

Monitoring System for Biodiversity-oriented Business Premises





Content

1	Introduction	4
2	Biodiversity as an international goal	5
3	Developing biodiversity indicators	6
4	The BOP monitoring system proposal	8
5	BOP data assessment and representation	10
Bibli	iography	11
Mor	nitoring plan	14
1	Biodiversity area	15
1.1	Set #1: BOP's biodiversity inside company areas	15
1.1.1	BOP extension	15
1.1.2	Habitat and species selection in the design of BOP	20
1.1.3	Management of BOP	22
1.1.4	Presence of key indicator species inside BOP and monitoring	23
1.1.5	Control of alien invasive species	24
1.2	Set #2: BOP improves biodiversity outside company areas	25
1.2.1	BOP outside company areas	25
1.2.2	BOP's connections with regional ecological corridor /green infrastructure initiative	25
1.3	Set #3: BOPs contribution or participation in large-scale initiatives	30
1.3.1	BOP contributes to adopt biodiversity actions in the municipality	30
	Contribution to conservation programs of regional /national nature protection administrations or other stakehold GOs)	
2	Social area	29
2.1	Set #1: BOPs influence in company's managers and employees awareness on biodiversity	29
2.1.1	Company's managers awareness of BOP and biodiversity	29
2.1.2	Company's employees awareness of BOP and biodiversity	30
2.2	Set #2: BOP's contribution to employee's awareness raising and well-being	31



	BOPs contribution to promote awareness of staff on biodiversity (dissemination of information, participation in eness-raising activities, "Open Doors Day," etc.)	31
2.2.2	Acceptance of BOP and contribution to staff well-being	32
2.3 (laro	Set #3: BOPs contribution to awareness raising of stakeholders and citizens on biodiversity cialinitiat)	336
	BOP's contribution to raise awareness of stakeholder and citizens (dissemination of information, participation in eness-raising activities, "Open Doors Day," etc.)	33
3	Corporate area	35
3.1	Set #1: BOP's integration into the management of the corporation	35
3.1.1	BOPs contribution to environmental management systems and sustainability policies	35
3.1.2	BOP economic aspects	36
This se	et of questions is focused on the economic investment made in BOP's, as well as the maintenance costs incurred	36
3.2	Set #2: Biodiversity integration across the company	.40
3.2.1	Integration of biodiversity into the management of the company	40
	et of questions aims to assess whether BOP contributed to the consideration of biodiversity by other units of the any in order to improve the overall biodiversity performance.	40
3.3	Set #3: Biodiversity promotion across business sector	.41
active nvitin	The company promotes the integration of biodiversity into management decisions in the business sector (by being member of a Business & Biodiversity initiative, motivating business associations and or chambers of commerce, and other companies to exchange experience, or via other actions) and contributes to inform policy stakeholders, commental authorities, and others.	
Ann	ex I	40
Ann	ex II	40
Ann	ex III	41



1 Introduction

Biodiversity-oriented design of business premises (BOP) is a pragmatic approach to contribute to the protection of biodiversity – especially in densely populated regions. BOPs provide permanent or temporary habitats for local fauna and flora and contribute to the creation of ecological corridors and the interconnection of the so-called green infrastructure.

A biodiversity-oriented and needs-based design increases the functionality and intrinsic value of a property in many respects: Green roofs reduce the necessity for air-conditioning (thus saving energy), improve the microclimate and the attractiveness for employees and guests. BOP offers good opportunities to sensitize and actively involve employees for biodiversity, improves the working atmosphere and increases employees' identification with the company. A biodiversity-oriented design also improves the surrounding ecological infrastructure. In this way, a company contributes to the protection of biodiversity and at the same time improves the overall attractiveness of its premises.

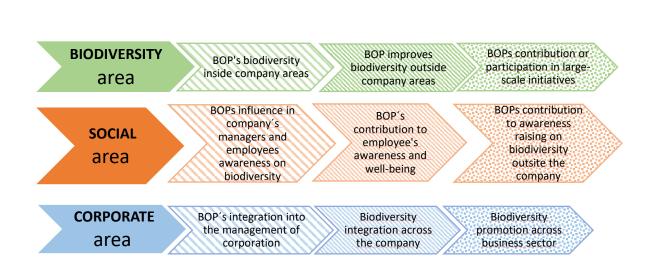
This document is the conceptual approach and background of the monitoring system developed by Ecoacsa and UPM, to assess the BOP's actions as a result of the adoption of BOP criteria in the management of their corporative and real state green areas, gardens or infrastructures oriented to biodiversity over time.

This document contains the questions that should be answered by companies' managers related to three interaction areas between BOP and companies: biodiversity, staff well-being and biodiversity integration into businesses. The aim of the questionnaire is to collect data for a monitoring system on BOP. All companies that have existing BOP are welcome to participate filling in this monitoring survey. In the case of a small company interested, the person in charge of the management of the biodiversity-oriented business premises (BOP) would be the right person to complete the questionnaire. In the case of larger companies, involvement of various managers covering the three aforementioned areas is recommended to fulfil the questionnaire.

Questions are grouped into three large sets -called areas of concern -, which are biodiversity, social and corporate. Each area is structured into three different set of questions (see image 1). For further details, see the document "Monitoring System for Biodiversity-oriented Business Premises". Depending to the level of knowledge of interviewees regarding their BOPs, it is recommended that each set of questions corresponding to each area of concern (biodiversity, social, corporate) will be independently responded.

Usually, required information is known by managers, but eventually in case they don't know all answers, the required data can be obtained internally in the company or from service provider(s). Along the text, some conceptual clarifications for managers are included in blue boxes. In addition, this document includes two annexes detailing both habitats and alien invasive species lists to facilitate responses related to these topics.





Set of

questions 2

Set of

questions 3

Image 1. Matrix representation of the BOP monitoring system.

2 Biodiversity as an international goal

Set of

questions 1

The United Nations and its agencies, such as the Conference of the Parties of the Convention on Biological Diversity (CBD), are defining long-term goals like the Sustainable Development Goals (SDGs, September 2015) and the post-2020 biodiversity framework to replace the Strategic Plan for Biodiversity 2011-2020 and its Aichi Biodiversity Targets (CBD, 2019). These goals are being reinforced within several European strategies, initiatives and directives such as the EU Biodiversity Strategy (2011), the EU Pollinators Initiative (Underwood *et al.* 2017), the so called non-financial reporting directive (NFRD, Directive on disclosure of non-financial and diversity information, EU, 2014) and the Action Plan for Financing Sustainable Growth (European Commission, 2018).

To date, 190 out of 197 parties have adopted at least one National Biodiversity Strategies and Action Plans (NBSAPs) in line with the Strategic Plan for Biodiversity 2011-2020 mentioned above representing great success. However, the European Parliament resolution of February 2016 on the mid-term review of the EU's Biodiversity Strategy clearly exhibited its concern about the continuous loss of biodiversity and expressed that the 2020 targets will not be achieved without additional, substantial and continuous efforts. Recently, the summary for policymakers of the global assessment report on biodiversity and ecosystem services by IPBES, the Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services (Díaz et al., 2019) specifically pointed out that "human actions threaten more species with global extinction now than ever before". This report states that species extinction rates are already at least tens to hundreds of times higher than the average over the past 10 million years and warns that if no actions are taken there will be a further acceleration in those rates (Díaz et al., 2019). As a reaction to this situation, governments are defining new NBSAPs and updating the oldest that had been submitted by Parties of the Convention on the Biological Diversity (CBD) all over the world. Each EU state member's contribution to the mid-term review of the EU biodiversity strategy can be found here¹.

All these international initiatives need indicators and monitoring plans to assess their performance and evaluate results and impacts of measures developed. Despite biodiversity indicators and accounting are rapidly gaining interest, there is a lack of international agreement on generally accepted and applied metrics and methodologies, or they are at an early stage of

¹ https://biodiversity.europa.eu/mtr/countries



development (Addison *et al.* 2018a, b). Given this reality, the main challenge in order to scale up biodiversity concerns at the same level than climate change is how to encourage companies to integrate biodiversity issues into their corporate social responsibility (CSR) reporting (Wolff *et al.* 2018), among other sustainability aspects (Di Fonzo & Hime, 2017).

