Dissemination and exploitation plan 1

WP6: COMMUNICATING AND EXCHANGING KNOWLEDGE AND ENGAGEMENT
TASK 6.1: ELABORATE THE RESTPOLL OVERALL COMMUNICATION, ENGAGEMENT AND IMPACT STRATEGY

Deliverable D6.5

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RestPoll
Restoring Pollinator habitats across European agricultural landscapes based on multi-actor participatory approaches

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Summary

The objective of work package 6 "Communicating and exchanging knowledge and engagement" is to upscale and broaden pollinator conservation through effectively communicating the project results and engaging diverse actors in the uptake and future use of the results. Therefore, a communication and engagement plan was created (Taylor et al. 2024a; D6.1 & 6.4), which highlights the project's identity (Taylor et al. 2024b, c; D6.2, MS22 & 23) and the strategy for communicating information to a broad audience of stakeholders. This report describes the progress of the dissemination and exploitation of RestPoll project during the first reporting period (Months 1-18), including estimated results from the implementation of different dissemination activities within the project.

1. Introduction

A goal of work package 6 is to promote and disseminate project outputs to stakeholders and the public through various general project communication activities. Therefore, the RestPoll communication, dissemination and exploitation plan is an integral part to the success of the project. This report gives an overview of the target audiences, objectives, tactics, tools, and metrics regarding communication of the project, along with our engagement strategy with stakeholders involved in the project. It documents the dissemination and exploitation activities that have been carried out during the first reporting period (Months 1-18) of the project.

2. RestPoll target audiences, communication strategies, and expected outcomes

In this section we highlight the different target audiences that we aim to reach (2.1) with different communication tools and channels (2.2) within RestPoll. To do so, we have expected results and outcomes that we aim to reach and will monitor throughout the project (2.3).

2.1. RESTPOLL TARGET GROUPS

The primary target audiences for RestPoll include:

- **Agricultural stakeholders**, such as farmers, agricultural organizations and communities, landowners, and businesses involved in agriculture and land management
- **Scientific community and educational institutions**, such as researchers in related disciplines who can benefit from project's research findings or schools and universities, who are interested in integrating pollinator conservation and restoration into their curricula and research
- **Politicians**, such as local or EU level politicians that are involved in agricultural measures and policies
- **Environmental and conservation NGOs**
- **General public**, who are interested in biodiversity and environmental issues

2.2. COMMUNICATION TOOLS AND CHANNELS IN RESTPOLL

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The RestPoll project is committed to transparent and effective communication, both internally among consortium members and externally with stakeholders, researchers, policymakers, and the wider public. To reach the best results for the communication strategy we must work together and use a three-pronged approach. This approach consists of internal communication, corporate communication and project communication.

For internal communications, we use diverse, familiar channels (e.g. websites, newsletters, social media channels, etc.) of our participating professionals and their organizations to provide relevant content so that everyone is updated actively and feels a part of the project.

For corporate communications, we have developed a corporate branding and use of reoccurring columns to share its content. This ensures that readers see recognizable formats, whilst it ensures that HVR and project coordinators can utilize the resources as optimally as possible.

Likewise, project communication utilizes our corporate branding to create and disseminate content that is project specific. It consists of materials such as PowerPoint presentations, print-out materials such as flyers and brochures, articles about the project's progress or interests, along with results and reports from the project (i.e. Deliverables, Milestones, tools, etc.).

Below is a list of the main platforms, networks, tools and channels used for communication and dissemination within the RestPoll project:

- **RestPoll Living Labs network:** the core of RestPoll's dissemination and exploitation is the well-established RestPoll Living Lab network consisting of 17 different Living Labs (LL) established in 14 different countries across Europe. The LLs serve as a platform for participatory experimentation, demonstration, and learning, and for assessing the effectiveness of both bottom-up (management/stakeholders-driven) and top-down (policy-driven) pollinator restoration measures.
- **RestPoll project branding**: corporate visual identity of RestPoll is integrated in the project's website and all future promotional materials to create an engaging environment for facilitation the main communication and dissemination outputs of the project
- **Project website:** the RestPoll website (https://restpoll.eu) is the main form of online communication. It is regularly updated with the addition of new members, events, or projects news.
- **Promotional materials:** have been developed for relevant target groups to inform them of the project goals. This includes a brochure and poster.
- **News and articles**: Various channels are used to publish project related news and progress. This includes articles on the website, quarterly newsletters, press releases, and publication of articles on external platforms and media.

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- **Social media:** RestPoll is active on Instagram/Facebook, X, BlueSky, and LinkedIn.
- **Events and networks:** RestPoll members have presented at self-organized workshops and also external events and conferences.
- **Scientific publications:** Research results will be disseminated via the publication of scientific papers and participation in scientific conferences.
- **Media and other channels:** Additional tools for dissemination to a wider audience will be used, such as podcasts, TV or radio interviews, personal or institutional blogs, and local newspapers.

2.3. EXPECTED RESULTS

Within RestPoll, our expected results and impacts are:

1. A better understanding of drivers of pollinator declines in regions across Europe
2. Examples of how pollinator diversity & pollination services are successfully integrated at all levels of public and business decision-making
3. Multiple restoration measures for green recovery connected in a European network of case studies with well-established Living Labs (LLs)
4. Communication of evidence-based understanding of interrelations between biodiversity & ecosystem services to citizens & policymakers at regional to global scales
5. Land-use managers across Europe acknowledge and integrate pollinator diversity and multiple ecosystem services by using our toolbox
6. Fully integrated RestPoll toolbox addressing all drivers of pollinator loss and enabling transformative changes at policy and society levels
7. Communication strategy among European research projects.

For each result, there are dissemination measures to evaluate if we have achieved our expected results. These are listed in Table 3 and also evaluated in the conclusion.

3. Overview of dissemination and exploitation activities

This section provides an overview of the dissemination and exploitation activities within the first reporting period (M1-18) of the RestPoll project. We highlight the creation and maintenance of our project website (3.1), the creation and dissemination of promotional materials (3.2), news articles and other publications that highlight the progress already made within the project (3.3), activities on social media (3.4), events and workshops organized or attended by RestPoll members (3.5), scientific publications inspired from RestPoll (3.6), completion of project deliverables (3.6), and synergies started with other projects (3.7).

3.1. PROJECT WEBSITE

The RestPoll website was established to act as an information hub about the project's aims, goals, activities and results (Taylor et al. 2024b; D6.2 + MS22; Figure 1). The website serves as a prime public dissemination tool making the project deliverables and published materials available to all stakeholders and the general public on the

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publication page. Additionally, a separate page dedicated to news articles of all RestPoll outputs (announcement of recent publications, deliverables and other documents etc.) or of RestPoll organized or related events presented in an engaging and informative manner.

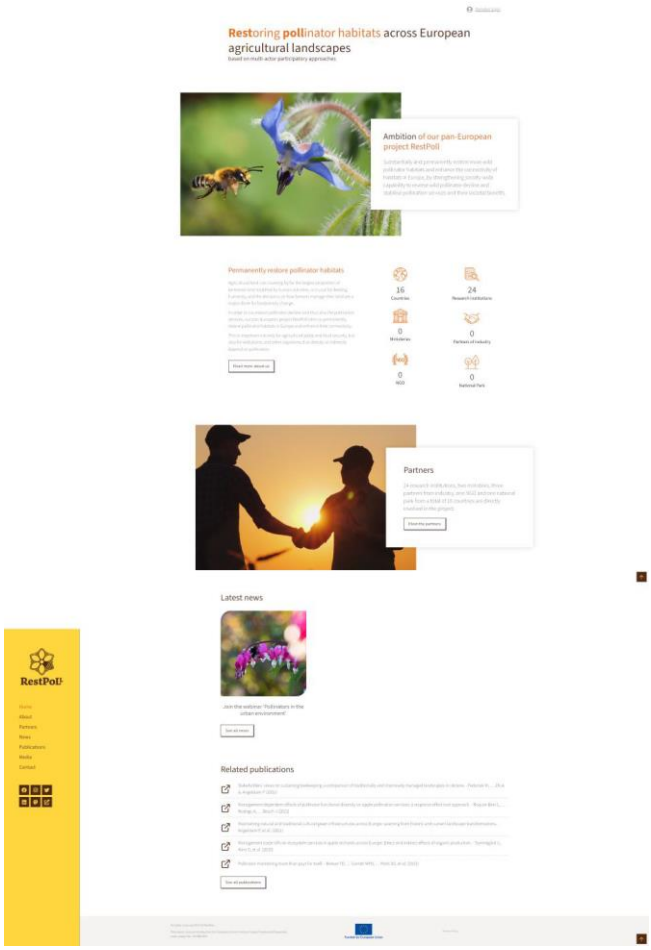

Figure 1: RestPoll Website homepage (https://restpoll.eu/)

We are implementing a page that highlights the RestPoll Living Lab (LL) network (Figure 2). It will include information about each of the 17 different LLs and how to join our network. This will enlarge the network to find new partners and ensure long-term use and visibility. We hope to have the official launch of this site by summer 2025.

