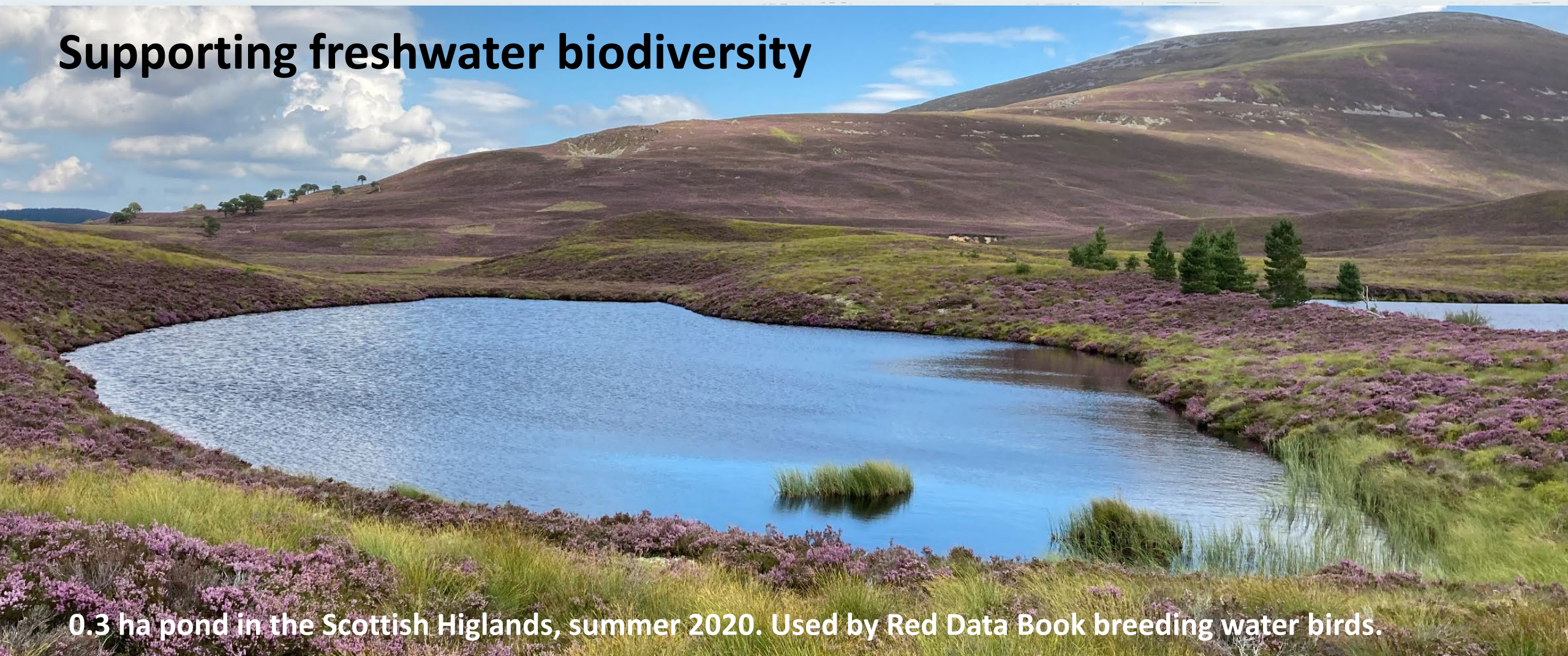
**Increasing awareness of the importance of ponds globally
and their role in...**



Giara di Gesturi, Sardinia: a Mediterranean Temporary Pond

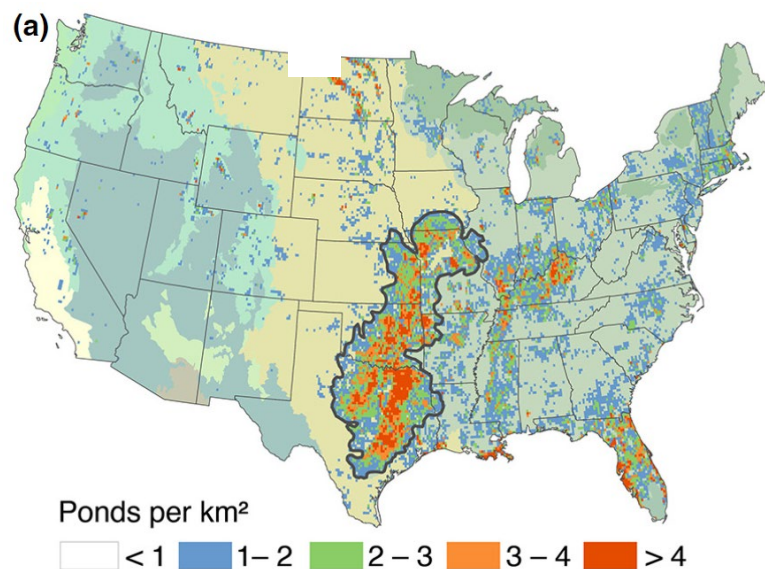
Introduction

Supporting freshwater biodiversity



0.3 ha pond in the Scottish Highlands, summer 2020. Used by Red Data Book breeding water birds.

Providing ecosystem services



North American 'pond belt' which has around 2 million farm ponds

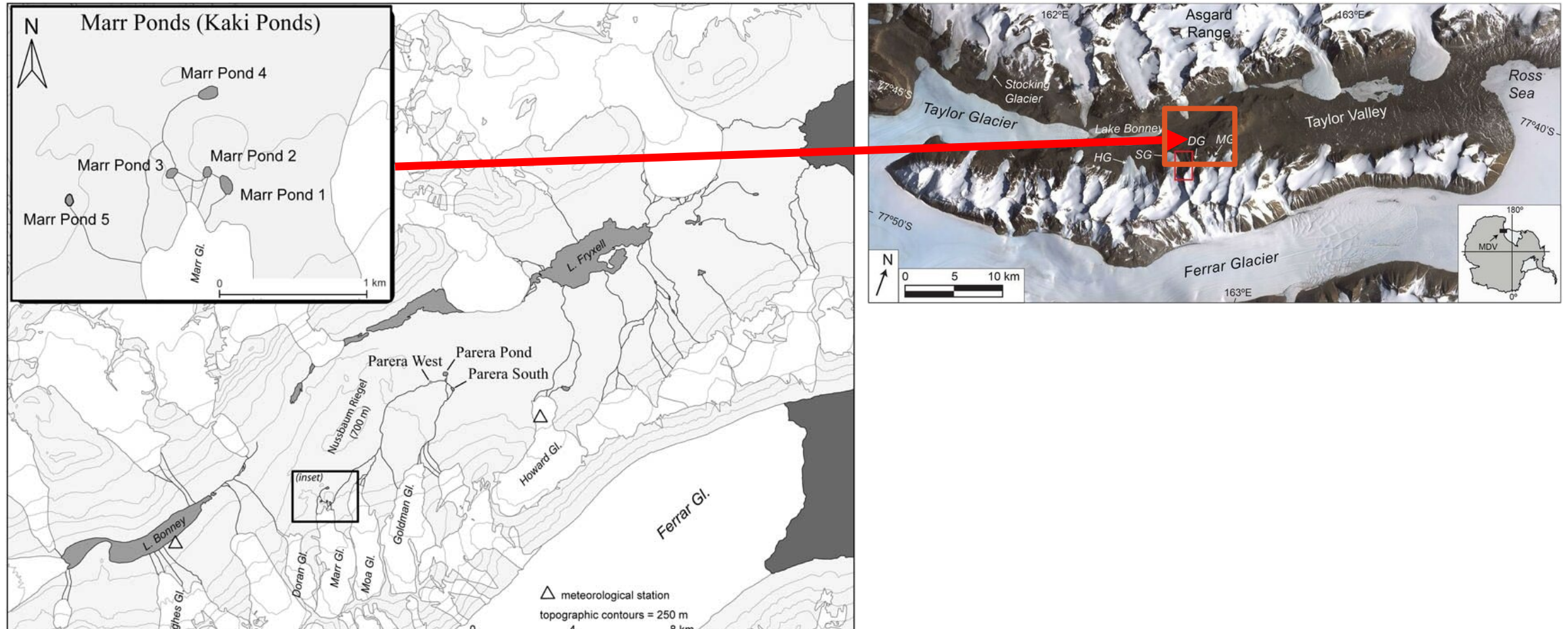


Mitigating the impacts of climate change



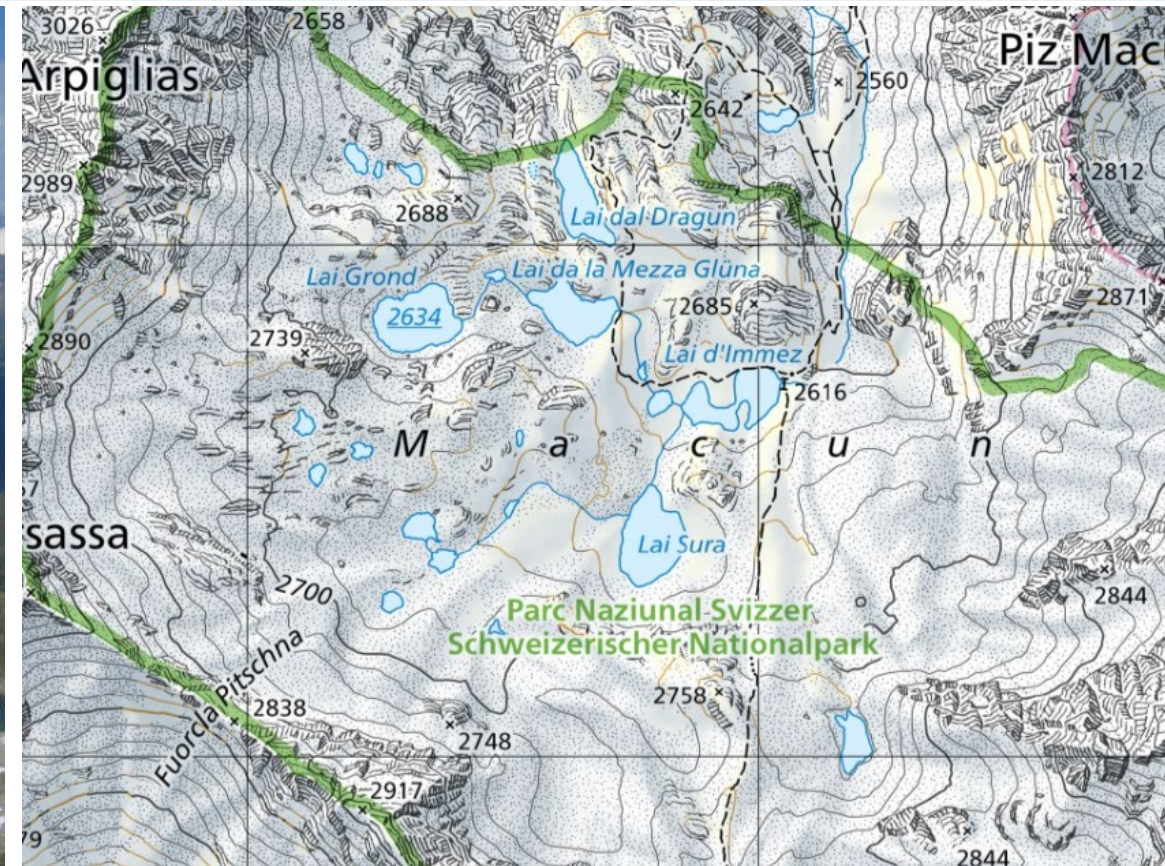
Introduction

Ponds found on all continents...Marr Ponds, Antarctica



Introduction

Mountains



Introduction

Coastal sand dune systems



New pond in dune slack system, simulating natural pond creation processes, on the north-west coast of Denmark and home to protected Spadefoot Toad (*Pelobates fuscus*)

