



Communication & Dissemination Strategy

Deliverable D7.2

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B-GOOD

Giving Beekeeping Guidance by cOmputatiOnal-assisted Decision making



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Preface

B-GOOD is a multi-disciplinary project aiming at providing practical scientific solutions to the diverse problems beekeepers face. More specifically, the project aims at designing innovative technologies that will facilitate the care and management of bee hives, i.e. keeping healthy colonies in a safe and well-supplied environment and implementing sustainable business strategies. In this context, interactions between the project consortium members, but also with different stakeholders of the beekeeping sector, other scientists, policy makers and the general public is primordial to promote the project and to develop relevant and practical tools. To maximize the outcome of the communication and dissemination activities with this diverse audience, a broad set of targeted strategies will be used.

This report describes the different strategies designed by the members of the B-GOOD Work Package 7 to ensure an efficient communication and dissemination activity throughout the project.

Summary

The development of adequate communication and dissemination tools and strategies is crucial to maximize the impact of research projects. This document groups together information about the communication and dissemination activities of B-GOOD and highlights the different strategies set up before, during and after the project to optimize these activities. In the first section, the general objectives and the structure of the document are exposed, as well as the definitions of the target groups and tools used common to both types of activities. More specific information is then provided about the methods and timelines specific to the communication and to the dissemination activities in the following two sections. Finally, the last section of this report details the different measures taken to monitor and evaluate the communication and dissemination activities.

1. Introduction

1.1. Aims of communication and dissemination within B-GOOD

B-GOOD stands for ‘Giving Beekeeping Guidance by cOmputatiOnal-assisted Decision making’. This project aims at promoting sustainable and healthy beekeeping in Europe by following a scientific multidisciplinary approach to develop and test innovative technologies in order to guide beekeepers in their management practices.

To reach these ambitious goals, B-GOOD groups together a large number of experts in multiple fields from 17 institutions located in 13 European countries. Given this wide diversity of collaborators, favouring interactions between the project’s members in a coherent and organized way is primordial. Moreover, given the significant amount of research currently being conducted on beekeeping sustainability and pollinator conservation, interactions with scientists outside of the project are needed to avoid overlap and redundancy and to promote collaboration. Additionally, because the projects members aim at developing technologies that are both pertinent and practical for apiculture, feedbacks from beekeepers and other stakeholders are crucial to tailor the produced tools to the needs of end-users and create suitable technologies. Finally, interactions between the project members, policy makers and general public is primordial to ensure a good understanding on how the EU taxpayer money allocated to B-GOOD is being used as well as to enhance global awareness about sustainability and pollinator conservation.

Therefore, these different points illustrate well that insuring an effective communication and dissemination activity throughout the project is not only a mandatory request from the EU, but that keeping a good level of interactions with the different audience groups will help maximizing the impact of B-GOOD. This challenging task can only be completed by planning, elaborating and following a systematic methodology, executing an integrated approach and adapting a tailored communication and dissemination strategy that goes beyond the four years of the project, i.e. from the beginning of its creation until after its completion.

Within B-GOOD, the role of Work Package 7 “Communication and Exploitation” (WP7) is to organize and foster the communication and dissemination activities of the project by developing adequate methods and assisting the consortium members for their interactions with other consortium members and external individuals and institutions (Figure 1). To do so, WP7 designed a specific communication and dissemination strategy plan that allows performing pertinent interactions with specific audience groups. This deliverable report describes the different methods used to tackle these objectives and ensure a pertinent and efficient communication of the project and dissemination of its results.

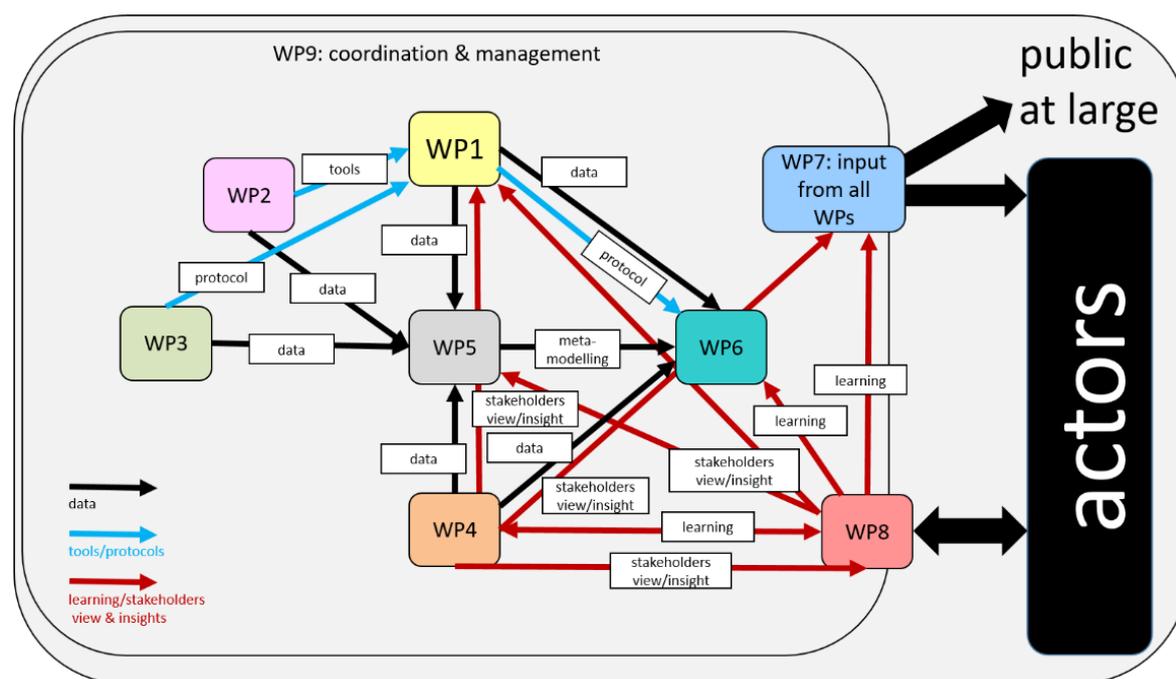


Figure 1: Organization of B-GOOD: The role of Work Package 7 (in clear blue) is to facilitate the transition between B-GOOD members and several audience categories, as well as to make the project visible and its results readily available to a diverse public. This figure originates from the B-GOOD grant proposal.

1.2. Main communication and dissemination objectives

The main objectives of the communication and dissemination activities to maximize the impact of B-GOOD are:

- enhance the project's visibility via branding and corporate identity of output;
- reach out to and interact with the diverse communities of beekeepers in Europe;
- generate market demand for the B-GOOD technologies;
- stimulate interactions and collaboration with the scientific community;
- encourage business opportunities for the exploitation of B-GOOD technologies;
- build support for future research and innovation;
- further increase public awareness about the need for sustainable beekeeping.

