



Understanding public administrators' and citizens' preferences for a successful transition to pesticide-free urban green spaces

Marianne Lefebvre, Maria Espinosa Goded, Masha Maslianskaia-Pautrel, Pauline Laille

► To cite this version:

Marianne Lefebvre, Maria Espinosa Goded, Masha Maslianskaia-Pautrel, Pauline Laille. Understanding public administrators' and citizens' preferences for a successful transition to pesticide-free urban green spaces. *Journal of Environmental Planning and Management*, 2022, pp.1-25. <10.1080/09640568.2022.2107496>. <hal-03800089>

HAL Id: hal-03800089

<https://hal.science/hal-03800089v1>

Submitted on 6 Oct 2022

HAL is a multi-disciplinary open access archive for the deposit and dissemination of scientific research documents, whether they are published or not. The documents may come from teaching and research institutions in France or abroad, or from public or private research centers.

L'archive ouverte pluridisciplinaire **HAL**, est destinée au dépôt et à la diffusion de documents scientifiques de niveau recherche, publiés ou non, émanant des établissements d'enseignement et de recherche français ou étrangers, des laboratoires publics ou privés.



HAL Authorization

Understanding public administrators' and citizens' preferences for a successful transition to pesticide-free Urban Green Spaces

Marianne Lefebvre[†], Maria Espinosa Goded[‡], Masha Maslianskaia-Pautrel^{*} and Pauline Laille^{**}

Published in Journal of Environmental Planning and Management
September 2022 <https://doi.org/10.1080/09640568.2022.2107496>

Bans on the cosmetic use of pesticides in urban green spaces (UGS) is part of the toolbox to reduce pesticide use. While most technical barriers have been lifted, the acceptability of the global changes induced by pesticide-free UGSs management is questioned. Public administrators in charge of UGSs have their own preferences and poorly informed opinions on citizens' ones. A Discrete Choice Experiment approach was adopted to investigate the discrepancy between the preferences of French citizens and public administrators in charge of technical and budget decisions, in 2017, when the pesticide ban was enforced. Results indicate that the most important differences are in the willingness to improve the working conditions of the maintenance teams, the interest in more natural UGSs and the relevance of communication on the pesticide ban. By challenging some of the opinions of UGS administrators with regard to citizens' preferences, our results remove some of the barriers to a successful transition towards pesticide-free UGSs.

JEL classification : Q24, Q26, C25

Keywords : Choice experiment, France, Pesticide, Stakeholders, Urban land

[†]marianne.lefebvre@univ-angers.fr, GRANEM n° 7456, Université d'Angers, SFR Confluences, 49036 Angers, France

[‡]Universidad de Sevilla, Seville, Spain

^{*}GRANEM n° 7456, Université d'Angers, SFR Confluences, 49036 Angers, France

^{**}Plante&Cit , 49000 Angers, France

Acknowledgment: This action is led by the Ministry for Agriculture and Food and the Ministry for an Ecological and Solidarity Transition, with the financial support of the French Biodiversity Agency on “Call for research & innovation projects on the development of alternative solutions to plant protection products in gardens, green spaces and infrastructures” research call, with the fees for diffuse pollution coming from the Ecophyto plan. We thank Rafiou Alfa Boukari for his contribution to data collection, Raphaële Préget and Sophie Thoyer for helpful comments on the experimental design and two anonymous referees for their helpful comments on earlier versions of this paper.

CRedit author statement: Marianne Lefebvre: Conceptualization, Funding acquisition, Project administration, Data Curation, Investigation, Writing - Original Draft; Maria Espinosa Goded: Methodology, Software, Writing - Original Draft; Masha Maslianskaia-Pautrel: Investigation, Writing - Review & Editing; Pauline Laille: Conceptualization, Funding acquisition, Investigation

1. Introduction

Reducing pesticide use has become a goal shared by many countries and a major issue in public policies due to the negative impacts of pesticides on the environment and on human health. In particular, the European Union has placed pesticide at the center of the Green Deal and Farm to Fork strategy, targeting a reduction of pesticide use by 50% by 2030 ([European Commission; 2020](#)). Since 2009, Integrated Pest Management was specified in the Sustainable Use of pesticide Directive (SUD) as the cornerstone of European Union (EU) policy to reduce pesticides ([European Parliament and Council; 2009](#)). The failure of this strategy (pesticide use has not decreased in the EU) calls for a new paradigm: the pesticide-free strategy ([Jacquet et al.; 2022](#)).

The prohibition of pesticides was already foreseen as a potential solution in sensitive areas and where pesticides are used for cosmetic purposes, including public parks and gardens ([European Parliament and Council; 2009](#)). Indeed, while pesticide use on amenity areas accounts for less than 3% of total pesticide use per year, it has disproportionate environmental effects, in particular through the contamination of sewage systems, ditches, drain or groundwater ([Kristoffersen et al.; 2008](#)), and the higher health risks since the population is more directly exposed to pesticides than in agricultural areas. The European Commission work program for 2022 includes a revision of the SUD, to help meet the EU objectives. Among the options on the table, prohibiting the use of pesticides in sensitive urban green spaces in all Member States is envisaged. Since 2003, many Canadian municipalities have also

banned the cosmetic use of pesticides in public areas (Pralle; 2006).

To comply with such pesticide ban, public managers of urban green spaces (UGSs) have to modify their practices. But the transition to pesticide-free management in UGSs is not a question of pure technical substitution of chemicals with alternative weeding and plant protection techniques. Rather, the transition always entails more global changes in the management of urban landscapes, such as extensive use of mulching, less frequent mowing, planting of new plant species and more generally the reorganization of the maintenance work and differentiating between maintenance tasks according to the type of areas (Gutleben; 2020). Keeping the level of weed control unchanged would lead to a major increase in management costs (Cheval et al.; 2017). While technical references are available on alternatives to pesticides for green space management, this transition also causes other challenges for local public authorities, who generally have limited information on citizens' preferences to base their decisions. Since the seventies, cultural norms have favoured neat-looking urban landscapes (Nassauer; 1995). After so many years with "zero weeds" as standard, public administrators may fear the limited social acceptance of weeds, and more generally the major changes resulting from the transition to zero pesticide use in urban landscapes.

The missing evidence on the preferences of the different stakeholders could be one of the main challenges for a successful transition to pesticide-free UGSs. Diverging preferences with regard to the consequences of the pesticide ban between citizens and those in charge of technical and budget decisions could lead to poorly informed and welfare decreasing decisions. Given the ecological and societal value of UGSs, more research on how urban green spaces are managed and maintained is needed (Lindholst; 2008; Rosol; 2010).

Knowledge of the differences between the preferences of citizens and public administrators in charge of applying environmental policy is still too limited (Spegel; 2017). This is particularly problematic since, in Cost Benefit Analysis, policy makers often rely on expert judgements rather than on stakeholder surveys to estimate the benefits associated with alternative environmental management plans, to be balanced against the costs of such projects (Colombo et al.; 2009). Administrators' decisions are sometimes considered to be poorly aligned with the interests of the general public, either due to paternalistic attitudes (they choose the option perceived as the best for the citizens, environment or for future generations even if citizens' dislike it) (Carlsson et al.; 2011), or because they serve their own interests such as maximizing the size of their service or budget (Niskanen; 1971; Buchanan et al.; 1980). Diverging preferences between managers (responsible for technical aspects)

and politicians (responsible for budget allocation and municipal staff, including the UGS maintenance teams) are also likely to slow down the transition. They work for the same organization (the city) and their common objective is the supply of UGS for the citizens. The relationship between managers and local politicians can be described as a principal-agent relationship in which the purchaser (the politicians) seeks to formulate (implicitly/or explicitly) contracts with the agent (the managers and the maintenance teams). In the transition to the new system without pesticides, managers are more likely to be more knowledgeable on the technical aspects than the elected official responsible for budgetary decisions, therefore leading to a situation of information asymmetry. In this context of information asymmetry, drawing up a contract in order to introduce incentives for the managers to follow the city council's objectives is complex (Marrelli and Pignataro; 2001). Overall, the convergence of local politicians and technical managers' preferences will depend on the degree of integration of elected officials and managers in the same organization and the level of information asymmetry on technical aspects. This is even more a challenge when the provision green-space maintenance is outsourced (Lindholm; 2008).

This study investigates the potential discrepancy between the preferences regarding the transition towards pesticide-free UGSs of local politicians (responsible for providing the financing and other resources necessary for UGS maintenance), managers (responsible for the design and maintenance of UGSs) and urban citizens frequenting UGSs but with no public role in UGS management. It is aimed at shedding light on the obstacles faced by municipalities, due to the fact that diverging preferences between the administrators of UGSs (including politicians and managers) and their citizens are likely to jeopardize the efficient transition towards pesticide-free UGSs.

To compare their preferences, we administered a Discrete Choice Experiment (DCE) with identical choice sets to the three groups, along with questions specific to each group. DCE have been used in the last decade to understand citizens' preferences for UGSs and the multiple services they offer (recreation, health...), including non-use value (?Tu et al.; 2016; Giergiczny and Kronenberg; 2014; ?). DCEs also provide a suitable framework for comparing preferences between different stakeholders. Using DCEs, some authors have investigated the potential discrepancy between the preferences of the general public and those of scientists or experts (not directly involved in administering policy) (Rogers; 2013; Colombo et al.; 2009; Ek et al.; 2018) or those of public administrators (Carlsson et al.; 2012, 2011; Alberini et al.; 2006; Eggert et al.; 2018; Spiegel; 2017; Nordén et al.; 2017). Others have focused on comparing the preferences of producers of environmental ser-

vices and their beneficiaries (Tienhaara et al.; 2020; Bateman; 1996; Latacz-Lohmann and Schreiner; 2019). The comparison of politicians' and managers' preferences is less common (see Bech (2003) and Baji et al. (2016) for such investigations in the health sector). The results of these studies on the similarity or divergences in the preferences of different stakeholders are clearly contextual and call for new evidence in the context of urban land management. To the best of the authors' knowledge, there are no similar studies focusing on preferences regarding pesticide-free UGSs.

The research is conducted in France, one of the main users of pesticides in the world (the 9th ranked country), where non agricultural areas account for 5% of total pesticide use (in 2009) (Amblard et al.; 2009). In 2014, following other Member States such as Germany, Denmark, Netherland and Luxemburg, France decided to officially extend its efforts in pesticides use reduction to non-agricultural areas (gardens, parks and infrastructures) (Kristoffersen et al.; 2008) . The Labbé law bans pesticide use in parks, on roads and walking paths and in the forests accessible to the public since the 1st of January 2017 (Legifrance; 2014). As of July 2022, the ban will extend to all public or private green spaces frequented by the public, including cemeteries, green areas of hospitals, schools, hotels, campgrounds, commercial zones etc. (Legifrance; 2021). Our research generates new knowledge on the differences between the preferences of citizens and public administrators in charge of applying environmental policy. It also contributes to the scarce literature on the management of UGSs without pesticides. It sheds light on the importance of challenging some of the opinions of UGS administrators with regard to what changes are accepted by citizens in parks and gardens. Doing so, our results can contribute to removing the socio-psychological barriers to a successful transition towards pesticide-free UGSs in a more general context.

The article is structured as follows. Section 2 presents the method. The results are exposed in section 3, and discussed in section 4. The last section concludes.

2. Method

Based on Lancaster's demand theory (Lancaster; 1966) and McFadden's Random Utility Maximization framework (McFadden; 1973), Discrete choice experiments are nowadays used extensively for environmental valuation, for example to estimate the non-market values of environmental services, including recreation (Louvière and Timmermans; 1990; Birol and Koundouri; 2008). The method relies on hypothetical choices, and it is particularly useful in a situation wherein citizens are not able to choose between different

options in their real life.¹ DCE outperforms other stated preference methods since they provide additional insights into preferences for specific characteristics of the management action, on top of the measure for the welfare impact of the environmental change (?). Moreover, one can estimate simultaneously preferences for multiple attributes, which is highly relevant when multiple dimensions are impacted by the environmental change (UGS management without pesticides in our study).

2.1 Survey design

Respondents had to choose their preferred option between two hypothetical pesticide-free UGS management scenarios described by six attributes characterizing UGSs after the pesticide ban. This choice task was repeated ten times (nine effective ones and a tenth to check the consistency of respondents' answers) with different levels for the two alternative schemes.² The choices made are used to estimate the willingness to pay (WTP) for each of these characteristics, and the welfare gains or losses for alternative transition scenarios.

This article is based on the same experimental design as Lefebvre et al.(2021) but with different respondents. Lefebvre et al. (2021) focus on citizens' preferences and how they are affected by their visit frequency to UGSs. Here, we surveyed three categories of stakeholders: local politicians, managers and citizens. Following Carlsson et al.(2011), we presented the same choices to all three categories of stakeholders. By comparing the WTP and welfare impacts for the three groups of stakeholders, we can assess the congruence among the choices of the politicians, managers and citizens.

In order to establish an identical experimental design for the three stakeholders, we had to focus on the UGS characteristics that were impacted by the pesticide ban, and that were discernible by and of potential interest for the

¹ Citizens do not typically have the opportunity to choose the exact characteristics of the UGSs they visit and can rarely express their preferences on management options and how their city budget is allocated to UGS maintenance. However, in the same city, different areas can be managed differently following the principles of "differentiated management" (Allain; 1997).

² There is no opt-out in our design since the transition to pesticide-free management is compulsory by law. The aim of the experiment is not to estimate the willingness to pay (or accept) for the pesticide ban (see Hirsch and Baxter (2009; 2011) for such a study in Canada). The status-quo is not an available option since maintaining the UGS characteristics as they were before the pesticide ban but without access to pesticides would necessarily entail higher costs. The monetary attribute would therefore be modified.

citizens. The literature on landscape planning and environmental economics relating to preferences for UGSs, complemented by technical references provided by the resource centre for UGS management in France, were analysed to make a first selection of attributes. Discussions with local politicians and managers in charge of the transition towards pesticide-free UGSs confirmed that these characteristics were relevant for the purpose of the study. A pilot study conducted with 75 respondents from the three types of stakeholders allowed us to check the understanding of the attributes and estimate priors. The attributes selected are: recreational opportunities, visual appearance, fauna abundance, provision of information, working conditions for maintenance teams and the monetary attribute. All the attributes' levels can be achieved with pesticide-free management and this study allows us to determine which ones are preferred by the different stakeholders. Table 1 summarizes the attributes and levels selected and Figure 1 provides an example of choice card.

The monetary attribute is presented as a percentage increase in the budget allocated to UGS maintenance due to the pesticide ban. This format of the monetary attribute is meaningful for all three type of stakeholders. While respondents may have a different understanding of the consequences of such an increase in the UGS budget (some may fear an increase in local taxes, while others may be concerned by the fact that fewer local public services will be offered in other areas if the budget is reallocated to UGSs), we believe they are all impacted by an increase in the UGS budget. Considering the attribute as an increase in local taxes (as commonly done in local environmental service valuation) could have created an incentive compatibility issue (Carson and Groves; 2007), since the three groups would not have been subject to the same budget constraint, thus precluding a direct comparison of preferences of the groups. Indeed, managers and politicians were asked to answer as if they were decision-makers, not citizens/taxpayers. Moreover, annual local taxes differ notably from one city to another and determining the right level for a study encompassing all French metropolitan territory would have been difficult.

The originality of our approach is that the levels of the attributes have been defined to describe the changes in the USGs (consequences of the pesticide ban), therefore allowing the estimation of the welfare impacts of the transition. The reference level corresponds to an unchanged situation with respect to what could be obtained with chemical pesticides. We assume that the UGS characteristics can be left unchanged even if technical constraints have changed with the pesticide ban. Recreational opportunities and working conditions are attributes which may improve or deteriorate with the pesticide ban compared to the unchanged situation, resulting in three levels in the DCE.













Since it is unrealistic to consider a case where the pesticide ban generated a loss of wildlife or a reduction in the public budget allocated to UGSs (Cheval et al.; 2017), the second level for those attributes corresponds to a small increase and the third one to a major increase with respect to the “unchanged situation”. The two remaining attributes have two levels. For the visual appearance, the reference level is “controlled” since it corresponds to the visual appearance obtained with pesticides; that is, the situation in most UGSs before the pesticide ban. The second level is a more “natural” appearance since UGS managers may decide to limit the control of the vegetation and accept a wilder-looking space. For the information attribute, the reference level is a lack of information, while an alternative with the transition could be the implementation of information campaigns targeted at citizens and maintenance teams.

We estimated priors based on the pilot survey and generated a fractional factorial design using the D-efficiency criteria to obtain 36 pair-wise choices grouped in 4 blocks, with each respondent thus answering 9 choice tasks. According to the S estimate, a sample size of 52 respondents ($S \text{ estimate} = 13 \times 4 \text{ blocks} = 52$) would be sufficient for obtaining significant parameter estimates for all of the attributes (Rose and Bliemer; 2013). The full description of the experimental design is available in Lefebvre et al.(2021).

[Insert Table 1 here]

Prior to the choice experiment, respondents were informed about the context of the survey: the pesticide ban on in French UGSs since the 1st of January 2017. The type of green space under study was also specified (i.e. parks and gardens). Respondents were told to give their answers in reference to the parks and gardens in their city. Importantly, we designed the introduction of the survey such that local politicians and managers were encouraged to choose the options in the choice scenarios that they would implement in their professional position (see the survey instructions in the Electronic Supplementary Material (ESM)). To do so, the introduction emphasized that the survey was about the opinions of different types of stakeholders. The second part was specific to each type and respondents therefore had to think about the survey topic from the perspective of their assigned role. For example, local politicians had to provide information on their mandate and seniority in local politics, managers on their employer and seniority in their occupation, and citizens on their habits related to the use of UGSs. This part of the survey helped respondents fix the idea in their minds that we were interested in their answers relating to their role as a specific type of stakeholder. In particular, this ensured that politicians and managers did not select options in the experiment according to their personal preferences as citizens visiting UGSs. We

Figure 1
Example of choice card

	RECREATIONAL OPPORTUNITIES ?	VISUAL ASPECT ?	FAUNA ABUNDANCE ?	INFORMATION & TRAINING ?	WORKING CONDITIONS ?	BUDGET ?
OPTION A1	 Unchanged	 Natural aspect	 Unchanged	 None	 Risk of deterioration	 Major increase
OPTION B1	 Improved	 Controlled aspect	 Minor increase	 Available	 Unchanged	 Unchanged
	Option A1		Option B1			
Selected option	<input type="radio"/> <input type="radio"/>					

Note: We did not follow the most common practice of presenting attributes in rows and choices in columns.

therefore have three well-defined groups of stakeholders.

2.2 Sample

The survey was administered online with Limesurvey between October 2017 and March 2018. Given the unavailability of a database or panel with local politicians and UGSs managers, we have used a mix between convenience and snowball sampling: the questionnaire was distributed through networks of mayors and UGSs managers, who have then shared the survey with citizens. The survey has also been distributed in our networks to reach more citizens. This process has allowed us to obtain a convenience sample of 1423 persons. The final sample is made up of 1124 respondents: 766 citizens, 137 local politicians and 221 managers. We have deleted from the final sample: i) those who did not pass the consistency check consisting in the comparison of the choice made in the first and seventh choices, since they were the same (only the names of the options A and B were swapped); ii) those giving unreliable answers to the questions related to attribute non-attendance.³; iii) those who accidentally answered the survey despite not living in metropolitan

³For the question “Did you systematically ignore any characteristic(s) when choosing between options A and B?” we delete those who selected the answer “I didn’t ignore any characteristics” but at the same time selected one of the attributes.

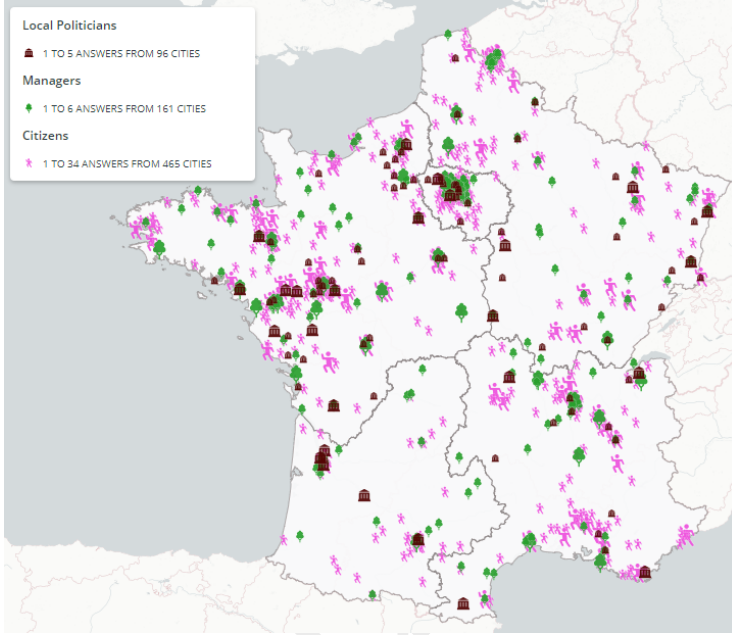
France.