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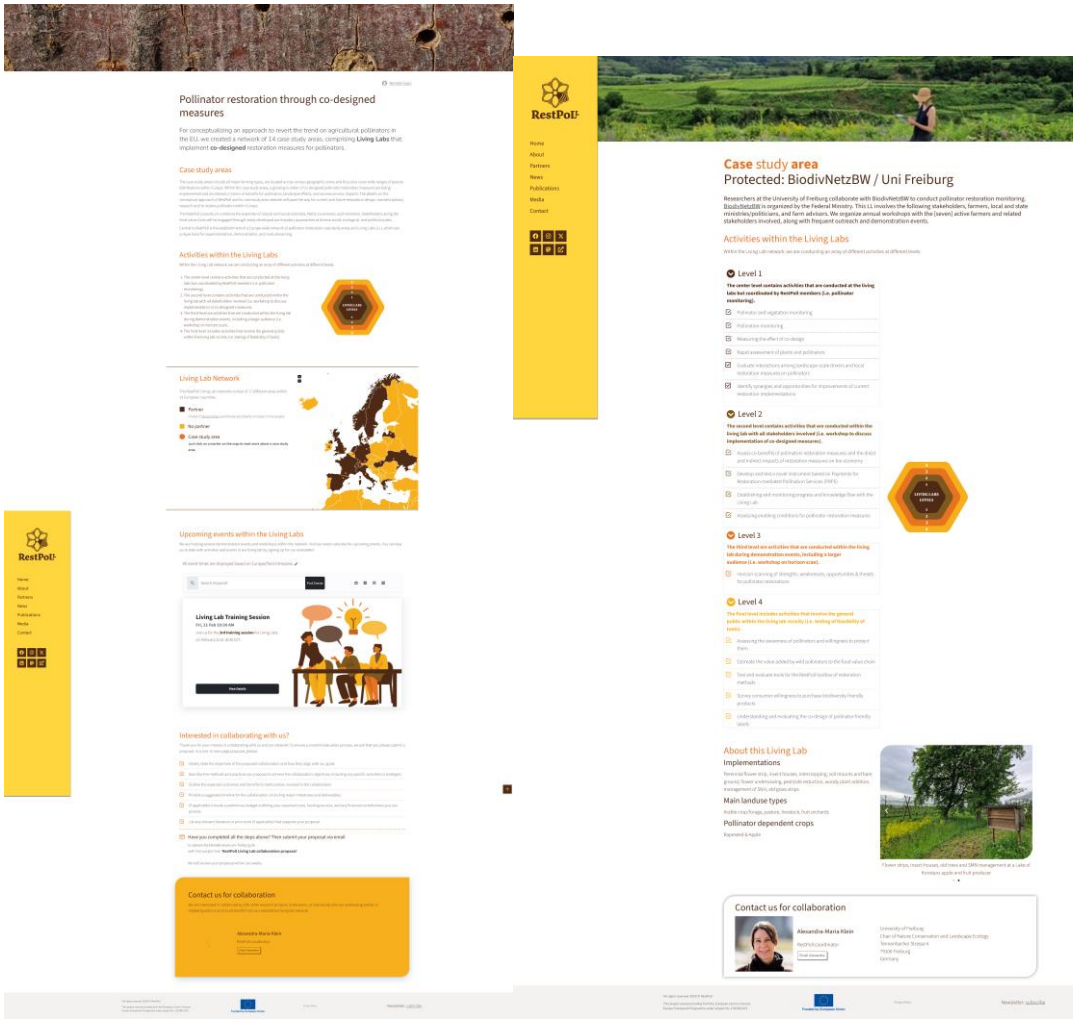

Figure 2: Preview of RestPoll Living Lab (LL) network home page (left) and a page for specific LL, BiodivNetz / University of Freiburg (right).

The website has been well visited since its launch in November 2023. Number of visits and visitation usages is presented in the overview table below (Table 1). Presented is data collected from November 2023 (launch) until February 2025 (month before report submission).

Table 1: Statistics from the RestPoll website during the first sixteen (16) months of the first reporting period of the project (November 2023- February 2025). Month 18 is not included in version 1 (V1) due to the submission deadline of the report.

Website statistics	**Results (Nov 2023- Feb 2025)**
Total page views	17,019
Total page users/session	2,702
Average session duration	00:04:39
Most visited pages	Upcoming RestPoll events (116 views), Where do pollinators nest? (85 views),

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	Update on Latvia (67 views). These are news items.
Mobile/Desktop use	Desktop: 64.8% Mobile: 34.7% The remaining 0.5% is a combination of tablet and smart TV
Top referral countries	United States (702 users), Germany (263 users), Netherlands (256 users)

3.2. PROMOTIONAL MATERIALS

The RestPoll branding has been used to create several promotional materials. These include RestPoll "merch," which was distributed to RestPoll members and associated stakeholders. These included clipboards, notepads, pens, and thank you notecards with the RestPoll branding and design (Figure 3).

Figure 3: Use of RestPoll clipboards and notepads during fieldwork (left, photo credit: Sándor Piross) and the first Annual Group meeting (right, photo credit: Yannick Noah Layer).

Additionally, we created a roll-up banner for advertising RestPoll and linking viewers to our website and social media channels (Figure 4).

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Figure 4: RestPoll roll-up banner used at the annual group meeting and other outreach events.

Likewise, we have created a brochure for stakeholders to communicate and connect them to our goal in RestPoll (Figure 5). These brochures were translated into the 13 different languages of the partner countries within the project. They are available on our website to download:

- English version: media page
- All versions: member area

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Figure 5: Stakeholder brochure highlighting the goals of RestPoll and how stakeholders can get involved.

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3.3. NEWS AND ARTICLES

3.3.1. NEWS ITEMS ON THE WEBSITE

On the News page of the RestPoll website, we feature project related news articles. To this date, we have written and published 35 articles. Articles cover information and progress of the project, including introduction of RestPoll members and information of pollinators, their importance, and the importance of restoration.

3.3.2. RESTPOLL NEWSLETTER

The RestPoll newsletter is circulated to subscribers via Laposta and is sent on a quarterly basis. To date, RestPoll has published four newsletters, with the next one to be issued in June 2025. The newsletters were sent to a total of 121 recipients. All newsletters are available to download in the media section of the website.

3.3.3. PRESS RELEASE

In accordance with the project's communication plan and Grant Agreement, press releases are issued to amplify the project's viability. To date, we have launched one release announcing the launch of the project. It is available to download in the media section of the website.

3.3.4. EXTERNAL ARTICLES

In addition to our internally produced news articles, RestPoll has been featured in the news and blogs of several partner websites, as well as in various international and local newspapers. A list of activities can be found in Appendix 8.1.

3.3.5. BOOKS & OTHER PUBLICATIONS

Praxishandbuch Nutzpflanzenbestäubung (EN: Practical handbook on crop pollination) is a soon-to-be published book by RestPoll members, which focuses on measures that are important for pollinators and pollinator-important crops. The information is addressed to land managers from farmers to hobby gardeners, who aim to restore pollinator habitats. Following the success of a similar book (i.e. Field Guide to Urban Plants), the next step is to engage other countries (i.e. partner countries in RestPoll) to adapt the content to their country-specific needs and do be used as a communication tool with stakeholders. More details about the book and example chapters can be found in Appendix 8.2.

3.4. SOCIAL MEDIA

RestPoll is currently active on four social media platforms: X, BlueSky, Instagram/Facebook, and LinkedIn (Table 2).

Table 2: Overview of RestPoll social media channels and campaigns posted within the first reporting period (Months 1-18, 1 Oct 2023- 31 March 2025)

Channel	Account Name	Number of followers	Number of posts
X (Twitter)	@RestPoll	> 230	209 posts (including re-posts)

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BlueSky	@restpoll.bsky.social	> 420	44 posts (including re-posts)
Instagram / Facebook / LinkedIn	Restpoll / RestPoll Project / RestPoll: Restoring Pollinator habitats across European agricultural landscapes	> 140	124 posts
		> 140	124 posts
		> 380	54 posts (including re-posts)

3.4.1. X (TWITTER)

X is a widely used platform used by all interested stakeholders' groups for RestPoll. It is convenient for fast communication of project news and events, along with re-posting of relevant or interesting posts.

