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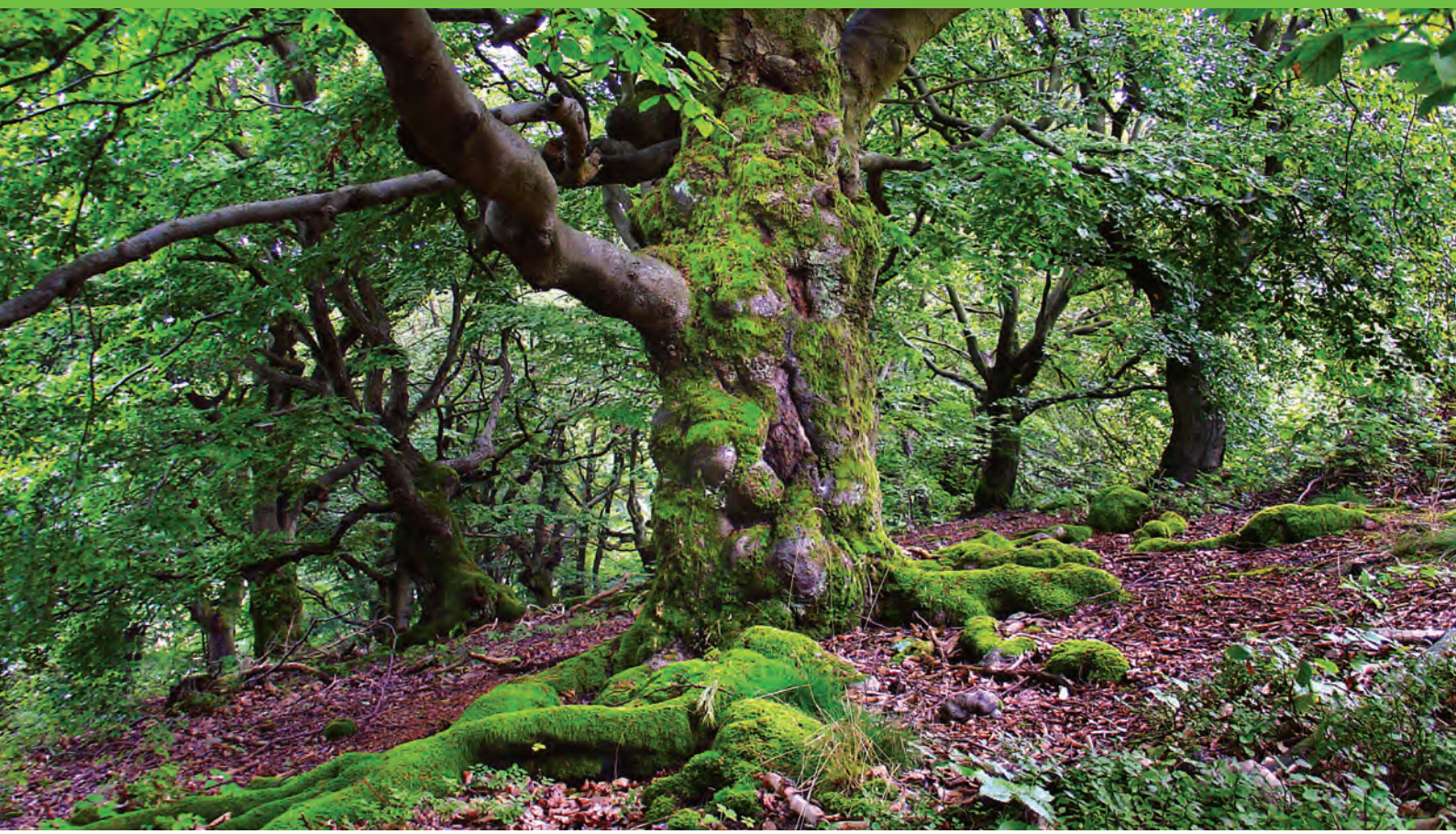
2013 Nature Awareness Study

Population survey on nature and biological diversity



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Dear Reader,

With the 2013 Nature Awareness Study commissioned by the Federal Ministry for the Environment, Nature Conservation, Building and Nuclear Safety, and the Federal Agency for Nature Conservation, we present you with the third edition of what is a valuable basis for effective communication in the field of nature conservation. It takes a good grasp of the present in order to consciously shape the future! This is why communication is so important in developing expedient nature conservation policies. It is also the reason why we need a reliable assessment of how much people know about the current status of nature and what they think about specific preservation topics if we are to successfully implement measures to protect nature and biological diversity.

A representative survey is carried out every two years to collect comprehensive information on the German population in terms of their knowledge, attitudes and willingness to act in matters of nature, conservation and biological diversity; the results are then made available to interested members of the general public, research bodies, and national players involved in conservation on the political stage and in the field. I would like to take this opportunity to highlight three main topics of the future captured in the 2013 Nature Awareness Study: 'the energy transition', 'ecologically sound consumption' and 'biological diversity'.

The 2013 Nature Awareness Study continues on from the monitoring programme initiated in 2011 which focused on social awareness of the energy transition and its consequences for nature and countryside. It emerges that the energy transition continues to enjoy strong approval in Germany, along with majority appeal. 56 percent of respondents believe it is the right approach. Approval has, however, dropped since 2011 when as many as 63 percent of respondents were very much in favour of the energy transition. The Nature Awareness Study puts into figures what has been fuelling public debate in the political and media arenas as well as around the convivial German regular´s table for some time now.

Analysis of social milieus, a fundamental component of the Nature Awareness studies, reveals the role played by public concern about rising electricity prices. The energy transition has become a class issue:

the better-off and up-market milieus back the policy, while the less advantaged on lower incomes tend to oppose it. Here, the 2013 Nature Awareness Study points to a pressing question of social justice, which we need to tackle if the energy transition in Germany is to become the national success story with the kind of role-model function that we all want to see.

The 2013 Nature Awareness Study introduces the subject of 'ecologically sound consumption'. Most consumer goods are directly or indirectly linked to natural resources and biological diversity. This means that our everyday consumption of food, clothing, furniture, etc. represents an opportunity for us to make our own contribution towards reducing environmental impact and conserving nature by taking conscious action. However, the results of the survey show that a large proportion of the population fail to see themselves as shapers of their environment, despite the fact that in many consumer sectors and areas of society it has been clearly demonstrated how mass demand can influence the market.

The Nature Awareness Study clearly reveals where the obstacles to development of this potential lie: the population appears divided early on in the survey when people are asked to do a self-appraisal of whether they know enough about the impact that the products they consume have on nature and the environment. Almost half consider themselves informed, whereas the other half indicates shortcomings in this respect. This ought to provide food for thought as far as nature and conservation communication is concerned.

Finally, I would like to highlight the subject of 'biological diversity'. The Nature Awareness Studies play a vital part in reporting the German National Strategy on Biological Diversity (BMU 2007), since they provide the data used to compute the indicator on 'public awareness of biological diversity'. The latter entails the computation of sub-indicators pertaining to knowledge, attitude and willingness to act. As in previous years, the indicator is still falling short of its target. Nonetheless, I find the changes in detail interesting: the number of people unfamiliar with the term 'biological diversity' but who have heard the expression has increased significantly since the last survey to 36 percent. What is more, 40 percent of those surveyed in 2013 have heard of the term and can also say what it means. Within this group, knowledge that biological diversity also stands for a diversity of genes approximately tripled between 2009 and 2011, increasing by a further four percentage points in 2013. An appreciation of biodiversity as an array of habitats and ecosystems likewise almost doubled between 2009 and 2011, and has remained stable at this level in 2013.

I consider these to be encouraging signs. They show how the efforts to communicate biological diversity really are paying off – whether during the International Year of Biological Diversity 2010, within the scope of the UN Decade of Biological Diversity 2011–2020, or during the day-to-day work of the many players in government and society. We cannot afford to let up in our common endeavour to bring home to people the significance of biological diversity. After all, the preservation of biological diversity is not merely about safeguarding our own existence but also represents an obligation to future generations.

Dr. Barbara Hendricks

Federal Minister for the Environment,
Nature Conservation, Building and Nuclear Safety

Dear Reader,

The '2013 Nature Awareness Study' carried out on behalf of the of the Federal Ministry for the Environment, Nature Conservation, Building and Nuclear Safety, and the Federal Agency for Nature Conservation is the third edition of a comprehensive survey on the relative importance of nature conservation in our society. The data generated in the first two studies has been shown to provide important impetus for those active in the field of nature conservation. The 2013 study continues on from this and again identifies interesting focal points.

In their capacity as representative population surveys, each carried out with over 2,000 respondents, the Nature Awareness Studies provide significant insights about the general population of the Federal Republic of Germany, and impart ideas for a variety of practical applications. The results provide an important basis for communicating matters of nature conservation, both in general and to specific target groups. In other words, the figures find their way to the interested general public via talks and through publications such as this brochure, thus helping to raise awareness and form opinion. The optimisation of voluntary conservation work or environmental education geared to specific target groups are but two good examples of how the data is being put to use. Moreover, the database created from the Nature Awareness Studies also supports the intermediary work of the Federal Agency for Nature Conservation as well as political communication on the part of the Federal Ministry for the Environment, Nature Conservation, Building and Nuclear Safety.

In 2013, 'wilderness' is featured for the first time in a Nature Awareness Study as a focal area in its own right. This was a deliberate decision in favour of a topic which is currently just as present in the professional discourse on nature conservation as it is in the general public debate. At the same time, the concept of wilderness (which emerged from the early nature preservation movement in the United States and is associated there with the founding of the first national parks) looks back on a fairly long history; and it has also had an impact on the development and transformation of the conservation idea in Central Europe. Wilderness, after all, cannot be divorced from humankind and its relationship with nature but represents a

preformed conception shaped by our culture. This is also apparent from the fact that, for example, various business sectors, for whatever reason, draw on images from the 'natural wilderness' to conjure up certain associations with which to pursue their own interests. In this context, the 2013 Nature Awareness Study shows that – besides frequent mentions of animals and forest – 'wilderness' instantly makes a third of the population think of positive concepts such as 'pure', 'genuine', 'unadulterated' and 'unspent'. A far smaller proportion of respondents express contrary associations linking wilderness to chaos or neglect. Even the danger aspect of wilderness is only named by 3 percent of respondents.

It is interesting to note that just under 1 in 5 men and women explicitly associate wilderness with the absence of human beings and civilisation, and that just under 1 in 6 believe that Germany's wilderness should be barred from public access. Pitted against them, however, are the roughly four in five people who are keen to have public access to such areas in Germany. While this to me indicates the population's desire to encounter a form of nature characterised by the culturally shaped attributes mentioned above, most people nonetheless appreciate the fact that such contact can only take place under certain conditions. If this were not the case, the essence of what many want to find in the wilderness would be lost, namely a natural space that today remains largely uninfluenced by humankind, a space free from the dictates of man's cultural landscape. Awareness of this reality is documented by the fact that a mere minority of 11 percent vote in favour of unhindered access, while 35 percent would like access via designated pathways, and a further 33 percent would welcome restricted access led by a competent guide.