Nowadays, there are a series of ongoing methodologies which are complementary to the monitoring system described in the present document that deserve to be highlighted. Some of them are focused on assessing the biodiversity footprint derived from economic activities (Lammerant *et al.* 2018). For instance, the Global Biodiversity Score (CDC Biodiversité) approach identifies drivers of biodiversity loss (land conversion, climate change...), and quantifies their large-scale impact (at country level). It is designed to complement other local initiatives. Moreover, the Biodiversity Impact Metric measures the biodiversity footprint of raw materials, considering that the bigger environmental impact is caused by the production of raw materials to feed the industrial activity. Another example is the Product Biodiversity Footprint (Neveux *et al.*, 2018), a holistic approach which accounts for impacts on biodiversity at the production sites and during the whole life cycle of the products. In addition, the Biodiversity Indicator for Extractive Companies (UNEP-WCMC, 2017) identifies sites with high sensitivity and develops indicators at site level in a second stage.

On the other hand, the Biodiversity Data Centre (BDC) —hosted by the European Environment Agency, EEA — provides access to data and information on species, habitat types and sites of interest in Europe. Several European environmental data centres (air pollution, climate change, water, land use, soil, forest, natural resources and waste) provide data and information for biodiversity indicators sets, and biodiversity and ecosystem services assessments. Moreover, the Coordination Group for Biodiversity and Nature (CGBN) — the operational group for the implementation of the EU Biodiversity Strategy 2020 — is in charge of reviewing the outputs of the technical working groups, ensuring linkages between them, discussing about financing, communication/awareness, and monitoring, assessment and reporting. Regarding the national Biodiversity Strategies of the EU member states, in Northern and Western Europe monitoring schemes have been established based on a large degree on volunteers; for instance in the UK, volunteer's effort have been put into motion mainly promoted by NGOs with support from public funds. However, Southern and Eastern Member States often have an underdeveloped monitoring regime with a reliance on professionals and a relative absence of volunteers.

So far, these European and national monitoring efforts are not transferable to the business sector and the monitoring of BOP premises. The LIFE BooGI-BOP (Boosting Green Infrastructure through Biodiversity-oriented Design of Business Premises") project will take them into account in order to contribute to the identification of synergies and to complement national systems with data from business which own business, industrial, commercial real estate, that haven't been taken into account so far up to now.

3 Developing biodiversity indicators

A useful definition of the term 'indicator' is "a measure based on verifiable data that conveys information about more than itself" (Biodiversity Indicators Partnership, BIP). To develop an indicator to monitor the integration of BOP and the development of processes in and outside the company, involves more than direct measures on biodiversity itself, such as species population density and abundance, richness and habitats extent.

The monitoring plan proposed covers three complementary areas to evaluate company performance and commitment to biodiversity. The first area and the most important aims to monitor company's actions to improve biodiversity in its premises. The survey integrated into the monitoring proposal collects data about BOP provided by companies' staff as well as information /data about external activities of the company regarding the contribution of BOP to green corridors, other green infrastructures or protected species conservation initiatives. These activities directly contribute to the reduction of pressures or threats to biodiversity. The survey connects companies with an open database, species lists or maps in order to facilitate data collection.

Another set of questions addresses the "social area of concern" with the objective to monitor potential biodiversity contributions to employee's well-being and citizen awareness. The third area - "corporate area of concern"- looks at the integration of biodiversity into the management of the company: The consideration of biodiversity in management decisions and contributions derived from integrating biodiversity into the management of the company. Therefore, the BOP monitoring system aims to provide indications about the three potential areas of impact:



BIODIVERSITY AREA					
Set #1 BOP's biodiversity inside company areas	 BOP extension Habitat and species selection in the design of BOP Management of BOP Presence of key indicator species inside BOP and monitoring Control of alien invasive species 				
Set #2 BOP improves biodiversity outside company areas	 BOP outside company areas BOP's connections with regional ecological corridor /green infrastructure initiative 				
Set #3 BOPs contribution or participation in large-scale initiatives	 BOP contributes to adopt biodiversity actions in the municipality Contribution to conservation programs of regional /national nature protection administrations or other stakeholders (i.e. NGOs) 				
	SOCIAL AREA				
Set #1 BOPs influence in company's managers and employees awareness on biodiversity	 Company's managers awareness of BOP and biodiversity Company's employees awareness of BOP and biodiversity 				
Set #2 BOP's contribution to employee's awareness raising and well-being	 BOPs contribution to promote awareness of staff on biodiversity (dissemination of information, participation in awareness-raising activities, "Open Doors Day," etc.) Acceptance of BOP and contribution to staff well-being 				
Set #3 BOPs contribution to awareness raising of stakeholder and citizens on bidiversity	 BOP's contribution to raise awareness of stakeholder and citizens (dissemination of information, participation in awareness-raising activities, "Open Doors Day," etc.) 				
	CORPORATE AREA				
Set #1 BOP's integration into the management of the corporation	 BOPs contribution to environmental management systems and sustainability policies BOP economic aspects 				
Set #2 Biodiversity integration across the company	— Integration of biodiversity into the management of the company				
Set #3 Biodiversity promotion across the business sector	 The company promotes the integration of biodiversity into management decisions in the business sector (by being an active member of a Business & Biodiversity initiative, motivating business associations and or chambers of commerce, inviting other companies to exchange experience, or via other actions) and contributes to inform policy stakeholders, environmental authorities, and others. 				

Image 2: Representation table of the BOP monitoring system



The indicators that we propose require the development of a methodological approach based on qualitative and quantitative data supported by each assessed private company. Main defining features of these indicators are (Jones *et al.* 2011, Gonçalves *et al.* 2015, Arlidge *et al.* 2018):

- Scientifically valid.
 - a) there is an accepted theory of the relationship between the indicator and its purpose, with agreement on that a change in the indicator does indicate any change on the issue of concern.
 - b) the data used is reliable and verifiable.
- Based on available data: so that the indicator can be produced over time.
- Responsive to change on the issue of interest.
- Easily understandable.
 - a) conceptually, how the measure relates to the purpose.
 - b) in its presentation.
 - c) the interpretation of the data.
- Relevant to user needs.
- Used: for measuring progress, early-warning of problems, understanding an issue, reporting, awareness-raising, etc.

The monitoring should provide relevant information for companies or corporations about the development of their biodiversity-oriented premises, as well as the contribution of BOP to social aspects and its influence across the management of the company. Reporting on these three areas of business performance will contribute to make business activities more reliable to stakeholders, managers and general users (Van Oudenhoven *et al.* 2018). The questionnaire can be answered by managers, practitioners (gardeners or landscape designers), and technical experts working in the company. According to the three areas of concern, responses to the questionnaire could be provided by various professionals from the company related to the different areas of interest addressed. In some cases, the involvement of a biodiversity expert could be necessary. In general, all required information is known by managers and other specialists. If certain data is not available, the monitoring system will encourage the company to collect information and improve data availability in order to be able to complete the assessment in the future.

At a first stage, the monitoring system will request data and information to describe the baseline of the company's premises /real estate. By comparing further assessments with the baseline, monitoring will indicate the increasing or decreasing of biodiversity performance. On the other hand, BOP monitoring data will indicate if biodiversity is considered in management processes and decisions. If monitoring results show potential for improvement, the company will hopefully be motivated to integrate biodiversity issues into structured decision-making process. Finally, the evaluation of BOP monitoring data provides companies with a transparent basis for reporting BOP results and impacts to society, policy makers and authorities.

Aggregated monitoring data of all BOP premises will allow the evaluation of BOP premises' results and impacts at regional, national and European levels. Furthermore, aggregated data and information shall show potential synergies between BOPs and other biodiversity protection initiatives, i.e. the creation of ecological corridors. They will also provide information on the challenges and where further efforts are needed to advance in the right direction.

4 The BOP monitoring system proposal

The proposed BOP monitoring system is based on a component matrix approach including **three** main **areas of potential impacts** (see image 1):

- 1. Potential created for biodiversity
- 2. Staff /people's perception of biodiversity values
- 3. Biodiversity impact in the management of the company

Each of these areas has three sets of questions that companies should complete to monitor their BOP's contribution to biodiversity.



The "Biodiversity" area aims at monitoring BOPs impact on biodiversity (target 1). The first package of questions is focused on *in-situ* measures inside company areas. The second set of questions addresses BOP contributions to biodiversity in surrounding areas of the company; and the third package of questions requests information about activities involving regional and national biodiversity initiatives.

The "Social" area is designed to monitor biodiversity contribution to employee's well-being and staff and other stakeholders' awareness (target 2). The first set of questions collects information about the awareness of managers and staff regarding biodiversity. The second package of questions looks at BOPs' contribution to staff well-being (health, work atmosphere). The third set of questions assesses how the company uses BOP to engage with citizens and stakeholders.

Finally, the "Corporate" area focuses on the role of biodiversity in the management of the company and in its relationship with the economic sector. The first set of questions addresses the integration of BOP into the management of the company (baselines, goals, monitoring), while the second set aims at collecting data about the consideration of biodiversity aspects in the management of other departments of the company (communication, supply chain, production, sales, others). The third set of questions addresses the contribution of the company to increase information and awareness of biodiversity across the business sector (i.e. beeing an active member of a Business & Biodiversity initiative, motivating business associations, inviting other companies to exchange experience).

