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„Achieving Transformative Change in Food Consumption in Austria: Opportunities, Obstacles and Influencing Factors“

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1. Abstract and Zusammenfassung

1.1. Abstract

Current agriculture reduces global biodiversity by converting natural habitats into intensely managed systems, and by releasing pollutants, including greenhouse gases. According to the IUCN Red List, the expansion and intensification of agricultural activity is endangering 5,407 species - i.e. 62% of those Red-listed as Threatened or Near-Threatened. Since the demand for certain food products determines what is grown, consumer behaviour is key to prevent biodiversity loss. Unfortunately, the current food production, food supply and food consumption systems do not align with present and future human needs. To address the needs of a richer and more urbanised growing world population, while preserving natural and productive resources, production and consumption of food have to undergo a radical transformational change. It requires the rethinking of how food is produced, processed, distributed and consumed.

Due to the importance of such a transformative change in society, I examine in this master thesis aspects of food consumption in Austria. In particular, I aim to capture how different segments of the Austrian society relate to food consumption issues. I have used an online survey focused on identifying barriers that prevent the population from consuming more sustainably. The essential idea was to discover these obstacles and figure out how to overcome them. For this purpose, respondents were split into two groups, according to their affinity for nature conservation topics (i.e. one group with a close affinity to such topics and another group without a close affinity).

In total, I received 320 completed responses: 264 participants described themselves as being concerned with environmental and conservation issues (called henceforth “nature conservation-affine”), while 56 participants identified themselves as distant to nature conservation (called henceforth “nature conservation-distant”). In general, the majority of respondents were concerned about aspects such as animal welfare or regionality when buying food. Likewise, most respondents generally did believe in the advantages of organic products over conventional products and the idea of labelling food with a biodiversity footprint was supported by the majority (80.5%). Split into the two above mentioned groups, however, large differences emerged for most replies. For example, respondents from the "nature conservation-distant" group had greater doubts about the advantages of organic food compared to conventional food and also stated to a large extent (44.6%) that they would "rather not" include a biodiversity footprint in their purchasing decision. In relation to reduced meat consumption, it is also worth mentioning that the strongest arguments against the consumption of meat substitutes were their artificial production, followed by high price, which was chosen more often by the “nature conservation-distant” group (28.6%).

This thesis provides important aspects for the promotion of sustainable food consumption and shows that affinity to conservation issues has an influence on the food consumption of the Austrian respondents. It can therefore be assumed that those individuals who are more closely involved with nature conservation issues are also more likely to be aware of how their diet affects the environment.

This means that a key goal here is to further raise awareness about how different diets and food consumption habits have an impact on the environment, especially to those who have not yet dealt with it. Since not everyone has come into contact with conservation issues professionally or through education, it is essential to close this gap.

1.2. Zusammenfassung

Die derzeitige Landwirtschaft reduziert die globale Biodiversität, indem sie natürliche Lebensräume in intensiv bewirtschaftete Systeme umwandelt und Schadstoffe, einschließlich Treibhausgasen, freisetzt. Laut der Roten Liste der IUCN gefährdet die Ausweitung und Intensivierung der landwirtschaftlichen Tätigkeit 5.407 Arten - 62% derjenigen, die als gefährdet oder potenziell gefährdet auf der Roten Liste stehen. Da die Nachfrage nach bestimmten Nahrungsmitteln festlegt, was angebaut wird, ist das Verbraucherverhalten der Schlüssel, um den Verlust der biologischen Vielfalt zu verhindern. Leider stimmen die gegenwärtigen Lebensmittelproduktions-, Lebensmittelversorgungs- und Lebensmittelverbrauchssysteme nicht mit den gegenwärtigen und zukünftigen menschlichen Bedürfnissen überein. Um den Bedürfnissen einer reicheren und stärker urbanisierten Weltbevölkerung gerecht zu werden und gleichzeitig die natürlichen und produktiven Ressourcen zu erhalten, müssen Produktion und Konsum von Nahrungsmitteln einem radikalen Wandel unterzogen werden. Es erfordert ein Umdenken darüber, wie Lebensmittel produziert, verarbeitet, verteilt und konsumiert werden.

Aufgrund der Wichtigkeit eines solchen transformativen Wandels der Gesellschaft untersuche ich in dieser Masterarbeit Aspekte des Lebensmittelkonsums in Österreich. Insbesondere möchte ich erfassen, wie verschiedene Segmente der österreichischen Gesellschaft mit Fragen des Lebensmittelkonsums umgehen. Ich habe eine Online-Umfrage verwendet, bei der es darum ging, Barrieren zu identifizieren, die die Bevölkerung daran hindern, nachhaltiger zu konsumieren. Die wesentliche Idee war, diese Hindernisse zu identifizieren und herauszufinden, wie man sie überwindet. Dazu wurden die Befragten entsprechend ihrer Affinität zu Naturschutzthemen in zwei Gruppen eingeteilt (d. h. eine Gruppe mit einer engen Affinität zu solchen Themen und eine andere Gruppe ohne eine solche Affinität).

Insgesamt erhielt ich 320 ausgefüllte Antworten: 264 Teilnehmer gaben an, dass sie sich mit Umwelt- und Naturschutzthemen beschäftigen (im Folgenden „naturschutz-affin“ genannt), während sich 56 Teilnehmer als distanziert zu diesen Themen bezeichneten (im Folgenden „naturschutz-fern“ genannt). Generell machte sich die Mehrheit der Befragten beim Lebensmitteleinkauf Gedanken über Aspekte wie Tierschutz oder Regionalität. Ebenso glaubten die meisten Befragten im Allgemeinen an die Vorteile von Bio-Produkten gegenüber konventionellen Produkten und die Idee, Lebensmittel mit einem Biodiversitäts-Fußabdruck zu kennzeichnen, wurde von der Mehrheit (80,5%) unterstützt. Aufgeteilt in die beiden oben genannten Gruppen ergaben sich jedoch bei den meisten Antworten große Unterschiede. Befragte aus der „naturschutz-fernen“ Gruppe hatten beispielsweise größere Zweifel an den Vorteilen von Bio-Lebensmitteln gegenüber konventionellen Lebensmitteln und gaben auch weitgehend (44,6%) an, dass sie „eher keinen“ Biodiversitäts-Fußabdruck in ihre Kaufentscheidung

einbeziehen würden. In Bezug auf den reduzierten Fleischkonsum ist auch nennenswert, dass die beiden Gründe, die am meisten gegen den Verzehr von Fleischersatzprodukten sprachen, deren künstliche Produktion waren, gefolgt vom hohen Preis, der von der „naturschutz-fernen“ Gruppe häufiger gewählt wurde (28,6%).

Diese Arbeit liefert wichtige Aspekte zur Förderung eines nachhaltigen Lebensmittelkonsums und zeigt, dass die Affinität zu Naturschutzfragen einen Einfluss auf den Lebensmittelkonsum der österreichischen Befragten hat. Es ist daher davon auszugehen, dass diejenigen, die sich intensiver mit Naturschutzthemen beschäftigen, sich auch der Auswirkungen ihrer Ernährung auf die Umwelt eher bewusst sind. Ein zentrales Ziel ist es daher, das Bewusstsein für die Auswirkungen unterschiedlicher Ernährungs- und Lebensmittelkonsumgewohnheiten auf die Umwelt weiter zu schärfen, insbesondere für diejenigen, die sich noch nicht damit auseinandergesetzt haben. Da sich nicht jeder beruflich oder durch die Ausbildung mit Naturschutzthemen beschäftigt, ist es wichtig, dass diese Lücke geschlossen wird.

3. Introduction

The loss of biodiversity is one of the most critical current environmental problems. Species extinction rates are several orders of magnitude higher than the pre-human background rate, with hundreds of anthropogenic vertebrate extinctions documented in prehistoric and historic times, and justifying the claim, that the Earth's biota is entering a sixth "mass extinction" (Ceballos et al., 2015). With regards to human impacts, agriculture is the largest contributor to biodiversity loss with expanding influence due to changing consumption patterns and growing populations: *"Agricultural expansion is the most widespread form of land-use change, with over one third of the terrestrial land surface being used for cropping or animal husbandry. This expansion, alongside a doubling of urban area since 1992 and an unprecedented expansion of infrastructure linked to growing population and consumption, has come mostly at the expense of forests (largely old-growth tropical forests), wetlands and grasslands" (IPBES, 2020).*

Current agriculture reduces biodiversity by converting natural habitats into intensely managed systems, and by releasing pollutants, including greenhouse gases (Dudley and Alexander, 2017). Traditional agroecosystems with a rich genetic diversity of different varieties have been replaced by thousands of hectares planted often with the same hybrid. The expansion and intensification of agricultural activity is endangering 5,407 species - 62% of those Red-listed by the IUCN as Threatened or Near-Threatened (Maxwell et al., 2016).

Since the demand for certain food products determines what is grown, consumer behaviour is key to prevent biodiversity loss. Unfortunately, the present food production, food supply, and food consumption systems do not align with present and future human needs. They generate large greenhouse gas emissions and lead to alterations of ecological problems such as biodiversity loss, deforestation, soil erosion, chemical contamination and water shortage (Lairon, 2012). In order to meet the needs of a richer and more urbanised growing world population, food production and consumption must undergo a radical transformational change. This requires the rethinking how food is produced, processed, distributed and consumed (Ferranti et al., 2018).

Wilting et al. (2017), for example, showed that the production of animal protein, owing to the area demand of cropland for feed, has a particularly high impact on biodiversity. Consequently, shifting diets to reduce high levels of meat consumption is a key leverage point for tackling biodiversity loss and climate change. Globally, about 30 % of the current biodiversity loss and 14.5 % of greenhouse gas emissions are due to animal husbandry (Stoll-Kleemann and Schmidt, 2017). "*By adopting a vegetarian diet worldwide, the projected need for cropland in 2050 could be reduced by 600 million ha*" *(Stoll-Kleemann and Schmidt, 2017).*

A shift to sustainable diets would trigger upstream effects from food consumption into processing chains and food production. The definition of sustainable nutrition in this thesis is based on a study by WWF Austria (2015), in which the following five factors are specified and argued: Firstly, vegetables, grains and fruits should be given priority, as 2/3 more meat is eaten than what is considered healthy (Figure

1). At the same time, meat and dairy products cause around 2/3 of direct greenhouse gas emissions. Secondly, organic products should be preferred to conventional products, as organic farming is more resource-efficient and environmentally friendly compared to conventional farming. The other factors, which were not examined in this thesis, are: avoidance of food waste, consuming seasonal and regional products, and a short transport route from the point of sale to home.

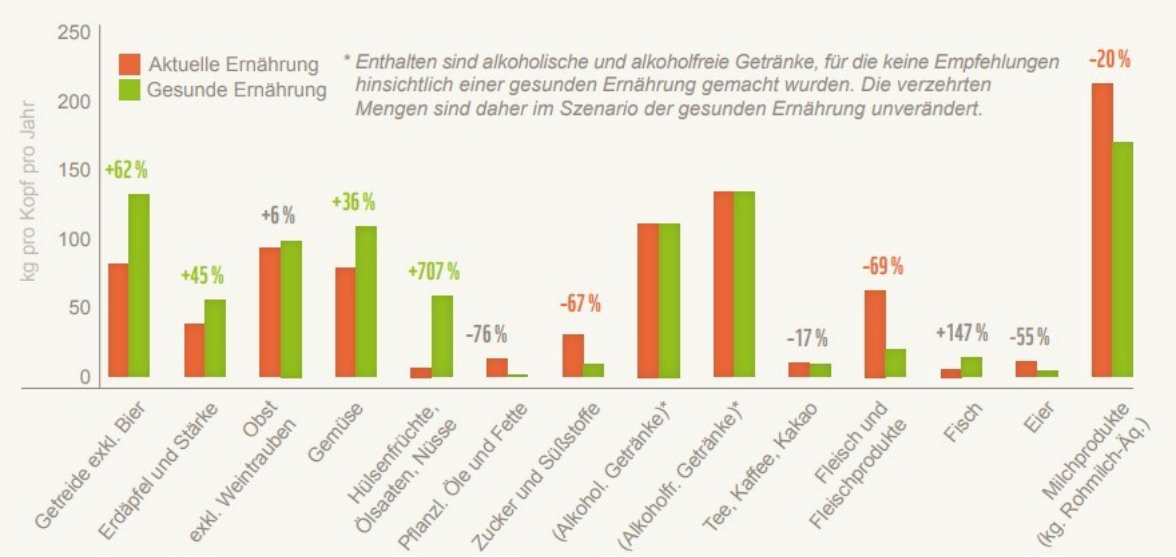

Figure 1: Comparison between the current Austrian diet and the desirable healthy, sustainable diet. Illustriation by WWF Austria (https://www.wwf.at/wp-content/uploads/2021/07/Achtung-Heiss-und-fettig-%E2%80%93-Klima-und-Ernaehrung-in-Oesterreich.pdf).

"Improving nutrition through sustainable diets can reduce the ecological impact of unhealthy and unsustainable food choices, resulting in sustainable gains for both the environment and public health. […] Moving towards sustainable diets is central to the Earth's future to tackle the pressing challenges that have taken us to the edge of, and beyond, the planetary limit, and to connect the nutritional well-being of all to the sustainability of the planet" (Ferranti et al., 2018). The challenge of sustainability is, therefore, "[…] *a fundamental re-orientation of society and the economy, not the implementation of some technical fixes" (Ferranti et al., 2018).*

This thesis aims to address opportunities and challenges for a "transformative change" of the Austrian population in terms of food consumption. To support the current literature on transformative change, this master's thesis not only wants to capture how Austrian respondents relate to food consumption issues. It goes beyond that by asking specific questions about the current barriers preventing the population from consuming more sustainably. The essential idea was to identify these obstacles and figure out how to overcome them. Since a difference in food consumption between various population groups was found in the literature (e.g. Haubach et al., 2013 and Friedl et al., 2006), it was also assumed in this work that the barriers would not be the same for all population groups. Therefore, the results were not only considered for the Austrian respondents as a whole, but also split according to different socio-demographic aspects. This should lay a foundation for ideas that can help drive transformative change - in general or adapted to specific population groups.

With this in mind, the objective of the study is accompanied by the following research questions:

- What does the food consumption behaviour in Austria look like and what are the main factors that determine it?
- What are the main obstacles encountered by the Austrian respondents limiting progress towards sustainable food consumption?
- What are the main courses of action to enable a transformative change in food consumption?