Introduction

Rivers and wetlands

Ponds on the floodplain of the R. Narew, Poland



This project has received funding from the *European Union's Horizon 2020 research and innovation programme* under grant agreement No ID 869296

Introduction

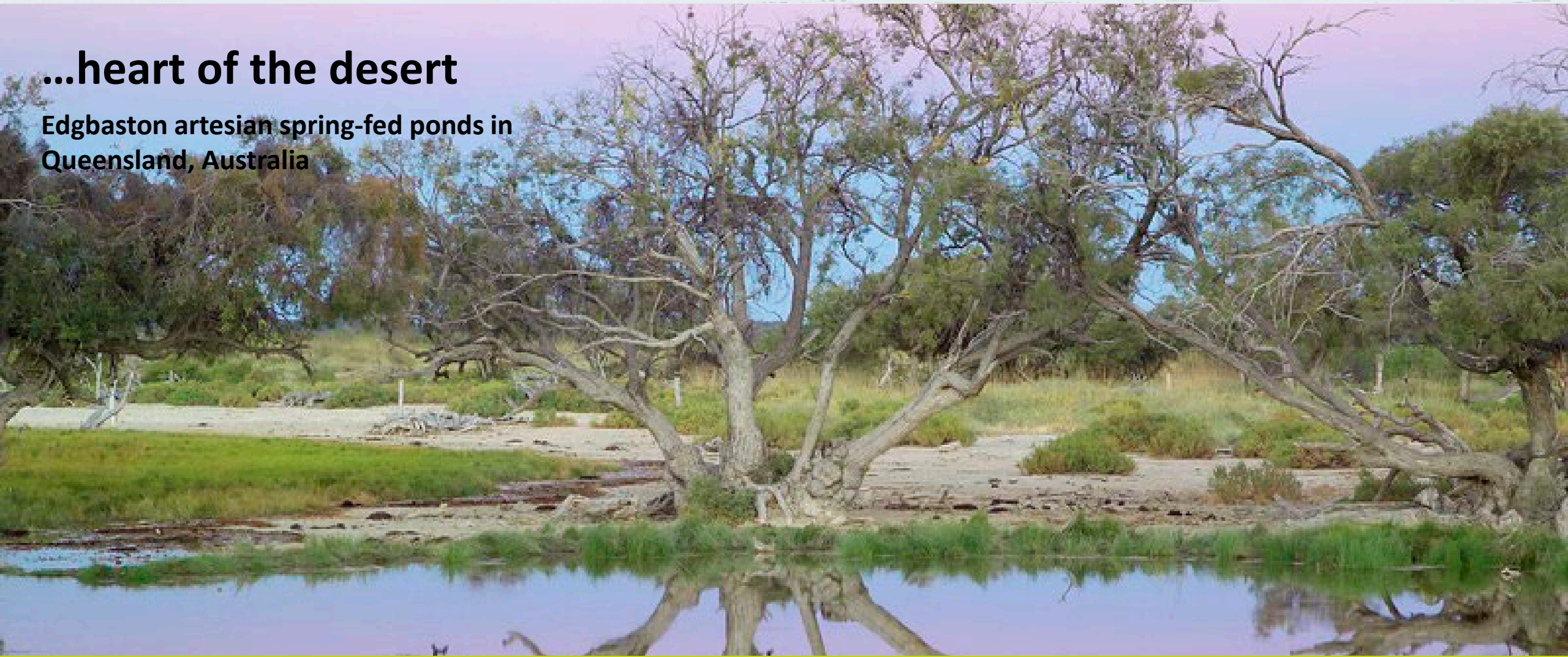
...depths of the forest



Introduction

...heart of the desert

Edgbaston artesian spring-fed ponds in
Queensland, Australia



This project has received funding from the *European Union's Horizon 2020 research and innovation programme* under grant agreement No ID 869296

Growth of pond related policies

Increased awareness of ponds has

- led to development of new policies which emphasise the need for protection and management of these abundant, biogeochemically active and biologically vital habitats.

But...

- ...ponds still suffer from long legacy of being overlooked in policy, reflecting neglect of smaller freshwater habitats in freshwater science.

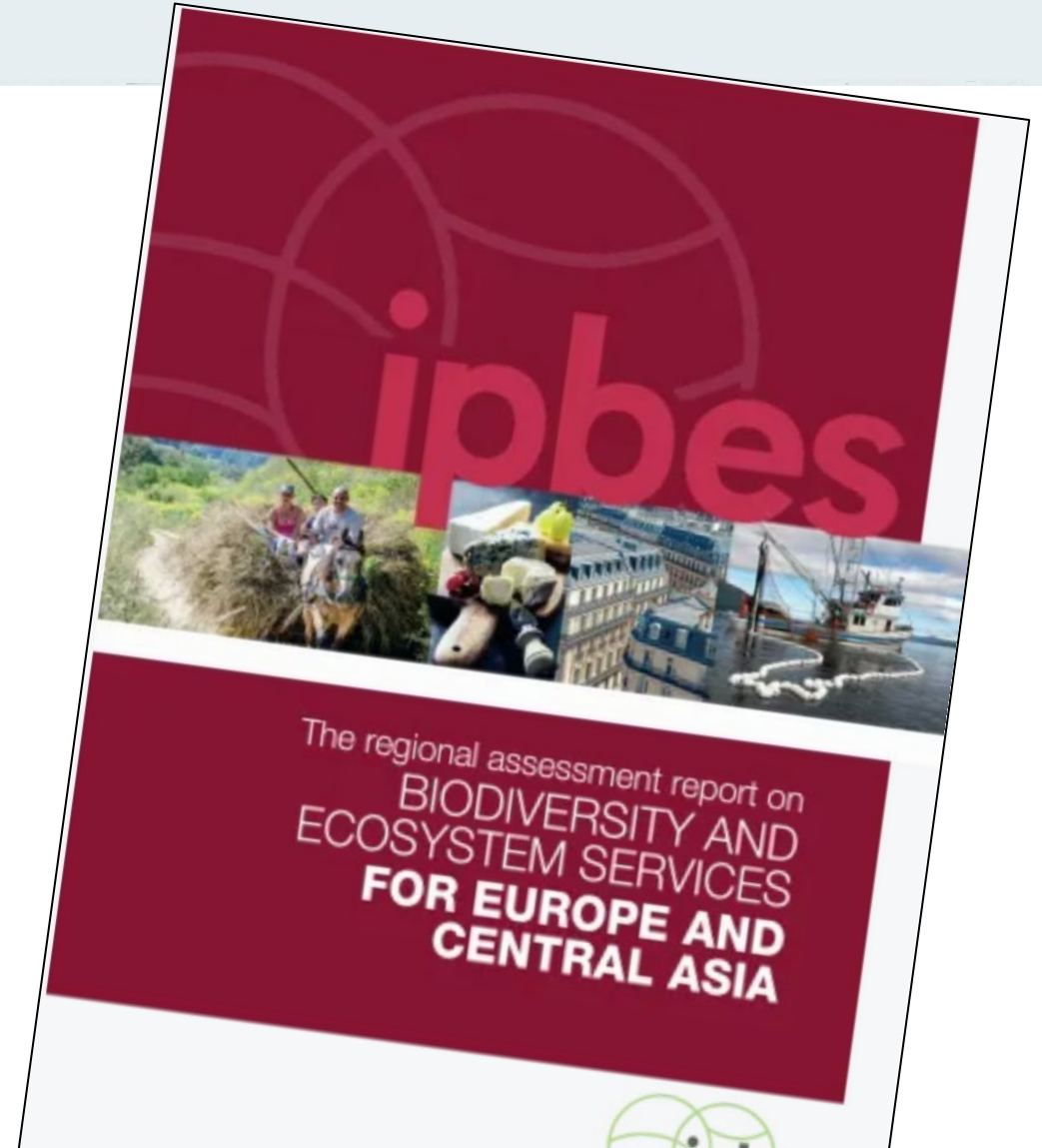
“Within the freshwater realm, new strategies should address the bias in research, management, and policy principally focused on rivers and lakes, largely excluding other freshwater habitats”

Van Reese et al, 2021

Created an important shift in right direction

First international water and nature policy to include ponds when they described the water environment as:

“Freshwater habitat includes streams, rivers, lakes, ponds (temporary or not) and also their sources (glaciers, aquifers or rainfall)”



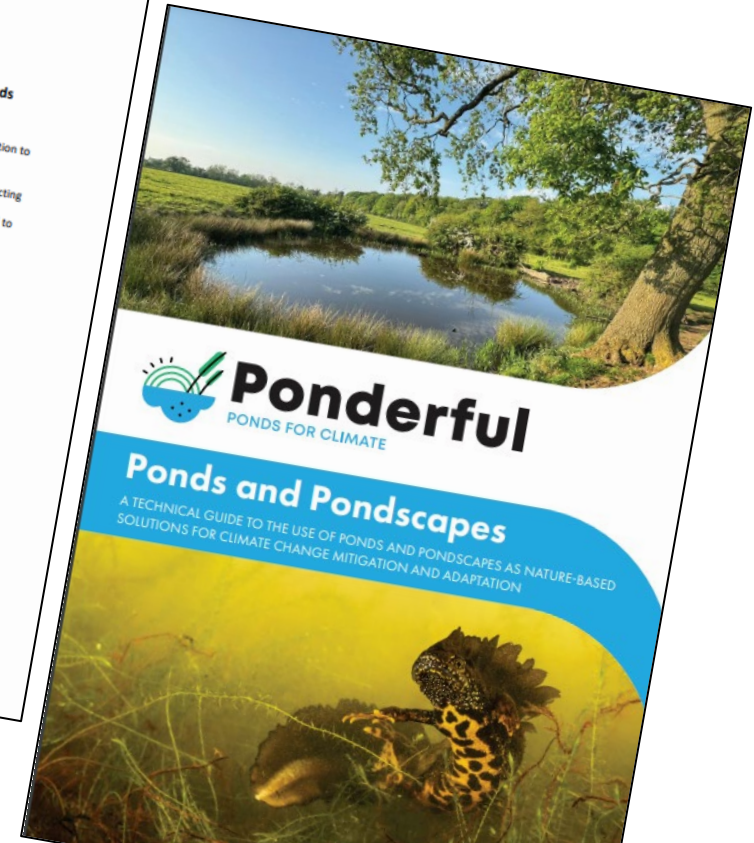
Convention on Wetlands

The Convention on The Convention on Wetlands recently (2023) published global guidance on the conservation and management of 'small wetlands'



**Dr Musonda Mumba,
Secretary General of the
Convention on Wetlands**

“By working together to restore, manage and create ponds and pondscapes, we can continue to benefit from the enormous benefits these small but mighty ecosystems provide.”