Another new aspect taken up by the 2013 study and that I would like to highlight here is floodplain protection and flood control. The Federal Agency for Nature Conservation has for years been warning about the link between flood damage and the loss of natural 'washlands' and floodplains.

The cost-intensive floodings suffered by parts of Germany last summer, and which were widely covered by the media, underscore the topical nature of the problem. The 2013 Nature Awareness Study shows that 60 percent of the population consider it very important to restore the natural state of rivers and streams as a way of improving water retention, with 59 percent coming out in favour of creating washlands and flood plains. The construction of higher dams as a technical means of flood control is rated very important by 49 percent, which means it is regarded as less of a priority than the renaturation of Germany's rivers. There is also an aesthetic element to this evaluation in as far as 93 percent of the population believe that natural-flowing rivers and streams are more attractive than those which have been straightened.

As a representative survey tool, the Nature Awareness Study thus plays a very clear role in supporting the vision of the Natural Strategy on Biological Diversity, "(...) returning more space to the rivers so that flood water can spread without causing damage" (BMU 2007, p. 35).

In reading our Nature Awareness Study, you will hopefully come across plenty of other items to spark your interest. We trust that these will support the nature conservation efforts on the part of authorities, associations and voluntary bodies, and perhaps even arouse curiosity in some individuals, inspiring them to look into the diversity of nature at greater length. I am confident that the following pages will make for an interesting read.

Prof. Dr. Beate Jessel

President of the Federal Agency for Nature Conservation

Summary and recommendations

The third nationwide survey on nature awareness in Germany (following on from the 2009 and 2011 surveys) was carried out from October to November 2013. To this end, a representative sample of 2,007 individuals aged 18 and over was selected from people from all regions of Germany (ADM Master Sample).

Wilderness as a task for nature conservation policy

The 2013 Nature Awareness Study is the first of its kind to look more closely into the subject of wilderness. Interestingly, when they hear the word 'wilderness' people think first and foremost of 'exotic' animals such as tigers, elephants or crocodiles and less of species native to Germany. 44 percent of respondents name associations that can be subsumed under 'forest and jungle'. On the whole, positive references outweigh the negative associations. 14 percent of Germans link the term 'wilderness' with nature, while 8 percent name national parks and nature reserves. Wilderness is frequently interpreted as a remote space away from human beings and civilisation (18 percent). Responses that can be subsumed under 'recreation and relaxation', thus placing people at the centre of the wilderness, occur far more seldom (6 percent).

Arguments in favour of wilderness areas meet with widespread approval: wilderness areas are universally seen as important refuge zones for animals and plants; they are regarded as areas of freedom in our hi-tech world. 90 percent also agree that they can teach us a lot about wildlife native to Germany. Statements opposing the creation of protected wilderness areas meet with lower acceptance: just 1 in 4 people believe wilderness areas to be unnecessary or to constitute too much of a hindrance when it comes to the commercial exploitation of the land in question.

For just under two thirds of respondents, the wilder the nature, the more they like it (65 percent). Compared with 2009 (59 percent), wild nature has seen an image boost. As well as having a penchant for wilderness, the Germans apparently also recognise its existence closer to home: at 64 percent, almost two thirds think that wilderness exists not just in Africa or South America but also in Germany itself. In contrast to this, just under a quarter of Germans take the view that wilderness does not exist in Germany. However, four in ten would welcome more wilderness in Germany, whereas an equal proportion is satisfied with the current situation. When asked where they think more wilderness ought to be developed in Germany, respondents would like to see more wilderness first and foremost in forests (79 percent).

A clear pattern of opinion emerges when asked which wilderness ought to be open to public access. Whereas just 16 percent believe that their local wilderness should not be accessible at all, 79 percent argue in favour of some form of access. Of these, 11 percent would welcome totally unrestricted access and 35 percent only on certain pathways; 33 percent are for guided access.

Many nature conservationists campaign for the reintroduction of native animal species. The survey shows that although these initiatives do meet with strong general acceptance, not every species receives the same level of support from the population at large. For example, people have more reservations about wolves and racoons than about beavers, lynxes and wildcats: two thirds endorse the idea of increasing the numbers of beavers, lynxes and wildcats, whereas (barely) half argue for larger numbers of racoons. The wolf meets with the lowest degree of sympathy: only 44 percent take the view that its numbers should expand further in Germany. The wolf evidently continues to be perceived as a threat by a substantial number of respondents.

Germany has favourable conditions for setting up and operating national parks in which large expanses of wilderness can be protected. The majority of respondents appreciate the advantages: 95 percent take the view that national parks protect animals and plants. Furthermore, a vast majority agree that they create jobs, are right for Germany, and enhance the region. A mere 21 percent see national parks in terms of a risk for forestry, and just 16 percent see them as a threat to agricultural land use. The majority advocate the development of near-natural forests: almost 80 percent of citizens think that dead trees and deadwood belong in the forest. Just a third thinks that a forest ought to look 'tidy'.

Recommendations:

The results confirm the **use of the wilderness concept as a promising approach in communicating** information about nature reserves in Germany. Here it is possible to creatively incorporate the different ways that the various target groups approach the subject of wilderness, for example as a habitat for rare plants and animals, for educational purposes, or as an antithesis to our hi-tech world.

Any communication of wilderness areas should cater to **people's needs in respect of accessing and experiencing wilderness areas** via appropriate opportunities for encounter (pathways, guided tours, etc.).

Reservations about wolves have been ascertained, but these can be diffused through a consistent policy of educational reporting.

When it comes to discussion of **Germany's national parks**, the present study revealed a basically strong approval of this nature reserve category and a number of arguments that people find important (above all job creation, enhancement of the region). At a local level, the specific advantages of national parks can be underpinned by relevant socioeconomic figures and facts (particularly economic viability, accessibility).

Threats to and use of nature

As in the studies of 2009 and 2011, the 2013 Nature Awareness Study also deals with the question of how people in Germany interpret 'nature' and how important they rate the protection of nature. The Germans are shown to attribute great relevance to nature: 92 percent take the view that nature is all part of leading a good life. Likewise, 92 percent appreciate its diversity. It is thus fair to speak of a widespread and overwhelming appreciation of nature. Only 8 percent of citizens say that nature is alien to them, while 22 percent are not interested in it.

Only a little under half the Germans feel personally at risk from the destruction of nature: in this context, 45 percent see their own living environment and quality of life in jeopardy. At the same time the survey reveals that a large proportion of Germans resent the reckless treatment of nature (83 percent). In addition, two thirds are afraid there will be hardly any intact nature left for coming generations. A similar contradiction can be seen in the fact that while claiming that we human beings are duty bound to protect nature, respondents are less inclined to feel personally responsible. 56 percent 'strongly agree' with the statement that it is up to human beings to protect nature (both agreement levels together: 95 percent). But just 18 percent 'strongly agree' with the statement 'I personally feel responsible for the preservation of nature' (both agreement levels together: 65 percent).

86 percent see nature conservation as an important political task. A majority, however, believe that protecting nature should not enjoy absolute priority at all times: 62 percent of the population think it is necessary to cut funding for nature conservation in times of economic downturn. Generally it can be said that the sustainable use of nature is deemed to be of the utmost importance. Almost all citizens take the view that nature must be maintained in its current scope for future generations and must only be used in such a way as to permanently ensure the diversity of flora and fauna along with their habitats.

Recommendations:

The positive impact of nature, as expressed in concepts such as 'a good life' and 'health and recreation', can be refined and deployed in communicating with specific target groups or milieus. It is important to develop specific communication and educational programmes for the socially weaker milieus, focusing on the positive effects of nature that are available free of charge. In this way, the protection of nature can contribute towards social integration in society.

The communication of nature conservation needs to drive home the need for citizens to approach the **protection of nature more in terms of personal options for action**. This may mean opportunities in their everyday lives and immediate environment such as doing voluntary work for a nature conservancy initiative, practising nature-compatible consumption, or engaging in 'small-scale' conservation activities (for instance, hanging up nesting boxes or sowing a meadow of wild flowers).

Furthermore, the information and educational work undertaken in the name of nature conserva-

tion needs to convey more strongly that **protecting nature is an agreement on the part of society and hence a political concern**. Citizens are to be encouraged to take personal responsibility and engage in participation processes to protect nature. Open discourse and the expression of opinions on how people in Germany want to live can help questions of sustainability, nature conservation and environmental protection to play a more significant role in drawing up political guidelines.

Strong public approval of sustainability principles makes for **greater integration of conservation concerns into the debate on sustainability**, with issues of social justice providing a particularly effective channel for addressing young milieus.

Shaping landscapes

Well over half the respondents see grasslands and pastures, streams and ponds, tree groves and hedges as an integral part of our agricultural landscape. It is interesting to note that it is nature conservation rather than forestry or agriculture that tends to be credited with preserving near-natural landscape features.

The survey results clearly reveal a high level of support for near-natural measures of flood control: 9 in 10 individuals definitely find (or at least tend to find) those rivers and streams that follow a near-natural course more attractive than straightened channels. Another reason why the same proportion finds near-natural landscaping important is because it allows the rivers and streams to evolve freely. Furthermore, just under 60 percent believe in the vital importance of creating washlands and flood plains as well as rainwater infiltration areas. In contrast to this, just under half deem the construction of higher dykes to be very important (49 percent).

As in the 2011 survey, the energy transition is again shown to enjoy majority support in 2013: 56 percent continue to back it. Nonetheless, basic approval has dropped noticeably by 7 percent compared with 2011. Acceptance of individual measures that impact on the landscape (high scores for offshore and onshore wind farms, and photovoltaic systems, but lower scores for biomass and logging) is at a similarly high level in 2013 to that of 2011. However, the percentage of clear-cut approval for offshore wind farms has seen a notable decline (of 9 percent). The extension of high-voltage power lines continues to encounter little appeal; these are rejected by 53 percent of the population (constant since 2011).

Recommendations:

The population's desire for **diversely structured agrarian landscapes** and people's ascription of responsibility to nature conservation can be interpreted as a call for conservationists to work together with agriculture and forestry in preserving and promoting near-natural landscapes which also offer experiential and recreational value.

The high aesthetic value seen by a majority in the **near-natural landscaping of rivers and washlands** is a key pointer to the fact that conservationists and planners should also always emphasise how the protection of nature contributes to the beauty and originality of our countryside, besides highlighting the ecological aspects.