4. Materials and Methods

a. Survey Design

I designed and applied an online survey to obtain answers on the mentioned research question. The survey was divided into five thematic blocks and contained a total of 23 questions (Appendix 1). The five thematic blocks were i) food consumption (n = 4 questions), ii) nutrition (n = 4 questions), iii) environmental relevance of food consumption (n = 6 questions), iv) consumption behaviour during the corona crisis (n = 3 questions) and v) personal data (n = 6 questions). The design of the questions varied, mostly using a 4-level Likert scale (for n = 8 questions), reflecting respondents' opinions about certain statements.

I divided the respondents into two groups that were created by distinguishing what was indicated in the last question of the survey (E6: “Are you concerned with environmental protection or nature conservation?”). The possible answers were: “Yes, I am involved in this professionally”, “Yes, my education is related to this”, “Yes, I deal with this in my free time”, “Yes, I take environmental protection and nature conservation into account in my everyday life”, “No, I do not deal with this”. The first four answer options were combined into one group and contrasted with the group that had nothing to do with these topics.

b. Sampling Design

The non-probability method of self-selective convenience sampling (Bethlehem and Biffignandi, 2011; Höbart et al., 2020) was applied. This means that my survey was made available via the Internet and those who had access to the Internet and decided to participate in the survey were considered participants. Although it must be mentioned that this type of sample selection has many limitations and therefore the sample must be considered not representative of the population, the method had many advantages for this work. First, Etikan et al. (2016) highlighted that the convenience sampling method is particularly useful when randomisation is impossible, e.g. because the sample is very large - as would be the case with the total population of Austria. This means that this method can be useful when the researcher has limited resources, such as time and manpower.

My sample didn’t have to be representative to make comparisons between population groups. For the designated goal of this thesis, convenience sampling was the fastest, easiest and cheapest method (Bethlehem and Biffignandi, 2011). Because it was distributed via preselected media channels (e.g. Facebook posting, e-mail, etc.), the approach was partly self-selective. The collected personal data of the participants were essential for interpreting the results and for identifying potential biases in participation.

c. Scope and Questions of the Survey

Food Consumption

Firstly, I wanted to find out which aspects generally play a role in food product selection and shop preferences. The four questions were dealing with frequency of food consumption, location, and factors influencing consumption behaviour.

Nutrition

Secondly, I investigated which diet the interviewees pursue and whether they would be willing to change it. The four questions dealt with diet per se, and in particular with the consumption of meat. The survey included a question on whether meat substitutes were known and whether consumers would be interested in them.

Environmental Relevance of Food

Thirdly, it was important to know whether the respondents tended to buy organic food or conventional products. The six questions were mainly dealing with the reasons for the consumer's decision. Furthermore, they were asked whether they would be interested in information on a biodiversity footprint of the products and how best to present such information.

Personal Data

Lastly, a distinction between the respondents had to be made. The six questions were required to obtain data for analysing to which extent person-specific data influences consumer behaviour. They utilised the parameters age, education, origin, gender and interest in and attitude towards "nature conservation or environmental protection".

d. Survey Execution

For the online survey, the software Limesurvey 3.21.1 was used. It was installed on a server provided by the BOKU university (https://survey.boku.ac.at). The survey was conducted in German language because the main target group was people living in Austria. The survey was open from December 14th 2020 to February 9th 2021. The following media have been used for distributing the survey: Facebook (https://www.facebook.com/), WhatsApp and e-mail. As the convenience sampling method was used, it was possible to choose specific channels of these media to get enough participants of the different stakeholder groups. On Facebook, for example, the link to the survey was posted on my profile and in several groups such as "Billa Österreich", "Penny" etc. Only a few participants were contacted directly via e-mail or chat message.

e. Data Analysis

Data Preparation

In total, 417 participants started the survey, of which 320 (76.7%) fully completed it. Non-completed surveys (n =97) were excluded from the analysis. Data was extracted from Limesurvey at the end of the survey and could be transferred directly into SPSS Statistics 26 Inc. (IBM) and Excel. However, some

of the variables had to be recoded into numerical variables for further analysis. A few values were missing related to the fact that respondents could skip questions based on the answer given to a previous question. So, some values were empty because the respondents had never seen the corresponding question. It was therefore necessary to ensure that the sample size was different from the original one.

Descriptive Analysis

At the beginning, I set up tables for all questions in Excel in order to calculate the occurrence percentage of each answer. I then created pie- and stacked bar charts for every question. These first analyses pointed out differences in the answers given and enabled me to filter the main results of interest, which I then used to conduct statistical tests in SPSS.

Statistical Analysis

I statistically investigated differences between the following population groups: (i) those who were professionally or recreationally involved in nature conservation or environmental issues and (ii) those who had nothing to do with these issues. Statistical analyses to calculate effect sizes and probabilities of statistically significant differences among treatments were conducted by appropriate statistical tests for independent samples: The chi-squared-test, for analysing two nominally scaled variables based on the observed frequencies of their characteristic expressions (Pearson, 1900), and the Mann-Whitney U test, to find out whether the central tendencies of two independent samples are different (Mann and Whitney, 1947). For this purpose, I used SPSS Statistics 26 Inc. (IBM).

5. Results

a. Distribution of Participants Across Stakeholder Groups

Participants of the survey (n =320) were mostly female (70.4%) with a primary residence in municipalities having populations greater than 100,000 (50.6%). Age groups were well distributed across respondents, with the largest proportion (34.0%) between 20 and 29 years old.

Furthermore, of the 320 respondents who provided full replies, 264 participants (82.5%) classified themselves as concerned with environmental and conservation issues. These respondents specified that they (i) were professionally or recreationally involved in nature conservation or environmental issues and thus can be considered as nature conservation-affine (NA). On the other hand, 56 participants (17.5%) were nature conservation-distant (ND), i.e. (ii) they did not concern themselves with nature conservation at all.

I visually inspected differences between other population groups, such as comparing male/female or urban/rural, but differences, if they occurred at all, were marginal and neglectable.

b. Survey Results

i. General Results

The first question inquired about the place where the respondents' usually buy their groceries. As three response options per person were given, a total number of 624 answers were obtained from the 320 respondents. Of these 624 answers, 313 fell under the category “In supermarkets and/or discount stores” (50.2% of the answers, 96.6% of the participants) and 116 fell under the category “In organic and/or health food stores” (18.6% of the answers, 35.8% of the participants) (Figure 2). Eighty-six respondents also indicated that they buy at least part of their food at markets (13.8% of the answers, 26.5% of the participants) and 58 respondents indicated that they buy directly from farmers (9.3% of the answers, 17.9% of the participants). All categories that had to do with orders at delivery services, as well as the category “other”, were very low - with percentages below 2.3% of the answers and below 4.3% of the participants. The category “By order from online grocery stores” was the lowest with two mentions and thus a percentage of 0.3% of the answers and 0.6% of the participants.

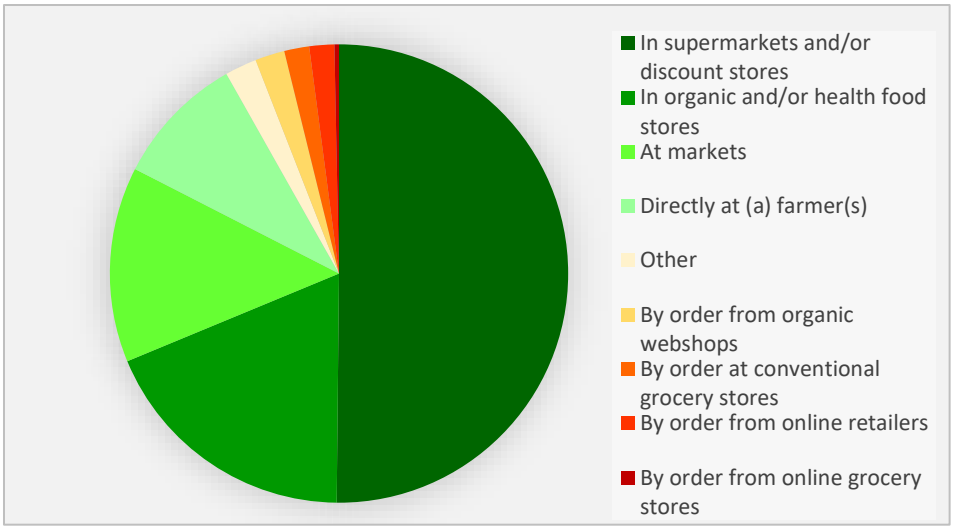

Figure 2: Respondents' statements about where they usually buy their groceries. Data in % of responses. N = 624. Original question: "Where do you usually buy your groceries?"

ii. Results for the Total Sample

Aspects important to the respondents when buying food were "is produced in Austria" and "takes animal welfare into account" (share of the answer options "Very Important" 53.7% and "Important" 38.0% for the answer "is produced in Austria"; 63.0% "Very Important" and 29.9% "Important" for the answer "takes animal welfare into account", respectively). "Avoids negative environmental impact", and "has environmental-friendly packaging" were also important aspects, while slightly less importance was given to the answer "bears a quality seal" (Figure 3).

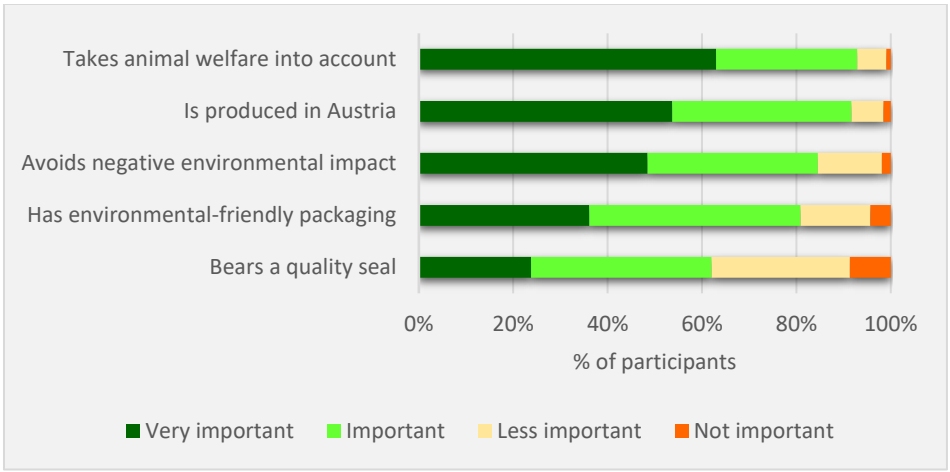

Figure 3: Respondents' statements about the importance of certain aspects when buying food. Data in % of participants. N = 320. Original question: "How important is it to you that what you eat every day...?".

When asked about their diet, the largest proportion of respondents (85.3%) stated to eat meat; respectively 48.5% ate meat several times a week and 9.6% ate meat even daily (Figure 4). Only a small percentage indicated that they did not eat meat: 6.2% chose the option "Vegan" and 4.3% the option "Vegetarian". The lowest proportion was achieved by the option "Pescetarian" with 3.4% and the option "Other" with 0.9%.

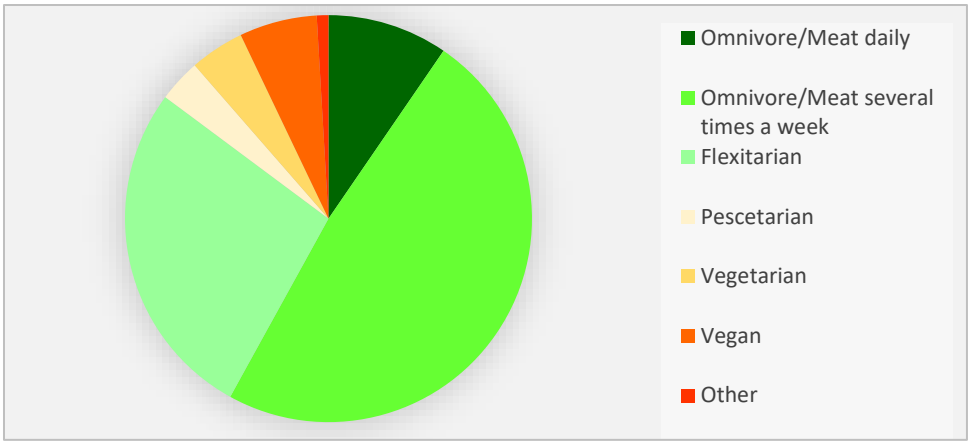

Figure 4: The information provided by the respondents about their diets. Data in % of participants. N = 320. Original Question:" Which statement best applies to your diet?".

A reduction in meat consumption (according to 279 respondents who specified that they ate meat) could mainly be achieved "if there were better meatless alternatives" (16.8%), and "if the packaging indicated the associated animal suffering" (16.0%) (Figure 5). The options that were least attractive were "if meat cost more" (11.4%) and "if the packaging indicated the associated loss of biodiversity" (11.1%). It is also important to note that the option "I do not want to reduce my meat consumption" was selected by 75 of the 279 respondents (14.8%).

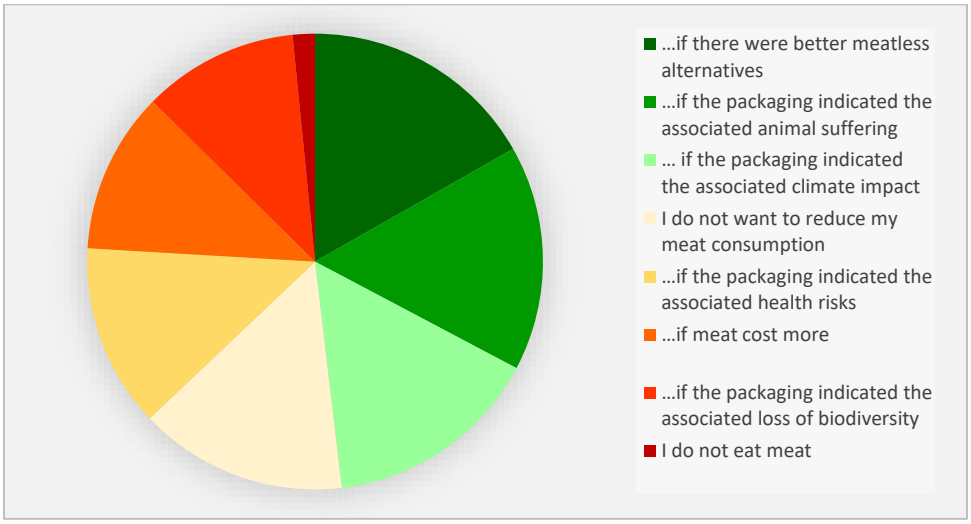

Figure 5: Respondents' statements about their motivations for reducing their meat consumption. Data in % of responses. N = 507. Original question: "The following are statements regarding reduction of meat consumption. I would reduce my meat consumption…".