Equally, IUCN is also going in the right direction (2024)

Third international water and nature policy to include ponds when they described the water environment as:

“Inland waters include lakes and lagoons, rivers and their estuaries, ponds, streams, groundwater, springs, cave waters, floodplains, as well as peatland bogs, marshes and swamps.

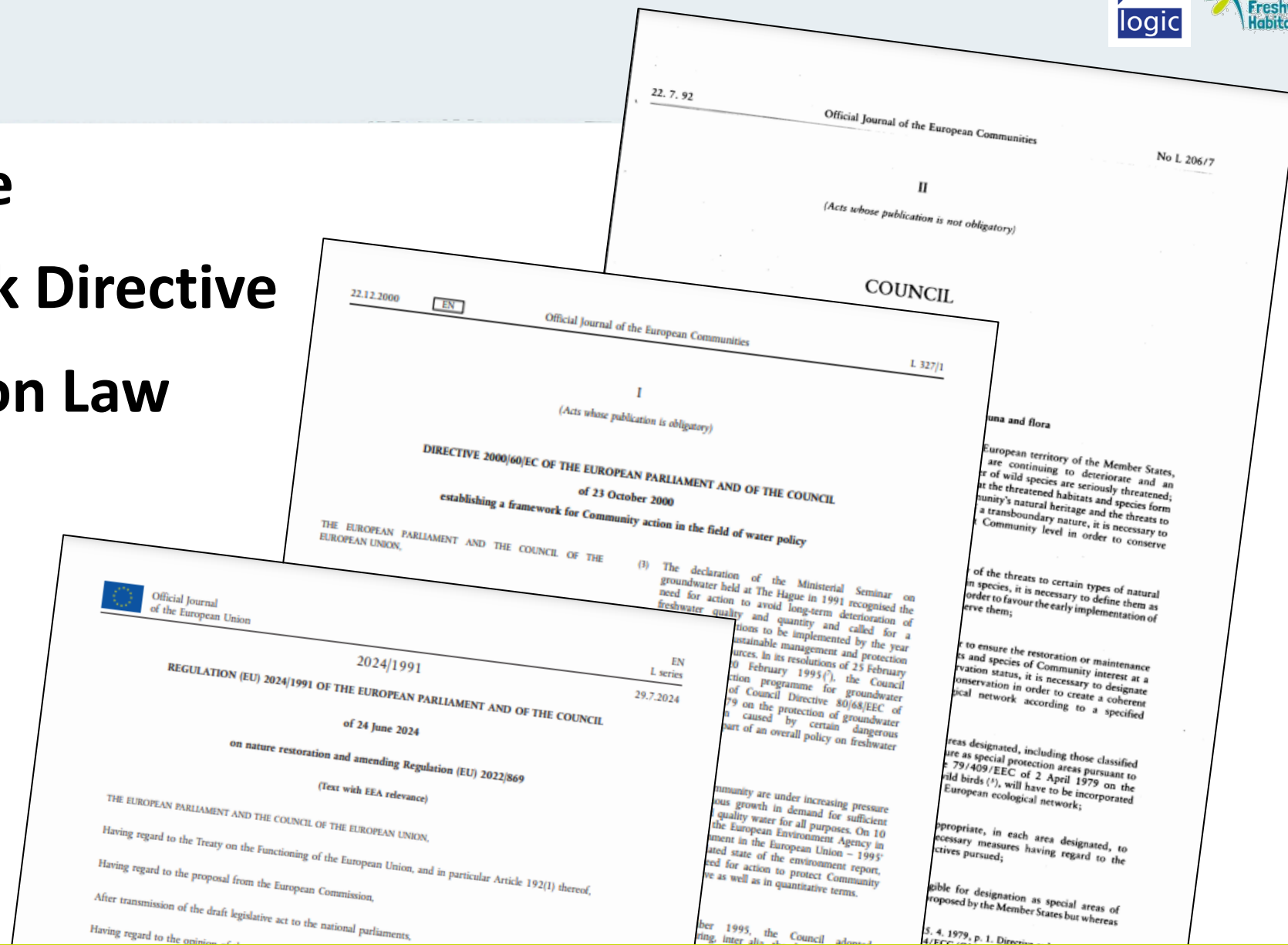
Focus on design of “protected and conserved areas”

Good start but still quite river-centric

- River – 774 times
- Pond – 11 times



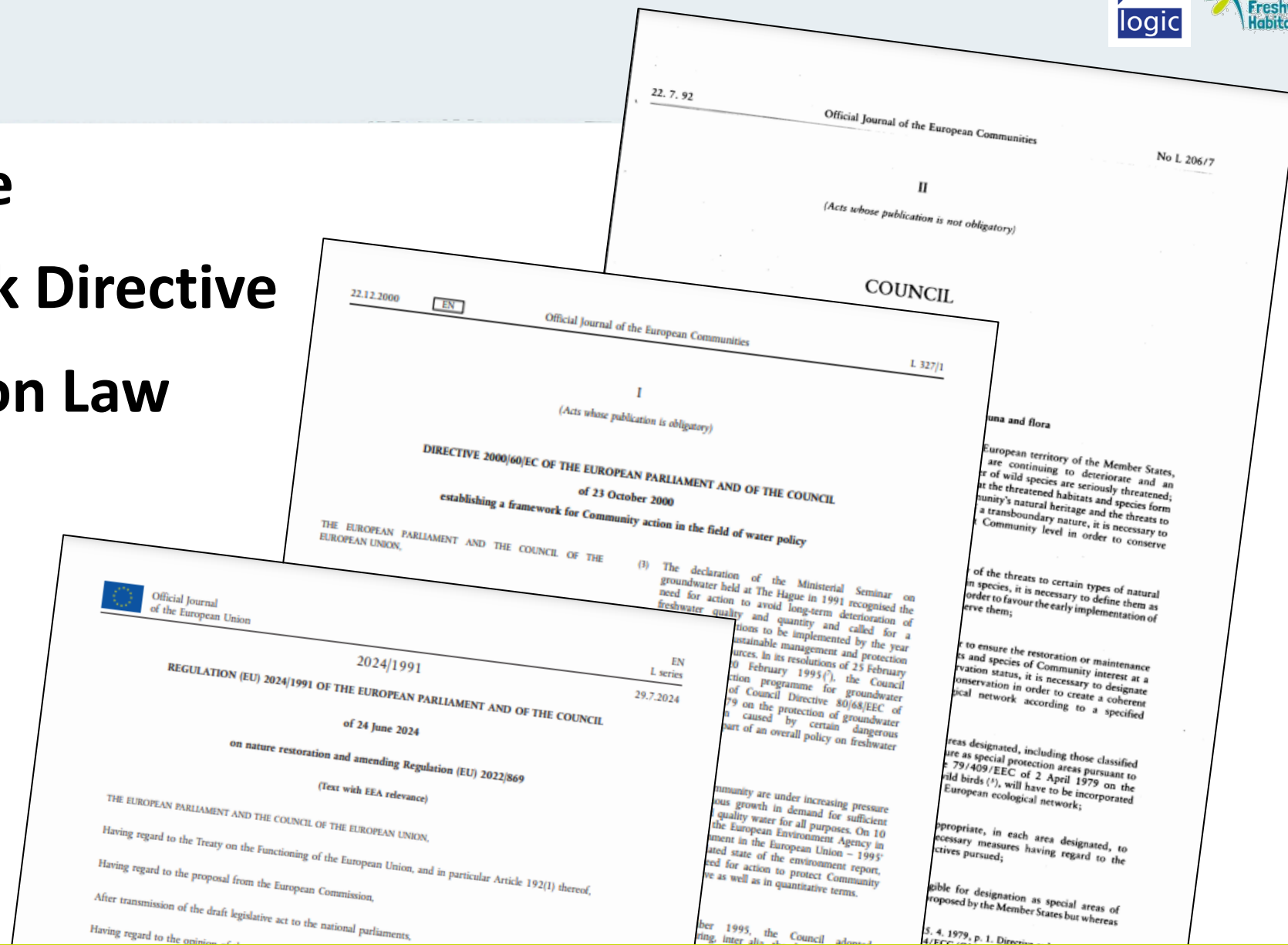
- Habitats Directive
- Water Framework Directive
- Nature Restoration Law



Clean Water Act

- Made considerable progress in defining the water environment as the whole network of freshwaters and wetlands, not just those directly connected to rivers.
- Recent significant reverse when, in a Supreme Court majority opinion, Justice Samuel Alito maintained that the Clean Water Act applies solely to streams, oceans, rivers, and lakes, along with wetlands featuring a "continuous surface connection to those bodies."

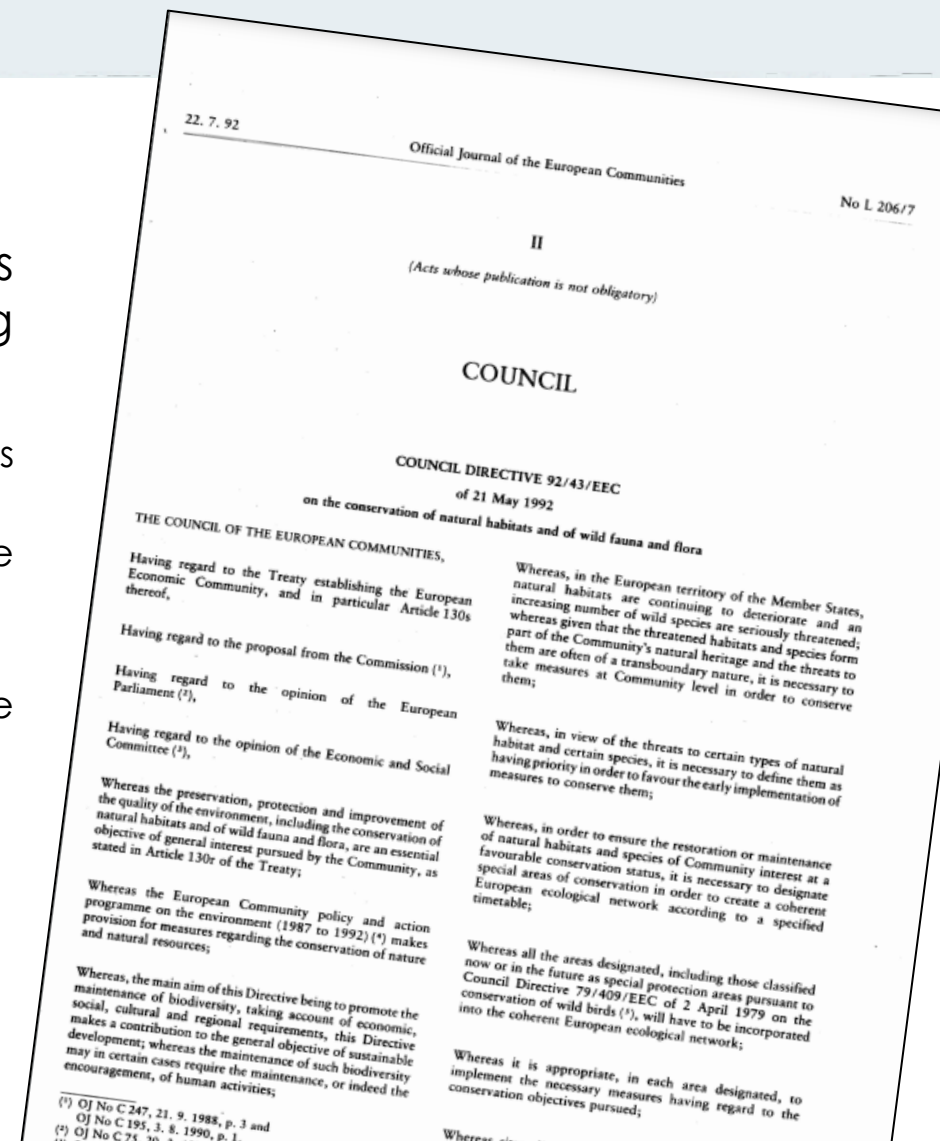
- Habitats Directive
- Water Framework Directive
- Nature Restoration Law