In the last 90 days (ending on 28 Feb 2025), we posted 21 posts, which collectively gained 1,225 impressions. In this period, we lost 9 followers. This can be explained by the declining number of users and the move to Bluesky. We will continue to post on X but have decided to refocus our activities on BlueSky (i.e. reposting or commenting).

3.4.2. BLUESKY

BlueSky is the newest social media channel used by RestPoll, due to the recent popularity of the platform. The platform and posts are similar to those created for X, but we hope to reach a different audience of viewers, who are no longer on X's platform.

We have over 420 followers on BlueSky and 44 posts. Further statistics are not yet available.

3.4.3. INSTAGRAM / FACEBOOK

Instagram and Facebook are platforms used to share pictures, videos and reels of events or captivating project information.

On Instagram, eighteen (18) posts and four (4) reels were shared within the last 90 days (ending on 28 Feb 2025). The posts received about 3,500 views and 200 interactions. The reels received about 1,000 views and 45 interactions. We gained seven (7) new followers.

Over the last 90 days (ending on 28 Feb 2025), posts on Facebook have received over 4,000 views and have a reach of over 3,000. Facebook Reach is the number of unique users who view our posts or page. We shared 23 posts. Additionally, there were 154 content interactions, which include likes or reactions, saves, comments, shares or replies to the content. We gained fourteen (14) new followers in this period.

3.4.4. LINKEDIN

LinkedIn is a platform for professionals to share longer posts about recent events or knowledge gained. Over the last 90 days (ending on 28 Feb 2025), the RestPoll project

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page has received 112 views with 65 unique visitors. During this same time period, we gained 58 new followers on LinkedIn (Figure 6). The fourteen (14) posts from the last 90 days collectively reached 2,323 users, gained 3,721 impressions and 170 reactions.

Figure 6: Followers count on LinkedIn over the last 90 days (ending on 28 Feb 2025).

3.5. EVENTS, NETWORKING, & WORKSHOPS

Within the first reporting period of the project, RestPoll members have participated in or hosted sixteen (16) events within the Living Lab network. Additionally, members participated in 23 other events, workshops, or conferences and organized two (2) educational or training events. A list of the events can be found in Appendix 8.1.

3.6. SCIENTIFIC PUBLICATIONS

At this stage of the project, scientific publication from data collected in RestPoll have not been published, but our partners have published papers with contributions of what they learned from RestPoll (members bolded), e.g.:

- Fijen, T. P. M., Eeraerts, M., **Osterman, J.,** *et al.* (2025): Crop diversification for pollinator Conservation. *Landsc Ecol* 40, 19. https://doi.org/10.1007/s10980-024-02027-3
- Wyckhuys, K.A.G., Abram, P.K., Barrios, E., Cancino, J., Collatz, J., Fancelli, M., **Klein, A.M.**, Lindell, C.A., **Osterman, J.**, Pinto, M., Tang, F.H.M., Tena, A. & Elkahky, M. (2025): Orchard systems offer low-hanging fruit for low-carbon, biodiversity-friendly farming. *BioScience biae*140. https://doi.org/10.1093/biosci/biae140
- Mupepele, A.C., von Königslöw, V., Bleile, A.M., **Fornoff, F.,** Fründ, J. & **Klein, A.M.** (2025): Plant–pollinator interactions in apple orchards from a production and conservation perspective. *Conservation Science and Practice*: e13280. https://doi.org/10.1111/csp2.13280

The paper from Fijen et al. 2025, acknowledges RestPoll as a funder of the research. See Appendix 8.3 for the list of publications funded through RestPoll.

3.7. PUBLIC PROJECT DELIVERABLES

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Within the first reporting period there were twelve (12) deliverables and fifteen (15) milestones reached. Public deliverables are available via the project's website on the publications page.

3.8. SYNERGIES WITH OTHER PROJECTS

Communication with other EU projects is a central part of RestPoll. We have hosted an online workshop with representatives of other EU projects (Pensoft and AGRI4POL) with similar restoration goals (Thompson & Klein 2024; MS 26). We will continue to conduct joint workshops with new partner projects, such as AGRI4POL, VALOR, BUTTERFLY and WildPosh, along with other ongoing EU projects (Safeguard, SHOWCASE) and major policy actors to ensure complementarity of project outcomes and synergies. Our coordinator, Alexandra-Maria Klein, is part of other EU-projects either as a partner (WildPosh), WP lead (AGRI4POL, VALOR), or part of the advisory board (BUTTERFLY) to engage in interactive activities.

4. Monitoring and evaluation

RestPoll's Communication plan: Communication & engagement strategy (Taylor et al. 2024a; D6.1 & 6.4) outlines and discusses the objectives, tactics, tools and metrics regarding communication of the project in all stages ranging from dissemination to evaluation, along with our engagement strategy with stakeholders involved in the project. It is revised on a regular basis.

The effects of our work are measured by evaluating the actual results (output), determining what dissemination may contribute to our objectives (outcomes) and developing our communication strategy and activities to maximize this input. Table 3 gives an overview of the assessment of planned measures to maximize impact and total target value for indicators verifying success.

Table 3: Assessment of measures to maximize impact and total target values for indicators verifying success

Tool	**Verification of use with target indicator values (M1-48)**	**Current indicator values (M1-18)**
Main forms of communication and knowledge exchange		
Website	#visits (>10,000), time spent (>mean 2min), #pages visited (>average of 2/visit), downloads (>600), access by stakeholders (>100)	**Achieved:** >17,000 visits, > 4:30 avg. time spent, 6.3 pages/visit, 258 downloads *The last indicator is not possible to access at this stage of the project*
e-learning	#visits (>1.000), time spent (>mean 4min), downloads	*Not applicable for current stage of the project*

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	(>300), social media activity (shared in >50 channels), #European countries (>20)	
Open archive	#visits (>300), time spent (>mean 4min), downloads (>200)	*Not applicable for current stage of the project*
Social media	#posts (>1,000), #retweets (>500)	**Achieved:** 331 posts, 133 re-posts
Books and other publications		**Achieved:** 1 book, 35 news articles
Social engagement		
Tools (e.g. educational videos, flipbooks, policy briefs, labelling)	Brand awareness & adaptable logo (1), #visits of all tools (>4,000), reach (>14 countries), downloads (>200)	**Achieved**: Branding guide & logo created *Other indicators are not applicable for current stage of the project*
Network events and Living Labs	#attendees (>600), interacting (>100), contributions (>200), mean rating (>3.75 out of 5), #countries (>10)	**Achieved:** ~400 attendees, 4.6 mean rating, 14 countries *Other indicators are not applicable for current stage of the project*
Public events	#attendees (>1,000), reach (>10 countries), mean rating (>7,5 out of 10), #countries (>10)	*Not applicable for current stage of the project*
Press release	List of publications & broadcasts with broad coverage (>20)	**Achieved:** 1 press-release
Support and teaching material		
RestPoll toolbox and inventories	Downloads (>500), reach (stakeholders of all partner countries & 5 countries outside Europe)	*Not applicable for current stage of the project*
Teaching material	Downloads (300), reach (>14 countries), social media activity (75 channels, >250 posts)	*Not applicable for current stage of the project*
Support events and training	List of supported events (2), #attendees (>25)	**Achieved**: 2 events were organized for ~20 students
Boosting restoration research		
Restoration data	1 from 13 countries	*Not applicable for current stage of the project*
Scientific publications	>30 until end of the project	**Achieved**: 1 peer-reviewed publication

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Conferences	>50	**Achieved**: 7 members participated in a conference
Use RestPoll data in additional studies	>5	*Not applicable for current stage of the project*
RestPoll survey for long-term monitoring	>5 case-study areas	*Not applicable for current stage of the project*
Pollinator & pollination survey data	>17 case-study areas	**Achieved**: 11 case-study areas conducted pollinator and vegetation surveys in 2024
New projects and PhD studentships	>5	**Achieved**: 8 PhD students currently involved on the project

Overall, the website performed strongly, already exceeding the indicators for it in just the first seventeen months. Whereas social media and press coverage have made some progress as they fall short of the target indicators. Many other measures are still in the early stages and have not been assessed yet.