As important building blocks on the road to **increasing acceptance of the energy transition in Germany** it is vital to communicate to people the relevance of expanding the grid, and encourage them to engage in participation processes surrounding the implementation of actual projects. The energy transition also needs to be imparted in terms of nature conservation, which, after all, is all about a departure from environmentally harmful practices of generating energy from fossil fuels. **In the course of educating the public about sustainable development, increased competence is needed** to facilitate conflict mitigation when the objectives of nature conservation are at odds with the goal of developing renewable energy.

Ecologically sound day-to-day actions

The results of the study show that half the citizens know very little about the impact of their consumption on nature. All the same, as many as a quarter claim to frequently if not always buy organic milk, organic eggs or organically grown fruit and vegetables. It is additionally shown that, at 65 percent, seasonal products are 'frequently' or 'always' purchased by more respondents than regional products (54 percent). On being asked about their purchase criteria, people state that regional

and seasonal produce is more important to them than organic status (36 percent ahead of 18 percent).

A major inducement for buying ecologically sound produce is the conviction that one is exerting a positive influence by consuming in this way. Just under half can see scope for such influence via ecologically sound consumption (46 percent).

Approximately half the respondents associate ecologically sound consumption with diverse obstacles. It is considered time-consuming, too expensive (approximately three quarters agree with the statement that ecologically sound products are over-priced), often impossible due to locality (lack of supply, for example), or else it is difficult to identify the eco-friendliest decision. Many people are unable to work out the tangible equivalent value for the relatively high price asked. The positive impact on the ecosystem is too vague and remote, whereas people find it easier to reason on the basis of health and flavour. Social norms also play a major role in purchase decisions: 8 in 10 respondents say ecologically sound consumption is driven by a responsibility towards the next generations. Just under three quarters are keen to set a good example with their consumer behaviour (73 percent).

A clear majority reject genetic engineering, with 84 percent of Germans coming out in favour of a ban on genetically modified organisms in agriculture.

Recommendations:

The **knowledge deficit** that people express when it comes to the eco-friendliness of the products they buy and use needs to be redressed without delay. Current communication and information strategies must be re-examined, and the reliability and clarity of existing certification and labelling scrutinised. It would appear necessary to pare down certification to just a few fail-safe and widely acknowledged certifications for sustainable and nature-friendly products.

Communicating matters of nature conservation also means driving home to the population **the benefits of ecologically sound consumption**: easing the burden on the ecosystem; contributing to a viable, diverse and beautiful cultural landscape; keeping nature reserves and wilderness areas natural and free from interference; and strengthening regional economic activity and regional identities. A more conscious approach to eating meat is of particular global significance.

The analysis and evaluation of product production stages in terms of eco-friendliness and sustainability are of utmost importance for many aspects of nature conservation. A dialogue between conservationists and industry/the retail trade has already begun, although a great many basic and specific questions in this broad field (for example criteria and evaluations) remain open on both sides. The first results to emerge from these processes can be gradually integrated into the communication of nature conservation in order to maintain the transparency of on-going activities.

The nature conservation/consumption discourse **must not shy away from questions regarding a 'good' life, levels of consumption, or sustainable sufficiency of lifestyles** but must tackle them head on.

It is up to policy-makers to **promote ecologically sound consumer and production patterns more resolutely** than in the past by putting in place funding measures and bans; this will enable such behaviour to gain a broader foothold within the population. As soon as the appropriate stimuli have allowed ecologically sound consumption and production patterns to mature into 'mainstream' behaviour, it can be assumed that self-reinforcing processes will break down the main obstacles to adopting such behaviour (time, accessibility, identifying the products, price category) further still.

Preserving biological diversity

For the 'public awareness of biological diversity' indicator, the 2013 survey again examined the three sub-sections on knowledge, attitude and behaviour, respectively. In this context, knowledge stands for the concept of biological diversity, attitude for raising awareness of the need to maintain biodiversity, and behaviour for the willingness to act, in other words make a personal contribution to safeguarding biological diversity. The values for the individual sub-indicators across the three survey periods have remained stable overall. In 2013, for instance, 40 percent fulfilled the 'knowledge' criterion (2011: 41 percent; 2009: 42 percent). At present, 54 percent fulfil the 'attitude' criterion (2011: 51 percent;

2009: 54 percent), while 50 percent satisfy the third criterion 'behaviour' in 2013 (2011: 46 percent; 2009: 50 percent). Respondents can only be said to have satisfied the overall indicator if they fulfil all three sub-indicators. In 2013 this was the case for 25 percent of respondents. Here again, any differences to the previous studies were minimal and statistically insignificant: 22 percent in 2009 and 23 percent in 2011.

Interestingly, public awareness of biological diversity has increased, although fewer people know what it means. In 2013, three quarters of the sample had already heard of the term but only 40 percent were able to explain it. Citizens agree that biological diversity should be maintained as a legacy for our children and future generations (answer category: 'strongly agree' / 'somewhat agree': 94 percent). With regard to the willingness to act on behalf of biodiversity, the findings from the 2009 and 2011 surveys are once again confirmed. As to be expected, this willingness to act is stronger the less effort is involved: by way of example, 79 percent are willing to sign a petition in favour of protecting our biological diversity. On the other hand, only about a third would play an active role within a nature conservancy organisation (36 percent).

Recommendations:

In the course of informing and educating the public about how we can safeguard our biological diversity, it is **important to keep deepening people's understanding of the biological diversity concept**; it is also vital to exploit the kind of subject matter and local and/or global 'anecdotes' capable of breathing life into the larger picture, namely protection, sustainable use and equitable benefit sharing.

Each and every one of us can make a personal contribution towards protecting biological diversity through our everyday behaviour (the way we consume, for instance). However, the degree of risk to biological diversity calls for renewed efforts to **increase the population's political awareness of the issue** and shape public opinion and political processes to pave the way for appropriate engagement and to encourage society as a whole to take a stand on protecting biological diversity.

In deciding on which strategies to be pursued in order to safeguard biological diversity, it makes sense to reach out to the intended elements of society on the basis of target groups. Here we are talking both about the **responsibility of the socially advantaged milieus as well as the potential of the less advantaged and the middle classes**.

Target group communication with sociodemographic groups and the Sinus-Milieus®

Looking at the response patterns of different sociodemographic sub-groups beyond the survey, similar tendencies emerge: in principle, older people, women, and the well-educated feel a closer affinity with nature and are more aware of nature conservation than younger people, men, and those with a basic formal education. The picture changes when it comes to wilderness: besides people educated at least to university entrance level, it is precisely the younger members of society and men who express particular sympathy for wilderness. Questions about ecologically sound consumer behaviour attract disproportionately strong agreement not only from the well-educated but above all from people with a higher net household income. Those on a higher income also buy nature-friendly products more frequently and assign a greater role to ecologically sound consumption. There are also particularly strong differences between the genders here: women place much greater value on an environmentally compatible approach to shopping than men. The under-30s buy nature-friendly products a lot less frequently, which is most probably due to their low income – after all, a large number are still trainees or students. Younger people do not consider it that important to consume products from their own region.

Large differences emerge when results are differentiated and analysed according to Sinus-Milieu. As in the previous studies, it is mainly the Socio-ecological and Liberal Intellectual milieus that have a particularly close relationship with nature. It is also interesting to see how the Movers and Shakers milieu – the young, hip, urban trendsetters – are currently assigning a disproportionately important role to nature. Although some Movers and Shakers were already displaying a love of nature back in 2011, this trend has taken hold even more in recent years. The Movers and Shakers appear very close to nature particularly in the context of wilderness and national parks. For instance, they join the Socio-ecological and Liberal Intellectual milieus in advocating the propagation of the lynx, beaver and wolf. The Precarious milieu is far less

nature-loving, as are the Escapists, judging by their answers to the vast majority of questions. In addition, the Traditional milieu and the New Middle Class milieu show little enthusiasm for the idea of wilderness. The importance attributed to the role of ecologically sound consumer behaviour is first and foremost a question of social class: the more socially advantaged milieus and the Socio-ecological milieu make a point of buying nature-friendly products far more often than the socially less advantaged milieus or the middle classes. A similar picture emerges when it comes to evaluating renewable energies: advocacy of the energy transition currently depends on social class (milieus in an advantaged social position are more in favour of the energy transition, whereas those in a less advantaged position have stronger reservations). In 2011, on the other hand, stronger lifeworld differences existed, even within one and the same social situation. This shift can be put down to the public debate on the energy transition, which has presented itself more in the guise of a debate on costs in recent years.

Recommendations:

In attempting to **reach socially advantaged milieus** (Established Conservative milieu, Liberal Intellectual milieu, High Achiever milieu, and Movers and Shakers milieu), it makes sense to select a **benefit-oriented approach to communication**, which highlights both personal benefits of the desired actions as well as the benefits to society at large. Possible examples: quality of life through biological diversity, health and fitness via the consumption of organic products, and the chance to shoulder social responsibility. Examples of suitable partners in this respect might be arts and culture associations.

When targeting the **less advantaged milieus** (Precarious milieu, Traditional milieu, Escapist milieu), it is more expedient to **focus on how burdens can be lightened**. It is particularly useful to incorporate educational institutions here to teach children about nature and thus simultaneously establish an important building block for social integration.

Milieus in the traditional segment (Established Conservative milieu and Traditional milieu) can be best reached by highlighting **arguments and concepts associated with the German idea of home country or homeland, and with 'protecting' and 'preserving'**. Possible strategic partners in this case might be religious organisations and regional associations or institutions operating in fields such as heritage.

A promising approach with which to address **postmodern groups** (Movers & Shakers, Adaptive Pragmatists, Escapists) is to focus communication more strongly on **experience, adventure and change**, giving **priority to modern means of communication** (social media, apps, YouTube).

A scientific report to wrap up the 2013 Nature Awareness Study will be ready in the autumn of 2014 (including in-depth analyses and further recommendations for nature conservation communication), along with an in-depth report on the indicator for public awareness of biological diversity, both in German. The documents will be available on the internet for download at www.bfn.de/naturbewusstsein.html. This English version at hand is ready for download at www.bfn.de/nature-awareness-study.html.

1 Introduction

This 2013 Nature Awareness Study is based on a representative population survey on how the Germans view nature and biological diversity. Starting in 2009, it has been commissioned and published every two years by the Federal Ministry for the Environment, Nature Conservation, Building and Nuclear Safety (BMUB), and the Federal Agency for Nature Conservation (BfN). The survey provides answers to the following questions: What does the population understand by 'nature'? Who commits to the cause, and how? And how is nature conservation actually rated in Germany – as a major political agenda serving to safeguard our own future, as a tedious curtailment of our personal freedom of decision, or as something that simply goes unnoticed? What are the nature topics that interest people and what can nature conservation learn from this? For the third time, the Nature Awareness Study is attempting to answer this and similar questions in order to provide the public with continuous feedback on nature awareness within society – similar to a monitoring of social trends. An additional aim is to provide all official and voluntary players and supporters of nature conservation with some helpful arguments and guidelines to refer to in the course of their daily work.

