Ponderful

Deliverable 5.2

Communications Plan

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PONDERFUL: Communications Plan

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1. Introduction

This plan sets out the communication activities to ensure project results are available to our key audiences, particularly policymakers, as well as showing how the outcomes are relevant to practitioners, businesses and citizens' everyday lives, to get the maximum value from our results.

Overall, the Communications Plan is intended to ensure that the project is widely known to relevant audiences **at the right levels** (i.e. project participant states, more widely in Europe and internationally), to maximise the exploitation and dissemination potential, and help create the paradigm shift in recognition of the importance of ponds and pondscapes needed to maximise the societal benefits they provide. The communication plan also creates the base for long-term post-project communication of the project outputs.

The **overall objectives** of the Communications Plan are to:

- Ensure that researchers in various key disciplines are aware of the project results

- Make policymakers in water, nature conservation, forest, agriculture and climate sectors aware of the importance of small waters and the practical implications of the project results, building on recognition of ponds in IPBES Europe and Central Asia Regional Assessment

- Provide effective practical tools for practitioners, who need confidence in methods rather than technical details

- Create a consistent series of stories, designed for specific audiences, about the project emphasising the special role of small waters.

2. Objectives

To **achieve our objectives** we will combine a mixture of **intermediate communication goals** which we can be sure are relatively easily achieved, combined with **high impact, more ambitious, final communication goals**. Our previous experience indicates that generating changes in EU environment policy is challenging and often long-term but may be helped by the current high profile of the climate/biodiversity crisis and the recent recognition by IPBES that ponds harbour a significant proportion of aquatic biodiversity, are under increasing pressure and are historically neglected[1,].

In this situation it is possible that the project's promotion of a **high impact paradigm shift** to fully incorporate small waters in environmental policies may now be more achievable. For example, the UN Framework for Freshwater Ecosystem Management currently perpetuates

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[1]IPBES (2018): The IPBES regional assessment report on biodiversity and ecosystem services for Europe and Central Asia. Rounsevell, M., Fischer, M., Torre-Marin Rando, A. and Mader, A. (eds.). Secretariat of the Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services, Bonn, Germany. 892 pages; [2]Gozlan et al. (2019). Inland Waters, 9, 78–94

long out-of-date views of ponds by using a high level classification of freshwaters that recognises rivers and streams, but, for standing waters, only lakes. This Framework, published in 2017, underpins UN Sustainable Development Goal 6 on water and typifies the 'Downing saliency error': although there are somewhere between 160 million and 3 billion ponds globally, they do not figure in international water policy.

We will define within the Communications Grid (which will be a living document regularly updated) deadline dates for key communication activities and a central driver will be to ensure that information is made available to annual/biannual Conventions of Parties (COPs) for IPCC and IPBES. At the highest levels the key communication goals will be to encourage policy makers to:

- Incorporate ponds effectively in freshwater policy and legislative programmes which, as noted by IPBES, are currently almost entirely focused on rivers and large lakes

- Incorporate pond habitat creation goals in the UN Decade of Ecosystem Restoration, which currently has very limited freshwater biodiversity specific objectives

- Incorporate ponds and other small waters, freshwater biodiversity and ES goals in the CBD plans (and future EU Water Framework Directive revisions) – currently these are mostly focused on large waters, reflecting the traditional 'saliency error' paradigm.

The Communications Plan is a central part of WP5, and is specifically implemented in Tasks 5.1 and 5.3 (see Appendix 1). It is led by FHT which has good previous experience of media engagement including regular radio and TV appearances, writing for national media and the running of an organisational communications strategy. Graphic, web and other design material will be professionally designed. We are creating an in-house communications guidance manual for participants (which we will complete by Month 6) and allocate resources for training key members of staff in media techniques, complementing their existing experience. Larger university participants also have in-house media teams who we will build into the communications plan, and we will also cooperate as far as possible with the media teams of the larger public bodies and NGOs (e.g. Natural England in the UK, RAMSAR Bureau) who are supporting the project.