As shown in Figure 2 respondents are distributed throughout the French metropolitan territory, however the North-West of France is over-represented in the sample relative to the population (38% in the sample compared to 23% in the population), due to the location of the research team. Moreover, retired persons over 65 years old are under-represented in our citizen sample and females and persons who have received higher education are over-represented, compare to the French population.

Regarding the education level, 86% of the respondents have completed higher education (which is more than the corresponding figure for the French population: 63%). More citizens than politicians and managers have completed higher education (92% compared to 74% for managers and 75% for politicians). This characteristic of our sample is interesting because it differs from Carlsson et al. (2011). In their research they indicated that differences in priorities (with regard to improvements in environmental quality) between administrator and the general public could be explained by the fact that administrators are on average better educated than the general public. Beyond the citizens' education level, our user sample also frequently visits UGSs: 34% of the citizens have visited a UGS several times a week during the last 12 months, 27% have visited a UGS once a week and 39% have visited one less than once a week.

The sample covers a wide range of experiences and seniority with regard to zero pesticide use. Half of the respondents (54%) -of all the three types- declared the transition to zero pesticide use started in their city before the pesticide ban (between 3 and 10 years ago), while 30% of them answered that it started more recently (less than 3 years ago). But citizens are largely unaware of when their city started the transition (47%). Although managers and politicians overall perceive that the transition has been well-received by citizens, 24% of managers and 36% of politicians perceive that the transition to zero pesticides has not been well-received by the citizens. While 29% of managers perceive that the transition has not been well handled by the local politicians, 16% of politicians bemoan a lack of support by UGS maintenance teams and managers. Given this heterogeneity in experiences of the transition, our results are likely to be of interest for most of the French territory.

Figure 2
Geographical distribution of respondents



2.3 Econometric approach

2.3.1 The specification of the RPL model

The Random Parameter Logit (RPL) model formulation has become one of the most widely used econometric structures for the analysis of DCE since it allows parameters to vary across respondents, flexible substitution patterns and correlation with unobserved factors (Train; 2003).

The utility V_{ijt} for respondent i from choosing alternative j in choice set t is defined as:

$$V_{ijt} = X'_{ijt}\beta_i + \varepsilon_{ijt} \quad (1)$$

where ε_{ijt} is assumed to be independent and identically distributed following a Gumbel distribution. The vector X'_{ijt} is the vector of attribute levels presented in section 2.1 and β_i is the vector of unknown parameters of the mean coefficients. In the RPL model, the heterogeneity across respondents i is introduced by allowing β to deviate from the population means following

a random distribution with density $f(\beta|\Omega)$. The vector of random parameters can be decomposed into (Mariel and Meyerhoff; 2018):

$$\beta_i = \beta + \Lambda z_i + \Gamma v_i \quad (2)$$

where β is the parameter representing the mean coefficients of the random parameter distributions, z_i is the vector of observed individual characteristics with the associated parameter matrix Λ . The interaction effects with the stakeholders represents the mean-shifters included in the matrix Λ , which will be used to answer the research question related to whether different stakeholders have similar preferences for pesticide-free UGS management attributes. The random unobserved taste variation is represented by v_i , composed of uncorrelated random variables with mean zero with the associated parameter matrix Γ . Both uncorrelated and correlated RPL can be estimated. In the correlated RPL, the full variance-covariance of the random parameters (the Cholesky matrix Γ) is estimated, while only the diagonal elements of Γ are estimated in the uncorrelated RPL (the variance elements are fixed by identification restrictions). The most common specification is the uncorrelated RPL, however the data set may have unobserved effects that are correlated among alternatives in a given choice situation. The correlated specification enables the correlation of the error term for each respondent in different situations (?). In order to disentangle all potential sources of correlation (scale heterogeneity from other sources), Hess et al. (2017) suggest allowing for all forms of correlation among utility coefficients estimating the full covariance. Since we use dummy-coded variables, the choice of the base category can lead to Type I errors and therefore to biased results if we do not consider potential correlation across the different levels of the same attribute (Burton; 2019). Therefore, we follow the suggestion by Mariel and Meyerhoff (2018) encouraging researchers not to constrain the correlations in the RPL.

The random parameters for the UGS attributes are assumed to follow a triangular distribution and a log-normal distribution for the monetary attribute. Different model distribution combinations were tested and the one that represented the best goodness of fit according to the AIC/n criteria was selected. It is common practice in the DCE literature to limit the distribution of the monetary attribute to be non-random or to constrain it to have only the expected sign as the marginal utility of the monetary attribute is expected to be negative.

Given the random coefficients for the attributes in the RPL model, we can compute the portion of the population for which the model assigns a non-expected sign, using the cumulative mass function of the frequency distribution of the parameter over the population.

2.3.2 Measuring preferences for specific characteristics and their relative importance

Attribute coefficients cannot be directly interpreted as the relative weight of the attributes since they are confounded with the underlying subjective scale of the utilities (Lancsar et al.; 2007). To measure the effect of each attribute on a common scale, we rely on the WTP ratio. Since attributes are modelled as dummy-coded variables, the WTP associated with attribute k and level l is equivalent to the willingness to accept an increase in the city UGS budget (expressed as a percentage point increase) for changes from the unchanged level of attribute k to level l .

$$WTP_k^l = \frac{-\beta_k^l}{\exp(\beta_{BUDG})} \quad (3)$$

where β_k^l is the coefficient associated with attribute k and β_{BUDG} is the coefficient associated with the monetary attribute.

To take into consideration heterogeneity across respondents, we estimated the median WTP and corresponding confidence interval following the Krinsky and Robb (1986) procedure with 1000 draws. The median value of the log-normal distribution is calculated as $\exp(\beta_{BUDG})$. We present median WTP as we believe that for studies aiming to assess public policies the median is a better value than the mean as it represents the central tendency and it avoids the problem of deriving a WTP estimate that is sensitive to outliers. The lower and upper limits of a 95% confidence interval are given by the 26th and 975th sorted estimates of WTP, respectively (Hole; 2007). In order to estimate WTP, we use the sampling uncertainty of means (Rodríguez-Entrena et al.; 2012). The WTP values are computed for each stakeholder considering the significant interaction term between the attribute and the stakeholder identity, as shown in Table 3. For example, the WTP for the INFO attribute for the managers is as follows:

$$WTP_{INFO} = \frac{-(\beta_{INFO} + \beta_{INFO \times Managers})}{\exp(\beta_{BUDG})} \quad (4)$$

where $\hat{\beta}_{INFO}$ and $\hat{\beta}_{BUDG}$ are the estimated means, $\hat{\beta}_{INFO \times Managers}$ represents the heterogeneity in means of the attribute INFO for the managers (the interaction with BUDG is not included as it is not significant).

To test whether the difference in WTP across stakeholders is significant, we apply the Complete Combinatorial test suggested by Poe et al. (2005). This is a non-parametric test that involves comparing differences in WTP

for all possible combinations of the estimates obtained by the Krinsky–Robb method.

2.3.3 Measuring welfare impacts

In order to analyse the barriers to a successful transition to zero-pesticide UGSs, we measure whether different transition scenarios have different impacts on stakeholders' welfare. We calculate the welfare impacts with the compensating surplus indicator (CS) (Meyerhoff et al.; 2009; Espinosa-Goded et al.; 2010; Rodríguez-Entrena et al.; 2012). CS is the maximum amount of money a respondent would be willing to pay (or willing to accept) to have the same utility in the pesticide-free scenario as in a benchmark scenario. CS can be measured for different scenarios defined by different combinations of attributes. The CS for the change from the benchmark (B) to a pesticide-free management option (MO) is estimated by calculating the difference between the total utility of each scenario (V_B and V_{MO}), and multiplying this by the negative inverse of the coefficient for the budget attribute β_{BUDG} (Hanemann; 1984).

$$CS_{MO_k} = \frac{V_B - V_{MO_k}}{-\exp(\beta_{BUDG})} \quad (5)$$

In order to estimate the CS for the population, we have used the same method as for WTP.

3. Results

We first analyse the correlation across parameters to select the best model. Then we present the WTP by attributes and type of stakeholders. Lastly, we measure whether different stakeholders are impacted differently by two different transition scenarios.

3.1 Model selection: Correlated vs Uncorrelated RPL

Table 3 presents the results of the uncorrelated and correlated RPL. The estimates are similar in magnitude. We tested the null hypothesis that all off-diagonal elements of the correlation matrix of the random parameters are zero. The likelihood ratio statistic is $LR = -2 \times ((-4890.1) - (-4764.0)) = 252.2 > 51 = \chi^2(36)0.05$, leading to rejection of the null hypothesis. Moreover, the AIC is better for the correlated model (even after penalizing for adding more parameters). As a result we focus on the correlated model.

The parameter estimates are significant (at the 1% significance level) and have the expected sign according to theoretical predictions.⁴ They are positive for attributes corresponding to an improvement and negative for a deterioration, as well as for an increase in the budget. All the attribute standard deviations are significant, confirming the high levels of unobserved heterogeneity and the value-added of the RPL model (compared to specifications not allowing heterogeneity in preferences through the parameter distribution).

According to the correlation matrix (See Table 1 in Electronic Supplementary Material), as expected, the highest negative correlations are observed among the attributes that can experience an improvement and a deterioration (for example -0.929 between USE(+) and USE(-)).

[Insert Tables 3 here]

3.2 Do citizens and administrators of UGSs have similar preferences for pesticide-free UGS attributes?

First, we comment on the significance of the interaction between the respondent type and each attribute in the correlated RPL model (Table 3). We observe heterogeneity of preferences among stakeholders in the mean parameters of the attributes related to natural appearance and fauna abundance (less valued by politicians and managers). The availability of information is more valued by managers while the improvement of working conditions is less valued by politicians. There are no significant interactions between the stakeholder type and the budget attribute.

The heterogeneity across stakeholders also translates into differences in the percentage of the population with a non-expected sign across managers, politicians and citizens (see Table 2 in the Electronic Supplementary Material). Fewer managers put a negative value on information (16%) than citizens or politicians (25.3%). More politicians assign a negative value to a more natural appearance (32% against 21.1% for citizens and 28.2% for managers) and the improvement of working conditions (33% against 9.9% for citizens and managers). However there are no differences across stakeholders in the preferences towards recreational opportunities.

Furthermore, we rely on WTP to analyse the relative importance of each attribute and the differences across stakeholders. We compare the median WTP and the rank of each attribute for the citizens, managers and politicians. The heterogeneity observed through the interaction terms (NATU, FAUNA,

⁴The interpretations based on standard errors (such as p-values and confidence intervals) should be taken cautiously since our sample is non-probabilistic. No inference for the population can be made (Hirschauer; 2020).

INFO, WORK(+)) in Table 3 is also reflected in significant differences in the WTP estimates (Table 4) . The results of the Complete Combinatorial test (Poe et al.; 2005) show that there are significant differences across types of stakeholders at the 10% level for all the attributes where there is heterogeneity among stakeholders, except for the NATU attribute between managers and politicians (see subscripts in Table 4).

[Insert Table 4 here]

The attribute with the highest absolute median WTP for citizens and politicians (and ranked second for managers) is the major increase in fauna: citizens and politicians are willing to accept an increase in the UGSs budget of 38.7% while managers have a lower WTP (31.1%). All stakeholders are also willing to accept an increase in the budget for a more natural appearance rather than a more controlled look (The median is 11.7% for politicians, 14.5% for managers and 19.7% for citizens), but politicians and managers place less value on a natural look than citizens do (this attribute ranks 4th for citizens, 5th for politicians and managers).

The attributes reflecting a deterioration have (as expected) a negative sign in the WTP estimates, but they also have high ranks (attributes are ranked according to the absolute values of the median MRS). All stakeholders are negatively impacted by a deterioration of the recreational facilities. Half of the respondents (whatever their type) are willing to accept a 30.4% increase in the budget to avoid a reduction in recreational opportunities (rank 3). This value is higher than the willingness to accept a budget increase for improved opportunities (10.9%), suggesting that losses and gains are valued differently (Kahneman and Tversky; 2012).

An increase of 33.5% in the budget is acceptable for all stakeholders to avoid a deterioration of the working conditions. This is particularly important for managers (rank 1, while this attribute is ranked 2 for citizens and politicians). But the willingness to accept an increase in the budget for the improvement of the working condition is lower than the compensation requested for a deterioration, in particular for the politicians: half of them are willing to accept only a 5.2% increase in the budget for an improvement in the working conditions and the majority of citizens and managers accepts an increase of 14.1% (while they are all willing to accept a budget increase of 33.5% to avoid a deterioration). For the politicians, the improvement in the working conditions is less of a priority (rank 8 versus rank 6 for the citizens and rank for the managers).

The WTP for information campaigns and training is rather low, in particular for citizens, who are only willing to accept a 10% budget increase to have access to such information. Training and information is valued more

positively by managers (rank 6) compared to citizens (rank 8) and politicians (rank 7).

3.3 Welfare impacts on citizens and public administrators of different transition scenarios

Beyond the preferences for different attributes, we are interested here in the welfare impacts of the transition, and the potential discrepancies among different types of stakeholders. Table 6 presents the median compensating surplus (and confidence interval) for two extreme transition options presented in Table 5: all the attributes are set at their most deteriorated level in MO1 and their most improved level in MO2. These scenarios are compared to a hypothetical benchmark (B) corresponding to a situation where all attributes would remain unchanged following the transition, compared to the situation with pesticides. It is hypothetical since it is impossible to maintain exactly the same UGS characteristics without the help of chemical pesticides and without a deterioration in working conditions.

The first scenario, MO1, is akin to the status quo in terms of visual appearance, fauna abundance and information, but with a deterioration of working conditions and recreational opportunities. The median compensation requirement for the MO1 scenario is positive (a change in the UGS budget of +63.7 percentage points), confirming that most respondents will suffer from a loss in utility if this management option is chosen. More interestingly, results reveal that the compensation requirement is not significantly different for the three types of respondents, suggesting that preferences converge in the losses domain.

However, small differences appear in the MO2 scenario. These improvements compared to the status quo are more valued by the citizens since the compensation they require is more strongly negative (-93.8 percentage points) than that registered by the managers (-85.4 percentage points) and politicians (-76.9 percentage points). The politicians have the lowest welfare gain in this scenario. This result is driven by the higher value attached by citizens to a natural appearance and increased abundance of fauna, as well as to the improvement in working conditions. As mentioned before, managers and politicians are more aware of the cost involved in achieving these improvements, and these costs may be reflected in their preferences. Yet, according to the Poe test, there are no significant differences at the 5% level in the welfare effects of both scenarios across stakeholders (see Table 3 in ESM).

[Insert Table 5 here]

[Insert Table 6 here]

4. Discussion

Understanding whether public administrators' opinions on other stakeholders' preferences are confirmed by evidence is important to reduce frictions hindering the transition. Local politicians' taking decisions not compatible with managers' or citizens' preferences on pesticide-free UGSs could prevent a rapid and welfare increasing transition. The information collected on stakeholders' priorities with regard to different attributes can help local politicians and managers in designing their pesticide-free UGS management strategies to maximize all stakeholders' benefits given the budget constraints. While our results shed light on diverging preferences for some of the attributes, we also find agreement on several dimensions.

In line with the theory of bureaucracy (Niskanen; 1971; Buchanan et al.; 1980), one might have thought that managers would be interested in increasing the size of their service (the budget and the number of employees allocated to UGS maintenance), whereas elected officials would be interested in controlling it, because they have to finance other local public policies. This assumption is not borne out in this research. All stakeholders have similar preferences with regard to the impact of the transition on the budget allocated to UGSs. However, our results shed light on diverging preferences between citizens, managers and local politicians with regard to how this budget should be spent (reflected in the WTP for the different attributes).

The working conditions of the maintenance teams appear to be an important aspect to consider for a successful transition. These conditions could be deteriorated despite the elimination of the health risk due to chemical pesticide use since there are other important risk factors: mechanical or thermal weeding involve carrying more heavy equipment and for a longer time period; exposure to the public, with some frequent complaints of citizens perceiving areas as neglected, cause psycho-social risks. All types of respondents converge on the importance of dedicating budget in order to safeguard the working conditions. It suggests that citizens have understood that keeping parks and gardens up to date with respect to the change in the law, and capable of meeting the public demands, requires not only design, planning and investment, but also daily provision of green-space maintenance by the city agents (Lindholm; 2008). Nevertheless, spending budget to improve the working conditions is less of a priority. In particular, the local politicians who are in charge of the human resources for UGS maintenance are the most reluctant to improve working conditions. They may have interpreted this attribute in terms of wage increases and been deterred by the impact on the city

budget. For citizens, on the other hand, being in favour of this improvement does not require any involvement on their part and they may overstate their willingness to improve working conditions in order to boost their self-image. The divergence of managers' and politicians' preferences is an indication of limited integration within the local administration and potential information asymmetry. This may be due to the fact that the workers in charge of UGSs maintenance may not be often present in the city council buildings, since they are mostly working outside and the buildings for their material are often not situated in the city center. More integration in order to align preferences and objectives would benefit the transition.

The rise in the abundance of fauna (insects and birds, including auxiliaries that can help to control pests) is likely to be observed with the reduction of pesticides (Aubertot et al.; 2005; Muratet and Fontaine; 2015). But our results show that respondents do not seem to be concerned (or have not considered) the potential damage caused by animals (the noise and dirt generated by birds, the disgust factor for insects and spiders) since all stakeholders are willing to accept a high increase in the budget for UGSs design and management favoring fauna. Our results complement recent evidence on the more positive emotions and increased well-being in urban landscapes rich in wildlife (Cameron et al.; 2020). Managers have on average a lower WTP than the two other groups. This may be due to their reluctance to deal with the rare but irritating complaints from some visitors. The burden of such complaints was frequently pointed out during the interviews conducted with managers before the survey. However, assuming their behaviors reflect the preferences declared in this survey, we show that the majority of the citizens are not likely to complain. The presence of fauna is perceived as greater naturalness. Other studies have shown that naturalness is perceived as more aesthetic and increases self-reported well-being (Ode Sang et al.; 2016). But no studies to date have explored the differences between the preferences of the visitors and those of the administrators. During focus group interviews, several managers claimed that many citizens dislike the natural look. Our results suggest that this is an inaccurate perception of citizens' preferences, since we find that only 21.1% of the citizens prefer a more controlled visual aspect. Most of them are willing to pay for a more natural aspect, which is in line with previous studies who have highlighted the preference for dense vegetation and fallow-like settings (de Groot and van den Born; 2003; Harris et al.; 2018). This claim may reflect instead some managers' own concerns: 28.2% of them prefer a more controlled visual aspect, and 32% of the local politicians (Table 2 ESM). Those may perceive a natural appearance as a sign of a poorly managed area, therefore conveying a negative image of their work. Pesticides

have been used in UGSs since the seventies and the priorities of elected officials, urban citizens and managers have evolved since then, reflecting the pressure for hygiene in urban areas, but could just as well change again (Gutleben; 2020). To lift barriers, our results suggest that training managers and providing information to local politicians on urban greening is more important than communication to the general public, who is in majority already convinced that the strong control of the vegetation is not desirable.

This leads us to another important divergence concerning the importance of information and training. In the French cities that voluntarily engaged in pesticide-free management before the ban, citizens were largely informed about pesticide-free management through message boards in public areas and announcement in the local press. Our results show that citizens are willing to accept only a small increase in the UGSs budget for that (this is the attribute less valued by citizens). This may be explained by the fact that many of the respondents may have already benefited from such information campaigns before the survey was launched and therefore do not value the benefit of more information. Unfortunately, we cannot distinguish those who live in cities where the transition happened before the pesticide ban from the others. Most importantly, we find that managers are willing to accept a larger budget increase for information. Managers may be willing to share their knowledge and believe that a better informed general public will translate into higher acceptance of the changes resulting from the zero-pesticide transition. Those who have invested in the past in developing such communication tools may also want confirmation that these were worthy efforts. The information attribute also includes training of maintenance teams, and can therefore explain the higher preference of managers for this attribute. Our results question the need for costly information and training measures, since they are less valued by citizens than by managers.