The first two Nature Awareness Studies were extremely well received and have shown how important it is for all engaged in nature conservation, whether in a professional, voluntary or private capacity, to be able to place personal commitment within a larger social context.

Successful implementation of nature conservation is only possible if the topic is positively embedded in the lifeworld of the population, and enjoys public acceptance and support. Conservation policy and its players in associations, municipalities, etc. can substantially improve attitudes towards nature, for instance via information, communication and education measures. This, however, calls for a sound understanding of the population in terms of its value systems, the reasons for its behaviour, its lifestyles, the mental images of nature, etc. The present study sets out to make an important contribution in this respect.

The population for this study was made up of German residents aged 18 and over. Computer-assisted face-to-face interviews (CAPI) were conducted with 2,007 individuals. The study was designed by SINUS Markt- and Sozialforschung GmbH in consultation with the clients. MARPLAN Media- and Sozialforschungsgesellschaft mbH carried out the survey, while the resultant data was evaluated by SINUS, with the support of Dr. Fritz Reusswig from the Potsdam Institute for Climate Impact Research(PIK). A working group of experts was on hand to advise the project team: Prof. Dr. Susanne Stoll-Kleemann (University of Greifswald), Prof. Dr. Ulrich Gebhard (University of Hamburg), Prof. Dr. Gundula Hübner (Martin-Luther University of Halle-Wittenberg, MSH Medical School Hamburg), Dr. Uta Eser (Nürtingen-Geislingen University of Applied Science), Dr. Siegmar Otto (University of Magdeburg) and Dr. Jana Rückert-John (Institute for Social Innovation e.V., ISInova).

A final scientific report with in-depth analyses of the survey results will be ready in the autumn of 2014. From November 2014 the database will be available to the scientific community as an SPSS file from the Date Archive of the Social Sciences based at the GESIS Leibniz Institute.

This brochure along with the two preceding studies and the respective in-depth reports in German language can be downloaded from the internet (www.bfn.de/naturbewusstsein.html).

1.1 Objectives and concept

With the 2013 Nature Awareness Study, the Federal Ministry for the Environment, Nature Conservation, Building and Nuclear Safety, and the Federal Agency for Nature Conservation are continuing their broad-based coverage and monitoring of social awareness of nature and biological diversity. The representative survey is intended to deliver reliable basic knowledge on value systems, attitudinal patterns, know how, and the willingness to act in the context of nature, nature conservation and biological diversity, thus providing significant pointers for the success and acceptance of nature conservation policy, communication and educational work, and measures to protect nature and biodiversity.

The Nature Awareness Study on the one hand comprises a basic framework of constant questions with which to identify trends in nature awareness over time. On the other hand, each study pinpoints new topics that slot in with the current debate and conservation policy.

The following topics have been carried over from the previous studies:

- man's relationship with nature/personal significance of nature;
- appraisal of the threat to nature;
- attitudes towards the protection and use of nature;
- acceptance of the energy transition and appraisal of altered landscapes in the course of the energy transition; and
- knowledge, attitudes and willingness to act to prevent the loss of and/or maintain biological diversity.

The first three points define the core of nature awareness, and the task here is a milieu-specific mapping of this core over time in terms of its essence, different characteristics and changing elements. The fourth point was first taken up in the 2011 Nature Awareness Survey to illustrate how the Germans felt about the impact on the landscape of the recently agreed energy transition. Since the energy transition is a longer-term political goal with far-reaching implications – extension of the national grid, development of renewable energies, stronger roll-out and use of bioenergy crops, to name but a few – this area has again been included in 2013. Biological diversity is an integral part of each Nature Awareness Study in order to compute the indicator for Public Awareness of Biological Diversity, which in turn is a mandatory part of the National Strategy on Biological Diversity.

Some aspects which have been newly included in the 2013 Nature Awareness Study are

- wilderness and national parks,
- cultural landscapes (farm land, rivers, flood control), and
- ecologically sound consumption.

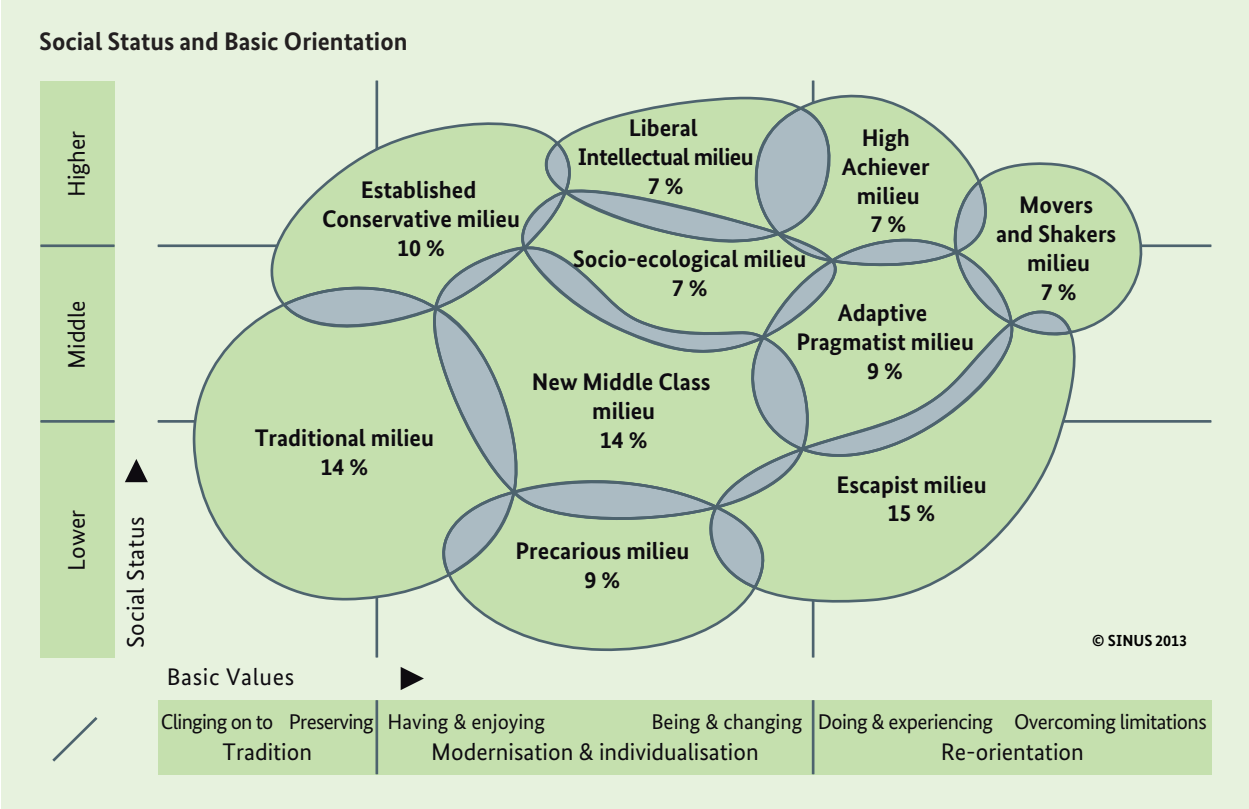
These were selected partly on the grounds of current developments and partly as a result of fundamental considerations.

The concept of wilderness has been playing an increasingly significant role in the expert debate on nature conservation of recent years. The catchphrases 'leaving nature to its own devices' and 'protection of natural processes' crop up frequently during discussion. But how does the general public actually view wilderness? Can wilderness be said to exist in Germany – and should there be more or less of it? Is wilderness something that triggers fear, or is it associated with positive emotions and attitudes? For the first time, this report looks at wilderness in the minds of the population as a new facet of nature awareness.

The classic term 'cultural landscape' deals expressly with how humankind shapes and uses nature through interventions such as agriculture and the construction of buildings and infrastructures. Cultural landscapes are the visible and tangible face of our socio-ecological systems. And it is here that the opportunities for nature conservation are ultimately determined. An agricultural landscape entirely cleared or 'freed' of natural elements leaves barely any scope for preservation goals. Is this the kind of cultural landscape that people really want – or would they rather achieve a balance between the interests of agriculture and nature conservation? Are rivers that have been straightened for purposes of settlement and transportation in keeping with what people imagine for their countryside, or do they look at restored flood plains and recognise the genuine ecological and aesthetic values they offer, not to mention an inexpensive means of flood control? Which renewable energy technologies do the respondents prefer, also bearing in mind the changes to the landscape that they cause?

Another area now included in the 2013 survey is that of ecologically sound consumption. Eco-friendly consumption has played an important role in research into environmental awareness for some time now. However, in nature conservation there is growing appreciation of the fact that one of the major areas in which the population can do something for – or indeed at the expense of – nature is 'shopping basket politics'. The present study presents for the first time results on whether and how the German population sees and assesses the link between sustainable consumption and nature conservation.

Figure 1: The Sinus-Milieus in Germany 2013



As in the preceding studies, the social-scientific model of the Sinus-Milieus® has been integrated into the 2013 study to help interpret the results in the life-world context.

1.2 Introduction to the Sinus-Milieus

How people experience and use nature, and what they feel for it depends not only on their age or level of education. Looking beyond all the socio-demographic factors, it is basic values and lifestyles that are particularly important in forming different attitudes and approaches to nature.

This was already evident in the 2009 and 2011 Nature Awareness Studies, in which an evaluation was carried out according to the milieu affiliation of respondents. For this reason, the Sinus-Milieus® were again integrated into the present follow-up study as a tool of cultural differentiation.

The determination of target groups by the Sinus Institute is based on an analysis of the different lifeworlds in our society. This includes basic values as well as everyday attitudes towards work, family, leisure and consumption. The milieus are positioned in a plane between two axes: socio-cultural basic values and social status. The higher the location of the milieu within the milieu landscape shown in Figure 1, the higher the social status[1] of its members; the further to the right its position, the more modern their basic values in a socio-cultural sense. The boundaries between the milieus are fluid. It is in the nature of social reality that lifeworlds cannot be delimited in the same (apparently) exact way – for instance by income or educational attainment – as social status. We refer to this as the indeterminacy principle of everyday reality. Indeed, one of the fundamental features of the milieu concept is that there are points of contact and overlap between the different milieus. If this were not the case, it could hardly be called a true-to-life model.

The horizontal axis of the Sinus-Milieu Model visualises the change of values in Germany since the 1950s by consolidating the respective defining values into corresponding basic orientations. Thus, basic orientation describes value patterns or value hierarchies – i.e. cognitive and mental dispositions. Basic orientation includes not only values in the stricter sense (such as

1 Social class describes a person's position in society as determined by their education, income and occupational prestige. It is coupled with the existence of economic, cultural, social and symbolic capital.

duty, achievement, family, security, order, personal fulfilment, participation, autonomy, etc.) but also everyday attitudes and goals in life.