1.3. Structure of the document

The terms "Communication" and "Dissemination" may seem similar and the strategies used to implement these two components may partly overlap. However, significant differences exist between these two terms. For instance, dissemination relies primarily on results that have been obtained within the project, whereas communication does not necessarily need these results to be in place or operate. In addition, while dissemination targets the project's stakeholders and potential users directly through supplying timely information (e.g. access to project tools and key findings from research activities), communication will ensure that the wider public is informed on the importance of the project's activities towards achieving positive socio-economic impacts. These differences imply that the audience, tools and the timelines used to implement these two parts may differ.

This led to the decision to group the common methods for these two items in the next paragraphs but to separate the more specific strategies used for each one in the following parts of the report.

1.4. General methodology

1.4.1. Targeted audience

In order to optimize the communication and dissemination of B-GOOD and enhance their efficacy by improving the message uptake of the audience, the different activities carried must always be tailored to the targeted audience. This is achieved for instance by using a language dedicated to stakeholder groups or by highlighting common goals to create trust and openness.

The audience is therefore at the core of the communication and dissemination strategy of B-GOOD, as it defines several major components of the methodology, such as the scale of action, the language and media used and means used to carry on the activities. Within B-GOOD, six main audience groups are defined. These are composed of very diverse actors with specific communication channels that represent different opportunities and challenges (Table 1).

Table 1: Opportunities and Challenges associated with different audience groups

The different audience groups, their definition and the opportunities and challenges to take into account for the communication and dissemination activities are listed.

Groups	Definition	Opportunities	Challenges
<i>B-GOOD consortium</i>	Members of B-GOOD project consortium. As they constitute the core of the project, an efficient internal communication must be ensured between the B-GOOD consortium members.	<ul style="list-style-type: none"> - cooperation between a large number of partners - multiple skills and expertise - wide network at different scales 	<ul style="list-style-type: none"> - geographical distance between institutes - difficulties to find coherent information for all
<i>Beekeepers</i>	'Beekeepers' are here defined as individuals who possess (and care for) honey bee colonies. They are the main testers and end-users for the technologies developed during the project.	<ul style="list-style-type: none"> - direct interest in better beekeeping practices - interest in bee health and sustainability - interest in new technologies - interest for nature and conservation - critical and constructive non-scientific feedback to evaluate the project activities 	<ul style="list-style-type: none"> - high diversity of profiles and communication channels - use of different communication means as scientists - refractory to changes in beekeeping practice and/or to new technologies
<i>Scientists</i>	'Scientists' refer here not only to experts in honey bee science, but also in other related topics. However, particularly close interactions are being set up with scientific members of other honey bee research project at different scales (European and local).	<ul style="list-style-type: none"> - similar interests - similar and/or additional skills - critical and constructive scientific feedback - overlap and redundancy avoidance 	<ul style="list-style-type: none"> - may see B-GOOD as competition - data privacy and sharing of sensitive information

<i>Policy makers</i>	<i>'Policy makers'</i> will play a crucial role in the project by supervising the well-functioning of the project and implementation of its findings. With their predominant role in the implementation of the project, ensuring good communication and dissemination with the policy makers is crucial.	<ul style="list-style-type: none"> - well connected through different channels - evaluation and feedback about the project 	<ul style="list-style-type: none"> - usage of the same communicating means - difficulty to reach
<i>Industries and companies</i>	As they will play an important role in the exploitation of B-GOOD results, <i>'Industries and Companies'</i> must be informed about the results of B-GOOD.	<ul style="list-style-type: none"> - interest in developing innovative technologies - sustainable and healthy beekeeping may bring a good image 	<ul style="list-style-type: none"> - sharing of sensible or protected information may be complicated - use of different communication channels and means as scientists
<i>General public</i>	Members of the 'general public' category are defined as any person who does not belong to the above mentioned categories. Notably, they are directly or indirectly connected to the project, for instance as taxpayers contributing to the funding of B-GOOD or as consumers of bee-derived products.	<ul style="list-style-type: none"> - existing awareness about bee health and nature conservation - existing awareness about local production and better quality food consumption 	<ul style="list-style-type: none"> - information means differ from scientists - need to provide applicable actions at their level

1.4.2. Tools and Channel

To tackle the above-mentioned objectives (**section 1.2**), a wide range of communications tools and channels is being used.

Branding material:

Branding material and the B-GOOD website (<https://b-good-project.eu/>) are central for ensuring a good visibility of B-GOOD (**Annex 1**). These are described in details in another deliverable document (**D7.1**).

Internal communication and dissemination:

To ensure an efficient and organized communication among the B-GOOD consortium members, several tools are being used:

- Written communication and file sharing: while e-mails are used moderately and kept only to inform all members of important matters, the software Microsoft Teams is used very frequently in order to guarantee a structured and optimal communication. This notably allows to organize the general consortium discussions into specific channels, to have live conversation between individual members or dedicated groups and to share files. Additionally, the B-GOOD website has an internal interface that allows to access information about the project's agenda, an easy access to stored material, and to report about activities carried on for B-GOOD (**Annex 2**).
- Online meetings: to discuss about the project organization and planning activities, online live discussions are set up in frequent bases. Notably, an online call open to all project consortium members is occurring monthly.

- Physical meetings: to foster communication and interactions between the consortium members, physical meetings are organized twice a year in one of the member's institution. These events permit to meet personally and to ensure close interaction, to facilitate the exchange of results and expertise, and to foster collaboration in a good social atmosphere within the project (**Annex 3**).
- Dissemination reminders: a dissemination reminder is sent to partners monthly in a visually-engaging html newsletter format. The aim of this reminder is to stimulate and provide instruction for partners on how to and when to provide their results to the dissemination team. The reminder features a success story from the previous month, short instruction on interesting types of content and a detailed communication guide that partners can use.

