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*Author-formatted document posted on 07/04/2026*

*Published in a RIO article collection by decision of the collection editors.*

DOI: https://doi.org/10.3897/arphapreprints.e194246

# PollinERA Deliverable - D6.1 PEDR, incl. Communication Strategy (CS)

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Ref. Ares(2024)4688757 - 28/06/2024

# D6.1 PEDR, incl. Communication Strategy (CS)

28 June 2024

Lead beneficiary: Pensoft Publishers

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Funded by the European Union

**Prepared under contract from the European Commission**
Grant agreement No. 101135005
EU Horizon Europe Research and Innovation Action

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|---|---|
| **Project acronym:** | PollinERA |
| **Project full title:** | Understanding pesticide-pollinator interactions to support EU Environmental Risk Assessment and policy |
| **Project duration:** | 01.01.2024 – 31.12.2027 (48 months) |
| **Project coordinator:** | Prof. Christopher John Topping, Aarhus University (AU) |
| **Call:** | HORIZON-CL6-2023-BIODIV-01-1 |
| **Deliverable title:** | PEDR, incl. Communication Strategy (CS) |
| **Deliverable n°:** | D6.1 |
| **WP responsible:** | WP6 – Communication, Dissemination and Exploitation |
| **Type of the deliverable:** | Report |
| **Dissemination level:** | Public |
| **Lead beneficiary:** | Pensoft Publishers |
| **Due date of deliverable:** | M6 |
| **Actual submission date:** | 28.06.2024 |

Deliverable status:

| Version | Status | Date | Author(s) |
|---|---|---|---|
| 1.0 | Draft | 06.06.2024 | Stoyanova, Metodiev<br>Pensoft Publishers |
| 1.2 | Review | 07.06.2024 | Mølgaard, Kondrup Marcussen, Topping<br>Aarhus University |
| 1.3 | Review | 28.06.2024 | Simon-Delso<br>BEBC |
| 1.4 | Final | 28.06.2024 | Stoyanova, Metodiev<br>Pensoft Publishers |

# Table of Contents

## Preface

This document is a deliverable for the PollinERA project, funded under the European Union's Horizon Europe (HE) Research and Innovation Action under grant agreement No. 101135005.

The purpose of this document is to present a detailed Plan for the Exploitation and Dissemination of Results (PEDR) of the PollinERA project, along with a communication strategy (CS), based on the preliminary plans in Section 2.2 of the PollinERA proposal.

## Key takeaway messages

- D6.1 outlines PollinERA's planned communication, dissemination and exploitation activities.
- The deliverable consists of four main sections – stakeholder groups (Chapter 2), project outputs (Chapter 3), tools and channels (Chapter 4), and an implementation plan (Chapter 5).
- Table 5 in Chapter 5 maps the correlation between the project's communication, dissemination and exploitation tools, and its stakeholder groups and Key Performance Indicators.
- PollinERA's implementation plan is divided into three stages: Initiation, Unfolding, and Maturity. D6.1 identifies Key Performance Indicators for the project's first stage (Chapter 5).
- PollinERA's PEDR and CS will be updated in M24 with KPIs for the next two project development stages (Unfolding and Maturity) and will be complemented with an Engagement Strategy.

## Summary

The PollinERA project aims to move the evaluation of pesticide risks and impacts and suggestions for mitigation beyond the current situation of assessing single pesticides in isolation on honey bees to an ecologically consistent assessment of effects on insect pollinators.

To ensure the effective project outreach, knowledge transfer and uptake of results during and after the project's lifetime, WP6 "Communication, dissemination and exploitation" has established a detailed Plan for the Exploitation and Dissemination of Results (PEDR) and Communication Strategy (CS). After outlining the main goals and scope of the project's communication, dissemination and exploitation (CDE), the PEDR and CS identify the project's main stakeholder groups and suggest a key message tailored to each group developed based on a questionnaire conducted across the consortium. Subsequently, the document lists the expected knowledge outputs of the project. Building upon this, D6.1 describes the main communication, dissemination and exploitation tools and methods and identifies their relation to the separate target groups. Finally, a specific implementation plan is elaborated for the

project's first stage of development, alongside suggested indicators for actively monitoring the actions' effectiveness.

In addition to being a strategic document, the PEDR and CS serve as practical guidelines for communicators, setting the PollinERA standards for successfully communicating science. Established during the starting phase of the project, the plan and the strategy will be updated in M24 (D6.2) to reflect PollinERA's progress and will be complemented with an Engagement Strategy (ES).

## List of abbreviations

| | |
|---|---|
| AGM | Annual General Meeting |
| AU | Aarhus University |
| BEBC | BeeLife European Beekeeping Coordination |
| BISE | Biodiversity Information System for Europe |
| CS | Communication Strategy |
| D6.1 | Deliverable 6.1 |
| CDE | Communication, Dissemination, Exploitation |
| EAB | External Advisory Board |
| EC | European Commission |
| EFSA | European Food Safety Authority |
| ERA | Environmental Risk Assessment |
| ES | Engagement Strategy |
| EU | European Union |
| FESMJ | Food and Ecological Systems Modelling Journal |
| HE | Horizon Europe |
| KER | Key Exploitable Result |
| KPI | Key Performance Indicator |
| M | Month |
| Ms | Milestone |
| PEDR | Plan for the Exploitation and Dissemination of Results |
| RIO | Research Ideas and Outcomes journal |
| SETAC | Society of Environmental Toxicology and Chemistry |
| WP | Work Package |

# 1 Introduction

Establishing clear and targeted approaches for communication, dissemination, and exploitation (CDE) of results is essential for any Horizon-funded research project. It lays the groundwork for PollinERA to facilitate an effective exchange and enhancement of knowledge and make a meaningful impact over the long term. The deliverable defines CDE following the European Commission's definitions:

- **Communication:** taking strategic and targeted measures throughout the project duration for promoting its activities and results to multiple audiences, including the media and the general public, and possibly engaging in a two-way exchange.

- **Dissemination:** the public disclosure of the results by appropriate means, other than resulting from protecting or exploiting the results, including by scientific publications in any medium.
- **Exploitation:** the use of results in further research and innovation activities other than those covered by the action concerned, including commercial exploitation such as developing, creating, manufacturing and marketing a product or process, creating and providing a service, or in standardisation activities.