■ Habitats Directive

Nine types of pond meet the criteria for EU Annex 1 Habitats Directive habitat types which. Ponds are included in the following Habitats Directive categories:

- 3110 Oligotrophic waters containing very few minerals of sandy plains (*Littorelletalia uniflorae*)
- 3130 Oligotrophic to mesotrophic standing waters with vegetation of the *Littorelletea uniflorae* and/or Isoeto-Nanojuncetea
- 3140 Hard oligo-mesotrophic waters with benthic vegetation of *Chara* spp
- 3150 Natural eutrophic lakes with Magnopotamion or Hydrocharition– type vegetation
- 3160 Natural dystrophic lakes and ponds
- 3170 Mediterranean temporary ponds
- 3180 Turloughs (mainly Ireland)
- 2190 Humid dune slacks
- 21A0 Machairs (in Scotland and Ireland).



- In Europe perhaps the most important gap is in the WFD which excludes virtually all ponds
- WFD = In theory, all of the water environment
- In practice, regulators early on took a decision to implement in a way which excludes smaller waters (both ponds and streams)
- This has a variety of negative impacts

WFD Article 2

“Inland water means all standing or flowing water on the surface of the land...”

■ Nature Restoration Law

The EU Nature Restoration Law represents an important opportunity for freshwater habitat restoration, freshwater biodiversity protection and the use of ponds and pondscape as nature-based solutions.

Six Articles of Nature Restoration Law relevant to ponds and pondscales:

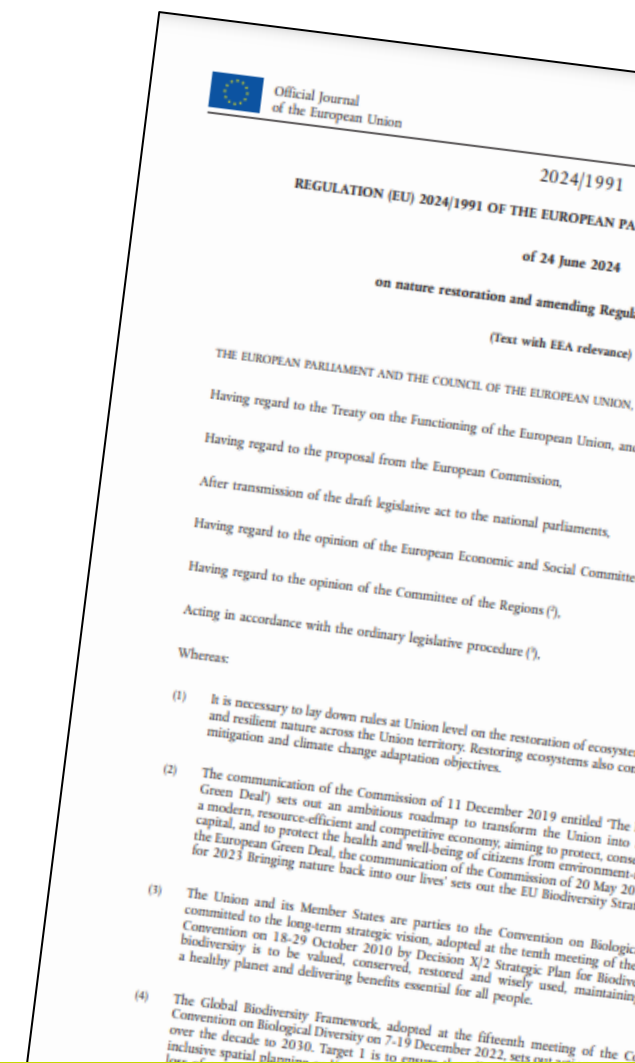
Article 2. Protection of Priority Habitats (Annex 1) and species listed in Annexes II, IV and V of the Habitats Directive which has significant implications for ponds.

Article 5. Improving urban biodiversity where ponds provide urban green space.

Article 7. Restoration of the natural connectivity of rivers and natural functions of the related floodplains, including measures to restore riverine pondscales and ponds.

Article 9. Improving farmland biodiversity: increasing the share of agricultural land with high-diversity landscape features, including ponds.

Articles 14 and 15. preparation and review of national implementation plans will include quantification of pond habitats to be restored under Articles 4 to 9, a description of the restoration measures planned, or



A national plan for ponds: what it should contain

- A national plan for ponds will provide the structure and resources needed to properly protect and manage ponds
- The PONDERFUL policy guidance document provides a framework



BOX 5. CREATING A NATIONAL PLAN FOR PONDS

The key stages for creating national and regional plans for ponds are:

1. Create a national or regional legal mandate for protecting and creating ponds. Mandates exist already but may need to be enhanced.

For example, the Water Framework Directive is intended to protect all freshwater but EU states often have adopted the 50 hectare rule (see Section 5.2). This approach was originally driven by the lack of data on ponds when WFD was implemented, so their importance was underappreciated. Newer data show that ponds are such a crucial part of the freshwater network that there is a critical need to incorporate them in this legislation.

2. Identify the most important sites

Not every pond is equal and allocation of resources requires that funds are well spent. Ways of identifying important ponds have been developed in several EU states.

3. Create a monitoring programme to assess condition of ponds

4. Allocate resources to the creation and management to protect important ponds

5. Identify locations for pond creation

These should help to strengthen the network of habitats by being close to existing high-quality locations helping species spread. New ponds can also be made in any location that can provide clean and unpolluted water.

6. Set plausible targets. Most water management has set unrealistic targets which have proved very difficult to achieve.

Targets for ponds should focus on:

- Number
- Quality
- Amount of clean water in the landscape
- Services provided

The National Plan (1/2)

To protect and manage ponds as nature-based solutions policy makers should create international, national and regional plans for ponds which:

- 1. Create a national or regional legal mandate for protecting and creating ponds.
Mandates exist already but may need to be enhanced.**

For example, the Water Framework Directive is intended to protect all freshwater but EU states often have adopted the 50 hectare rule (see Section 5.2). This approach was originally driven by the lack of data on ponds when WFD was implemented, so their importance was underappreciated. Newer data show that ponds are such a crucial part of the freshwater network that there is a critical need to incorporate them in this legislation.

- 2. Describe the resource by making national pond inventories, mapping ponds and assessing their importance (for biodiversity, Nature's Contributions to People and other ecosystem services they provide)**

Identify the most important sites, Not every pond is equal and allocation of resources requires that funds are well spent. Ways of identifying important ponds have been developed in several EU states.

- 3. Establish monitoring programs on five or 10 year cycles to assess pond condition and delivery of key Nature's Contribution to People;**

3. Set targets for pond and pondscape improvements and delivery of goals to meet policy aims (e.g. of the EU Nature Restoration Law)

Set plausible targets. Most water management has set unrealistic targets which have proved very difficult to achieve. Targets for ponds should focus on:

- Number
- Quality
- Amount of clean water in the landscape
- Services provided

4. Introduce practical programmes, with numerical targets, for protecting, managing, restoring and creating ponds and pondscales and

Allocate resources to the creation and management to protect important ponds. Identify locations for pond creation. These should help to strengthen the network of habitats by being close to existing high-quality locations helping species spread. New ponds can also be made in any location that can provide clean and unpolluted water.

5. Identify or devise funding programmes for protection and improvement of ponds and pondscales.

1. Create legal mandate

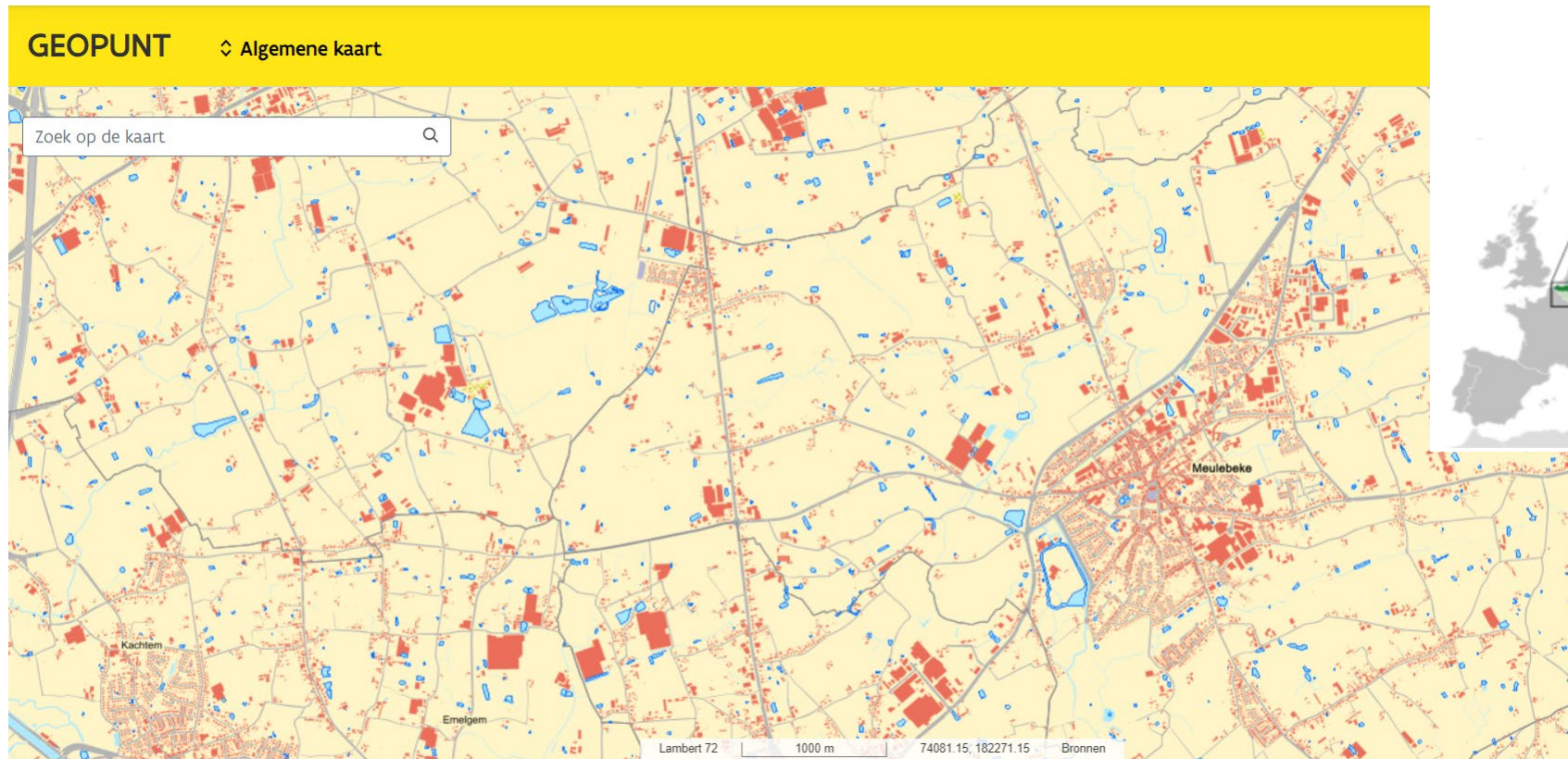
In European Union: 3 main options

- WFD: plan exists in theory but not well-implemented
- Habitats Directive: plan exists in theory; partially implemented; but many freshwater habitats (especially ponds) in Europe still Vulnerable or Near-threatened
- Nature Restoration Law: could be opportunity to better plans for high nature value locations

