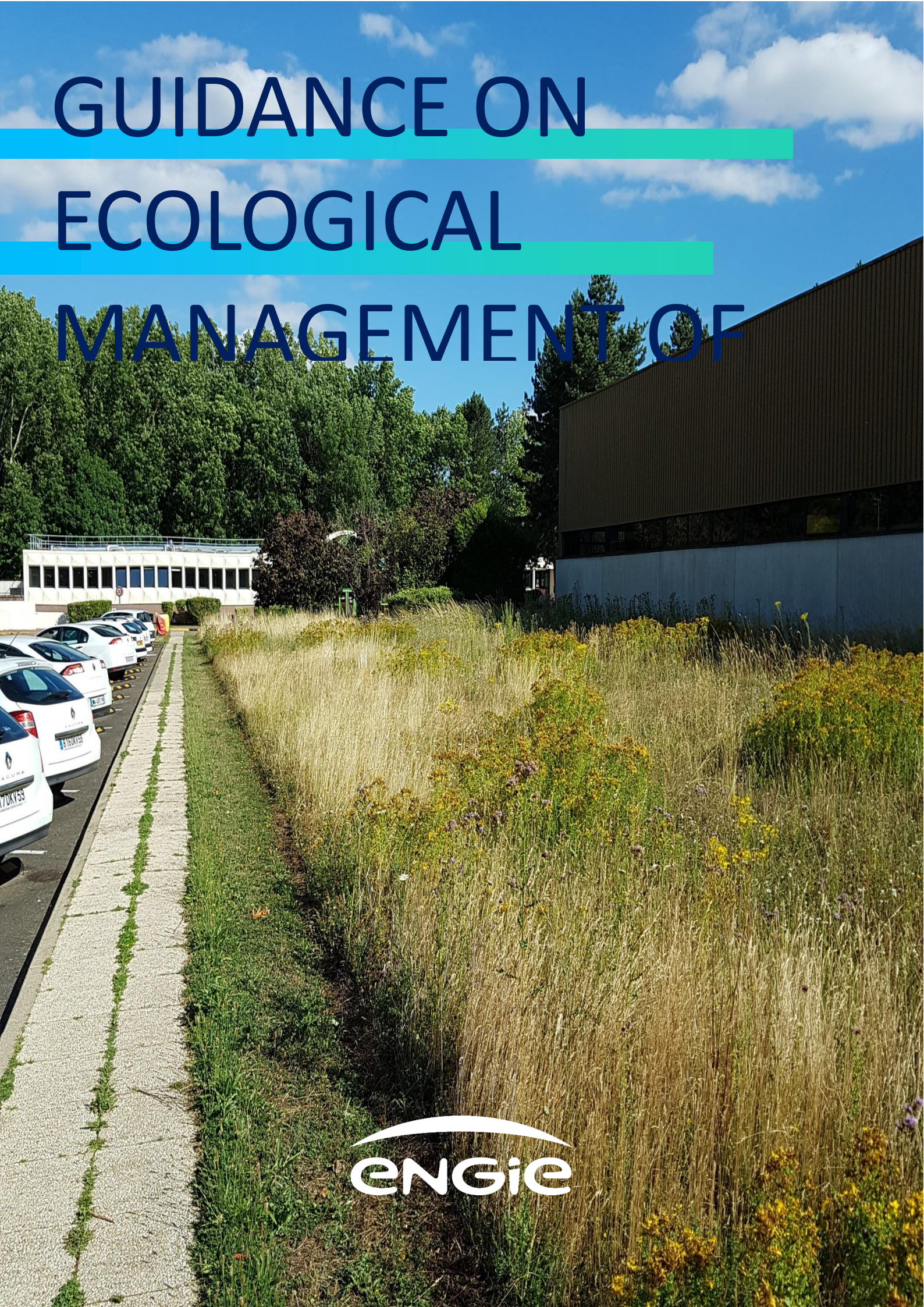
GUIDANCE ON ECOLOGICAL MANAGEMENT OF



FOREWORDS

Extinction rate is 10s to 100s time higher than it has averaged over the past 10 million years: 1 million species is threatened (1 out of 8). Biodiversity is declining at an unprecedented rate. In the short term, this situation is of deep concern for the maintenance of our agri-food, health and supply systems. Thus, biodiversity loss, together with climate change, will undermine the ability of most countries to achieve most of their sustainable development goals. Drivers of loss are underpinned by societal values and behaviors: production and consumption patterns, human population, dynamics and trends, trade, technological innovations… Although the current dynamics will not allow us to respond to the urgency of this biodiversity crisis, we can still opt to protect and restore nature.

ENGIE is on its way to lead the zero-carbon transition. Our ambition is to make zero-carbon transition possible for Companies and Local authorities through "as a service" integrated zero-carbon transition solutions. To meet with a sustainable transition, we need to pay attention to the Group impacts on biodiversity and ecosystems and therefore, as early as 2010, ENGIE committed to mitigate its impact on biodiversity by providing each of its priority sites with a biodiversity protection action, and by supporting act4nature and extending the scope of its biodiversity objectives to all its activities, as soon as July 2018. Since February 2019, ENGIE has also been committed to assessing the potential impact of new projects on UNESCO World Heritage sites (natural or mixed) and to avoiding the development of projects with negative impacts.

This is a two-way interaction: Group activities are partly dependent on ecosystem services in terms of biomass resources, water and climate, and our activities also impact directly on biodiversity while the fragmentation and disruption of habitats caused by the footprint occupied by our facilities represent the main impact of Group activities. Furthermore, poor consideration or anticipation of regulatory changes ever stronger or stakeholder expectations may in particular cause delays or stoppages in our business, and therefore significant financial costs.