5 BOP data assessment and representation

The BOP monitoring system proposed is structured in nine different cells. Each cell includes a set of questions (qualitative and quantitative) in order to tackle specific issues regarding the three areas of concern (biodiversity, social and corporate). The BOP monitoring system collects the answers and allows an evaluation of the development in each area of concern.

At the first stage, a baseline will be drawn. In following years, changes and results from adopted measures will be collected in order to track the development and achievements made by the company. Companies should provide data for all areas since the beginning. It should be indicated if certain data is not available. The evaluation regarding the lack of data (e.g. number and type of companies) is also an important result from the monitoring.

The proposed scheme allows to deliver several types of reports for different target groups:

- Facility managers: Assessment of the development of biodiversity potential (habitats and key indicator species) in the premises over time and BOP's contribution to employee's well-being and awareness-raising (social area). See image 2.
- Decision makers / managers: Company's contribution to biodiversity protection (at local and regional level), to reduce negative impacts on biodiversity (biodiversity management in company's units) and awareness-raising on biodiversity (staff, stakeholder, suppliers, final costumers, economic sector).
- Policy decision makers: To demonstrate that BOPs are valuable contributions to biodiversity protection at regional or national scale by showing what and where achievements have been made (biodiversity, social, and corporate area). The possibility to evaluate aggregated data from many BOPs will deliver convincing arguments to create incentives for the implementation of BOP actions and support BOP mainstreaming into companies (See image 2).
- Nature conservation authorities: To describe (quantitatively and qualitatively, and at local, regional and national level) BOP's contribution to biodiversity protection (i.e. contribution to ecological corridors, protected areas, distribution areas of certain species). The monitoring system will describe the potential role of the premises and will evaluate synergies (focus 1, 2 and 3 of the biodiversity area, and focus 3 of social area). The monitoring system will include geographical data /GIS data of BOP premises in order to create maps and to allow the overlapping with maps of ecological corridors, protected areas, etc.
- CSR coordinators of the company: Input into sustainability and/or environmental reports directed at stakeholders
 and final consumers. These reports allow also consumers to take company's commitments in biodiversity into
 consideration when taking decisions.



GLOSSARY

Biodiversity-oriented Design of Business Premises (BOP): It is a pragmatic approach to contribute to the protection of biodiversity. Thus, BOP measures provide habitats for local fauna and flora and help to build a network of habitats, ecological corridors and green infrastructure. In addition, biodiversity-oriented sites offer employees and guests a place to recreate.

BOP habitat classification: Across Europe countries, BOP Land use and land cover (LULC) types are very different. In order to provide a consistent classification, we have categorised the type of zones according to Corine Land Cover (CLC) classification. For further details, see Annex II.

Level of disturbance:

Hardly disturbed: LULC permanently affected by high levels of interactions from human activities (cars, noise, regularly frequented by staff, etc).

Some disturbances: LULC experiencing low impact interactions from human activities and concentrated in shorts periods of time (recreational areas, terraces, smoke areas, etc).

Without disturbances: LULC without any kind of interaction with human activities.

Natural habitat: Areas composed of viable assemblages of plant and / or animal species of largely native origin and / or where human activity had not essentially modified an area's primary ecological functions and species composition. International Finance Corporation, 2012

Managed habitat: Habitat where it's necessary to implement management actions to maintain and enhance the biological or productive interest of many areas, where natural processes no longer create suitable conditions for desired species or cultural uses.

Restored habitat: Habitats recovery from an ecosystem that has been degraded, damaged, or destroyed and now it contains enough biotic and abiotic resources to continue its development without further assistance or subsidy. It would sustain itself structurally and functionally, demonstrate resilience to normal ranges of environmental stress and disturbance, and interact with contiguous ecosystems in terms of biotic and abiotic flows and cultural interactions. International Finance Corporation, 2012.

Surrounding areas: areas that surround the BOP and can present the same habitat in a buffer area up to 500 meters.

Ecological corridor: territory of variable extension and configuration which, due to its disposition and its conservation state, functionally connects natural spaces of singular relevance for the wild flora or fauna that are separated from each other, allowing the ecological and genetic exchange between populations or the migration of these species, among other processes.

Connectors: Elements natural, artificial or structures which contribute to the creation of an ecological corridor that connect functional habitats, so that the species inhabit them achieve an ecological and genetic flow with nearby habitats.



Green infrastructures: network of natural and semi-natural areas and other environmental features, strategically planned, designed and managed for the provision of a wide range of ecosystem services. It incorporates green spaces (or blue spaces in the case of aquatic ecosystems) and other physical elements of terrestrial (including coastal) and marine spaces. In terrestrial spaces, green infrastructure is present in rural and urban environments. (https://eurlex.europa.eu/legal-content/EN/TXT/?uri=CELEX:52013DC0249).

For further information, please click on the following link to Spain: WWF biotope corridors net: http://awsassets.wwf.es/downloads/AutopistasSalvajesInforme.pdf?_ga=2.203227283.360021700.1585159984-409769879.1585159984 https://img.europapress.es/fotoweb/fotonoticia 20180309175506 420.jpg.

Key Performance Indicator (KPI): a Key Performance Indicator evaluates the success of an organization or activity (such as projects, programs, products and other initiatives) in which it engages. Choosing the right KPIs relies upon a good understanding of what is important to the organization. For example: projects events, number of people engaged with the project, number of visit to BOPs, etc.

Key indicators species are a species that determines the quality of the habitat and its capacity to sustain large communities of individuals. The key indicator species should be selected with the help of an expert for each region and according to the habitats present. <u>Annex III</u> represents a key species selection proposal for each country to be monitored.

Alien invasive species are introduced artificially, accidentally or intentionally outside their natural range. Its invasion means that native species sometimes cannot compete against them, ending up displaced or dying. These species produce changes in the composition, structure and processes of ecosystems, causing a great loss of biodiversity. The species should be selected with the help of an expert for each region and according to the habitats present. Annex II represents an alien invasive species selection proposal for each country to be monitored.

Tier 1: Direct suppliers or service lending services companies.

Tier 2: External suppliers or lending services supplied by companies that provide direct services or products to your company.

Tier 3: Raw material producers that provide direct services or products to your company.



Bibliography

Addison, P. F. E., Bull, J. W. & Milner-Gulland, E. J., (2018a). Using conservation science to advance corporate biodiversity accountability. Conservation Biology 33(2), 307–318.

Addison, P. F. E., Carbone, G. & McCormick, N., (2018b). The development and use of biodiversity indicators in business: an overview. Gland, Switzerland: IUCN. vi + 16pp.

Arlidge, W. N., Bull, J. W., Addison, P. F., Burgass, M. J., Gianuca, D., Gorham, T. M., Jacob, C., Shumway, N., Sinclair, S.P., Watson, J.E.M., Wilcox, C., Milner-Gulland, E.J.M. & Wilcox, C., (2018). A Global Mitigation Hierarchy for Nature Conservation. BioScience, 68, 336-347.

CBD. 2019. Preparations for the post-2020: Biodiversity framework. Post-200 Global Biodiversity Framework: Discussion Paper. Note by the Executive Secretary. CBD/POST2020/PREP/1/1.

CDC Biodiversité. 2017. Global Biodiversity Score: measuring a company's biodiversity footprint. BIODIV'2050 OUTLOOK: Club B4B*+. N°11 - November 2017. Ed. Mission Économie de la Biodiversité.

Di Fonzo, M. & Hime, S., (2017). How businesses measure their impacts on nature: A gap analysis, University of Cambridge Institute for Sustainability Leadership (CISL).

European Commission. 2018. Action Plan: Financing Sustainable Growth. Communication from the commission to the European Parliament, the European Council, the European Central Bank, the European Economic and Social Committee and the Committee of the Regions. European Commission. Brussels, 8.3.2018/COM 97.

European Union. 2011. The EU biodiversity Strategy 2020, Luxembourg: Publications Office of the European Union, 2011

European Union, 2014. Directive 2014/95/EU of the European Parliament and of the Council of 22 October 2014 amending Directive 2013/34/EU as regards disclosure of non-financial and diversity information by certain large undertakings and groups. Official Journal of the European Union, L330/1.

Gonçalves, B., Marques, A., Soares, AMVDM. & Pereira, H.M., (2015). Biodiversity offsets: From current challenges to harmonized metrics. Current Opinion in Environmental Sustainability, 14, 61–67.