Elsewhere, national legislation must be adapted or developed

Identify the resource

An excellent example of describing the resource can be seen in the maps of the Research Institute Nature and Forest (INBO), Belgium



Geopunt is een officiële website van de Vlaamse overheid. Meer info >

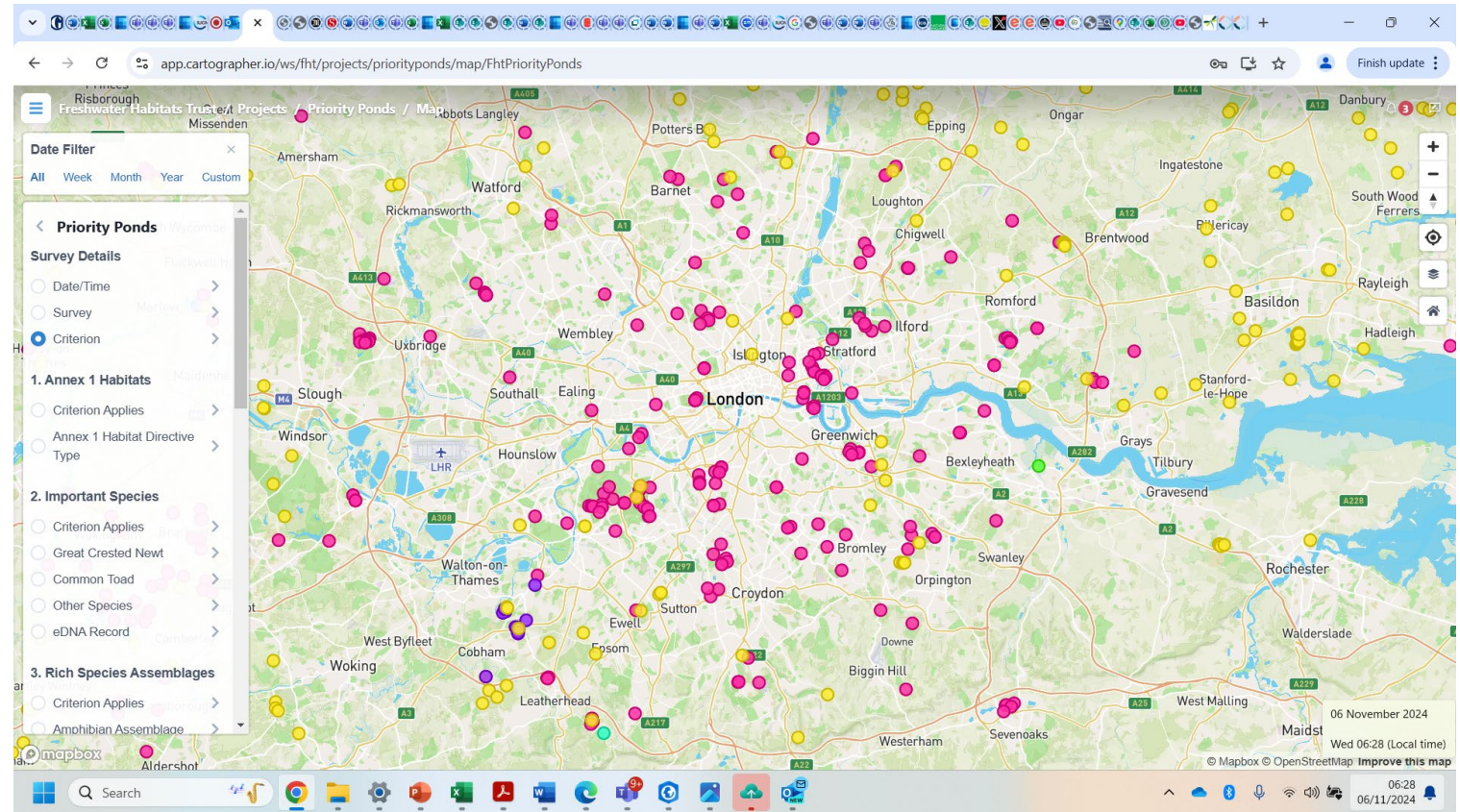
Identify 'special' ponds

'Special' ponds

- Not all ponds are equal
- Plans should identify the most important sites e.g. for biodiversity or specific ecosystem services

For example: England Priority Pond Map

- Public database
- 7 categories of 'important' ponds



Identify 'special' ponds

Priority ponds 7 criteria

1. Habitats of high conservation importance

These are ponds that meet the conditions for an Annex 1 Habitats Directive type. The following nine habitat types are the most relevant to ponds:

- **3110** Oligotrophic waters containing very few minerals of sandy plains (*Littorelletalia uniflorae*)
- **3130** Oligotrophic to mesotrophic standing waters with vegetation of the *Littorelletea uniflorae* and/or *Isoeto-Nanojuncetea*
- **3140** Hard oligo-mesotrophic waters with benthic vegetation of *Chara* spp
- **3150** Natural eutrophic lakes with *Magnopotamion* or *Hydrocharition* – type vegetation
- **3160** Natural dystrophic lakes and ponds
- **3170** Mediterranean temporary ponds
- **3180** Turloughs (mainly Ireland)
- **2190** Humid dune slacks
- **21A0** Machairs (in Scotland and Ireland)

2. Ponds with species of high conservation importance

Ponds with one or more national or UK Red Data Book species, BAP species, species fully protected under the Wildlife and Countryside Act Schedule 5 and 8, Habitats Directive Annex II species, Nationally Scarce wetland plant species, or three* Nationally Scarce aquatic invertebrate species.

3. Ponds with exceptional populations or numbers of key species

These are ponds that fulfil at least one of the following criteria:

- Criteria specified in guidelines for the selection of biological Sites of Special Scientific Interest (currently amphibians and dragonflies only).
- Exceptionally rich sites for plants or invertebrates (supporting 30 or more wetland plant species or 50 or more aquatic macroinvertebrate species).

4. Ponds of high ecological quality

These are ponds identified using the [Predictive System for Multimetrics \(PSYM\)](#), developed by Freshwater Habitats Trust for use in England and Wales. Ponds need to be assessed using standard PSYM methods.

To qualify as a priority pond, waterbodies need to be categorised as having 'Good' quality with a score of 75% or more.

5. Other important ponds

These are individual ponds or groups of ponds with a limited geographic distribution recognised as important because of their age, rarity of type or landscape context e.g. [irreplaceable ponds](#).

6. Predictive methods (PASS)

The [Priority Pond Assessment \(PASS\) system](#) has been developed to use observations about the physical characteristics of a pond (such as surrounding land use) to rapidly identify if a pond is likely to qualify as a priority pond. The method picks up around 60% of priority ponds.

Read the [Priority Pond Assessment manual](#) for more details on this method.

7. Clean water

The presence of clean water can now be used to identify 'Provisional Priority Ponds'. Clean water (in this context) is assessed using two nutrients which can pose a major risk to freshwater wildlife: nitrate and phosphate. To qualify as a Provisional Priority Pond *both* nitrate *and* phosphate need to be at low levels:

- Nitrate (nitrogen) levels need to be below 0.5 mg/l (or ppm), *and*
- Phosphate (phosphorous) levels below 0.05 mg/l (or ppm).

3. Establishing monitoring programmes

Establish monitoring programs on five or 10 year cycles to assess pond condition and delivery of key Nature's Contribution to People

- A good example of such a programme is the UK Countryside Survey which made the first repeat surveys of pond quality
- For a single species the England Great Crested Newt PondNet monitoring programme – which is annual – also provides a model

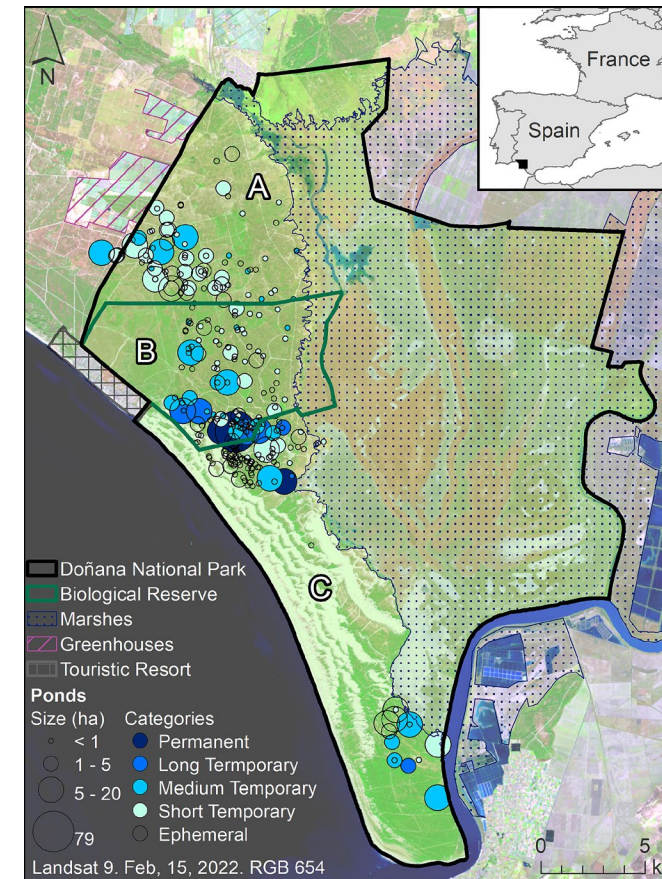


4. Set targets

Set targets for pond and pondscape improvements and delivery of goals to meet policy aims (e.g. of the EU Nature Restoration Law)

- It's vital to set target for protection and management
- A good example is the “*Framework of Actions for the sustainable territorial development of the area of influence of the Doñana natural space*”, perhaps Europe's most famous pond-rich landscape