ENGIE made biodiversity an integral part of its strategy, business lines and its new product development as early as 2010. The protection of biodiversity is fully involved in environmental and social responsibility of the Group and constitutes a strong challenge to the territorial base of its activity. As a part of its commitments to act4nature renewed in 2023, to "Introduce ecological site management for all the Group's industrial activities" and in compliance with its biodiversity strategy "Strengthen the Group's commitment to preserve biodiversity", the CSR Department is pleased to present this guide to ecological management of sites.

ENGIE, committed to

act4nature international

ENTREPRISES ENGAGÉES POUR LA NATURE

CONTENTS

WHY IS ENGIE CONCERNED WITH BIODIVERSITY?

Biodiversity is the variability among living organisms from all sources including, terrestrial, marine and other aquatic ecosystems and the ecological complexes of which they are part; this includes diversity within species, between species and of ecosystems.

Implanted in biodiversity hotspots or having sites with a large spatial footprint, ENGIE sites impacts both emblematic and ordinary biodiversity.

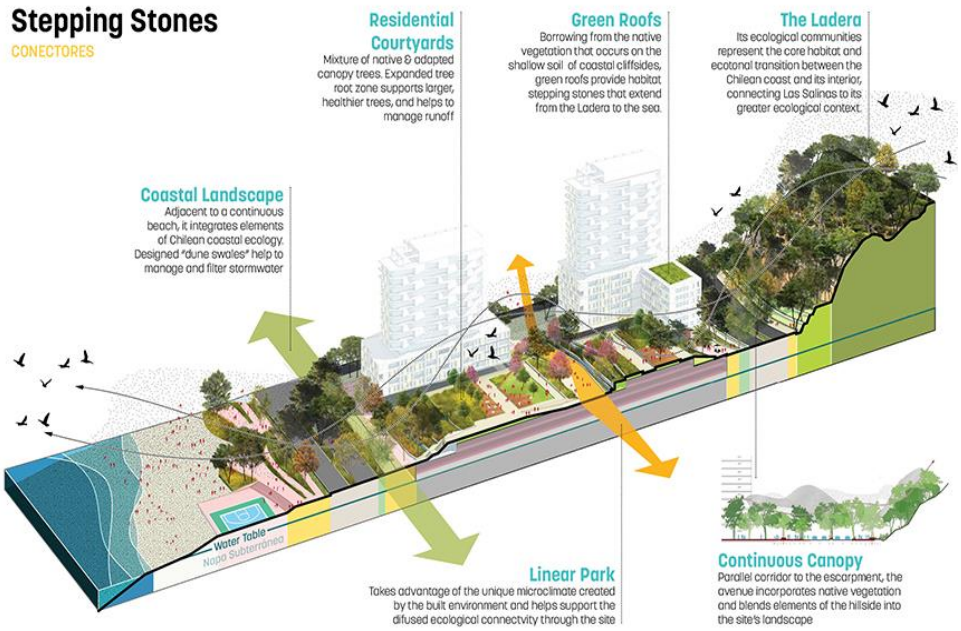
In what forms is biodiversity present on sites ?

ENGIE's sites are artificialized areas, or partially artificialized, which shelter biodiversity. Even if some of them are located on urbanized or industrial zones, the area used by sites includes different habitats: natural spaces with various functions that allows species to achieve their entire life cycle.

Species and their interactions compose ecosystems. Today, biodiversity is highly threatened by the destruction of habitats, overexploitation, climate change, pollution and invasive alien species. As a complex structure, the loss of a few species or entity can lead to the collapse of vast ecosystems. It is important that the site not disturbed or causes as little disturbance as possible. their functioning and allows the connectivity between habitats, as human activities fragment and destroy these ecosystems. We seek to reduce and erase this fragmentation, in both urban and rural areas, and create ecological connectivity through our sites.

ECOLOGICAL CONNECTIVITY

It is essential to the movement, spread and genetic exchange between populations. Ensuring this ecological connectivity through the preservation of corridors allows the functionality of ecosystems in a more effective way. Hedges and riparian forests are well known examples of these corridors, but patch habitats such as green roofs act as stepping stones allowing species movement too.



How ENGIE's sites impact biodiversity ?

ENGIE's main impact on biodiversity is due to the spatial footprint of its sites (like gas storage facilities and pipelines, renewable energies facilities and the reservoirs used for hydropower generation for instance) by fragmenting terrestrial, aquatic and aerial corridors. Environments favorable to the development of invasive alien species can be fostered during construction works (e.g through the use of imported soils). Then, indirect impacts relate to the Group's sourcing of supplies, especially coal and biomass.

We took commitments and we act

To protect biodiversity with efficiency, ENGIE frames its commitment with 2 targets specifically dedicated to its industrial sites - among the 13 commitments in act4nature - and implements a biodiversity strategy based on 4 focuses.

ENGIE BIODIVERSITY STRATEGY

Lead a biodiversity network of internal experts through internal training and awareness raising

Strengthen the Group's commitments to preserve biodiversity by integrating biodiversity and implementing a specific management of biodiversity thanks to EICM and ecological guidance

Develop innovative solutions to preserve biodiversity at Group sites by improving our knowledge of the ecological potential of sites with appropriate mapping tools and developing Nature-based Solutions

Ensure that the Group opinions and practices are transparent for outside stakeholders thanks to local participation and national and international partnerships (with the IUCN French committee and FNE)

During 2021 and 2023 period, ENGIE decided to increase the proactive actions regarding biodiversity in concertation with local stakeholders on sites. For this purpose, the CSR Department has created this guidance for the ecological management of sites.