Basic orientations that define a person during his/her socialisation phase have a strong impact on how this person lives and thinks later on in life – whether in the form of adaptation or dissociation. Hence, it was traditional values based on duty and order (clinging on to & preserving) that were of primary importance to the 1950s generation. In the 1960s, standard of living, status and property grew in social importance, as shown in the Modernisation section (Having & enjoying). The middle segment of the axis also points out the growing importance of individualisation in the 1970s, when personal fulfilment, emancipation and authenticity (Being & changing) became the new guiding principles in society. The 1980s and 90s saw a shift in the spectrum of social values towards pleasure, multiple options, a faster pace of life, and pragmatism. Increasing complexity and insecurities (for example in the context of digitalisation and globalisation) have emerged as new challenges since the turn of the millennium; these are being met through different kinds of reorientation such as exploration, refocusing, or the formation of new syntheses.

Society is subject to constant social change and so the Sinus-Milieu Model has to be updated on a regular basis. The last adjustment to accommodate the social reality was carried out in 2010 in line with the structural and cultural developments of the previous decade. More recently, the magnitude of two milieus has been adjusted to reflect social change: the Movers & Shakers milieu has been extended by one percentage point, while the Traditional milieu has shrunk by the same margin. A brief profile of the Sinus-Milieus® is given below.

The Established Conservative milieu consciously sets itself apart from other milieus via its marked need for quality and exclusivity. It aspires to a role of opinion leadership in society, despite feeling challenged in this by the fast rate of technological and economic change. Although members are not against cultural innovations (such as hi-tech) per se, they reject outright any manifestations of postmodern arbitrariness and hedonistic adventure seeking. They focus instead on responsible and prudent action that takes all possible implications into consideration from the outset.

Socio-demographic attributes

- Milieu in the middle to older age group: focus from 40 to 70, average age: 51
- Intermediate to advanced educational attainment, 30 percent have a university degree (overall: 14 percent)
- Often married, with children in the household
- Company employees in executive and highly qualified posts, senior officials; well off, high incomes

The Liberal Intellectual milieu is the enlightened, very affluent academic elite, characterised by a cosmopolitan, post-material outlook on life. In the case of the Liberal Intellectuals, their self-assurance and certainty of their own capability help them master the challenges of professional and family life with confident ease. Representatives of this milieu manifest no classic career orientation. But material success is important in order to pursue their intended holistic design for life: perseverance and motivation go hand in hand with pronounced individualism and a desire for authenticity. Liberal Intellectuals attempt to create scope in their lives in which to devote themselves to subtle pleasures, education, aesthetics, and culture.

Socio-demographic attributes

- Middle age groups: focus 40 to 60, average age: 46
- High level of formal education; highest percentage of university degrees of all the milieus
- Often married, with children in the household
- Disproportionately high number work full- or part-time; above-average number of independent professionals, along with employees in executive and highly qualified positions; high net household income

The High Achievers milieu combines a global economic mindset with a penchant for accomplishment and efficiency. They like to live life to the full as well as striving for material success. This success-oriented milieu can be seen as the new multi-optional achievement elite, with considerable IT and multimedia skills. With their fundamentally neo-liberal convictions, they welcome growing globalisation and manifest a basic attitude of strategic optimism. They aspire to be avant-garde in terms of their style preferences and way of life, and manifest a marked tendency to be distinctive and seek out the company of exclusive circles.

Socio-demographic attributes

- Age focus: 30 to 50; average age: 42
- Men are slightly over-represented
- High proportion of singles; couples without and with (younger) children
- Many with advanced educational qualifications and a degree
- Largest percentage of working people of all the milieus; many work in highly qualified and executive positions, and many are independent professionals; high net household income

The Movers and Shakers milieu is a very young milieu which sees itself as the individual, post-modern avant-garde. Its members combine a marked drive to achieve with an unconventional way of life. The Movers and Shakers stand out by virtue of their openness towards anything new and unfamiliar, displaying a high degree of flexibility and mobility in the process. They are constantly on the lookout for new frontiers and are intent on extending their network – both on-line and off-line. Success is important to them – although they gauge this more by their own standards than by conventional yardsticks.

Socio-demographic attributes

- The youngest milieu: two thirds are under 30; average age: 29
- Many singles, many without children of their own; many still live with their parents
- High level of formal education: disproportionately high number hold the university entrance certificate
- An above-average number of school/university students and trainees; many have never yet had a job; above-average household income (affluent parental home); those in jobs are on average to higher incomes

The New Middle Class milieu is society's down-to-earth mainstream. The New Middle Class strives for harmony and a sustainable livelihood. A steady job is important to them, as is their children's education, because they see a financially sound and ordered life based on balance and harmony as the key to private happiness. The idea of going against or rejecting accepted conventions or social norms is alien to them. Life revolves around the family, although their children are often older or have already left home.

Socio-demographic attributes

- Middle age group and older people from the age of 40; average age: 51
- Average educational attainment; small number of academics
- High proportion of married people compared with other milieus; often older children living at home, but also 'empty nesters'
- Slightly over-represented in the eastern German states
- Predominantly working; low-/middle-rank employees, skilled workers; 26 percent are already retired; average income brackets

The Adaptive Pragmatic milieu is the young centre of society. They unite and combine different facets: on the one hand they share with the New Middle Class a need for security, firm roots and a sense of belonging, and on the other hand they strive for success, or at least a sound, secure professional footing. They exercise flexibility and pragmatism in adapting to the requirements of the working world, and show a strong identification with our achievement- and competition-oriented society. Their pronounced utilitarianism makes them determined and yet willing to compromise. At the same time, however, the Adaptive Pragmatics like to enjoy life and pursue all kinds of interests common to youth culture.

Socio-demographic attributes

- Age focus under 50; average age: 38
- Half are married, often with no children or young children
- Average to high level of education (intermediate and/or university entrance certificate), or still in education/training
- Junior clerks, middle and qualified company employees, and skilled workers; disproportionately large number of part-timers; average to upper income brackets (many double earners)

Firmly embedded in the **Socio-ecological milieu** is a strong scepticism of growth and globalisation. Their fundamentally post-material stance means that they are open to foreign cultures, and are the standard bearers of political correctness and diversity. They emphasise the importance of principles, and call for a rigorous rethink in vital preparation for the global challenges to come. Representatives of this milieu have a marked ecological and social conscience: they lead a sustainable way of life and have a clear idea of 'the right way to live'. In contrast, they reject neo-liberal attitude patterns and the growing technisation of everyday life.

Socio-demographic attributes

- Broad age range: 30 to 60; average age: 50
- Women over-represented
- High proportion of divorcé(e)s
- High level of formal education: one third with the university entrance certificate or a degree (overall: 27 percent)
- Highest share of part-timers by comparison with other milieus; many qualified company employees and senior officials, also self-employed persons and free-lancers; average income bracket

The Traditional milieu is the war/post-war generation and, as such, the oldest milieu. It has seen very little change over the past decade. The lifeworld of the Traditionals is characterised by petty bourgeois values and a traditional blue-collar culture. They long for an ordered, safe world, and keep modern social developments at a distance.

Socio-demographic attributes

- The oldest milieu: focus on the over-60 age segment; average age: 68
- A correspondingly high proportion of women, along with many retired people/pensioners and widow(er)s
- A mostly low level of formal schooling (primary/lower secondary level)
- Low to average incomes

The Precarious milieu is the lower class striving for orientation and participation. Representatives of this milieu tend to be confronted by hopeless future prospects; they often have an accumulated set of challenges in common (unemployment, search for an apprentice position, difficult family circumstances, and health problems). Their experience of disadvantage and exclusion leads here to embitterment, but they have little inclination to protest about their lot in life. Instead it strengthens their desire for a problem-free existence and a sense of identity and belonging.

Socio-demographic attributes

- Middle age groups and older people, focus on the over-50 age cohort; average age: 54
- A disproportionately high number of singles and widow(er)s; highest proportion of divorcé(e)s of all the milieus
- Mostly low levels of education (lower secondary level, with or without an apprenticeship)
- Around two thirds are non-working (retirees, pensioners and unemployed persons); disproportionately high number of manual and skilled workers; low net household income.

The Escapist milieu is characterised by a strong drive towards fun and adventure. Freedom and independence are more important to Escapists than the conventions of our achievement-oriented society, which most refuse to follow. They are keen to break out of the bourgeois mainstream and do not want to go along with a conventional way of life; always on the lookout for extremes they are disinclined to postpone anything until later and instead live life in the present, relishing spontaneous consumption, action and entertainment.

Socio-demographic attributes

- Younger age groups: up to the age of 40; average age: 38
- High proportion of singles (with and without a partner in the household); only 1 in 2 have children
- No clear focus regarding level of education
- Junior clerks and middle employees, manual and skilled workers; a slightly above-average rate of unemployment
- A disproportionately high percentage of school/university students and trainees/apprentices; Distribution of income in keeping with the basic population

1.3 Explanatory notes on this brochure

The following four chapters present the results of the 2013 Nature Awareness Study. New aspects (Chapter 2 'Wilderness – humankind's search for unspoiled nature' and Chapter 4 'Culture – shaping a sustainable co-existence between humankind and nature ') are discussed in more detail than aspects already covered in the preceding studies. Key data is visualised in diagrams and tables. All answer categories are given for the scaled-response questions. The latter largely entail 4-level scales, with the first two levels indicating the degree of agreement (for example 'strongly agree' / 'somewhat agree'), and the last two levels indicating the degree of rejection ('somewhat disagree' / 'strongly disagree').

The decimal points have been removed and percentages rounded to the nearest whole number. In cases where the sum of the various answer categories totalled more or less than 100 percent, a maximum adjustment of 1.4 percentage points was made in the 'don't know/no comment' category. In very rare cases this proved insufficient, and another, usually the highest value, had to be slightly adjusted.

The databases was analysed according to differences in the response behaviour of sub-groups. The following sociodemographic attributes were taken into account here: level of formal education (low, intermediate, high)[2], gender, age (18 to 29, 30 to 49, 50 to 65, 66 and over), and net household income (up to €999, €1,000 to € 1,999, €2,000 to €3,499, €3,500 and over). In order to illustrate the differences between the lifeworlds, the Sinus-Milieus® have been integrated into the survey, as outlined in Section 1.2. Significant differentiations are described in the running text, with particularly interesting distributions presented graphically in figures or tables.

Established testing procedures taken from the field of empirical research were used to test the statistical significance of differentiations. Any differences in response behaviour between sections of the population were tested using the chi-squared test (compare Sedlmeier 2013, Eid 2013, or Janssen and Laatz 2010).