Despite these divergence, we observe congruence of preferences with regards to the importance of taking advantages of the transition to improve recreational opportunities offered by UGSs. Lawns in parks and gardens are used for a broad range of activities: quiet recreation (reading, talking and walking), sports, plays and social occasions including meals. Previous research has shown that short cut landscapes are associated with improved quality of life and personal safety (Ignatieva et al.; 2020). While less frequent mowing can contribute to a more natural visual aspect, our results show that if it is likely to reduce recreational opportunities, it should be avoided. Since the willingness to accept an increase in the budget allocated to natural-looking UGSs is higher for citizens than for managers and politicians, maintenance teams can limit their intervention to controlling vegetation and the budget can

be reallocated towards an improvement in recreational opportunities.

The results on the welfare impacts contribute to the scarce literature regarding how much citizens are willing to pay for an important transition likely to be environmentally beneficial and how much money administrators think should be spent on it (Carlsson et al.; 2011). We find here no differences in the compensating surplus for two extreme scenarios. While divergences are more likely to be visible with such extreme scenarios, further studies could include similar calculations for other city-specific scenarios. Indeed, the external validity of our results is limited by the cultural differences likely to impact preferences and UGSs management modes (Wilkerson et al.; 2018).

Overall, the study provides further evidence on the usefulness of discrete choice modelling when it comes to estimating citizens' preferences for environmental services with multiple dimensions and non-use values, and comparing these preferences with those of the administrators of such services. While DCEs offer many opportunities, methodological challenges also emerge.

One challenge is the fact that the same respondent may have different answers according to the role he acts when answering to the survey. Here, administrators were asked to respond as they would when making a public policy decision, and not to convey their private preferences. Previous literature indicates that studies where administrators were asked to answer as public decision-makers (Carlsson et al.; 2011; Nordén et al.; 2017; Alberini et al.; 2006; Terwel and ter Mors; 2015; Agren et al.; 2007) found more noticeable differences with the general public's preferences than studies where they were asked to state their private preferences (Speigel; 2017). We could have included in the questionnaire questions to control whether our strategy to make sure politicians and managers choose the options they would implement in their professional position, in order to have three well-defined group of stakeholders.

One of the challenge in on-line DCE is to reduce choice-task complexity, and the cognitive effort required from respondents (Hoyos; 2010). In this particular research, it would be worth further investigating the heuristics used by respondents, whether they differ across types and how they may have affected the results.

Making sure respondents have the same understanding of the attributes and levels is an important challenge. Here, the perception of what is a natural visual aspect is likely to differ across individuals, ranging from letting weeds take over in the absence of human influence to careful landscaping with indigenous plants that form an ecosystem that helps deter common weeds, and therefore depends upon human protection and management (Nassauer; 1995).

We have indeed observed important heterogeneity in preferences for the natural appearance, with more than a quarter of the politicians and managers (and citizens to a lesser extent) preferring a more controlled appearance. Describing attributes with photos of urban parks and gardens could have enhanced the evaluability of the choice tasks (Hsee; 1996), but the use of visualization techniques is controversial (see Patterson et al (2017) for a literature review). Indeed, images can include unintentional idiosyncratic information that might confound the effect of factors that the researcher is trying to understand (Patterson et al.; 2017) and the provision of images makes responses less consistent across choice questions (Shr et al.; 2019).

More generally, a better understanding of the drivers of heterogeneity in preferences within each category of stakeholders would benefit this research. We could learn from an analysis of the role of characteristics such as region, gender, age, town size and seniority (in the job for managers, mandate for politicians or city residence for citizens). These characteristics may better explain diverging preferences than the stakeholder type. Unfortunately, the present survey did not allow for the collection of homogeneous data on these aspects for the three types. Moreover, previous evidence suggests that accounting for the characteristics of the usual park destination is important to understand preferences (?). Here, respondents were asked to state their preferences for an average park or garden in their city. But according to the principle of *differentiated management*, each public green area can benefit from a specific treatment, according to its ecological, cultural and social function in the city (Allain; 1997; Aggéri; 2010). Estimating the willingness to pay for this diversity within a city, and the differences across stakeholders, is a promising research avenue.

5. Conclusion

The study relies on a discrete choice experiment to compare preferences of three categories of stakeholders (citizens, managers in charge of the technical decisions and local politicians in charge of the budget) with regard to the transition towards pesticide-free UGSs. It supplies information on citizens' preferences to UGSs' administrators who have to make trade-offs in the implementation of the pesticide ban with a budget constraint.

We found no significant differences between the three group of respondents with regard to the welfare impact of two extreme ways to organize the transition to pesticide-free management. However, the method allows to get additional insights into preferences for specific characteristics of the management action and differences in the priorities of the different groups. We found that the strong preferences for the non-deterioration of recreational oppor-

tunities and working conditions of the maintenance teams are shared by all three types of respondents. But we also found noticeable differences between preferences of elected representatives, managers and citizens. Managers tend to overestimate the importance of information on the pesticide ban for both citizens and workers, compare to the value associated to this attribute by citizens and politicians. Moreover, managers are less willing to accept and increase in budget to have wild-looking UGSs with abundant fauna, while these characteristics are valued by the majority of citizens. All agreed on the importance of ensuring that the working conditions do not deteriorate. However, local politicians were more reluctant than the other two categories to improve them.

Our results challenge some of the received opinions held by French managers and elected representatives on urban citizens' acceptance of the changes resulting from the transition towards pesticide-free UGSs. Local governments have an important role in coordinating and mediating the plural interests of the various stakeholders concerned by UGSs (Azadi et al.; 2011). Beyond generating evidence on stakeholders' preferences through survey, public administrators could collect information through other channels. For example, the maintenance team could receive training on how to communicate with passersby and report to their managers, in order to be more responsive to citizens' demands. Public participation in UGS governance is also a way to collect citizens' needs so that planners can provide an appropriate provision of urban green space (Rosol; 2010; Azadi et al.; 2011).

Technical solutions for a successful transition exist. Shedding light on the specific UGS characteristics where preferences are diverging can help to lift the remaining socio-psychological barriers to a successful implementation of cosmetic pesticide bans, likely to multiply, in particular in the framework of the revision of the European Sustainable Use of pesticide Directive.

References

- Aggéri, G. (2010). *Inventing the natural cities of tomorrow: differentiated management, sustainable management of green spaces (In French) // Inventer les villes-natures de demain: gestion différenciée, gestion durable des espaces verts*, Educagri Edition.
- Agren, H., Dahlberg, M. and Mörk, E. (2007). Do politicians' preferences correspond to those of the voters? An investigation of political representation, *Public Choice* **130**(1): 137–162.
URL: <http://dx.doi.org/10.1007/s11127-006-9077-1>
- Alberini, A., Longo, A. and Riganti, P. (2006). Using Surveys to Compare the Public's and Decisionmakers' Preferences for Urban Regeneration: The Venice Arsenale.
URL: <https://papers.ssrn.com/abstract=945046>
- Allain, Y.-M. (1997). The city: A new territory for nature? differentiated management in europe (in french) // la ville : un territoire nouveau pour la nature? la gestion différenciée en europe., *Journal d'agriculture traditionnelle et de botanique appliquée* **39**(2): 199–217.
URL: <http://dx.doi.org/10.3406/jatba.1997.3624>
- Amblard, G., Bonnavaud, H., Buche, C., Cercueil, D. and Charvet, L. (2009). Pesticides in everyday life. [technical report alterre-bourgogne] (in french) // pesticides au quotidien. [rapport technique alterre-bourgogne].
URL: <https://hal.archives-ouvertes.fr/hal-01190511/document>
- Aubertot, J.-N., Barbier, J. M., Carpentier, A., Gril, J. J., Guichard, L., Lucas, P., Savary, S., Savini, I. and Voltz, M. (2005). Pesticides, agriculture and the environment. Reducing pesticide use and its environmental impacts (in French) // Pesticides, agriculture et environnement. Réduire l'utilisation des pesticides et en limiter les impacts environnementaux. Expertise scientifique collective Inra-Cemagref.
URL: <http://temis.documentation.developpement-durable.gouv.fr/docs/Temis/0080/Temis-0080961/23321.pdf>
- Azadi, H., Ho, P., Hafni, E., Zarafshani, K. and Witlox, F. (2011). Multi-stakeholder involvement and urban green space performance, *Journal of Environmental Planning and Management* **54**(6): 785–811.
URL: <http://dx.doi.org/10.1080/09640568.2010.530513>
- Baji, P., García-Goñi, M., Gulácsi, L., Mentzakis, E. and Paolucci, F. (2016). Comparative analysis of decision maker preferences for equity/efficiency attributes in reimbursement decisions in three european countries, *The European Journal of*

Health Economics **17**(7): 791–799.

URL: <http://dx.doi.org/10.1007/s10198-015-0721-x>

Bateman, I. J. (1996). Household Willingness to Pay and Farmers' Willingness to Accept Compensation for Establishing a Recreational Woodland, *Journal of Environmental Planning and Management* **39**(1): 21–44.

URL: <http://dx.doi.org/10.1080/09640569612651>

Bech, M. (2003). Politicians' and hospital managers' trade-offs in the choice of reimbursement scheme: a discrete choice experiment, *Health Policy* **66**(3): 261–275.

URL: [http://dx.doi.org/10.1016/S0168-8510\(03\)00064-2](http://dx.doi.org/10.1016/S0168-8510(03)00064-2)

Birol, E. and Koundouri, P. (2008). *Choice experiments informing environmental policy: a European perspective*, Edward Elgar Publishing.

Buchanan, J. M., Tollison, R. D. and Tullock, G. (1980). *Toward a theory of the rent-seeking society*, Texas A & M University.

Burton, M. (2019). Model invariance when estimating random parameters with categorical variables, *Conference paper Australian Agricultural and Resource Economics Society (AARES), 2019, Melbourne, Australia*.

URL: <http://dx.doi.org/10.22004/ag.econ.285040>

Cameron, R., Brindley, P., Mears, M., McEwan, k., Ferguson, F., Sheffield, D., Jorgensen, A., Riley, J., Goodrick, J., Ballard, L. and Richardson, M. (2020). Where the wild things are! do urban green spaces with greater avian biodiversity promote more positive emotions in humans?, *Urban Ecosystems* **23**: 301–317.

URL: <http://dx.doi.org/10.1007/s11252-020-00929-z>

Carlsson, F., Daruvala, D. and Jaldell, H. (2012). Do administrators have the same priorities for risk reductions as the general public?, *Journal of Risk and Uncertainty* **45**(1): 79–95.

URL: <http://dx.doi.org/10.1007/s11166-012-9147-3>

Carlsson, F., Kataria, M. and Lampi, E. (2011). Do EPA Administrators Recommend Environmental Policies That Citizens Want?, *Land Economics* **87**(1): 60–74.

URL: <http://dx.doi.org/10.3368/le.87.1.60>

Carson, R. T. and Groves, T. (2007). Incentive and informational properties of preference questions, *Environmental and Resource Economics* **37**(1): 181–210.

URL: <http://dx.doi.org/10.1007/s10640-007-9124-5>

Cheval, H., Gutleben, C. and Laille, P. (2017). Technical and economic solutions for pesticide-free transition (in French). // Conditions technico-économiques du passage au « Zéro Phyto ».

URL: <https://www.plante-et-cite.fr/files/ressource/file:1079>

- Colombo, S., Angus, A., Morris, J., Parsons, D. J., Brawn, M., Stacey, K. and Hanley, N. (2009). A comparison of citizen and “expert” preferences using an attribute-based approach to choice, *Ecological Economics* **68**(11): 2834–2841.
URL: <http://dx.doi.org/10.1016/j.ecolecon.2009.06.001>
- de Groot, W. T. and van den Born, R. J. G. (2003). Visions of nature and landscape type preferences: an exploration in The Netherlands, *Landscape and Urban Planning* **63**(3): 127–138.
URL: [http://dx.doi.org/10.1016/S0169-2046\(02\)00184-6](http://dx.doi.org/10.1016/S0169-2046(02)00184-6)
- Eggert, H., Kataria, M. and Lampi, E. (2018). Difference in Preferences or Multiple Preference Orderings? Comparing Choices of Environmental Bureaucrats, Recreational Anglers, and the Public, *Ecological Economics* **151**: 131–141.
URL: <http://dx.doi.org/10.1016/j.ecolecon.2018.04.034>
- Ek, C., Elofsson, K. and Lagerkvist, C.-J. (2018). Which type of policy instrument do citizens and experts prefer? A choice experiment on Swedish marine and water policy, *Working Paper in Economics University of Gothenburg* (746).
URL: <https://gupea.ub.gu.se/handle/2077/58220>
- Espinosa-Goded, M., Barreiro-Hurlé, J. and Ruto, E. (2010). What Do Farmers Want From Agri-Environmental Scheme Design? A Choice Experiment Approach, *Journal of Agricultural Economics* **61**(2): 259–273.
URL: <http://dx.doi.org/10.1111/j.1477-9552.2010.00244.x>
- European Commission (2020). Farm to fork strategy: For a fair, healthy and environmentally-friendly food system.
URL: https://ec.europa.eu/food/system/files/2020-05/f2f_action-plan_2020_strategy-info_en.pdf
- European Parliament and Council (2009). Directive 2009/128/ec of the european parliament and of the council of 21 october 2009 establishing a framework for community action to achieve the sustainable use of pesticide.
URL: <https://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=OJ:L:2009:309:0071:0086:EN:PDF>
- Giergiczny, M. and Kronenberg, J. (2014). From Valuation to Governance: Using Choice Experiment to Value Street Trees, *AMBIO* **43**(4): 492–501.
URL: <http://dx.doi.org/10.1007/s13280-014-0516-9>
- Gutleben, C. (2020). The pesticide-free city trend in public spaces: creative ways to healthier landscapes. (in french) // Les politiques « Zéro pesticide » au sein des collectivités territoriales : l’innovation dans le paysage pour la santé des habitants, *Environnement, Risques & Santé* **19**(2): 113–121.
URL: <http://dx.doi.org/10.1684/ers.2020.1415>

- Hanemann, W. M. (1984). Welfare Evaluations in Contingent Valuation Experiments with Discrete Responses, *American Journal of Agricultural Economics* **66**(3): 332–341.
URL: <http://dx.doi.org/10.2307/1240800>
- Harris, V., Kendal, D., Hahs, A. K. and Threlfall, C. G. (2018). Green space context and vegetation complexity shape people's preferences for urban public parks and residential gardens, *Landscape Research* **43**(1): 150–162.
URL: <http://dx.doi.org/10.1080/01426397.2017.1302571>
- Hess, S. and Train, K. (2017). Correlation and scale in mixed logit models, *Journal of Choice Modelling* **23**: 1–8.
URL: <http://dx.doi.org/10.1016/j.jocm.2017.03.001>
- Hirsch, R. A. and Baxter, J. (2011). Context, Cultural Bias, and Health Risk Perception: The “Everyday” Nature of Pesticide Policy Preferences in London, Calgary, and Halifax, *Risk Analysis* **31**(5): 847–865.
URL: <http://dx.doi.org/10.1111/j.1539-6924.2010.01560.x>
- Hirsch, R. and Baxter, J. (2009). The Look of the Lawn: Pesticide Policy Preference and Health-Risk Perception in Context, *Environment and Planning C: Government and Policy* **27**(3): 468–490.
URL: <http://dx.doi.org/10.1068/c0809>
- Hirschauer, N., G. S. M. O. B. C. J. A. (2020). Can p-values be meaningfully interpreted without random sampling?, *Environment and Planning C: Government and Policy* **14**(3): 71–91.
URL: <https://doi.org/10.1214/20-SS129>
- Hole, A. R. (2007). A comparison of approaches to estimating confidence intervals for willingness to pay measures, *Health Economics* **16**(8): 827–840.
URL: <http://dx.doi.org/10.1002/hec.1197>
- Hoyos, D. (2010). The state of the art of environmental valuation with discrete choice experiments, *Ecological Economics* **69**(8): 1595–1603.
URL: <http://dx.doi.org/10.1016/j.ecolecon.2010.04.011>
- Hsee, C. K. (1996). The evaluability hypothesis: An explanation for preference reversals between joint and separate evaluations of alternatives, *Organizational behavior and human decision processes* **67**(3): 247–257.
URL: <http://dx.doi.org/10.1006/obhd.1996.0077>
- Ignatieva, M., Haase, D., Dushkova, D. and Haase, A. (2020). Lawns in cities: From a globalised urban green space phenomenon to sustainable nature-based solutions, *Land* **9**(3).
URL: <http://dx.doi.org/10.3390/land9030073>

Jacquet, F., Jeuffroy, M., Jouan, J., Cadre, L., E. Litrico, I., Malausa, T., Reboud, X. and Huyghe, c. (2022). Pesticide-free agriculture as a new paradigm for research, *Agronomy for Sustainable Development* **42**:8.

URL: <http://dx.doi.org/10.1007/s13593-021-00742-8>

Kahneman, D. and Tversky, A. (2012). Prospect Theory: An Analysis of Decision Under Risk, *Handbook of the Fundamentals of Financial Decision Making*, Vol. 4 of *World Scientific Handbook in Financial Economics Series*, World scientific, pp. 99–127.

URL: http://dx.doi.org/10.1142/9789814417358_0006

Krinsky, I. and Robb, A. L. (1986). On Approximating the Statistical Properties of Elasticities, *The Review of Economics and Statistics* **68**(4): 715–719.

URL: <http://dx.doi.org/10.2307/1924536>

Kristoffersen, P., Rask, A., Grundy, A., Franzen, I., Kempenaar, C., Raisio, J., Schroeder, H., Spijker, J., Vershwele, A. and Zarina, L. (2008). A review of pesticide policies and regulations for urban amenity areas in seven european countries, *Weed Research* **48**: 201–214.

URL: <http://dx.doi.org/10.1111/j.1365-3180.2008.00619.x>

Lancaster, K. J. (1966). A New Approach to Consumer Theory, *Journal of Political Economy* **74**(2): 132–157.

URL: <http://dx.doi.org/10.1086/259131>

Lancsar, E., Louviere, J. and Flynn, T. (2007). Several methods to investigate relative attribute impact in stated preference experiments, *Social Science & Medicine* **64**(8): 1738–1753.

URL: <http://dx.doi.org/10.1016/j.socscimed.2006.12.007>

Latacz-Lohmann, U. and Schreiner, J. A. (2019). Assessing Consumer and Producer Preferences for Animal Welfare Using a Common Elicitation Format, *Journal of Agricultural Economics* **70**(2): 293–315.

URL: <http://dx.doi.org/10.1111/1477-9552.12297>

Lefebvre, Marianne, M.-P. M. and Laille, P. (2021). Users' preferences for pesticide-free management of urban green spaces: the french example (in french)// préférences des usagers pour la gestion des espaces verts urbains sans pesticides: l'exemple de la france, *Revue économique* **72**(4): 947–967.

URL: <http://dx.doi.org/10.3917/reco.726.0947>

Legifrance (2014). Law n°2014-110 of february 6, 2014 aiming to better control the use of phytosanitary products on the national territory (labbé law).

URL: <https://www.legifrance.gouv.fr/jorf/id/JORFTEXT000028571536>

Legifrance (2021). Order of January 15, 2021 on measures to protect people when using plant protection products in private properties, places frequented by the public and in places for collective use.

URL: <https://www.legifrance.gouv.fr/jorf/id/JORFTEXT000043023130>

Lindholm, A. C. (2008). Improving contract design and management for urban green-space maintenance through action research, *Urban Forestry & Urban Greening* 7(2): 77–91.

URL: <http://dx.doi.org/10.1016/j.ufug.2008.02.001>

Louvière, J. and Timmermans, H. (1990). Stated preference and choice models applied to recreation research: A review, *Leisure Sciences* 12(1): 9–32.

URL: <http://dx.doi.org/10.1080/01490409009513087>

Mariel, P. and Meyerhoff, J. (2018). A More Flexible Model or Simply More Effort? On the Use of Correlated Random Parameters in Applied Choice Studies, *Ecological Economics* 154: 419–429.

URL: <http://dx.doi.org/10.1016/j.ecolecon.2018.08.020>

Marrelli, M. and Pignataro, G. (2001). *Public decision-making processes and asymmetry of information*, Springer.

McFadden, D. (1973). Condition logit analysis of qualitative choice behavior, in P. Zarembka (ed.), *Frontiers in econometrics*, Academic Press, pp. 105–142.