Thus, as part of the ENGIE's Nature 2023-2030 roadmap and strategy, the Group has renewed its Act4nature International commitments in terms of Footprint and ecological continuity and it is in this context that the current guide is now updated. This tool is one among others to contribute to biodiversity protection and restoration.

OUR COMMITMENTS

Introduction of ecological site management[1] for all the Group's industrial activities. A scale of maturity is proposed to the sites, with at least the elimination of the use of phytosanitary products and maintenance of green spaces in line with the local ecosystem.	2025: 50% sites 2030: 100% sites NEW 2030: use of a minimum of 40% local/endemic plants and no use of invasive exotic species for all revegetation operations
Continued development of action plans[2] for sites qualified as priority sites[3] , whatever the activity, located in or near a biodiversity-sensitive area.	NEW 2025: 80% priority sites with an action plan drawn up in consultation with the relevant stakeholders[4] NEW 2028: 100% priority sites

The guidance includes a first part about project management and recommendations on how to integrate and implement ecological management on site with the special advices from advanced sites on this issue. The

[1] Industrial sites included in the Group's environmental reporting perimeter.
[2] The action plans follow a model defined at Group level and are verified on site by the statutory auditors on an annual basis.
[3] A priority site is an industrial site located within 15 km of a protected area or a biodiversity-sensitive zone. The protected areas and sensitive zones taken into account are : IUCN categories I to VI, Ramsar, UNESCO (natural and mixed), KBA, MAB, Natura 2000
[4] For each site or project, the various stakeholders are identified and a dialogue is established to better understand local issues and avoid exerting too much pressure on biodiversity and ecosystems.

second part is a catalogue of practical sheets on actions implemented on ENGIE's sites and external best practices.

ECOLOGICAL MANAGEMENT: DEFINITION AND IMPLEMENTATION PHASES

Ecological management is a way to maintain green areas bearing in mind the environment and biodiversity, in such a way that ecological services and biological resources are conserved while appropriate human uses and benefits are sustained. It is based on differentiated spaces that do not require the same management or management intensity.

Ecological management of sites means protecting and restoring the environment through actions such as lowering the pressure level induced by phytosanitary products, repeated mowing, soil artificialization, respecting spontaneous (no-invasive) as well as prioritizing endemic flora and fauna, reducing waste, protecting

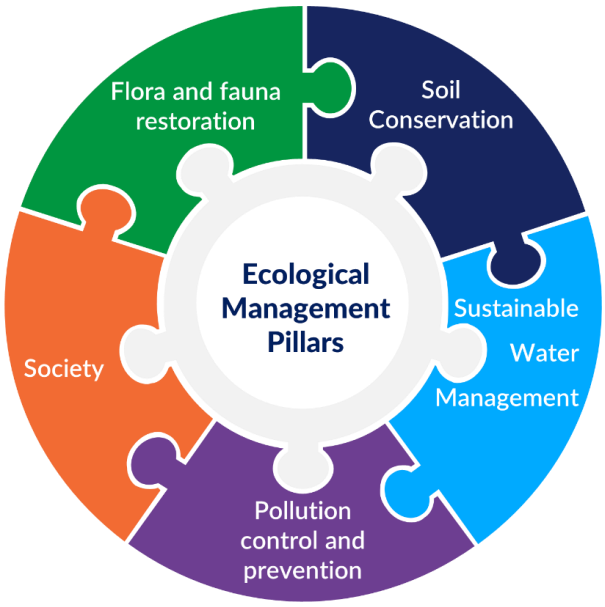
ECOLOGICAL MANAGEMENT PLAN

The management plan is an ENGIE's strategic document designed to formalize objectives and maintenance procedures of green areas in industrial sites. It also integrates a long-term vision of the landscape and socio-ecological aspects of the site,as well as a short- and medium-term strategic planning taking stock of past management practices by incorporating changes according to the uses of each space.

It is useful for all stakeholders and helps to:

- organize and plan the role/actions of the site manager;
- ensure long-term consistency;
- communicate with the territory;
- make the results of the action readable and exploitable
- facilitate the implamentation of act4nature engagements of the Group.

ECOLOGICAL MANAGEMENT AT ENGIE IS BASED ON FIVE PILLARS :



Sites can have two types of areas: artificialized areas i.e. highly impacted by human activities, and agricultural or natural areas. Please note that ecological management refers to green artificialized areas only (including gardens) and that other ones, as natural or protected areas, require another specific management.

THE ROLL-OUT OF AN ECOLOGICAL MANAGEMENT PLAN INCLUDES 6 PHASES

CSR OBJECTIVE REQUIREMENTS

End of 2030, 100% of the sites will have implememted an ecological management.

This means reach, at least, a basic maturity level of ecological management practices:

- **No use of chemical phytosanitary products**
- **Management of green spaces differently than a systematic cutting of grass or trees, in order to restore biodiversity on site ("differentiated management")**

An additional objective related to Act4nature comitemments:

- **Using of a minimum of 40% of local/endemics plants and no use of invasive exotic species for all vegetation operations.**

According to the Group commitments mentioned above, three distinct levels of maturity have been established as part of the ecological management practices at ENGIE.