The two factors that most discouraged respondents from eating more meat substitutes were "their artificial production" (35.8% chose "Applies very much" and 28.7% chose "More likely to apply") and "not a substitute for the original" (36.7% chose "Applies very much" and 19.4% chose "More likely to apply"). In third place came the answer "their bad taste" followed by the answer "their high price" (Figure 6). The lowest score was achieved by the answers "never thought about trying them", and "intolerance".

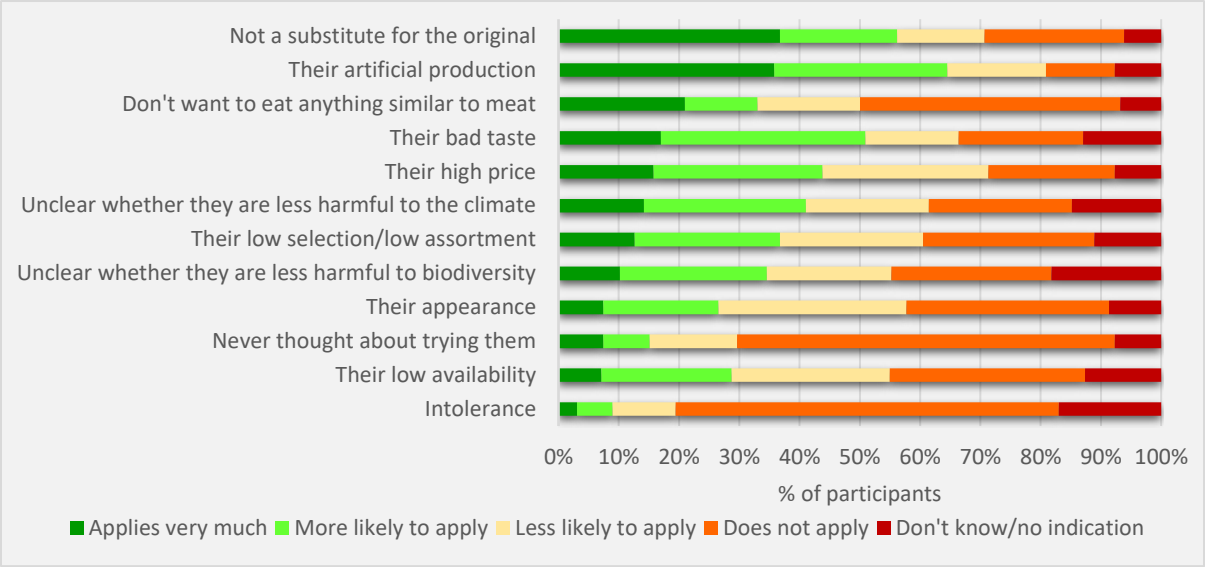

Figure 6: Respondents' statements about their barriers to eating more meat substitutes. Data in % of participants. N = 320. Original question: "What most discourages you from consuming (more) meat substitutes?".

Three-hundred and one respondents, all except those who previously stated that they always buy organic products, were asked what discourages their consumption of organic foods. The reason most people listed was:" There is a wider choice in conventional products" with 17.3% for "Applies very much" and 45.1% for "More likely to apply", followed by the two answers "The conventional product is cheaper" (19.1% for "Applies very much" and 29.3% for "More likely to apply") and "The organic product is not available where I shop" (15.1% for "Applies very much" and 30.3% for "More likely to apply"). The statement that received the least agreement was: "I generally doubt the advantages of organic food compared to conventional products" with 4.0% for "Applies very much" and 8.0% for "More likely to apply" (Figure 7).

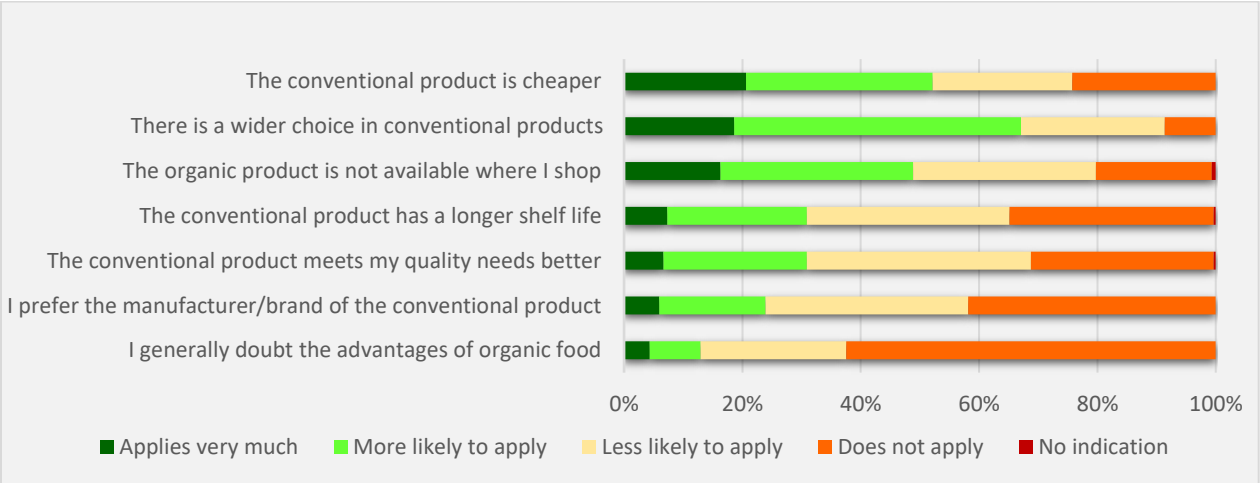

Figure 7: The reasons why respondents decide against organic food. Data in % of participants. N = 301. Original question:" If you choose not to eat organic food, what are your reasons?".

The possibility of labelling food with a biodiversity footprint seems to be supported by most respondents, with 58.3% stating that they would "perhaps consider" it and 22.2% even "fully consider" it. On the other hand, 14.5% would "rather not consider" the biodiversity footprint and 4.9% would "not consider it at all" (Figure 8).

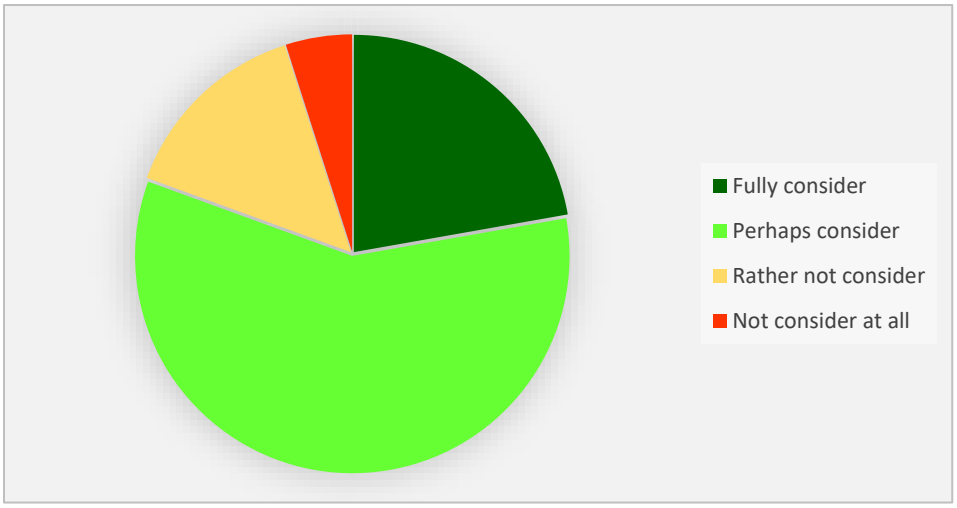

Figure 8: Respondents' statements about whether they would include the biodiversity footprint in their purchasing decision. Data in % of participants. N = 320. Original question: "There are currently considerations to label certain foods in the store with a biodiversity footprint. Would you include the biodiversity footprint of a food in your purchase decision? I would…".

285 persons were asked how such a biodiversity footprint should look like to be appealing for them (the question was not presented to respondents who previously indicated they would "not consider biodiversity at all"), allowing for multiple answers. In the 542 answers received, two forms of presentation received the most agreement: "key figures" was selected 156 times, followed by "certification", which was selected 155 times. The other answer options were selected much less often and "Biodiversity footprint should not be presented separately, but should be integrated into other information" with 23 selections and "Other" with 9 selections received the lowest approval (Figure 9).

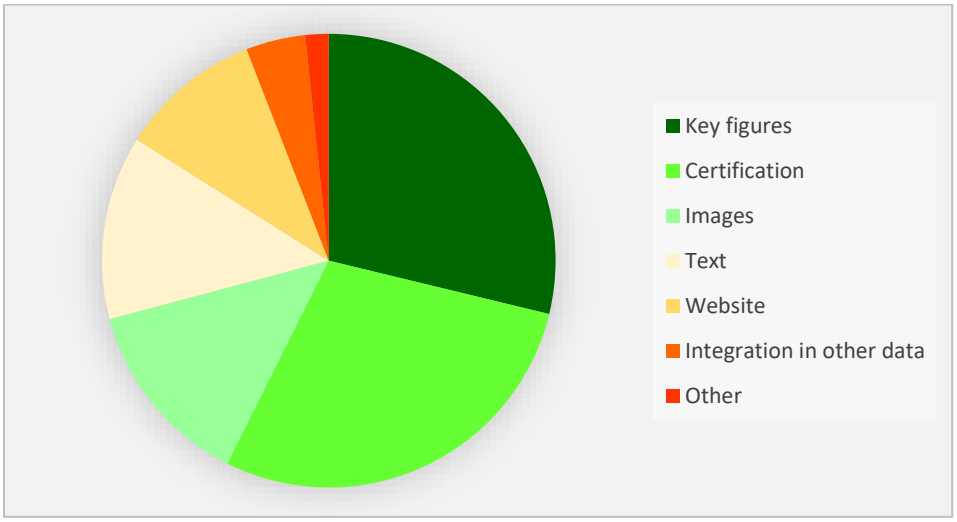

Figure 9: Respondents' statements about how this biodiversity footprint should be presented. Data in % of responses. N = 542. Original question: "How do you think this biodiversity footprint should be presented?".

iii. Comparison Among Groups

On the subject of reducing individual meat consumption, all the selected answer options were relatively equal across the groups (proportion in percent between 10.7 and 16.9; Figure 10). The answer option "I would reduce my meat consumption if the associated climate impact were pointed out on the packaging", achieved the highest value within the "nature conservation-affine" group (16.9%), but at the same time the lowest value for the group "nature conservation-distant" (7.2%). This leads to a significant difference between the two groups (Chi-square test: $x^2(1) = 6.619$; $p = 0.01$). In contrast, the highest

value for the group “nature conservation-distant” was for the answer option “I do not want to reduce my meat consumption” (22.9%). This option was also one that showed a significant difference (Chi-square test: $x^2(1) = 4.457$; $p = 0.035$), because the group “nature conservation-affine” only achieved 13.1% here. It is worth mentioning that the answer option “I would reduce my meat consumption if there were better meat-free alternatives” was selected by a share of at least 16% for both groups.

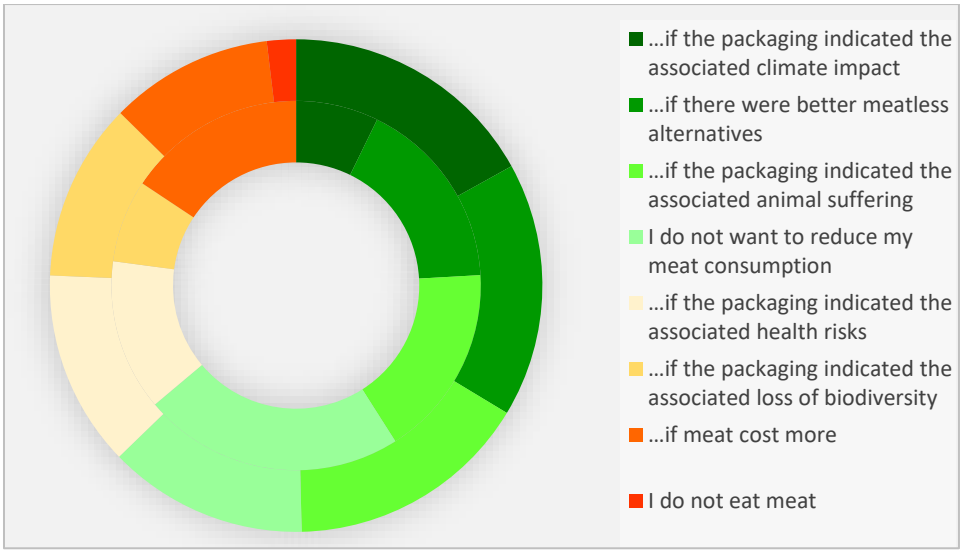

Figure 10: Respondents' statements about their motivations for reducing their meat consumption, split into both survey groups. Data in % of responses. The results for NA (N = 419) are presented by the outer ring and ND (N = 83) by the inner ring. Original question: “The following are statements regarding the reduction of meat consumption. I would reduce my meat consumption…”.

The question why respondents do not buy (more) meat substitutes again highlighted the differences between the groups (Figure 11). The option “Because it is unclear whether they are less harmful to biodiversity than meat” exhibited an especially strong deviation between groups (Mann-Whitney U test: $z = -2.45$; $p = 0.014$), with a total of 37.1% of the NA group selecting the response options “Applies very much” and “More likely to apply”, compared to only 23.2% of the ND group. In contrast, no significant differences were found between groups for the option “Because it is unclear whether they are less harmful to the climate than meat” (Mann-Whitney U test: $z = -0.50$; $p > 0.05$). It is also worth noting that there were significant differences among the two groups regarding the option “Their high price”: Only 12.5% of the NA group selected the “Applies very much” category, compared to 28.6% of the ND group (Mann-Whitney U test: $z = -2.57$; $p = 0.010$). In addition to these factors, the following answer options were also selected significantly more often by the ND group: “Never thought about trying them” (Mann-Whitney U test: $z = -4.04$; $p = < 0.001$), “Their appearance” (Mann-Whitney U test: $z = -3.68$; $p = < 0.001$), “Their bad taste” (Mann-Whitney U test: $z = -3.29$; $p = 0.010$) and “Not a substitute for the original” (Mann-Whitney U test: $z = -2.10$; $p = 0.036$).