External dissemination and communication:

To maximize the outreach and impact of B-GOOD, very diverse channels and tools are being used:

- Consortium member networks (Dissemination): a direct way to ensure efficient communication and dissemination of B-GOOD activities is to use the broad network of the consortium members. This way, direct contact can be established with known individuals, groups, associations and institutions, offering the possibility to target known audiences. Notably, an annual newsletter to update interested audiences is running and helps spread different information about the project.
- General media (Communication): broad audience media are used for presenting B-GOOD to the general public and mass-media audiences, and include communications of varied types, such as newspaper, websites and radio. Generally, press releases will be issued when important results are achieved to inform mass media and generate interest (**Annex 4**).
- Social media (Communication + Dissemination): social media are an inevitable and efficient way to reach a broad general audience. B-GOOD therefore uses some social media to expose the project to the public (**Annexes 5 and 6**). These are described in details in another deliverable document (**D7.1**). An account has been also created on the most popular video sharing platform YouTube to host B-GOOD videos (**Annex 7**). Additionally, a B-GOOD project page has been created on ResearchGate to reach more specifically the scientific community (**Annex 8**).
- Specialized non-scientific media (Dissemination): to reach specific stakeholders, communication and dissemination of B-GOOD is going through specialized channels, such as beekeeping and apiculture journals to present and inform about the project.
- Specialized scientific media (Dissemination): specialized scientific media such as science news distributors (**Annex 9**) are used to help informing specialized and/or particularly interested audience such as scientists and companies.
- Scientific journals (Dissemination): for the publication of information about the project and more particularly about the scientific results of B-GOOD, scientific articles will be prepared and published in open access journals. Notably, a special issue team will be set up to plan the topics and processes for publishing a Special Issue in relevant open-access science journals. Print-friendly PDFs of the B-GOOD results will be generated every twelve months and distributed to the email alert subscribers and other relevant mailing lists.
- Scientific events, associations and networks (Dissemination): presenting B-GOOD to the scientific community is an efficient way to establish collaborations with external members, foster discussions to further gather feedback from diverse experts. This is particularly relevant as several on-going EU initiatives or projects (e.g. EU Bee Partnership, MUST-

B, POSHBEE, etc.), associations and large international fora (APIMONDIA, EurBee, IBRA, OIE, etc.) and research networks (e.g. COLOSS, **Annex 10**) work on similar topics. The different scientific events where B-GOOD has been and will be presented are detailed in specific project milestone reports about symposia (**MS39, 42, 43 and 44**).

- Non-scientific events (Communication + Dissemination): to reach out to non-scientists interested in science and/or honey bees or companies and industries, B-GOOD members are attending several events open to the public and presenting the project there (**Annex 11**). For communication matters general public awareness events may be considered to showcase the importance of B-GOOD's achievements for bee health and society.
- B-GOOD meetings and workshops (Dissemination): during the life of B-GOOD, several meetings and workshops are being organized. For instance, interviews and participatory workshops are being conducted with stakeholders and beekeepers throughout Europe by members of work packages 4 and 8. Additionally, to ensure significant interactions with beekeepers and assess their needs and feedbacks, a minimum of 25 workshops are taking place at various partners' institutions. Additionally, a training school will be organized in the second half of the project to inform and educate beekeepers and scientists about the new technologies developed within the project.
- Online meetings and webinars (Dissemination): to enhance visibility and facilitate the access to information about B-GOOD, a series of online events and webinars are being created and implemented. Notably, a YouTube channel was created and allows to visualize interviews of the project members, presentation of the technologies and results of the project (**Annex 11**).
- Online surveys and forum (Dissemination): to discuss and gather feedbacks (notably from stakeholders including beekeepers), several surveys and fora are set-up online (**Annex 12**). This allows for instance to gather information about the expectations and wishes of participants prior the organization of workshops in order to design more pertinent events that respond to the need of the public, or to evaluate the event once it has occurred.

n.b. Given the current restrictions caused by the Covid-19 pandemic, physical interactions have been cancelled for an undetermined duration. Some of the above-mentioned items may be disrupted by this Force Majeure situation. However, measures are being implemented to limit the disturbance, e.g. physical events are being replaced by online data collection, meetings and webinars whenever possible.

1.5. Privacy and Acknowledgments

All communication and dissemination activities of B-GOOD are being conducted with respect of protection of personal data, privacy and ethics principles and guidelines, as clearly exposed in the relevant B-GOOD deliverables (**deliverables D10.1 and D10.2**). Additionally, to ensure data privacy a data management plan has been created and approved by the consortium (**deliverable D9.2**). Finally, all activities of B-GOOD include acknowledgment and/or references to the European Union and European Commission for the funding of the project, constructive feedbacks and evaluation when relevant.

2. Specific communication strategy

2.1. Key objectives

The specific objectives for the communication activities of B-GOOD are the following:

- maximize the visibility and outreach of the project;
- boost the project's impact at different geographical scales;
- maintain the internal and external flow of information throughout the whole project;
- use awareness of general public to provide them with concrete actions;

- contribute to the knowledge about sustainability of beekeeping and pollinator conservation.

2.2. Communication methodology:

Not all of the above-mentioned tools and channels apply to all targeted audiences. For instance, a scientific paper may seem very indigestible to the general public as it contains many specific wording and complex reasoning. By contrast, oversimplification of specific terms may be inadequate when interacting between scientific peers as it may lead to misunderstandings.

Therefore, specific strategies must be tailored to targeted audience groups. These strategies aim at communicating key messages to different public with the help of diverse tools (Table 2). To do so, local partners and consortium members design their means of communications according to their activities, e.g. use an adapted language specific to the targeted public. Additionally, the B-GOOD members must think ahead about the objectives, key messages and relevance of the exposed contents and ideas in order to make their uptake as clear as possible. For instance, when communicating with the general public, simple wording and comparisons with situations of the everyday life can enhance general interest and increase the outreach of B-GOOD.

Table 2: Overview of B-GOOD communication activities

The aims of the communication activities carried with different audience groups, some examples of key messages to bring across and the tools and channels to do so are listed. References to relevant annexes are indicated in the text (see **section 1.4.2**).

Targeted Group	Aim(s)	Key messages examples	Tools / Channels used
<i>B-GOOD consortium</i>	- develop and maintain good internal communication between members of the project	- good collaborations need good communication - teamwork makes the dream work	- e-mails - B-GOOD website - Teams software - monthly consortium calls - online meetings - physical meetings and workshops
<i>Beekeepers</i>	- create visibility, awareness, - develop trust and openness - assess needs of potential end-users	- healthy and sustainable beekeeping is beneficial for all - science can help beekeepers - new technologies can help management practices	- B-GOOD website - social media
<i>Scientists</i>	- inform about project aim and vision - create visibility and impact - discussions with the community	- B-GOOD project description - we are willing to collaborate - we are open to suggestions and constructive comments	- B-GOOD website - social media - science news distributors (e.g. Eurekalert)
<i>Policy makers</i>	- inform about project development	- need for development of healthy and	- B-GOOD website - social media

	- develop network and gather support	sustainable beekeeping for food security and public health - B-GOOD is active and productive	
<i>General public</i>	- create visibility - develop public support - enhance awareness	- need for development of healthy and sustainable beekeeping for food security and public health	- B-GOOD website - general media (e.g. radio,) - social media - science news distributors - forum and events

2.3. Timeline of communication activities

The principal aims of the communication activities of B-GOOD are to make the project visible and known to different audiences. To do so, these activities have started before the beginning of the project and will last until its completion (Figure 2).