Díaz, S., Settle, J. & Brondizio, E., (2019). Summary for policymakers of the global assessment report on biodiversity and ecosystem services of the Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services. Advance unedited version. 6 May 2019. IPBES. [https://www.ipbes.net/news/ipbes-global-assessment-summary-policymakers-pdf]

Jones, J., Collen, B., Atkinson, G., Baxter, P., Bubb, P., Illian, J., Katzner, T., Keane, A., Loh, J. & McDonald-Madden, E., (2011.) The why, what, and how of global biodiversity indicators beyond the 2010 target. Conservation Biology, 25, 450–457.

Lammerant, J., Müller, L., Kisielewicz, J., (2018). Critical Assessment of Biodiversity Accounting Approaches for Businesses. European Union Business & Biodiversity Platform.

Neveux, G., Rabaud, S., Asselin, A., Attwood, S., Remans, R., Bos, G., Duramy, J. Bowers, K., Mila i Canals, Ll., Cranston, G., Walsh, L., Hammerl, M., Hörmann, S., Hellweg, S. & Schenker, U., (2018). Core initiative on Biodiversity. One Planet Program on Sustainable Food Systems. Technical report on existing methodologies & tools for biodiversity metrics.

Underwood, E., Darwin, G. & Gerritsen, E. (2017). Pollinator initiatives in EU Member States: Success factors and gaps. Report for European Commission under contract for provision of technical support related to Target 2 of the EU Biodiversity Strategy to 2020 — maintaining and restoring ecosystems and their services ENV.B.2/SER/2016/0018. Institute for European Environmental Policy, Brussels.

Van Oudenhoven, A. P., Schröter, M., Drakou, E. G., Geijzendorffer, I. R., Jacobs, S., van Bodegom, P. M., Chazee, L., Czúcz, B., Grunewald, K., Lillebø A.I., Mononen, L., Nogueira, A.JA., Pacheco-Romero, M., Perennou, C., Remme, R.P., Rova, S., Syrbe, R.U., Tratalos, J.A., Vallejos, A. & Mononen, L., (2018). Key criteria for developing ecosystem service indicators to inform decision making. Ecological indicators, 95, 417-426.



Wolff, A., Gondran, N., and Brodhag, C., (2018). Integrating corporate social responsibility into conservation policy. The example of business commitments to contribute to the French National Biodiversity Strategy. Environmental Science & Policy, 86, 106-114.

Boosting Urban Green Infrastructure through Biodiversity-Oriented Design of Business Premises

The EU LIFE project "Boosting Urban Green Infrastructure through Biodiversity-Oriented Design of Business Premises" (LIFE BooGI-BOP) of seven European partners promotes biodiversity-oriented design of premises (BOP) as a part of green infrastructures and potential stepping-stones for biotope corridors – especially in urban and peri-urban areas in Europe – that are also able to improve the well-being of individuals and society.

We are looking for frontrunners who are interested in the biodiversity-oriented design of their company premises. Join the **BOP Movement!**

More information: www.biodiversity-premises.eu

Contacts

Universidad Politécnica de Madrid Ecoacsa SL. Lake Constanze Fund

Jesús Carrasco Agustín Rubio **Marion Hammel**

marion.hammerl@bodensee-stiftung.org jesuscarrasco@ecoacsa.com agustin.rubio@upm.es

This project has been funded with support from the LIFE Programme of the European Union.

Funded by EU LIFE Program

Authors: Carrasco, Jesus; Rubio, Agustin; Fernandez, Ricardo; Alvarez, Sergio; Tejedor, Javier; Fernandez, Maria Jose; Schulz, Sven; Aviles, Carmen; Alvarez, David; Hammerl, Marion.



Citation: Carrasco, Jesus; Rubio, Agustin; Fernandez, Ricardo; Alvarez, Sergio; Tejedor, Javier; Fernandez, Maria Jose; Schulz, Sven; Avilés, Carmen; Alvarez, David; Hammerl, Marion. 2020. "Monitoring System for Biodiversity-Oriented of Business Premises". LIFE17 GIE / DE /000466 "Boosting Green Infrastructure through Biodiversity-Oriented Design of Business Premises"

Version: v.2.0 / 2020

Project Partners













Monitoring plan

Company information

Company name:						
Sector:						
Number of workers in the	assessment are	ea:				
Company relationship wit is the relationship between						to it and what
BOP Identification Code (nlesse generat	e a code fol	lowing the next instr	ruction: Name of co	omnany XXXX City	XXX Number -
001, year- 2020: TELE-MA	-		_			
Date when BOP was creat	:ed:					
Size of total surface occup	oied by the com	pany:				
a) Could you ple	ase provide th	e url of a m	nap of the area occu	ipied by your com	pany (using Googl	e Earth, GIS or
another tool/soft	tware)? Please,	specify the	link here?			Yes / No
b) If it is yes, ple	ase inserting th	ne url about	the link to any relev	vant information o	or file in this regard	l or drawing of
your company ar	ea:					
Name of the responsible p	person for mon	itoring:				
Position:						
Level of knowledge about	biodiversity (1	Little know	ledge, 5 I am an expe	ert):		
Date of first data collection	on (Baseline)		Date:			
Today's (Monitoring date))		Date:			



1 Biodiversity area

1.1 Set #1: BOP's biodiversity inside company areas

1.1.1 BOP extension

This first set of questions is seeking to find out what the BOP surface or extension is and the type of habitats classification according to European classification of land use and land cover (LULC)

Item 1. - What is the size of the total BOP surface occupied by the company?

- 1. a) Since your BOP implementation, can you differentiate between natural habitats under management and restored land within the Land Use and Land Cover (LUCL) classification?

 Yes / No
- 1. b) If YES, please, could you indicate the % of each LUCL represented in your BOP? If needed, select more than one zone if they are present in the BOP. Could you identify the level of disturbance of these habitats?

BOP habitat classification: Across Europe, BOP's Land Use and Land Cover (LULC) types are different. In order to provide a consistent classification, we have categorised the type of zones according to Corine Land Cover (CLC) classification. For further details, see *Annex I*. https://land.copernicus.eu/user-corner/technical-library/corine-land-cover-nomenclature-guidelines/html/

Natural habitat: Areas composed of viable assemblages of plant and / or animal species of largely native origin and / or where human activity had not essentially modified an area's primary ecological functions and species composition. International Finance Corporation, 2012

Managed habitat: Habitat where it is necessary to implement active management actions to maintain and enhance the biological or productive interest, where natural processes no yet create suitable conditions for desired species or cultural uses.

Restored habitat: habitats recovery from an ecosystem that had been degraded, damaged, or destroyed and now it contains enough biotic and abiotic resources to continue its development without further assistance or subsidy. It would sustain itself structurally and functionally, demonstrate resilience to normal ranges of environmental stress and disturbance, and interact with contiguous ecosystems in terms of biotic and abiotic flows and cultural interactions. International Finance Corporation, 2012.

Level of disturbance:

Hardly disturbed: LULC permanently affected by high levels of interactions from human activities (cars, noise, regularly frequented by staff, etc.).

Some disturbances: LULC experiencing low impact interactions from human activities concentrated in short periods of time (recreational areas, terraces, smoke areas, etc.).

Without disturbances: LULC without any kind of interaction with human activities.



Land use and land cover	<u>Level of</u> <u>disturbance</u>	<u>NATURAL</u>	<u>Level of</u> <u>disturbance</u>	RESTORED	<u>Level of</u> <u>disturbance</u>	<u>MANAGED</u>
Bare rocks		%		%		%
Scree, cliffs, rock outcrops, including areas of						
active erosion, rocks and reef flats situated above						
the high-water mark, inland salt planes.						
Land occupied by agriculture						
species with areas of natural						
vegetation						
Significant or sparsely natural						
vegetated areas (Areas with sparse						
vegetation, covering 10-50 % of						
surface. Includes steppes, tundra,		%		%		%
lichen heath, badlands, karstic						
areas and scattered high-altitude						
vegetation)						
Natural grasslands		%		%		%
Grasslands under no or moderate human						
influence. Low productivity grasslands. Often						
situated in areas of rough, uneven ground, steep						
slopes; frequently including rocky areas or						
patches of other (semi-)natural vegetation.		0.4		0/		
Hardwood vegetation		%		%		%
Bushy sclerophyllous vegetation in a climax stage						
of development, including maquis, matorral and garrigue.						
Transitional woodland-shrub		%		%		%
		/0		/6		70
Transitional bushy and herbaceous vegetation with occasional scattered trees. Can represent						
woodland degradation, forest regeneration /						
recolonization or natural succession.						
Agro-forestry areas (dehesas,		%		%		%
hedges,)						
Annual crops or grazing land under the wooded						
cover of forestry species.						
Hedges		%		%		%
Fences or boundaries formed by closely growing						
bushes or shrubs species.		0/		0/		0/
Riparian vegetation Broad-leaved forest		%		%		%
		%		%		%
Vegetation formation composed principally of						
trees, including shrub and bush understorey,						
where broad-leaved species predominate.		0/		0.4		0/
Coniferous forest		%		%		%
Vegetation formation composed principally of						