Meyerhoff, J., Liebe, U. and Hartje, V. (2009). Benefits of biodiversity enhancement of nature-oriented silviculture: Evidence from two choice experiments in Germany, *Journal of Forest Economics* 15(1): 37–58.

URL: <http://dx.doi.org/10.1016/j.jfe.2008.03.003>

Muratet, A. and Fontaine, B. (2015). Contrasting impacts of pesticides on butterflies and bumblebees in private gardens in France, *Biological Conservation* 182: 148–154.

URL: <http://dx.doi.org/10.1016/j.biocon.2014.11.045>

Nassauer, J. I. (1995). Messy Ecosystems, Orderly Frames, *Landscape Journal* 14(2): 161–170.

URL: <http://dx.doi.org/10.3368/lj.14.2.161>

Niskanen, W. A. (1971). *Bureaucracy and Representative Government*, Transaction Publishers.

Nordén, A., Coria, J., Jönsson, A. M., Lagergren, F. and Lehsten, V. (2017). Divergence in stakeholders' preferences: Evidence from a choice experiment on forest landscapes preferences in Sweden, *Ecological Economics* 132: 179–195.

URL: <http://dx.doi.org/10.1016/j.ecolecon.2016.09.032>

- Ode Sang, , Knez, I., Gunnarsson, B. and Hedblom, M. (2016). The effects of naturalness, gender, and age on how urban green space is perceived and used, *Urban Forestry & Urban Greening* **18**: 268–276.
URL: <http://dx.doi.org/10.1016/j.ufug.2016.06.008>
- Patterson, Z., Darbani, J. M., Rezaei, A., Zacharias, J. and Yazdizadeh, A. (2017). Comparing text-only and virtual reality discrete choice experiments of neighbourhood choice, *Landscape and Urban Planning* **157**: 63–74.
URL: <http://dx.doi.org/10.1016/j.landurbplan.2016.05.024>
- Poe, G. L., Giraud, K. L. and Loomis, J. B. (2005). Computational methods for measuring the difference of empirical distributions, *American Journal of Agricultural Economics* **87**(2): 353–365.
URL: <http://dx.doi.org/10.1111/j.1467-8276.2005.00727.x>
- Pralle, S. (2006). Timing and sequence in agenda-setting and policy change: a comparative study of lawn care pesticide politics in canada and the us, *Journal of European Public Policy* **13**(7): 987–1005.
URL: <http://dx.doi.org/10.1080/13501760600923904>
- Rodríguez-Entrena, M., Barreiro-Hurlé, J., Gómez-Limón, J. A., Espinosa-Goded, M. and Castro-Rodríguez, J. (2012). Evaluating the demand for carbon sequestration in olive grove soils as a strategy toward mitigating climate change, *Journal of Environmental Management* **112**: 368–376.
URL: <http://dx.doi.org/10.1016/j.jenvman.2012.08.004>
- Rogers, A. A. (2013). Public and Expert Preference Divergence: Evidence from a Choice Experiment of Marine Reserves in Australia, *Land Economics* **89**(2): 346–370.
URL: <http://dx.doi.org/10.3368/le.89.2.346>
- Rose, J. M. and Bliemer, M. C. J. (2013). Sample size requirements for stated choice experiments, *Transportation* **40**(5): 1021–1041.
URL: <http://dx.doi.org/10.1007/s11116-013-9451-z>
- Rosol, M. (2010). Public participation in post-fordist urban green space governance: The case of community gardens in Berlin, *International Journal of Urban and Regional Research* **34**(3): 548–563.
URL: <http://dx.doi.org/10.1111/j.1468-2427.2010.00968.x>
- Shr, Y.-H., Ready, R., Orland, B. and Echols, S. (2019). How do visual representations influence survey responses? evidence from a choice experiment on landscape attributes of green infrastructure, *Ecological Economics* **156**(3): 375–386.
URL: <http://dx.doi.org/10.1016/j.ecolecon.2018.10.015>

Spegel, E. (2017). Valuing the reduction of floods: Public officials' versus citizens' preferences, *Climate Risk Management* **18**: 1–14.

URL: <http://dx.doi.org/10.1016/j.crm.2017.08.003>

Terwel, B. W. and ter Mors, E. (2015). Host community compensation in a carbon dioxide capture and storage (CCS) context: Comparing the preferences of Dutch citizens and local government authorities, *Environmental Science & Policy* **50**: 15–23.

URL: <http://dx.doi.org/10.1016/j.envsci.2015.01.015>

Tienhaara, A., Haltia, E., Pouta, E., Arovuori, K., Grammatikopoulou, I., Miettinen, A., Koikkalainen, K., Ahtiainen, H. and Artell, J. (2020). Demand and supply of agricultural es: towards benefit-based policy, *European Review of Agricultural Economics* **47**(3): 1223–1249.

URL: <http://dx.doi.org/10.1093/erae/jbz044>

Train, K. (2003). *Discrete Choice Methods with Simulation*, Cambridge University Press, Cambridge.

Tu, G., Abildtrup, J. and Garcia, S. (2016). Preferences for urban green spaces and peri-urban forests: An analysis of stated residential choices, *Landscape and Urban Planning* **148**: 120–131.

URL: <http://dx.doi.org/10.1016/j.landurbplan.2015.12.013>

Wilkerson, M. L., Mitchell, M. G., Shanahan, D., Wilson, K. A., Ives, C. D., Lovelock, C. E. and Rhodes, J. R. (2018). The role of socio-economic factors in planning and managing urban ecosystem services, *Ecosystem Services* **31, Part A**: 102–110.

URL: <http://dx.doi.org/10.1016/j.ecoser.2018.02.017>

Table 1
Attributes

Attributes	Description	Level and VARIABLE NAME
Recreational opportunities	They depend on the green area characteristics such as functionality, accessibility, security, and aesthetics. Pesticide-free management may require changes that could alter these characteristics for elements such as atmosphere, plantations, paths or furniture.	Improved USE(+) Unchanged* Reduced USE(-)
Visual appearance	The change to pesticide-free management implies the presence of more weeds in green areas such as urban parks, but also along footpaths, by walls or at the base of trees. Depending on what is desirable and the methods of management, this vegetation can have a natural or managed look.	Controlled* Natural NATU
Fauna abundance	Pesticide-free management may boost the populations of all types of local animal species (e.g. birds, insects, small animals). Some of this fauna is useful for the maintenance of the green areas (e.g. controlling undesirable insects).	Major increase FAUNA(++) Minor increase FAUNA(+) Unchanged*
Information Training	Pesticide-free management creates many changes concerning the level of service of the green areas, the key skills required of workers, the organization of work, and the associated costs. To facilitate these changes, the local communities can decide to offer training and/or information for maintenance teams and residents.	Absent* Existing INFO
Working conditions	With pesticide-free management, there is no longer any risk associated with manipulating pesticides but there are other factors that affect working conditions. They include physical working conditions and being exposed to an increased risk of accidents or professional illnesses (e.g. due to noise, dust, exhaust gases, awkward positions). Being subjected to comments from members of the general public, who are sometimes aggressive, is also a psychological risk. With the change to pesticide-free management these risk factors evolve as the work changes, creating potentially better or worse working conditions.	Improved WORK(+) Unchanged* Risk of deterioration WORK(-)
Budget	This concerns the local community budget allocated to green areas (maintenance and investment). Generally, 2 to 5% of the community's maintenance budget is dedicated to green areas. A change to pesticide-free management is expected to increase this budget for several reasons: the change in labour requirements, the purchasing of specific equipment, the reorganization of the space (e.g. new plants), sub-contracting, training workers, and informing the population.	0%,+5%,+15% BUDG

Table 2
Socio-economic characteristics of the sample

Variable	Description	% Sample	% French population
Region	French geographical region where the respondent lives:		
_IDF	Paris and Parisian region (<i>Ile-de-France</i>)		18
_NW	North West		23
_NE	North East		22
_SW	South West		11
_SE	South East		25
Age	Age category of respondent:		
1	Between 18 and 24 years old		10
2	Between 25 and 34 years old		15
3	Between 35 and 49 years old		25
4	Between 50 and 64 years old		25
5	Above 65 years old		24
CSP	Occupational category:		
_High	Higher socio-economic status		28
_Low	Lower socio-economic status		29
_Retired	Retired		26
_Unempl	Other Unemployed		17
Female			
1	if the respondent is a women		52
HigherEducation			
1	if the respondent has received higher education		63
Townsize	Size of the city where the respondents currently live:		
_small	Less than 20000 inhabitants		62
_medium	Between 20000 and 100000		23
_large	More than 100000		15

Note: The last column contains data for the French metropolitan population (Source: INSEE job survey 2012 and Recensement de la population 2017 and OECD(2019) for higher education).

Table 3
RPL model estimations (Uncorrelated and Correlated)

	Uncorrelated		Correlated	
	Coef.	Std.error	Coef.	Std.error
Attributes (means)				
USE(-)	-1.592	0.106***	-1.993	0.140***
USE(+)	0.562	0.078***	0.719	0.097***
NATU	1.093	0.077***	1.298	0.106***
FAUNA(+)	1.007	0.072***	1.300	0.115***
FAUNA(++)	1.895	0.109***	2.541	0.187***
INFO	0.577	0.060***	0.666	0.082***
WORK(-)	-1.766	0.107***	-2.189	0.152***
WORK(+)	0.719	0.085***	0.926	0.118***
BUDG	-2.825	0.100***	-2.721	0.114***
Heterogeneity in means				
USE(-) x Politicians	0.082	0.241	-0.045	0.289
USE(-) x Managers	0.109	0.176	0.088	0.204
USE(+) x Politicians	-0.164	0.175	-0.198	0.199
USE(+) x Managers	-0.061	0.155	-0.004	0.175
NATU x Politicians	-0.441	0.174**	-0.515	0.210**
NATU x Managers	-0.261	0.148*	-0.332	0.173*
FAUNA(+) x Politicians	-0.322	0.165*	-0.329	0.235
FAUNA(+) x Managers	-0.179	0.131	-0.174	0.179
FAUNA(++) x Politicians	-0.510	0.243**	-0.527	0.357
FAUNA(++) x Managers	-0.482	0.201**	-0.495	0.284*
INFO x Politicians	0.229	0.136*	0.266	0.169
INFO x Managers	0.265	0.124**	0.270	0.151*
WORK (-) x Politicians	0.154	0.218	0.002	0.271
WORK (-) x Managers	0.169	0.173	0.138	0.211
WORK (+) x Politicians	-0.572	0.186***	-0.583	0.208***
WORK (+) x Managers	-0.286	0.178	-0.314	0.198
BUDG x Politicians	0.149	0.171	-0.074	0.193
BUDG x Managers	0.017	0.134	0.202	0.142
Attributes (Standard Deviations)				
USE(-)	1.308	0.098***	3.767	0.296***
USE(+)	0.655	0.127***	1.003	0.246***
NATU	1.254	0.074***	3.762	0.519***
FAUNA(+)	0.367	0.160**	2.659	0.281***
FAUNA(++)	1.459	0.104***	5.326	0.464***
INFO	0.643	0.083***	2.240	0.247***
WORK(-)	1.401	0.105***	4.185	0.537***
WORK(+)	0.642	0.102***	1.718	0.537***
BUDG	1.020	0.073***	2.672	0.385***
Log-Likelihood	-4890.093		-4764.015	
Observations	10116		10116	
AIC/n	0.974		0.956	
Parameters	36		72	

Note: The standard deviations reported are estimated considering the correlation between parameter estimates (?) using 1000 Halton draws. Estimated with NLOGIT 6.0. "x" corresponds to the interaction between the stakeholder type and the attribute.

Table 4
Willingness To Pay per attribute and per stakeholder type: trade-off
between increase in budget allocated to UGSs and other UGS
characteristics

Attribute	Median	90% Conf. Interval	Rank
USE(-)			
Citizens	-30.4	[-39.3 ; -22.9]	3
Politicians	-30.4	[-39.3 ; -22.9]	3
Managers	-30.4	[-39.3 ; -22.9]	3
USE(+)			
Citizens	10.9	[7.8 ; 15.0]	7
Politicians	10.9	[7.8 ; 15.0]	6
Managers	10.9	[7.8 ; 15.0]	8
NATU			
Citizens	19.7 ^{p,m}	[15.3 ; 25.5]	4
Politicians	11.7 ^u	[8.5 ; 16.4]	5
Managers	14.5 ^u	[11.0 ; 19.7]	5
FAUNA(+)			
Citizens	19.6	[14.6 ; 26.4]	5
Politicians	19.6	[14.6 ; 26.4]	4
Managers	19.6	[14.6 ; 26.4]	4
FAUNA(++)			
Citizens	38.7 ^m	[31.4 ; 47.3]	1
Politicians	38.7 ^m	[31.4 ; 47.3]	1
Managers	31.1 ^{u,p}	[25.1 ; 38.5]	2
INFO			
Citizens	10.0 ^m	[7.5 ; 7.5]	8
Politicians	10.0 ^m	[7.5 ; 7.5]	7
Managers	14.2 ^{u,p}	[11.2 ; 18.3]	6
WORK(-)			
Citizens	-33.5	[-40.9 ; -27.4]	2
Politicians	-33.5	[-40.9 ; -27.4]	2
Managers	-33.5	[-40.9 ; -27.4]	1
WORK(+)			
citizens	14.1 ^p	[10.3 ; 18.6]	6
Politicians	5.2 ^{u,m}	[2.0 ; 8.8]	8
Managers	14.1 ^p	[10.3 ; 18.6]	7

Note: WTP estimated with the Krinsky and Robb (1986) procedure (1000 draws).

^{u,p,m} means that the WTP is significantly different at the 10% level for the stakeholder type in row and the types in subscript (*u* for user, *p* for politicians and *m* for managers) according to the Complete Combinatorial test suggested by Poe et al.(2005) (see Table 3 in the Electronic Supplementary Material for complementary results on this test). Attributes are ranked according to the absolute values of the median MRS.

Table 5
Attribute levels associated with different management options (MO)

	Benchmark	MO1	MO2
Recreational opportunities	Unchanged	Deteriorated	Improved
Visual appearance	Controlled	Controlled	Natural
Fauna abundance	Unchanged	Unchanged	Major increase
Training & Information	Lacking	Lacking	Existing
Working conditions	Unchanged	Risk of deterioration	Improved

Table 6
Compensating surplus in the two management options (MO)

Attribute	Median	90% Conf. Interval	
MO1			
Citizens	63.7	[51.9;	78.5]
Politicians	63.7	[51.9;	78.5]
Managers	63.7	[51.9;	78.5]
MO2			
Citizens	-93.8	[-115.2;	-76.3]
Politicians	-76.9	[-95.3;	-62.4]
Managers	-85.4	[-105.1;	-69.2]

Note: Estimation with the Krinsky and Robb (1986) procedure (1000 draws). $CS > 0$ means stakeholders are worse off and require compensation for the welfare loss. $CS < 0$ means that stakeholders are better off and would be willing to increase the budget allocated to UGSs for this scenario.

Understanding public administrators' and citizens' preferences for a successful transition to pesticide-free urban green spaces

Electronic Supplementary Material

Table 1: Estimated correlation matrix of the correlated RPL

	USE(-)	USE(+)	NATU	FAUNA(+)	FAUNA(++)	INFO	WORK(-)	WORK(+)	BUDG
USE(-)									
USE(+)	-0.929								
NATU	0.023	-0.259							
FAUNA(+)	0.033	0.159	0.230						
FAUNA(++)	0.001	0.125	0.222	0.891					
INFO	-0.361	0.349	0.153	0.099	-0.085				
WORK(-)	0.295	-0.192	0.011	-0.042	-0.440	0.428			
WORK(+)	-0.422	0.290	-0.007	-0.044	0.173	-0.009	-0.521		
BUDG	-0.329	0.428	-0.115	0.401	0.555	-0.390	-0.576	-0.036	

Table 2: Share of the population with preferences of nonexpected sign

	Users	Politicians	Managers
USE(-)	9.2%	9.2%	9.2%
USE(+)	4.6%	4.6%	4.6%
NATU	21.1%	32.0%	28.2%
FAUNA(+)	12.1%	12.1%	12.1%
FAUNA(++)	12.7%	12.7%	18.3%
INFO	25.3%	25.3%	16.0%
WORK(-)	9.7%	9.7%	9.7%
WORK(+)	9.9%	33.0%	9.9%

Table 3: Comparison of WTP and CS by stakeholders: Poe tests (p-values)

WTP NATU	<i>Politicians</i>	<i>Managers</i>
<i>Users</i>	0.006	0.063
<i>Politicians</i>		0.169
WTP FAUNA(++)	<i>Politicians</i>	<i>Managers</i>
<i>Users</i>		0.081
<i>Politicians</i>		0.081
WTP INFO	<i>Politicians</i>	<i>Managers</i>
<i>Users</i>		0.041
<i>Politicians</i>		0.041
WTP WORK(+)	<i>Politicians</i>	<i>Managers</i>
<i>Users</i>	0.000	
<i>Politicians</i>		0.000
CS MO2	<i>Politicians</i>	<i>Managers</i>
<i>Users</i>	0.101	0.268
<i>Politicians</i>		0.257

Note: The p-values are reflected for the WTP and CS where the interaction effects are significant and therefore the simulated WTP and CS varies among stakeholders.

"ZERO PESTICIDES" IN GREEN SPACES: HOW DO YOU FEEL ABOUT IT?



The use of pesticides has been banned since 1st January 2017, in most public places in France, under the law "Labbé": [explanation](#)

We all have our own vision of how pesticides should be used in public places, but what actually is our level of acceptance concerning "zero pesticides", a term that often causes pre-conceived ideas?

Are you a locally elected representative, a manager of public green spaces, or a user of these spaces? You can help us sort out opinions regarding the issue.

This survey is designed to examine the way that YOU see the changes caused by pesticide-free management.

- The survey takes **20 minutes maximum**.
- **No prior knowledge** concerning green areas is needed
- Your answers will be **anonymous**, protected by law, and only used for the research project on this topic.

This work is carried out by the [University of Angers](#) and [Plante & Cité](#), (National research body for the study of green spaces and landscapes) and co-financed by the [French National Agency of Biodiversity](#).



There are 175 questions in this survey

1 Information - What types of green spaces are we talking about?

The survey is concerned with parks and public gardens in town.

In these green spaces, large planted areas and smaller areas such as at the base of trees or walls need to be managed.



Rennes (France) - Parc du Thabor



Rennes (France) - Square de Guyenne

2 The participants

Many different types of participants are concerned by a "zero pesticide" management and the resulting changes. This survey focuses on the following three categories:

Who are you? *

Please select one of the answers bellow:

- ☐ A locally elected official,
- ☐ A manager of public green spaces,
- ☐ An individual who uses public green spaces.

Plant or landscaping professionals: please answer as an individual.

[Questions only for local elected officials]

What is your mandate? *

Answer this question only if the following conditions are met:

The answer was 'Local elected official' to question '3 [IDENTREP]'. (Who are you?)

Tick the answer(s)

Please select all that apply:

- ☐ Mayor
- ☐ Municipal councillor
- ☐ Community advisor
- ☐ Departmental (County) councillor
- ☐ Regional councillor
- ☐ Member of Parliament

- ☐ Senator
- ☐ Other

In which municipality are you elected official? *

Answer this question only if the following conditions are met:

The answer was 'Mayor' or 'Municipal Councillor' or 'Community Councillor' to question '4 [ELUmandate]'. (What is your mandate?)

Please write your answer(s) here:

Name of the municipality
Postal code / zip code

Are you an elected member of the majority? *

Answer this question only if the following conditions are met:

The answer was 'Community Councillor' or 'Municipal Councillor' or 'Mayor' to question '4 [ELUmandate]'. (What is your mandate?)

Please select one of the following answers:

- ☐ Yes
- ☐ No

How long have you been a local elected official? (number of years) *

Answer this question only if the following conditions are met:

The answer was 'County Councillor' or 'Municipal Councillor' or 'Mayor' to question '4 [ELUmandate]'. (What is your mandate?)

Your answer must be a whole number and between 0 and 60.

Please write your answer here:

Did you have a local mandate during the previous term? *

Answer this question only if the following conditions are met:

The answer was 'Community Councillor' or 'Municipal Councillor' or 'Mayor' to question '4 [ELUmandate]'. (What is your mandate?)