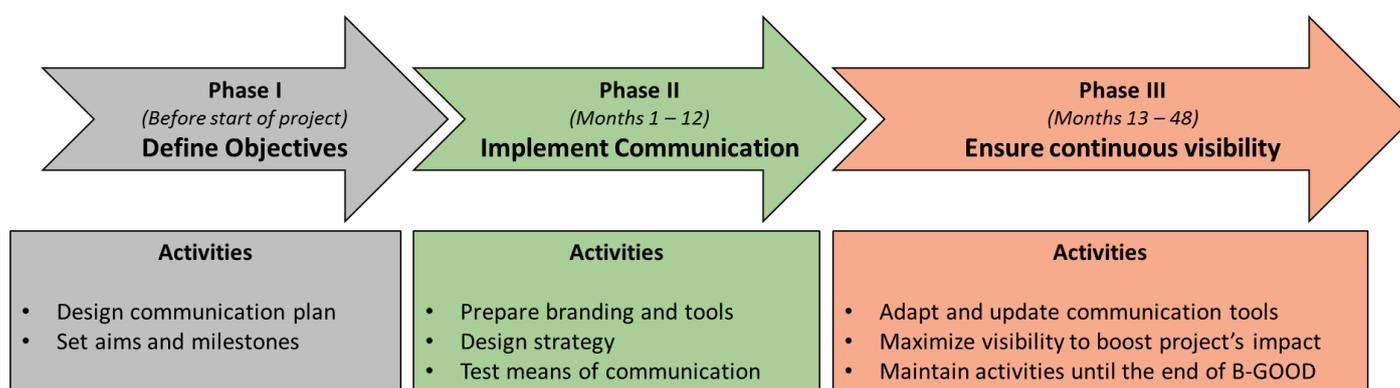


Figure 2: Organisation of the communication activities. Scheme summarizing the overall timeline of the communication of the B-GOOD project. The different phases and corresponding main communication activities of the project are presented.

3. Specific dissemination strategy

3.1. Key objectives

To promote the technologies developed by B-GOOD members and ensure good visibility of its results, the specific objectives of the dissemination strategy are:

- make the results available to all (e.g. open access);
- make the results understandable by all (e.g. tailor the terminology to audience);
- gather feedback to improve and tailor technologies to the needs of end-users;
- generate market demand for B-GOOD technologies and political support;
- assess needs and demands for B-GOOD technologies;
- ensure that relevant results are shared with each stakeholder group via the most appropriate channel and form.

3.2. Dissemination methodology:

Throughout the project's duration, B-GOOD consortium members are generating a great quantity of data. An important aspect of the dissemination strategy of B-GOOD is therefore to optimise the dissemination of these data and boost the uptake by different audience by making it readily available to the targeted groups.

Therefore, the dissemination activities of B-GOOD have for principal aim to translate the data and results obtained within the project for the different audiences. The same data can therefore be used in multiple ways, depending on whom it is presented to. By making the results more easily available and understandable, the project members can more readily satisfy the curiosity of their audience, keep them informed about the project outcomes and developments and foster future interactions. Notably, as B-GOOD aims at developing innovative technologies for beekeepers, the dissemination of the results will be of high importance to keep the targeted stakeholders informed about the project's development and to initiate the exploitation of these results in optimal conditions.

Table 4: Overview of B-GOOD dissemination activities

The aims of the communication activities carried with different audience groups, some examples of the type of information to be disseminated and the tools and channels to do so are listed. References to relevant annexes are indicated in the text (see **section 1.4.2**).

Targeted Group	Aim(s)	Type of information	Tools / Channels used
<i>Beekeepers</i>	- make the results available and generate market demand	- results - extension articles - videos (e.g. protocols to use tools)	- specific media channel (e.g. beekeeping journals) - physical meetings (workshops) - webinars
<i>Scientists</i>	- foster collaboration through data exchange	- results - ideas and projects - flyers - posters - scientific articles	- scientific journals - science news distributors - specialized social media (e.g. ResearchGate) - conferences and workshops - online seminars - trainings - COLOSS network
<i>Industries and companies</i>	- gather support and generate market demand - create supply and disseminate products	- data - results - knowhow	- physical meetings (e.g. workshops) - conferences - specialized media
<i>Policy makers</i>	- enhance support by showing findings - inform about progress	- analysed data - reports and forms	- e-mails - meetings and conferences - contact with dissemination members of the European commission

3.3. Timeline of dissemination activities

The principal aim of the dissemination activities of B-GOOD are to make the project results available and understandable to different audiences. To do so, these activities have started at the beginning of the project and will last after its completion (Figure 3).

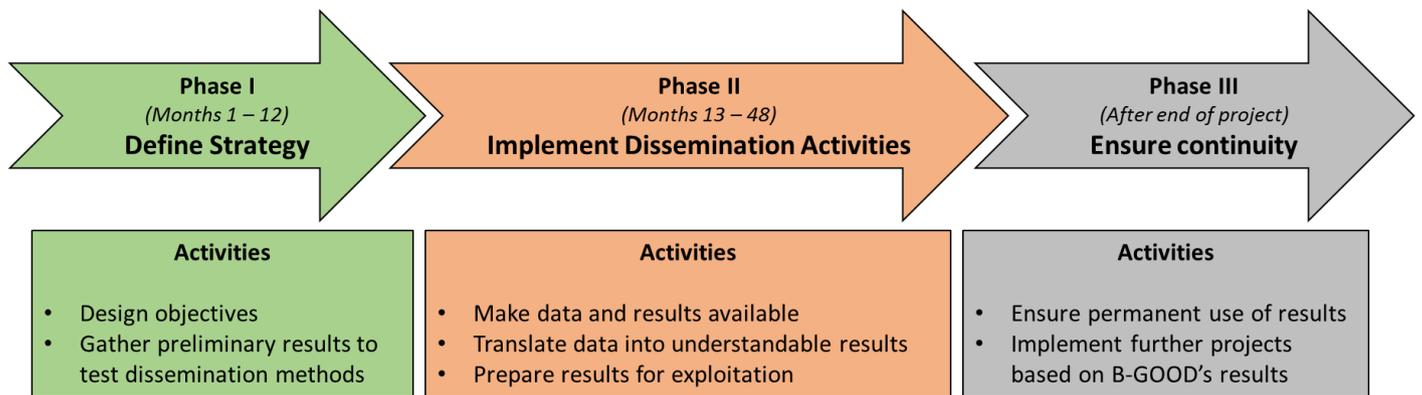


Figure 3: Organisation of the dissemination activities. Scheme summarizing the overall timeline of the dissemination of the B-GOOD project. The different phases and corresponding main dissemination activities of the project are presented.

4. Monitoring and Evaluation

As it enables to better organise and to improve the communication and dissemination activities of B-GOOD, monitoring and evaluation both constitute core components of work package 7.

The monitoring of activities generally starts prior to events, and each event must be strategically planned ahead and communicated to members of the work package 7 through diverse ways. For instance, a survey that can be accessed on the personal interface of the B-GOOD website permits to communicate information about the communication activity of its members (**Annex 13**). This way, the information about these activities can be stored in a homogenous way and accessed readily when needed.