All three elements are proven methods to increase the quality, impact and benefits of project outputs. Against this background, PollinERA streamlined its CDE activities in the current *D6.1 PEDR, incl. Communication Strategy (CS)*. The PEDR and CS were developed by building upon the measures to maximise the impact identified in the project's Description of Action and amplifying them through a consultation process with the project consortium. In month 4 of the project, a thorough questionnaire containing 23 questions was circulated among partners to collect information about their communication and dissemination needs and PollinERA's expected research results and impact. The responses provided valuable details regarding partners' target audiences, anticipated outcomes, preferred methods for dissemination and exploitation, and their desired involvement in PollinERA's CDE activities.

Based on the feedback received and in line with the Grant Agreement, WP6 has designed the PEDR and CS to identify target audiences, project research activities and outcomes, tools and channels employed, and the envisioned implementation timeline of these activities. The plan and the strategy serve as the foundation for all further CDE activities within the project.

The key CDE actor within PollinERA is WP6, led by Pensoft Publishers, and is responsible for:

- Establishing a recognisable project identity;
- Developing all PollinERA printed materials, policy briefs, infographics and video content;
- Developing content for the PollinERA website, newsletter and social media channels;
- Writing and publishing press releases and news items;
- Encouraging partners' participation in CDE activities;
- Monitoring the efficiency and impact of the project's CDE activities.

Partners' contribution and input are essential for effectively implementing the PEDR and CS. Each consortium member shall take full advantage of their personal and institutional networks, connect with other EU projects, actively participate in conferences and other relevant events, and promote the project and its results via local, regional and national media channels when possible. Pensoft will periodically distribute reporting forms to collect information on any CDE activities performed by each partner.

## 1.1 Communication

The main strategic objective of PollinERA's communication efforts is to ensure that all project activities reach a wide audience while promoting the project mission and results and generating awareness and interest. The main outreach messages for PollinERA focus on describing the beneficial impacts of project results on insect pollinators, human health, and the environment.

The communication efforts of PollinERA started at the beginning of the project and will continue even after the project ends in December 2027. To ensure effective communication throughout this entire duration, WP6 developed the current deliverable as a well-designed strategy which aims to:

- inform stakeholders about PollinERA's activities and results;
- provide secure storage in online libraries;
- offer regular dissemination of news and events, broadcasting an active dialogue through the project's social network profiles;
- improve citizens' knowledge about the risks of chemicals to pollinators' health;
- make citizens aware of how public money is spent;
- raise awareness of the role and the importance of pollination and insects and ways to improve the risk assessment and management of chemicals on them;
- inspire new collaborations and engage with other research projects and end users;
- provide community links with other related EU Horizon projects and promote the success of European collaborations.

To ensure the fulfilment of the aforementioned objectives, a set of materials, formats and channels tailored to the needs of each target group are envisaged. These include the development of promotional materials, regular updates of the project website, press releases (published in science news portals like EurekAlert! and AlphaGalileo) and channelling the potential of social media. PollinERA will also approach established contacts in various large media, newsrooms and message outlets, such as the ERA Pesticide Free newsletter, Pollinator Power Network newsletter, the BeeLife newsletter and others.

In support of bidirectional communication, PollinERA encourages project partners to use their already-established personal and institutional channels and connections and to seek to establish new ones with relevant:

**Projects**

- ANTENNA
- BETTER-B
- MUST-B
- PARC
- RestPoll
- Safeguard
- SPRINT
- SYBERAC
- WildPosh

- AGRI4POLL (starting 2025 & funded under HORIZON-CL6-2024-BIODIV Promoting pollinator friendly farming systems)
- VALOR (starting 2025 & funded under HORIZON-CL6-2024-BIODIV-01-3: Dependence of society and the economy on pollinators)
- BUTTERFLY (starting 2025 & funded under HORIZON-CL6-2024-BIODIV-01-3: Dependence of society and the economy on pollinators)

**Organisations**

- Slovenia Beekeeping Association (ČZS Slovenia)
- Federchimica
- Swedish Plant Protection Council
- PlantLink
- Dipartimento di Scienze e Tecnologie Agro-alimentari
- European Food Safety Authority (EFSA)
- German Environment Agency (UBA)
- Greppa näringen

**Networks**

- Biodiversity Information system for Europe (BISE)
- EU Pollinator Hub
- EU Pollinator Information Hive
- European Bee Hub
- INSPIRE Knowledge Base
- Society of Environmental Toxicology and Chemistry (SETAC)

**Media channels**

- Corriere salute
- Focus
- TG Leonardo (RAI)
- Slovenian media agency (STA)
- ATL
- Naturmorgon
- La Repubblica
- Il fatto quotidiano
- LifeGate
- TVN Warner Bros. Discovery
- Vetenskapsradion
- Land Lantbruk

## 1.2 Dissemination

The aim of the dissemination activities of any European project, including PollinERA, is to make knowledge and results available, accessible, public and free of charge to potential users, such as scientists, industry, public authorities, policymakers, and civil society. PollinERA's dissemination efforts will be initiated as soon as results become available using both traditional and novel approaches.

PollinERA's activities are policy and technically-orientated. Thus, 'Policy Briefs' will be targeted to disseminate results to the regulatory community related to chemical risk assessment and management from the pesticide, biocide and veterinary production areas, both at EU and national levels. Policy Briefs will outline analyses and recommendations for legislative initiatives associated with activities and results obtained by PollinERA. The dissemination of Policy Briefs is intended to raise awareness, foster the 'buy-in' and adoption of the project's new environmental risk assessment (ERA) tools and approaches amongst the wider regulatory community, and will be supported and benefit from the project's engagement activities and training activities. PollinERA's scientific advances (knowledge and tools) will be disseminated to various interested audiences through the publication of scientific peer-reviewed articles and scientific outreach via PollinERA conference session at a major conference.

In addition to the policy outreach, PollinERA adopts Open Science practices to secure the access, visibility, and longevity of project results. Various established platforms, such as the European Bee Hub, VEGAHUB, and TKPlate publication of formal models, will be used to publish all information, data, and results.

All project outcomes will be accessible on PollinERA's website. Moreover, a dedicated PollinERA topical collection of articles using novel publishing formats will be established in the *Food and Ecological Systems Modelling Journal* (FESMJ) (M24). FESMJ is an innovative open-access journal which facilitates the publication of models, datasets and software solutions in several areas (agriculture, food, social-ecological interactions, bioeconomy, natural resources, environmental sciences etc.). Novel types of articles (e.g., Formal Models) help document the outcomes of the full research cycle, including data, formal model papers, model validation studies, software, data analytics pipelines and visualisation methods. The topical collection will store and highlight the most notable project results, such as ecotoxicological knowledge gaps data sets, pollinator pesticide risk indicators, models for chemicals and pollinator populations, and a systems-based approach to pollinator ERA.