THREE LEVELS OF MATURITY

* Basic (Essential)	** Medium (Recommended)	*** Mature (Facultative)

MATURITY LEVEL	REQUIREMENTS	DESCRIPTION
Basic* (Essential)	**No use of chemical phytosanitary products**	Avoid the use of any phytosanitary product such as herbicides, growth regulators, insecticides, miticides, bactericides and antibiotics, defoliant, fungicides, molluscicides, rodenticide, containing synthetic chemistry, dangerous for the environment and the auxiliary fauna (*c.f.* Appendix 3 *Unauthorized phytosanitary products references*).
	Management of green spaces differently than a systematic cutting of grass and trees, in order to restore biodiversity on site ("differentiated management").	Appropriate selection of alternative grass and weed control techniques: manual weeding, mulching, managed ground cover, differentiated (selective mowing to preserve remarkable spontaneous species) and late mowing, livestock grazing, etc.
Medium** (Recommended)	**Adaptation of the "green" areas of the site to the local context using of a minimum of 40% local/endemic plants**	Green areas adaptation to local ecosystems and societies while emphasizing the selection of plants in harmony with the site conditions (soil, climate, exposure…). Prioritize the use of local or native species as well as no-invasive adapted species when renewing or replacing plants and preferably favoring the choice of endangered and/or cultural keystone species. Meaning 40% of the green area should be planted with local and/or endemic species5.
	Mapping to identify the possibilities to contribute to the ecological corridors (green, blue and black)	Integration of the site within ecological networks and ecosystems connection (such as green, blue or black corridors) at both territorial and local levels, while considering connections between different habitats within the Site.

[5] Not using chemical phytosanitary products encourages the return of local/endemic species.

	Regular inventories of fauna and flora done to assess the results of the actions on site and around	Biodiversity monitoring on the site to assess the progress made through practice changes: conduct an initial inventory of local floristic and faunistic biodiversity and establish regular monitoring (using spontaneous observation sheets with a frequency tailored to the tracked species).
	Internal committees dedicated to biodiversity	Biodiversity committees establishment in order to monitor indicators of green spaces, improve communication and interactions between stakeholders regarding site management, as well as encourage collective decision-making for continuous improvement and ecological management goals achievement. This will enable rapid exchange and integration of advancements in knowledge and practices.
Mature* (Facultative)**	**Stakeholders (internal and external) involved in the ecological management of the site**	Implementation of projects and initiatives (both within the ENGIE Site and among employees, as well as between the Site and companies, local environmental associations, and any other identified stakeholder): establishment of a vegetable garden, involvement in landscaping projects, training on ecological management and responsible use of Site's green spaces, inventories and participatory science (flora, insects, etc.), garden competitions, and more..
	Actions extended to the territory (not only on site)	Establishment of collective rules to strengthen or even create social bonds, incorporating key recommendations of ecological management, including the prohibition of synthetic chemical phytosanitary products. These rules can be developed in consultation with various stakeholders for a better understanding of the issues and a greater ownership of improvement practices or to benefit from their expertise.
	Biodiversity management has become a business opportunity	Generate and voluntarily trade biodiversity our carbon units/offsets, analyzing the cost reduction resulting from reduced interventions, replacement or elimination of aggressive products, etc. Expand ecological management beyond the site -and in collaboration with various stakeholders- aligning initiatives with Nature-based Solutions IUCN criteria, in order to address one or multiple societal challenges.

The main actions are summarized into the environmental action plan of the site (ecological management section), and the indicator MAP0634-Number of sites with ecological management in place must be completed in EARTH.

1. CARRYING OUT AN INITIAL BIODIVERSITY DIAGNOSIS

It is conducted in two inseparable parts: environmental and societal.

1.1 NATURALISTIC (OR ENVIRONMENTAL) DIAGNOSIS

Identify environmental challenges existing on different scales. There are at least two scales:

- regional (radius of several kilometers or regional ecological plan scale or land use plan or territorial policy) for the identification of major issues like ecological corridors;
- site: identification of naturalist potential and ecological issues as well as ongoing maintenance techniques.

This diagnosis helps find and adapt solutions to optimize the management of green areas (transformation of lawn into meadow, late mowing, wildlife refuge area, hedges, ecological engineering in general...).

Necessarily carried out by an expert in ecology at the site level, the naturalistic diagnosis must be cross-referenced with a competent entity on ecology at the regional level to avoid missing certain issues and to validate publicly good practices.

The following steps shall be implemented for its realization:

1. Conduct an inventory of the green spaces managed by the Site based on its usage and user expectations as well as the characteristics of each area:
    - those destinated to ornamental use,
    - those buffer zones surrounding operational facilities that must maintain specific security conditions,
    - those recreational or wellness spaces for employees (islands of freshness, outdoor training sessions...).

2. Categorize spaces by vegetation stratum based on the desired or necessary maintenance intensity for the Site's operation and security conditions. This classification will help optimize the distribution of workload while avoiding uniform maintenance across all spaces. Some biodiversity tools like "eDNA" or "BeeOdiversity" could be helpful at this stage*(cf* . Practical sheets).

3. Assess the ecological balance and the current maintenance practices of each area, which will serve as a baseline for evaluating, further down the line, the impact of implemented practices in relation to the site's biodiversity. This balance could lean on Appendix 1 *Self-assessment on Ecological management practices* and/or be enhanced with other methodologies that would be considered relevant to the context of the site. Appendix 1 takes into consideration the three maturity levels as well as the following pillars of ecological management at ENGIE:
    - Flora and fauna restoration: Biodiversity, species monitoring and habitat preservation are some of the concepts inherently integrated into the principles of ecological management. The objective is to preserve and enhance flora and fauna, particularly by safeguarding endangered species as well as promoting ecological significance of certain species.
    - Soil conservation: Soils fulfill a multitude of essential ecological functions, such as water storage and purification, pollutant retention, carbon storage. Soils also serve as reservoirs of biodiversity and soil fertility, nutrient transformation as well as the quality of our food are ensured by the activity of these organisms. Preserving soils involves identifying soil risks (erosion, biodiversity loss, etc.) and implementing specific measures .