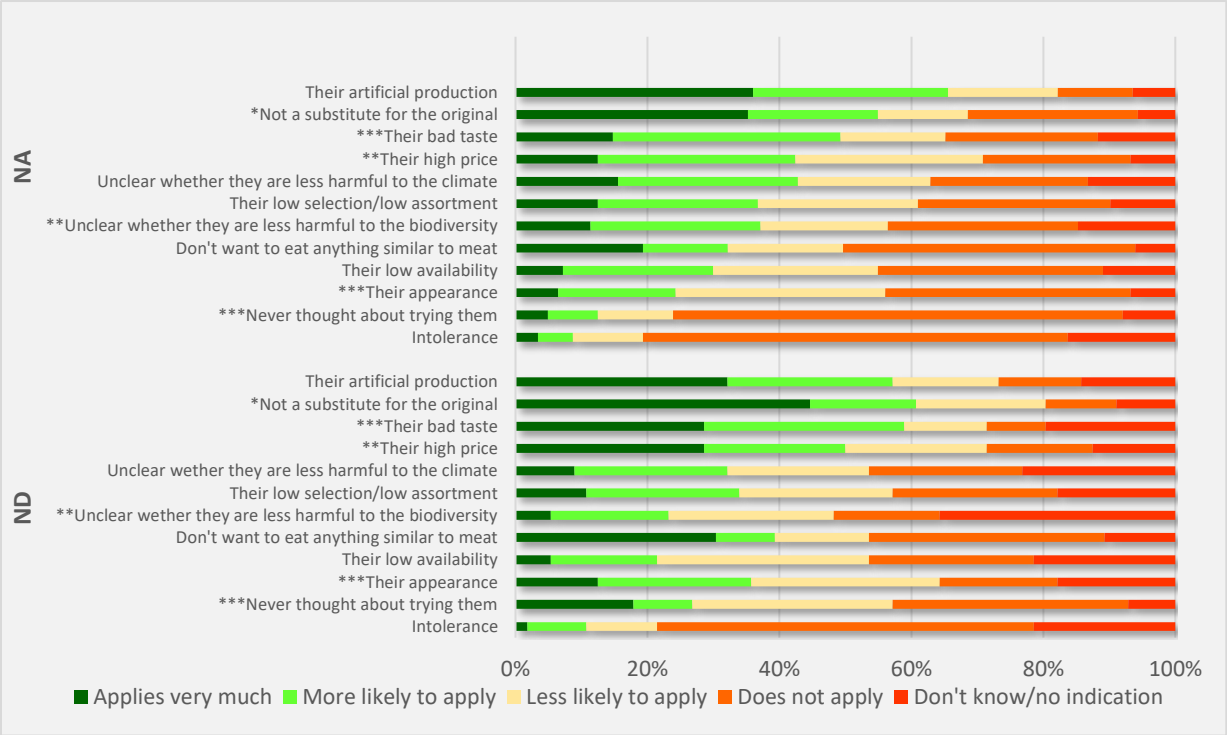

Figure 11: Respondents' statements about their barriers to eating more meat substitutes, split into both survey groups. Data in % of participants. The results for NA (N = 264) are presented on the upper side and ND (N = 56) below. Significant differences: p < = 0.05*, p < = 0.01 and p < = 0.001***. Original question: "What most discourages you from consuming (more) meat substitutes?".**

Differences between the two groups also occurred for the question what discourages respondents from buying organic food (Figure 12). Both groups selected "Applies very much" and "More likely to apply" answers more often for the option "There is a wider choice in the conventional products" (NA: 15.9%, 42.4%; ND: 23.2%, 60.7%), whereas the ND group also selected these answers more frequently for the option "The conventional product is cheaper" (30.4%, 41.1%). This was not the case for the NA group; these individuals used the mentioned response options significantly less often and had their focus on the selection of "Less likely to apply" and "Does not apply" (Mann-Whitney U test: z = -3.103; p = 0.002). In the NA group, the answer option that gained the second most agreement was: "The organic product is not available where I shop" ("Applies very much": 16.3%, "More likely to apply": 60.7%). This again differs significantly from the ND group where less agreement was obtained (Mann-Whitney U test: z = 2.528; p = 0.011). The response option "I generally doubt the advantages of organic food over conventional products" received the least agreement from both groups (NA: "Applies very much" = 1.9%, "More likely to apply" = 6.4%; ND: "Applies very much" = 14.3%, "More likely to apply" = 16.1%), but even here differences between the two groups could still be detected, with the group "nature conservation-distant" stating agreement more often (Mann-Whitney U test: z = -3.749; p = < 0.001).

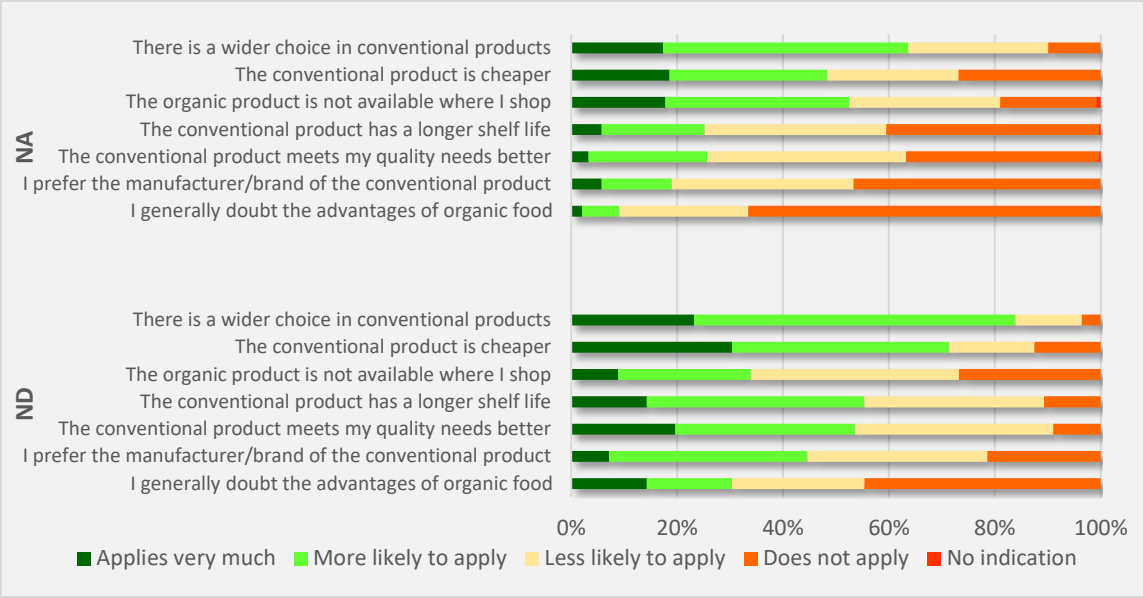

Figure 12: The reasons of the respondents to decide against buying organic food, split into both survey groups. Data in % of participants. The results for NA (N = 242) are presented on the upper side and ND (N = 56) below. Original question:" If you choose not to eat organic food, what are your reasons?".

When asked about the possibility of a biodiversity footprint, a very different picture emerged between the groups (Figure 13). The NA group gave strong agreement to including this biodiversity footprint ("Fully consider" = 25.0%, "Perhaps consider" = 63.3%), while the ND group significantly more often (Mann-Whitney U test: z = 6.353; p = < 0.001) chose the other answer options ("Rather not consider" = 44.6%, "Not consider at all" = 10.7%). A very differentiated opinion emerged even within the group of "nature conservation-distant" participants, as 25 respondents from this group were positively inclined towards the biodiversity footprint while 31 persons would rather reject it.

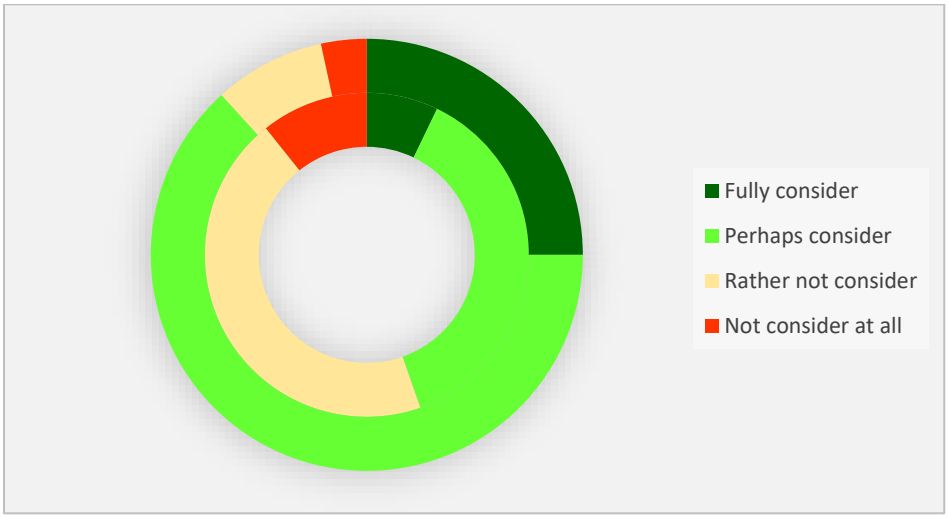

Figure 13: Respondents' statements about whether they would include the biodiversity footprint in their purchasing decision, split into both survey groups. Data in % of participants. The results for NA (N = 264) are presented by the outer ring and ND (N = 56) by the inner ring. Original question: "There are currently considerations to label certain foods in the store with a biodiversity footprint. Would you include the biodiversity footprint of a food in your purchase decision? I would…".

Regarding the form of presentation, the answer "certification" was selected very often by both the NA group (47.7%) and the ND group (48.2%) (Figure 14). For the group of the "nature conservation-distant", this answer was chosen the most often, while this was the case with the answer "key figures" (52.7%)

for the group of the “nature conservation-affine”. In the ND group, however, only 28.6% selected this answer, which corresponds to a significant difference between the groups (Chi-square test: $x^2(1) = 10.726$; $p = 0.001$). Significant differences were also found for the answers “illustrations” (Chi-square test: $x^2(1) = 5.175$; $p = 0.023$) and “website” (Chi-square test: $x^2(1) = 4.812$; $p = 0.028$), both of which were selected more often by the NA group (24.6% and 19.3%) than by the ND group (10.7% and 7.1%). Both groups selected the answer “Biodiversity footprint should not be presented separately, but should be integrated into other data” in very small proportions (NA: 6.4%, ND: 10.7%), and no significant difference was found among the groups here (Chi-square test: $x^2(1) = 1.266$; $p > 0.05$).

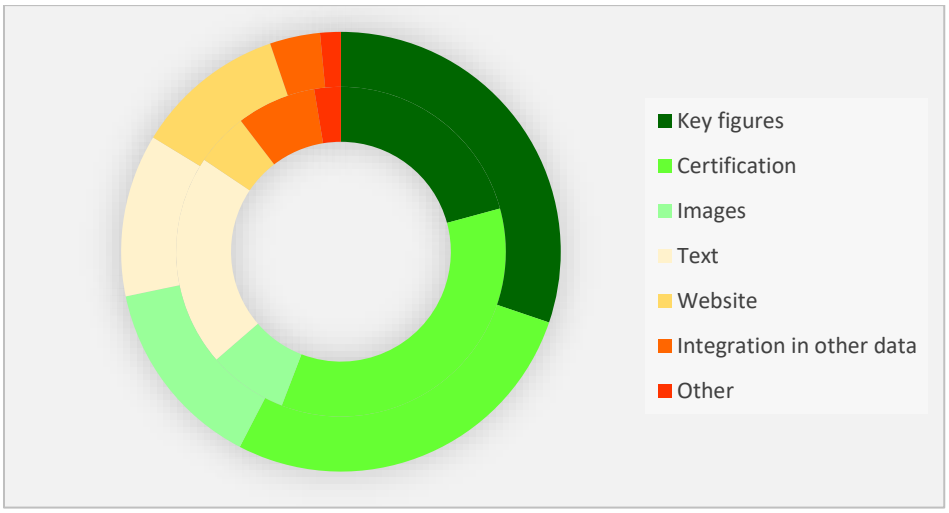

Figure 14: Respondents' statements about how this biodiversity footprint should be presented, split into both survey groups. Data in % of responses. The results for NA (N = 460) are presented by the outer ring and ND (N = 77) by the inner ring. Original question: “How do you think this biodiversity footprint should be presented?”.

6. Discussion

a. Food Consumption Patterns in Austria

i. Food Consumption Behaviour

Most of the respondents of this survey buy from conventional supermarkets or discounters. Furthermore, the majority of respondents stated that aspects such as environmental protection and animal welfare were of importance when it comes to food consumption. Animal welfare was even found to be the answer choice that was selected the most often. Nevertheless, only very few respondents indicated that they would be willing to reduce their meat consumption due to animal suffering.

ii. Nutrition

According to both a study (April 2018) by “meinungsraum.at” and a study from AMA (September 2019), the proportion of vegetarians and vegans in the Austrian population is below 10% respectively. At 4.3% vegetarians and 6.2% vegans, my results are comparable to those of AMA, where a share of 4% for vegetarians and 2% for vegans was achieved. Slight differences might be caused by the high proportion of respondents in this sample who are aware of nature conservation issues. This is consistent with the findings of Iseli (2018), who suggested a relationship between knowledge of the effects of dietary behaviour and dietary pattern. It can therefore be assumed that those individuals who are more closely involved in nature conservation issues are also more likely to be aware of how their diet affects the environment. Similarly, Heil et al. (2014) found that knowledge about climate change is related to reduced meat consumption. On the other hand, the same work also showed that health concerns, such as the information about the higher risk of heart and cancer diseases due to high levels of meat consumption, lead to a much stronger reduction in consumption.

b. Obstacles to Transformative Change in Food Consumption

i. Labelling of Food

Only few respondents consider it unimportant whether a food product is endowed with a label or not. For example, 14.5% indicated that they would “rather not consider” the biodiversity footprint and 4.9% would “not consider it at all” in their purchasing decisions. This is consistent with findings from Germany (e.g. Albersmeier et al., 2009 and Weinrich et al., 2015) and seems to relate to a mistrust of consumers to such labels (Karsten & Belz, 2006 and Köhler, 2008). However, this mistrust has decreased over time, as PwC's consumer survey (2021) has revealed. Among other things, German consumers were asked about the importance of quality labels on food and it was shown that trust in quality labels has increased by a total of 11% compared to 2017. Along with trust, the proportion for which quality labels are taken into account in the purchase decision rose by 12%.