Content created for the website, social media, and the newsletter are categorized and grouped together based on the subject into the four columns created for the project (Table 4). This is in line with the project's branding for communication being recognizable. The table below gives an overview of the planned frequency of content creation for these columns and the realized frequency at this stage of the project (M1-18).

Table 4: Planned and realized frequency of columns for use on the website, social media, and the newsletter.

Column	**Planned Frequency**	**Realized frequency (M1-17)**
The faces behind RestPoll	Biweekly from April 2024	2024- 4 articles + 20 posts (~weekly) 2025- 1 article + 11 posts (~weekly)
Did you know that...	Throughout the project in sync with the social posts, when the 7 quarterly updates occur, 24 deliverables are met and when it occurs (reposting). Minimum of 40 times.	2024- 10 articles + 19 posts 2025- 3 posts
Field work	Throughout the project when the 17 case study areas are visited, twice annually to promote the workshop. Minimum of 30 times.	2024- 3 articles + 11 posts 2025- 1 article + 3 posts

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In practice (+ project information and other news)	Throughout the project monthly or when relevant news or developments occur. Minimum of 40 times.	2023- 1 article + 9 posts 2024- 9 articles + 27 posts 2025- 3 article + 6 posts

5. Exploitation and Sustainability

The RestPoll project is set to run until September 2027; however, we are committed to ensuring its impact extends beyond this period. To achieve this, we have developed a plan to establish the long-term functionality of our Living Lab (LL) network and monitoring in these sites (5.1), create and maintain the RestPoll toolbox (5.2), provide policy recommendations (5.3), teach and train the next generation (5.4), ensure open access to all results and reports (5.5), and create a lasting project legacy (5.7).

5.1. LIVING LAB NETWORK

We are dedicated to ensure that Living Lab (LL) network remains active beyond the project's duration. To achieve this, we are integrating our LLs into broader networks such as the European Network of Living Labs (ENoLL), the Agroecology Living Labs Network, and FarmBioNet. These partnerships will strengthen the sustainability and visibility of our LLs, fostering continued engagement and knowledge-sharing.

Additionally, we will feature the LL network prominently on the RestPoll website, providing accessibility for others to collaborate or join our network. As part of the project, we have developed guidelines for establishing long-term networks of Living Lab and monitoring sites. This document serves as a blueprint for future LL networks, ensuring that our methodologies and lessons learned can be replicated and expanded upon (Fornoff et al. 2024; D1.1).

5.2. THE RESTPOLL TOOLBOX

The RestPoll Toolbox is one of the key deliverables of our project, designed to empower stakeholders in restoring habitats for pollinators and reversing pollinator decline in agricultural settings. It will include a selection of tested and validated tools, enabling users to implement evidence-based solutions effectively. To ensure its usability and impact, stakeholders will test and evaluate the ease and benefit of using the tools, selecting those that provide the greatest benefits for inclusion.

Additionally, we will identify gaps in existing tools and explore opportunities to develop new resources where needed. To maximize its reach and long-term accessibility, the toolbox will be made available not only on the RestPoll website, but also through major institutional platforms such as the FAO website and the EU Pollinator Information Hub. These strategic placements will ensure that the toolbox remains a widely used resource, facilitating the adoption of best practices in pollinator restoration efforts.

5.3. POLICY IMPACT

The timing of the Nature Restoration Law presents a unique opportunity for RestPoll to contribute to the development of national restoration plans. We are actively engaging

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with existing policy groups, including the Pollinator Working Group, to align our project outcomes with EU policy priorities.

Our strategy includes collaborating with policymakers to ensure our research directly informs decision-making, responding to policy requests from EU level officials, ensuring that our findings are actionable and relevant, and monitoring policy developments and adapting our recommendations to align with emerging legislative frameworks. By maintaining close engagement with policy makers and advocacy groups, we aim to maximize the project's influence on restoration efforts and biodiversity policy at both nation and EU levels. This includes engagement and collaboration with policy representatives on our advisory board.

5.4. TEACHING & KNOWLEDGE FLOW

At RestPoll we recognize the importance of not only disseminating knowledge but also fostering knowledge exchange across generations. Therefore, our approach goes beyond developing teaching and e-learning tools. We plan to actively engage with students to pass on essential information and insights on restoration.

Within the project, three (3) partners have already integrated student training and education into their activities. Partners at the University of Thessaly organized a workshop for pupils at a local beekeeper's facilities with the Greek Living Lab, where students learned about the RestPoll project. Partners at the University of Freiburg and the CIHEAM-IAMM (University of Montpellier) designed a hybrid semester course, equipping international students with the knowledge and skills to tackle biodiversity loss in agricultural landscapes. Looking ahead, we plan to expand and enhance these educational efforts by integrating cross-EU pollinator and pollination projects. This initiative aims to inspire and equip the next generation of researchers and nature conservationists with the knowledge and skills needed for sustainable restoration.

5.5. OPEN ACCESS & KNOWLEDGE DISSEMINATION

In line with the Horizon Europe regulations, all RestPoll project results, datasets, and reports will be made open access. RestPoll data will be published in Zenodo and in repositories targeted to specific data such as GloBI, GBIF and the EU Pollinator Hub, as per our data management plan (Wintermantel et al. 2024; D7.2). This will ensure that researchers, policymakers, and practitioners can freely access and build upon our findings. We will make use of the European Commission's dissemination tools, such as the Horizon Results Booster and the Horizon Results Platform, to enhance visibility. We plan to apply for support from the Horizon Results Booster to be advised on our dissemination and exploitation efforts, as well as strengthen networking opportunities. Uploading our Key Exploitable Result to the Horizon results platform will broaden dissemination and facilitate stakeholder engagement. By leveraging these platforms, we aim to maximize the impact and usability of our research beyond the project's lifespan.

5.6. PROJECT LEGACY & LONG-TERM SUSTAINABILITY

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Although the official project funding concludes in September 2027, RestPoll exploitation activities will continue until September 2031 to ensure sustained impact. Until September 2029, the project website and social media channels will be maintained and updated to disseminate new developments. Policy recommendations, toolkits, and educational materials will continue to be shared through platforms, such as the Horizon Dashboard and Horizon Results Platform. Academic papers and research publications emerging from the project will be made available. We will explore opportunities for follow-up projects and potential collaboration to build on the progress achieved. By implementing this comprehensive sustainability and exploration strategy, RestPoll aims to create a legacy that continues to support pollinator conservation and habitat restoration efforts across Europe and beyond.

6. Conclusion

This report outlines the communication, engagement, dissemination, and exploitation activities within the first eighteen (18) months of the project. The key conclusions are:

Effective Communication and Engagement

The project aims to scale up pollinator conservation by communicating research findings to a broad audience, including farmers, policymakers, scientists, NGOs, and the general public. We have used a three-pronged communication strategy (internal, corporate, and project communication) to ensure clear messaging across different stakeholders.

Dissemination Tools and Strategies

The website was the primary hub for updates, publications, and outreach. It exceeded expectations with >17,000 visits and an average session time of 4:30 minutes. Social media platforms, such as X/BlueSky, Instagram, Facebook, and LinkedIn were used to share project information and updates. Engagement levels were varied, with some platforms like LinkedIn and Instagram performing better than others. Additionally, four newsletters were sent to 121 subscribers, and one press release was issued. However, the press outreach falls short of the target of >20 publications/broadcasts at this stage of the project. Promotional materials, such as brochures, banners, and branded merchandise helped reinforce the project's identity. Progress was also made in boosting restoration research. Members participated in conferences to promote the research done in RestPoll and a high number of PhD students are currently involved in the project.

Progress and Challenges

Some targets were met or exceeded, such as the website engagement and brand visibility. However, social media impact and external press coverage needs improvement, with only 331 posts made, which is 33 % of the target goal (1,000 posts).

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Many planned activities, such as e-learning, open archive, and data availability, are not yet applicable at this early stage of the project.

Two education and training events were already organized to engage students by three RestPoll member institutions. The SPHERE master's course was piloted this winter semester with students in Montpellier (CIHEAM-IAMM) and in Freiburg (ALU-FR). In this hybrid course, eight (8) RestPoll members were invited to present their research to the students, who then summarized their presentation in the form of a report and a final poster. The course plans to continue and expand across other EU projects (i.e. BUTTERFLY and AGRI4POL).