- Sustainable water management: Ecologically managing water in green spaces involves understanding available water resources and monitoring consumption. Implementing a thoughtful irrigation strategy and mastering systems that optimize use. Exploring water alternatives and non-irrigation practices enhance ecological management and resource preservation.
- Pollution control and preservation: Mitigating greenhouse gas emissions and other atmospheric pollutants, which begins with monitoring fuel consumption before progressing towards reduction, as well as mitigating and regulating noise and light pollution associated with maintenance operations or illumination of green spaces are also a significant concern on ecological management.
- Society: Ecological management directly impact not only spaces but society and territories. This makes it a collective project and a strategic endeavor for business, involving employees on Site's biodiversity conservation actions or to communicate and respond to stakeholders inquiries if the case as well as to co-construct good practices and knowledge by using their local skills and expertise. Social issues will be addressed based on the "societal diagnosis" which is described below.

1.2 SOCIETAL DIAGNOSIS

Identify the players who will intervene in the process in order to gather their advice on local issues: players of the agricultural and forest sectors, nature conservation associations and experts. The diagnosis is carried out in support with the site manager and the person in charge of stakeholder relations and it shall be based on the *ENGIE's Stakeholder Engagement Referential* (internal document) : it is necessary to cross-reference to avoid controversies and to study all the possibilities of co-construction with the stakeholders. At this stage, synergies with on-site development projects are also monitored to assess the future of the plots.

Do not hesitate to cross-reference the potential actions of the management plan with others with CSR aspects (art, integration, education). Some suggestions could be found in the Appendix 1 - Society section.

It is essential to create alliances and partnerships with local stakeholders for the valorization and good functioning of the project.

Internally, prepare the project, present it and co-construct the procedures with the employees.

2. IDENTIFICATION OF ISSUES

Once the Biodiversity Diagnosis is completed, a list of improvement points might be identified as a result. These can then be prioritized and classified (e.g. taking into account the 5 pillars of ecological management) in order to have a focused set of "major issues". These will serve as a starting point for the next stage of setting long-term objectives.

3. FORMULATION OF LONG-TERM OBJECTIVES

At this stage, long-term objectives shall be established according to the management challenges and issues identified on the initial Site's Biodiversity diagnosis. Each objective is associated with each issue detected, which makes it possible to measure the effectiveness of management and to frame operational choices.

In addition, the different requirements of maturity levels of ENGIE's ecological management as well as the Act4nature commitments must be considered as a reference for Site's objectives and goals setting and at least the

"basic level of maturity" should be covered in this phase. Each long-term objective is quantified or qualified with a level of requirements.

4. BREAKDOWN INTO OPERATIONAL OBJECTIVES AND ACTIONS

Operational objectives and actions are at the crossroads of long-term objectives and SWOT factors identified in the diagnoses. They are clearly quantified and qualified and are conducted over several years. They are divided into short and medium term actions to be carried out, specified in descriptive sheets.

At this stage, a management operations plan must be integrated. This planning includes various information such as intervention period and frequency, equipment used, control methods, a monitoring dashboard, etc. Meaning an Ecological Management Plan encompassing a Differentiated Management Plan, a Weed Management and Zero-Phyto Plan and other specific procedures related to practices that need to be implemented to tackle the Site's ecological management challenges. Some actions and practices recommendation could be found in the Appendix 2 "Ecological management recommendations"

The sites are under permanent work: operational staff must be involved in the governance of the projects. It allows the integration of operating constraints and prioritized as follows: 1) safety, 2) operation, 3) maintenance.

IMPORTANT:

The use of chemical phytosanitary products or those having any classification based on physicochemical properties, toxicological effects, or effects on humans and the environment is prohibited, as it is not compatible with ecological management. However, derogations are possible if it is demonstrated that there are any requirements imposed by local regulations or by the license to operate. In the case of difficult-to-access areas for personnel safety reasons, substitute products as phytosanitary products authorized in organic agriculture shall be applied.

5. IMPLEMENTATION OF THE ECOLOGICAL MANAGEMENT PLAN

Implementation is planned over the entire period of the management plan: all the actions to be carried out alongside their monitoring, budget and responsibility as well as the awareness and valorization aspects. An internal manager must be appointed; he relies on the experts or partners who must be proficient in their fields (specifications, equipment, training...) (see links to partners and resources)

Local skills should be promoted where possible and provide the means to combine expertise (i.e. different perspectives and specialties, taking care to address difficulties of understanding)- The management plan is reviewed at least once a year to respond to progress and changes in stakes: it must be challenged. It must also take into account economic uncertainties: ensure flexibility on actions and budgets to reassure but also to enter into the long term.

THIRD PARTY MAINTENANCE:

In the case that the maintenance of green areas is managed by a third party (such as a landscaper, gardener, or contractor), the ecological management plan and technical specifications must be communicated to them and if necessary provide them with training. They could also be involved in the processes of results monitoring and ecological management goals review.

6. EVALUATION AND VALORIZATION

Evaluation assesses actions and operational objectives with SMART indicators and later determines the maturity level of the management: from "License to operate" to excellency i.e. an activity driven by ecology.

Valorization of the management plan can be carried out in terms of ecology, performance and territorial acceptability. This step requires the involvement of teams and supervisors.

SMART targets

Specific – target a specific area for improvement

Measurable – quantify or at least suggest concrete criteria

Achievable – level of performance or requirement matches global strategy and resources

Realistic – state what results can realistically be achieved, given available resources.

Time-related – specify when the result(s) can be achieved

Educational communication with the public should be conducted at this stage too. This involves, for example, installing explanatory panels describing how the site functions, its flora and fauna, or explaining the importance of safeguarding its ecosystem.