In addition, a combination of qualitative and quantitative indicators will be used to measure the impact of the different groups of communication channels outlined above to ensure that impact is measured not just in terms of number but also on the influence it has achieved in the relevant group (Table 5).

Table 5: Overview of indicators used to evaluate B-GOOD

Table outlining the quantitative and qualitative indicators that will be used to measure impact for the different channels. The minimum objective ('min. ') is indicated when relevant.

Channel / activity	Quantitative	Qualitative
<u>Consortium member networks</u> (on-demand emails & annual newsletter)	- number of email recipients (min. 15) - size of newsletter audience (min. 100)	- deliveries: open ratio (min. 30% of delivered emails opened) - links clicks (min. 15 per link)
<u>Website</u>	- number of users (min. 2000 per year) - number of visits (min. 4000 per year)	- page depth - session length (min. 5 minutes)
<u>General media</u> (press releases, newspaper, websites and radio)	- number of published items (min. 2 per year)	- prestige of title and scale (local, national, international)
<u>Social media</u> (Facebook, Twitter, ResearchGate, YouTube)	- number of posts (min. 1 per week Twitter; 1 every 2 weeks Facebook); - number of likes, shares, retweets (min. 5 per post)	- structure of audience, target will be to have representatives of all groups
<u>Specialized non-scientific media</u> (beekeepers journal articles)	- number of published items (min. 2 per year)	- prestige of title and scale (local, national, international)
<u>Specialized scientific media</u> (science news distributors)	- number of published items (min. 2 per year)	- prestige of title and scale (local, national, international)
<u>Scientific events, associations and networks</u>	- number of events attended (min. 3) - number of attendees (min. 30 per event)	- type of engagement (presentation, stand, poster)

(EU projects events, associations and large international fora and research networks)		
<u>Non-scientific events</u>	- number of events attended (min. 3 per year) - number of attendees (min. 30 per event)	type of engagement (e.g. presentation, stand, poster)
<u>B-GOOD meetings and workshops</u> (stakeholder interviews, 25 workshops, a training school)	- number of events organised (min. 6 per year) - number of attendees (min. 15 per event)	- evaluation score received after the meeting; recommendations
<u>Online meetings and webinars</u>	- number of events attended (min. 3) - number of attendees (min. 15 per event)	- evaluation score received after the meeting; recommendations
<u>Online surveys and forum</u>	- number of responses (min. 50% of contacted) - number of members (min. 20)	- completed surveys ratio - monthly activity indicators

Additionally, in order to constantly adapt and ameliorate the quality of their activities, B-GOOD members are evaluated at different levels, detailed below.

4.1. Internal evaluation

First, the B-GOOD members are asked to provide each other with constructive comments and opinions internally. During the design of the project, a great number of milestones has been set in order to guide the members of the project and provide a way to frequently assess their activity. By reporting on these milestones and on the different deliverables through specific documents, members of B-GOOD can also inform their colleagues about their activity and gather feedback. For instance, B-GOOD members are asked to review these different deliverable and milestone reports prior to submission in order to provide feedback and constructive comments to improve their work.

4.2. External evaluation

Evaluation can also be provided directly by different members of the targeted audience. For instance, during or after the communication and dissemination events (e.g. workshops), the feedback of the attendants can be obtained by the organizers in different ways. First, by directly asking to their audience during the event. Then, by offering them to send a feedback after the event. Within B-GOOD, this can be done via a survey made available on the project's website.

External evaluation is also provided by the European Commission throughout the whole duration of the project, and during specific evaluation periods (e.g. mid-term and final). Concerning the communication and dissemination activities, members of the work package 7 plan to produce nine deliverable reports.

5. Acknowledgements

The authors would like to thank the B-GOOD consortium members for a very fruitful collaboration and the people involved in the internal reviewing process of this document for their helpful advices.

6. References

-none-

7. Annexes

Overview of the annexes:

- 7.1. Annex 1: B-GOOD website
- 7.2. Annex 2: B-GOOD website (internal interface)
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7.1. Annex 1: B-GOOD website

Screenshot of the website created by Pensoft, main page for external and internal users (from the 22.04.2020), to see the website follow this [link](#)

B-GOOD Home About Partners News Events Media Center Library Contact Login

GIVING BEEKEEPING GUIDANCE BY COMPUTATIONAL-ASSISTED DECISION MAKING

Search

B-GOOD will pave the way towards healthy and sustainable beekeeping within the European Union by following a collaborative and interdisciplinary approach. Merging data from within and around beehives as well as wider socioeconomic conditions, B-GOOD will develop and test innovative tools to perform risk assessments according to the Health Status Index (HSI).

B-GOOD has the overall goal to provide guidance for beekeepers and help them make better and more informed decisions.

Six B-GOOD developed technologies will feed real-time data into the platform

- Forecast risk-oriented stakeholders to produce long-term statistics.
- GIS and spatially-referenced temperature measurements.
- Advanced bee counters (via normally used pollen traps) data/visual discrimination.
- Sensors to detect pesticide residues.
- Sensors to detect honey bee viruses of high health relevance.
- Analysis tool for genetic insights.

Latest from the project

- JOIN THE HIVE!**
We are looking for a Post-Doctoral Research Fellow at Nottingham Trent University.
Join the B-GOOD Hive: We are looking for a Research Fellow to join the team
Nottingham Trent University are seeking a candidate to work as a post-doctoral research fellow as part of a multi-disciplinary team in support of research funded by the EU under... [read more](#)
- Assembly of the BEEP bases for tier 1 of B-GOOD**
This update on the progress of the BEEP bases was provided by April van Boven, Wednesday the 26th of January. Stephen Roberts of the BEEP team asked the bases what... [read more](#)
- B-GOOD joined the 6th annual BEES Christmas Market in Brussels**
The B-GOOD project was represented at the 2019 BEES Christmas Market, which took place on 22 December in Brussels, Belgium. The scientific networking Christmas-themed event... [read more](#)

Tweets by @B_GOOD

B-GOOD Paper Reviewer
Adriana @Grimmer
The outbreak has posed a grave challenge to the migratory beekeepers, who chase blossoms from one state to another. by @B_GOOD

Subscribe Calendar Feedback

This project receives funding from the European Union's Horizon 2020 research and innovation programme under grant agreement No 817622. [Read our Privacy Policy](#) Powered by **PENSOFT**

7.2. Annex 2: B-GOOD website (internal interface)

Main page of the internal interface of the website, access restricted to the consortium members (screenshot from the 22.04.2020), to see the website follow this [link](#)

The screenshot shows the internal interface of the B-GOOD website. At the top left is the B-GOOD logo. To its right is a navigation menu with links for Home, About, Partners, News, Events, Media Center (with sub-links for Report forms), Library (with sub-link for Living documents), Contact, User manual (with sub-link for Next meeting), and a user profile for Alexis Beaurepaire. Below the navigation is a search bar. The main content area contains five buttons: 'Internal Repository', 'Users', '+ Publish news', '+ Publish event', and '+ Add external document'.