Land use and land cover	<u>Level of</u> <u>disturbance</u>	NATURAL	<u>Level of</u> <u>disturbance</u>	RESTORED	<u>Level of</u> <u>disturbance</u>	<u>MANAGED</u>
trees, including shrub and bush understorey,						
where coniferous species predominate.						
Mixed forest		%		%		%
Vegetation formation composed principally of						
trees, including shrub and bush understorey,						
where neither broad-leaved nor coniferous						
species predominate.						
Estuaries		%		%		%
The mouth of a river under tidal influence within						
which the tide ebbs and flows.						
Water bodies		%		%		%
Natural or artificial water bodies with presence of						
standing water surface during most of the year.						
Water courses		%		%		%
Natural or artificial, permanent or temporal						
watercourses serving as water drainage channels.						
Includes canals.						
Coastal lagoons		%		%		%
Stretches of salt or brackish water in coastal areas						
which are separated from the sea by a tongue of						
land or other similar topography. These water						
bodies can be connected to the sea at limited						
points, either permanently or for parts of the						
year only.						
Inland marshes and wetlands		%		%		%
Low-lying land usually flooded in winter, and with						
ground more or less saturated by fresh water all						
year round.						
Others (please indicate)		%		%		%



Item 2. —Which of the following biodiversity supporting structures are present in your BOP areas? Please, quantify the number of units or indicate their size:

<u>Structure</u>	Are present in your BOP? Yes / No	Size / Number
Nesting sites or nesting boxes		Total number?
Insect friendly lighting zones		% of total lightning
Watering place for animals		Total number?
Deadwood piles		Total number?
Single old trees		Total number?
Shore line adapted to amphibians		Linear meters
Boulder or rock piles		Total number?
Artificial ponds		Total number?
Natural structures for rainwater management		Total number?
Floating platforms		Total number?
Others (indicate):		

Item 3 Does the company have any kind of green	n elements such as green roofs, green walls, parks, roundabout, planter	's or
similar structures?	Yes / No	

s. a) If YES, how much in total is the size of this area in the BOP area?	m²
---	----

3. b) Could you classify the type of habitat of these green infrastructures?

Green elements	<u>Size</u>	type of species (native or alien)
Green roof		
Green wall		
Others		

1.1.2 Habitat and species selection in the design of BOP

The following questions are sought to get information about the species that your BOP contains.

Item 4. Indicate if the company has an overview of the habitats in the surroundings of the facilities (up to 500 m).

overview on	any have an updated the habitats in the premises (up to 500 m)?	If yes: do you have? A concrete inventory (I) A rough overview (O)	Has this information abo composition been considere	out surrounding habitats ed in the design of the BOP?
Yes	No		Yes	No



Item 5. – Do your BOP areas have a n	minimum of 90 % of native sp	ecies
---	------------------------------	-------

- Yes, and selected species are native.
- Yes, and seeds used come from native species.
- No. The BOP surface area has more than % of neophytes.
- I do not know.

Item 6. - Have you considered the different habitat conditions when selecting plant species?

6. a) If YES, select the parameters you have considered:

<u>Parameters</u>	Have you considered it?	Yes / No
Salinity		
Nutrients		
рН		
Temperature		
Humidity		
Pollution		
Slope		
Position		
Others (please, indicate which)		

Item 7 In the case of you have increased or decreased y	our BOP area, have you followed the same criteria for the selection
of species like in the older BOP areas?	Yes /no

7. a) If NO, please indicate the reasons:	
---	--



The following questions try to describe the relationship between the species selected for the BOP design and the nature of the surrounding habitats.

<u>Agro-forestry plant species selection</u> (Fruit trees and berry plantations, nut trees, irrigated lands agriculture species, non-irrigated agriculture species, vineyards and olive crops,).

Item 8.— Have you selected agriculture or agro-forestry plant species in your BOP? Yes / No

8. a) **If YES**, please indicate the mix of plant species that you have incorporated in your BOP and its corresponding size within the premise:

Agriculture or agroforestry mix of plant species	Few species (F) – (from 1 to 2 species) Some species (S) - (from 3 to 4 species) Many species (M) – (from 5 – 10 species) Abundant species (A) – (more than 10 species)
Fruit trees and berry species	
Annual crop plant species	
Permanent crop plant species	
Irrigated land plant species	
Non-irrigated arable land plant species	
Vineyard species	
Olive species	
Others (please, indicate)	

<u>Water-related ecosystems</u> (water bodies -permanent o temporal-, water courses, inland or wetland species, and riparian species,).

Item 9. – Are there aquatic ecosystem plant species in your BOP?

Yes / No

9. a) If YES, which plant species do you have in your aquatic ecosystems?

Aquatic ecosystem mix of plant species		<u>ecies</u>	Few species (F) – (from 1 to 2 species) Some species (S) - (from 3 to 4 species) Many species (M) – (from 5 – 10 species) Abundant species (A) – (more than 10 species)	
Water bodies plant species				
Water courses p	ant species			
Others	(please,	indicate):		



<u>Natural grasslands</u> (Steppe, pasture and grassland, meadow - herbaceous or woodland - hedge species).

Item 10.- Do you have a real inventory of herbaceous grassland plant species?

Yes / No.

10. a) If YES, please indicate the most frequent species:

Herbaceous plant species	Few species (F) – (from 1 to 2 species) Some species (S) - (from 3 to 4 species) Many species (M) – (from 5 – 10 species) Abundant species (A) – (more than 10 species)
Steppe species	
Pasture species	
Meadows species	
Wooded meadows	
Grassland species	
Hedges	
Others:	

Forest ecosystems (shurbland, hard-wood, broad-leaved, coniferous, mixed forest species,).

Item 11.- Do you have an actual inventory of the forestry species?

Yes / No

11. a) If YES, indicate the species that you have incorporated in your BOP and its corresponding size within the premise:

Forest plant species	Few species (F) – (from 1 to 2 species) Some species (S) - (from 3 to 4 species) Many species (M) – (from 5 – 10 species) Abundant species (A) – (more than 10 species)
Shrubland species	
Hardwood species	
Broad-leaved species	
Coniferous species	
Mixed forest species	
Other:	

Item 12.- Have you connected or established biotope-corridors with nearby habitats in the design phase?

Yes / No



Ecological corridor: territory of variable extension and configuration which, due to its disposition and its conservation state, functionally connects natural spaces of singular relevance for the wild flora or fauna that are separated from each other, allowing the ecological and genetic exchange between populations or the migration of these species, among other processes.

Connectors: Elements natural, artificial or structures which contribute to the creation of a biotope corridor that connect functional habitats, so that the species inhabit them achieve an ecological and genetic flow with nearby habitats

1.1.3 **Management of BOP**

Item 13.- Does the company have a plan for the maintenance of BOP?

Yes / No

- 13. a) If YES, does the plan include objectives for the further development of BOP?
 - No. Just maintenance of the current habitats and structures
 - Yes, increase of quality of habitats and structures
 - Yes, increase of the extension of BOP area
- 13. b) If YES, is the company focus put on specific aspects to improve quality of BOP areas (multiple answers possible)

Examples		
Water quality of water bodies	Yes	No
Improvement of the structure of water bodies	Yes	No
Reduction or avoidance of the use of pesticides	Yes	No
Reduction or avoidance of the use of chemical fertilizers	Yes	No
Produce / use organic compost	Yes	No
Species diversity increase in certain habitats	Yes	No
Others:	Yes	No

Item 14.- BOP areas are maintained by:

Type of staff		Number of people	
Own staff	Yes	No	
External services: Gardener	Yes	No	
External services: Gardening company	Yes	No	

14. a) In case of external services,

Did you specify maintenance requirements of BOP areas in the contract?

Yes / No

Did you select a gardener /company with experience in BOP?

Yes / No



1.1.4 Presence of key indicator species inside BOP and monitoring

The following questions seek to find out the Key Indicator Species in the BOP and if its presence is being monitored

A **key indicator species** are species that determine the quality of the habitat and its capacity to sustain large communities of individuals. The key indicator species should be selected with the help of an expert for each region and according to the habitats present. <u>Annex III</u> includes a selection proposal of key indicator species for each country to be monitored.

Item 15.- Does the company select key indicator species included in the list provided in <u>Annex III</u> for their BOP?