Other project outputs, including reports, protocols, methodologies, and research papers, will be available in the *Research Ideas and Outcomes* (RIO) journal.

In addition, the project will be registered and incorporated in the EU Pollinator Information Hive, INSPIRE Knowledge Base, and establish a link and explore collaborations with the Biodiversity Information System for Europe (BISE). These measures will enable the exploitation of PollinERA outputs to a selected audience.

Additionally, target audiences will have access to easily digestible yet informative formats such as videos and infographics, providing insights into the functionality and application of PollinERA's tools (e.g., One System framework). Project members will also present their results and engage in dialogue with stakeholders at relevant meetings, webinars, conferences, events and workshops.

## 1.3 Exploitation

As soon as research results become available, the exploitation activities will begin, focusing on the concrete use of outputs for commercial, societal, and policy support purposes. The main goal of the project's exploitation activities will be to lead to legislative and monitoring recommendations, benefit society and empower policymakers to proactively address the pollinator population declines and the harmful impacts of pesticides.

The coordinating institution of the project, Aarhus University (AU), in collaboration with partner BeeLife European Beekeeping Coordination (BEBC), will organise a one-day international training workshop at the European level with selected national representatives involved in chemical risk assessment and risk management, including pesticides, and biocides used in agriculture and veterinary medicinal products. As a complementary educational tool, three thematic interactive webinars will be organised for stakeholder target groups to present the new tools and approaches implemented during the project (toxicological testing, *in silico* predictive toxicology, PollinERA Framework). Their opinions and reactions will be collected to study potential breakers and accelerators and identify narratives that could help implement the project's outcome in the future.

To ensure the visibility and utilisation of project outcomes, PollinERA will consider the exploitation opportunities provided by the European Commission. In particular, these include publishing results on platforms such as the Horizon Results Platform, the Knowledge Centre for Biodiversity and Open Research Europe, taking advantage through the Horizon Results Booster. Another approach will be to feature a dedicated success story on the Research and Innovation success stories page. These platforms elevate the exploitation efforts to reach policymakers and researchers, granting them access to the project's results that hold significant potential. A preliminary list of PollinERA's results can be found in Chapter 3.

# 2 Stakeholder groups

Recognising stakeholder groups and taking them into account in the planning and customisation of the CDE activities is a crucial step towards creating effective PEDR and CS. To produce relevant messages to each stakeholder group, the project needs first to identify which of them can benefit from the project results or help with their further exploitation. Therefore, during the proposal stage of the project, the following preliminary stakeholder groups, subgroups and key messages (Table 1) were identified. Stakeholders with ***** have been pre-selected to be invited as a part of the External Advisory Board (EAB) (Ms 32). Each group's respective abbreviation is used in Table 1, Table 2 and Table 5.

**Policy-related institutions (P)**

- EU and national decision-making (risk management) authorities and institutions, such as the European Commission and its Directorates-General (DGs) (AGRI*, ENVI*, SANTE*), JRC Knowledge Centres*, European

Parliament*, Permanent Representations (EU), Member States, and National Parliaments.
- Public bodies involved in risk assessment and surveillance. For example, The European Food Safety Authority*, European Chemicals Agency*, European Environment Agency*, European Medicines Agency (EU) and their national collaborators.
- Intergovernmental organisations dealing with standardisation, such as the Organisation for Economic Co-operation and Development*, and the Food and Agriculture Organization.

**Academia (A)**

- Research institutions, universities and research projects. For example, COLOSS (APITOX Task Force), the European Network of Scientists for Social and Environmental Responsibility, the International Union for Conservation of Nature (worldwide), and HE WildPosh*, TerraChem* and SYBERAC*.

**Field practitioners – agriculture (FP)**

- Beekeepers and their associations. For example, the European Professional Beekeepers Association (EU), Apimondia (worldwide), and COPA-COGECA (EU).
- Farmers and their associations, such as COPA-COGECA, IFOAM - Organics International, and the European Coordination Via Campesina (EU).
- Farm advisors such as veterinarians, agronomists, or companies (SMS) providing agricultural/environmental advice/services. For example, the Association of Veterinary Consultants, Federation of Veterinarians of Europe, European Forum for Agricultural and Rural Advisory Services* (EU), and World Organization for Animal Health (worldwide).

**NGOs (O)**

- Environmental NGOs and conservation trusts. For example, Pesticide Action Network Europe (PAN Europe), BCE (EU), BugLife (UK).
- Consumer organisations. For example, European Consumer Organisation (BEUC, EU), Consumers (CI, worldwide), and other national consumer organisations.

**Industry (I)**

- Agrochemical companies and associations, such as CropLife (EU).
- Pharmaceutical companies and associations, such as the International Forum on Advancements in Healthcare (EU).
- Biocidal companies and their associations, such as Biocides for Europe (EU).
- Companies from the agri-food sector, such as FoodDrinkEurope (EU).

**General public (GP)**

- Citizens, indigenous peoples and local communities.
- European and local media outlets.

- Science news agencies. For example, AlphaGalileo, EurekAlert!, ScienceDaily, Phys.org.

**Table 1: Key messages and relevant stakeholder groups (P, A, FP, O, I, GP)**

| Key message | Stakeholder groups |
|---|---|
| PollinERA provides an integrated approach that brings together policy and regulatory areas, allowing each of these areas to evaluate their performance and carry out each one's work with a holistic perspective. | Main group: P |
| PollinERA will pilot a pesticide and pollinator co-monitoring scheme to 1) form the basis for tracing biodiversity and stressors in tandem, 2) develop post-approval monitoring in the terrestrial environment and 3) test pollinator-specific pesticide risk indicators to track stress and mitigation. | Main group: P |
| PollinERA addresses the necessity to consider landscape structure and non-Apis pollinators in risk assessment for pesticides and to reorganise farmer subsidy schemes to consider compensation for maintaining landscape structure that is needed for protecting and boosting the biodiversity of ecosystem service providers. | Main group: P |
| PollinERA will provide ERA toolset, methods and data for the development of new regulatory approaches | Main group: P |
| PollinERA will break new ground in understanding the sources and routes of pesticide exposure to cover the pathway from pesticide use to potential impact on pollinator populations and pollination services. | Main group: A |
| Methods and tools to study the effect of large-scale landscape structure on populations under stress (esp. toxicants). | Main group: A |
| PollinERA will identify pest management practices including pesticides that are risky for pollinators and pollination services and provide the foundation for a simplified ERA process that provides safe PPPs. | Main group: FP |
| PollinERA aims to provide tools for advisors to support practitioners in gaining/maintaining agricultural management that balances production and wildlife. | Main group: FP |
| PollinERA will identify pest management practices including pesticides that are risky for pollinators and pollination services and possibly mitigation options. | Main group: O |