Please select one of the following answers:

- ☐ Yes
- ☐ No

For your previous mandate, were you an elected member of the majority? *

Answer this question only if the following conditions are met:

The answer was 'Yes' to question '8 [PRECMANDATE]'. (Did you have a local mandate in the previous term?)

Please select one of the following answers:

- ☐ Yes
- ☐ No

Is the management of green spaces part of your remit? *

Answer this question only if the following conditions are met:

The answer was 'Municipal Councillor' or 'Mayor' or 'Community Councillor' to question '4 [ELUmandate]'. (What is your mandate?)

Please select one of the following answers:

- ☐ Yes
- ☐ No

[Questions only for the UGSs managers]

Who is your employer? *

Answer this question only if the following conditions are met:

The answer was 'Manager of public green spaces' to question '3 [IDENTREP]'. (Who are you?)

Please select an answer below

Please select one of the following answers:

- ☐ A public body
- ☐ A private company
- ☐ Other

What is the full name of your employer (municipality or inter-municipal grouping)? *

Answer this question only if the following conditions are met:

The answer was 'A public body' to question '11 [EMPLOYER]'. (Who is your employer?)

Please write your answer here:

How long have you been working as a green space management professional (number of years)? *

Answer this question only if the following conditions are met:

The answer was 'A public body' to question '11 [EMPLOYER]'. (Who is your employer?)

Your answer must be a whole number and between 0 and 60.

Please write your answer here:

What is your level of education? *

Answer this question only if the following conditions are met:

The answer was 'A public body' to question '11 [EMPLOYER]'. (Who is your employer?)

Please select an answer below

Please select all that apply:

- ☐ No diploma, entry level
- ☐ Level 1 qualification (GCSE)
- ☐ Level 2 qualification
- ☐ Level 3 qualification (A level, Baccalaureate or equivalent)
- ☐ Level 4 or 5 qualification (BTEC Higher National Diploma)
- ☐ Level 6 qualification (Bachelor's degrees)
- ☐ Level 7 or 8 qualification (Master's degree, Doctorate or equivalent)
- ☐ Other

[Questions only for the citizens]

In which “*département*” do you live? *

Answer this question only if the following conditions are met:

----- Scenario 1 -----

The answer was 'An individual who uses public green spaces' to question '3 [IDENTREP]'. (Who are you?)

----- or Scenario 2 -----

The answer was 'A private company' or 'Other' to question '11 [EMPLOYER]'. (Who is your employer?)

----- or Scenario 3 -----

The answer was 'Regional Councillor' or 'County Councillor' or 'Senator' or 'Member of Parliament' or 'Other' to question '4 [ELUmandate]'. (What is your mandate?)

Please write your answer here:

Name of the *département*

Postal code / zip code

For how many years have you lived in this *département*? *

----- Scenario 1 -----

The answer was 'An individual who uses public green spaces' to question '3 [IDENTREP]'. (Who are you?)

----- or Scenario 2 -----

The answer was 'A private company' or 'Other' to question '11 [EMPLOYER]'. (Who is your employer?)

----- or Scenario 3 -----

The answer was 'Regional Councillor' or 'County Councillor' or 'Senator' or 'Member of Parliament' or 'Other' to question '4 [ELUmandate]'. (What is your mandate?)

Your answer must be a whole number and between 0 and 80

Please write your answer here:

Can you see a public green space from your home? *

Answer this question only if the following conditions are met:

----- Scenario 1 -----

The answer was 'An individual who uses public green spaces' to question '3 [IDENTREP]'. (Who are you?)

----- or Scenario 2 -----

The answer was 'A private company' or 'Other' to question '11 [EMPLOYER]'. (Who is your employer?)

----- or Scenario 3 -----

The answer was 'Regional Councillor' or 'County Councillor' or 'Senator' or 'Member of Parliament' or 'Other' to question '4 [ELUmandate]'. (What is your mandate?)

Please select only one of the following answers:

☐ Yes

☐ No

Can you see a public green space from your place of work? *

Answer this question only if the following conditions are met:

----- Scenario 1 -----

The answer was 'An individual who uses public green spaces' to question '3 [IDENTREP]'. (Who are you?)

----- or Scenario 2 -----

The answer was 'A private company' or 'Other' to question '11 [EMPLOYER]'. (Who is your employer?)

----- or Scenario 3 -----

The answer was 'Regional Councillor' or 'County Councillor' or 'Senator' or 'Member of Parliament' or 'Other' to question '4 [ELUmandate]'. (What is your mandate?)

Please select only one of the following answers:

- ☐ Yes
- ☐ No

What is your main reason for using green spaces? (One answer possible) *

Answer this question only if the following conditions are met:

----- Scenario 1 -----

The answer was 'An individual who uses public green spaces' to question '3 [IDENTREP]'. (Who are you?)

----- or Scenario 2 -----

The answer was 'A private company' or 'Other' to question '11 [EMPLOYER]'. (Who is your employer?)

----- or Scenario 3 -----

The answer was 'Regional Councillor' or 'County Councillor' or 'Senator' or 'Member of Parliament' or 'Other' to question '4 [ELUmandate]'. (What is your mandate?)

Please select only one of the following answers:

- ☐ As a passage through or somewhere for walks
- ☐ As a place to relax (e.g. reading, sitting)
- ☐ As a place for recreational activities (e.g. sport, games)
- ☐ I don't go to public green spaces
- ☐ Other

During the last 12 months, how often have you visited public parks or gardens? *

Answer this question only if the following conditions are met:

----- Scenario 1 -----

The answer was 'An individual who uses public green spaces' to question '3 [IDENTREP]'. (Who are you?)

----- or Scenario 2 -----

The answer was 'A private company' or 'Other' to question '11 [EMPLOYER]'. (Who is your employer?)

----- or Scenario 3 -----

The answer was 'Regional Councillor' or 'County Councillor' or 'Senator' or 'Member of Parliament' or 'Other' to question '4 [ELUmandate]'. (What is your mandate?)

Please select only one of the following answers:

- ☐ Several times a week
- ☐ Once a week
- ☐ Less than once a week
- ☐ Less than once a month

3 Information – instructions

In this survey, you will need to **choose between several different options of management created by the "zero pesticide" policy in public parks and gardens in town.**

To clarify the notion of choice, here is an example: **The choice of a week-long holiday.**

Which would you prefer: holiday A1 or B1?

There are no wrong answers; it is just a question of personal choice. If neither option is ideal or realistic, please just choose the closest one.

	BUDGET	TRAJET*	ACTIVITÉS
SEJOUR A1	Moins de 300€ 	Entre 3 et 5h 	Séjour sportif 
SEJOUR B1	Plus de 800€ 	Plus de 8h 	Séjour culturel 

* Temps de trajet depuis votre domicile

Please select one of the following answers:

	A1	B1
<i>Choice of holiday</i>	<input type="radio"/>	<input type="radio"/>

Suppose that the same question is asked several times, with different options each time; for example, the second choice is between the two holidays, A2 or B2:

	BUDGET	TRAJET*	ACTIVITÉS
SEJOUR A2	Entre 300 et 500€ 	Plus de 8h 	Séjour détente 
SEJOUR B2	Plus de 800€ 	Moins de 3h 	Séjour culturel 

* Temps de trajet depuis votre domicile

Please select one of the following answers:

	A2	B2
Choice of holiday	<input type="radio"/>	<input type="radio"/>

Does it feel like a psychological test?

Don't worry! We won't be analyzing your choices individually; rather, we will be analyzing statistically the choices of all the participants to the survey so that we can obtain a reliable image of the participants' preferences.

Still a bit sceptical?

It's a survey technique that seems a bit strange but that has proved to be very effective.

You can find out more about how we use the data you give us by looking up "discrete choice models" on the Internet.

4 Information – Green space characteristics

We use this method in order to know more about **YOUR PREFERENCES** towards the changes caused by the "zero pesticide" maintenance policy in public parks and gardens in town.

Here are 6 characteristics that we use to describe the changes caused by the "zero pesticide" maintenance policy.

You can come back to this page again later if you need to!



To answer the survey questions, it is useful to know more... Click on each characteristic in the scrolling menu to show its description.

Please select one of the following answers:

- ☐ Functional qualities
- ☐ Aesthetics / beauty
- ☐ Fauna abundance
- ☐ Training, communication
- ☐ Working conditions
- ☐ Budget

Functional qualities. The functional qualities of a green space mainly concern its ease of use, accessibility, and safety. The change to a "zero pesticide" maintenance policy can lead to changes that may affect the atmosphere, paths through the green space, furniture, access to certain areas, possible activities, etc.



Aesthetics / beauty. The change to a "zero pesticide" maintenance policy implies the presence of a greater number of self-sown plants in large spaces but also on the edges of footpaths or at the base of trees. Depending on the decisions taken or on the management possibilities, these plants can be given a controlled look (e.g. flower beds that are clearly defined, mown lawns and trimmed uniform shrubs) or a natural look (e.g. more wild plants and more meadows, trees and shrubs that are not rigorously shaped).



- Controlled aspect -



- Natural aspect -

Fauna abundance. The change to a "zero pesticide" maintenance policy can increase the local wildlife (all species: birds, insects, small mammals). Part of this wildlife is useful for the maintenance of the green spaces (e.g. to keep the number of nuisance insects down). Increasing the local wildlife is a good thing for some people, but others view it as a nuisance.



- Major increase -



- Minor increase -



- Unchanged -

TRAINING the workers, INFORMING inhabitants. The change to a "zero pesticide" maintenance policy implies changes that concern at the same time the services for the inhabitants, the tasks for the maintenance workers, the organization of work, and associated costs. In order to accompany the changes, the local authorities can decide to put training and /or communication campaigns in place for workers and inhabitants.



Working conditions. With the "zero pesticide" maintenance policy, the health risk associated with handling pesticides disappears, but there are other risks that affect working conditions. These conditions include arduous work and being exposed to factors (e.g. noise, dust, exhaust fumes, postural stresses) that increase the risk of occupational disease. Being exposed to comments from members of the public, who are sometimes aggressive, is also a psychological risk factor. With the "zero pesticide" maintenance policy, these risk factors evolve with the changed work, creating either improved or worse working conditions.



Budget. The term budget concerns the local authority funding dedicated to green spaces (maintenance and investment). Generally, 2 to 5% of the budget is likely to increase for several reasons: the evolution of the worker requirements, purchasing new equipment, the redesign of the spaces, new plantations, etc.



5 Survey – Choices 1/10

Now it's your turn! Here are two options of green space “zero pesticide” management.

Please choose one of the two options, even if neither seems ideal or realistic.

There are no right or wrong answers. We are just asking for what YOU prefer for the management of public parks and gardens in town.

[The following options are in French, please refer to the key in section 4 for the English translation.]

	QUALITÉ D'USAGE	ESTHÉTIQUE	PRÉSENCE DE FAUNE	FORMATION COMMUNICATION	CONDITIONS DE TRAVAIL	BUDGET
OPTION A1	 - Inchangée -	 - Aspect naturel -	 - Inchangée -	 - Inexistantes -	 - Risque de détérioration -	 - Forte hausse -
OPTION B1	 - Améliorée -	 - Aspect maîtrisé -	 - Légère hausse -	 - Existantes -	 - Inchangées -	 - Inchangé -

Please only answer this question if the following conditions are all true:

((ALEA.NAOK == "1"))

Please select one of the following answers:

Option	A1	B1
	<input type="radio"/>	<input type="radio"/>

QUALITÉ D'USAGE	ESTHÉTIQUE	PRÉSENCE DE FAUNE	FORMATION COMMUNICATION	CONDITIONS DE TRAVAIL	BUDGET

OPTION A1

- Inchangée -	- Aspect naturel -	- Inchangée -	- Inexistantes -	- Risque de détérioration -	- Forte hausse -

OPTION B1

- Améliorée -	- Aspect maîtrisé -	- Légère hausse -	- Existantes -	- Inchangées -	- Inchangé -

Please only answer this question if the following conditions are all true:

((ALEA.NAOK == "2"))

Please select one of the following answers:

Option	A1	B1
	<input type="radio"/>	<input type="radio"/>

QUALITÉ D'USAGE	ESTHÉTIQUE	PRÉSENCE DE FAUNE	FORMATION COMMUNICATION	CONDITIONS DE TRAVAIL	BUDGET

OPTION A1

- Améliorée -	- Aspect naturel -	- Inchangée -	- Existantes -	- Améliorées -	- Légère hausse -

OPTION B1

- Inchangée -	- Aspect maîtrisé -	- Légère hausse -	- Inexistantes -	- Risque de détérioration -	- Forte hausse -

Please only answer this question if the following conditions are all true:

((ALEA.NAOK == "3"))

Please select one of the following answers:

Option	A1	B1
	<input type="radio"/>	<input type="radio"/>

QUALITÉ D'USAGE	ESTHÉTIQUE	PRÉSENCE DE FAUNE	FORMATION COMMUNICATION	CONDITIONS DE TRAVAIL	BUDGET

OPTION A1

- Améliorée -	- Aspect naturel -	- Inchangée -	- Existantes -	- Améliorées -	- Légère hausse -

OPTION B1

- Inchangée -	- Aspect maîtrisé -	- Légère hausse -	- Inexistantes -	- Risque de détérioration -	- Forte hausse -

Please only answer this question if the following conditions are all true:
 ((ALEA.NAOK == "4"))

Please select one of the following answers:

Option	A1	B1
	<input type="radio"/>	<input type="radio"/>

QUALITÉ D'USAGE	ESTHÉTIQUE	PRÉSENCE DE FAUNE	FORMATION COMMUNICATION	CONDITIONS DE TRAVAIL	BUDGET

OPTION A1

- Améliorée -	- Aspect naturel -	- Inchangée -	- Existantes -	- Améliorées -	- Légère hausse -

OPTION B1

- Détériorée -	- Aspect maîtrisé -	- Forte hausse -	- Inexistantes -	- Inchangées -	- Forte hausse -

Please only answer this question if the following conditions are all true:
((ALEA.NAOK == "5"))

Please select one of the following answers:

Option	A1	B1
	<input type="radio"/>	<input type="radio"/>

QUALITÉ D'USAGE	ESTHÉTIQUE	PRÉSENCE DE FAUNE	FORMATION COMMUNICATION	CONDITIONS DE TRAVAIL	BUDGET

OPTION A1

- Améliorée -	- Aspect naturel -	- Inchangée -	- Existantes -	- Améliorées -	- Légère hausse -

OPTION B1

- Détériorée -	- Aspect maîtrisé -	- Forte hausse -	- Inexistantes -	- Inchangées -	- Forte hausse -

Please only answer this question if the following conditions are all true:
((ALEA.NAOK == "6"))

Please select one of the following answers:

Option	A1	B1
	<input type="radio"/>	<input type="radio"/>

QUALITÉ D'USAGE	ESTHÉTIQUE	PRÉSENCE DE FAUNE	FORMATION COMMUNICATION	CONDITIONS DE TRAVAIL	BUDGET

OPTION A1

- Améliorée -	- Aspect maîtrisé -	- Forte hausse -	- Existantes -	- Améliorées -	- Forte hausse -

OPTION B1

- Détériorée -	- Aspect naturel -	- Légère hausse -	- Inexistantes -	- Risque de détérioration -	- Légère hausse -

Please only answer this question if the following conditions are all true:
 ((ALEA.NAOK == "7"))

Please select one of the following answers:

Option	A1 <input type="radio"/>	B1 <input type="radio"/>
--------	-----------------------------	-----------------------------

QUALITÉ D'USAGE	ESTHÉTIQUE	PRÉSENCE DE FAUNE	FORMATION COMMUNICATION	CONDITIONS DE TRAVAIL	BUDGET

OPTION A1

- Améliorée -	- Aspect maîtrisé -	- Forte hausse -	- Existantes -	- Améliorées -	- Forte hausse -

OPTION B1



















- Détériorée -	- Aspect naturel -	- Légère hausse -	- Inexistantes -	- Risque de détérioration -	- Légère hausse -

Please only answer this question if the following conditions are all true:
 ((ALEA.NAOK == "8"))

Please select one of the following answers:

Option	A1	B1
	<input type="radio"/>	<input type="radio"/>

As before, please choose between the following two different options. They are different from the options above.

	QUALITÉ D'USAGE 	ESTHÉTIQUE 	PRÉSENCE DE FAUNE 	FORMATION COMMUNICATION 	CONDITIONS DE TRAVAIL 	BUDGET 
OPTION A2	 - Améliorée -	 - Aspect naturel -	 - Forte hausse -	 - Inexistantes -	 - Améliorées -	 - Forte hausse -
OPTION B2	 - Détériorée -	 - Aspect maîtrisé -	 - Légère hausse -	 - Existantes -	 - Inchangées -	 - Légère hausse -

Please only answer this question if the following conditions are all true:

((ALEA.NAOK == "1"))

Please select one of the following answers:

Option	A2 <input type="radio"/>	B2 <input type="radio"/>
--------	-----------------------------	-----------------------------

QUALITÉ D'USAGE	ESTHÉTIQUE	PRÉSENCE DE FAUNE	FORMATION COMMUNICATION	CONDITIONS DE TRAVAIL	BUDGET

OPTION A2

- Détériorée -	- Aspect naturel -	- Forte hausse -	- Existantes -	- Risque de détérioration -	- Inchangé -

OPTION B2

- Améliorée -	- Aspect maîtrisé -	- Inchangée -	- Inexistantes -	- Inchangées -	- Forte hausse -

Please only answer this question if the following conditions are all true:
((ALEA.NAOK == "2"))

Please select one of the following answers:

Option	A2 <input type="radio"/>	B2 <input type="radio"/>
--------	--------------------------	--------------------------

QUALITÉ D'USAGE	ESTHÉTIQUE	PRÉSENCE DE FAUNE	FORMATION COMMUNICATION	CONDITIONS DE TRAVAIL	BUDGET

OPTION A2

- Inchangée -	- Aspect naturel -	- Légère hausse -	- Inexistantes -	- Améliorées -	- Légère hausse -

OPTION B2

- Améliorée -	- Aspect maîtrisé -	- Inchangée -	- Existantes -	- Inchangées -	- Forte hausse -

Please only answer this question if the following conditions are all true:
((ALEA.NAOK == "3"))

Please select one of the following answers:

Option	A2 <input type="radio"/>	B2 <input type="radio"/>
--------	--------------------------	--------------------------

QUALITÉ D'USAGE

ESTHÉTIQUE

PRÉSENCE DE FAUNE

FORMATION
COMMUNICATION

CONDITIONS
DE TRAVAIL

BUDGET



OPTION A2



- Détériorée -



- Aspect maîtrisé -



- Légère hausse -



- Inexistantes -



- Améliorées -



- Légère hausse -

OPTION B2



- Inchangée -



- Aspect naturel -



- Inchangée -



- Existantes -



- Inchangées -



- Inchangé -

Please only answer this question if the following conditions are all true:

((ALEA.NAOK == "4"))

Please select one of the following answers:

Option

A2

☐

B2

☐

QUALITÉ D'USAGE	ESTHÉTIQUE	PRÉSENCE DE FAUNE	FORMATION COMMUNICATION	CONDITIONS DE TRAVAIL	BUDGET

OPTION A2

- Détériorée -	- Aspect naturel -	- Forte hausse -	- Inexistantes -	- Inchangées -	- Forte hausse -

OPTION B2

- Inchangée -	- Aspect maîtrisé -	- Inchangée -	- Existantes -	- Risque de détérioration -	- Inchangé -

Please only answer this question if the following conditions are all true:
((ALEA.NAOK == "5"))

Please select one of the following answers:

Option	A2	B2
	<input type="radio"/>	<input type="radio"/>

QUALITÉ D'USAGE	ESTHÉTIQUE	PRÉSENCE DE FAUNE	FORMATION COMMUNICATION	CONDITIONS DE TRAVAIL	BUDGET

OPTION A2

- Inchangée -	- Aspect maîtrisé -	- Légère hausse -	- Existantes -	- Améliorées -	- Légère hausse -

OPTION B2

- Améliorée -	- Aspect naturel -	- Inchangée -	- Inexistantes -	- Risque de détérioration -	- Forte hausse -

Please only answer this question if the following conditions are all true:
((ALEA.NAOK == "6"))

Please select one of the following answers:

Option	A2	B2
	<input type="radio"/>	<input type="radio"/>

QUALITÉ D'USAGE	ESTHÉTIQUE	PRÉSENCE DE FAUNE	FORMATION COMMUNICATION	CONDITIONS DE TRAVAIL	BUDGET

OPTION A2

- Détériorée -	- Aspect maîtrisé -	- Forte hausse -	- Inexistantes -	- Inchangées -	- Forte hausse -

OPTION B2

- Inchangée -	- Aspect naturel -	- Inchangée -	- Existantes -	- Améliorées -	- Inchangé -

Please only answer this question if the following conditions are all true:
((ALEA.NAOK == "7"))

Please select one of the following answers:

Option	A2	B2
	<input type="radio"/>	<input type="radio"/>

QUALITÉ D'USAGE

ESTHÉTIQUE

PRÉSENCE DE FAUNE

FORMATION
COMMUNICATION

CONDITIONS
DE TRAVAIL

BUDGET



OPTION A2



- Détériorée -



- Aspect maîtrisé -



- Forte hausse -



- Inexistantes -



- Inchangées -



- Forte hausse -

OPTION B2



- Inchangée -



- Aspect naturel -



- Inchangée -



- Existantes -



- Améliorées -



- Inchangé -

Please only answer this question if the following conditions are all true:

((ALEA.NAOK == "8"))

Please select one of the following answers:

Option

A2

☐

B2

☐

As before, please choose between the following two different options. They are different from the options above.