In order to keep the margin of error to a minimum, this is based on the confidence intervals of 95 percent (over- or under-represented) and 99 percent (heavily over- or under-represented) commonly used for social scientific purposes. Hence, attributes are interpreted as being over-represented (above-average) or under-represented (below average) in the sample if this can be claimed with a probability of at least 95 percent (level of significance of $p < .05$). Attributes are viewed as being heavily over-represented or heavily under-represented if a probability of 99 percent (significance level of $p < .01$) can be set. The over- (black numbers) and under-representations (white numbers) are colour coded in the figures and explained in the legends.[3]

In time series, i.e. sets of questions already surveyed in the preceding studies, the significance of any change was tested using parametric (t-tests) and non-parametric test procedures (Mann-Whitney test). In many cases, only minimal deviations can be observed for questions asked both in 2011 and in 2013; significant differences are marked as such. The differences between the 2009 survey and the 2011 and 2013 surveys are by comparison often more substantial. This is probably due to the fact that the data for the 2009 pilot study was collected in summer, whereas the 2011 and 2013 were scheduled for winter. In summer, people spend more time outdoors than in winter, and so they attribute greater significance to nature in the warmer season than in the colder months (compare BMU and BfN 2012, p. 49).

Both the level of agreement and frequency of occurrence of any one attribute within a sub-group is colour coded and explained in the legend, as already outlined above. However, a black and white brochure print-out makes it difficult to distinguish between the colours for 'under-represented' and 'over-represented', or between 'somewhat agree' and 'somewhat disagree'. This is why the number have also been colour coded: over-represented values and statements of agreement (for example 'strongly agree'/'somewhat agree') are printed in black, and the under-represented values and statements of rejection ('Doesn't really

2 Basic level: elementary and/or lower secondary school or German polytechnic school certificate (Grade 8 or 9); intermediate level: secondary school/ German polytechnic school certificate (Grade 10), or technical college certificate; high level: general or subject-specific university entrance qualification/university degree.

3 In the preceding studies, differences in response behaviour between sub-groups were measured using a 5 percent or 10 percent marker. This means that an attribute occurs in a sub-group 5 percent or 10 percent more frequently than in the average population. In the present study, significance was tested using the chi-squared test, since this procedure produces more valid results for average scores under 20 percent or over 80 percent.

apply'/'Doesn't apply at all') are printed in white, on a green background or, in the case of a black and white print-out, on a background of varying shades of grey. This means that all colour codes can be distinguished from one another, even in a black and white document.

In the milieu charts, it is not only the milieus which are reproduced in colour but also the overlaps between the milieus, in accordance with the attribute's frequency of occurrence. The more frequently an attribute occurs within a milieu, the stronger the shading of neighbouring overlaps in this colour (heavily over-represented > over-represented > average > below average > well below average).

An overview of the response behaviour of the overall population is given in the basic univariate analysis in the Appendix. All questions are listed here in tabular form. The differentiations according to socio-demographic attributes can be downloaded on the BfN website along with the current basic brochure and the preceding studies (www.bfn.de/naturbewusstsein.html).

In interpreting the results of the 2013 Nature Awareness Study the social desirability effect was accounted for more strongly than ever before – it is a familiar phenomenon in attitude and behaviour research and describes response distortion, in which respondents adjust their answers in the hope of earning the approval of their counterpart as opposed to risking social rejection by giving correct and authentic responses. In the context of nature and environment, this phenomenon exists in as far as the topic is linked to moral values. In order to uncover the social desirability effect, a control mechanism was incorporated into the current survey, based on the social desirability scale of Winkler et al. (2006). The analysis of how strong the effect of social desirability actually proved to be and how strongly the responses were distorted as a consequence is presented in the in-depth report. This will be available online along with the other material as of autumn 2014 at www.bfn.de/naturbewusstsein.html.

2 Wilderness – humankind's search for unspoiled nature

Wilderness as a nature preservation goal and cultural construction

For the very first time, the topic of 'wilderness' occupies a place of its own in the Nature Awareness Studies. This is due to it becoming an ever more important issue in the expert debate on nature preservation and in nature protection policies of recent years. The plan behind the Federal Government's National Strategy on Biological Diversity (NBS) is for nature to develop according to its own laws on at least 2 percent of Germany's land area (BMU 2007), with each wilderness area covering as much expanse as possible. The Federal Agency for Nature Conservation defines wilderness areas as (largely) unfragmented regions free from any designated use, which serve to guarantee the flow of natural processes uninfluenced by humankind in the long term (compare Finck et al. 2013). Moreover, the NBS makes specific reference to forests, stipulating that natural woodland should cover 5 percent of Germany's forest area by 2020.

But what does the population understand by 'wilderness', and what are people's attitudes towards it? Is there any wilderness actually left in Germany to their mind, and should more be done to protect it? The present study provides answers to these questions in the form of a representative survey.

Before turning to the empirical results, we should like to touch briefly on the historical and terminological context that was also vital in developing the sets of questions for this chapter. The German term 'Wildnis' – derived from the Proto-Germanic wilthiz and found in many other languages, English, for example (wilderness)[4] – denotes the opposite of human civilisation, in other words the untamed, non-built-up and unexploited nature, with intact natural processes and original species. Another aspect is the open-ended outcome: unlike the cultural landscape determined by human beings, there is no knowing how wilderness will develop. This means that wilderness is a relative term: depending on one's interpretation of civilisation/culture – and how it is assessed – its antonym is defined and assessed as 'wilderness'. 'Wilderness' is a culturally formed, typical concept and the perception and evaluation of wild nature has changed in the course of history (BfN 2010, Jessel 1997). Before the Enlightenment, a somewhat negative view of wilderness areas prevailed as something considered 'barren', 'dangerous' and 'infertile'. The Enlightenment and particularly the Romantic Movement – not least under the influence of prominent artists, writers and philosophers – subsequently led to a reappraisal: wilderness was given increasingly positive connotations, precisely because, as the antithesis to civilisation, people also associated it with freedom and possible alternatives to the prevailing social conventions (Kirchhoff and Trepl 2009a, Piechocki 2010). The 'wild nature' of the 'New World' is seen as the trigger for a reappraisal of the individual and society – the classic text in this respect is the book 'Walden' by Henry David Thoreau (1854)[5], the American visionary of the 'wilderness' movement. From this movement, spawned very much from a critical view of society, comes one of the main incentives for modern nature conservation, not least manifested by the founding of the first national parks of Yosemite and Yellowstone in 1860s (Hass 2009, Kathke 2009).

In Germany, too, the concept of wilderness played an important if rather less prominent role in the early days of nature conservation. In the 19th century in this country, where there was no 'settlement boundary' as there was in the west of the USA, 1854 saw the folklorist Wilhelm Heinrich Riehl[6] call for a 'right to wilderness' in order to prevent the transformation of

4 The term 'wilderness' also includes 'deer' (in German Hirsche and Rehe), an explicit indicator that fauna forms a part of wilderness.

5 Ever since its discovery by Europeans, the landscape of America has served as a backdrop for visions of freedom on the part of politically 'constricted' Europe. The figure of the 'noble savage' (which played an important part in the writings of writers such as Rousseau) bears witness to this from an anthropological and social perspective. The fact is, however, that it could hardly be applied to the native Americans who, as a noble people with no sense of private property and hence no sense of greed, were easy prey for those intent on taking their land away from them.

6 Some of his pronouncements found their way into National Socialist ideology, from which this publication explicitly distances itself.

relatively unspoiled tracts of natural land into settlements and farming areas. Right from its early beginnings, the idea of nature conservation was thus an expression of cultural values and political attitudes.

This still applies today. Since the 1990s, both government-funded and private nature conservation initiatives have rediscovered the concept of wilderness. One now comes across it in a host of different contexts: we are invited to outdoor camps to learn about the wilderness; manufacturers of outdoor gear advertise their wilderness expertise; wilderness cabins are available to visitors in the national parks; and the nature conservation associations run wilderness campaigns. The ideas of wilderness propagated here might refer to 'exotic' wildernesses such as tropical jungle and deserts inhabited by wildlife, to semi-cultivated forests in Germany, to spaces in national parks, or indeed to areas that have been taken out of the human equation and left to their own 'wild' devices once again, areas such as military exercise grounds, urban wasteland, or city parks which are no longer maintained (BMU 2007, p. 40). In our minds, wilderness is not just something far removed from civilisation but can also be found in its midst (Stremlow and Sidler 2002). In this light, our 'longing for wilderness' (Haß et al. 2012) can be interpreted as a postmodern desire to return to our roots, to experience something beyond our control, a desire which is, however, flawed in that there are no longer any areas left in Germany if not worldwide that are completely free from human influence (Jessel 2005).

Here again, it becomes apparent that 'wilderness' defies a purely analytical, scientific definition. Wilderness is more than an area left to the influence of natural forces; it represents social desires, utopias or fears. Putting a value on wilderness is not an individual decision but stems far more from images conveyed in literature, the media or advertising, all of which are ultimately governed by cultural values and role models in society (Stremlow and Sidler 2002; Kirchhoff and Trepl 2009a; Haß et al. 2012).

Chapter structure

In order to find out what Germany's citizens understand by 'wilderness', this study began by asking open-ended questions about the concept itself (Section 2.1 'Wilderness means animals and forest'). Respondents were subsequently asked whether wilderness still exists in Germany. The following definition was specified to ensure a uniform understanding of wilderness for further questions on the subject:

"Wilderness areas are large, unfragmented regions in which nature is not put to use but instead left to develop freely. Such regions do exist in areas such as the Wadden Sea and the Bavarian Forest".

Section 2.2 'People are favourably inclined towards wilderness in Germany' highlights attitudes and views in connection with wilderness in Germany (its existence, development and accessibility; propagation of wildlife). Section 2.3 'Germany's national parks as areas of wilderness' looks at attitudes towards near-natural forests and nature reserves in Germany.

2.1 Wilderness means animals and forest

In order to understand the spectrum of cultural images of wilderness, respondents were first asked for spontaneous comments on what they associate with the term 'wilderness'.

Wilderness: more animals than plants

More than half (55 percent) instantly associate the term 'wilderness' with 'animals' (see Figure 2). They are thinking here first and foremost about wild, large and exotic animals such as 'lions', 'tigers', 'elephants' and 'crocodiles'. Less frequent mention is made of the kinds of animals a walker might encounter in a German forest, such as 'deer', 'hares', and 'squirrels'. Just under a quarter (23 percent) think of 'plants' in the context of wilderness (not counting mentions of trees and forests). Besides descriptions pointing to the occurrence of rare plants, some specific types are mentioned (by their colloquial names) such as are 'forest flowers', 'shrubs', 'wild herbs', 'fungi', 'liana' and 'orchids'. The prevalence of wild animals over wild plants applies for all social milieus.

Wilderness generally means forest and jungle

Although lagging well behind animals as individual mentions, plants return to pride of place as creators of habitats. A large percentage of respondents (44 percent) link wilderness with 'forest, rain forest and jungle'. This includes both descriptions of trees[7] or forests ('ancient trees', 'giant trees', 'fir trees', 'protected forest', 'woodland pasture', 'sub-tropical moist forests', et cetera) and of specific, geographically pinpointed forest regions (for instance, 'the jungles of Brazil').