| | |
|---|---|
| PollinERA proposes a step forward in the ERA of pesticides, addressing many of the shortcomings identified and criticised by NGOs in the past. | Main group: O |
| PollinERA will highlight new systems approach methods and the potential of gaining/maintaining agricultural management that balances production and wildlife. In the future, enabling consumers to choose sustainable products and NGOs to support and promote the approach. | Main group: O |
| PollinERA will provide a one-system tool for *in silico* field testing of pesticides that has the potential to make the ERA process less complicated and demanding, as well as more protective of pollinators. | Main group: I |
| PollinERA integrates industry's data into a contextualised framework, providing more transparency to the RA process. | Main group: I |
| PollinERA aims to provide tools that can determine the effects of certain chemicals and their combinations, providing better clarity on the dangers (or the opposite) of certain products. | Main group: I |
| PollinERA will provide new tools and methods to better understand the pollinator declines and contribute to the protection of bees and other insect pollinators. | Main group: GP |
| PollinERA is a step forward in pesticide Environmental Risk Assessment and opens the door to the study of many other stressing factors of insect pollinators. | Main group: GP |

# 3 Outputs

PollinERA will develop a new systems-based ERA scheme, tools and protocols for a broad range of toxicological testing, feeding to *in silico* models (QSARS, toxicokinetic/toxicodynamic, and ALMaSS agent-based population simulations). All these outputs are described in Table 2.

**Table 2: Main outputs**

| Output | Accessible via | Potential users | Expected scale of dissemination and outreach |
|---|---|---|---|
| Standard operating procedures (SOPs) for pesticide toxicological testing of different insect pollinator taxa | Publication, project website, open access repository (e.g., EU Pollinator Hub, Zenodo) | A, I | International |

| | | | |
|---|---|---|---|
| Co-monitoring scheme for pesticides & pollinators with Pesticide Risk Indicators for pollinators | Publication, project website, open-access repository | P, A, I | National, EU, International |
| Models for predicting pesticide toxicological effects on non-standard pollinators from chemical structure | Publication, open-access repository (e.g., VEGAHUB, Zenodo) | P, A, I | EU, International |
| Generic & specific TKTD models for pollinators | Open-access repository (e.g., EFSA's TKPlate, the Food and Ecological Systems Modelling Journal (FESMJ)) | P, A, I | International |
| New ALMaSS species models for butterflies, moths & hoverflies, including TKTD pesticide responses | Publication, open-access repository (e.g., Gitlab) | P, A, I | International |
| Population-level systems-based approach to ERA & policy evaluation considering multiple stressors, detailed management, & long-term spatiotemporal dynamics | project website, presentations; open-access publications | A, P, I, O | International |
| Provision of open-source program code for all models developed | Open-access repository (e.g., Gitlab) | A, P, I, FP | International |
| ERA & policy alignment report (Deliverable 5.4) | Open-access repository (e.g., Zenodo) | P | EU |
| Toxicity models toward pollinators | Publication, open access tool | A, P, I | EU, International |
| Models for co-exposure | Publication, open access tool | A, P, I | EU, International |

# 4 Tools and channels

To effectively connect each stakeholder group with their respective project results, therefore maximising outreach and impact, PollinERA will use a diverse mix of uni- and bi-directional tools and channels. The project will embrace well-established good practices in the field of science communication, along with emerging new outreach methods and opportunities. Over the course of the next four years, PollinERA will keep its CDE activities up-to-date by regular performance monitoring and adapting these in accordance with the latest trends, especially in the fast-paced digital environment. The update of the PEDR and CS will be provided in M24 (D6.2) and will be complemented with an Engagement Strategy (ES).

## 4.1 Branding and promotional materials

The first step towards an effective CDE strategy is to ensure the broad recognition and the successful uptake of project results via a distinct visual identity, along with a set of captivating promotional materials (Fig. 1).


**Figure 1:** PollinERA's promotional materials

The set of promotional materials includes:

- **Project logo**, designed at the proposal stage and further used to establish a coherent visual identity for the project;
- **Brand Book**, serving as a visual identity guide for the use of project branding elements, aiming to guarantee a consistent and continuous presentation of project outputs, such as presentations, project documents and promotional materials;

- **PollinERA stickers**, ensuring the project's widespread visibility and resonance;
- **PollinERA info sticker**, containing all seven study species, which can be detached individually.
- **Project two-pager** summarising the main elements of PollinERA such as the aim, specific objectives with respective actions, consortium details, work packages, duration and coordination;
- **Project poster**, offering an accessible and clear introduction to the project in an eye-catching design, illustrating the aim and specific objectives, including details about the consortium, structure and duration of the project;
- **Roll-up banner**, used to enrich the project's presence at various events, showcasing the project and partners' logos, along with a short summary sentence of the project's main aim, social media handles and a QR code for easy access to the website;
- **Introductory presentation**, delineating the project's background, consortium details, methodology, anticipated outcomes, and tasks. The presentation also outlines workflows, the One System framework PollinERA expects to produce, study species, and synergies;
- **Virtual meeting backgrounds**, used by partners to elevate PollinERA's overall online presence and promote the project during online meetings, webinars and online conferences;
- **QR codes**, designed to ensure the effortless reachability of project results by simply scanning the tailor-made code via a mobile device, leading directly to the project's website;
- **Study Species Illustrations** of all seven species that will be assessed during the project – *Bombus terrestris, Osmia bicornis, Apis Mellifera, Pieris napi, Noctua pronuba, Sphaerophoria scripta* and *Eristalis tenax* (Fig. 2).