Since in my study, the rejection of labels was particularly high in the group of "nature conservation-distant", the concept of the biodiversity footprint was either not fully understood, or the respondents

simply didn't care whether a label was available or not. This is in line with the findings of Weinrich et al. (2015), showing that trust in a label as well as willingness to buy increases after participants in a survey have received more information about a label. In addition, Perrini et al. (2010) mentioned that "[…] *labels are the primary source of consumer trust […], but these labels must be noticed and understood before consumers will actively seek them out."*

In addition to the credibility of such labels, the form of presentation is also relevant to consumers' purchasing decisions. The two most popular forms of presentation for a biodiversity footprint were a certification and key figures, which is not consistent with other studies such as Weinrich et al. (2015), who found that respondents mostly wanted text as the form of presentation. For the majority of the interviewees in my study, it was important that the biodiversity footprint should be presented independently and not be integrated into a more generic environmental parameter. This is not in line with the findings from Rupprecht et al. (2020), who argue that there are many different labels on the market, which makes it difficult for consumers to recognise which information can be trusted and which not. In the work program of ÖSTRAT (2011) the importance of quality seals and labels as quality assurance instruments are highlighted and work is being carried out to ensure that these do not become purely marketing instruments.

ii. Accessibility of Food

Accessibility can be identified as the second major barrier to Austrians' consumption behaviour. "Accessibility" here refers to both the availability of certain foods at the location of grocery shopping, but also the sufficient assortment of products.

- Meat Substitutes

Meat substitutes are a topic of particular relevance that has gained public interest in recent years. A share of 23% of the respondents in this study consider plant-based substitutes a good alternative for meat products. Nevertheless, the majority of the respondents indicated that they would consider a reduction in meat consumption if better meatless alternatives were available. This also coincides with the statement that the current products cannot be seen as a substitute for the original (meat). According to the trend report "Meat of the Future" from the German Federal Environmental Agency (2019), the amount of 1.2 million Google searches in 2018 indicates an increase in the relevance of meat substitutes. This trend report also investigated the acceptance of meat substitutes with similar results as in this study.

The participants perception that there are not enough suitable alternatives to meat products can be explained by the fact that meat substitutes have only recently come to the fore. This goes along with another major obstacle, which is the artificial production of those substitutes. This was often cited as a barrier by the respondents in this study. Köster (2019) reports on consumer concerns regarding the artificiality of such substitute products. However, there is consensus in several studies (see e.g. Chemnitz & Wenz, 2021 or Köster, 2019) that such meat substitutes are rapidly becoming more popular.

Accordingly, it seems to be a matter of time until such products are fully mature and sufficient alternatives will exist.

- Organic Products

Regarding the purchase of organic products, respondents selected two major reasons for deciding against buying these: The first reason was their unavailability at the place of grocery shopping. Since the majority of respondents indicated that they purchase at least part of their food in supermarkets, it can be assumed that the supply in supermarkets is regarded as too low. The related second reason was the wider choice in conventional products. These results do not appear in many other studies. Instead, the reasons which were most often mentioned against a purchase decision of organic food are (1) their high cost (see e.g. Kiy & Terlau, 2015; Richter, 2003; Koerber & Kretschmer, 2001) and (2) consumer's awareness and motivation (Lehner et al., 2019).

iii. Price of Food

Monetary aspects in the form of food prices (see also Glanz et al., 1998) as well as in the form of the income of the respondents (Friedl et al., 2006) are an essential influencing factor in food consumption. This is in line with my results, whereby especially the "nature conservation-distant" group in comparison to the "nature conservation-affine" group stated that organic products are often too expensive. However, several studies have shown that food consumption is a complex issue and cannot be explained by aspects of money alone. For example, Buder & Hamm (2011) showed that classic variables such as income hardly play a role for the purchasing behaviour of organic food. This is supported by Visschers et al. (2009), who found that both the perceived price and household income do not influence the purchase of organic food. My results also correspond to this, as only 18% of the respondents stated that they would reduce their meat consumption if meat would cost more.

iv. Education of Consumers

In terms of food consumption, I found major differences between the NA group and the ND group (for example in their consideration of a biodiversity footprint during a purchase and in their willingness to reduce their meat consumption due to climate change impacts). These results support findings from pre-existing literature, which suggest that there is a strong relationship between environmental attitudes and food consumption. According to these findings, consumers with a high awareness of environmental risks are more likely to change their behaviour to protect the environment (Haubach et al., 2013). Visschers et al. (2009) found that attitudes toward environmental protection were actually the strongest predictor of environmentally friendly food purchasing behaviour. A weak positive correlation between purchasing behaviour and environmental knowledge was also shown. Compared to other factors such as income, age and gender having significant effects on people's diet, Pack (2006) stated that "*the educational level is seen as the strongest determinant, because education is a precondition for the understanding of health and environmental-related information.*"

It is also often discussed that there is a connection between the aspects of income, education and nature conservation-friendly behaviour. Since in this thesis the ND group stated significantly more often that

they would not buy organic products due to their high prices, such interrelatedness of factors can also be assumed. For example, Schäufele & Hamm (2019) indicated that positive attitudes towards topics such as "environmental protection" and "sustainable consumption" lead to more organic products being purchased. Likewise, it was shown that buyers of organic food were more highly educated and received a higher income. Another example are the findings of Stolz et al. (2017): respondents with a higher level of education more often indicated that they buy organic products, income groups differ significantly from each other, and the contribution to environmental protection was seen as an essential aspect when buying organic food. These findings can be seen as an explanation for my results.

c. Representativeness of This Survey

This survey was based on the convenience sampling method, meaning it was mainly distributed via Facebook and was therefore accessible to everyone who found the link and wanted to take part. Convenience sampling can be understood as nonrandom sampling, where parts of the population that meet a certain criterion - in this case accessibility to the internet, use of social media and interest in the topic - are included in the study in higher proportions than others.

7. Recommendations for Fields of Action

If sustainable food consumption for the Austrian population is to be achieved, the behavioural decisions of consumers have to be changed. In general, various policy instruments can influence consumer's decisions, roughly divided into three groups: economic, regulatory and social instruments. Depending on the goal of the policy instruments and the target population group, different instruments can be used (Pack, 2006). Based on my results, three essential instruments can be identified.

First of all, public education seems to be of great importance. This is reflected especially in the answers given by the ND group, since a majority of them stated that they would definitely not want to reduce meat consumption. This suggest that it makes a big difference to what extent consumers are familiar with the issues of nature and environmental protection and that individuals need to have adequate knowledge. This goal could be reached with campaigns promoting a more environmentally sustainable diet and informing consumers about the environmental impacts of their food consumption patterns. Two things must be taken into account here: (1) Most effective forms of information can vary depending on who should be addressed (e.g. different media) and (2) a large part of the Austrian population cannot be reached with nature conservation arguments. Within this study, the ND group indicated that only 11% of them would be willing to reduce meat consumption due to climate change mitigation and biodiversity loss issues. This is consistent with the findings of Sanchez-Sabate & Sabaté (2019) that the population of western countries is not willing to give up meat due to environmental reasons. For this target group, it would be crucial to raise their awareness on how functional ecosystems also benefit their own wellbeing, e.g. via ecosystem services.

To further reduce meat consumption, a raise in awareness on health aspects regarding meat consumption should also be achieved. In line with this, it is important for meat substitutes to counteract their rather weak image by highlighting the advantages of these products over meat consumption. It could be essential here to provide more obvious mentions of both the aspects of health promotion and environmental and animal welfare. The same applies when comparing conventional and organic products. In its work program (2011), ÖSTRAT is already heading this way, for example by further expanding a web portal for sustainable consumption, "bewusstkaufen.at", as an information- and networking platform in order to offer consumers a more complete overview of the product range and to ensure a continuous raise in awareness for sustainable consumption.

When it comes to public education, it is important to consider that an attitude-behaviour gap can often occur. This means that people do not always act the same way in everyday life as they claim to in surveys. There are several reasons for this gap between attitude and behaviour. Farjam et al. (2019) mention, for instance, that the effect of environmental attitude on contributions, while positive in principle, depends on the cost of such behaviour. Further underlying factors are the subjective norm and utilitarian value of the respondents (Park & Lin, 2020) and the connection with other individual inconsistencies such as health concerns (Redondo & Puelles, 2017). *"[…] reinforcing environmental concern through communication and education is only going to have a meaningful effect in basic, low-cost situations while considerably stronger incentives […] or structural changes able to lower the cost of the most*

effective actions […] are required otherwise" (Farjam et al., 2019). Furthermore, there is a risk of not realising the true nature of this problem. For example, if ignorance and lack of experience are recognised as the core of the problem, decisions can be made to remedy such partial deficiencies, but the problem is not completely resolved (Refondo & Puelles, 2017). "*That said, raising concern may still have indirect positive effects, for instance by increasing support for more ambitious environmental policies" (Farjam et al., 2019)*, but other instruments are also required.

Secondly, it is essential to make product information available to consumers via labels. The lack of trust in those labels was recognised as a major problem. To increase trust, it is important that labels are certified from independent institutions (Karsten & Belz, 2006). Jahn et al. (2005) state that trust in quality labels heavily depends on the type of external audits and their implementation. In contrast to so-called self-proclaimed labels, it is important that independent labels are verified by institutions such as NGOs. Because of this independent approval, the ability to lead to higher credibility results in a competitive advantage. Rupprecht et al. (2020) also found that so-called "expert labels" are rated as very trustworthy by the population: "*Public trust in scientific experts to provide assurance for food safety and quality is strong, indicating a demand for this kind of expert-sourced information in the food marketplace"*. In summary, "independent third parties" - whether in the form of scientific experts or institutions - could provide a trustworthy source and ensure that confidence in seals increases (Rupprecht et al., 2020).

Thirdly, it is desirable to increase the supply of sustainable products. For example, a large proportion of the respondents stated that they would be willing to consume meat-free alternatives, but that their artificial production (e.g. many additives) would discourage them. Since such products are only just emerging, great potential is seen here for expanding the variety of products. According to a study by the German Environment Agency (2019), however, Europe is currently already the largest market for meat substitute products. In this study, it is mentioned that this has been particularly evident since 2010 in the increased number of product launches, with around 470 new products being brought onto the market in Europe in 2016. Furthermore, the consumption of meat substitute products in Germany is increasing, but it is only a small part of the market volume of the meat industry: in 2017 it was estimated at 6%.

Because the respondents stated that organic products were not available at their preferred place of grocery shopping, it would be an important step to increase the variety of organic products by simply adding more of them to the assortment. However, it must be mentioned that both retail food stores and discounters have greatly increased their range of organic products in recent years. For instance, the managing director of an Austrian discounter announced in an interview that the organic range would be doubled to 140 products by spring 2021 (APA, 2021). At the same time, RollAMA Marketing GesmbH (2020) announced in a press release that the organic share of groceries in the food retail sector has been increasing continuously for years and reached a double-digit value for the first time in June 2020 with ten percent. Milk and eggs account for the highest organic share in Austrian food retailers.

In summary, it can be said that there is a tendency towards sustainable consumption in the Austrian population, but this is still blocked by certain barriers. To overcome them, it requires a combination of different instruments, as one alone won't be enough to support the transformative change.

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b. Software

LimeSurvey GmbH: Limesurvey 3.21.1. https://www.limesurvey.org
IBM: IBM SPSS Statistics 26

c. Figures

9. Appendix

Appendix 1: Survey (Original Version)

Lime Survey PDF export of the original survey.

Sehr geehrte TeilnehmerInnen! Vielen Dank für Ihr Interesse an der Umfrage, die im Rahmen meiner Masterarbeit erstellt wurde. Im Folgenden werden Ihnen nun ein paar Fragen zu Ihrem üblichen Lebensmitteleinkauf und Ihrer Ernährungsweise gestellt. Dabei gibt es kein richtig oder falsch, aber nur die vollständige und eigenständige Beantwortung gewährleistet eine hohe Datenqualität.

Ich danke Ihnen vielmals, dass Sie sich für die Beantwortung der Fragen ca. 10 Minuten Zeit nehmen.

Teil A: Lebensmittelkonsum

A1. Zu welchem Anteil erledigen Sie für Ihren Haushalt die Einkäufe?

Nur eine Antwort möglich.

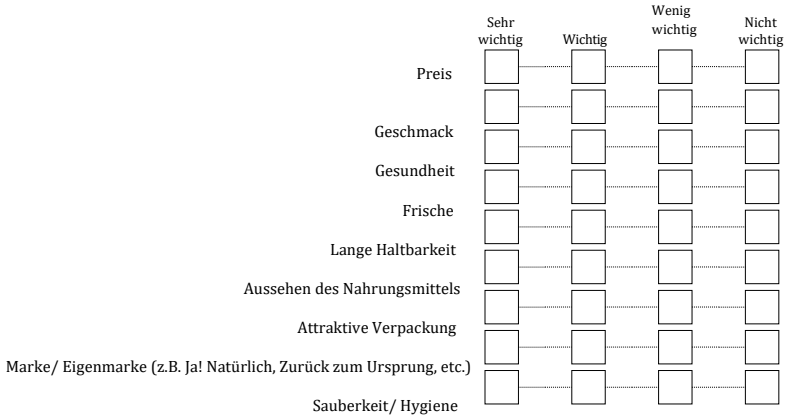
- ☐ So gut wie immer (> 80%)
- ☐ Teilweise (50 - 80%)
- ☐ Eher selten (10 - 50%)
- ☐ So gut wie nie (0 - 10%)

A2. Wo kaufen Sie üblicherweise Ihre Lebensmittel ein?

Maximal 3 Antworten möglich.

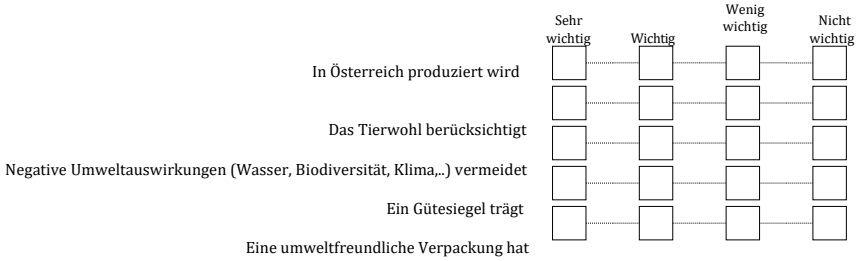
- ☐ In Supermärkten und/oder Discountern
- ☐ In Bioläden und/oder Reformläden
- ☐ Auf Märkten
- ☐ Direkt bei (einem) Bauer(n)
- ☐ Per Bestellung bei herkömmlichen Lebensmittelläden (Billa, Spar,..)
- ☐ Per Bestellung bei Online-Lebensmittelläden (Hello Fresh, Blue Apron,..)
- ☐ Per Bestellung bei Onlineversandhändlern (Amazon, Ebay,..)
- ☐ Per Bestellung bei Bio-Webshops (Adamah, Bio-Austria,..)
- ☐ Sonstiges

A3. Wie wichtig sind Ihnen folgende Aspekte beim Kauf von Lebensmitteln?