Yes / No

15. a) If you select key indicator species for your BOP, please indicate who does the identification, whether the key indicator species are monitored or not and how population is developing.

Key indicator species selected	Is the specie present in your BOP? Yes / No	Monitored by Governmental authority (A), NGO (N), University (U), company (C)	Monitoring frequency	Development of the population: strong increase (=SI) increase (=I) stagnation (=S) reduction (=R)



1.1.5 Control of alien invasive species

This set of questions seeks to find out the Alien Invasive Species (AIS) in the BOP and if its presence is being controlled.

Alien invasive species are introduced artificially, accidentally or intentionally outside their natural range. Its invasion means that native species sometimes cannot compete against them, ending up displaced or dying. These species produce changes in the composition, structure and processes of ecosystems, causing a great loss of biodiversity. Annex II includes an AIS list proposal for each country to monitor BOP.

Item 16.— Do you know if any of the following alien invasive species included in <u>Annex II</u>, is in your premises or in the surroundings? **Yes / No**

16. a) If YES, are you controlling them, and do you know about their development?

Alien Invasive Species in the premises or in the surroundings	Is it present in your BOP (= B)? Is it present in the surrounding areas (= S)	Monitored by Governmental authority (A), NGO (N), University (U), company (C)	Monitoring frequency	Development of the population: strong increase (=SI) increase (=I) stagnation (=S) reduction (=R)

Item 17. Do you control the alien invasive species?

- No. We are doing nothing to prevent its dispersion.
- Yes. We control their presence, but do not take corrective measures to eliminate them.
- We control their presence and take corrective measures to eliminate them.

Item 18. Did you inform the regional nature conservation authority about the presence of alien invasive species?

Yes / No

18. a) If YES, did you receive support from the authority to eliminate / manage alien invasive species?

Yes / No



1.2 Set #2: BOP improves biodiversity outside company areas

1.2.1 BOP outside company areas

This set seeks to find out valuable information of the biodiversity-oriented areas that have been created in the surroundings of the company's premises.

Surrounding areas: areas that surround the BOP and can present the same habitat in a buffer area up to 500 meters.

Connectors: Natural, artificial or structure elements that contribute to the creation of an ecological corridor connecting functional habitats, so that the species that inhabit them achieve an ecological and genetic flow with nearby habitats.

Item 19. Does the company contribute to the restoration of habitats in the surroundings?

-	ribute to the restoration the surroundings of the ises?	If yes, please, indicate the type of restored or created habitats.	Restored area (m²)
Yes	No		

Item 20. Are you monitoring habitats in the surroundings of your premises?

Yes / No

20. a) If **YES**, which key indicator species included in <u>Annex III</u> are used for monitoring and who does the monitoring?

Key Indicator Species selected	Is it present in the surroundings of the premises? Yes / No	Monitored by Governmental authority (A), NGO (N), University (U), company (C)	Monitoring frequency	Development of the population: strong increase (=SI) increase (=I) stagnation (=S) reduction (=R)

Item 21.- Are there possibilities to connect the habitats in your premise with nearby habitats? Yes / No

21. a) If it yes, did you connect habitats or are you planning to do so?

We are planning / Already connected

1.2.2 BOP's connections with regional ecological corridor /green infrastructure initiative



This set of questions seeks to find out if the BOP is in or near a regional ecological corridor or green infrastructure and if BOP contributes or could contribute to these structures.

Green infrastructures: network of natural and semi-natural areas and other environmental features, strategically planned, designed, and managed for the provision of a wide range of ecosystem services. It incorporates green spaces (or blue spaces in the case of aquatic ecosystems) and other physical elements of terrestrial (including coastal) and marine spaces. In terrestrial spaces, green infrastructure is present in rural and urban environments (https://eurlex.europa.eu/legal-content/EN/TXT/?uri=CELEX:52013DC0249).

For further information, please click on the following link to Spain: WWF biotope corridors net: http://awsassets.wwf.es/downloads/AutopistasSalvajesInforme.pdf?_ga=2.203227283.360021700.1585159984-409769879.1585159984 https://img.europapress.es/fotoweb/fotonoticia 20180309175506 420.jpg

Item 22. Does the company have information about regional ecological corridor(s) and/or green infrastructure in the region?

- Yes, we have information about ecological corridors
- No, we don't have any information about ecological corridors.
- Yes, we have information about green infrastructures.
- No, we don't have any information about green infrastructures.
- 22. a) Are you in contact with the responsible administration or other entities? Yes / No

To fill in question 22 b) and 23, please consult the next links with the information about green ecological corridors in your country.

Spain:

 $\frac{http://awsassets.wwf.es/downloads/AutopistasSalvajesInforme.pdf?_ga=2.203227283.360021700.1585159984-409769879.1585159984$

- Germany:
- Slovenia:
 - Website Green Infrastructure and Territorial Systems of Ecological Stability: https://www.sazp.sk/zivotne-prostredie/starostlivost-o-krajinu/zelena-infrastruktura/dokumenty-uses-v-sr.html
 - o Green infrastructure a map with GIS layers: http://maps.sopsr.sk/mapy/map.php
- Austria:



22. b) According to the information provided:

Does the company have the possibility to connect habitats located in the premises with regional /national ecological corridors or other green infrastructure?			Are you already connected your habitat(s) with regional / national ecological corridors or other green infrastructure?			
Yes - limited possibilities	Yes – extended possibilities	No	Yes, fully Yes, partly connected		Connection is planned	No
Please, indicate the number of connections			Please, indicate the number of connections			

Item 23. - Indicate if your BOP is located in an ecological corridor or a protected area and the % of the overlapping area. If your BOP is close, please indicate the distance to the nearest one:

Type of ecological corridor or protected area	Is your BOP inside? Yes / No	% of overlapping area				Distance to the nearest ecological corridor or protected area (in km)	
Water course		0 % -20 %	20 % - 40 %	40 - 60 %	60 % - 80 %	80 % - 100 %	
Riparian forest		0 % -20 %	20 % - 40 %	40 - 60 %	60 % - 80 %	80 % - 100 %	
Meadow		0 % -20 %	20 % - 40 %	40 - 60 %	60 % - 80 %	80 % - 100 %	
Forest		0 % -20 %	20 % - 40 %	40 % - 60 %	60 % - 80 %	80 % - 100 %	
Hedge		0 % -20 %	20 % - 40 %	40 % - 60 %	60 % - 80 %	80 % - 100 %	
Others		0 % -20 %	20 % - 40 %	40 % - 60 %	60 % - 80 %	80 % - 100 %	



1.3 Set #3: BOPs contribution or participation in large-scale initiatives

1.3.1 BOP contributes to adopt biodiversity actions in the municipality

The following set of question is seeking to find out if your BOP has motivated stakeholders in the municipality to adopt biodiversity actions.

- Item 24. Do you promote BOP or other biodiversity actions with stakeholders in the municipality? Yes / No
 - 24. a) If YES, please, indicate activities you are involved and organizations or associations with which you are collaborating:

Activity	With whom	Since when

Item 25. - Is the company informed about an initiative / program on biodiversity protection in the municipally? Yes / No

25. a) **If YES**, please indicate to which small-scale initiative does the company contribute / want to contribute? (e.g. Special Protection Areas for Birds, Natura 2000 area, municipally ecological corridor, programme for the protection of a special habitat / species):

Type of initiative / programme	Type of contribution	Planned or initiated in (year)

1.3.2 Contribution to conservation programs of regional /national nature protection administrations or other stakeholders (i.e. NGOs)

The next set of questions is focused on the company's contribution to regional or national biodiversity programs of nature conservation promoted by administrations or other organisations such as NGOs.

Item 26. - Is the company informed about any regional or national initiative / program on biodiversity protection?

Yes / No

Item 27. - Do you support any biodiversity protection activities /programs promoted by the regional /national administration or other stakeholders (e.g., Special Protection Areas for Birds, Natura 2000 area, municipally ecological corridor, programme for the protection of a special habitat / species)? **Yes / No**

27.a) If YES, please indicate activities and entities with which you are collaborating

Name of initiative /Activity	Coordinated by	Type of contribution



2 Social area

2.1 Set #1: BOPs influence in company's managers and employees awareness on biodiversity

2.1.1 Company's managers awareness of BOP and biodiversity

The next three questions assess the level of involvement of managers of the decision-making level in BOP matters.

Item 28. – Are decision-making managers involved or participating in BOP initiatives? Yes / No 28. a) If YES, indicate the phases in which managers have participated.