14 percent associate 'rivers' with wilderness. Besides general descriptions ('rivers', 'lakes', 'streams', 'springs', 'waterfalls', 'lakelands'), specific features are also given for this type of landscape (for example, the Niagara Falls). A mere 6 percent associate 'mountainous and rocky landscapes' with wilderness.

Wilderness tends to have positive connotations

One third think of 'unspoiled nature' in connection with wilderness. Descriptions subsumed in this category seem to have positive connotations, as becomes clear from the responses 'natural', 'unspoiled', 'pure', 'real', 'pristine', 'unused', and 'undisturbed existence'. A decidedly moral dimension of wilderness in terms of cultural heritage becomes apparent here: ever since Rousseau, and again since the Romantic period, the wild has often been seen as something pristine and good (Kirchhoff and Trepl 2009b).

The antithesis of this, namely wilderness with all its negative connotations, is also evident in the responses. As many as 13 percent of respondents are primarily reminded of 'chaos and neglect'. The majority of mentions in this category embrace aspects such as 'refuse dumped in the forest', 'nothing is cleared away and cleaned up', 'pests', 'neglected', 'lawless', 'rubbish lying around everywhere', 'mess', 'no culture', 'scrub' and 'gardens that have run to seed'. It is hardly surprising to find that the Traditional milieu is represented here to a disproportionately high degree (17 percent) if one considers its penchant for cleanliness and order.

Ahead of the survey it was expected that wilderness would also often be associated with 'danger'. Despite many respondents thinking of animals they consider to be dangerous, only 3 percent named a term directly attributable to the 'danger' category. This value does not appear in the respective figure as, in the interest of clarity, only responses with a frequency of at least 4 percent are represented (see Basic univariate analysis).

Threatened wilderness as something requiring protection

14 percent of Germans associate wilderness with the general concept of 'nature'. A smaller share of respondents see wilderness as an inherent part of nature preservation: 8 percent name 'national parks and nature reserves'. In this study, mentions of 'bird sanctuaries', 'biosphere reserves', 'nature parks sanctuaries', 'restricted zones' and 'prohibited access areas' were subsumed under 'nature reserves'. For a further 7 percent, the word 'wilderness' triggers thoughts of a 'habitat for animals and plants', to which the mentions 'protection for animals', 'habitat for rare animals and plants', 'plenty of space for wildlife', 'refuge', and 'space for plants and animals to thrive freely' belong. 7 percent associate 'biodiversity' with wilderness. 6 percent also name 'practices undertaken by humankind to protect nature and the environment', such as 'animal protection', 'marine preservation', 'no logging of ancient forests', 'no hunting of endangered species', 'no exploitation of mineral resources', and 'no overfishing'. 4 percent think of 'threatened wilderness'.

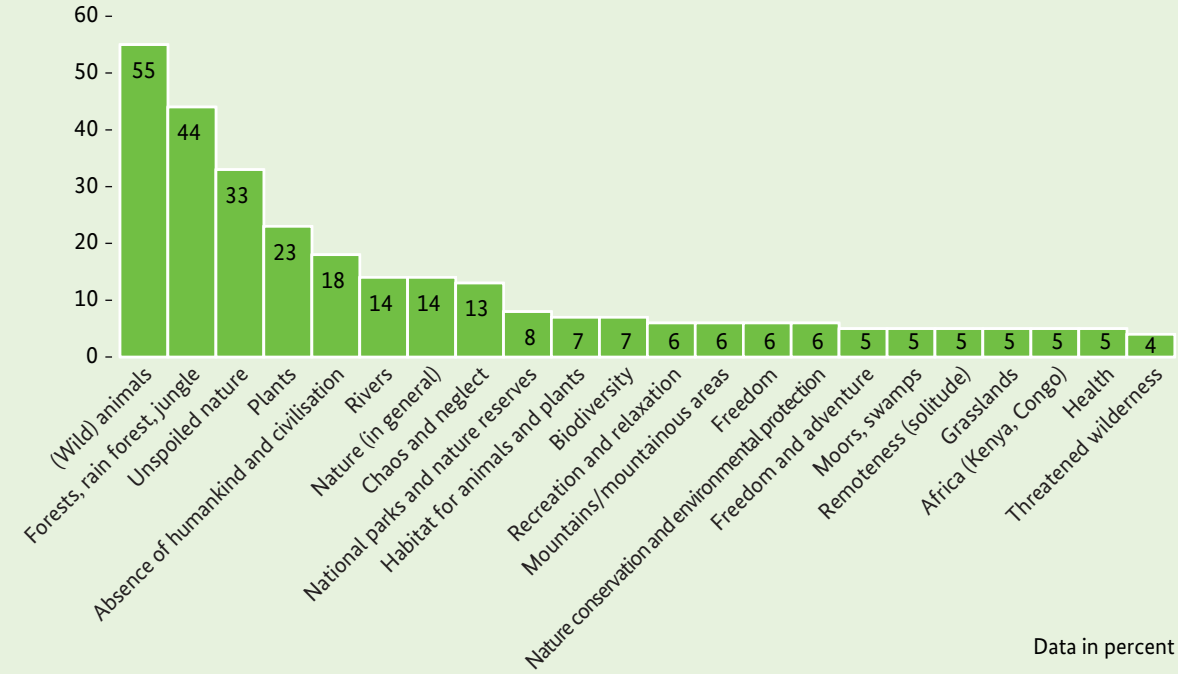
Wilderness as an experiential space remote from civilisation

The 'absence of man and civilisation' occurs to 18 percent of respondents on hearing the word 'wilderness'. Mentions assigned to this category primarily embrace descriptions defined by the 'lack' of something and include: 'deserted', 'no human intervention', 'nature not shaped by humans', 'no hiking trails', 'no agriculture', 'no buildings', 'no cars', 'without electricity', et cetera.

A smaller proportion of respondents connect wilderness directly with the quality of the human experience. For example, 6 percent of citizens associate the term with 'recreation and relaxation' ('calm', 'silence', 'holidays', 'unwinding', 'peace', 'well-being', 'equilibrium', 'balance', 'soothing rustling sounds'), but also 'freedom' (6 percent), 'remoteness/solitude' (5 percent) and 'health' (5 percent). At 5 percent, only a relatively small number are also reminded of 'freedom and adventure' (for example, 'camping out', 'camping', 'making a campfire', 'adventure holiday', 'survival

7 In coding the open responses, trees were assigned to the category 'forests, rain forest, jungle' and have thus been differentiated from the 'plants' category. This procedure was selected because trees and forests were named very frequently and because they differ in meaning from 'plants' in this context.

Figure 2: Associations with 'wilderness'



training', 'going for walks', 'adventure for children', 'fun', 'fishing', 'pleasure', 'rafting', 'climbing', 'sleeping bag', 'hiking tours'). There is a slightly stronger representation here of the Movers and Shakers, who are more interested in extreme sports (7 percent), and the nature-loving Socio-ecological milieu (8 percent).

2.2 People are favourably inclined towards wilderness in Germany

Wild nature is popular

Wilderness is popular: for 65 percent, the wilder the nature the more they like it ('strongly agree': 23 percent and 'somewhat agree': 42 percent). Men (26 percent), people under 30 (32 percent) and the well-educated often 'strongly agree' that nature is best at its wildest, whereas 4 years ago slightly fewer people (59 percent) agreed with this statement.

Preference for nature at its wildest differs strongly within the lifeworlds. The nature-loving Socio-ecological milieu are particularly keen on wild nature (43 percent, highest rate of acceptance, population average: 23 percent), and the Liberal Intellectuals (31 percent) and young Movers and Shakers are also over-represented here (30 percent). Within the Traditional milieu, people are less keen on nature at its wildest, since this older group of the population is more inclined to associate wilderness with chaos and neglect. Those least favourably inclined towards wilderness are the members of the Precarious milieu (13 percent).

Almost two thirds believe that wilderness exists in Germany

Do respondents believe that wilderness exists in Germany, or do they think it is to be found mainly in Africa or South America? At 64 percent, almost two thirds think that wilderness does exist in Germany. A quarter take the view that there is no wilderness in Germany, whereas 12 percent say they don't know (see Figure 3). People under the age of 29 and with basic formal schooling are less inclined to place wilderness in a German location (see Table 1). One can deduce from the open responses on the concept of wilderness among the population up to the age of 29 that these people are less inclined to associate national parks with 'wilderness' (5 percent versus average: 8 percent), and instead think slightly more of freedom (8 percent versus average: 6 percent), survival (4 percent versus average: 2 percent) and steppe (4 percent versus average: 2 percent). This means they have a rather 'exotic' image of wilderness in mind.

Figure 3: Existence of wilderness in Germany

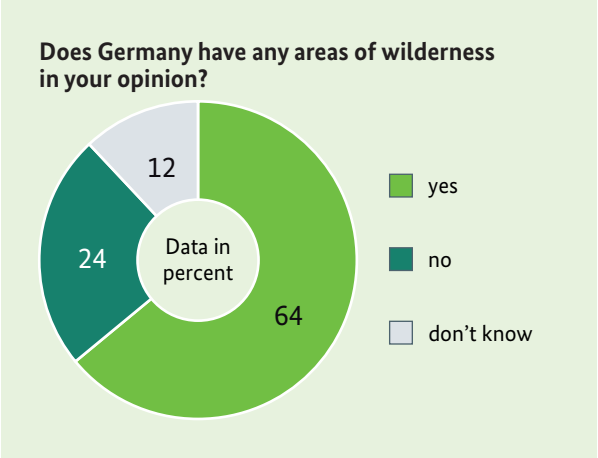
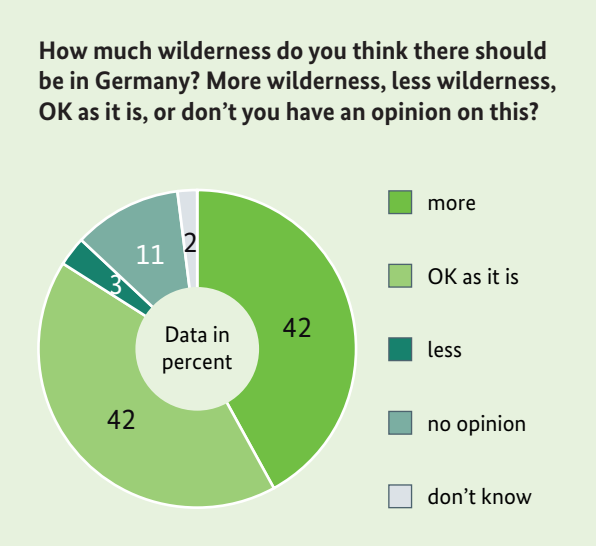


Figure 4: Views on the spread of wilderness



Four in ten would welcome more wilderness in Germany

42 percent of citizens would welcome the existence of more wilderness in Germany (see Figure 4). The same proportion find the stock of wilderness areas in Germany fine as it is, while just 3 percent call for less wilderness in the Federal Republic. The urban and rural populations show no notable differences on this matter. Younger and well-educated respondents are often in favour of more wilderness in Germany. Those with a good formal education welcome wilderness in Germany, as they associated it more with recreation and relaxation, while younger people are attracted by the adventure aspect, the wildness of wilderness (see Table 2).