Future Plans and Improvements

We plan to increase collaborations with other EU projects to strengthen outreach (i.e. AGRI4POL, VALOR, BUTTERFLY). This will be done through direct communication and networking, along with the advertisement of the RestPoll Living Lab (LL) network on the website. Through the webpage, we hope to engage interested researchers or institutions to collaborate and expand upon our work. Additionally, we plan to improve social media presence and media coverage to meet the engagement goals. We plan to implement new strategies to increase the number of subscribers for the newsletter and on social media. In the future, we plan to create more material that is available in various languages. This will help cater to the international stakeholders. We will continue to refine our communication strategy based on our evaluation metrics in order to maximize impact.

Evaluation of Goals

The project has made strong initial progress in establishing communication channels and engaging stakeholders to achieve our seven (7) goals and expected impacts (Appendix 8.4). A key milestone has been the development of our project brand and website, which serves as a central hub for sharing results, tracking progress, and engaging stakeholders (goal 1). The website not only highlights project achievements but also fosters collaboration within our Living Lab network. Through this platform, we hope to engage other pan-European projects or institutions that are interested in working within our network or using our results. This ties directly into goals 2 and 3, which strives to successfully integrate pollinator diversity and pollination services into all levels of public and business decision making (goal 2) and also establish a strong network of Living Labs (goal 3).

To further our goals, we have organized a range of networking, training, and public events aimed at engaging policymakers, citizens, and land managers (goals 4, 5, & 6). These events have been instrumental in raising awareness of the importances of pollinators and their services. Through co-design processes, we are actively creating and testing tools that will benefit various stakeholder groups, ensuring the effective implementation of our goals (goal 5 & 6).

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Social media has played a key role in stakeholder engagement (goal 7). However, we recognize the need to enhance our strategy and press outreach to meet long-term dissemination goals. In the first period of the project, we shifted our focus from X to Bluesky and adapted our approach by prioritizing longer-form content on LinkedIn and Facebook, while using BlueSky and Instagram for more concise updates. This multi-platform strategy has allowed us to reach different stakeholders and public sectors effectively. Other dissemination tools, such as training and e-learning, will become more relevant in later phases of the project. Additionally, we have established collaboration with several pan-European projects by exchanging information through newsletters and planning future joint initiatives. We aim to host joint policy meetings, co-develop educational materials, and collaborate on information dissemination to broaden our impact and maximize the exploitation of project results.

Overall, the project has made progress in achieving its goals, with strong stakeholder engagement and a growing network of collaborators. Moving forward, we will continue to refine our outreach strategies, enhance dissemination efforts, and expand our Living Lab network to maximize the impact of our work. By establishing multi-actor collaboration and fostering co-design, we aim to ensure long-term sustainability and meaningful contributions to pollinator restoration across Europe.

7. References

Fornoff, Felix *et al.* (2024). RestPoll case-study network. Deliverable D1.1 EU Horizon RestPoll Project, Grant agreement No. 101082102. Link

Taylor, R., Romani, S., Prins, C., de Groot, E., Thompson, A., & Klein, A.-M. (2024a). Communication plan: communication and engagement strategy. Deliverable D6.1 + 6.4. EU Horizon RestPoll Project, Grant agreement No. 101082102. Link

Taylor, R., Romani, S., & de Groot, E.. (2024b). Project website and branding. Deliverable D6.2 & Milestone MS 22. EU Horizon RestPoll Project, Grant agreement No. 101082102. Link

Taylor, R., Romani, S., de Groot, E., Thompson, A., & Klein, A.-M. (2024c). General project communication is active. Milestone MS23. EU Horizon RestPoll Project, Grant agreement No. 101082102. Link

Thompson, A. & Klein, A.-M. (2024). Communication across EU projects. Milestone MS26. EU Horizon RestPoll Project, Grant agreement No. 101082102. Link

Wintermantel, D., Thompson, A., Fornoff, F. *et al.* (2024). Data management 1. Deliverable D7.2. EU Horizon RestPoll Project, Grant agreement No. 101082102. Link

8. Appendix

8.1. LIST OF DISSEMINATION AND COMMUNICATION WITHIN RESTPOLL

Type of activity: 1) Clustering activities, 2) Collaboration with EU-funded projects, 3) Education and training events, 4) Exhibition, 5) Interview, 6) Media article, 7)

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Newsletter, 8) Organize a conference, 9) Organize a workshop, round table, group discussion, etc., 10) Other, 11) Other scientific collaboration, 12) Participation in a conferences, 13) Participation in a workshop, 14) Participation in other events or meetings, 15) Press release, 16) Print materials (brochure, leaflet, posters, stickers, banners, etc.), 17) Publication (non-scientific or non-peer-reviewed), 18) Publication (scientific and peer-reviewed), 19) Social media, 20) Trade Fair, 21) Training, 22) TV/ Radio/Podcast campaign, 23) Video/Film, 24) Website or blog post

Target Audience: 1- Citizens, general public, 2- Civil society, 3- Customers, 4- EU Institutions, 5- Industry, business partners, 6- Innovators, 7- International organizations (UN body, OECD, etc.), 8- Investors, 9- Local authorities, 10- Media, 11- National authorities, 12- Regional authorities, 13- Scientific or research communities, 14- Specific end user communities, 15- Other

Type of activity	Partner Institute	Activity Name	Target audience	Date
2	01-ALU-FR	EU Cross-Pollinators projects meeting	4, 13	01. Dec 23
3	10-UTH	Workshop: RestPoll Project and pollinators	1	26. Oct 24
3	01-ALU-FR	SPHERE masters course	12, 14	Oct 2024-March 2025
3	04-CIHEAM-IAMM	SPHERE masters course	12, 14	Oct 2024-March 2025
5	11-HUN-REN CER	Radio interview with Imre Sándor Piross on Restpoll and pollinator conservation	1	09.01.2024
5	11-HUN-REN CER	Radio interview with Imre Sándor Piross on Restpoll and pollinator conservation	1	11.01.2024
5	11-HUN-REN CER	Radio interview with Imre Demeter on Restpoll and pollinator conservation	1	21.02.2024
5	07-ULUND	Podcast Love weeds	1	22. Jun 24
6	11-HUN-REN CER	Press release republished by a local media outlet	1,10	05.01.2024
6	11-HUN-REN CER	Press release republished by a local media outlet	1,10	05.01.2024
6	11-HUN-REN CER	Press release republished by a local media outlet	1,10	05.01.2024
6	11-HUN-REN CER	Press release republished by a local media outlet	1,10	05.01.2024
6	11-HUN-REN CER	Press release republished by a local media outlet	1,10	05.01.2024

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6	11-HUN-REN CER	Press release republished by a local media outlet	1,10	06.01.2024
6	11-HUN-REN CER	Press release republished by a local media outlet	1,10	06.01.2024
6	11-HUN-REN CER	Press release republished by a local media outlet	1,10	07.01.2024
6	11-HUN-REN CER	Press release republished by a local media outlet	1,10	17.01.2024
6	11-HUN-REN CER	Press release republished by a local media outlet	1,10	17.01.2024
6	24-WBF	RestPoLL: Newspaper article outreach about the project	1	30. Jun 24
6	06-CYFNU YFCNU	Living Lab workshop post - Ukraine	1, 9	20. Sep 24
6	06-CYFNU YFCNU	Living Lab workshop post- Ukraine	1, 9	22. Sep 24
7	01-ALU-FR	Article in GfÖ news magazine	13	01. Jun 23
7	05-ENSFEA	Article in ENSFEA newsletter	13	Dec 23
7	22-HVR Group	Introduction of RestPoll in WildPosh's first newsletter	13	04. Jul 24
7	18-CONFAGRI	Article in Confagricoltura Newsletter	9, 12	25/11/2024
7	25-UCAM	Article - Local bumblebee conservation research	1	01. Feb 25
9	07-ULUND	Stakeholder information meeting and workshop	5, 6, 14	18. Mar 24
9	10-UTH	Living Lab Workshop- Greece	13	19. Jun 24
9	10-UTH	Italy Living Lab Launch	5, 9, 2, 12	06. Sep 24
9	06-CYFNU YFCNU	RestPoll project presentation meeting for farmers, scientists and private entrepreneurs at the regional level (Ukraine) on September 19, 2024	9, 12, 13, 14	19. Sep 24
9	26-UREAD	Living Lab planning and workshop	1, 5, 13, 14	05. Nov 24
9	07-ULUND	Living Lab workshop	9, 11, 12	26. Nov 24
9	26-UREAD	Living Lab workshop and training session	1, 5, 13, 15	18. Feb 25
9	12-TCD	Living Lab Workshop	1	
11	06-CYFNU YFCNU	Experience exchange is a path to mutual development and new opportunities	13	13.03.2024