Our virtual Press Office will comprise a central list of media contacts – normally one person for each partner who is either member of the team or a member of the organisation's official media team.

3.   Audience

Our **audience is divided into five main categories** (see WP5 details), and **goes beyond the research community**, with communications designed to meet the needs of each of these groups. We will also **develop a register of critical 'super-influencers'**, such as the Head of the EU Water Policy Unit and the EU Environment Commissioner.

We will develop a small number of key **messages** to convert into stories about the project. In the first half of the project these are likely to consist of:

- Why the 'saliency error' on small waters matters, and how latest data support this hypothesis

- Ponds are lynch-pin habitats for freshwater biodiversity: European and world-wide examples

- How small waters interact with the climate: a powerful force for good or a problem in the making?

In the second half of the project, we will be adding to these message the key outputs of project results which could include (though this obviously depends completely on project outputs):

- Ponds: a European refuge for freshwater wildlife

- Refining global climate models with information on small waters

- Multiple benefits from small waters are cheap, easily achieved and can reliably be delivered (unlike much of current water management)

We will arrange our communications to combine a mixture of **one-way and two-way exchanges** to obtain maximum awareness of the project, develop longevity and generate post-project funding and support for actions. All project participants will be involved in project communication through a strategic grid of daily, weekly, monthly and annual programmes of communications activity co-ordinated by FHT and working in collaboration with EPCN. We will seek monthly updates on likely news items from each participant, and make suggestions of the main stories they should be promoting locally. We will prepare a strategy for key staff to represent the project in each member state when we generate high profile media (e.g. publication in a high level journal, observations which confirm the substantial role of small waters in influencing climate gases, where some evidence indicates impacts equal to forests or peatlands). We will use standard feedback survey forms extensively developed in previous projects to evaluate the success of communication activities. We will run both **internal communication strategies** – which are mainly concerned with ensuring that participants are aware of all the ongoing activities and also help to maintain overall project coherence - and **external communications strategies**.

Appendix 1. Implementation of the Communications Plan: text from WP5 summarising the approach to be taken.

Objectives

WP5 is coordinating the dissemination, exploitation and communication of PONDERFUL results and outputs, enabling **ponds and pondscapes to be used to provide climate change adaptation and mitigation, biodiversity conservation and other ecosystem services**. WP5 will ensure that the information, tools and practices created by PONDERFUL become widely known to relevant user groups by: (a) finalising and implementing the Plan for the Exploitation and Dissemination of Results (PEDR) and the Communication Plan, (b) developing the project website and data management system, (c) running a comprehensive programme of interpersonal, written and visual communication, and (d) co-ordinating the project's data management and long-term legacy.

The **Specific Objectives** (SO) of WP5 are:

SO 5.1. **To complete the development of the Plan for the Exploitation and Dissemination of Results (PEDR),** ensuring that it is fully developed, regularly updated and implemented during the project and **create and implement a comprehensive Communication Plan** identifying communication tools and managing a timetable of activities to reach key audiences. The two plans will maximise the substantial innovation potential that the project can deliver and make the results widely known in Europe and beyond.

SO 5.2. **To establish, develop and manage the project's website**, **data management system** and other **web-based resources** to provide an **easily accessible central communications hub** that will be the repository of the project's information resources. The website will also form the basis of the **project legacy** with data and outputs linked to the EPCN website to facilitate **long-term dissemination and exploitation**.

SO 5.3. **To schedule and coordinate interactions with existing international scientific, policy and practical networks** and **disseminate project results by working with multiple audiences** to embed PONDERFUL results in the work of nature, water, urban, forest, agriculture and climate policy managers. To assist this process we will produce **policy briefings**, **a Technical Handbook and Guidance Document** and explore the **commercialisation of project outputs with participating SMEs.**

SO 5.4. **To ensure access to the large quantities of original data generated by PONDERFUL** we will produce and implement a long-term **Data Management Plan** to ensure that our data are findable, accessible, interoperable and reusable (FAIR).