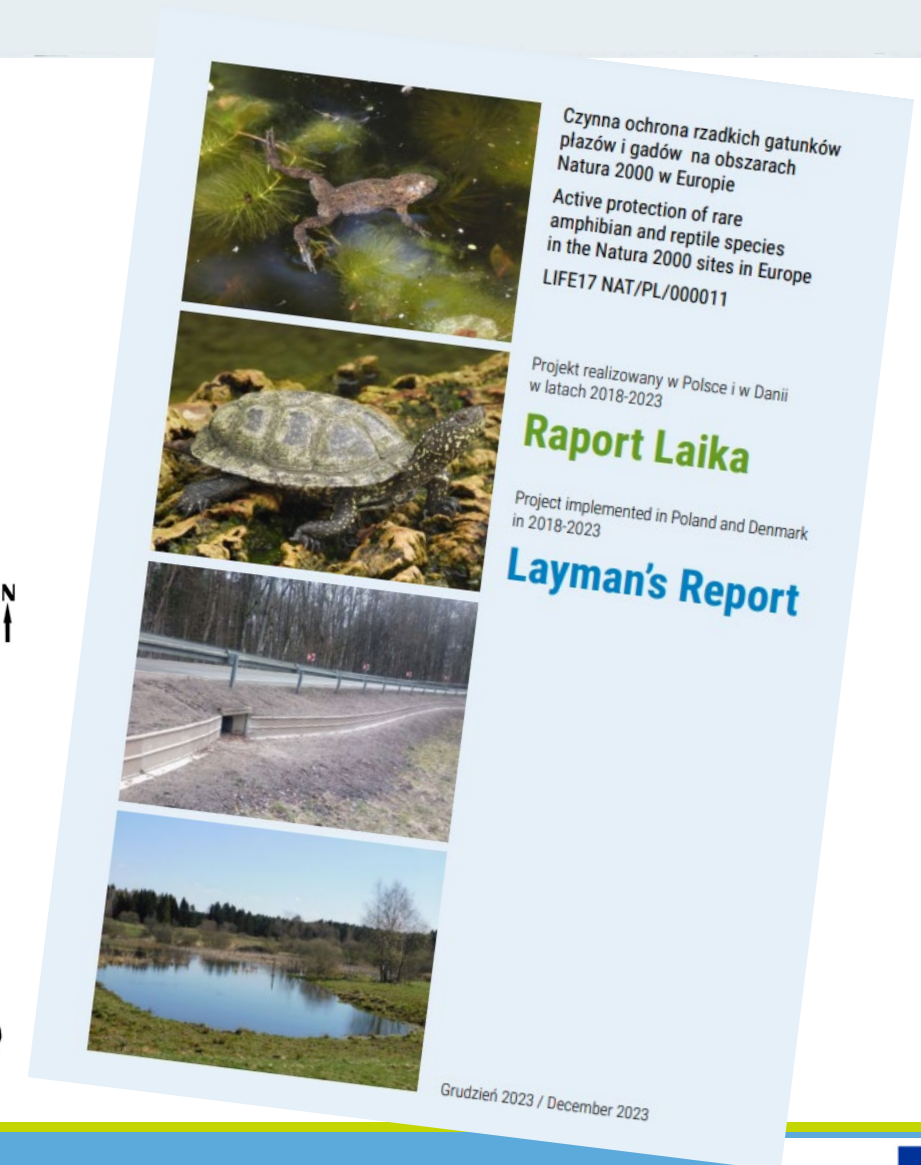
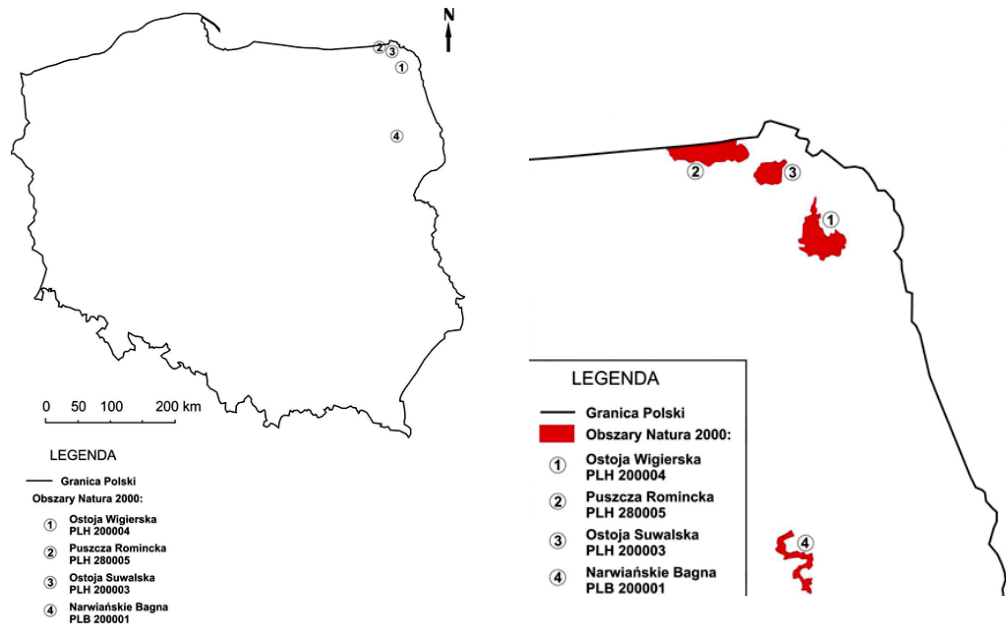
Ponds of the Doñana National Park (Felipe *et al.*, 2023)



5. Practical programmes

Introduce practical programmes, with numerical targets, for protecting, managing, restoring and creating ponds

A good example is the work of the Man and Nature Association and AmphiConsult in north-east Poland



6. Funding

Identify or devise funding programmes for protection and improvement of ponds and pondscapes.

- Funding is crucial and without it pond protection will not occur
- We have identified a range of sources in the PONDERFUL project; ultimately these depend on adequate policy drivers which recognise the importance of ponds
- Lets look at these in a bit more detail...

Table 6 - PONDERFUL Sources of Finance Inventory (McDonald et al. 2023)

Main category	Category definitions	Instruments
1. Income instruments	Instruments for raising revenue that can then be used to finance nature-based solutions. Some can be used by landowners (1.1, 1.4, and 1.5); others can only be levied by government-sanctioned associations (1.2 and 1.3) or governments (1.6).	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 1.6 Other revenue raising measures
2. Contracting approach (cost reduction/restructure)	Legal agreements that reduce or restructure the costs of financing nature-based solutions, either by providing assets or use of assets at below market rates (2.1) or by shifting financing of upfront costs in return for ongoing payments (2.2).	2.1 Community asset transfer 2.2 Public private partnership
3. Voluntary contributions/donations	Voluntary payments made of own free-will, whether a direct beneficiary of the nature-based solutions (3.2) or simply to contribute (3.1, 3.3).	3.1 Philanthropic contributions 3.2 Voluntary beneficiary contributions 3.3 Crowdfunding
4. Tradable rights/permits and payment for ecosystem services	Revenue is raised by selling the 'rights' to ecosystem services generated by the nature-based solutions. This payment can be relatively informal (4.1) or through structured markets for climate mitigation (4.2), for offsetting damage to biodiversity elsewhere (4.3), or for reducing water pollutants (4.4).	4.1 Payment for ecosystem services 4.2 Transfer-based instruments: Voluntary carbon markets 4.3 Transfer-based instruments: Biodiversity offsets and habitat banking 4.4 Transfer-based instruments: Water quality trading systems
5. Subsidies	Subsidies are a financial contribution from the government to a person, company or organisation to promote socially beneficial outcomes. They can be ongoing payments (or tax breaks) linked to outcomes or production (5.1, 5.2)	5.1 Environmental subsidies 5.2 Tax concessions
6. Grants	Direct contribution from government (local, national, or EU) to a recipient in return for...	

Financing ponds: challenges

Pondscapes (like other nature-based solutions) pose challenges for private financing

- Pondscapes generate “**public**” **goods** (e.g. biodiversity conservation, 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**

Financing ponds: Sustainable finance inventory

Objective: Identify options for how pondscape NBS can be financed (“how can I finance my pond?”)

- Emphasis on private finance options

Contents

- 22 finance instruments



Ponderful
PONDS FOR CLIMATE

SUSTAINABLE FINANCE INVENTORY

Find the complete Ponderful Sustainable Finance Inventory at the [Ecologic Institute website](https://www.ponderful.co.uk/) or click on the instruments below to learn more

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 (1.2 and 1.3) or governments (1.6).	1.1 User fees	+Altnabrocky
		1.2 Business improvement districts	+Vauxhall
		1.3 Betterment levies	+Wimbledon
		1.4 Development rights and leases	+SANPark
		1.5 Sale of market goods	+Bavaria
		1.6 Other revenue raising measures	+UK Network Rail +Port Townsend
2. Contracting approach (cost reduction/restructure)	Legal agreements that reduce or restructure the costs of financing NbS, either by providing assets or use of assets at below market rates (2.1) or by shifting financing of upfront costs in return for ongoing payments (2.2).	2.1 Community asset transfer	+Chapman Pond
		2.2 Public private partnership	+Valley State
3. Voluntary contributions/donations	Voluntary payments made of own free-will, whether a direct beneficiary of the NbS (3.2) or simply to contribute (3.1, 3.3)	3.1 Philanthropic contributions	+Living Danube
		3.2 Voluntary beneficiary contributions	+Haweswater
		3.3 Crowdfunding	+Treflach Wetland
4. Tradable Rights/permits and payment for ecosystem services	Revenue is raised by selling the ‘rights’ to ecosystem services generated by the NbS. This payment can be relatively informal (4.1) or through structured markets for climate mitigation (4.2), for offsetting damage to biodiversity elsewhere (4.3), or for reducing water pollutants (4.4).	4.1 Payment for ecosystem services	+Vittel
		4.2 Transfer-based instruments: voluntary carbon markets	+MoorFutures
		4.3 Transfer-based instruments: Biodiversity offsets and habitat banking	+Eco-Accounts +District Licensing
		4.4 Transfer-based instruments: Water quality trading systems	+Pennsylvania
5. Subsidies	Subsidies are a financial contribution from the government to a person, company or organisation to promote socially beneficial outcomes. They can be ongoing payments (or tax breaks) linked to outcomes or production (5.1, 5.2)	5.1 Environmental subsidies	+Petra Marada
		5.2 Tax concessions	+West Australia
6. Grants	Direct contribution from government (local, 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).	6.1 Grants	+Hunte-Leda
7. Debt instruments	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 through debt markets (7.2).	7.1 Loans and green loans	+Linnunsuo +Winona Wetland
		7.2 Bonds and green bonds	+DC Bond +TCF Green Bond
8. Ownership models (equity finance)	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 impact (8.1) or be purely commercial (8.2)	8.1 Impact investing	+Sumatra Merang
		8.2 Commercial investing	+Mill Creek