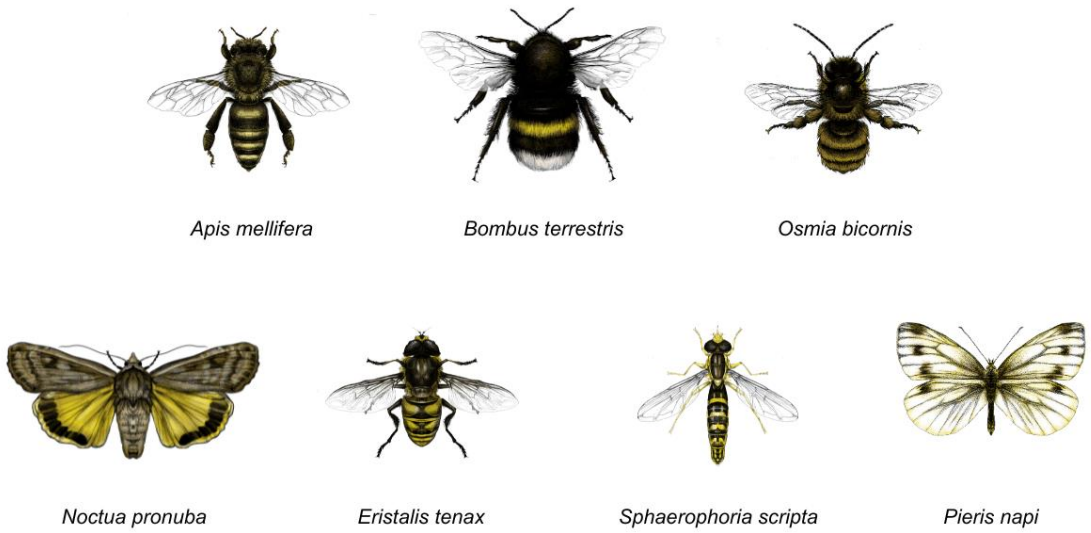


**Figure 2:** PollinERA's study species illustrations

The set of branding and promotional materials strengthens the awareness-raising efforts of the project, ensuring that its activities are presented to stakeholders in a concise and visually impactful manner. Partners can support the CDE activities of PollinERA by distributing the materials among their networks by bringing them to events and meetings or sharing them digitally on social media and other online platforms. More information about PollinERA's branding kit is available in *D6.3 Project branding and website*.

## 4.2 Project website

PollinERA's project website (www.pollinera-horizon.eu) serves as a one-stop shop for all project materials, including public deliverables, reports, publications, news updates, promotional materials, and results. Maintained by PollinERA's communication team, Pensoft Publishers, it is regularly updated to keep the audience informed and ensure the continued interest of already attracted visitors. Following the guidelines outlined in the Brand Book, the website provides a user-friendly interface, including an easy-to-use navigation menu. The footer of the website contains links leading to PollinERA's social media accounts, newsletter subscription form, and some of the website pages. Additional details can be found in *D6.3 Project branding and website*.

## 4.3 Social media

As described in the European Commission's guidelines, social media is a useful and suitable tool for communication and dissemination activities for EU-funded Research and Innovation projects (EC, 2020, p.4). Following these recommendations, PollinERA uses social media platforms to reach a wider audience and create a supportive community of individuals interested in pollination, entomology, biodiversity and nature conservation. During the first months of the project, a detailed social media strategy was developed to guide and plan the content distribution across several social media platforms. The strategy, presented in subsections 4.3.1-3, aims to actively engage relevant stakeholders in the project's activities and timely share results and news updates.

### 4.3.1 Social media platforms

When choosing the most suitable social media platforms to host a project profile, it is important to adhere to the principle 'quality over quantity', i.e. focusing on platforms ideal to the project's needs, rather than being present on every available platform. The choice of platforms could be determined by considering the following key questions:

- Are project members active on this social network?
- Are stakeholders active on this social network?
- Does this channel have a large, active audience?
- Do we have the expertise to maintain an account on this channel?
- Can we reasonably measure and report results for this channel?

Taking into account these questions, PollinERA established project profiles on the following platforms:

- X, formerly known as Twitter: @pollinERA_eu
- LinkedIn: PollinERA Project

Each platform has been carefully examined, providing insight into the advantages and disadvantages that should be considered when utilising them for communication and dissemination purposes (Table 3).

**Table 3: Advantages and disadvantages of X and LinkedIn**

| Platform | Advantages | Disadvantages |
|---|---|---|
| X | • Free of charge;<br>• A high number of users, especially entomologists;<br>• Short, quick and momentary communication;<br>• Easy to start a discussion;<br>• Easy to track news and events via hashtags and threads;<br>• Increased reachability due to a repost function;<br>• Diverse analytics;<br>• Post scheduling. | • Potential loss of followers due to people leaving the platform;<br>• Big amount of content, including spam;<br>• Rebranding, which could be rather confusing to users;<br>• Requires regular content sharing;<br>• Limited characters and media;<br>• Posts are subject of attention for a limited amount of time;<br>• Limited analytics overview. |
| LinkedIn | • Ability to share more content in terms of characters and media;<br>• Primarily focused on professional topics;<br>• Inspirational and leadership-focused content<br>• Potential to target industry stakeholders<br>• Increased reachability due to a repost function;<br>• Post scheduling. | • Mainly used for job search;<br>• Fewer interaction types such as polls;<br>• Requires time and effort to build a brand;<br>• Posts are not timeless and expire after one year. |

PollinERA has also established its channel on YouTube (@PollinERA_eu) where it will share and store its collection of videos. Additionally, a social media profile will be created on Instagram in M9 of the project to reach a wider audience – mainly the general public and early career researchers. The project will carefully follow and

monitor the social media landscape in case any other newly emerging platforms prove to be suitable for its CDE purposes.

### 4.3.2 Social media resources

PollinERA will use its social media profiles to follow and engage with not only the institutional and personal profiles of its consortium members but also other relevant profiles outside the project, such as EU Green Research, the Intergovernmental Panel on Climate Change, the EU Climate Action Director General, the EU Directorate General for Environment, UN Environment, the Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services, the International Union for Conservation of Nature, the European Food Safety Authority, the European Chemicals Agency, the European Environment Agency, European Medicines Agency and the United Nations Environment Programme.

PollinERA has identified a list of relevant ongoing EU-funded research projects based on the project's description of action, which was further developed via a partner's survey, keywords relevant to the project and a search on the CORDIS website using the call HORIZON-CL6-2023-BIODIV-01-1 Area B.