Task 5.1. Develop, regularly update and implement the Plan for the Exploitation and Dissemination of Results (PEDR) and develop the project's comprehensive Communication Plan. *Lead participant: FHT; participants: KUL, HES-SO, ECOLOGIC, UCL, CIIMAR, UdelaR, RANDBEE.*

In Task 5.1 we will finalise the **Plan for the Exploitation and Dissemination of Results (PEDR),** which will be completed within one month of the projects' start date and evaluated at the consortium Kick-Off Meeting and **create and regularly update a comprehensive Communication Plan** for strategically communicating project results to our key audiences (policymakers, practitioners, businesses, public), with a **daily, weekly, monthly and annual communication grid**, using multiple social and traditional media channels. Messages will be adapted to relevant national, European and global timetables (e.g. Fête des Mares in France, World Water Day). The overall objective of the Communications Plan is to: (i) ensure that project results are known to scientists in key disciplines and to policymakers in water, nature, forest, agriculture and climate management and (ii) to provide practitioners with usable practical advice and public audiences with simple information, emphasising the special role of ponds and pondscapes in land and water management. Our **goal** is to see pond- and pondscape-related policy objectives incorporated into relevant global, EU, national and regional policies (e.g. future EU Water Framework Directive revisions, UN Decade of Ecosystem Restoration programmes and Convention on Biological Diversity plans). The **communication goals** are **important because** most policy still focuses on large water bodies, whereas ponds, due to their high number, sensitivity to anthropogenic impact and ease of management, provide strong levers for climate change adaptation and mitigation, biodiversity conservation and enhanced delivery of ecosystem services.

The communication programme is led by FHT who will create an in-house communication guide for the project team, train key staff in media techniques, and provide general media training at Annual Meetings.

Task 5.2. Develop, manage and maintain the project website, web-based resources, data management system and long-term information repository.

Lead participants: CIIMAR; participants: KUL, HES-SO, ECOLOGIC, UCL, CIIMAR, UU, FHT RANDBEE.

The PONDERFUL website will function as the central dissemination, information and communications hub for the project with standard pages (news, events, about, team, press, etc.), an online atlas, an educational component and multilingual web-based materials (i.e. **webinars, E-Newsletters, short animated films)**. It will host PONDERFUL generated datasets and metadata and web-based resources created in WP4 (**Technical Handbook, Policy Guidance**, **multi-criteria decision tool)**. The website will be developed by RANDBEE, who have substantial experience in website production for EU-funded projects, with web-based resources produced by CIIMAR, which has coordinated several national and international science literacy projects, and other project partners. Project **branding and styling**, developed within the first three months, will establish the PONDERFUL visual identity (logo, fonts, colours, visual identity) with templates and guidelines for use by all participants, and will be consistent with participants existing branding to help post-project legacy. We will create social media channels in line with the visual identity (e.g. Twitter, Facebook), produce two **animation videos,** a **peer-reviewed video on JoVe** on protocols

for making ponds and broadcast four **Technical Webinars** about pond importance and management.

The Data Management Plan will be created by Month 6 of the project and updated annually (Month 18, 30, 42). The DMP will set out mechanisms for managing the project's data and metadata management practices, while the AQUACROSS Information Platform (IP) will be the operational software tool for implementing these management practices. The data generated by PONDERFUL will be made findable via a centralised metadata database embedded in the AQUACROSS Information Platform (IP), linked to the PONDERFUL website. For long-term data archiving and preservation, all the publications and research data will be uploaded in an official repository and they will be carefully managed following the best research management practices coming from Zenodo and OpenAIRE. The metadata will be uploaded and maintained on the platform provided by the existing AQUACROSS IP. In the case of public data not directly accessible through online data portals, the sources of the data and respective contact points will be provided, along with the metadata uploaded to the IP.