	QUALITÉ D'USAGE	ESTHÉTIQUE	PRÉSENCE DE FAUNE	FORMATION COMMUNICATION	CONDITIONS DE TRAVAIL	BUDGET
OPTION A3	 - Détériorée -	 - Aspect maîtrisé -	 - Inchangée -	 - Existantes -	 - Inchangées -	 - Inchangé -
OPTION B3	 - Améliorée -	 - Aspect naturel -	 - Forte hausse -	 - Inexistantes -	 - Améliorées -	 - Légère hausse -

Please only answer this question if the following conditions are all true:

((ALEA.NAOK == "1"))

Please select one of the following answers:

Option ☐ A3 ☐ B3

QUALITÉ D'USAGE	ESTHÉTIQUE	PRÉSENCE DE FAUNE	FORMATION COMMUNICATION	CONDITIONS DE TRAVAIL	BUDGET

OPTION A3

- Détériorée -	- Aspect naturel -	- Inchangée -	- Existantes -	- Inchangées -	- Légère hausse -

OPTION B3

- Inchangée -	- Aspect maîtrisé -	- Légère hausse -	- Inexistantes -	- Risque de détérioration -	- Forte hausse -

Please only answer this question if the following conditions are all true:
((ALEA.NAOK == "2"))

Please select one of the following answers:

	A3	B3
Option	<input type="radio"/>	<input type="radio"/>

QUALITÉ D'USAGE	ESTHÉTIQUE	PRÉSENCE DE FAUNE	FORMATION COMMUNICATION	CONDITIONS DE TRAVAIL	BUDGET

OPTION A3

- Améliorée -	- Aspect maîtrisé -	- Légère hausse -	- Existantes -	- Risque de détérioration -	- Légère hausse -

OPTION B3

- Inchangée -	- Aspect naturel -	- Forte hausse -	- Inexistantes -	- Inchangées -	- Inchangé -

Please only answer this question if the following conditions are all true:
((ALEA.NAOK == "3"))

Please select one of the following answers:

Option	A3	B3
	<input type="radio"/>	<input type="radio"/>

QUALITÉ D'USAGE	ESTHÉTIQUE	PRÉSENCE DE FAUNE	FORMATION COMMUNICATION	CONDITIONS DE TRAVAIL	BUDGET

OPTION A3

- Améliorée -	- Aspect maîtrisé -	- Légère hausse -	- Existantes -	- Risque de détérioration -	- Légère hausse -

OPTION B3

- Inchangée -	- Aspect naturel -	- Forte hausse -	- Inexistantes -	- Inchangées -	- Inchangé -

Please only answer this question if the following conditions are all true:
((ALEA.NAOK == "4"))

Please select one of the following answers:

Option	A3	B3
	<input type="radio"/>	<input type="radio"/>

QUALITÉ D'USAGE	ESTHÉTIQUE	PRÉSENCE DE FAUNE	FORMATION COMMUNICATION	CONDITIONS DE TRAVAIL	BUDGET

OPTION A3

- Inchangée -	- Aspect maîtrisé -	- Inchangée -	- Inexistantes -	- Risque de détérioration -	- Inchangé -

OPTION B3

- Détériorée -	- Aspect naturel -	- Légère hausse -	- Existantes -	- Inchangées -	- Forte hausse -

Please only answer this question if the following conditions are all true:
((ALEA.NAOK == "5"))

Please select one of the following answers:

Option	A3	B3
	<input type="radio"/>	<input type="radio"/>

QUALITÉ D'USAGE

ESTHÉTIQUE

PRÉSENCE DE FAUNE

FORMATION
COMMUNICATION

CONDITIONS
DE TRAVAIL

BUDGET



OPTION A3



OPTION B3



Please only answer this question if the following conditions are all true:

((ALEA.NAOK == "6"))

Please select one of the following answers:

Option

A3

☐

B3

☐

QUALITÉ D'USAGE	ESTHÉTIQUE	PRÉSENCE DE FAUNE	FORMATION COMMUNICATION	CONDITIONS DE TRAVAIL	BUDGET

OPTION A3

- Détériorée -	- Aspect naturel -	- Inchangée -	- Existantes -	- Améliorées -	- Forte hausse -

OPTION B3

- Améliorée -	- Aspect maîtrisé -	- Légère hausse -	- Inexistantes -	- Risque de détérioration -	- Inchangé -

Please only answer this question if the following conditions are all true:
((ALEA.NAOK == '7'))

Please select one of the following answers:

Option	A3	B3
	<input type="radio"/>	<input type="radio"/>

QUALITÉ D'USAGE	ESTHÉTIQUE	PRÉSENCE DE FAUNE	FORMATION COMMUNICATION	CONDITIONS DE TRAVAIL	BUDGET

OPTION A3

- Améliorée -	- Aspect naturel -	- Forte hausse -	- Existantes -	- Inchangées -	- Forte hausse -

OPTION B3



















- Détériorée -	- Aspect maîtrisé -	- Inchangée -	- Inexistantes -	- Améliorées -	- Inchangé -

Please only answer this question if the following conditions are all true:
((ALEA.NAOK == "8"))

Please select one of the following answers:

Option	A3	B3
	<input type="radio"/>	<input type="radio"/>

As before, please choose between the following two different options. They are different from the options above.

	QUALITÉ D'USAGE 	ESTHÉTIQUE 	PRÉSENCE DE FAUNE 	FORMATION COMMUNICATION 	CONDITIONS DE TRAVAIL 	BUDGET 
OPTION A4	 - Détériorée -	 - Aspect maîtrisé -	 - Forte hausse -	 - Existantes -	 - Risque de détérioration -	 - Légère hausse -
OPTION B4	 - Inchangée -	 - Aspect naturel -	 - Légère hausse -	 - Inexistantes -	 - Inchangées -	 - Inchangé -

Please only answer this question if the following conditions are all true:

((ALEA.NAOK == "1"))

Please select one of the following answers:

Option A4 B4

☐ ☐

QUALITÉ D'USAGE	ESTHÉTIQUE	PRÉSENCE DE FAUNE	FORMATION COMMUNICATION	CONDITIONS DE TRAVAIL	BUDGET

OPTION A4

- Inchangée -	- Aspect naturel -	- Forte hausse -	- Existantes -	- Inchangées -	- Forte hausse -

OPTION B4

- Améliorée -	- Aspect maîtrisé -	- Inchangée -	- Inexistantes -	- Améliorées -	- Inchangé -

Please only answer this question if the following conditions are all true:
((ALEA.NAOK == "2"))

Please select one of the following answers:

Option	A4	B4
	<input type="radio"/>	<input type="radio"/>

QUALITÉ D'USAGE	ESTHÉTIQUE	PRÉSENCE DE FAUNE	FORMATION COMMUNICATION	CONDITIONS DE TRAVAIL	BUDGET

OPTION A4

- Améliorée -	- Aspect naturel -	- Légère hausse -	- Inexistantes -	- Améliorées -	- Inchangé -

OPTION B4

- Détériorée -	- Aspect maîtrisé -	- Inchangée -	- Existantes -	- Inchangées -	- Forte hausse -

Please only answer this question if the following conditions are all true:
((ALEA.NAOK == "3"))

Please select one of the following answers:

Option	A4	B4
	<input type="radio"/>	<input type="radio"/>

QUALITÉ D'USAGE	ESTHÉTIQUE	PRÉSENCE DE FAUNE	FORMATION COMMUNICATION	CONDITIONS DE TRAVAIL	BUDGET

OPTION A4

- Inchangée -	- Aspect maîtrisé -	- Inchangée -	- Inexistantes -	- Améliorées -	- Forte hausse -

OPTION B4

- Détériorée -	- Aspect naturel -	- Légère hausse -	- Existantes -	- Risque de détérioration -	- Légère hausse -

Please only answer this question if the following conditions are all true:
((ALEA.NAOK == "4"))

Please select one of the following answers:

Option	A4	B4
	<input type="radio"/>	<input type="radio"/>

QUALITÉ D'USAGE	ESTHÉTIQUE	PRÉSENCE DE FAUNE	FORMATION COMMUNICATION	CONDITIONS DE TRAVAIL	BUDGET

OPTION A4

- Détériorée -	- Aspect maîtrisé -	- Inchangée -	- Existantes -	- Améliorées -	- Inchangé -

OPTION B4

- Inchangée -	- Aspect naturel -	- Légère hausse -	- Inexistantes -	- Inchangées -	- Légère hausse -

Please only answer this question if the following conditions are all true:
((ALEA.NAOK == "5"))

Please select one of the following answers:

Option	A4	B4
	<input type="radio"/>	<input type="radio"/>

QUALITÉ D'USAGE	ESTHÉTIQUE	PRÉSENCE DE FAUNE	FORMATION COMMUNICATION	CONDITIONS DE TRAVAIL	BUDGET

OPTION A4

- Améliorée -	- Aspect maîtrisé -	- Légère hausse -	- Existantes -	- Améliorées -	- Forte hausse -

OPTION B4

- Détériorée -	- Aspect naturel -	- Forte hausse -	- Inexistantes -	- Risque de détérioration -	- Inchangé -

Please only answer this question if the following conditions are all true:
((ALEA.NAOK == "6"))

Please select one of the following answers:

Option	A4	B4
	<input type="radio"/>	<input type="radio"/>

QUALITÉ D'USAGE	ESTHÉTIQUE	PRÉSENCE DE FAUNE	FORMATION COMMUNICATION	CONDITIONS DE TRAVAIL	BUDGET

OPTION A4

- Détériorée -	- Aspect naturel -	- Légère hausse -	- Inexistantes -	- Inchangées -	- Inchangé -

OPTION B4

- Inchangée -	- Aspect maîtrisé -	- Forte hausse -	- Existantes -	- Risque de détérioration -	- Forte hausse -

Please only answer this question if the following conditions are all true:
((ALEA.NAOK == "7"))

Please select one of the following answers:

Option	A4 <input type="radio"/>	B4 <input type="radio"/>
--------	--------------------------	--------------------------

QUALITÉ D'USAGE	ESTHÉTIQUE	PRÉSENCE DE FAUNE	FORMATION COMMUNICATION	CONDITIONS DE TRAVAIL	BUDGET

OPTION A4

- Améliorée -	- Aspect naturel -	- Légère hausse -	- Existantes -	- Risque de détérioration -	- Inchangé -

OPTION B4

- Inchangée -	- Aspect maîtrisé -	- Inchangée -	- Inexistantes -	- Inchangées -	- Légère hausse -

Please only answer this question if the following conditions are all true:
((ALEA.NAOK == "8"))

Please select one of the following answers:

	A4	B4
Option	<input type="radio"/>	<input type="radio"/>

9 Choice 5/10

As before, please choose between the following two different options. They are different from the options above.

	QUALITÉ D'USAGE	ESTHÉTIQUE	PRÉSENCE DE FAUNE	FORMATION COMMUNICATION	CONDITIONS DE TRAVAIL	BUDGET
OPTION A5	 - Détériorée -	 - Aspect naturel -	 - Inchangée -	 - Existantes -	 - Inchangées -	 - Légère hausse -
OPTION B5	 - Inchangée -	 - Aspect maîtrisé -	 - Légère hausse -	 - Inexistantes -	 - Risque de détérioration -	 - Forte hausse -

Please only answer this question if the following conditions are all true:

((ALEA.NAOK == "1"))

Please select one of the following answers:

Option	A5	B5
	<input type="radio"/>	<input type="radio"/>

QUALITÉ D'USAGE

ESTHÉTIQUE

PRÉSENCE DE FAUNE

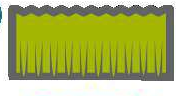
FORMATION
COMMUNICATION

CONDITIONS
DE TRAVAIL

BUDGET



OPTION A5



OPTION B5



Please only answer this question if the following conditions are all true:

((ALEA.NAOK == "2"))

Please select one of the following answers:

Option

A5

☐

B5

☐

QUALITÉ D'USAGE	ESTHÉTIQUE	PRÉSENCE DE FAUNE	FORMATION COMMUNICATION	CONDITIONS DE TRAVAIL	BUDGET

OPTION A5

- Détériorée -	- Aspect naturel -	- Forte hausse -	- Inexistantes -	- Améliorées -	- Légère hausse -

OPTION B5

- Inchangée -	- Aspect maîtrisé -	- Légère hausse -	- Existantes -	- Inchangées -	- Inchangé -

Please only answer this question if the following conditions are all true:
((ALEA.NAOK == "3"))

Please select one of the following answers:

Option	A5 <input type="radio"/>	B5 <input type="radio"/>
--------	--------------------------	--------------------------

QUALITÉ D'USAGE	ESTHÉTIQUE	PRÉSENCE DE FAUNE	FORMATION COMMUNICATION	CONDITIONS DE TRAVAIL	BUDGET

OPTION A5

- Inchangée -	- Aspect naturel -	- Inchangée -	- Inexistantes -	- Risque de détérioration -	- Légère hausse -

OPTION B5

- Détériorée -	- Aspect maîtrisé -	- Forte hausse -	- Existantes -	- Améliorées -	- Inchangé -

Please only answer this question if the following conditions are all true:
((ALEA.NAOK == "4"))

Please select one of the following answers:

Option	A5 <input type="radio"/>	B5 <input type="radio"/>
--------	--------------------------	--------------------------

QUALITÉ D'USAGE	ESTHÉTIQUE	PRÉSENCE DE FAUNE	FORMATION COMMUNICATION	CONDITIONS DE TRAVAIL	BUDGET

OPTION A5

- Inchangée -	- Aspect maîtrisé -	- Forte hausse -	- Existantes -	- Risque de détérioration -	- Légère hausse -

OPTION B5

- Améliorée -	- Aspect naturel -	- Inchangée -	- Inexistantes -	- Inchangées -	- Inchangé -

Please only answer this question if the following conditions are all true:
((ALEA.NAOK == "5"))

Please select one of the following answers:

Option	A5 <input type="radio"/>	B5 <input type="radio"/>
--------	--------------------------	--------------------------

QUALITÉ D'USAGE	ESTHÉTIQUE	PRÉSENCE DE FAUNE	FORMATION COMMUNICATION	CONDITIONS DE TRAVAIL	BUDGET

OPTION A5

- Inchangée -	- Aspect naturel -	- Forte hausse -	- Existantes -	- Risque de détérioration -	- Inchangé -

OPTION B5

- Détériorée -	- Aspect maîtrisé -	- Inchangée -	- Inexistantes -	- Améliorées -	- Légère hausse -

Please only answer this question if the following conditions are all true:
((ALEA.NAOK == "6"))

Please select one of the following answers:

Option	A5	B5
	<input type="radio"/>	<input type="radio"/>

QUALITÉ D'USAGE	ESTHÉTIQUE	PRÉSENCE DE FAUNE	FORMATION COMMUNICATION	CONDITIONS DE TRAVAIL	BUDGET

OPTION A5

- Inchangée -	- Aspect naturel -	- Légère hausse -	- Existantes -	- Améliorées -	- Forte hausse -

OPTION B5

- Détériorée -	- Aspect maîtrisé -	- Forte hausse -	- Inexistantes -	- Risque de détérioration -	- Inchangé -

Please only answer this question if the following conditions are all true:
((ALEA.NAOK == "7"))

Please select one of the following answers:

Option	A5 <input type="radio"/>	B5 <input type="radio"/>
--------	--------------------------	--------------------------

QUALITÉ D'USAGE



ESTHÉTIQUE



PRÉSENCE DE FAUNE



FORMATION
COMMUNICATION



CONDITIONS
DE TRAVAIL



BUDGET



OPTION A5



- Améliorée -



- Aspect maîtrisé -



- Légère hausse -



- Inexistantes -



- Inchangées -



- Inchangé -

OPTION B5



- Inchangée -



- Aspect naturel -



- Inchangée -



- Existantes -



- Améliorées -



- Légère hausse -

Please only answer this question if the following conditions are all true:

((ALEA.NAOK == "8"))

Please select one of the following answers:

Option



















A5



B5



As before, please choose between the following two different options. They are different from the options above.

	QUALITÉ D'USAGE 	ESTHÉTIQUE 	PRÉSENCE DE FAUNE 	FORMATION COMMUNICATION 	CONDITIONS DE TRAVAIL 	BUDGET 
OPTION A6	 - Détériorée -	 - Aspect naturel -	 - Forte hausse -	 - Existantes -	 - Risque de détérioration -	 - Inchangé -
OPTION B6	 - Améliorée -	 - Aspect maîtrisé -	 - Inchangée -	 - Inexistantes -	 - Inchangées -	 - Forte hausse -

Please only answer this question if the following conditions are all true:

((ALEA.NAOK == "1"))

Please select one of the following answers:

Option	A6 <input type="radio"/>	B6 <input type="radio"/>
--------	-----------------------------	-----------------------------

QUALITÉ D'USAGE	ESTHÉTIQUE	PRÉSENCE DE FAUNE	FORMATION COMMUNICATION	CONDITIONS DE TRAVAIL	BUDGET

OPTION A6

- Inchangée -	- Aspect naturel -	- Légère hausse -	- Inexistantes -	- Inchangées -	- Légère hausse -

OPTION B6

- Améliorée -	- Aspect maîtrisé -	- Forte hausse -	- Existantes -	- Risque de détérioration -	- Inchangé -

Please only answer this question if the following conditions are all true:
The answer to question 1 is [ALEA]' ()

Please select one of the following answers:

Option	A6	B6
	<input type="radio"/>	<input type="radio"/>

QUALITÉ D'USAGE

ESTHÉTIQUE

PRÉSENCE DE FAUNE

FORMATION
COMMUNICATION

CONDITIONS
DE TRAVAIL

BUDGET



OPTION A6



- Détériorée -



- Aspect maîtrisé -



- Légère hausse -



- Inexistantes -



- Améliorées -



- Légère hausse -

OPTION B6



- Inchangée -



- Aspect naturel -



- Inchangée -



- Existantes -



- Inchangées -



- Inchangé -

Please only answer this question if the following conditions are all true:

The answer to question 1 is [ALEA]' ()

Please select one of the following answers:

Option

A6

☐

B6

☐

QUALITÉ D'USAGE	ESTHÉTIQUE	PRÉSENCE DE FAUNE	FORMATION COMMUNICATION	CONDITIONS DE TRAVAIL	BUDGET

OPTION A6

- Améliorée -	- Aspect naturel -	- Légère hausse -	- Existantes -	- Risque de détérioration -	- Légère hausse -

OPTION B6

- Détériorée -	- Aspect naturel -	- Forte hausse -	- Existantes -	- Améliorées -	- Inchangé -

Please only answer this question if the following conditions are all true:
The answer to question 1 is [ALEA]' ()

Please select one of the following answers:

Option	A6	B6
	<input type="radio"/>	<input type="radio"/>

QUALITÉ D'USAGE	ESTHÉTIQUE	PRÉSENCE DE FAUNE	FORMATION COMMUNICATION	CONDITIONS DE TRAVAIL	BUDGET

OPTION A6

- Inchangée -	- Aspect maîtrisé -	- Légère hausse -	- Existantes -	- Améliorées -	- Légère hausse -

OPTION B6

- Améliorée -	- Aspect naturel -	- Inchangée -	- Inexistantes -	- Risque de détérioration -	- Forte hausse -

Please only answer this question if the following conditions are all true:
((ALEA.NAOK == "5"))

Please select one of the following answers:

Option	A6	B6
	<input type="radio"/>	<input type="radio"/>

QUALITÉ D'USAGE	ESTHÉTIQUE	PRÉSENCE DE FAUNE	FORMATION COMMUNICATION	CONDITIONS DE TRAVAIL	BUDGET

OPTION A6

- Détériorée -	- Aspect naturel -	- Forte hausse -	- Inexistantes -	- Inchangées -	- Forte hausse -

OPTION B6

- Inchangée -	- Aspect maîtrisé -	- Inchangée -	- Existantes -	- Risque de détérioration -	- Inchangé -

Please only answer this question if the following conditions are all true:
((ALEA.NAOK == "6"))

Please select one of the following answers:

Option	A6	B6
	<input type="radio"/>	<input type="radio"/>

QUALITÉ D'USAGE	ESTHÉTIQUE	PRÉSENCE DE FAUNE	FORMATION COMMUNICATION	CONDITIONS DE TRAVAIL	BUDGET

OPTION A6

- Améliorée -	- Aspect naturel -	- Forte hausse -	- Existantes -	- Inchangées -	- Forte hausse -

OPTION B6

- Détériorée -	- Aspect maîtrisé -	- Inchangée -	- Inexistantes -	- Améliorées -	- Inchangé -

Please only answer this question if the following conditions are all true:
((ALEA.NAOK == "7"))

Please select one of the following answers:

Option	A6	B6
	<input type="radio"/>	<input type="radio"/>

QUALITÉ D'USAGE	ESTHÉTIQUE	PRÉSENCE DE FAUNE	FORMATION COMMUNICATION	CONDITIONS DE TRAVAIL	BUDGET

OPTION A6

- Inchangée -	- Aspect maîtrisé -	- Forte hausse -	- Inexistantes -	- Améliorées -	- Inchangé -

OPTION B6

- Améliorée -	- Aspect naturel -	- Inchangée -	- Existantes -	- Risque de détérioration -	- Forte hausse -



















Please only answer this question if the following conditions are all true:
((ALEA.NAOK == "8"))

Please select one of the following answers:

Option	A6 <input type="radio"/>	B6 <input type="radio"/>
--------	--------------------------	--------------------------

11 Choice 7/10

As before, please choose between the following two different options. They are different from the options above.