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12	04-CIHEAM-IAMM	10th International Degrowth Conference and 15th Conference of the European Society for Ecological Economics	2, 13	20/06/2024
12	04-CIHEAM-IAMM	XIV International Seminar of FONCIMED Network	2, 13	10.09.2024
12	04-CIHEAM-IAMM	HAICTA 2024_11th International Conference on ICT in Agriculture, Food&Environment	2,13	17/10/2024
12	13-INPT	International Congress in Ecology and Evolution - French Society of Ecology and Evolution (SFE²) biennial meeting	13	Oct 24
12	07-ULUND	Presentation at Biosphere Research Conference	9, 10, 12, 13	18. Nov 24
12	06-CYFNU YFCNU	Dissemination of RestPoll project ideas to attract new stakeholders. A round table discussion on gardening, organized by BTU	13, 14	22. Jan 25
12	04-CIHEAM-IAMM	PHD Conference	13	11-12 Dec 2023
13	07-ULUND	Workshop on certification of pollination services	3, 5, 13, 14	05. Nov 24
14	01-ALU-FR	Gemeinsame Dienstbesprechung zum Thema "PSM-Reduktion/Biodiversität/Ökolandbau (Umsetzung BiodivStG.)	5, 9, 12, 14	05. Dez 23
14	01-ALU-FR	Artenvielfalt durch die Landwirtschaft – Wettbewerb „Höfe für Biologische Vielfalt“ und weitere Projekte zur Blütenvielfalt in der Agrarlandschaft	5, 9, 12, 14	12. Mar 24
14	02-TUM	Pollinator-Day	1, 15	18. Mar 24
14	10-UTH	1st meeting with Living Lab stakeholders - Greece	1, 5, 9, 13	27. Mar 24
14	19-BNPI	St. George's Day Herding-out Festival 2024	1,2,5,14	19.04.2024
14	15-BSC	Partner meeting of the LIFE Programme project GrassLIFE2	2, 13, 14	13. Jun 24
14	01-ALU-FR	Presentation at EU Working Group Pollinators (WGP) on 26 June 2024	4, 11, 13, 7	26. Jun 24
14	07-ULUND	Borgeby field days	1, 2, 5, 6, 9, 14	26. Jun 24
14	07-ULUND	Borgeby field days	1, 2, 5, 6, 9, 14	27. Jun 24
14	02-TUM	Hoffest	1,3,5	21. Jul 24
14	02-TUM	Demo-Day Agroforst	1,2,9,13	24. Aug 24

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14	06-CYFNU YFCNU	Meeting with acting and potencial stakeholders -farmers engaged in gardening	14	14. Oct 24
14	07-ULUND	Southern Swedish farmer meeting	3, 5, 6, 14, 15	11. Dec 24
14	07-ULUND	Presentation at an annual farmer meeting	5, 14	13. Dec 24
14	07-ULUND	Seed growing day at Bjärsjölagård	5, 6, 14	12. Feb 25
14	06-CYFNU YFCNU	Coordination meeting with stakeholders	14	09. Mar 25
14	01-ALU-FR	Presentation at FreiRäume Stuttgart	9, 13	04.09.2025
15	19-BNPI	Sharing the press release on project launch on Facebook		28/11/2023
15	01-ALU-FR	Press Release (1, Uni Freiburg)	12	19. Dec 23
15	11-HUN-REN CER	Press release on project launch	1,10	20.12.2023
15	11-HUN-REN CER	Press release on project launch	1,10	05.01.2024
15	19-BNPI	Feast and tradition of the St George's Day		30/05/2024
15	07-ULUND	News on rediscovering nationally extinct bee	1, 10	12. Jul 24
15	22-HVR Group	RestPoll 1. Press Release	4	Nov 24
16	10-UTH	Submission of an e-poster in HAICTA Conference 2024	13	17. Oct 24
15	07-ULUND	Flyer on flower planting benefits	5, 14	06. Feb 25
18	01-ALU-FR	Scientifc article- Crop diversification for pollinator conservation	13	11. Jan 25
19	15-BSC	RestPoll X post	1	12.01.2023
19	11-HUN-REN CER	Sharing the press release on project launch on Facebook	1	15.01.2024
19	15-BSC	RestPoll X post	1	07.02.2024
19	15-BSC	LinkedIn post on Restpoll	1	07.02.2024
19	15-BSC	LinkedIn post on Restpoll	1	09.04.2024
19	15-BSC	LinkedIn post on Restpoll	1	18/06/2024
19	15-BSC	RestPoll X post	1	24/06/2024
19	12-TCD	Living Lab Workshop Post- Trinity College	9	17. Sep 24

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19	15-BSC	RestPoll X post	1	18/09/2024
19	06-CYFNU YFCNU	Living Lab workshop post- Ukraine	9	20. Sep 24
19	15-BSC	RestPoll X post	1	15/11/2024
19	19-BNPI	Sharing the press release on project launch on BNPD website		28/11/2024
19	19-BNPI	Living Lab Workshop Post- BNPI	9	11. Feb 25
19	04-CIHEAM-IAMM	LinkedIn Post	1, 10	14/03/2025
19	04-CIHEAM-IAMM	LinkedIn Post	1, 10	18/03/2025
19	15-BSC	RestPoll X post	1	24/06/2025
19	15-BSC	RestPoll X reposts	1	
19	15-BSC	RestPoll(-related) LinkedIn reposts	1	
22	01-ALU-FR	Podcast on "Auch das noch?"	1	21. Aug 24
22	06-CYFNU YFCNU	A story on a local news TV channel - TVA, Broadcasting Company	1	19. Sep 24
23	01-ALU-FR	Documentary about pollinators	1	27. Oct 24
23	06-CYFNU YFCNU	Documentary about Living Labs Workshop	1, 3, 5, 6, 9, 10, 13, 14	28. Oct 24
24	15-BSC	Blog post on the launch of the RestPoll project (in English & Latvian)	1, 11, 13	12.01.2023
24	15-BSC	Blog post on pollinator monitoring in Latvia (in English & Latvian)	1, 13	07.02.2024
24	22-HVR Group	Meet Alexandra-Maria Klein - RestPoll News	1	27. May 24
24	22-HVR Group	Podcast with partner Sara Leonhardt Bee Nutrition - RestPoll News	1	27. May 24
24	22-HVR Group	Swedish Case Study Areas - RestPoll News	1	30. May 24
24	22-HVR Group	BiodivNetz BW supports pollinators in southern Germany - RestPoll News	1	03. Jun 24
24	22-HVR Group	Create your own AirBee&Bee - RestPoll News	1	08. Jul 24

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24	22-HVR Group	Flower power on the verge of the future - RestPoll News	1	25. Jul 24
24	22-HVR Group	Beyond bees How many pollinators can you count - RestPoll News	1	01. Aug 24
24	22-HVR Group	Meet Anda Adamsone-Fiskovica - RestPoll News	1	08. Aug 24
24	15-BSC	Blog Post- Fieldwork in the Latvian CSA	1, 13	18. Aug 24
24	22-HVR Group	Sampling farms in Baden-Württemberg- RestPoll News	1	20. Aug 24
24	22-HVR Group	Update on Latvia - RestPoll News	1	26-08-2024
24	22-HVR Group	Upcoming RestPoll events- RestPoll News	1	01. Sep 24
24	22-HVR Group	Where do pollinators nest? - RestPoll News	1	02. Sep 24
24	22-HVR Group	Living Labs: Science in progress - RestPoll News	1	03. Sep 24
24	22-HVR Group	Meet Zehra Basara - RestPoll News	1	03. Sep 24
24	22-HVR Group	How are things in Heves, Hungary? - RestPoll News	1	05. Sep 24
24	22-HVR Group	Pollinator Importance, Restoration, and Collaboration - RestPoll News	1	30. Sep 24
24	22-HVR Group	Roses and thorns: the challenges involved in RestPoll- RestPoll News	1	04. Oct 24
24	22-HVR Group	Intrinsic motivations to perserve pollinators- RestPoll News	1	07. Oct 24
24	22-HVR Group	The cutting edge of pollinator restoration: RestPoll as an Innovative Action- - RestPoll News	1	31. Oct 24
24	22-HVR Group	What the natural and social sciences can learn from each other - RestPoll News	1	05. Nov 24
24	22-HVR Group	The evidence behind effective pollinator preservation- - RestPoll News	1	11. Nov 24
24	22-HVR Group	RestPoll celebrates first anniversary with fruitful meeting - RestPoll News	1	21. Nov 24
24	22-HVR Group	Dive into last year's fieldwork and RestPoll publications - RestPoll News	1	02. Dec 24
24	22-HVR Group	Agroforestry is studying the effects of trees on farms - RestPoll News	1	09. Dec 24
24	22-HVR Group	The bigger picture: an interview with Tom Breeze - RestPoll News	1	17. Dec 24
24	22-HVR Group	Preserving our precious pollinators - RestPoll News	1	31. Dec 24