The data and metadata will be managed by a working group drawn from all Work Package teams which will be tasked with 'Ensuring dataset interrelationships and consistency'. The DMP will comprise the protocols for the collection of new data as part of the different project work packages and will guide all subsequent data management activity in accordance to the H2020 Open Research Data Pilot and the FAIR principle (see also section 2.2 for details on data management). Short-term temporary storage of data during the project will be done centrally on a cloud data storage tool that is automatically backed-up at regular time intervals and shared among all project partners. To ensure the project legacy, website materials will be maintained long-term by the two NGOs associated with the project (FHT and EPCN), the transition being managed during Year 4. We will also upload data to ZENODO for further enhancing the long-term legacy of the data.

Task 5.3. Implement the PEDR and Communication Plan and **interact with existing scientific, policy and practical networks**. *Lead participant: FHT; participants: all project participants will contribute.*

Our communication strategy will be differentiated according to audience types and networks and balances **two-way person-to-person** communication with **one-way reports, documents and media**. The PEDR and Communication Plan will be **reviewed annually**. Task 5.3 will comprise two main activities to support effective exploitation, dissemination and communication:

(1) A major **communication campaign will be developed to promote PONDERFUL** with a daily, weekly, monthly and annual **social and traditional media programme**, promoting the project to relevant audiences, underpinned by **a database of stakeholders and end-users**. We will also develop a **database of national pond contact points** to ensure regional and national awareness of project results and establish a coordinating **PONDERFUL Press Office**, identifying national partner Communication Officers. We will provide regular project updates in a **twice yearly E-newsletter**, "**PONDERFUL News and Freshwater Reports"** including reports and updates on relevant freshwater projects worldwide to facilitate the sharing of information with rapid communication ensured through the **PONDERFUL Twitter** account. To help **train the next generation of young scientists,** in clustering work with

AQUACROSS, **we will run webinars on PONDERFUL topics from the end of Year 1,** probably at quarterly intervals**.**

(2) Planned **communications with scientific, policy and practical networks for the project duration**:

Scientific communication: Following a planned schedule, all project participants will make at least one annual scientific presentation at national and international conferences of relevant scientific societies (e.g. Symposium for European Freshwater Sciences, World Conference on Ecological Restoration) with the PONDERFUL conference (Year 4), in Turkey or Spain, providing additional awareness raising. Peer-reviewed articles, guidelines, tools and databases developed in WP1-WP4 will be open-access with publications and releases announced through TV, radio, newspapers, social media and professional networks.

Policymaker communication: All participants will make at least one presentation annually to policy makers focusing on the practical benefits of small waters. We will build on earlier discussions on small waters with the EU, and will include meetings with European networks (e.g. **Network of European Nature Conservation Agencies** (ENCA) and three **European Topic Centres** on Biological Diversity, Inland, Coastal and Marine Waters, and Climate Change Impacts, Vulnerability and Adaptation), the EU Water and Habitats directorates, the EU climate directorate, and NGOs with international water programmes (e.g. WWF, IUCN). **Policy briefings** (four documents) will provide policy and business leaders with summaries of project results covering freshwater biodiversity, benefits of NBS, the role of ponds in climate change and new business opportunities (especially CLIMA-Ponds), available in 12 languages for wide accessibility.

Practitioner communication: In each of the participant states we will identify networks of regional and national practitioners which the project needs to interact with. The objective will be to make potential users aware of discussions about Case Study sites (WP2), DEMO sites (WP4), the Technical Handbook, the Policy Guidance Document and applications for practitioners. We will also create a small series of 6-8 **information posters**, modelled on posters produced by FHT for the UK, to convey the main findings of the project covering each main climate region and farmed, semi-natural and urban environments (Figure 3.1/WP5).

Figure 3.1/WP5. Pictorial guides to UK pondscapes and their management. The two examples (grassland, left; forest, right) are designed to convey messages about network density and location of clean water ponds

In addition to the **clustering activities** organised by specific WPs, PONDERFUL will organise webinars and two-way invitations to project meetings with **SMIRES** (http://www.smires.eu/), a COST Action on intermittent rivers and ephemeral streams, with potential synergies in the management of freshwater ecosystems under a climate change perspective. We have also reserved money for clustering with projects submitted under the same Topic (e.g. **DRYvER:** Securing biodiversity, functional integrity and ecosystem services in drying river networks). To support the **project legacy** we will develop post-project relationships with national and pan-European activities that continue after the project (e.g. River Basin Management Plans). **Implementation of the Communication Plan** will be led by FHT with a 0.4 FTE international coordinator with time allocated to regional lead participants for a **daily, weekly, monthly and annual communication programme**, adapted to regional, national, European and global timetables