- ANTENNA
- BETTER-B
- MUST-B
- PARC
- RestPoll
- Safeguard
- SPRINT
- SYBERAC
- WildPosh
- AGRI4POLL (starting 2025 & funded under HORIZON-CL6-2024-BIODIV Promoting pollinator friendly farming systems)
- VALOR (starting 2025 & funded under HORIZON-CL6-2024-BIODIV-01-3: Dependence of society and the economy on pollinators)
- BUTTERFLY (starting 2025 & funded under HORIZON-CL6-2024-BIODIV-01-3: Dependence of society and the economy on pollinators)

Apart from keeping track of the content shared by other projects, PollinERA takes advantage of another proven social media resource: hashtags. By including relevant hashtags in its posts, the project expands the reach of its content while in the meantime linking them with other posts on similar topics, thus providing context and facilitating effortless tracking. PollinERA uses the following hashtags to reach and find its stakeholders:

- #EUpollinators, #EUGreenDeal, #EUBiodiversity, #HorizonEurope: policy and governance, scientific community at local and EU level, umbrella organisations;
- #pollinators, #pesticides, #conservation, #biodiversityresearch, #biodiversity, #ecosystems: scientific community at local and EU level, umbrella organisations, citizens, and general public.

### 4.3.3 Social media campaigns

PollinERA has developed an editorial calendar with specific social media campaigns to ensure focused, targeted, and measurable social media efforts (Table 4).

**Table 4: Planned social media campaigns**

| Name | Hashtag | Description | Status |
|---|---|---|---|
| Explaining PollinERA campaign | #PollinERAexplained | This campaign presents the key facts about PolinERA for stakeholders to learn more about the project. | Planned for stage 1 |
| Partner institutions campaign | #PollinERApartners | This campaign presents all partner institutions within the consortium. | Planned for stage 1 |
| Faces of the project campaign | #PollinERAfaces | This campaign introduces different project members and their unique expertise. | Planned for stage 1 |
| Work package campaign | #PollinERAwps | This campaign presents each work package and its specific objectives. | Planned for stage 1 |
| Study species campaign | #PollinERAspecies | This campaign introduces the 7 species that will be studied during the project. | Planned for stage 1 |
| Previous research campaign | #PollinERAbackground | This campaign shares relevant publications by project members published before PollinERA. | Planned for stage 2 |
| PollinERA research campaign | #PollinERAresearch | This campaign emphasises the latest scientific publications arising from the project | Planned for stage 2 |
| PollinERA progress campaign | #PollinERAprogress | This campaign will feature a series of video interviews conducted during each AGM, | Planned for stage 2 |

| | | | |
|---|---|---|---|
| | | during which partners will share their progress thus far. | |
| PollinERA results campaign | #PollinERAresults | The campaign aims to showcase concrete project outcomes. | Planned for stage 3 |

Apart from the planned social media campaigns, the project used a dedicated hashtag (#PollinERAtakeoff) to raise awareness about the project during the kick-off meeting, which took place in Denmark in January 2024. During the upcoming Annual general meetings, the PollinERA team will use the hashtag #PollinERAmeets.

## 4.4 Attendance at events

Taking part in international events enables the project to share its outcomes with a broader audience, including the scientific community and other interested groups. Therefore, PollinERA aims to attend various international conferences and events, identified through a survey distributed among partners. These include the 10th Congress of Apidology (EurBee), SETAC meetings (Europe, North America), European Ecological Federation meetings, XXVII International Congress of Entomology, Workshops held by connected HE projects, PARC project events, SCAPE, European Conference on Ecological Modelling. PollinERA's representation at these events will be carefully decided and tailored to the specific context, considering the type of event and available project results. With this in mind, project results can be communicated and disseminated through oral presentations during relevant sessions, poster and abstract presentations, delivering an invited talk or engaging interested stakeholders at the event through one-on-one interactions.

## 4.5 Newsletters

Newsletters are a valuable tool for informing stakeholders about the latest project developments and reaffirming its identity beyond its scope. Therefore, PollinERA will circulate a bi-annual e-newsletter to its partners and external subscribers. The project-branded newsletter will share updates, disseminate the latest results, highlight successes and announce upcoming events.

## 4.6 Press releases

PollinERA distributes press releases to two major science news portals: EurekAlert! and AlphaGalileo, facilitating increased public attention around its major news and updates. Serving as a valuable communication tool that provides information about the project, these two portals support dissemination efforts by reaching a wide audience of potential users. Potential press release topics include the project's high-impact scientific publications, upcoming PollinERA-organised events and the release of important datasets and other outputs.

## 4.7 Infographics

To translate complex concepts in a visually appealing and accessible way, PollinERA will create infographics dedicated to specific topics. Using a combination of text and visuals, such as charts, graphics and diagrams, PollinERA will illustrate otherwise abstract concepts and help stakeholders better understand complex project results. Among the topics identified as suitable for infographics are the project's One System Framework and pathway towards impact.

## 4.8 Videos

The dynamic digital environment has proven that moving images attract more and longer user attention than a single text or still image. Videos are an innovative communication and dissemination tool enabling projects to present results and developments and their usage in an informative and entertaining manner. Therefore, PollinERA will concentrate efforts on producing videos and sharing them on the main social media platforms, X, LinkedIn and YouTube, and the project's website. Some of the topics considered for videos include:

- an introductory video presenting the main objectives, mission, partners and tasks of PollinERA;
- short progress video interviews with partners conducted during AGMs;
- annual highlights videos published at the end of each project year, presenting the main achievements for the past 12 months;
- short awareness videos shared mainly on X and LinkedIn.

## 4.9 Scientific publications

PollinERA's scientific advances (knowledge and tools) will be disseminated to a variety of interested audiences through the publication of scientific peer-reviewed articles in high-impact journals, including but not limited to the open-access journals: *Environmental Evidence, Food and Ecological Systems Modelling Journal, Nature Communications, Scientific Report, Toxics, and Ecotoxicology and Environmental Safety*. The project will also deposit its scientific publications in trusted open-access repositories to further enhance their dissemination potential.