Ecology

Performance

Acceptability

The level of maintenance and restoration of ecosystem services and Site's integration into the ecological landscape

The contribution of the ecological transition to the energy and climate strategy as these two human-induced issues must be tackle together to be resolved effectively[6]. Ecological management allows the rationalization of green areas maintenance costs

The territorial vision of the site gives meaning to the actions and highlights positive externalities.
Quality of work life: many social positive impacts have been identified in relation to the initiatives implemented for biodiversity

[6] Some pathways chosen to achieve the goals related to energy, economic growth, industry and infrastructure and sustainable consumption and production could have substantial positive or negative impacts on nature and therefore on the achievement of other Sustainable Development Goals

Appendix 1. Self-assessment checklist on Ecological Management practices:

	MATURITY LEVEL	YES/NO/PARTIAL
FLORA AND FAUNA RESTORATION		
Are there measures in place to establish ecological connections between this site and others?	**	
Are the landscape and objectives (including ambiences, esthetic and views) of the site's green spaces known/have they been identified?	*	
Is the biodiversity of the site (common and remarkable) known, and are specific preservation actions in place?	***	
Is there an initial inventory of the site's biodiversity?	*	
Is there an appropriate frequency for flora or fauna monitoring (annual or biannual), especially for indicator species (umbrella species, heritage species)?	**	
If present, is there management and monitoring of invasive species ?	**	
If present, is there management of pest species (such rodents)?	*	
Is the environmental impact of the nuisance species control methods used taken into account?	*	
Are there any installations of ecologically beneficial plants (such as nectar-bearing plants) on the site?	**	
Is there a creation of specific micro-habitats on the site to promote certain species (excluding deadwood and insect hotels)?	**	
Have species designated with a particular protection status been identified, and have specific preservation measures been implemented?	*	
Are the species present on the site adapted to the environmental conditions?	*	
Is there a use of indigenous or endemic flora during renewal or replanting?	*	
Are the species considered for renewal proven to be non-invasive?	*	
Is there any requirements or specifications establishment for the procurement and production of plants and seeds?	***	
Is the health condition of flora diagnosed periodically?	**	
Do weed control operations solely rely on alternative methods to chemical-phytosanitary weed control?	*	
Are there preventive measures in place to avoid the need for weeding (mulching, ground cover plants, etc.)?	*	
Have the selected alternative methods been chosen based on the site's characteristics and resources available?	*	
Is reasoned pruning practiced on the site (pruning solely for safety reasons and/or preservation of the architectural form)?	**	
Are the interventions carried out outside of the nesting periods?	**	

Has a spatial distribution of the herbaceous layers (lawns, grasslands, meadows) been established based on differentiated management?	*	
Do mowing practices take into account the biological cycles of fauna and flora ?	*	
Do the mowing methods used take into account the preservation of fauna (presence of refuge islands for biodiversity, mowing from the center to the periphery, etc.)?	*	
Are there natural flowering meadows (expression of the soil seed bank) resulting from soil depletion techniques on the site?	**	
Is there a practice of pastoralism (livestock grazing) for the maintenance of natural grasslands/meadows?	*	
If intervention is necessary, is an alternative method used instead of chemical treatment derived from synthetic chemistry (phytosanitary chemical products)?	*	
Are treatments with phytosanitary products not authorized in organic agriculture or dangerous to human and environmental health prohibited?	*	
Are management auxiliaries used only when there is a proven and justified need for control?	*	
Is spontaneous colonization encouraged (relay plants, hosts for beneficial fauna)?	**	
If necessary, are there nest boxes and/or insect habitats on the site?	**	
SOIL CONSERVATION		
Are the soil characteristics known (nature, permeability, physico-chemical properties)?	**	
Is there a recent soil analysis (< 10 years) for the significant areas of the site: areas with soil additions, heritage to be preserved, risk zones, groundwater, etc.?	***	
Have major risks to the soils been identified (erosion, pollution, loss of biodiversity and organic matter, compaction, sealing and artificialization, salinization, floods), and corresponding preservation measures been implemented?	**	
Is manual hoeing and digging of the soil limited only to necessary operations (planting)?	*	
Are there preventive methods in place to avoid the need for weed control?	*	
Is fertilization solely based on organic matter?	**	
SUSTAINABLE WATER MANAGEMENT		
Is irrigation nonexistent on the site or only done on a sporadic basis (during new plantings)?	**	
Are you aware of the evolution of the total annual water consumption in the last three years for all the green spaces managed by the Site? (Differentiation by source if possible)	**	
Are water needs evaluated based on climate, soil type, and plant species?	**	
Are water inputs regulated (amounts to be applied, duration, frequency, and division)?	**	
Is irrigation carried out during hours of lower evaporation (early morning or nighttime)?	**	