A4. Wie wichtig ist Ihnen, dass das, was Sie täglich essen...

Biodiversität bezieht sich in dieser Umfrage auf die Vielfalt der Tier- und Pflanzenarten.



Teil B: Ernährung

B1. Welche Aussage trifft am Besten bezüglich Ihrer Ernährungsweise zu?

Nur eine Antwort möglich.

- AllesesserIn/ Fleisch (inklusive Wurst und Schinken) täglich
- AllesesserIn/ Fleisch (inklusive Wurst und Schinken) mehrmals pro Woche
- Flexitarisch (mehrheitlich vegetarisch, nur gelegentlich Fleisch)
- Pescetarisch (kein Fleisch, aber Fisch und Milchprodukte)
- Vegetarisch (kein Fleisch und kein Fisch, aber Milchprodukte)
- Vegan (rein pflanzlich, keinerlei Tierprodukte)
- Sonstiges

B2. Im Folgenden geht es um Aussagen bezüglich Verminderung des Fleischkonsums.

Biodiversität bezieht sich in dieser Umfrage auf die Vielfalt der Tier- und Pflanzenarten.

Ich würde meinen Fleischkonsum reduzieren, wenn auf der Verpackung auf ein damit verbundenes Tierleid hingewiesen werden würde ☐

Ich würde meinen Fleischkonsum reduzieren, wenn auf der Verpackung auf damit verbundene Gesundheitsgefahren hingewiesen werden würde ☐

Ich würde meinen Fleischkonsum reduzieren, wenn auf der Verpackung auf den damit verbundenen Biodiversitätsverlust hingewiesen werden würde ☐

Ich würde meinen Fleischkonsum reduzieren, wenn auf der Verpackung auf die damit verbundenen Klimaauswirkungen hingewiesen werden würde ☐

Ich würde meinen Fleischkonsum reduzieren, wenn Fleisch mehr kosten würde ☐

Ich würde meinen Fleischkonsum reduzieren, wenn es bessere fleischlose Alternativen gäbe ☐

Ich will meinen Fleischkonsum auf keinen Fall reduzieren ☐

Ich esse kein Fleisch ☐

B3. Als Alternative zum absoluten Verzicht auf Fleisch werden heutzutage auch Fleischersatzprodukte (z.B. Fleischbällchen aus Soja, Bratwurst aus Seitan) geboten. Kennen Sie diese?

Nur eine Antwort möglich.

Ja, ich kenne sie und konsumiere sie regelmäßig ☐

Ja, ich kenne sie und habe bereits welche probiert ☐

Ja, ich kenne sie, habe sie aber noch nicht probiert ☐

Nein, ich kenne sie nicht, wäre aber daran interessiert ☐

Nein, ich kenne sie nicht und bin daran auch nicht interessiert ☐

B4. Was hält Sie am meisten davon ab, (mehr) Fleischersatzprodukte zu konsumieren?

	Trifft sehr zu	Trifft eher zu	Trifft weniger zu	Trifft nicht zu	Weiß nicht/ keine Angabe
Deren schlechter Geschmack	☐	☐	☐	☐	☐
Deren Aussehen	☐	☐	☐	☐	☐
Deren hoher Preis	☐	☐	☐	☐	☐
Deren künstliche Herstellung	☐	☐	☐	☐	☐
Deren geringe Verfügbarkeit	☐	☐	☐	☐	☐
Deren geringe Auswahl/ geringes Sortiment	☐	☐	☐	☐	☐
Unverträglichkeit	☐	☐	☐	☐	☐
Weil unklar ist, ob sie für das Klima weniger schädlich sind als Fleisch	☐	☐	☐	☐	☐
Weil unklar ist, ob sie für die Artenvielfalt weniger schädlich sind als Fleisch	☐	☐	☐	☐	☐
Ich habe mir noch nie darüber Gedanken gemacht, sie zu probieren	☐	☐	☐	☐	☐
Sie stellen für mich keinen Ersatz des Originals dar	☐	☐	☐	☐	☐

Teil C: Umweltrelevanz von Lebensmitteln

C1. Wie oft kaufen Sie Bio-Produkte?

Nur eine Antwort möglich.

- Immer (90 – 100%) ☐
- Wann immer möglich (80 – 89%) ☐
- Oft (50 – 79%) ☐
- Manchmal (10 – 49%) ☐
- Selten (1 – 9%) ☐
- Nie (0%) ☐

C2. Wenn Sie sich gegen Bio-Lebensmittel entscheiden, was sind Ihre Gründe dafür?

Konventionelle Landwirtschaft ist die allgemein übliche und verbreitete Form der Landwirtschaft (im Gegensatz zu speziellen Formen der Landwirtschaft - z.B. der biologischen Landwirtschaft).

	Trifft sehr zu	Trifft eher zu	Trifft weniger zu	Trifft nicht zu
Das konventionelle Produkt ist preisgünstiger	☐	☐	☐	☐
Bei den konventionellen Produkten gibt es eine größere Auswahl	☐	☐	☐	☐
Ich bevorzuge den Hersteller oder die Marke des konventionellen Produkts	☐	☐	☐	☐
Das Bio-Produkt ist da, wo ich einkaufe, nicht verfügbar	☐	☐	☐	☐
Das konventionelle Produkt entspricht meinen Qualitätsbedürfnissen besser (z.B. Geschmack)	☐	☐	☐	☐
Das konventionelle Produkt ist länger haltbar	☐	☐	☐	☐
Ich zweifle generell an den Vorteilen von Bio-Lebensmittel gegenüber konventionellen Produkten	☐	☐	☐	☐

C3. Inwiefern stimmen Sie den folgenden Aussagen zu? Ich stimme..

Biodiversität bezieht sich in dieser Umfrage auf die Vielfalt der Tier- und Pflanzenarten.

	Sehr zu	Eher zu	Weniger zu	Nicht zu
Bio-Produkte sorgen dafür, dass Bauern besser entlohnt werden	☐	☐	☐	☐
Bio-Produkte sind besser für den Klimaschutz	☐	☐	☐	☐
Bio-Produkte sind besser für den Erhalt der Biodiversität	☐	☐	☐	☐
Bio-Produkte sorgen für ein besseres Tierwohl	☐	☐	☐	☐
Bio-Produkte sind gesünder	☐	☐	☐	☐
Bio-Produkte haben einen besseren Geschmack	☐	☐	☐	☐

C4. Derzeit existieren Überlegungen, bestimmte Lebensmittel im Geschäft mit einer Biodiversitätsbilanz zu kennzeichnen. Würden Sie die Biodiversitätsbilanz eines Lebensmittels in Ihre Kaufentscheidung einbeziehen? Ich würde sie..

Unter der Biodiversitätsbilanz eines Produkts versteht man die Gesamtheit seiner Auswirkungen auf die Biodiversität, quantizifiziert in einer Zahl.

- Voll und ganz einbeziehen ☐
- Eher einbeziehen ☐
- Eher nicht einbeziehen ☐
- Überhaupt nicht einbeziehen ☐

C5. Wie sollte diese Biodiversitätsbilanz Ihrer Meinung nach dargestellt werden?

Mehrfachnennungen möglich.

- ☐ Siegel: Ein eigenständiges Siegel neben den bisherigen (z.B. Bio, AMA, Fairtrade, etc.)
- ☐ Kennzahlen: Quantifizierte Werte (z.B. "11% besser bei Klimaschutz", "50% besser für Biodiversität", etc.)
- ☐ Text: Wörtliche Produktbeschreibung (z.B. "Nachhaltig besser als herkömmliche Produkte, weil ...")
- ☐ Abbildungen: Fotos von Tier- und Pflanzenarten, die in der Biodiversitätsbilanz einen besonders großen Vorteil zum konventionellen Produkt bedingen
- ☐ Website: Ein Verweis auf eine Internetseite, auf der alle Informationen über das Produkt detailliert abrufbar sind
- ☐ Biodiversitätsbilanz sollte nicht extra dargestellt werden, sondern in andere Angaben integriert werden
- ☐ Sonstiges

C6. Wären Sie bereit, für ein Produkt mit vergleichsweise günstiger Biodiversitätsbilanz mehr zu zahlen?

Nur eine Antwort möglich.

- ☐ Ja, bis maximal 20 Prozent
- ☐ Ja, auch mehr als 20 Prozent
- ☐ Nein, ich würde nicht mehr dafür bezahlen

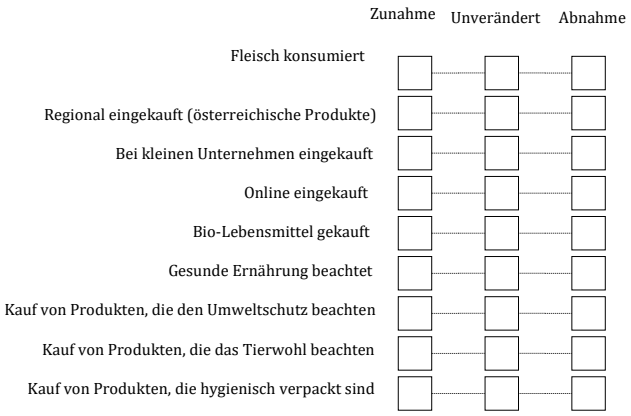
Teil D: Konsumverhalten zu Zeiten des Corona-Virus

D1. Inwiefern würden Sie sagen, dass folgende Aussage auf Sie zutrifft: "Durch die COVID-19-Situation hat sich mein Konsumverhalten verändert“

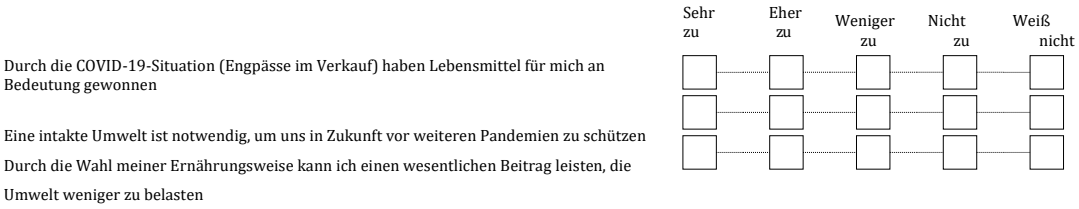
Nur eine Antwort möglich.

- ☐ Trifft sehr zu
- ☐ Trifft teilweise zu
- ☐ Trifft nicht zu

D2. Inwiefern hat sich Ihr Konsumverhalten in folgenden Aspekten verändert?

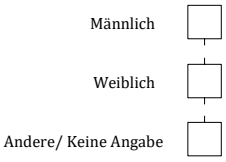


D3. Inwiefern stimmen Sie folgenden Aussagen zu? Ich stimme..

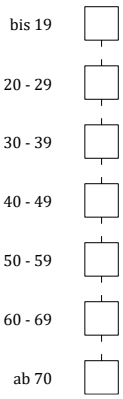


Teil E: Angaben zur Person

E1. Bitte geben Sie Ihr Geschlecht



E2. Bitte geben Sie Ihr Alter an.



E3. Bitte nennen Sie Ihren höchsten Bildungsabschluss.

- ☐ Lehre/ BMS
- ☐ AHS, BHS
- ☐ Pflichtschule
- ☐ Hochschulabschluss
- ☐ Ohne allgemeinen Schulabschluss oder beruflichen Bildungsabschluss
- ☐ Sonstiges

E4. Wo befindet sich Ihr derzeitiger Hauptwohnsitz?

Nur eine Antwort möglich.

- ☐ Burgenland
- ☐ Kärnten
- ☐ Niederösterreich
- ☐ Oberösterreich
- ☐ Salzburg
- ☐ Steiermark
- ☐ Tirol
- ☐ Vorarlberg
- ☐ Wien
- ☐ Außerhalb von Österreich

E5. Bitte nennen Sie die Größe der Gemeinde Ihres Hauptwohnsitzes.

Nur eine Antwort möglich

- ☐ < 2.000 Einwohner
- ☐ 2.001 - 10.000 Einwohner
- ☐ 10.001 - 100.000 Einwohner
- ☐ > 100.000 Einwohner

E6. Beschäftigen Sie sich mit den Themen Umweltschutz oder Naturschutz?

Mehrfachnennungen möglich.

- ☐ Ja, ich habe beruflich damit zu tun
- ☐ Ja, meine Ausbildung hat damit zu tun
- ☐ Ja, ich beschäftige mich in meiner Freizeit damit
- ☐ Ja, ich berücksichtige Umwelt- und Naturschutz in meinem Lebensalltag
- ☐ Nein, ich beschäftige mich nicht damit
- ☐ Sonstiges

Vielen Dank für Ihre Teilnahme!