Task 5.4. Work with Small and Medium Enterprises (SMEs) to explore the commercialisation of pond products: CLIMA-Ponds. *Lead participant: AMPHI; participants: HES-SO, FHT.*

We will create commercial demand for the project's results by developing SME awareness, tools and know-how to provide alternatives to 'business-as-usual' approaches in land and water management. This will create foundations to increase the market-based opportunities to return ponds to European landscapes in sufficient quantity and integrity to influence CC mitigation and adaptation, biodiversity targets, and societal resilience of ecosystem services. We will develop a business model for market application of project results, incorporating stakeholder inputs from WP1, DEMO sites data and NBS prototypes from WP4, and test commercial potential through a business model building exercise, including avaluating the use of CLIMA-Ponds deployed in large numbers in public and private spaces (e.g. golf courses, parks, gardens, agricultural settings). The business model will include:

Analysis of the products, including their unique value for customers, positioning and price level. The possible business should target selling specific values/benefits of ecosystem services such as carbon sequestration, water cycle rehabilitation and habitat or key species (e.g. amphibians) protection.

Identification of the target sectors and actors for the commercial uses, such as: clients and/or purchasers in tender procedures (e.g. local governments, managers of protected landscapes, private landowners) and tender performers (SME/practitioners such as engineers, developers, landscape architects), involved in managing, use and transformation of landscapes across the full range of natural to agricultural and urban settings.

Identification of existing and future barriers to the commercial use of the project results (e.g. beliefs, recognised investments pathways, resistance to change) and drivers to adoption (e.g. water, biodiversity and/or emerging climate regulations, bottom-up pressure from society and NGOs).

Identification of the optimal business organisation, including key activities, required and available resources and strategic partnerships, and ***possible channels and strategies to reach the market.***

PONDERFUL will also **develop standards for commercialisation and a 'best practice' design code.** Based on the analysis of the monitoring results of the project, we will set standards for restoration and creation of ponds in the full range of landscape settings (from natural to urban), both for nature conservation and restoration as well as for mitigation purposes. **Certification criteria** will be developed to allow for better design and optimization of the product in the future with a 'best practice' code of design/construction to deliver specific product values/benefits (e.g. carbon sequestration, biodiversity/species protection). AMPHI will develop 'standardised', 'certified' or 'labelled' ponds, following specific requirements (design, construction) to deliver specific benefits based on ecosystem services and biodiversity conservation.

Task 5.5. Clustering activities. *Lead participant: FHT; participants: AU, CIIMAR, ECOLOGIC, RANDBEE, UU, UVic.*
Clustering activities to create synergies with other projects funded under the same topic (e.g. DRYvER) or outside the topic (e.g. AQUACOSM-PLUS, CLIM-SALTLAKES), mentioned elsewhere of the proposal, will be coordinated within this task. The project will also collaborate to build up on existing knowledge and create synergies with other Nature Based Solutions (NBS) projects which are working together under different Task Forces (e.g. TF1: EU NBS Knowledge Repository; TF2: NBS Impact Assessment Framework; TF3 : Business and Governance; TF4: Communication and Exploitation; TF NBS for hydro-meteorological risk; TF EU-China NBS Cooperation).

Appendix 2. Table of Deliverables

D5.1. Report: Plan for the Exploitation and Dissemination of Results [M2].

D5.2. Report: Complete comprehensive communication plan [M2].

D5.3. Initial database of stakeholders and end-users to underpin identification of main audiences, facilitate stakeholder engagement and communication network; continuously updated during project [M2].

D5.4. First version of daily/weekly/monthly/annual communications grid, reviewed monthly/annually (M4).