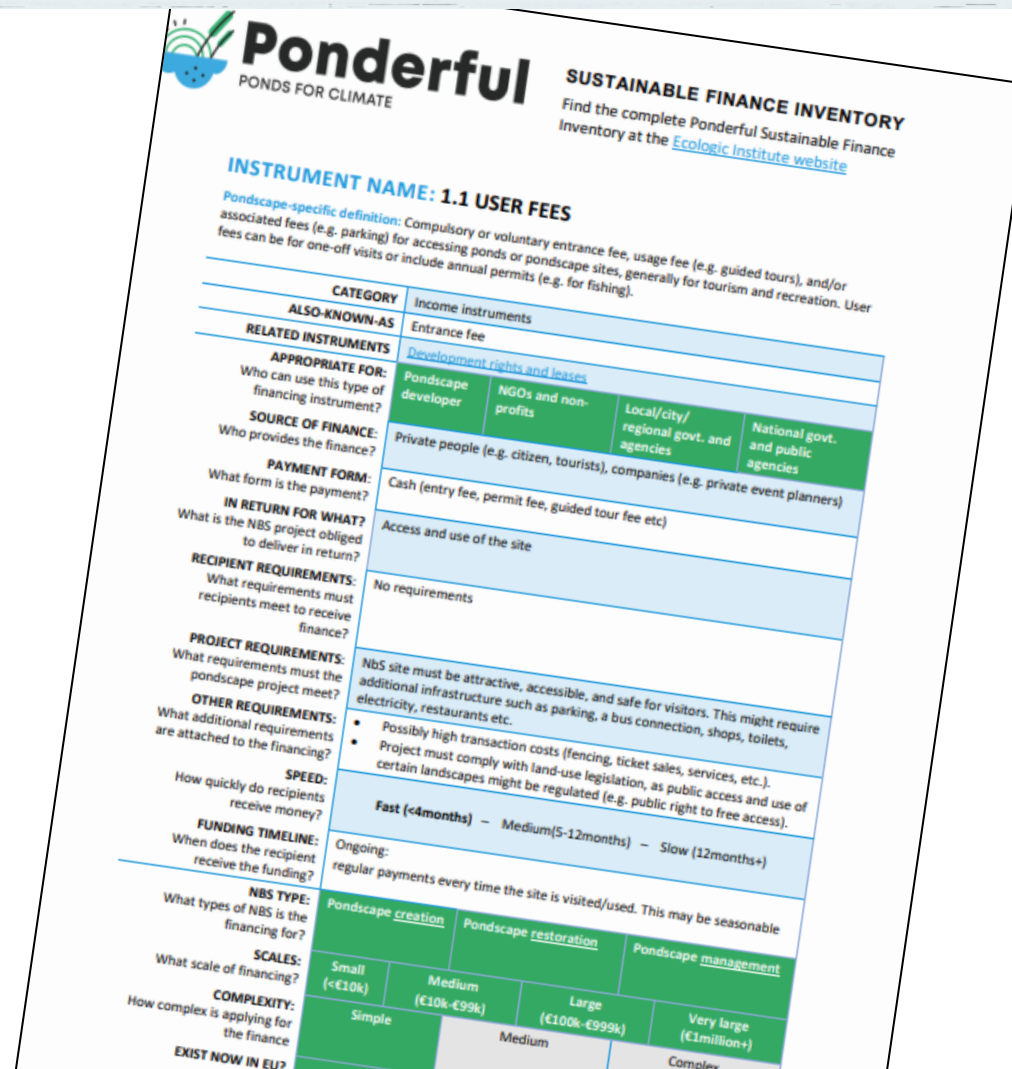
Financing ponds: Sustainable finance inventory

Objective: Identify options for how pondscape NBS can be financed (“how can I finance my pond?”)

- Emphasis on private finance options

Contents

- 22 finance instruments



Ponderful
PONDS FOR CLIMATE

SUSTAINABLE FINANCE INVENTORY
Find the complete Ponderful Sustainable Finance Inventory at the [Ecologic Institute website](https://ecologicinstitute.org/ponderful)

INSTRUMENT NAME: 1.1 USER FEES

Pondscape-specific definition: Compulsory or voluntary entrance fee, usage fee (e.g. guided tours), and/or associated fees (e.g. parking) for accessing ponds or pondscape sites, generally for tourism and recreation. User fees can be for one-off visits or include annual permits (e.g. for fishing).

CATEGORY	Income instruments			
ALSO-KNOWN-AS	Entrance fee			
RELATED INSTRUMENTS	Development rights and leases			
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?	Private people (e.g. citizen, tourists), companies (e.g. private event planners)			
PAYMENT FORM: What form is the payment?	Cash (entry fee, permit fee, guided tour fee etc)			
IN RETURN FOR WHAT? What is the NBS project obliged to deliver in return?	Access and use of the site			
RECIPIENT REQUIREMENTS: What requirements must recipients meet to receive finance?	No requirements			
PROJECT REQUIREMENTS: What requirements must the pondscape project meet?	NBS site must be attractive, accessible, and safe for visitors. This might require additional infrastructure such as parking, a bus connection, shops, toilets, electricity, restaurants etc.			
OTHER REQUIREMENTS: What additional requirements are attached to the financing?	<ul style="list-style-type: none"> Possibly high transaction costs (fencing, ticket sales, services, etc.). Project must comply with land-use legislation, as public access and use of certain landscapes might be regulated (e.g. public right to free access). 			
SPEED: How quickly do recipients receive money?	Fast (<4months) – Medium(5-12months) – Slow (12months+)			
FUNDING TIMELINE: When does the recipient receive the funding?	Ongoing: regular payments every time the site is visited/used. This may be seasonal			
NBS TYPE: What types of NBS is the financing for?	Pondscape creation	Pondscape restoration	Pondscape management	
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?				

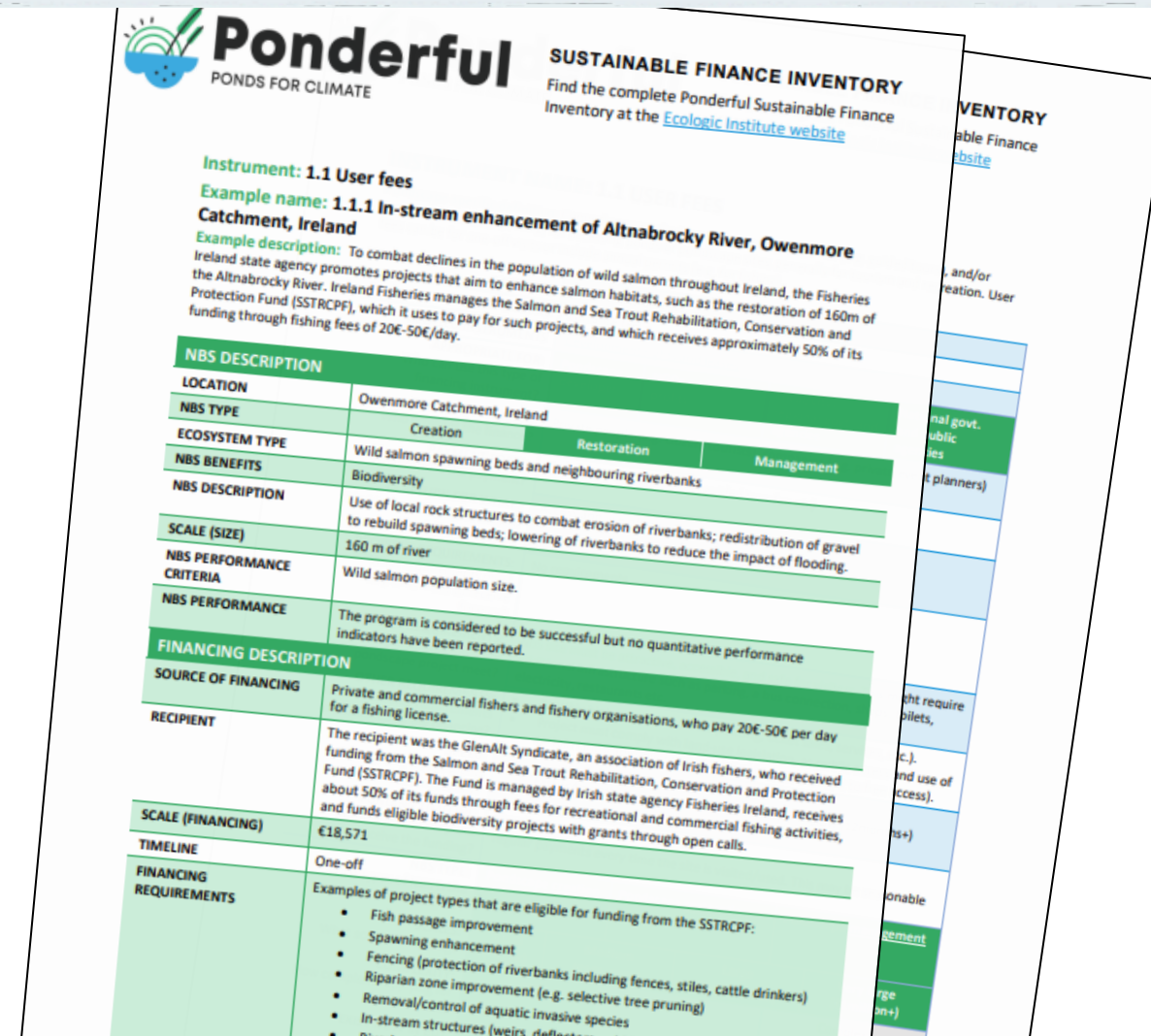
Financing ponds: Sustainable finance inventory

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- 22 finance instruments
- 26 real-world examples



Ponderful
PONDS FOR CLIMATE

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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 funding through fishing fees of 20€-50€/day.

NBS DESCRIPTION	
LOCATION	Owenmore Catchment, Ireland
NBS TYPE	Creation
ECOSYSTEM TYPE	Wild salmon spawning beds and neighbouring riverbanks
NBS BENEFITS	Biodiversity
NBS DESCRIPTION	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.
SCALE (SIZE)	160 m of river
NBS PERFORMANCE CRITERIA	Wild salmon population size.
NBS PERFORMANCE	The program is considered to be successful but no quantitative performance indicators have been reported.
FINANCING DESCRIPTION	
SOURCE OF FINANCING	Private and commercial fishers and fishery organisations, who pay 20€-50€ per day for a fishing license.
RECIPIENT	The recipient was the GlenAlt Syndicate, an association of Irish fishers, who received funding from the Salmon and Sea Trout Rehabilitation, Conservation and Protection Fund (SSTRCPF). The Fund is managed by Irish state agency Fisheries Ireland, receives about 50% of its funds through fees for recreational and commercial fishing activities, and funds eligible biodiversity projects with grants through open calls.
SCALE (FINANCING)	€18,571
TIMELINE	One-off
FINANCING REQUIREMENTS	Examples of project types that are eligible for funding from the SSTRCPF: <ul style="list-style-type: none">• 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, etc.)