## 4.10 Open-access collections

PollinERA focuses on promoting access, visibility, and longevity of the project results with the project's strong emphasis on Open Science and usage of various established platforms (e.g., EU Pollinator Hub, VEGAHUB, TKPlate, and publication of formal models) for publishing all information, data, and results. To support the proactive, open-science transfer of results and scientific achievements, a dedicated PollinERA topical collection of articles using novel publishing formats (M24) will be established in FESMJ. FESMJ is an innovative open-access journal that facilitates the publication of models, datasets, and software solutions in several areas (agriculture, food, social-ecological interactions, bioeconomy, natural resources, environmental sciences, etc.). Novel types of articles (e.g., Formal Models) help document the outcomes of the full

research cycle, including data, formal model papers, model validation studies, software, data analytics pipelines and visualisation methods. The topical collection will store and highlight the most notable project results, such as ecotoxicological knowledge gaps data sets, pollinator pesticide risk indicators, models for chemicals and pollinator populations, and a systems-based approach to pollinator ERA. Other project outputs (e.g., reports) will be available in the Research Ideas and Outcomes (RIO) journal. As the PollinERA project progresses, the RIO collection will continue to expand, serving as a repository for researchers, policymakers, and practitioners and offering diverse reports, protocols, methodologies, and research papers. In addition, the project will be registered/incorporated in the EU Pollinator Information Hive, INSPIRE Knowledge Base, and establish a link and explore collaborations with BISE.

## 4.11 Practice abstracts

Practice abstracts are concise and clear practice-oriented knowledge outputs aiming to adapt scientific results to the needs of practitioners. For this reason, PollinERA intends to make selected key publications available to stakeholders by sharing them as practice abstracts on the project's website. The abstracts will outline each study's background, main objective, results, and take-home messages.

## 4.12 Policy briefs

PollinERA's activities are policy and technically-orientated. Thus, policy briefs will be targeted to disseminate results related to chemical risk assessment and management to the regulatory community in the areas of pesticide, biocide, and veterinary production, both at the EU and national levels. Policy briefs will outline analyses and recommendations for legislative initiatives associated with activities and results obtained by PollinERA. The dissemination of policy briefs is intended to raise awareness, foster the 'buy-in' and adoption of the project's new ERA tools and approaches amongst the wider regulatory community, and will be supported and benefit from the project's engagement and training activities.

## 4.13 Stakeholder engagement

Complementing the project's PEDR and CS, particular attention is paid to promoting and fostering the involvement of key European stakeholders to maximise the acceptance and uptake of project exploitation and engagement. Policy-related institutions have been identified as main consumers of PollinERA's outcomes, some of which will play a special role in the co-development engagement activities (e.g., members of its EAB). A variety of European stakeholders will be actively engaged in the project to improve partners' expert capacity and oversee or evaluate the calibration/validation of the tools proposed and the quality of regulatory proposals. This engagement will be done through interactive thematic workshops and training sessions. In addition, PollinERA will engage with projects and initiatives having related activities and goals (i.e. WildPosh, EFSA etc.), aiming to benefit from and maximise the knowledge exchange with them throughout the duration of the PollinERA project. Moreover, direct communication and information exchange with relevant Biodiversa+ projects and JRC Knowledge Centres is envisaged.

## 4.14 Synergies building

In order to maximise impact and ensure the sustainability of results, PollinERA will unfold in close collaboration with existing networks, initiatives, universities, research institutes, intergovernmental bodies and other relevant research projects (e.g., WildPosh, Safeguard, ANTENNA, RestPoll, etc.). By organising and participating in joint workshops, webinars, press releases and other communication and dissemination activities, the synergies will facilitate the exchange of good practices and increase visibility. Apart from increasing project exposure, synergies play a role in the recruitment for the EAB (WP7) and facilitate co-development to ensure the relevance and usability of the project outputs to target groups. In addition, synergies minimise double disposition for the same actors/stakeholders, which in relation to CDE contributes to targeting the activities to the recipient groups especially for policy-related institutions to increase the likelihood of maximum interaction and impact of communication output.

The project focuses on the organisations, networks and projects listed in section 1.1. Particular attention will be drawn to the collaboration between PollinERA and WildPosh, as both projects share the ambition to provide a better understanding of the exposure routes and toxicological and ecological impacts of chemical pollution on terrestrial biodiversity and ecosystems. The two projects will perform various joint communication activities and events, including a joint final event, joint data management plan and alignment of activities, solidifying the quality of final outputs. In addition, there will be a regular knowledge exchange between relevant working groups of the two projects.

## 4.15 European services

As an additional approach to maximising the exposure and exploitation potential of its results, PollinERA will consider utilising the dissemination and exploitation services offered by the European Commission, such as:

- Horizon Results Booster, allowing PollinERA to maximise the impact of its results, by steering them towards the most suitable audiences;
- Horizon Results Platform, acting as an important link between policymakers and researchers, empowering access to the PollinERA's results and fostering their exploitation;
- Open Research Europe, enabling the publication of all aspects of Commission-funded research, thus maximising the value of research projects and accelerating their impact;
- Research and Innovation success stories.

# 5 Implementation plan

PollinERA created an implementation plan (Table 5), outlining the project's communication, dissemination, and exploitation tools, the targeted stakeholder groups, and the Key Performance Indicators (KPIs) that will measure the effectiveness of these actions. The communication team at PollinERA is in charge of planning, monitoring, and updating the plan, providing technical, organisational, and design

support, and participating in most activities. All other partners are expected to contribute to various outreach efforts by informing the communication team of recent developments, providing content for project materials, attending and participating in organised events, and publishing, presenting, and distributing project outcomes within their networks.

The implementation plan is divided into three stages based on two considerations:

1) the maturity of the project, acknowledging that each stage has a different focus for CDE activities;
2) the envisioned update of the PEDR and CS in M24 (D6.2) which will allow WP6 to evaluate the CDE tools and channels, identify new KPIs relevant to the next two stages of the project's development and introduce an Engagement Strategy.