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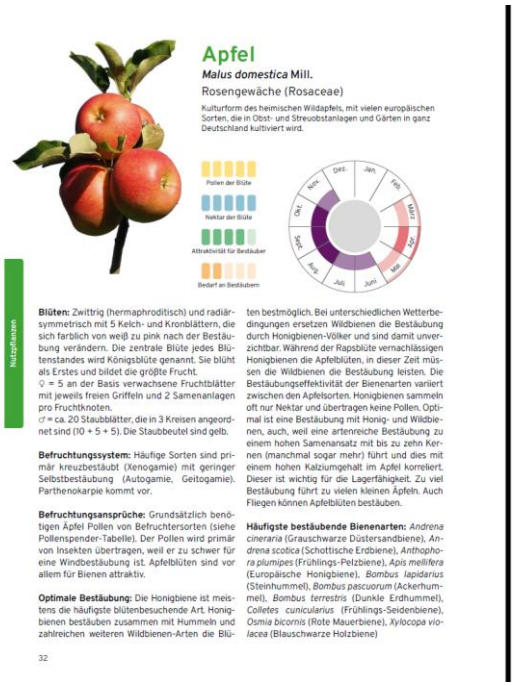
24	22-HVR Group	Bükk National Park wants to win over wildlife and farmers - RestPoll News	1	31. Dec 24
24	22-HVR Group	Meet the advisory board - RestPoll News	1	09. Jan 25
24	22-HVR Group	Up in the vineyards of the Vogel case study area - RestPoll News	1	09. Jan 25
24	22-HVR Group	Can crop diversification help save pollinators? - RestPoll News	1	12. Feb 25
24	22-HVR Group	Restoring pollinator habitats through project Butterfly - RestPoll News	1	14. Feb 25
24	22-HVR Group	Project AGRI4POL is promoting sustainable agriculture for pollinators in collaboration with RestPoll - RestPoll News	1	14. Feb 25
24	22-HVR Group	Nationally extinct pollinator rediscovered in Sweden - RestPoll News	1	24. Mar 25
24	22-HVR Group	WildPosh's plans for this summer - RestPoll News	1	28. Mar 25

8.2. BOOK INFORMATION

Klein, A.-M. & Fornoff, F. (2025) Praxishandbuch Nutzpflanzenbestäubung: Ertragssteigerung durch Förderung der Biodiversität (EN: Practical handbook on crop pollination: Increasing yields by promoting biodiversity). Haupt Verlag, Bern. https://www.haupt.ch/buecher/natur-garten/praxishandbuch-nutzpflanzenbestaeubung.html?srsltid=AfmBOoq7vTvyTz69EhO_RiRgqsIwOMgnbApArkbrANixUYevpUHMNASs



Apfel

Malus domestica Mill.

Rosengewächse (Rosaceae)

Kulturform des heimischen Wildapfels, mit vielen europäischen Sorten, die in Obst- und Streuobstanlagen und Gärten in ganz Deutschland kultiviert wird.

Pollen der Blüte
Nektar der Blüte
Attraktivität für Bestäuber
Bedarf an Bestäubern

Dez. Jan. Feb. März Apr. Mai Juni Juli Aug. Sept. Okt. Nov.

Nutzpflanzen

Blüten: Zwittrig (hermaphroditisch) und radiärsymmetrisch mit 5 Kelch- und Kronblättern, die sich farblich von weiß zu pink nach der Bestäubung verändern. Die zentrale Blüte jedes Blütenstandes wird Königsblüte genannt. Sie blüht als Erstes und bildet die größte Frucht.
♀ = 5 an der Basis verwachsene Fruchtblätter mit jeweils freien Griffeln und 2 Samenanlagen pro Fruchtknoten.
♂ = ca. 20 Staubblätter, die in 3 Kreisen angeordnet sind (10 + 5 + 5). Die Staubbeutel sind gelb.

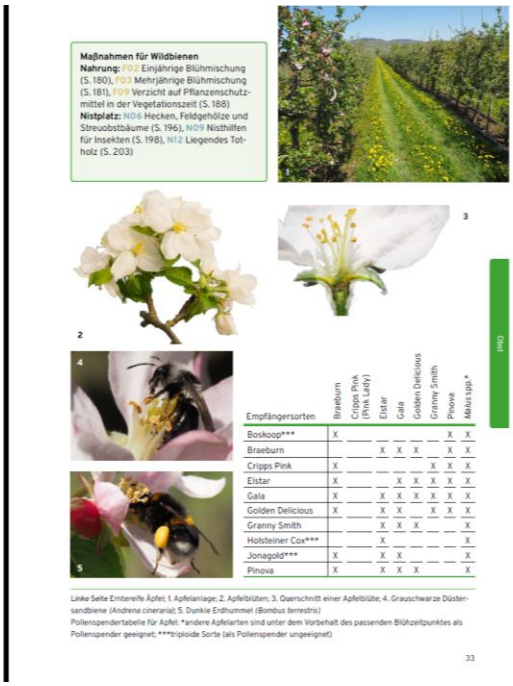
Befruchtungssystem: Häufige Sorten sind primär kreuzbestäubt (Xenogamie) mit geringer Selbstbestäubung (Autogamie, Geitogamie). Parthenokarpie kommt vor.

Befruchtungsansprüche: Grundsätzlich benötigen Äpfel Pollen von Befruchtersorten (siehe Pollenspender-Tabelle). Der Pollen wird primär von Insekten übertragen, weil er zu schwer für eine Windbestäubung ist. Apfelblüten sind vor allem für Bienen attraktiv.

Optimale Bestäubung: Die Honigbiene ist meistens die häufigste blütenbesuchende Art. Honigbienen bestäuben zusammen mit Hummeln und zahlreichen weiteren Wildbienen-Arten die Blüten bestmöglich. Bei unterschiedlichen Wetterbedingungen ersetzen Wildbienen die Bestäubung durch Honigbienen-Völker und sind damit unverzichtbar. Während der Rapsblüte vernachlässigen Honigbienen die Apfelblüten, in dieser Zeit müssen die Wildbienen die Bestäubung leisten. Die Bestäubungseffektivität der Bienenarten variiert zwischen den Apfelsorten. Honigbienen sammeln oft nur Nektar und übertragen keine Pollen. Optimal ist eine Bestäubung mit Honig- und Wildbienen, auch, weil eine artenreiche Bestäubung zu einem hohen Samenansatz mit bis zu zehn Kernen (manchmal sogar mehr) führt und dies mit einem hohen Kalziumgehalt im Apfel korreliert. Dieser ist wichtig für die Lagerfähigkeit. Zu viel Bestäubung führt zu vielen kleinen Äpfeln. Auch Fliegen können Apfelblüten bestäuben.

Häufigste bestäubende Bienenarten: *Andrena cineraria* (Grauschwarze Düstersandbiene), *Andrena scotica* (Schottische Erdbiene), *Anthophora plumipes* (Frühlings-Pelzbiene), *Apis mellifera* (Europäische Honigbiene), *Bombus lapidarius* (Steinhummel), *Bombus pascuorum* (Ackerhummel), *Bombus terrestris* (Dunkle Erdhummel), *Colletes cunicularius* (Frühlings-Seidenbiene), *Osmia bicornis* (Rote Mauerbiene), *Xylocopa violacea* (Blauschwarze Holzbiene)

32



Maßnahmen für Wildbienen
Nahrung: F02 Einjährige Blühmischung (S. 180), F01 Mehrjährige Blühmischung (S. 181), F09 Verzicht auf Pflanzenschutzmittel in der Vegetationszeit (S. 188)
Nistplatz: N06 Hecken, Feldgehölze und Streuobstbäume (S. 196), N09 Nisthilfen für Insekten (S. 198), N12 Liegendes Totholz (S. 203)

1 2 3 4 5

Empfängersorten	Braeburn	Cripps Pink (Pink Lady)	Elstar	Gala	Golden Delicious	Granny Smith	Pinova	*Malus* spp.*
Boskoop***	X						X	X
Braeburn			X	X	X		X	X
Cripps Pink	X					X	X	X
Elstar	X			X	X	X	X	X
Gala	X		X	X	X	X	X	X
Golden Delicious	X		X	X		X	X	X
Granny Smith			X	X	X			X
Holsteiner Cox***			X					X
Jonagold***	X		X	X				X
Pinova	X		X	X	X			X

Linke Seite Ernereife Äpfel; 1. Apfelanlage; 2. Apfelblüten; 3. Querschnitt einer Apfelblüte; 4. Grauschwarze Düstersandbiene (Andrena cineraria); 5. Dunkle Erdhummel (Bombus terrestris)
Pollenspendertabelle für Apfel: *andere Apfelarten sind unter dem Vorbehalt des passenden Blühzeitpunktes als Pollenspender geeignet; ***triploide Sorte (als Pollenspender ungeeignet)

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Figure 7: Example of a crop profile (i.e. apple), which provides information about the flowering system, -timing, optimal pollination, the most abundant pollinating bee species, and which measures support those species.