	QUALITÉ D'USAGE 	ESTHÉTIQUE 	PRÉSENCE DE FAUNE 	FORMATION COMMUNICATION 	CONDITIONS DE TRAVAIL 	BUDGET 
OPTION A7	 - Améliorée -	 - Aspect maîtrisé -	 - Légère hausse -	 - Existantes -	 - Inchangées -	 - Inchangé -
OPTION B7	 - Inchangée -	 - Aspect naturel -	 - Inchangée -	 - Inexistantes -	 - Risque de détérioration -	 - Forte hausse -

Please only answer this question if the following conditions are all true:

((ALEA.NAOK == "1"))

Please select one of the following answers:

Option A7 B7

☐ ☐

QUALITÉ D'USAGE	ESTHÉTIQUE	PRÉSENCE DE FAUNE	FORMATION COMMUNICATION	CONDITIONS DE TRAVAIL	BUDGET

OPTION A7

- Améliorée -	- Aspect maîtrisé -	- Légère hausse -	- Existantes -	- Inchangées -	- Inchangé -

OPTION B7

- Inchangée -	- Aspect naturel -	- Inchangée -	- Inexistantes -	- Risque de détérioration -	- Forte hausse -

Please only answer this question if the following conditions are all true:
((ALEA.NAOK == "2"))

Please select one of the following answers:

Option	A7 <input type="radio"/>	B7 <input type="radio"/>
--------	--------------------------	--------------------------

QUALITÉ D'USAGE	ESTHÉTIQUE	PRÉSENCE DE FAUNE	FORMATION COMMUNICATION	CONDITIONS DE TRAVAIL	BUDGET

OPTION A7

- Inchangée -	- Aspect maîtrisé -	- Légère hausse -	- Inexistantes -	- Risque de détérioration -	- Forte hausse -

OPTION B7

- Améliorée -	- Aspect naturel -	- Inchangée -	- Existantes -	- Améliorées -	- Légère hausse -

Please only answer this question if the following conditions are all true:
((ALEA.NAOK == "3"))

Please select one of the following answers:

Option	A7 <input type="radio"/>	B7 <input type="radio"/>
--------	--------------------------	--------------------------

QUALITÉ D'USAGE	ESTHÉTIQUE	PRÉSENCE DE FAUNE	FORMATION COMMUNICATION	CONDITIONS DE TRAVAIL	BUDGET

OPTION A7

- Inchangée -	- Aspect maîtrisé -	- Légère hausse -	- Inexistantes -	- Risque de détérioration -	- Forte hausse -

OPTION B7

- Améliorée -	- Aspect naturel -	- Inchangée -	- Existantes -	- Améliorées -	- Légère hausse -

Please only answer this question if the following conditions are all true:
((ALEA.NAOK == "4"))

Please select one of the following answers:

Option	A7 <input type="radio"/>	B7 <input type="radio"/>
--------	--------------------------	--------------------------

QUALITÉ D'USAGE	ESTHÉTIQUE	PRÉSENCE DE FAUNE	FORMATION COMMUNICATION	CONDITIONS DE TRAVAIL	BUDGET

OPTION A7

- Détériorée -	- Aspect maîtrisé -	- Forte hausse -	- Inexistantes -	- Inchangées -	- Forte hausse -

OPTION B7

- Améliorée -	- Aspect naturel -	- Inchangée -	- Existantes -	- Améliorées -	- Légère hausse -

Please only answer this question if the following conditions are all true:
((ALEA.NAOK == "5"))

Please select one of the following answers:

Option	A7 <input type="radio"/>	B7 <input type="radio"/>
--------	--------------------------	--------------------------

QUALITÉ D'USAGE	ESTHÉTIQUE	PRÉSENCE DE FAUNE	FORMATION COMMUNICATION	CONDITIONS DE TRAVAIL	BUDGET

OPTION A7

- Détériorée -	- Aspect maîtrisé -	- Forte hausse -	- Inexistantes -	- Inchangées -	- Forte hausse -

OPTION B7

- Améliorée -	- Aspect naturel -	- Inchangée -	- Existantes -	- Améliorées -	- Légère hausse -

Please only answer this question if the following conditions are all true:
((ALEA.NAOK == "6"))

Please select one of the following answers:

Option	A7 <input type="radio"/>	B7 <input type="radio"/>
--------	--------------------------	--------------------------

QUALITÉ D'USAGE	ESTHÉTIQUE	PRÉSENCE DE FAUNE	FORMATION COMMUNICATION	CONDITIONS DE TRAVAIL	BUDGET

OPTION A7

- Détériorée -	- Aspect naturel -	- Légère hausse -	- Inexistantes -	- Risque de détérioration -	- Légère hausse -

OPTION B7

- Améliorée -	- Aspect maîtrisé -	- Forte hausse -	- Existantes -	- Améliorées -	- Forte hausse -

Please only answer this question if the following conditions are all true:
((ALEA.NAOK == "7"))

Please select one of the following answers:

Option	A7 <input type="radio"/>	B7 <input type="radio"/>
--------	--------------------------	--------------------------

QUALITÉ D'USAGE	ESTHÉTIQUE	PRÉSENCE DE FAUNE	FORMATION COMMUNICATION	CONDITIONS DE TRAVAIL	BUDGET

OPTION A7

- Détériorée -	- Aspect naturel -	- Légère hausse -	- Inexistantes -	- Risque de détérioration -	- Légère hausse -

OPTION B7

- Améliorée -	- Aspect maîtrisé -	- Forte hausse -	- Existantes -	- Améliorées -	- Forte hausse -

Please only answer this question if the following conditions are all true:
((ALEA.NAOK == "8"))

Please select one of the following answers:

Option	A7 <input type="radio"/>	B7 <input type="radio"/>
--------	--------------------------	--------------------------

As before, please choose between the following two different options. They are different from the options above.

	QUALITÉ D'USAGE	ESTHÉTIQUE	PRÉSENCE DE FAUNE	FORMATION COMMUNICATION	CONDITIONS DE TRAVAIL	BUDGET
OPTION A8	 - Inchangée -	 - Aspect naturel -	 - Forte hausse -	 - Existantes -	 - Inchangées -	 - Forte hausse -
OPTION B8	 - Améliorée -	 - Aspect maîtrisé -	 - Inchangée -	 - Inexistantes -	 - Améliorées -	 - Inchangé -

Please only answer this question if the following conditions are all true:

((ALEA.NAOK == "1"))

Please select one of the following answers:

Option A8 B8

☐ ☐ ☐

QUALITÉ D'USAGE

ESTHÉTIQUE

PRÉSENCE DE FAUNE

FORMATION
COMMUNICATION

CONDITIONS
DE TRAVAIL

BUDGET



OPTION A8



- Détériorée -



- Aspect maîtrisé -



- Inchangée -



- Existantes -



- Inchangées -



- Inchangé -

OPTION B8



- Améliorée -



- Aspect naturel -



- Forte hausse -



- Inexistantes -



- Inchangées -



- Légère hausse -

Please only answer this question if the following conditions are all true:

((ALEA.NAOK == "2"))

Please select one of the following answers:

Option

A8

☐

B8

☐

QUALITÉ D'USAGE	ESTHÉTIQUE	PRÉSENCE DE FAUNE	FORMATION COMMUNICATION	CONDITIONS DE TRAVAIL	BUDGET

OPTION A8

- Inchangée -	- Aspect maîtrisé -	- Inchangée -	- Inexistantes -	- Améliorées -	- Forte hausse -

OPTION B8

- Détériorée -	- Aspect naturel -	- Légère hausse -	- Existantes -	- Risque de détérioration -	- Légère hausse -

Please only answer this question if the following conditions are all true:
((ALEA.NAOK == "3"))

Please select one of the following answers:

Option	A8	B8
	<input type="radio"/>	<input type="radio"/>

QUALITÉ D'USAGE	ESTHÉTIQUE	PRÉSENCE DE FAUNE	FORMATION COMMUNICATION	CONDITIONS DE TRAVAIL	BUDGET

OPTION A8

- Inchangée -	- Aspect naturel -	- Légère hausse -	- Inexistantes -	- Améliorées -	- Légère hausse -

OPTION B8

- Améliorée -	- Aspect maîtrisé -	- Inchangée -	- Existantes -	- Inchangées -	- Forte hausse -

Please only answer this question if the following conditions are all true:
((ALEA.NAOK == "4"))

Please select one of the following answers:

Option	A8	B8
	<input type="radio"/>	<input type="radio"/>

QUALITÉ D'USAGE	ESTHÉTIQUE	PRÉSENCE DE FAUNE	FORMATION COMMUNICATION	CONDITIONS DE TRAVAIL	BUDGET

OPTION A8

- Améliorée -	- Aspect maîtrisé -	- Légère hausse -	- Existantes -	- Améliorées -	- Forte hausse -

OPTION B8

- Détériorée -	- Aspect naturel -	- Forte hausse -	- Inexistantes -	- Risque de détérioration -	- Inchangé -

Please only answer this question if the following conditions are all true:
((ALEA.NAOK == "5"))

Please select one of the following answers:

Option	A8	B8
	<input type="radio"/>	<input type="radio"/>

QUALITÉ D'USAGE	ESTHÉTIQUE	PRÉSENCE DE FAUNE	FORMATION COMMUNICATION	CONDITIONS DE TRAVAIL	BUDGET

OPTION A8

- Inchangée -	- Aspect maîtrisé -	- Inchangée -	- Inexistantes -	- Risque de détérioration -	- Inchangé -

OPTION B8

- Détériorée -	- Aspect naturel -	- Légère hausse -	- Existantes -	- Inchangées -	- Forte hausse -

Please only answer this question if the following conditions are all true:
((ALEA.NAOK == "6"))

Please select one of the following answers:

Option	A8	B8
	<input type="radio"/>	<input type="radio"/>

QUALITÉ D'USAGE	ESTHÉTIQUE	PRÉSENCE DE FAUNE	FORMATION COMMUNICATION	CONDITIONS DE TRAVAIL	BUDGET

OPTION A8

- Améliorée -	- Aspect naturel -	- Légère hausse -	- Existantes -	- Risque de détérioration -	- Inchangé -

OPTION B8

- Inchangée -	- Aspect maîtrisé -	- Inchangée -	- Inexistantes -	- Inchangées -	- Légère hausse -

Please only answer this question if the following conditions are all true:
((ALEA.NAOK == "7"))

Please select one of the following answers:

Option	A8 <input type="radio"/>	B8 <input type="radio"/>
--------	--------------------------	--------------------------

QUALITÉ D'USAGE

ESTHÉTIQUE

PRÉSENCE DE FAUNE

FORMATION
COMMUNICATION

CONDITIONS
DE TRAVAIL

BUDGET



OPTION A8



OPTION B8



Please only answer this question if the following conditions are all true:

((ALEA.NAOK == "8"))

Please select one of the following answers:

Option



















A8



B8



As before, please choose between the following two different options. They are different from the options above.

	QUALITÉ D'USAGE 	ESTHÉTIQUE 	PRÉSENCE DE FAUNE 	FORMATION COMMUNICATION 	CONDITIONS DE TRAVAIL 	BUDGET 
OPTION A9	 - Améliorée -	 - Aspect maîtrisé -	 - Forte hausse -	 - Inexistantes -	 - Améliorées -	 - Légère hausse -
OPTION B9	 - Détériorée -	 - Aspect naturel -	 - Inchangée -	 - Existantes -	 - Risque de détérioration -	 - Inchangé -

Please only answer this question if the following conditions are all true:

((ALEA.NAOK == "1"))

Please select one of the following answers:

Option A9 B9

☐ ☐

QUALITÉ D'USAGE	ESTHÉTIQUE	PRÉSENCE DE FAUNE	FORMATION COMMUNICATION	CONDITIONS DE TRAVAIL	BUDGET

OPTION A9

- Détériorée -	- Aspect maîtrisé -	- Forte hausse -	- Existantes -	- Risque de détérioration -	- Légère hausse -

OPTION B9

- Inchangée -	- Aspect naturel -	- Légère hausse -	- Inexistantes -	- Inchangées -	- Inchangé -

Please only answer this question if the following conditions are all true:
((ALEA.NAOK == "2"))

Please select one of the following answers:

Option	A9	B9
	<input type="radio"/>	<input type="radio"/>

QUALITÉ D'USAGE	ESTHÉTIQUE	PRÉSENCE DE FAUNE	FORMATION COMMUNICATION	CONDITIONS DE TRAVAIL	BUDGET

OPTION A9

- Inchangée -	- Aspect naturel -	- Inchangée -	- Inexistantes -	- Risque de détérioration -	- Légère hausse -

OPTION B9

- Détériorée -	- Aspect maîtrisé -	- Forte hausse -	- Existantes -	- Améliorées -	- Inchangé -

Please only answer this question if the following conditions are all true:
((ALEA.NAOK == "3"))

Please select one of the following answers:

Option	A9	B9
	<input type="radio"/>	<input type="radio"/>

QUALITÉ D'USAGE	ESTHÉTIQUE	PRÉSENCE DE FAUNE	FORMATION COMMUNICATION	CONDITIONS DE TRAVAIL	BUDGET

OPTION A9

- Améliorée -	- Aspect naturel -	- Légère hausse -	- Inexistantes -	- Améliorées -	- Inchangé -

OPTION B9

- Détériorée -	- Aspect maîtrisé -	- Inchangée -	- Existantes -	- Inchangées -	- Forte hausse -

Please only answer this question if the following conditions are all true:
((ALEA.NAOK == "4"))

Please select one of the following answers:

Option	A9 <input type="radio"/>	B9 <input type="radio"/>
--------	--------------------------	--------------------------

QUALITÉ D'USAGE	ESTHÉTIQUE	PRÉSENCE DE FAUNE	FORMATION COMMUNICATION	CONDITIONS DE TRAVAIL	BUDGET

OPTION A9

- Inchangée -	- Aspect naturel -	- Forte hausse -	- Existantes -	- Risque de détérioration -	- Inchangé -

OPTION B9

- Détériorée -	- Aspect maîtrisé -	- Inchangée -	- Inexistantes -	- Améliorées -	- Légère hausse -

Please only answer this question if the following conditions are all true:
((ALEA.NAOK == "5"))

Please select one of the following answers:

Option	A9	B9
	<input type="radio"/>	<input type="radio"/>

QUALITÉ D'USAGE	ESTHÉTIQUE	PRÉSENCE DE FAUNE	FORMATION COMMUNICATION	CONDITIONS DE TRAVAIL	BUDGET

OPTION A9

- Détériorée -	- Aspect maîtrisé -	- Inchangée -	- Existantes -	- Améliorées -	- Inchangé -

OPTION B9

- Inchangée -	- Aspect naturel -	- Légère hausse -	- Inexistantes -	- Inchangées -	- Légère hausse -

Please only answer this question if the following conditions are all true:
((ALEA.NAOK == "6"))

Please select one of the following answers:

Option	A9	B9
	<input type="radio"/>	<input type="radio"/>

QUALITÉ D'USAGE



ESTHÉTIQUE



PRÉSENCE DE FAUNE



FORMATION
COMMUNICATION



CONDITIONS
DE TRAVAIL



BUDGET



OPTION A9



- Améliorée -



- Aspect maîtrisé -



- Légère hausse -



- Inexistantes -



- Inchangées -



- Inchangé -

OPTION B9



- Inchangée -



- Aspect naturel -



- Inchangée -



- Existantes -



- Améliorées -



- Légère hausse -

Please only answer this question if the following conditions are all true:

((ALEA.NAOK == "7"))

Please select one of the following answers:

Option

A9

☐

B9

☐

QUALITÉ D'USAGE	ESTHÉTIQUE	PRÉSENCE DE FAUNE	FORMATION COMMUNICATION	CONDITIONS DE TRAVAIL	BUDGET

OPTION A9

- Détériorée -	- Aspect naturel -	- Légère hausse -	- Inexistantes -	- Inchangées -	- Inchangé -

OPTION B9

- Inchangée -	- Aspect maîtrisé -	- Forte hausse -	- Existantes -	- Risque de détérioration -	- Forte hausse -

Please only answer this question if the following conditions are all true:
((ALEA.NAOK == "8"))

Please select one of the following answers:

Option	A9 <input type="radio"/>	B9 <input type="radio"/>
--------	--------------------------	--------------------------



14 Choice 10/10

As before, please choose between the following two different options. They are different from the options above. This is the last choice!