D5.5. Initial database of national pond contact points to be continuously updated during project [M4]

D5.6. Report: Complete project branding guidelines and style artwork and deliver outputs to participants [M6].

D5.7. Report: Data Management Plan to determine the strategy by which data generated by the project will be made open for maximising their re-use [M6].

D5.8. Report: Programme for interactions with scientific networks, policy networks and practical networks to communicate and disseminate project outputs, refined at 6 monthly, formal annual update [M6].

D5.9. First annual review and update of PEDR and Communications Plan [M12]

D5.10. Publish newsletters (PONDERFUL News and Freshwater Report) with updates of first year [M12]

D5.11. Second annual review and update of PEDR and Communication Plans [M24].

D5.12. Publish newsletters (PONDERFUL News and Freshwater Report) with updates of the second year [M24].

D5.13. Updated data management plan [M30].

D5.14. Content created for Technical Webinars about pond importance and management [M30].

D5.15. Produce first animation video about the importance of ponds [M36].

D5.16. Report: first plan for SME commercialisation of CLIMA-Ponds [M36].

D5.17. Third annual review and update of PEDR and Communication Plans [M36].

D5.18. Publish newsletters (PONDERFUL News and Freshwater Report) with updates

D5.19. Produce second animation video about the importance of ponds [M40].

D5.20. Report: Development of standards for commercialisation and 'best practice' design code [M40].

D5.21. Publish 4-6 information posters describing pond landscapes and their management [M46].

D5.22. Policy Briefing notes summarising main project results for policy makers and practitioners [M46].

D5.23. Publish newsletters (PONDERFUL News and Freshwater Report) of the last project year

Appendix 3. Our approach to knowledge management and protection.

A central objective of PONDERFUL is to create a well-managed research data resource for efficient use in the project and effective reuse as part of the project legacy. We will follow the H2020 Open Research Data Pilot requirements to facilitate access and reuse of research data generated within PONDERFUL. Specifically we will:

- Develop (and keep up-to-date) a Data Management Plan (DMP).
- Deposit our data in named research data repositories.
- Ensure third parties can freely access, mine, exploit, reproduce and disseminate our data with the AQUACROSS Information Platform which fully complies with the Open Research Data Pilot
- Provide related information and identify the tools needed to use the raw data to validate our research.

A detailed Data Management Plan (DMP) will be developed at Month 6 (D5.7) of the project (WP 5) and updated annually (Month 18, 30, 42) with data generated from the last update. The DMP will ensure that the research data is Findable, Accessible, Interoperable and Reusable (FAIR). The DMP will set out mechanisms for managing the project's data and metadata management practices.

PONDERFUL will generate large and important datasets on all aspects of ponds and pondscapes, covering policy, societal context, financing (WP1), biodiversity, environmental conditions, ecological status, carbon sequestration, GHG emission and other ES, targeted experiments, case studies, pollination services, and colonization newly ponds (WP2), maps of pondscapes, spatially-explicit time series data on land use and climate dynamics, priority maps for intervention, mapping and assessment land use and CC impacts, predictive modelling frameworks (WP3), and information on best practices for NBS (WP4). We will also combine a large number of existing datasets on biodiversity from several thousand European ponds into a well-integrated Pan-European database. The DMP will deal with all these different kinds of data, developing and implementing a management vision that conforms to the FAIR principle in accordance to the H2020 Open Research Data Pilot.

The AQUACROSS Information Platform (IP) will be the operational software tool for implementing the management practices of the data Data generated by PONDERFUL will be made findable via a centralised metadata database embedded in the PONDERFUL section of the AQUACROSS Information Platform (IP). The data generated by PONDERFUL will be made findable via a centralised metadata database embedded in the AQUACROSS Information Platform (IP), linked to the PONDERFUL website. The AQUACROSS IP takes advantage of the latest developments and interoperability standards for harvesting and collecting relevant data and metadata files from other European reference data portals. The associated data will be uploaded on decentralised repositories that each participant can choose according to their needs (e.g. Freshwater Biodiversity platform, GBIF, repositories linked to peer-reviewed papers (e.g. DRYAD), WaterNet), linked to the PONDERFUL website via the AQUACROSS Information Platform so that all data will be accessible through the PONDERFUL website. Project data will be documented to relevant metadata standards and compliant with the INSPIRE/Open Geospatial Consortium (OGC) compliant. For spatial datasets the PONDERFUL discovery metadata profile will adopt the INSPIRE Directive metadata model using the ISO 19115/19139 standards. For non-spatial datasets, the Ecological Metadata Language will be adopted. Data will be made openly available under an Open Data License (Creative Commons CC Zero License or Creative Common Attribution