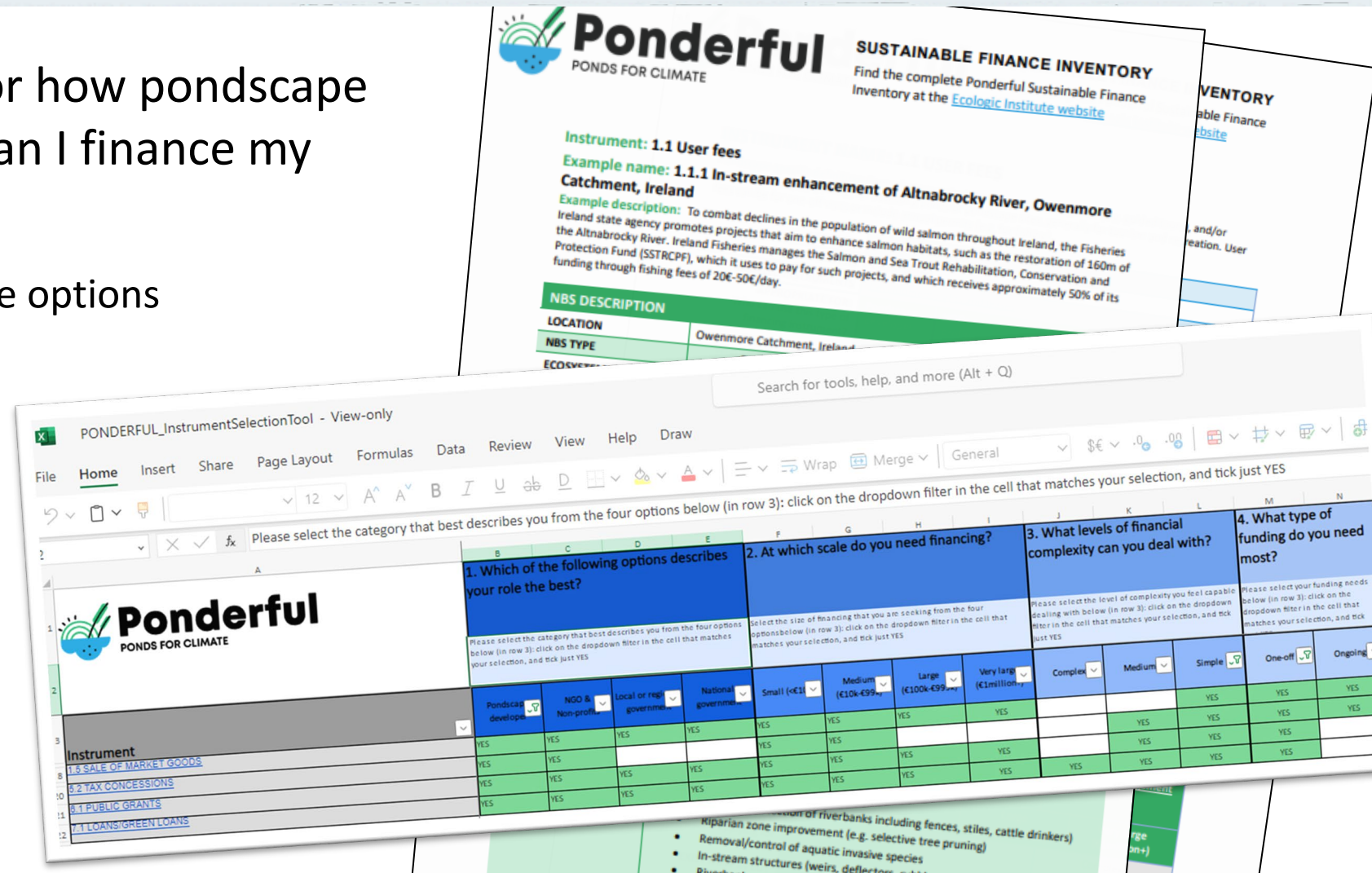
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- Online version + excel tool



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NBS DESCRIPTION

LOCATION	NBS TYPE
Owenmore Catchment, Ireland	ECOSYSTEM

Search for tools, help, and more (Alt + Q)

POUNDERFUL_InstrumentSelectionTool - View-only

File Home Insert Share Page Layout Formulas Data Review View Help Draw

Please select the category that best describes you from the four options below (in row 3): click on the dropdown filter in the cell that matches your selection, and tick just YES

	B	C	D	E	F	G	H	I	J	K	L	M	N												
1.	Which of the following options describes your role the best?				2. At which scale do you need financing?				3. What levels of financial complexity can you deal with?				4. What type of funding do you need most?												
Please select the category that best describes you from the four options below (in row 3): click on the dropdown filter in the cell that matches your selection, and tick just YES														Please select the size of financing that you are seeking from the four options below (in row 3): click on the dropdown filter in the cell that matches your selection, and tick just YES				Please select the level of complexity you feel capable dealing with below (in row 3): click on the dropdown filter in the cell that matches your selection, and tick just YES				Please select your funding needs below (in row 3): click on the dropdown filter in the cell that matches your selection, and tick just YES			
	Pondscape developer	NGO & Non-profit	Local or regional government	National government	Small (<€10k)	Medium (€10k-€99,999)	Large (€100k-€999,999)	Very large (€1million+)	Complex	Medium	Simple	One-off	Ongoing												
Instrument																									
1.6 SALE OF MARKET GOODS	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES												
5.2 TAX CONCESSIONS	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES												
8.1 PUBLIC GRANTS	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES												
10.1 LOANS/GREEN LOANS	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES												

• Riparian zone improvement (e.g. selective tree pruning)
• Removal/control of aquatic invasive species
• In-stream structures (weirs, deflectors, etc.)

Financing instruments

- Closer look at the options
- Some generate revenue, some private source of funding, some reduce or avoid costs, ...

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 (1.2 and 1.3) or governments (1.6).	1.1 User fees	+Altnabrocky
		1.2 Business improvement districts	+Vauxhall
		1.3 Betterment levies	+Wimbledon
		1.4 Development rights and leases	+SANPark
		1.5 Sale of market goods	+Bavaria
		1.6 Other revenue raising measures	+UK Network Rail +Port Townsend
2. Contracting approach (cost reduction/restructure)	Legal agreements that reduce or restructure the costs of financing NbS, either by providing assets or use of assets at below market rates (2.1) or by shifting financing of upfront costs in return for ongoing payments (2.2).	2.1 Community asset transfer	+Chapman Pond
		2.2 Public private partnership	+Valley State
3. Voluntary contributions/donations	Voluntary payments made of own free-will, whether a direct beneficiary of the NbS (3.2) or simply to contribute (3.1, 3.3)	3.1 Philanthropic contributions	+Living Danube
		3.2 Voluntary beneficiary contributions	+Haweswater
		3.3 Crowdfunding	+Treflach Wetland
4. Tradable Rights/permits and payment for ecosystem services	Revenue is raised by selling the 'rights' to ecosystem services generated by the NbS. This payment can be relatively informal (4.1) or through structured markets for climate mitigation (4.2), for offsetting damage to biodiversity elsewhere (4.3), or for reducing water pollutants (4.4).	4.1 Payment for ecosystem services	+Vittel
		4.2 Transfer-based instruments: voluntary carbon markets	+MoorFutures
		4.3 Transfer-based instruments: Biodiversity offsets and habitat banking	+Eco-Accounts +District Licensing
		4.4 Transfer-based instruments: Water quality trading systems	+Pennsylvania

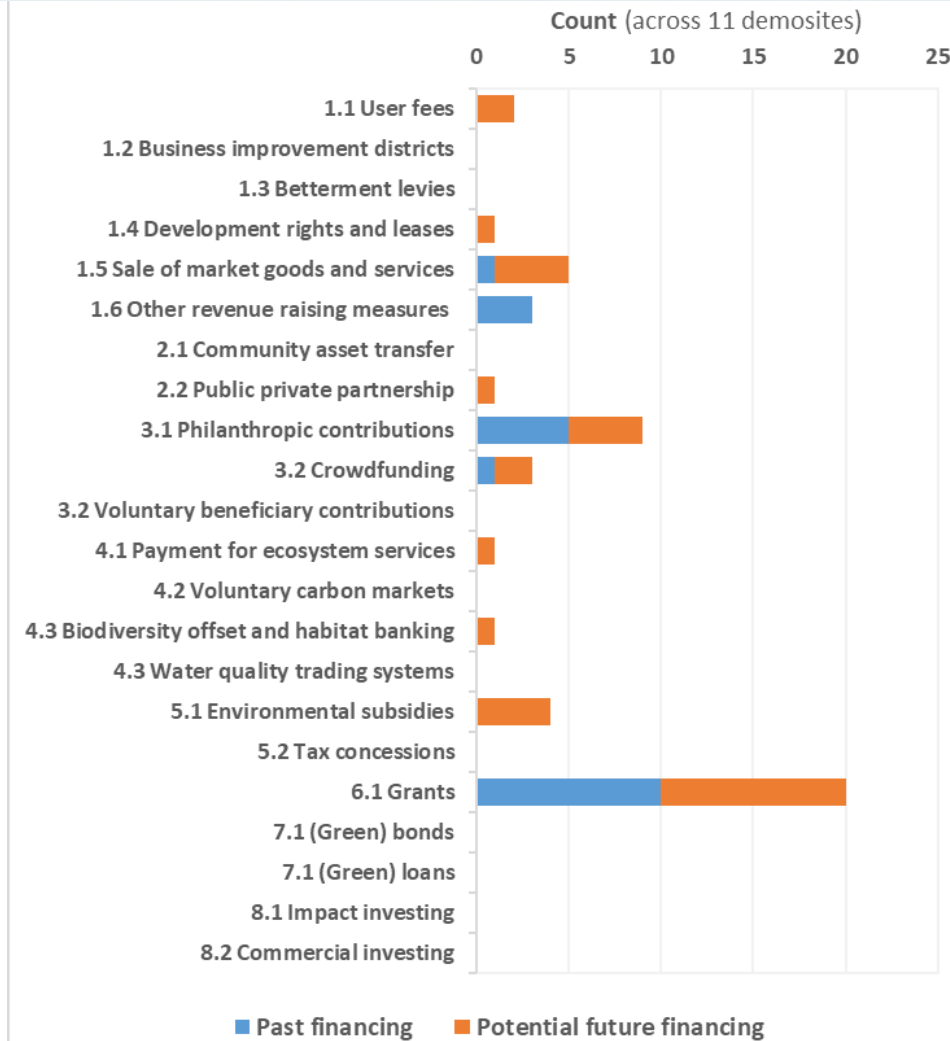
Financing instruments

- Closer look at the options
- Some generate revenue, some private source of funding, some reduce or avoid costs, ... others are debt- or equity finance
- Different options suited to different types of pondscape NbS projects – if at all?

5. Subsidies	Subsidies are a financial contribution from the government to a person, company or organisation to promote socially beneficial outcomes. They can be ongoing payments (or tax breaks) linked to outcomes or production (5.1, 5.2)	5.1 Environmental subsidies	+Petra Marada
		5.2 Tax concessions	+West Australia
6. Grants	Direct contribution from government (local, 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).	6.1 Grants	+Hunte-Leda
7. Debt instruments	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 through debt markets (7.2).	7.1 Loans and green loans	+Linnunsuo +Winona Wetland
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Role of private financing – today and tomorrow

- Worked with PONDERFUL demosites to identify sources of previous financing, and potential future sources
- **Historically:** Grants, with some philanthropic contributions
- **Future:** Similar – though potential for some private financing in the form of income instruments



Role of private financing – today and tomorrow

Challenge for private financing remains:

- Pondscales generate primarily public goods
- Measurement, etc.

Private finance opportunities

- Creation of environmental markets
- Integrated landscape priorities

Overall conclusion:

- Private finance no magical solution
- Decisive role for public policy and public funding



A national plan for ponds

- A national plan for ponds will provide the structure and resources needed to properly protect and manage ponds
- The PONDERFUL policy guidance document provides a framework