Appendix 2: Personal Data of Survey Participants

Demographical aspect		***Stakeholder group***		
		Nature conservation-affine	*Nature conservation-distant*	*Total*
Participants	*Total*	*264*	*56*	*320*
	Relative	*82.5%*	*17.5%*	*100%*
Gender	*Female*	*71.6%*	*64.3%*	*70.4%*
	Male	*28.0%*	*35.7%*	*29.3%*
	Different	*0.4%*	*0%*	*0.3%*
Age	*Under 19*	*1.5%*	*1.8%*	*1.9%*
	20 – 29	*31.8%*	*42.9%*	*34.0%*
	30 – 39	*25.0%*	*21.4%*	*24.4%*
	40 – 49	*18.9%*	*21.4%*	*19.1%*
	50 – 59	*15.9%*	*7.1%*	*14.2%*
	60 – 69	*6.5%*	*5.4%*	*6.2%*
	Over 70	*0.4%*	*0%*	*0.3%*
Highest completed level of education	*Mandatory school*	*0.8%*	*5.4%*	*1.9%*
	Apprenticeship	*12.9%*	*26.8%*	*15.4%*
	Higher School Certificate	*47.0%*	*28.6%*	*43.8%*
	Professional school / Skilled worker exam	*34.8%*	*33.9%*	*34.3%*
	Without a general school leaving certificate or vocational training qualification	*0.4%*	*0%*	*0.3%*
	Other	*4.1%*	*5.4%*	*4.3%*
State	*Burgenland*	*14.8%*	*16.1%*	*14.8%*
	Carinthia	*1.5%*	*1.8%*	*1.5%*
	Lower Austria	*20.1%*	*17.9%*	*19.8%*
	Upper Austria	*2.3%*	*0%*	*1.9%*
	Salzburg	*0.4%*	*1.8%*	*0.6%*
	Styria	*4.9%*	*5.4%*	*4.9%*
	Tyrol	*0%*	*1.8%*	*0.6%*
	Vorarlberg	*0%*	*1.8%*	*0.3%*
	Vienna	*52.3%*	*51.8%*	*52.2%*
	Outside of Austria	*1.9%*	*0%*	*1.5%*
Population of residence municipality	*< 2.000 inhabitants*	*10.6%*	*14.3%*	*11.4%*
	2.001 to 10.000 inhabitants	*24.2%*	*30.4%*	*25.3%*
	10.001 to 100.000 inhabitants	*14.0%*	*5.4%*	*12.7%*
	> 100.000 inhabitants	*51.1%*	*50.0%*	*50.6%*

Appendix 3: Survey Results

Reduction of individual meat consumption

Crosstab

			[Nein, ich beschäftige mich nicht damit] Beschäftigen ..	
			Ja	Total
[Ich würde meinen Fleischkonsum reduzieren, wenn auf der Verpackung auf ein damit verbundenes Tierleid hingewiesen werden würde] Im Folgenden geht es um Aussagen bezüglich Verminderung des Fleischkonsums.	Nicht Gewählt	Count	42	239
		% within [Nein, ich beschäftige mich nicht damit] Beschäftigen Sie sich mit den Themen Umweltschutz oder Naturschutz?	75,0%	74,7%
	Ja	Count	14	81
		% within [Nein, ich beschäftige mich nicht damit] Beschäftigen Sie sich mit den Themen Umweltschutz oder Naturschutz?	25,0%	25,3%
Total		Count	56	320
		% within [Nein, ich beschäftige mich nicht damit] Beschäftigen Sie sich mit den Themen Umweltschutz oder Naturschutz?	100,0%	100,0%

Chi-Square Tests

	Value	df	Asymptotic Significance (2-sided)	Exact Sig. (2-sided)	Exact Sig. (1-sided)
Pearson Chi-Square	,004[a]	1	,953		
Continuity Correction[b]	,000	1	1,000		
Likelihood Ratio	,004	1	,953		
Fisher's Exact Test				1,000	,551
Linear-by-Linear Association	,003	1	,953		
N of Valid Cases	320				

a. 0 cells (,0%) have expected count less than 5. The minimum expected count is 14,18.

b. Computed only for a 2x2 table

Crosstab

			[Nein, ich beschäftige mich nicht damit] Beschäftigen .. Ja	Total
[Ich würde meinen Fleischkonsum reduzieren, wenn auf der Verpackung auf damit verbundene Gesundheitsgefahren hingewiesen werden würde] Im Folgenden geht es um Aussagen bezüglich Verminderung des Fleischkonsums.	Nicht Gewählt	Count	45	255
		% within [Nein, ich beschäftige mich nicht damit] Beschäftigen Sie sich mit den Themen Umweltschutz oder Naturschutz?	80,4%	79,7%
	Ja	Count	11	65
		% within [Nein, ich beschäftige mich nicht damit] Beschäftigen Sie sich mit den Themen Umweltschutz oder Naturschutz?	19,6%	20,3%
Total		Count	56	320
		% within [Nein, ich beschäftige mich nicht damit] Beschäftigen Sie sich mit den Themen Umweltschutz oder Naturschutz?	100,0%	100,0%

Chi-Square Tests

	Value	df	Asymptotic Significance (2-sided)	Exact Sig. (2-sided)	Exact Sig. (1-sided)
Pearson Chi-Square	,019[a]	1	,891		
Continuity Correction[b]	,000	1	1,000		
Likelihood Ratio	,019	1	,891		
Fisher's Exact Test				1,000	,528
Linear-by-Linear Association	,019	1	,891		
N of Valid Cases	320				

a. 0 cells (,0%) have expected count less than 5. The minimum expected count is 11,38.

b. Computed only for a 2x2 table

Crosstab

			[Nein, ich beschäftige mich nicht damit] Beschäftigen ..	
			Ja	Total
[Ich würde meinen Fleischkonsum reduzieren, wenn auf der Verpackung auf den damit verbundenen Biodiversitätsverlust hingewiesen werden würde] Im Folgenden geht es um Aussagen bezüglich Verminderung des Fleischkonsums.	Nicht Gewählt	Count	50	265
		% within [Nein, ich beschäftige mich nicht damit] Beschäftigen Sie sich mit den Themen Umweltschutz oder Naturschutz?	89,3%	82,8%
	Ja	Count	6	55
		% within [Nein, ich beschäftige mich nicht damit] Beschäftigen Sie sich mit den Themen Umweltschutz oder Naturschutz?	10,7%	17,2%
Total		Count	56	320
		% within [Nein, ich beschäftige mich nicht damit] Beschäftigen Sie sich mit den Themen Umweltschutz oder Naturschutz?	100,0%	100,0%

Chi-Square Tests

	Value	df	Asymptotic Significance (2-sided)	Exact Sig. (2-sided)	Exact Sig. (1-sided)
Pearson Chi-Square	1,998[a]	1	,157		
Continuity Correction[b]	1,485	1	,223		
Likelihood Ratio	2,198	1	,138		
Fisher's Exact Test				,177	,108
Linear-by-Linear Association	1,992	1	,158		
N of Valid Cases	320				

a. 0 cells (,0%) have expected count less than 5. The minimum expected count is 9,63.

b. Computed only for a 2x2 table

Crosstab

			[Nein, ich beschäftige mich nicht damit] Beschäftigen ..	
			Ja	Total
[Ich würde meinen Fleischkonsum reduzieren, wenn auf der Verpackung auf die damit verbundenen Klimaauswirkungen hingewiesen werden würde] Im Folgenden geht es um Aussagen bezüglich Verminderung des Fleischkonsums.	Nicht Gewählt	Count	50	243
		% within [Nein, ich beschäftige mich nicht damit] Beschäftigen Sie sich mit den Themen Umweltschutz oder Naturschutz?	89,3%	75,9%
	Ja	Count	6	77
		% within [Nein, ich beschäftige mich nicht damit] Beschäftigen Sie sich mit den Themen Umweltschutz oder Naturschutz?	10,7%	24,1%
Total		Count	56	320
		% within [Nein, ich beschäftige mich nicht damit] Beschäftigen Sie sich mit den Themen Umweltschutz oder Naturschutz?	100,0%	100,0%

Chi-Square Tests

	Value	df	Asymptotic Significance (2-sided)	Exact Sig. (2-sided)	Exact Sig. (1-sided)
Pearson Chi-Square	6,619[a]	1	,010		
Continuity Correction[b]	5,763	1	,016		
Likelihood Ratio	7,613	1	,006		
Fisher's Exact Test				,009	,006
Linear-by-Linear Association	6,598	1	,010		
N of Valid Cases	320				

a. 0 cells (,0%) have expected count less than 5. The minimum expected count is 13,48.

b. Computed only for a 2x2 table

Crosstab

			[Nein, ich beschäftige mich nicht damit] Beschäftigen ..	
			Ja	Total
[Ich würde meinen Fleischkonsum reduzieren, wenn Fleisch mehr kosten würde] Im Folgenden geht es um Aussagen bezüglich Verminderung des Fleischkonsums.	Nicht Gewählt	Count	43	262
		% within [Nein, ich beschäftige mich nicht damit] Beschäftigen Sie sich mit den Themen Umweltschutz oder Naturschutz?	76,8%	81,9%
	Ja	Count	13	58
		% within [Nein, ich beschäftige mich nicht damit] Beschäftigen Sie sich mit den Themen Umweltschutz oder Naturschutz?	23,2%	18,1%
Total		Count	56	320
		% within [Nein, ich beschäftige mich nicht damit] Beschäftigen Sie sich mit den Themen Umweltschutz oder Naturschutz?	100,0%	100,0%

Chi-Square Tests

	Value	df	Asymptotic Significance (2-sided)	Exact Sig. (2-sided)	Exact Sig. (1-sided)
Pearson Chi-Square	1,185[a]	1	,276		
Continuity Correction[b]	,805	1	,369		
Likelihood Ratio	1,126	1	,289		
Fisher's Exact Test				,339	,183
Linear-by-Linear Association	1,181	1	,277		
N of Valid Cases	320				

a. 0 cells (,0%) have expected count less than 5. The minimum expected count is 10,15.

b. Computed only for a 2x2 table

Crosstab

			[Nein, ich beschäftige mich nicht damit] Beschäftigen ..	
			Ja	Total
[Ich würde meinen Fleischkonsum reduzieren, wenn es bessere fleischlose Alternativen gäbe] Im Folgenden geht es um Aussagen bezüglich Verminderung des Fleischkonsums.	Nicht Gewählt	Count	42	236
		% within [Nein, ich beschäftige mich nicht damit] Beschäftigen Sie sich mit den Themen Umweltschutz oder Naturschutz?	75,0%	73,8%
	Ja	Count	14	84
		% within [Nein, ich beschäftige mich nicht damit] Beschäftigen Sie sich mit den Themen Umweltschutz oder Naturschutz?	25,0%	26,3%
Total		Count	56	320
		% within [Nein, ich beschäftige mich nicht damit] Beschäftigen Sie sich mit den Themen Umweltschutz oder Naturschutz?	100,0%	100,0%

Chi-Square Tests

	Value	df	Asymptotic Significance (2-sided)	Exact Sig. (2-sided)	Exact Sig. (1-sided)
Pearson Chi-Square	,055[a]	1	,815		
Continuity Correction[b]	,004	1	,947		
Likelihood Ratio	,055	1	,814		
Fisher's Exact Test				,869	,480
Linear-by-Linear Association	,055	1	,815		
N of Valid Cases	320				

a. 0 cells (,0%) have expected count less than 5. The minimum expected count is 14,70.

b. Computed only for a 2x2 table

Crosstab

			[Nein, ich beschäftige mich nicht damit] Beschäftigen ..	
			Ja	Total
[Ich will meinen Fleischkonsum auf keinen Fall reduzieren] Im Folgenden geht es um Aussagen bezüglich Verminderung des Fleischkonsums.	Nicht Gewählt	Count	37	246
		% within [Nein, ich beschäftige mich nicht damit] Beschäftigen Sie sich mit den Themen Umweltschutz oder Naturschutz?	66,1%	76,9%
	Ja	Count	19	74
		% within [Nein, ich beschäftige mich nicht damit] Beschäftigen Sie sich mit den Themen Umweltschutz oder Naturschutz?	33,9%	23,1%
Total		Count	56	320
		% within [Nein, ich beschäftige mich nicht damit] Beschäftigen Sie sich mit den Themen Umweltschutz oder Naturschutz?	100,0%	100,0%

Chi-Square Tests

	Value	df	Asymptotic Significance (2-sided)	Exact Sig. (2-sided)	Exact Sig. (1-sided)
Pearson Chi-Square	4,457[a]	1	,035		
Continuity Correction[b]	3,750	1	,053		
Likelihood Ratio	4,159	1	,041		
Fisher's Exact Test				,054	,029
Linear-by-Linear Association	4,443	1	,035		
N of Valid Cases	320				

a. 0 cells (,0%) have expected count less than 5. The minimum expected count is 12,95.

b. Computed only for a 2x2 table

Barriers to eating more meat substitutes

[Deren schlechter Geschmack] Was hält Sie am meisten davon ab, (mehr) Fleischersatzprodukte zu konsumieren? across [Nein, ich beschäftige mich nicht damit] Beschäftigen Sie sich mit den Themen Umweltschutz oder Natursc hutz?

Independent-Samples Mann-Whitney U Test Summary

Total N	320
Mann-Whitney U	5383,500
Wilcoxon W	6979,500
Test Statistic	5383,500
Standard Error	610,312
Standardized Test Statistic	-3,291
Asymptotic Sig.(2-sided test)	,001

[Deren Aussehen] Was hält Sie am meisten davon ab, (mehr) Fleischersatzprodukte zu konsumieren? across [Nein , ich beschäftige mich nicht damit] Beschäftigen Sie sich mit den Themen Umweltschutz oder Naturschutz?

Independent-Samples Mann-Whitney U Test Summary

Total N	320
Mann-Whitney U	5170,000
Wilcoxon W	6766,000
Test Statistic	5170,000
Standard Error	604,289
Standardized Test Statistic	-3,677
Asymptotic Sig.(2-sided test)	,000

[Deren hoher Preis] Was hält Sie am meisten davon ab, (mehr) Fleischersatzprodukte zu konsumieren? across [Ne in, ich beschäftige mich nicht damit] Beschäftigen Sie sich mit den Themen Umweltschutz oder Naturschutz?

Independent-Samples Mann-Whitney U Test Summary

Total N	320
Mann-Whitney U	5821,500
Wilcoxon W	7417,500
Test Statistic	5821,500
Standard Error	610,762
Standardized Test Statistic	-2,571
Asymptotic Sig.(2-sided test)	,010

[Deren künstliche Herstellung] Was hält Sie am meisten davon ab, (mehr) Fleischersatzprodukte zu konsumieren? across [Nein, ich beschäftige mich nicht damit] Beschäftigen Sie sich mit den Themen Umweltschutz oder Natursc hutz?

Independent-Samples Mann-Whitney U Test Summary

Total N	320
Mann-Whitney U	6994,000
Wilcoxon W	8590,000
Test Statistic	6994,000
Standard Error	605,035
Standardized Test Statistic	-,658
Asymptotic Sig.(2-sided test)	,511

[Deren geringe Verfügbarkeit] Was hält Sie am meisten davon ab, (mehr) Fleischersatzprodukte zu konsumieren? a cross [Nein, ich beschäftige mich nicht damit] Beschäftigen Sie sich mit den Themen Umweltschutz oder Natursch utz?

Independent-Samples Mann-Whitney U Test Summary

Total N	320
Mann-Whitney U	6595,500
Wilcoxon W	8191,500
Test Statistic	6595,500
Standard Error	608,130
Standardized Test Statistic	-1,310
Asymptotic Sig.(2-sided test)	,190

[Deren geringe Auswahl/ geringes Sortiment] Was hält Sie am meisten davon ab, (mehr) Fleischersatzprodukte zu konsumieren? across [Nein, ich beschäftige mich nicht damit] Beschäftigen Sie sich mit den Themen Umweltschut z oder Naturschutz?