License-CC-BY v4.0), unless there are restrictions imposed by third parties, immediately after acceptance of the associated peer-reviewed scientific research paper. For long-term data archiving and preservation, all the publications and research data will be uploaded in an official repository and they will be carefully managed following the best research management practices coming from Zenodo and OpenAIRE. The metadata will be uploaded and maintained on the platform provided by the existing AQUACROSS IP. In the case of public data not directly accessible through online data portals, the sources of the data and respective contact points will be provided, along with the metadata uploaded to the IP. The data and metadata will be managed by a working group drawn from all Work Package teams which will be tasked with 'Ensuring dataset interrelationships and consistency'.

There are three aspects of data management that will need special attention in the DMP of PONDERFUL: (1) privacy of stakeholder related information; (2) geo-referencing of data on rare or threatened species; (3) data from external collaborators. Concerning privacy, PONDERFUL will comply with the GDPR EU legislation. Special care will be taken over personal identification in WP1 and WP 5 stakeholder information (e.g. data collected from surveys, interviews, workshop participation, etc). The templates (consent form for interviews, registration document for workshops, and text for the survey question) will be located in the intranet of our website. We will not gather any sensitive data or conduct any type of research on humans that would require ethical approvals. All participants will be assured of anonymity and all data and results of analysis will be treated in a confidential way. We will ensure anonymity of the data collected by coding the respondents, recordings and transcripts, and not linking any personal data to respondents during data gathering, archiving, analysis and results presentation.

The results of the study will be only presented in an aggregated form, so it will not be possible to identify information/data provided by particular participant. To avoid risk to the rights and freedoms, we will not use any data processing like tracking, surveillance, audio and video, geolocation, tracking, or personalization on written support. While it is important that most of our data will be geo-referenced, PONDERFUL will develop procedures on geo-referencing data that could contain sensitive information. This might involve establishing buffer zones around (specific) coordinates, or limiting access to some of the more detailed data (e.g. species lists of threatened amphibians or large branchiopods). The DMP will comprise the protocols for the collection of new data as part of the different project work packages and will guide all subsequent data management activity in accordance to the H2020 Open Research Data Pilot and the FAIR principle. Short-term temporary storage of data during the project will be done centrally on a cloud data storage tool that is automatically backed-up at regular time intervals and shared among all project partners. The PONDERFUL consortium aims to follow the same FAIR approach for the existing data that will be used within the project, especially in the development of the pan-European database on pond biodiversity. However, many of these data sets are owned by external researchers, organizations or institutes, and we thus rely on their willingness and permission to make these data openly available. This will be part of negotiations with the different partners and, if restrictions apply, we aim to make at least the metadata publicly available so that data owners can be approached for permission to use data.

Peer-reviewed scientific research articles (as well as the modelling framework from WP3), will be made open access via open access publishing ('gold' open access) or self-archiving

('green' open access). . To ensure the project legacy, website materials will be maintained long-term by the two NGOs associated with the project (FHT and EPCN). We will also upload data to ZENODO for further enhancing the long-term legacy of the data. Irrespective of the chosen access route, the author will deposit a machine-readable electronic copy of the published article or the final peer-reviewed manuscript in an open source online repository (such as www.zenodo.org) to ensure long term preservation. A journal/publisher specific embargo period (of up to six months) might apply when choosing for publishing under 'green' open access. Costs associated with making the data FAIR and with open-access publishing will be covered under PONDERFUL.