B-GOOD will pave the way towards healthy and sustainable beekeeping within the European Union by following a collaborative and interdisciplinary approach. Merging data from within and around beehives as well as wider socioeconomic conditions, B-GOOD will develop and test innovative tools to perform risk assessments according to the Health Status Index (HSI).

B-GOOD has the overall goal to provide guidance for beekeepers and help them make better and more informed decisions.

7.3. Annex 3: B-GOOD consortium Meeting at UCOI in December 2019

Picture of the participants of the B-GOOD consortium meeting organized at the University of Coimbra, Portugal, on the 2nd and 3rd of December 2019



7.4. Annex 4: Portuguese radio programme about B-GOOD

Transcript (translated in English) of the programme “90 Seconds of Science” that was played several time per day for a week (23-29.03.2020) on the Portuguese radio Antena 1. The interviewee is Pr. Paulo Sousa, member of the B-GOOD consortium from UCOI.

José Paulo Sousa:

My name is José Paulo Sousa, and I am a professor at the Department of Life Sciences and a senior researcher at the Centre for Functional Ecology of the University of Coimbra.

The B-GOOD project is a European project with the main objective to provide European beekeepers with the latest technologies so that they can monitor the health of their colonies in a simpler and continuous manner. The project also aims to validate and make full operational the Health Status Index developed by the European Food Safety Authority (EFSA).

Basically, each hive is equipped with several sensors that give, in real time, an indication of the colony's development due to changes in the weight of each hive and also changes in temperature and sound, parameters that are important for the assessment of colony's health. The data can be easily accessible via an app, giving information to beekeepers about potential problems in the colony, for example the presence of some diseases such as Varroa and Nosema, etc, affecting colony's effectiveness or if the colony needs some type of intervention. So, beekeepers can save resources and anticipate some of the beekeeping actions. Also, new type of sensors is being developed and tested in the project that can give early indication of a couple of phenomena in the colony like swarming.

The project started six months ago. Part of the technology itself is developed and its being tested. In this first phase, what is happening is the implementation of this technology in hives (what we call “smart hives”) in eight countries (Portugal included). We will start testing this methodology now in the spring with the start of the beekeeping season.

The CFE-UC team is also involved in developing models to assess and map flower resources important for bees across Europe and identify key areas for beekeeping. The collection of field data will start now in spring where flowers start to bloom.

Announcer:

“90 seconds of science” is a production with the help of Antena 1, ITQB and FCSH from the New University of Lisbon, with the support of Santander Universities programme and Novartis.

7.5. Annex 5: B-GOOD Facebook page

Screenshot of the B-GOOD Facebook page (“B-GOOD H2020 Project”, from the 22.04.2020)



7.6. Annex 6: Twitter account of B-GOOD

Screenshot of a tweet of the B-GOOD profile (@BGOOD_H2020)

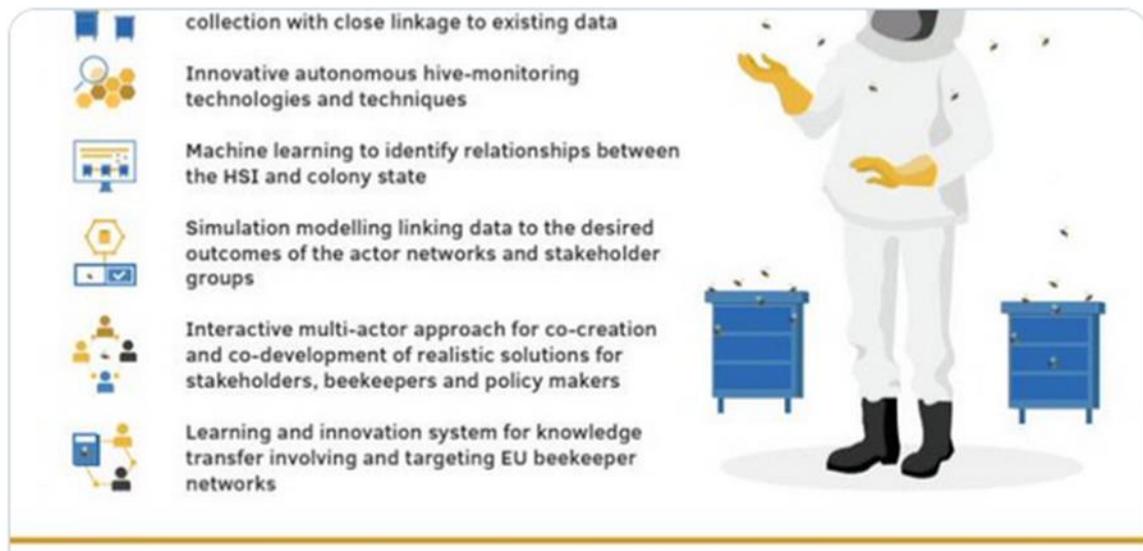


Right after [#PollinatorWeek](#) comes our first press release 🐝:

eurekaalert.org/pub_releases/2...

Read how B-GOOD will use [#bigdata](#) & innovations for healthy [#bees](#)

[#beekeeping](#) [#apiculture](#) [#pollination](#) [#beehealth](#)
[#H2020research](#) [@EFSA_EU](#) [@CORDIS_EU](#)