Managers	
Have not participate in any phase.	
Decision process regarding the implementation of BOP.	
BOP design and conception phase.	
Implementation of BOP.	
BOP maintenance	
BOP monitoring	

28. b) Are managers regularly informed about BOP?	Yes / No
28. c) If YES, % of managers (estimation) informed about BOP initiatives?	% of total managers
28. d) How are managers informed about BOP?	
 Topic in management meetings Internal newsletter or intranet 	
• Other	

28. e) Estimation of the average **level of knowledge** of the managers involved regarding BOP and the contribution to biodiversity protection?

• Without knowledge

Good knowledge

Poor knowledge

Very good knowledge

28. f) Do you notice an increase of awareness of the managers regarding BOP and the contribution to biodiversity?

No increase

Good increase

Poor increase

Remarkable increase.

2.1.2 Company's employees' awareness of BOP and biodiversity

These questions seek to assess the level of involvement of company's employees (those who high level managing does not have positions) in matters related to BOP.

Item 29. –Are employees involved in the BOP's development process?

Yes / No

29. a) If YES, indicate the phases in which employees have participated:

Staff	
No participation in any phase.	
Decision process regarding the implementation of BOP.	
BOP design and conception phase.	
Implementation of BOP.	
BOP maintenance	
BOP monitoring	

29.	b)	Is the	employees	regularly	informed	about	BOP?
-----	----	--------	-----------	-----------	----------	-------	------

Yes / No

- 29. c) **If YES**, indicate the % of employees (estimation) who are informed about the BOP initiative? _____ % of total employees
- 29. d) How does the company keep employees informed about BOP?
 - Topic in employees meetings
 - Internal newsletter or intranet
 - Other
- 29. e) Estimation of the average **level of knowledge** of the employees about BOP and the contribution to biodiversity protection?
 - Without knowledge

Good knowledge

Poor knowledge

Very good knowledge

- 29. f) Do you notice an increase of awareness of the employees regarding BOP and the contribution to biodiversity?
 - No increase

Good increase

Poor increase

• Remarkable increase.



2.2 Set #2: BOP's contribution to employee's awareness raising and well-being

2.2.1	BOPs contribution to promote awareness of staff on biodiversity (dissemination of information, participation in
	awareness-raising activities, "Open Doors Day," etc.)

This set of questions seeks to get information about the activities that are carried out to raise awareness on the value of BOP and the value of biodiversity in general

Item 30. Drivers or reasons why biodiversity friendly areas have been established by the company	?
Item 31. – Is the company promoting activities for employees related to BOP areas?	Yes / No
31. a) If YES, how many of these activities are related to biodiversity issues?	
Main topics: Climate change / native species / plastics / circular economy / alien inv	asive species / biodiversity
awareness / Others	
31. b) Staff participating in these initiatives? % of total staff (estimation	on)
31. c) How many biodiversity related activities to involve staff have been organized annual	ally?

Kind of activities	Number of activities per year
Outdoor activities or educational tours	
Exhibitions	
Photographic competition	
Activities involving staff's families	
Workshops on biodiversity	
Information material (e.g. leaflets, panels, posters)	
Internal newsletter or Intranet	
Others	



32. a) If YES.

2.2.2 Acceptance of BOP and contribution to staff well-being

The following questions assess the perception that the staff has of BOP and whether biodiversity-friendly designed areas contribute to well-being or not.

Item 32. – Does the company have information regarding the acceptance of BOP by the staff? Yes / No

	-, ·· ·,
-	How is the overall evaluation of the acceptance?

-	How is the overall evaluation of the acceptance?
	(From 1 = excellent to 5 = bad)?

- Percentage of staff favourable to BOP?
- Percentage of staff without an opinion?
- Percentage of staff who is against BOP?
- Percentage of staff who actively participate in BOP's activities
- Percentage of staff who is fully aware about the positive contributions of BOP to the protection of biodiversity

%
%
%
%
%
%

Item 33. – Is part of the BOP area used by your own staff?

No / Yes

- 33. a) If YES, indicate for what kind of activities are BOP areas used (multiple answers possible) by your own staff
 - Relaxing
 - Eating
 - Meetings
 - Others (please describe): _______
- 33. b) Does the company has information about how BOP influences the working atmosphere?
 - There is not information and therefore no assessment possible
 - BOP does not contribute to a better working atmosphere
 - Yes, the company has information about how BOP areas improve working atmosphere

Item 34. – Is part of the BOP area used by the staff from other companies?

No / Yes

- 34. a) If YES, indicate for what kind of activities are BOP areas used (multiple answers possible) by the staff
 - Relaxing
 - Eating
 - Meetings
 - Others (please describe): _____



2.3 Set #3: BOPs contribution to awareness raising of stakeholders and citizens on biodiversity

2.3.1 BOP's contribution to raise awareness of stakeholder and citizens (dissemination of information, participation in awareness-raising activities, "Open Doors Day," etc.)

Item 35. – Does the company invite stakeholders and/or the public to visit BOP areas?

- No, BOP areas are not open to the public.
- Yes, BOP areas are open to the public but are not entirely accessible.
- The company organizes activities to show BOP to stakeholders and/or the public
- Yes, BOP areas are accessible for public use

Item 36. - Does the company carry out activities to raise citizens awareness of biodiversity? Yes / No

36. a) If YES, please select all activities carried out by the company (multiple answers possible)

- Training or workshops on biodiversity.
- Outdoor activities or educational tours.
- Exhibitions.
- Panels, infographics, leaflets, etc.
- Photographic competition.
- Mushroom, aromatic plants picking, nuts harvesting, etc.
- Citizens-science /participatory biodiversity monitoring
- Others, please identify which ones _______

If you have more information about your activities, please include links to documents, publication or other material you consider relevant.

1			
l			

36. b) If YES, who organizes the activities (you can select more than one)?

- The company
- In collaboration with educational centres.
- In collaboration with NGOs.
- In collaboration with others, please name third entities



36. c) Are activities specially targeted to a specific stakeholder (multiple answers possible):

Target group	YES / NO	National (N) Internal (I) Local (L)	If YES , Please, add link
Suppliers			
Business clients			
Final consumers			
General public			
Families			
Retired persons			
Children			
Others			

Please	, add link to relevant information:		
	36. d) When did the company start these activities?	Year:	
	36. e) In total, how many people did participate in the activ	rities last year?	Number /year:
	36. f) Does the company /collaborating organization ask for	feedback?	Yes / No
	36. g) If YES, what are the overall results from feedback sur	veys?	

Feedback	Result
Very positive	%
Positive	%
Fair	%
Indifferent	%
Negative	%

36. h) Does the company plan to continue to realize or promote awareness-raising activities in the future?

Yes / No



3 Corporate area

3.1 Set #1: BOP's integration into the management of the corporation

3.1.1 BOPs contribution to environmental management systems and sustainability policies

The following questions assess the consideration of BOP in environment management systems, sustainability or biodiversity policies, guidelines or requirements of the company

		ompany have an environmental management system in	place? Yes	/ No
	37. a) If YES ,	please indicate		
	•	Third party-certified management system	EMAS III 🗆 IS	O 14001 🗆
	•	Internal guidelines or management criteria		
	•	Another third party-certified management system:		
	•	Non-certified management system		
Item 38.	– Does the c	ompany have a sustainability plan or policy in place?	Yes	/ No
	38. a) If YES ,	please indicate		
	•	Third party-certified management system	EMAS III 🗆 IS	O 14001 🗆
	•	Internal guidelines or management criteria		
	•	Another third party-certified management system:		
	•	Non-certified management system		
		ation of BOPs and BOPs' maintenance part of the environ please indicate where and since when (year):	nmental management	system? Yes / N
	BOP is men	tioned in the environmental policy		since
	BOP is part	of the environmental programme		since
	BOP is part	of a monitoring system		since
	BOP is men	tioned in the environmental report (please add link to re	port)	since
		ation of BOPs and BOPs´ maintenance part of the sustair please indicate where and since when (year):	nability policy?	Yes / No
	BOP is men	tioned in the environmental policy		since
	BOP is men	tioned in the sustainability report (please add link to rep	ort)	since



3.1.2 **BOP** economic aspects

This set of quest	ions is focused on the economic investment made in BOP's, as well as the r	maintenance costs incurred	
Item 41. – Do yo	ou have information about the investment done by the company to create	BOP areas? Yes / No	
	Exact total cost (in euros) incurred for creating BOP areas		€
41. a) If YES, please could you provide any	• Estimated total cost (in euros) incurred for creating BOP areas available information?		€
·	u have information about costs incurred in order to maintain BOP areas? f YES, please could you provide?	Yes / No	
	Exact total cost (in euros) incurred for creating BOP areas		€
	Estimated total cost (in euros) incurred for creating BOP areas		€
Item 43 Does t	the company plan further investment in BOP?	Yes / No	
43. a)	How much do you plan to invest? Approximately Euros		
43. b)	When do you plan to invest? Year?		
43. c)	Does the company have an annual budget for biodiversity-related activiti	ies? Yes / No	
43. d)	If YES, please could you provide any information available?		
	Awareness-raising activities annual costs		€
	Financial contribution to biodiversity projectsOthers		€



3.2 Set #2: Biodiversity integration across the company

3.2.1 Integration of biodiversity into the management of the company

This set of questions aims to assess whether BOP contributed to the consideration of biodiversity by other units of the company in order to improve the overall biodiversity performance.