Is the irrigation method adapted to the vegetated surfaces and their water needs ?	**	
Are preventive methods employed to limit irrigation (mulching, ground cover plants, water-efficient species, etc.)?	**	
Is there use of other water sources for irrigation (prioritizing rainwater or recycled water before resorting to drilling or pumping)?	**	
Does the Site accept the season yellowing of the herbaceous layer?	**	
Are biodiversity processes used to filter or limit the transfer of water pollutants on site ? (e.g. natural or artificial wetlands…)	**	
POLLUTION CONTROL AND PREVENTION		
Are there measures in place to reduce waste generation from green space maintenance?	**	
Do you valorize green waste on-site (sorting waste and using residual materials) or nearby?	**	
In case of internal compost production, is there a structured protocol in place?	**	
Are green waste exported off-site being valorized (composting facility, etc.)?	**	
Is there a tracking of consumption (fuel and oil) for machinery and vehicles?	**	
Are there measures in place to reduce the use of thermal engines?	**	
Is there an inventory of sources and levels of noise pollution related to maintenance activities of green areas of the site?	**	
Are there measures in place to limit these nuisances?	**	
Is the site lighting suitable for its uses (timing, users attendance)?	**	
Is the lighting rationalized (type of pole, orientation, timer, lighting cone, energy source, type of bulb, power supply mode)?	**	
Are vehicles prohibited on vegetated areas (no circulation outside of designated paths)?	**	
SOCIETY		
Is there internal communication about ecological management of the Site?	***	
Is there a training plan (annual or multi-year) for the staff that includes ecological management themes (introduction to differentiated management, Understanding and monitoring soil quality, naturalist knowledge -flora and fauna-…)?	***	
Are educational information provided to users?	***	
Has a collective continuous improvement process been implemented (annual work meetings involving gardeners, team leaders, environmental officers, etc.)?	**	
Are there actions promoting employees involvement in green spaces (participation in planting/replacing and weeding campaigns, fauna-flora surveys, etc.)?	***	
Are there projects, initiatives or engagements between the Site and external stakeholders (companies, community, local environmental associations, ONG, etc.)?	***	

Appendix 2: Ecological management practices and recommendations

FLORA AND FAUNA RESTORATION	RECOMMENDATIONS
Biodiversity protection	- Selective mowing to preserve remarkable or local spontaneous species - If invasive plants or animals considered harmful are present on the site, regular monitoring must be conducted, and the implemented control methods should have limited environmental impacts (zero-phyto) - Identify and, if applicable, preserve the site's habitats and all species designated with special status (protected at national, regional, and departmental levels, unfavorable conservation status, heritage or uncommon species, etc.) - Create natural refuges for endangered fauna. This can be achieved by using elements of the site (leaving piles of dead leaves under hedges, logs and piles of branches, stones, etc.), or by installing wooden wildlife refuges (insect hotels, nesting boxes, hedgehog houses, etc.). - Encourages the arrival of pollinating insects, such as bees, and thus contributes to their preservation with a melliferous flower meadow. - Diversify habitats for fauna and flora: aim to extend edge effects and edge influences (vegetation transition between two habitats), develop ecotones, and preserve spontaneous species on the site…
Plants selection	- Use plants suitable for site conditions (soil, climate, exposure, pest pressure, etc.), hardy and less susceptible to diseases (especially fungal) - Preferentially use species of local origin when renewing or replacing plants. Endemic plant species are to be preferred, as they are specimens adapted to the local soil type and climate. They are therefore more resistant and require less maintenance. Wherever possible, plants that grow spontaneously should be left to contribute to the formation of a richer local ecosystem. - Installing and preserving nectar-producing plants, host plants, etc., as well as relay plants for beneficial fauna, with a preference for local native plants - Avoid exotic species suspected of being invasive by replacing them with proven non-invasive substitute species - Invasive plant species will require special treatment (generally manual removal). They must not be gyro-crushed, as this will strengthen them and cause them to grow back more strongly the following year. If they are to be removed permanently, they must be dug up and the root system removed as far as possible.

Biodiversity monitoring	- Conduct an initial inventory of local biodiversity: inventory dates, observers, faunistic and/or floristic data, site/habitat/environment descriptions, species involved, etc. - Implement regular biodiversity monitoring: establish observation sheets for spontaneous fauna and flora with a frequency adapted to the monitored species, etc.
Mowing	- If possible, prioritize late mowing to allow species (both fauna and flora) to complete their entire life cycle on-site - Carry out centrifugal mowing (from the center towards the periphery) to allow the escape of the present fauna, preferably using a mowing bar that is less aggressive for insects - Avoid clear-cutting - Left uncultivated areas not frequented such as the edges of fences, the foot of trees or roadsides. By maintaining these areas in their natural state, endemic plants can thrive and encourage the development of local biodiversity. - Promote the presence of refuge islands for biodiversity - Implement differentiated mowing (avoidance of species to be preserved) - Generally, the mowing products will be exported to promote both soil impoverishment and the expression of the soil seed bank, aiming to achieve greater plant diversity
Management of pests and health condition of plants	- Diversify the species of plants used (mixed hedges, etc.) and promote flora species associations to reduce pest pressure and thus limit plant health problems. - Encourage the presence of beneficial animals such as birds, bats and predatory insects in Site's environment. These animals feed on pests and help to regulate their population naturally. You can install suitable nesting boxes or shelters to attract them. - Pay attention to the health condition of plants upon receipt. If contamination by a pest or disease is observed, isolate infested or infected plants to prevent any spread. - In case of a phytosanitary problem requiring intervention, implement biological control methods: mechanical control (removal of infested plant parts), physical control (physical barrier - glue, net - between the plant and its pest), and biological control (use of predatory and parasitic fauna against harmful organisms). - The use of unauthorized phytosanitary products in organic agriculture or those with any classification based on physicochemical properties, toxicological effects, or effects on humans and the environment is prohibited.
SOIL CONSERVATION	**RECOMMENDATIONS**
Erosion	- Maintain a permanent vegetative cover of the soil (permeable mulches, plants…) - Create terraces for sloped soils.
Pollution	- Monitor and control inputs and additions of exogenous substrate.
Biodiversity and Organic Matter Loss	-Promote soil biodiversity (soil fauna), particularly through the addition of organic matter.