	QUALITÉ D'USAGE	ESTHÉTIQUE	PRÉSENCE DE FAUNE	FORMATION COMMUNICATION	CONDITIONS DE TRAVAIL	BUDGET
OPTION A10	 - Inchangée -	 - Aspect naturel -	 - Légère hausse -	 - Inexistantes -	 - Inchangées -	 - Légère hausse -
OPTION B10	 - Améliorée -	 - Aspect maîtrisé -	 - Forte hausse -	 - Existantes -	 - Risque de détérioration -	 - Inchangé -

Please only answer this question if the following conditions are all true:

((ALEA.NAOK == "1"))

Please select one of the following answers:

Option	A10	B10
	<input type="radio"/>	<input type="radio"/>

QUALITÉ D'USAGE	ESTHÉTIQUE	PRÉSENCE DE FAUNE	FORMATION COMMUNICATION	CONDITIONS DE TRAVAIL	BUDGET

OPTION A10

- Améliorée -	- Aspect naturel -	- Forte hausse -	- Inexistantes -	- Améliorées -	- Forte hausse -

OPTION B10

- Détériorée -	- Aspect maîtrisé -	- Légère hausse -	- Existantes -	- Inchangées -	- Légère hausse -

Please only answer this question if the following conditions are all true:

((ALEA.NAOK == "2"))

Please select one of the following answers:

Option	A10	B10
	<input type="radio"/>	<input type="radio"/>

QUALITÉ D'USAGE	ESTHÉTIQUE	PRÉSENCE DE FAUNE	FORMATION COMMUNICATION	CONDITIONS DE TRAVAIL	BUDGET

OPTION A10

- Améliorée -	- Aspect naturel -	- Légère hausse -	- Existantes -	- Risque de détérioration -	- Légère hausse -

OPTION B10

- Détériorée -	- Aspect naturel -	- Forte hausse -	- Existantes -	- Améliorées -	- Inchangé -

Please only answer this question if the following conditions are all true:

((ALEA.NAOK == "3"))

Please select one of the following answers:

Option	A10	B10
	<input type="radio"/>	<input type="radio"/>

QUALITÉ D'USAGE	ESTHÉTIQUE	PRÉSENCE DE FAUNE	FORMATION COMMUNICATION	CONDITIONS DE TRAVAIL	BUDGET

OPTION A10

- Détériorée -	- Aspect naturel -	- Forte hausse -	- Inexistantes -	- Améliorées -	- Légère hausse -

OPTION B10

- Inchangée -	- Aspect maîtrisé -	- Légère hausse -	- Existantes -	- Inchangées -	- Inchangé -

Please only answer this question if the following conditions are all true:

((ALEA.NAOK == "4"))

Please select one of the following answers:

Option	A10	B10
	<input type="radio"/>	<input type="radio"/>

QUALITÉ D'USAGE	ESTHÉTIQUE	PRÉSENCE DE FAUNE	FORMATION COMMUNICATION	CONDITIONS DE TRAVAIL	BUDGET

OPTION A10

- Inchangée -	- Aspect maîtrisé -	- Inchangée -	- Existantes -	- Inchangées -	- Légère hausse -

OPTION B10

- Améliorée -	- Aspect naturel -	- Légère hausse -	- Inexistantes -	- Risque de détérioration -	- Forte hausse -

Please only answer this question if the following conditions are all true:

((ALEA.NAOK == "5"))

Please select one of the following answers:

Option	A10	B10
	<input type="radio"/>	<input type="radio"/>

QUALITÉ D'USAGE	ESTHÉTIQUE	PRÉSENCE DE FAUNE	FORMATION COMMUNICATION	CONDITIONS DE TRAVAIL	BUDGET

OPTION A10

- Inchangée -	- Aspect maîtrisé -	- Forte hausse -	- Existantes -	- Risque de détérioration -	- Légère hausse -

OPTION B10

- Améliorée -	- Aspect naturel -	- Inchangée -	- Inexistantes -	- Inchangées -	- Inchangé -

Please only answer this question if the following conditions are all true:

((ALEA.NAOK == "6"))

Please select one of the following answers:

Option	A10	B10
	<input type="radio"/>	<input type="radio"/>

QUALITÉ D'USAGE	ESTHÉTIQUE	PRÉSENCE DE FAUNE	FORMATION COMMUNICATION	CONDITIONS DE TRAVAIL	BUDGET

OPTION A10

- Inchangée -	- Aspect maîtrisé -	- Forte hausse -	- Inexistantes -	- Améliorées -	- Inchangé -

OPTION B10

- Améliorée -	- Aspect naturel -	- Inchangée -	- Existantes -	- Risque de détérioration -	- Forte hausse -

Please only answer this question if the following conditions are all true:

((ALEA.NAOK == "7"))

Please select one of the following answers:

Option	A10	B10
	<input type="radio"/>	<input type="radio"/>

QUALITÉ D'USAGE	ESTHÉTIQUE	PRÉSENCE DE FAUNE	FORMATION COMMUNICATION	CONDITIONS DE TRAVAIL	BUDGET

OPTION A10

- Inchangée -	- Aspect naturel -	- Légère hausse -	- Existantes -	- Améliorées -	- Forte hausse -

OPTION B10

- Détériorée -	- Aspect maîtrisé -	- Forte hausse -	- Inexistantes -	- Risque de détérioration -	- Inchangé -

Please only answer this question if the following conditions are all true:
((ALEA.NAOK == "8"))

Please select one of the following answers:

Option	A10	B10
	<input type="radio"/>	<input type="radio"/>



15 Help us better understand your choices

Did you have any problems choosing between options A and B? *

Please select one of the following answers:

- ☐ Yes
☐ No

Please write a comment about your choices below:

Did you find the description of the characteristics clear enough?*

Please select one of the following answers:

- ☐ Yes
☐ No

Which characteristic/s caused you problems? (Several answers are possible)*

Please only answer this question if the following conditions are all true:

The answer to the question '124 [ATTACLCOMP]' was 'No'(Did you find the description of the characteristics clear enough?*)

Please choose all the answers that correspond

- ☐ Functional qualities
☐ Aesthetics / beauty
☐ Fauna abundance
☐ Training, communication
☐ Working conditions
☐ Budget

Did you systematically ignore any characteristic/s when choosing between options A and B? If you did, which ones? (Several answers are possible) *

Please choose all the answers that correspond

- ☐ I didn't ignore any characteristics
☐ Functional qualities
☐ Aesthetics / beauty
☐ Fauna abundance
☐ Training, communication
☐ Working conditions
☐ Budget

Did any characteristic/s systematically determine your choice? If so, which ones? (Several answers are possible) *

Please choose all the answers that correspond

- ☐ I systematically took all of the characteristics into account
☐ Functional qualities
☐ Aesthetics / beauty
☐ Fauna abundance
☐ Training, communication
☐ Working conditions
☐ Budget

16 Your ideal option

We would now like to know what your ideal option would be, i.e. one that combines your preferred characteristics.

This combination doesn't have to be realistic.

QUALITÉ D'USAGE

Please select one of the following answers:



ESTHÉTIQUE

Please select one of the following answers:



PRÉSENCE DE FAUNE

Please select one of the following answers:



FORMATION COMMUNICATION

Please select one of the following answers:

- Ideal option
- | | |
|---|--|
|  |  |
| - Existantes - | - Inexistantes - |
| <input type="radio"/> | <input type="radio"/> |

CONDITIONS DE TRAVAIL

Please select one of the following answers:

- Ideal option
- | | | |
|--|--|--|
|  |  |  |
| - Améliorées - | - Inchangées - | - Risque de détérioration - |
| <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |

BUDGET

Please select one of the following answers:

- Ideal option
- | | | |
|---|---|---|
|  |  |  |
| - Forte hausse - | - Légère hausse - | - Inchangé - |
| <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |

17 Pesticide-free management in your community

[Questions only for the citizens]

When did your community change to “zero pesticide” management? *

Please select one of the following answers:

- ☐ At least 3 years ago
- ☐ Between 3 and 10 years ago
- ☐ More than 10 years ago
- ☐ I don't know

Do you think you are able to spot the difference between a green space managed with pesticides and a green space managed without pesticides?*

Please select one of the following answers:

- ☐ Yes
- ☐ No

How? *

Please only answer this question if the following conditions are all true:

The answer to the question '163 [DINSTEVPSP]' was 'yes' (Do you feel capable to spot the difference between a green space managed with pesticides and a green space managed without pesticides?*)

[Questions only for local elected officials]

Is the management of green spaces part of the remit of the group of municipalities you have been elected to represent? *

Answer this question only if the following conditions are met:

The answer was 'Community Councillor' or 'Municipal Councillor' or 'Mayor' to question '4 [ELUmandate]'. (What is your mandate?)

Please select one of the following answers:

- ☐ Yes
- ☐ No

Who is mainly responsible for maintaining the green spaces in your community? *

Answer this question only if the following conditions are met:

The answer was 'Community Councillor' or 'Municipal Councillor' or 'Mayor' to question '4 [ELUmandate]'. (What is your mandate?)

Please select an answer below

Please select only one of the following proposals:

- ☐ Local authority (municipal staff)
- ☐ Inter-municipal organisation
- ☐ Private company

How many agents are assigned to the maintenance of green spaces in your community?

Answer this question only if the following conditions are met:

The answer was 'Community Councillor' or 'Councillor' or 'Mayor' to question '4 [ELUmandate]'. (What is your mandate?)

Please write your answer(s) here:

Number of people

FTE

All professions combined. According to the information in your possession, specify in number of persons or full-time equivalents (FTE)

How much public green space is maintained by your community?

Answer this question only if the following conditions are met:

The answer was 'Community Councillor' or 'City Councillor' or 'Mayor' to question '4 [ELUmandate]'. (What is your mandate?)

Only numbers can be entered in this field.

Your answer must be at least 0

Please write your answer here:

hectares (ha)

How would you describe the proportion of your local body's budget dedicated to green spaces? *

Answer this question only if the following conditions are met:

The answer was 'Community Councillor' or 'Municipal Councillor' or 'Mayor' to question '4 [ELUmandate]'. (What is your mandate?)

Please select an answer below

Please select only one of the following proposals:

- ☐ Very Insufficient
- ☐ Rather Insufficient
- ☐ Rather Comfortable
- ☐ Very Comfortable

In what year did your community make a commitment to "zero pesticide use"?*

Answer this question only if the following conditions are met:

The answer was 'Community Councillor' or 'Municipal Councillor' or 'Mayor' to question '4 [ELUmandate]'. (What is your mandate?)

Your answer must be at least 1960

Only an integer can be entered in this field.

Please write your answer here:

What do you think of these proposals? *

Answer this question only if the following conditions are met:

((ELUmandat 1.NAOK == "Y" or ELUmandat 2.NAOK == "Y" or ELUmandat 3.NAOK == "Y"))

Choose the appropriate answer for each item:

	Strongly agree	Somewhat agree	Somewhat disagree	Strongly disagree	Don't know
The move to "zero pesticide" in the management of green spaces in your community is well perceived by residents.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
The transition to "zero pesticide" has been well supported by the green space maintenance service.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Do you have any comments on these proposals? *

Answer this question only if the following conditions are met:

((ELUmandat 1.NAOK == "Y" or ELUmandat 2.NAOK == "Y" or ELUmandat 3.NAOK == "Y"))

Please write your answers here:

Resident's perception

Support from the green spaces department

Has your community ever received complaints or appeals from users or maintenance workers following the switch to "zero pesticide"? *

Answer this question only if the following conditions are met:

((ELUmandat 1.NAOK == "Y" or ELUmandat 2.NAOK == "Y" or ELUmandat 3.NAOK == "Y"))

Please select an answer below

Please select only one of the following proposals:

- ☐ Yes
☐ No
☐ I don't know

What are these complaints/appeals? *

Answer this question only if the following conditions are met:

The answer was 'Yes' to question '143 [PLAINPASZRPH]' (Has your community ever received complaints or appeals from users or cleaners following the switch to 'zero pesticide'?).

Please write your answer here:

What response(s) has (have) been given to these complaints/remedies? *

Answer this question only if the following conditions are met:

The answer was 'Yes' to question '143 [PLAINPASZRPH]' (Has your community ever received complaints or appeals from users or

cleaners following the switch to 'zero pesticide'?).

Please write your answer here:

More generally, what are the main difficulties encountered by your community in relation to pesticide-free management of green spaces? *

Answer this question only if the following conditions are met:

((ELUmandat 1.NAOK == "Y" or ELUmandat 2.NAOK == "Y" or ELUmandat 3.NAOK == "Y"))

Please write your answer here:

[Questions only for the UGSs managers]

Who is mainly responsible for maintaining the green spaces in your community? *

Answer this question only if the following conditions are met:

The answer was 'Manager of public green spaces' to question '3 [IDENTREP]'. (Who are you?) and the answer was 'A public authority' to question '11 [EMPLOYER]'. (Who is your employer?)

Please select an answer below

Please select only one of the following proposals:

- ☐ Local authority (municipal staff)
- ☐ Inter-municipal organisation
- ☐ Private company

How many agents are assigned to the maintenance of green spaces in your community? *

Answer this question only if the following conditions are met:

The answer was 'Manager of public green spaces' to question '3 [IDENTREP]'. (Who are you?) and the answer was 'A public authority' to question '11 [EMPLOYER]'. (Who is your employer?)

Please write your answer(s) here:

Number of people

FTE

All professions combined. According to the information in your possession, specify in number of persons or full-time equivalents (FTE)

How much public green space is maintained by your community? *

Answer this question only if the following conditions are met:

The answer was 'Manager of public green spaces' to question '3 [IDENTREP]'. (Who are you?) and the answer was 'A public authority' to question '11 [EMPLOYER]'. (Who is your employer?)

Only numbers can be entered in this field.

Your answer must be at least 0

Please write your answer here:

hectares (ha)

How would you describe the proportion of your local body's budget dedicated to green spaces? *

Answer this question only if the following conditions are met:

The answer was 'Manager of public green spaces' to question '3 [IDENTREP]'. (Who are you?) and the answer was 'A public authority' to question '11 [EMPLOYER]'. (Who is your employer?)

Please select only one of the following proposals:

- ☐ Very Insufficient
- ☐ Rather Insufficient
- ☐ Rather Comfortable
- ☐ Very Comfortable

In what year did your community make a commitment to "zero pesticide use"?*

Answer this question only if the following conditions are met:

The answer was 'Manager of public green spaces' to question '3 [IDENTREP]'. (Who are you?) and the answer was 'A public authority' to question '11 [EMPLOYER]'. (Who is your employer?)

Your answer must be at least 1960

Only an integer can be entered in this field.

Please write your answer here:

What do you think of these proposals? *

Answer this question only if the following conditions are met:

The answer was 'Manager of public green spaces' to question '3 [IDENTREP]'. (Who are you?) and the answer was 'A public authority' to question '11 [EMPLOYER]'. (Who is your employer?)

Choose the appropriate answer for each item:

	Strongly agree	Somewhat agree	Somewhat disagree	Strongly disagree	Don't know
The move to "zero pesticide" in the management of green spaces in your community is well perceived by residents.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
The transition to "zero pesticide" has been supported by the elected representatives of your local community (budget, communication, etc.).	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Do you have any comments on these proposals? *

Answer this question only if the following conditions are met:

The answer was 'Manager of public green spaces' to question '3 [IDENTREP]'. (Who are you?) and the answer was 'A public authority' to question '11 [EMPLOYER]'. (Who is your employer?)

Please write your answers here:

Resident's perception

Support from the green spaces department

More generally, what are the main difficulties encountered by your community in relation to pesticide-free management of green spaces? *

Answer this question only if the following conditions are met:

The answer was 'Manager of public green spaces' to question '3 [IDENTREP]'. (Who are you?) and The answer was 'A public authority' to question '11 [EMPLOYER]'. (Who is your employer?)

Please write your answer here:

Has your community ever received complaints or appeals from users or maintenance workers following the switch to "zero pesticide"?

Answer this question only if the following conditions are met:

The answer was 'Manager of public green spaces' to question '3 [IDENTREP]'. (Who are you?) and The answer was 'A public authority' to question '11 [EMPLOYER]'. (Who is your employer?)

Please select only one of the following proposals:

- ☐ Yes
☐ No
☐ I don't know

What are these complaints/appeals? *

Answer this question only if the following conditions are met:

The answer was 'Yes' to question '158 [PLRCEVGES]' (Have you ever received complaints or appeals from users or maintenance workers following the changeover to 'zero pesticide'?)

Please write your answer here:

What response(s) has (have) been given to these complaints/remedies? *

Answer this question only if the following conditions are met:

The answer was 'Yes' to question '158 [PLRCEVGES]' (Have you ever received complaints or appeals from users or maintenance workers following the changeover to 'zero pesticide'?)

Please write your answer here:

18 Your profile

[Questions only for the citizens]

Are you? *

Please select one of the following answers:

- ☐ Female
- ☐ Male

How old are you? *

Please select one of the following answers:

- ☐ Under 18
- ☐ Between 18 and 24
- ☐ Between 25 and 34
- ☐ Between 35 and 49
- ☐ Between 50 and 64
- ☐ Between 65 and 79
- ☐ Over 80

What is your level of education?*

Please select one of the following answers:

- ☐ No qualifications or entry level (CEP (France))
- ☐ General certificate of secondary education (GCSE/ GNVQ (UK) / 9th grade (US) / Brevet des collèges (BEPC)
- ☐ BTEC First Diploma (Business and Technology Education Council), GNVQ foundation (NVQ Level 1) CAP, BEP (UK) / BEP, CAP (France)
- ☐ A Levels (UK) / High-School Diploma/Degree (US) / Bac (France)
- ☐ BTEC HND (Higher National Diploma), Diploma of Higher Education, BA Degree (Bachelor of Arts), BSC Degree (Bachelor of Science), (UK) / 12th Grade, Associate's Degree (US) / 1er cycle (BTS, DUT, DEUG, Licence, or equivalent) (France)
- ☐ MA (Master of Arts) / MSC (Master of Science) Master 1 or Master 2, Phd (Doctor of Philosophy) (UK and US) / 2ème, 3ème cycle or grandes écoles (Maîtrise, Master, DESS, DEA, Ingénieur, Doctorat) (France)
- ☐ Other

What is your professional situation today? *

Please select one of the following answers:

- ☐ Farmer
- ☐ Self-employed, shopkeeper, or entrepreneur
- ☐ Manager or academic profession
- ☐ Employee
- ☐ Worker
- ☐ Job seeker
- ☐ Student
- ☐ Retired
- ☐ Other out of work (housewife/ husband, handicapped...)
- ☐ Other

Do you think that you are better informed than most people about the topic of this survey? (Due to your profession, your studies, or the profession activity of another member of your household)*

Please select one of the following answers:

- ☐ Yes
☐ No
☐ I don't know

On average, your monthly household income net before tax is: *

Please select one of the following answers:

- ☐ Less than €1,000
☐ Between €1,000 and €1,999
☐ Between €2,000 and €2,999
☐ Between €3,000 and €3,999
☐ Between €4,000 and €4,999
☐ Between €5,000 and €5,999
☐ Between €6,000 and €7,999
☐ Between €8,000 and €9,999
☐ More than €10,000
☐ I don't know / I don't want to answer

Your income and that of your partner if you are living with a partner, or just your income if you are alone, or your income and that of your parents if you live with at least one parent. The income should include any social benefits.

What do green spaces represent for you personally? (In a few words or phrases) *

Please write your answer here:

[Questions only for local elected officials]

Are you? *

Answer this question only if the following conditions are met:

((ELUmandat 1.NAOK == "Y" or ELUmandat 2.NAOK == "Y" or ELUmandat 3.NAOK == "Y"))

Please select an answer below

Please select only one of the following proposals:

- ☐ Female
☐ Male

What is your level of education? *

Answer this question only if the following conditions are met:

((ELUmandat 1.NAOK == "Y" or ELUmandat 2.NAOK == "Y" or ELUmandat 3.NAOK == "Y"))

Please select an answer below:

- ☐ No diploma, entry level
- ☐ Level 1 qualification (GCSE)
- ☐ Level 2 qualification
- ☐ Level 3 qualification (A level, Baccalaureate or equivalent)
- ☐ Level 4 or 5 qualification (BTEC Higher National Diploma)
- ☐ Level 6 qualification (Bachelor's degrees)
- ☐ Level 7 or 8 qualification (Master's degree, Doctorate or equivalent)
- ☐ Other

What do green spaces mean to you personally? (in a few words or sentences)

*

Answer this question only if the following conditions are met:

((ELUmandat 1.NAOK == "Y" or ELUmandat 2.NAOK == "Y" or ELUmandat 3.NAOK == "Y"))

Please write your answer here:

[Questions only for UGSs managers]

Rk: due to an error in coding with did not collect information on managers' profile (age, education, gender...)

What do green spaces mean to you personally? *

Answer this question only if the following conditions are met:

The answer was 'Manager of public green spaces' to question '3 [IDENTREP]'. (Who are you?) and The answer was 'A public authority' to question '11 [EMPLOYER]'. (Who is your employer?)

Please write your answer here:

19 Help us contact you later on

The results of this survey will be published online on the websites [Plante & Cité](#) and [Ecophyto Pro](#).

Would you like to be informed of this publication?*

Please select one of the following answers:

- ☐ Yes
☐ No

Would you like to be included in our prize draw? (For the opportunity of winning a gift card worth 40 euros) *

Please select one of the following answers:

- ☐ Yes
☐ No

Please enter your email below

Please only answer this question if the following conditions are all true:

----- Scenario 1 -----

The answer to the question '172 [RECEPRESENQT]' was 'yes' (The results of this survey will be published online on the websites Plante & Cité and Ecophyto Pro. Would you like to be informed of this publication?)

----- or Scenario 2 -----

The answer to the question '173 [PARTIRAGSOR]' was 'yes' Would you like to be included in our prize draw? (For the chance of winning a gift card worth 40 euros).

Please write your answer here:

20 Do you have any comments?

If you would like to make a comment about this survey, please do so in the space below:

Please write your answer here:

Thank you for answering this survey. Your answers have been saved.

Please share this survey! The more participants, the more precise and useful the results are.



[Share](#)



[Tweet](#)



How do we use the data collected?

The data collected are analyzed anonymously and are used purely for scientific purposes. No data will be provided to the State or any third party outside the University.

The results of the survey will be published and available to the public in June 2018 on the following websites: Plante & Cité; EcophytoPro. This publication will be transmitted to the Agence Française pour la Biodiversité in conjunction with the project Ecophyto II.

[Send your survey.](#)

Thank you.