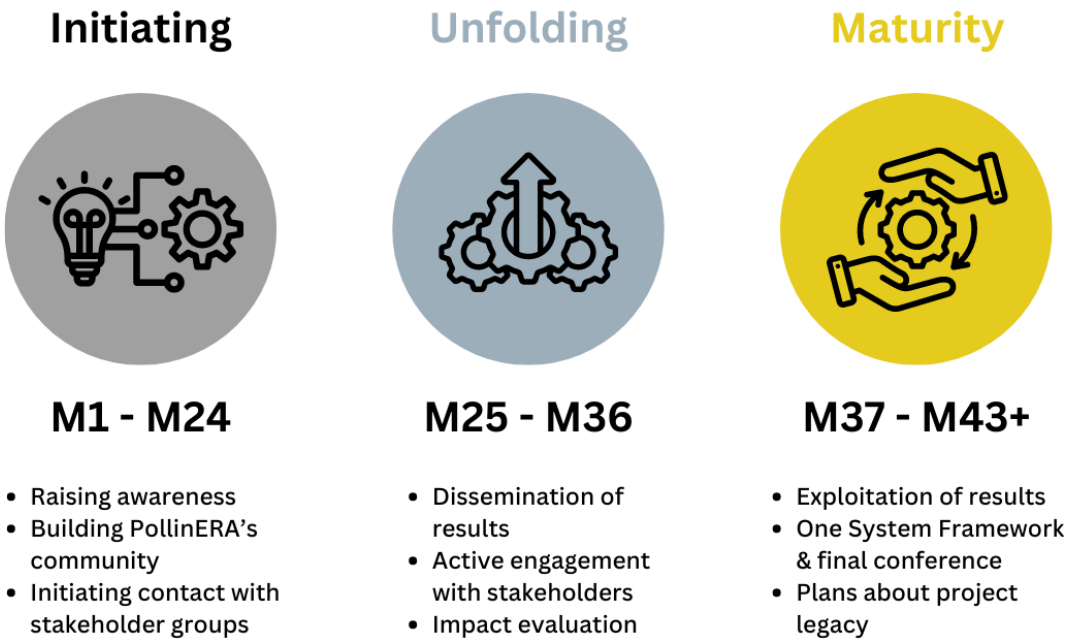


**Figure 3:** Visual representation of PollinERA's development stages and their focus

The **Initiating (M1-M24)** stage will be focused entirely on making the project visible, raising awareness about the problem it addresses, building a community, and initiating contact with stakeholder groups, e.g., via the first co-development workshop planned for October 2024 (WP5) as well as building synergies with identified relevant EU research projects.
The Initiating stage will conclude with the CP and PEDR first update in M24 (D6.2) where the CDE actions will be evaluated, an ES will be added, and the KPIs will be updated for the next stage. The second stage, **Unfolding (M25-M36)**, aims to facilitate the successful dissemination of project results, actively engage with stakeholders and properly evaluate the impact. The last stage, **Maturity (M37-M42 [and beyond])**, is dedicated to the effective exploitation of results, the planning of project legacy and the CDE efforts around the development of the One System framework, along with the PollinERA conference session envisioned to take place at a major conference.

The current D6.1 provides detailed KPIs for the project's first stage (Initiation). When updating the CP and PEDR, new tables will be added where the relevant KPIs for the consequent stages will be listed.

By adapting the KPIs to align with each stage, PollinERA can precisely track progress and make well-informed decisions about the challenges and opportunities encountered at the different phases. PollinERA selected its KPIs based on the following S.M.A.R.T. criteria (Doran, 1981):

- Specific: what exactly is the goal?
- Measurable: how do we know the goal is reached?
- Achievable: are resources available to reach this target?
- Realistic: is this goal worthwhile?
- Timely: is there a timeline?

**Table 5: Overview of the communication, dissemination and exploitation tools with KPIs for the project Initiating stage (months 1-24)**

**Abbreviations for stakeholder groups: Policy-related institutions (P), Academia (A), Field practitioners – agriculture (FP), NGOs (O), Industry (I), General public (GP)*

| Type of CDE activity | Tool | Stakeholder group | Output KPIs | Outreach KPIs |
|---|---|---|---|---|
| C | Promotional materials | All | Introductory presentation (IP): 1<br>Two-pager (2P): 1<br>Poster (P): 1<br>Roll-up banner (RB): 1<br>Stickers (S): 2 | Number of downloads: at least 100/per item (IP, 2P)<br>Use at events: 10 (IP, S), 2 (P, RB)<br>Distributed at events: 150 (2P), 300 (S) |
| C, D | Project website | All | News items: at least 1 per month<br>Number of promoted events: at least 2 per month | Number of visits: 3000<br>Number of returning visitors: 15%<br>Average session duration: 120s<br>Country distribution: at least 20 countries from Europe and beyond |

| | | | | |
|---|---|---|---|---|
| C | Social media networks X and LinkedIn (L) | All | Number of posts: 96 (X), 48 (L)<br>Number of reposts: 96 (X), 20 (L) | Number of new followers: 300 (X), 250 (L)<br>Number of interactions per post: 13 (X), 5 (L)<br>Number of impressions per post: 300 (X), 100 (L)<br>Traffic to the project website: 150 users (X), 100 (L) |
| C, D | Newsletters | All | Number of newsletters: 2 per year | Number of new subscribers: 100<br>Open rate: at least 40%<br>Link-click rate: at least 20%<br>Unsubscribe rate: <5% |
| C, D, E | Videos | All | Number of videos: at least 5 | Number of views per video: at least 50 |
| C, D | Infographics | All | Number of infographics: 2 | Number of downloads: 100/per item |
| C, D | Press releases | All | Number of press releases: 2 per year | Views on EurekAlert!/press release: 1500 per item<br>Hits on AlphaGalileo/press release: 1500 per item |
| D | Attendance / presentations at events | A | Number of attended events: at least 2 per year | Number of attendees: at least 30 per event |

| | | | | |
|---|---|---|---|---|
| D | Scientific publications | A | N/A for this stage of the project | |
| D | Open access collection | A | Number of available documents: 6 | Number of views: 50 per item |
| D, E | Joint activities | All | Joint events: N/A for this stage of the project<br>Joint policy brief: N/A for this stage of the project<br>Joint news items on project websites: 4<br>Joint press releases: 2<br>Joint publications in scientific journals: 1 | Number of attendees at events: N/A for this stage of the project<br>Number of distributed policy briefs: N/A for this stage of the project<br>Number of visits/news item: 500<br>Number of views/item: 1500<br>Average citation statistics: N/A for this stage of the project |
| D | Practice abstracts | FP, A, I | N/A for this stage of the project | |
| D, E | Policy briefs | FP, A, O, I, P | N/A for this stage of the project | |
| D, E | Training activities | FP, A, O, I | N/A for this stage of the project | |
| D, E | One System framework | FP, A, O, I, P | N/A for this stage of the project | |
| D, E | Final event | All | N/A for this stage of the project | |

# 6 Outlook

As the digital world is dynamic and ever-evolving, PollinERA's PEDR and CS will be updated in M24 (D6.2) and complemented with an ES. This scheduled update will reflect on new developments, identify novel dissemination risks and propose suitable

mitigation measures. It will assess the performance of the CDE activities conducted so far and identify opportunities for improvement, providing new KPIs to evaluate effectiveness during the second and third project stages.

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## Project partners