	- Soils in green spaces are frequently supplemented with fertilization, however, the strategies employed must correspond to genuine needs and prioritize organic matter applications.
Compaction	- Avoid trampling - Minimize machine traffic on vegetated surfaces - When soils are wet to very wet: wait until the moisture level is lower than field capacity before intervening, never use machines when conditions are unfavorable.
Artificialized/Impervious Surfaces, and Runoff	- Limit impermeable structures (covers, coatings) and prioritize porous surfaces, - Maintain a permanent vegetative cover of the soil (permeable mulches, ground cover plants, etc.).
Salinization	- Seek alternatives to the use of de-icing salts (such as sand), paying special attention to additives, and remain mindful of application areas (avoid salting near swales, etc.).
WATER MANAGEMENT	**RECOMMENDATIONS**
Water resources availability and consumption monitoring	-Understand, if applicable, the level of water stress exposure of the site and adjust action plans according to local provisions and context. - The existence and regular updating of as-built plans (plans describing the actual work completed at the end of a construction project) for water site infrastructure. - An evaluation strategy for consumption to optimize water use and track the effectiveness of alternatives to irrigation. - A rainwater collector can be combined with a rational irrigation system, such as drip irrigation. Mulching the garden also helps to maintain a good level of humidity in the soil, and limits the water requirements of the ecological garden. - A leak detection procedure: including regular preventive checks and maintenance of installations.
Irrigation water	- Prioritize non-irrigation. - Assess needs based on climate (local climate and exceptional situations), considering potential evapotranspiration (ETP), soil type, and plants (growth stage, ground cover, etc.). - Regulate water inputs by calculating doses, duration, frequency, and dividing inputs. - Optimize watering times, irrigating only during hours of lower evaporation (early morning and nighttime) and avoiding windy periods. - Adapt irrigation to differentiated management, watering only floral layers, certain herbaceous layers during water stress, and trees and shrubs until vegetation recovers. - Accept seasonal yellowing of green spaces, especially lawns. - Prioritize the use of recycled water.
POLLUTION PREVENTION AND CONTROL	**RECOMMENDATIONS**
Green waste	- Establish green waste management based on principles of reduction, reuse, and recycling. - Reduce waste generation at the source (e.g., less frequent mowing, prudent pruning, leaving leaves and clippings on-site, etc.).

	- Optimize waste recovery on-site or nearby, focusing on sorting green waste and reusing residues (such as mulching). - Produce compost on-site or nearby if possible, following specific protocols, including addressing health risks associated with composting. - Export waste for valorization, using composting platforms for instance, if on-site valorization is not feasible.
Optimize lighting	- Conduct an assessment of usage to determine suitable lighting arrangements. - Develop a lighting plan addressing pole type, power, timer, and lighting cone orientation with the goal of optimizing lighting.
Fuels	- Understand and monitor fuel consumption of machinery and vehicles. - Changes in intervention methods often result in significant consumption reductions: reduced interventions, use of manual or electric tools, etc. - Maintenance of equipment is essential for proper functioning and avoiding excessive consumption; it will be regular and users will be trained in eco-friendly practices (for maintenance and driving) of vehicles and machinery.
Reduction of noise caused by maintenance operations.	- Understanding, through an inventory of internal and external sources of pollution on the site, and monitoring nuisances, provides an assessment of the site's practices to better plan and manage their reduction. - Prohibit vehicle circulation on vegetated areas (except for designated paths). - Implement guidelines limiting the use of machinery that can disrupt the tranquility of the site and its surroundings (noise, dust) to define preferred usage hours.

Appendix 3: Unauthorized phytosanitary products references

- List of databases on registered plant protection products in the European and Mediterranean Plant Protection Organization (EPPO) region: https://www.eppo.int/ACTIVITIES/plant_protection_products/registered_products

- Catalog of phytosanitary products and their uses, fertilizing materials, and growing media authorized in France: https://ephy.anses.fr/

- List of biocontrol plant protection products, under articles L.253-5 and L.253-7 of the Rural and Maritime Fishing Code of France: info.agriculture.gouv.fr/gedei/site/bo-agri/supima/2d320671-26c8-4970-abce-4e01755eae28

- International Legislation on Plant Protection Products (PPPs) : https://food.ec.europa.eu/plants/pesticides/legislation-plant-protection-products-ppps_en#regulation-ec-11072009

PRACTICAL SHEETS

There are 3 types of the following practical sheets: organization, communication and technical ones. Each type is useful at every step of the implementation of the ecological management of sites. This helps navigation through the catalogue and understand where/how to implement each action.

Organization

Communication -Awareness

COM001_Nesting box competition

COM002_Biodiversity newsletter

Technics

TECH001_Weeding

TECH002_Weeding prevention

TECH003_Grazing

TECH004_Felines monitoring

TECH005_Biologic control of rodents

RESOURCES

Help from local nature conservation NGO or agency is needed. Here is a list of potential resources from implantation countries.

Latin America

Wetlands International Home - Wetlands International

Austria

Naturschutzbund https://naturschutzbund.at/startseite.html

Brazil

APREMAVI https://apremavi.org.br/

Chile

ACCh http://asiconservachile.cl/acch/

France

Zero Phyto tool (NN Chico Mendes) http://www.nn-chicomendes.org/stop-phytos/consulter.php

Video on urban biodiversity (ARB IdF) https://www.dailymotion.com/video/x65dxrm

Conservatoires des Espaces Naturels http://www.reseau-cen.org/

Germany

Federal Agency for Nature Conservation https://www.bfn.de/?L=1

Hungary

MME http://www.mme.hu/

Mexico

Comisión Nacional de Áreas Naturales Protegidas https://www.gob.mx/conanp

FONCET https://fondoeltriunfo.org/

Poland

Polskie Towarzystwo Ochrony Przyrody http://www.salamandra.org.pl/home.html

Portugal

Instituto da conservação da natureza e das florestas https://www.icnf.pt/

Slovakia

Štátna ochrana prírody http://www.sopsr.sk/web/

Turkey

Nature Conservation Center http://www.dkm.org.tr/