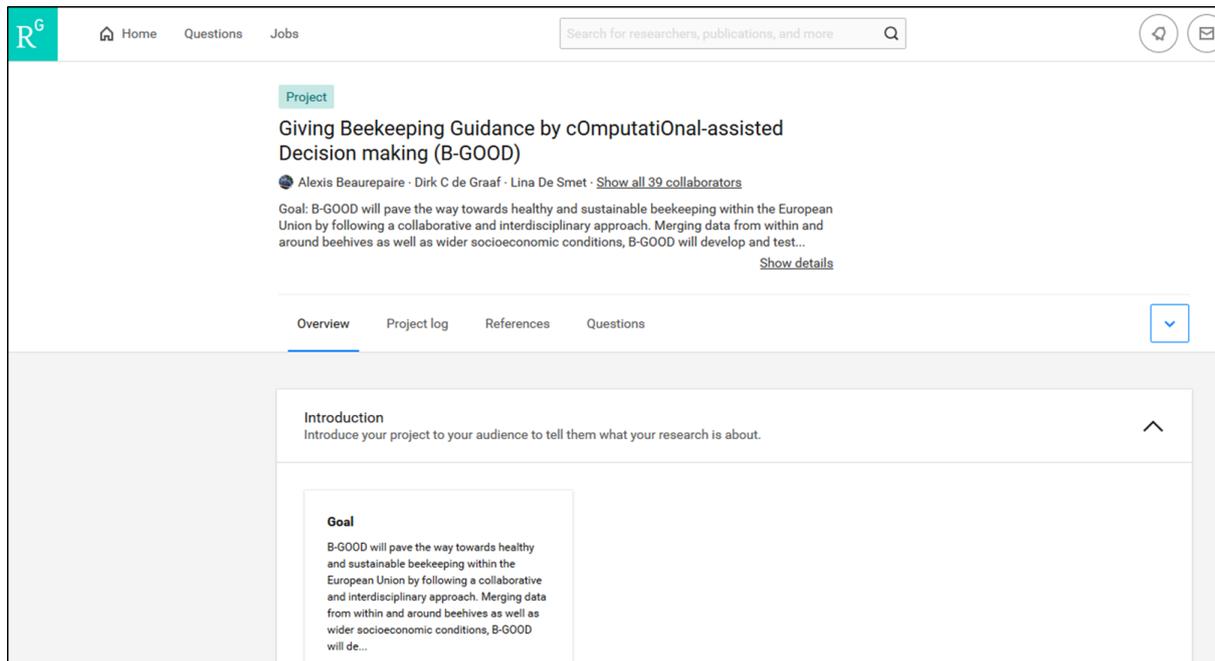
7.7. Annex 7: B-GOOD YouTube Channel

Screenshot from the newly created YouTube channel of B-GOOD, established to host the first project overview video (featuring project coordinator Dirk de Graaf). Four more videos presenting the project will be released until the end of 2020.



7.8. Annex 8: Research Gate page of B-GOOD

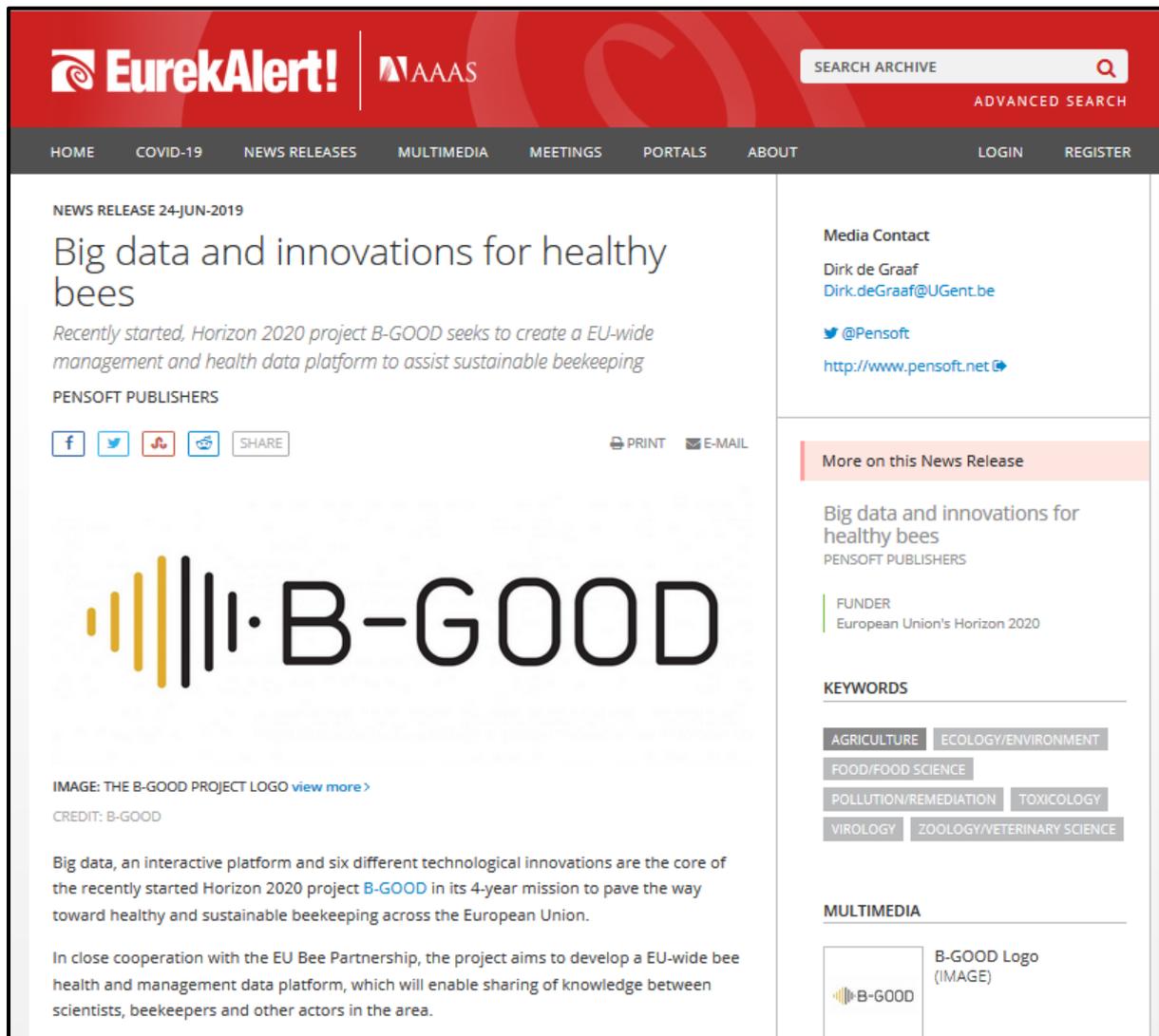
Screenshot of the B-GOOD Research Gate project page (from the 28.04.2020). The page is accessible on this [link](#).



The screenshot displays the Research Gate project page for B-GOOD. At the top, there is a navigation bar with 'Home', 'Questions', and 'Jobs' links, a search bar, and social media icons. The main content area features a 'Project' tab and the title 'Giving Beekeeping Guidance by cOMputatiOnal-assisted Decision making (B-GOOD)'. Below the title, the project is attributed to Alexis Beaurepaire, Dirk C de Graaf, and Lina De Smet, with a link to 'Show all 39 collaborators'. A brief description states: 'Goal: B-GOOD will pave the way towards healthy and sustainable beekeeping within the European Union by following a collaborative and interdisciplinary approach. Merging data from within and around beehives as well as wider socioeconomic conditions, B-GOOD will develop and test...'. A 'Show details' link is provided. Below this, a navigation menu includes 'Overview', 'Project log', 'References', and 'Questions'. The 'Introduction' section is visible, with the text: 'Introduce your project to your audience to tell them what your research is about.' Below the introduction, a 'Goal' section is partially visible, containing the same text as the project description.