Item 44.	I. – Did the company integrate biodiversity aspects into the managem	nent before the exist	ence of BOP?	Yes /No
ltem 45.	5. Did the company carry out a risk assessment regarding the impacts	on biodiversity?	Yes / No	
	45.a) If YES , what is the biggest impact of the company on biodivers	sity?		

Item 46.- Does the sustainability policy of the company include (measurable) objectives and measures for biodiversity protection apart from BOP? **Yes / No**

46. a) If YES, please indicate which departments /activities of the company are considered and which objectives have been settled

Department	Biodiversity considered Yes / No	Main objectives	If YES, please, add links
Corporation			
Investments			
Planning /Management			
Product design			
Procurement			
Supply chain			
Production			
Transport			
Marketing / Communication			
Recycling / disposal			
Others			

Item 47. - Is information on biodiversity included in any kind of report?

Yes / No

47. a) **If YES**, specify what kind of report (multiple options are possible) includes information about biodiversity related aspects of the company:

Annual report

Company policies

• Financial disclosure

Others, please identify which:

add link.

Key Performance Indicator (KPI): A Key Performance Indicator evaluates the success of an organization or an activity (such as projects, programs, products, and other initiatives) in which it engages. Choosing the right KPIs relies upon a good understanding of what is important to the organization. For example: projects events, number of people engaged with the project, number of visit to BOPs, etc.

Item 48. – Did the company select one or more Key Performance Indicators (KPIs) for monitoring biodiversity aspects beyond BOP?

Yes /No

48. a) If YES, please indicate what KPI (s) related to biodiversity do you monitor?

Key Performance Indicator	Frequency of monitoring (every 1,2, 3 years)	Results of the latest monitoring: positive, without change, negative, not applied

Item 49. - Do you inform your consumers about your activities to improve biodiversity performance? **Yes / No**

- 49. a) If YES, how do you provide information to your consumers?
 - Publicly available in the website
 - Via other publications
 - Via product information
 - During events such as fairs
 - Others, please describe which
- Tier 1: Direct suppliers or lending services companies.
- Tier 2: External suppliers or external suppliers or lending services supplied by companies that provide direct services or products to your company.
- Tier 3: Raw material producers that provide direct services or products to your company.



3.3 Set #3: Biodiversity promotion across business sector

3.3.1 The company promotes the integration of biodiversity into management decisions in the business sector (by being an active member of a Business & Biodiversity initiative, motivating business associations and or chambers of commerce, inviting other companies to exchange experience, or via other actions) and contributes to inform policy stakeholders, environmental authorities, and others.

The last set of questions is focused on promotion of biodiversity in the business sector by the company.

Item 5	0. - Do you regularly inform other companies of your sector about BOP?	Yes / No
	50. a) If YES, do you encourage other companies to consider BOP in their real state?	Yes / No
Item 5	1 Do you regularly inform your suppliers about BOP?	Yes / No
	51. a) If YES, which tier do you provide information?	Tier 1 / Tier 2 / Tier 3
Item 5	2 Do you regularly inform authorities about BOP?	Yes / No
	52. a) If YES, select what kind of authorities you keep informed:	
	• Local.	
	Regional.	
	National.	
	International.	
Item 5	3 Do you inform other companies / business associations about your activities to impd BOP?	prove biodiversity performance Yes /No
	53. a) Whom do you inform about your work on biodiversity aspects?	
	(business sector / business associations / business chambers / business in general / so others)	ciety in general / consumers /
	4 Does a regional or national Business & Biodiversity Initiative exist in your country?	
Item 5	Do you collaborate with a regional, national or international Business & Biodiversity in	nitiative in your country?
	 No Yes, we have a leadership role in the initiative. Yes, but we are no 	ate in working groups of the
	55. a) If YES , what is the name of the initiative with which you are collaborating?	



Annex I

The following types of habitats have been extracted from Corine Land Cover (CLC) classification.

https://land.copernicus.eu/pan-european/corine-land-cover/clc2018

Check the following link to explore Corine's definition of types of habitats:

https://land.copernicus.eu/user-corner/technical-library/corine-land-cover-nomenclature-guidelines/html/

For technical guidelines about Corine Land Use classification click on the following link:

https://land.copernicus.eu/user-corner/technical-library/corine-land-cover-nomenclature-guidelines/docs/pdf/CLC2018 Nomenclature illustrated guide 20190510.pdf

Annex II

The following links contain the list of alien invasive species of each country:

Spain: https://www.miteco.gob.es/es/biodiversidad/temas/conservacion-de-especies/especies-exoticas-invasoras/ce-eei-catalogo.aspx

The following list includes an alien invasive species proposal made by Spanish specialists to monitor Spanish BOP areas according the most common species in BOP areas.

Spanish common name	English common name	Scientific common name
Cotorra argentina	Monk parakeet	Myiopsitta monachus
Cotorra de kramer	Rose-ringed Parakeet	Psittacula krameri
Avispa asiática	Asian vesp	Vespa velutina
Tortuga de Florida	Slider turtles, Florida turtles	Trachemys scripta elegans
Uña de gato	Cat's claw	Carpobrotus edulis
ond de gato		Carpobrotus acinaciformis
Camalote, flor de bora o jacintos	Water hyacinth	Eichhornia crassipes
de agua	,	
Ailanto	Tree of heaven	Ailanthus altissima
Eucalipto	Eucalyptus tree	Eucaliptus ssp.
Mimosas	Mimosa tree	Acacia dealbata

Germany: https://neobiota.bfn.de/invasivitaetsbewertung.html

The following list includes the alien invasive species proposal made by German specialists to monitor German BOP areas according to the most common species in BOP areas.



Slovenia: http://www.sopsr.sk/invazne-web/?page_id=57

The following list includes the alien invasive species proposal made by Slovak specialists to monitor Slovak BOP areas according to the most common species in BOP areas.

Slovak common name	English common name	Scientific name
Ambrózia palinolistá	Common Ragweed	Ambrosia artemisiifolia
Javorovec jaseňolistý	Ash-leaved Maple	Negundo aceroides
Pajaseň žliazkatý	Tree of Heaven	Ailantus altissima
Pohánkovec (rod)	Knotweed (various species)	Fallopia sp.
Zlatobyľ kanadská	Canada Goldenrod	Solidago canadensis
Zlatobyľ obrovská	Giant Goldenrod	Solidago gigantea

Austria: ¿¿??

The following list includes the alien invasive species proposal made by Austrian specialists to monitor Austrian BOP areas according to the most common species in BOP areas. ¿¿??

Annex III

The following list includes the key indicator species selection proposal made by Spanish specialists to monitor Spanish
 BOP areas.

Spanish common name	English common name	Scientific common name
Conejo	Rabbit	Oryctolagus cuniculus
Insectos polinizadores (abejas u otros)	Pollinating insects (bees, others)	Apis mellifera
Libélula	Dragonfly	Anisoptera
Efímeras	Mayfly	Ephemeroptera
Lirón careto	Garden dormouse	Elyomis quercinus
ratón de campo	Wood mouse / Field mouse	Apodemus sylvaticus
Murciélagos (en general)	Chiroptera	Bat
Lavándula	Lavender	Lavandula ssp.
Romero	Rosemary	Rosmarinus officinalis
Enebros y sabinas	Juniper and savin juniper	Juniperus spp.
Serbales, mostajos	Mountain ash, whitebeam	Sorbus spp.
Orquídeas (en general)	Wild orchids	Orchidaceae
Durillos	Brambles, dogwood,	Viburnum spp.
Plantas trepadoras (madreselvas,	Climbing plants (honeysuckle, sarsaparrilla)	Lonicera ssp.
zarzaparrillas)		Smilax aspera
Quercus (en general)	Oaks (in general)	Quercus sp.



- The following list includes the key species selection proposal made by German specialists to monitor German BOP areas.
- The following list includes the key species selection proposal made by Slovak specialists to monitor Slovakian BOP areas.
- The following list includes the key species selection proposal made by Austrian specialists to monitor Austrian BOP areas.

Project partners