F03 Mehrjährige Blühmischung

Mehrjährige Blühflächen bieten Wildbienen das ganze Jahr über Nahrungsquellen. Auch schon im Frühjahr sind entscheidende Nahrungsangebote vorhanden, welche Wildbienen zum Nisten in direkter Umgebung animieren. Mehrjährige Blühmischungen sind einjährigen Blühmischungen immer vorzuziehen, weil sie eine wesentlich größere Wirkung auf das Populationswachstum von Wildbienen haben.

Diese Bienen profitieren: Holz- und Keulhornbienen, Honigbienen, Hummeln, Langhorn- und Pelzbienen, Mauer- und Blattschneiderbienen, Sandbienen, Schmal- und Furchenbienen

Diese weiteren Tiere und Pflanzen profitieren: Blütenkäfer, Fliegen, Schmetterlinge, Vögel, Feldhase

Besonders hohes Potenzial: In strukturarmen Landschaften, in Ackerkulturen, in Obstanlagen

Aktiv werden
- Aussaat von einheimischen, regionalen Wildpflanzenmischungen, flächig oder in Streifen
- Bevorzugt viele Einzelflächen von 0,01–0,1 ha, flächig über den Betrieb verteilt anlegen, statt wenige große Flächen
- Auf Staudenvielfalt achten, z. B. Glockenblumen, Reseden, Natternkopf und Wicken sowie einjährige Arten wie Mohn, Kornblume und Senf

Wirkung auf Wildbienen: Die Blühmischungen enthalten einjährige sowie überdauernde Pflanzenarten; hohes Angebot von Nektar versorgt die adulten Bienen für ihre Aktivitäten; das Pollenangebot von heimischen Wildpflanzen ist optimal geeignet, um selbst spezialisierten und seltenen Wildbienenarten Nahrung für ihre Larven zu bieten; durch den mehrjährigen Charakter können die Bienenpopulationen wachsen.

Zusatzinformation: Mosaikmahd erlaubt einen frühen Blütenaspekt sowie die Überwinterung von Insekten und Spinnen an den Pflanzenstängeln. Der unbearbeitete Boden ist Lebensraum für Bienenlarven. Hummelköniginnen benötigen Blüten schon ab März und gründen in deren Nähe ihr über den Sommer wachsendes Volk. Konstantes Blütenangebot ist essenziell für diese Arten.

1. Mehrjähriger Blühstreifen «Blühende Landschaft» aus regionalem Saatgut im zweiten Jahr neben einer Apfelanlage.

2. Die Malven-Langhornbiene (*Tetralonia malvae*) ist auf Malven (z. B. die einheimische Moschusmalve (*Malva moschata*)) spezialisiert, die in keiner mehrjährigen Blühmischungen fehlen sollte.

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Garten-Tipp: Blumenwiese statt englischem Rasen

Rasen sind als Gras-Monokultur mit intensiver Pflege sehr artenarme Bereiche in einem ansonsten eher vielfältigen Gartenmosaik. Dies muss nicht so sein, da frühblühende Beikräuter in einem Rasen sehr gute Futterquellen für viele Bienenarten sind und farbliche Aspekte in das monotone Grün bringen. Man denke an die Schlüsselblumen (Gattung *Primula*), Schneeglöckchen (Gattung *Galanthus*) und Traubenhyazinthen (Gattung *Muscari*) in Großmutters Rasen. Ein Rasen kann zur gepflegten Frühjahrsblumenwiese werden, wenn dort zusätzlich Gundermann (*Glechoma hederacea*) und Braunelle (*Prunella vulgaris*), Lerchensporn (Gattung *Corydalis*), Scharbockskraut (*Ficaria verna*), Krokus (Gattung *Crocus*), Traubenhyazinthe (Gattung *Muscari*) und Primel (Gattung *Primula*) wachsen dürfen. Nach diesen ersten Frühlingsboten können dort Löwenzahn (Gattung *Taraxacum*) und Wiesenschaumkraut (*Cardamine pratensis*) blühen, sowie im weiteren Jahresverlauf eine ganze Bandbreite an niederliegenden oder kleinwüchsigen, trittresistenten Pflanzenarten wie Thymian (*Thymus vulgaris*), Wegwarte (*Cichorium intybus*), Fingerkräuter (Gattung *Potentilla*) und Pfennigkraut (*Lysimachia nummularia*). Diese sind, mit Ausnahme der Blüten, ebenfalls grasgrün, bieten aber geeignete Nahrung für Wildbienen und gleichzeitig Futter für eine ganze Reihe an weiteren einheimischen Insektenarten.

Frühblüher färben eine Rasenfläche bunt, viele attraktive Blütenpflanzen etablieren sich bei entsprechender Pflege sowohl zwischen den Zeilen in Obstanlagen als auch in Privatgärten.

Um dies zu erreichen, ist die einfachste Maßnahme das Unterlassen der intensiven Rasenpflege; also nicht düngen, alle blühenden Wildpflanzen gewähren lassen und selten mähen. Von selbst stellen sich Gänseblümchen (*Bellis perennis*), Löwenzahn (Gattung *Taraxacum*), Ehrenpreis (Gattung *Veronica*), Fingerkraut (Gattung *Potentilla*) und einige weitere wichtige Futterpflanzen für Wildbienen ein. Im Idealfall führt das Rasenmanagement zur Förderung von Wildblumen und Kräutern, einer Unterdrückung von Gräsern und einem Ausmagern der Rasenfläche.

In wenigen Schritten zum Blumenrasen
1. Verzicht auf (häufiges) motorbetriebenes Mähen, die Rotoren töten Insekten
2. Nicht düngen
3. Blumen aussamen lassen
4. Aussäen von trittresistenten, niederwüchsigen Pflanzenarten

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Figure 8: Example of a measure profile, Perennial flower mix, from the Pracitcal handbook by Klein & Fornoff (2025).

8.3. LIST OF PUBLICATIONS WITHIN RESTPOLL

Below is the list of peer-reviewed scientific publications that have been published within the project. RestPoll members are bolded:

Fijen, T. P. M., Eeraerts, M., **Osterman, J.,** *et al.* Crop diversification for pollinator Conservation. *Landsc Ecol* **40**, 19 (2025). https://doi.org/10.1007/s10980-024-02027-3

8.4. LIST OF DISSEMINATION MEASURES

Below is the list of dissemination measures for each of the seven (7) RestPoll main results (section 2.3) and their status within the project (M1-17).

Result	D&E&C Measure	Status
1	Implement project branding and website	Completed
	Harmonized datasets from our RestPoll network	
	Scientific articles addressing drivers and mitigation strategies	Ongoing
	Presentations of results at major conferences	Ongoing
	Open-archive of papers, presentations, and data	
	Researchers outside of RestPoll use our data	
	Establish long-term monitoring in some case-study areas	
2	Networking event in the LLs	Ongoing
	Advertisement of RestPoll tools and inventories	

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	Teaching materials for land users	
3	E-learning materials for European-wide stakeholders interested in green recovery	
4	Support events and trainings for researchers to increase research quality	Ongoing
	Public events to share outcomes to synergies pollinator restoration	Ongoing
5	Tools such as educational videos to reach land managers and business/industry	
6	Press releases to journalist and politicians to raise awareness of project results	
7	Ongoing announcements of project news/outcomes on social media and with other pan-European projects	Ongoing
	Policy meetings and workshops planned jointly with other pan-European projects	Ongoing

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