7.9. Annex 9: B-GOOD description in a science news distributor

Article about B-GOOD on the website “EurekAlert!” posted at the start of the project (24.06.2019), to access it follow this [link](#)



The screenshot shows a news release on the EurekAlert! website. The header includes the EurekAlert! logo, the AAAS logo, and a search bar. The navigation menu contains links for HOME, COVID-19, NEWS RELEASES, MULTIMEDIA, MEETINGS, PORTALS, ABOUT, LOGIN, and REGISTER. The main content area features the title "Big data and innovations for healthy bees" and a sub-headline: "Recently started, Horizon 2020 project B-GOOD seeks to create a EU-wide management and health data platform to assist sustainable beekeeping". Below the headline, it identifies "PENSOFT PUBLISHERS" and provides social media sharing options (Facebook, Twitter, YouTube, LinkedIn) and buttons for PRINT and E-MAIL. A large image of the B-GOOD logo is displayed, with a caption: "IMAGE: THE B-GOOD PROJECT LOGO view more >". The credit line reads "CREDIT: B-GOOD". The main text describes the project's mission: "Big data, an interactive platform and six different technological innovations are the core of the recently started Horizon 2020 project B-GOOD in its 4-year mission to pave the way toward healthy and sustainable beekeeping across the European Union." It also mentions cooperation with the EU Bee Partnership. On the right side, there is a "Media Contact" section for Dirk de Graaf (Dirk.deGraaf@UGent.be, @Pensoft, http://www.pensoft.net). Below that, a "More on this News Release" section lists the title, publisher, funder (European Union's Horizon 2020), and a list of keywords: AGRICULTURE, ECOLOGY/ENVIRONMENT, FOOD/FOOD SCIENCE, POLLUTION/REMEDIATION, TOXICOLOGY, VIROLOGY, and ZOOLOGY/VETERINARY SCIENCE. A "MULTIMEDIA" section at the bottom right shows a thumbnail of the B-GOOD logo.

7.10. Annex 10: Website of the COLOSS research network

Screenshot (from the 22.04.2020) of the front website page of the research network COLOSS (prevention of COLony LOSSes) currently groups 1398 members from 95 countries. To see the website, use this [link](#)



7.11. Annex 11: B-GOOD information stand at the BEES Market

Presentation of the B-GOOD poster by Dana Freshley (UGent) at the BEES market which took place on the 20.12.2019 in Brussels.



7.12. Annex 12: B-GOOD online survey

Screenshot of the online survey sent to the participants of B-GOOD workshops prior to the event to gather information about their wishes in order to tailor the event accordingly.

The screenshot shows a survey form with a yellow and white color scheme. At the top left is the B-GOOD logo, which consists of a stylized bee icon made of vertical bars of varying heights, followed by the text 'B-GOOD'. Below the logo is the title 'Pre-workshop Survey B-GOOD' and a confidentiality statement: 'This survey is confidential and the data will be assessed for internal use only, notably to help the B-GOOD workshop organizers tailoring the events to the needs of participants.' The form contains three main sections of questions, each with radio button options and a text input field for 'Autre'.

B-GOOD

Pre-workshop Survey B-GOOD

This survey is confidential and the data will be assessed for internal use only, notably to help the B-GOOD workshop organizers tailoring the events to the needs of participants.

What B-GOOD event will you go to? (please write name, date and place)

Votre réponse _____

How did you hear about the event?

- From the member(s) of B-GOOD organizing the event
- From another member of B-GOOD
- From a friend/colleague
- From an online post
- Autre : _____

What are the topic you would like to discuss?

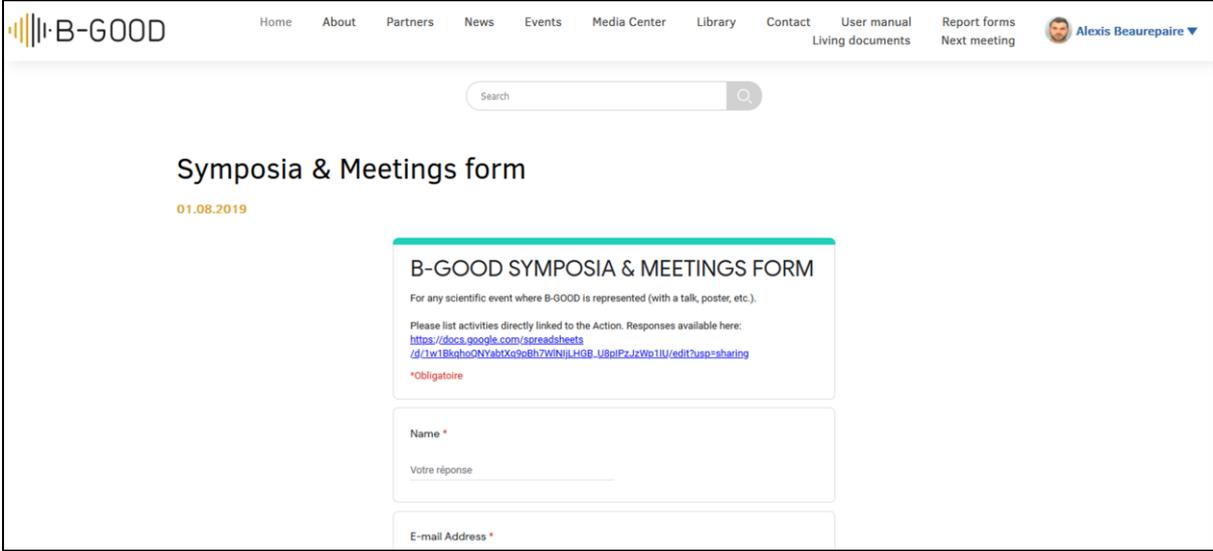
- New technologies and beekeeping
- Sustainable beekeeping
- Past and Present challenges of beekeeping
- Honey bee health
- Beekeeping management
- Research in honey bee health
- Autre : _____

You are

- A hobbyist beekeeper
- A professional beekeeper
- A bee inspector or bee trainer
- A consumer (not directly related to beekeeping)
- A scientist
- Autre : _____

7.13. Annex 13: B-GOOD online symposia & meetings form

Screenshot of the online survey accessible by the members of B-GOOD to report on their symposia and meetings activities.



The screenshot shows the B-GOOD website interface. At the top left is the B-GOOD logo. The navigation menu includes: Home, About, Partners, News, Events, Media Center, Library, Contact, User manual, Report forms, and Next meeting. A user profile for Alexis Beaurepaire is visible in the top right. A search bar is located below the navigation. The main heading is "Symposia & Meetings form" with a date of "01.08.2019". The form content includes:

- B-GOOD SYMPOSIA & MEETINGS FORM**
- For any scientific event where B-GOOD is represented (with a talk, poster, etc.).
- Please list activities directly linked to the Action. Responses available here:
https://docs.google.com/spreadsheets/d/1w1BkshoQNYahXo9e8h7WINJI_HGB_U8eiPz-JWp1IU/edit?usp=sharing
- *Obligatoire
- Name ***
Votre réponse
- E-mail Address ***