Independent-Samples Mann-Whitney U Test Summary

Total N	320
Mann-Whitney U	6740,000
Wilcoxon W	8336,000
Test Statistic	6740,000
Standard Error	611,623
Standardized Test Statistic	-1,066
Asymptotic Sig.(2-sided test)	,286

[Unverträglichkeit] Was hält Sie am meisten davon ab, (mehr) Fleischersatzprodukte zu konsumieren? across [Nein , ich beschäftige mich nicht damit] Beschäftigen Sie sich mit den Themen Umweltschutz oder Naturschutz?

Independent-Samples Mann-Whitney U Test Summary

Total N	320
Mann-Whitney U	6808,500
Wilcoxon W	8404,500
Test Statistic	6808,500
Standard Error	541,684
Standardized Test Statistic	-1,077
Asymptotic Sig.(2-sided test)	,281

[Weil unklar ist, ob sie für das Klima weniger schädlich sind als Fleisch] Was hält Sie am meisten davon ab, (mehr) Fleischersatzprodukte zu konsumieren? across [Nein, ich beschäftige mich nicht damit] Beschäftigen Sie sich mit den Themen Umweltschutz oder Naturschutz?

Independent-Samples Mann-Whitney U Test Summary

Total N	319
Mann-Whitney U	7058,500
Wilcoxon W	8654,500
Test Statistic	7058,500
Standard Error	611,818
Standardized Test Statistic	-,499
Asymptotic Sig.(2-sided test)	,618

[Weil unklar ist, ob sie für die Artenvielfalt weniger schädlich sind als Fleisch] Was hält Sie am meisten davon ab, (mehr) Fleischersatzprodukte zu konsumieren? across [Nein, ich beschäftige mich nicht damit] Beschäftigen Sie sic h mit den Themen Umweltschutz oder Naturschutz?

Independent-Samples Mann-Whitney U Test Summary

Total N	320
Mann-Whitney U	5891,000
Wilcoxon W	7487,000
Test Statistic	5891,000
Standard Error	613,278
Standardized Test Statistic	-2,448
Asymptotic Sig.(2-sided test)	,014

[Ich habe mir noch nie darüber Gedanken gemacht, sie zu probieren] Was hält Sie am meisten davon ab, (mehr) Fle ischersatzprodukte zu konsumieren? across [Nein, ich beschäftige mich nicht damit] Beschäftigen Sie sich mit den Themen Umweltschutz oder Naturschutz?

Independent-Samples Mann-Whitney U Test Summary

Total N	320
Mann-Whitney U	5190,000
Wilcoxon W	6786,000
Test Statistic	5190,000
Standard Error	545,112
Standardized Test Statistic	-4,040
Asymptotic Sig.(2-sided test)	,000

[Sie stellen für mich keinen Ersatz des Originals dar] Was hält Sie am meisten davon ab, (mehr) Fleischersatzprodu kte zu konsumieren? across [Nein, ich beschäftige mich nicht damit] Beschäftigen Sie sich mit den Themen Umwel tschutz oder Naturschutz?

Independent-Samples Mann-Whitney U Test Summary

Total N	320
Mann-Whitney U	6119,000
Wilcoxon W	7715,000
Test Statistic	6119,000
Standard Error	605,530
Standardized Test Statistic	-2,102
Asymptotic Sig.(2-sided test)	,036

[Ich möchte nichts essen, was so ähnlich wie Fleisch aussieht/riecht/schmeckt etc.] Was hält Sie am meisten davo n ab, (mehr) Fleischersatzprodukte zu konsumieren? across [Nein, ich beschäftige mich nicht damit] Beschäftigen Sie sich mit den Themen Umweltschutz oder Naturschutz?

Independent-Samples Mann-Whitney U Test Summary

Total N	320
Mann-Whitney U	6275,500
Wilcoxon W	7871,500
Test Statistic	6275,500
Standard Error	598,250
Standardized Test Statistic	-1,866
Asymptotic Sig.(2-sided test)	,062

Deciding against organic food

[Das konventionelle Produkt ist preisgünstiger] Wenn Sie sich gegen Bio-Lebensmittel entscheiden, was sind Ihre Gründe dafür? across [Nein, ich beschäftige mich nicht damit] Beschäftigen Sie sich mit den Themen Umweltschutz oder Naturschutz?

Independent-Samples Mann-Whitney U Test Summary

Total N	298
Mann-Whitney U	5035,000
Wilcoxon W	6631,000
Test Statistic	5035,000
Standard Error	561,016
Standardized Test Statistic	-3,103
Asymptotic Sig.(2-sided test)	,002

[Bei den konventionellen Produkten gibt es eine größere Auswahl] Wenn Sie sich gegen Bio-Lebensmittel entscheiden, was sind Ihre Gründe dafür? across [Nein, ich beschäftige mich nicht damit] Beschäftigen Sie sich mit den Themen Umweltschutz oder Naturschutz?

Independent-Samples Mann-Whitney U Test Summary

Total N	298
Mann-Whitney U	5367,000
Wilcoxon W	6963,000
Test Statistic	5367,000
Standard Error	539,490
Standardized Test Statistic	-2,612
Asymptotic Sig.(2-sided test)	,009

[Ich bevorzuge den Hersteller oder die Marke des konventionellen Produkts] Wenn Sie sich gegen Bio-Lebensmittel entscheiden, was sind Ihre Gründe dafür? across [Nein, ich beschäftige mich nicht damit] Beschäftigen Sie sich mit den Themen Umweltschutz oder Naturschutz?

Independent-Samples Mann-Whitney U Test Summary

Total N	298
Mann-Whitney U	4546,500
Wilcoxon W	6142,500
Test Statistic	4546,500
Standard Error	545,195
Standardized Test Statistic	-4,089
Asymptotic Sig.(2-sided test)	,000

[Das Bio-Produkt ist da, wo ich einkaufe, nicht verfügbar] Wenn Sie sich gegen Bio-Lebensmittel entscheiden, was sind Ihre Gründe dafür? across [Nein, ich beschäftige mich nicht damit] Beschäftigen Sie sich mit den Themen Umweltschutz oder Naturschutz?

Independent-Samples Mann-Whitney U Test Summary

Total N	296
Mann-Whitney U	8120,500
Wilcoxon W	9716,500
Test Statistic	8120,500
Standard Error	553,943
Standardized Test Statistic	2,528
Asymptotic Sig.(2-sided test)	,011

[Das konventionelle Produkt entspricht meinen Qualitätsbedürfnissen besser (z.B. Geschmack)] Wenn Sie sich gegen Bio-Lebensmittel entscheiden, was sind Ihre Gründe dafür? across [Nein, ich beschäftige mich nicht damit] Beschäftigen Sie sich mit den Themen Umweltschutz oder Naturschutz?

Independent-Samples Mann-Whitney U Test Summary

Total N	297
Mann-Whitney U	3951,500
Wilcoxon W	5547,500
Test Statistic	3951,500
Standard Error	549,387
Standardized Test Statistic	-5,090
Asymptotic Sig.(2-sided test)	,000

[Das konventionelle Produkt ist länger haltbar] Wenn Sie sich gegen Bio-Lebensmittel entscheiden, was sind Ihre Gründe dafür? across [Nein, ich beschäftige mich nicht damit] Beschäftigen Sie sich mit den Themen Umweltschutz oder Naturschutz?

Independent-Samples Mann-Whitney U Test Summary

Total N	297
Mann-Whitney U	4021,000
Wilcoxon W	5617,000
Test Statistic	4021,000
Standard Error	550,522
Standardized Test Statistic	-4,953
Asymptotic Sig.(2-sided test)	,000

[Ich zweifle generell an den Vorteilen von Bio-Lebensmittel gegenüber konventionellen Produkten] Wenn Sie sich gegen Bio-Lebensmittel entscheiden, was sind Ihre Gründe dafür? across [Nein, ich beschäftige mich nicht damit] Beschäftigen Sie sich mit den Themen Umweltschutz oder Naturschutz?

Independent-Samples Mann-Whitney U Test Summary

Total N	298
Mann-Whitney U	4900,000
Wilcoxon W	6496,000
Test Statistic	4900,000
Standard Error	500,350
Standardized Test Statistic	-3,749
Asymptotic Sig.(2-sided test)	,000

The biodiversity footprint in the purchasing decision

Derzeit existieren Überlegungen, bestimmte Lebensmittel im Geschäft mit einer Biodiversitätsbilanz zu kennzeichnen. Würden Sie die Biodiversitätsbilanz eines Lebensmittels in Ihre Kaufentscheidung einbeziehen? Ich würde sie.. across [Nein, ich beschäftige mich nicht damit] Beschäftigen Sie sich mit den Themen Umweltschutz oder Naturschutz?

Independent-Samples Mann-Whitney U Test Summary

Total N	320
Mann-Whitney U	10928,500
Wilcoxon W	12524,500
Test Statistic	10928,500
Standard Error	556,640
Standardized Test Statistic	6,353
Asymptotic Sig.(2-sided test)	,000

Representation of the biodiversity footprint

Crosstab

Count

		[Nein, ich beschäftige mich nicht damit] Beschäftigen Sie sich mit den Themen Umweltschutz oder Naturschutz?		
		Nicht Gewählt	Ja	Total
[Siegel: Ein eigenständiges Siegel neben den bisherigen (z.B. Bio, AMA, Fairtrade, etc.)] Wie sollte diese Biodiversitätsbilanz Ihrer Meinung nach dargestellt werden?	Nicht Gewählt	138	29	167
	Ja	126	27	153
Total		264	56	320

Chi-Square Tests

	Value	df	Asymptotic Significance (2-sided)	Exact Sig. (2-sided)	Exact Sig. (1-sided)
Pearson Chi-Square	,004[a]	1	,947		
Continuity Correction[b]	,000	1	1,000		
Likelihood Ratio	,004	1	,947		
Fisher's Exact Test				1,000	,532
Linear-by-Linear Association	,004	1	,947		
N of Valid Cases	320				

a. 0 cells (0,0%) have expected count less than 5. The minimum expected count is 26,78.

b. Computed only for a 2x2 table

Crosstab

Count

		[Nein, ich beschäftige mich nicht damit] Beschäftigen Sie sich mit den Themen Umweltschutz oder Naturschutz?		
		Nicht Gewählt	Ja	Total
[Kennzahlen: Quantifizierte Werte (z.B. "11% besser bei Klimaschutz", "50% besser für Biodiversität", etc.)] Wie sollte diese Biodiversitätsbilanz Ihrer Meinung nach dargestellt werden?	Nicht Gewählt	125	40	165
	Ja	139	16	155
Total		264	56	320

Chi-Square Tests

	Value	df	Asymptotic Significance (2-sided)	Exact Sig. (2-sided)	Exact Sig. (1-sided)
Pearson Chi-Square	10,726[a]	1	,001		
Continuity Correction[b]	9,784	1	,002		
Likelihood Ratio	11,057	1	,001		
Fisher's Exact Test				,001	,001
Linear-by-Linear Association	10,693	1	,001		
N of Valid Cases	320				

a. 0 cells (0,0%) have expected count less than 5. The minimum expected count is 27,13.

b. Computed only for a 2x2 table

Crosstab

Count

		[Nein, ich beschäftige mich nicht damit] Beschäftigen Sie sich mit den Themen Umweltschutz oder Naturschutz?		
		Nicht Gewählt	Ja	Total
[Text: Wörtliche Produktbeschreibung (z.B. "Nachhaltig besser als herkömmliche Produkte, weil ...")] Wie sollte diese Biodiversitätsbilanz Ihrer Meinung nach dargestellt werden?	Nicht Gewählt	209	40	249
	Ja	55	16	71
Total		264	56	320

Chi-Square Tests

	Value	df	Asymptotic Significance (2-sided)	Exact Sig. (2-sided)	Exact Sig. (1-sided)
Pearson Chi-Square	1,602[a]	1	,206		
Continuity Correction[b]	1,185	1	,276		
Likelihood Ratio	1,528	1	,216		
Fisher's Exact Test				,217	,139
Linear-by-Linear Association	1,597	1	,206		
N of Valid Cases	320				

a. 0 cells (0,0%) have expected count less than 5. The minimum expected count is 12,43.

b. Computed only for a 2x2 table

Crosstab

Count

		[Nein, ich beschäftige mich nicht damit] Beschäftigen Sie sich mit den Themen Umweltschutz oder Naturschutz?		
		Nicht Gewählt	Ja	Total
[Abbildungen: Fotos von Tier- und Pflanzenarten, die in der Biodiversitätsbilanz einen besonders großen Vorteil zum konventionellen Produkt bedingen] Wie sollte diese Biodiversitätsbilanz Ihrer Meinung nach dargestellt werden?	Nicht Gewählt	199	50	249
	Ja	65	6	71
Total		264	56	320

Chi-Square Tests

	Value	df	Asymptotic Significance (2-sided)	Exact Sig. (2-sided)	Exact Sig. (1-sided)
Pearson Chi-Square	5,175[a]	1	,023		
Continuity Correction[b]	4,401	1	,036		
Likelihood Ratio	5,902	1	,015		
Fisher's Exact Test				,022	,014
Linear-by-Linear Association	5,159	1	,023		
N of Valid Cases	320				

a. 0 cells (0,0%) have expected count less than 5. The minimum expected count is 12,43.

b. Computed only for a 2x2 table

Crosstab

Count

		[Nein, ich beschäftige mich nicht damit] Beschäftigen Sie sich mit den Themen Umweltschutz oder Naturschutz?		
		Nicht Gewählt	Ja	Total
[Website: Ein Verweis auf eine Internetseite, auf der alle Informationen über das Produkt detailliert abrufbar sind] Wie sollte diese Biodiversitätsbilanz Ihrer Meinung nach dargestellt werden?	Nicht Gewählt	213	52	265
	Ja	51	4	55
Total		264	56	320

Chi-Square Tests

	Value	df	Asymptotic Significance (2-sided)	Exact Sig. (2-sided)	Exact Sig. (1-sided)
Pearson Chi-Square	4,812[a]	1	,028		
Continuity Correction[b]	3,994	1	,046		
Likelihood Ratio	5,698	1	,017		
Fisher's Exact Test				,031	,017
Linear-by-Linear Association	4,797	1	,029		
N of Valid Cases	320				

a. 0 cells (0,0%) have expected count less than 5. The minimum expected count is 9,63.

b. Computed only for a 2x2 table