Table 1: Existence of wilderness in Germany, according to age and education

Does Germany have any areas of wilderness in your opinion?

Data in percent	Average	Age (years)				Education		
		-29	30 - 49	50 - 65	65+	low	medium	high
Yes	64	56	65	67	68	59	69	69

heavily over-represented | over-represented | heavily under-represented | under-represented

Table 2: View on spread of wilderness, according to age, gender and education

How much wilderness do you think there should be in Germany? More wilderness, less wilderness, OK as it is, or don't you have an opinion on this?

Data in percent	Average	Sex		Age (years)				Education		
		M	F	-29	30 - 49	50 - 65	65+	low	medium	high
More	42	43	41	49	42	40	39	35	42	53

heavily over-represented | over-represented | heavily under-represented | under-represented

As for opinions on the expansion of wilderness, lifeworld proves to be a stronger differentiator than socio-demographics (see Figure 5). Two-thirds of the Socio-ecological and 61 percent of the Liberal Intellectual milieus are in favour of more extensive tracts of wilderness in Germany. Both milieus enjoy spending a lot of time outdoors and are very aware of the importance of nature preservation. Only a third of the New Middle Class, the Precarious and the Traditional milieus speak out in favour of more wilderness. As far as the New Middle Class is concerned, order makes them less overwhelmed and better able to navigate daily life, especially when the going gets tough; their relatively low acceptance of more extensive wilderness might thus be interpreted as a rejection of chaotic circumstances.

Figure 5: Views on the spread of wilderness according to Sinus-Milieu

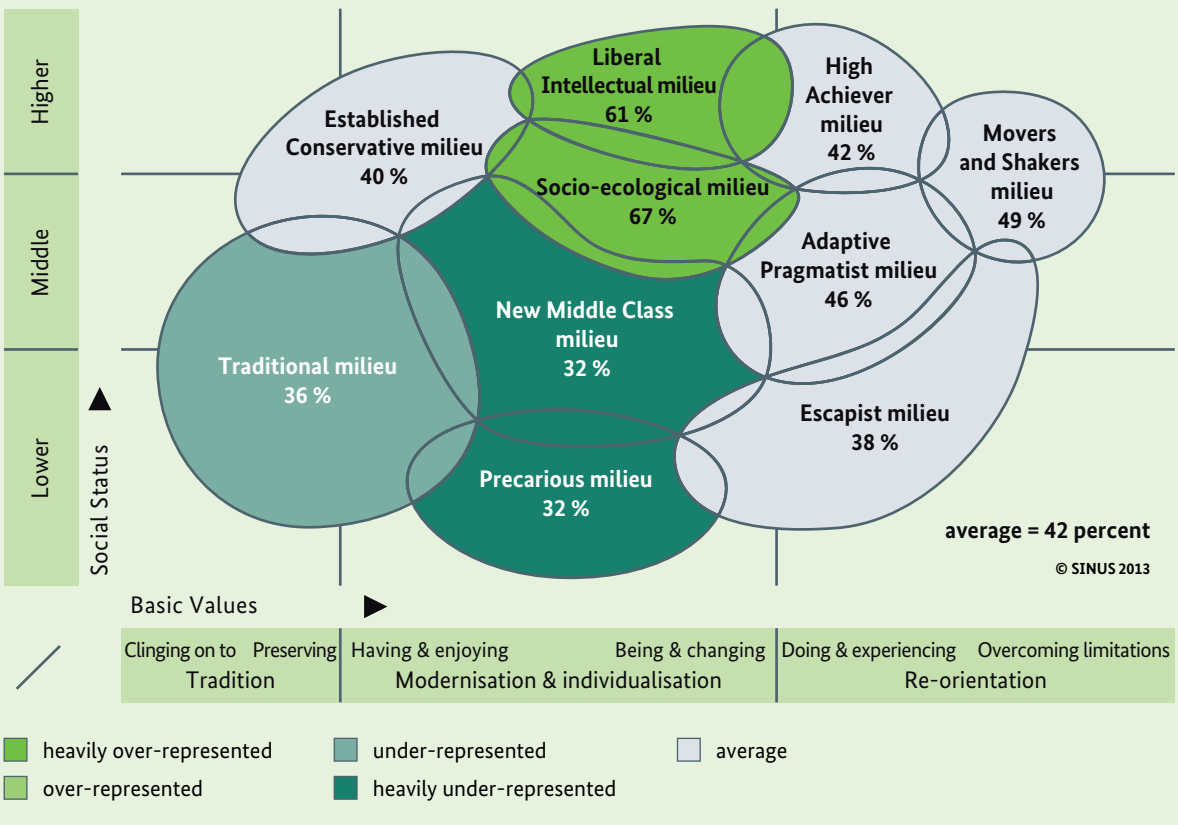
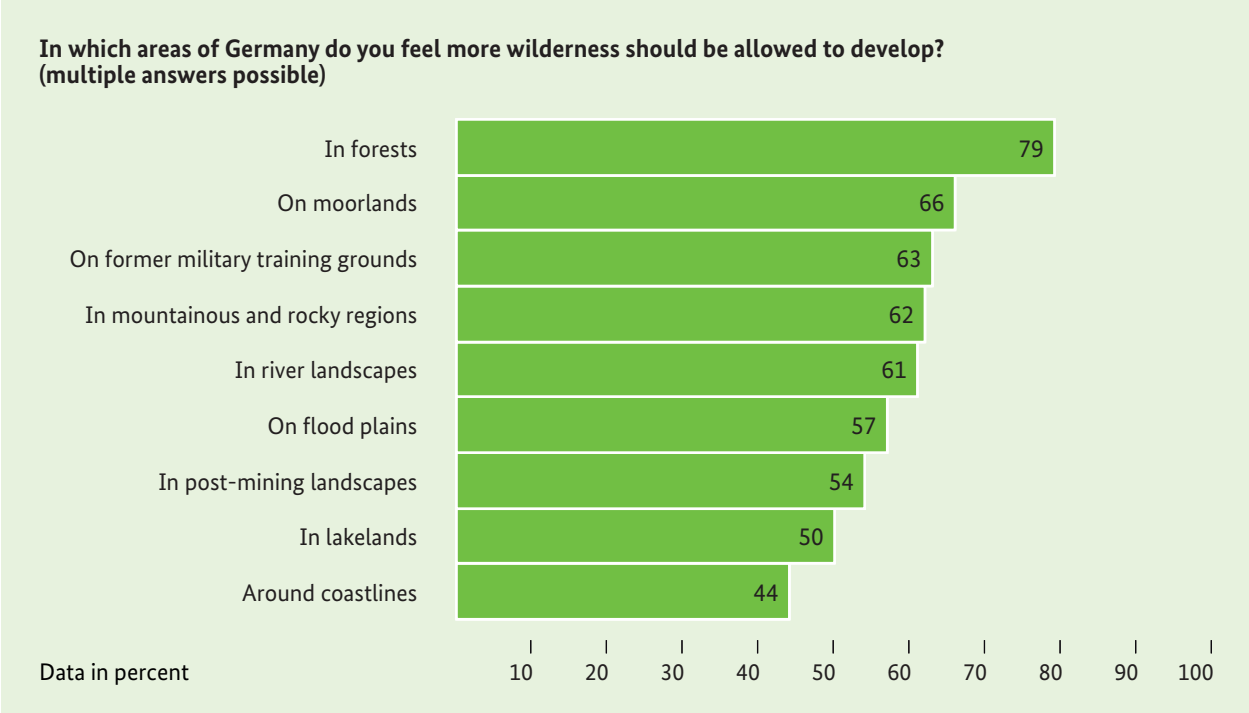


Figure 6: Spread of wilderness within different types of ecosystem



More wilderness is particularly welcome in forest areas

Following on from the question as to whether there should be more wilderness, people calling for more such areas were asked what kind of landscapes should be made available for the purpose. Forests was the most common response – which in turn is in keeping

Table 3: Spread of wilderness in different types of ecosystem, according to gender, age and education

In which areas of Germany do you feel more wilderness should be allowed to develop? (multiple answers possible)

Data in percent	Average	Sex		Age (years)				Education		
		M	F	-29	30 - 49	50 - 65	65+	low	me-dium	high
In forests	79	79	79	83	81	81	71	76	81	83
On moorlands	66	63	69	63	66	69	66	63	64	72
On former military training grounds	63	64	62	55	64	63	67	62	60	67
In mountainous and rocky regions	62	61	63	64	64	60	60	64	53	68
In river landscapes	61	59	63	63	60	62	59	61	51	69
On flood plains	57	56	59	56	56	63	54	56	52	63
In post-mining landscapes	54	56	52	50	51	56	61	57	51	55
In lakelands	50	48	51	56	51	50	41	44	42	61
Around coastlines	44	43	46	48	45	45	39	43	36	54

heavily over-represented | over-represented | heavily under-represented | under-represented

Table 4: Access to wilderness, according to gender and education

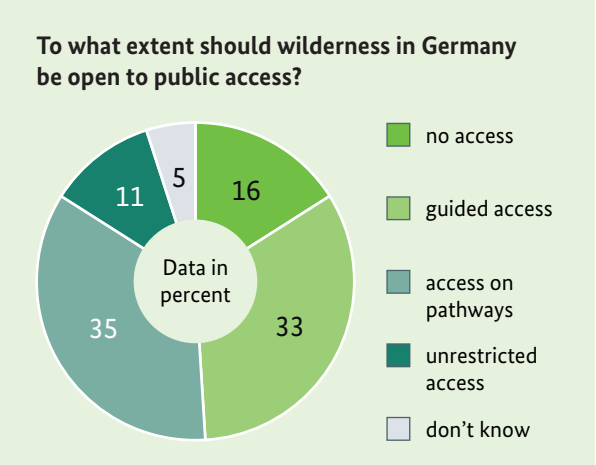
To what extent should wilderness in Germany be open to public access?

Data in percent	Average	Sex		Education		
		M	F	low	medium	high
Access on pathways	35	37	32	36	30	38
Guided access	33	31	35	29	34	37
No access	16	14	18	14	18	15
Unrestricted access	11	13	8	12	11	8

heavily over-represented | over-represented | heavily under-represented | under-represented

with the fact that wilderness is primarily associated with forest. However, the majority would welcome wilderness left to the forces of nature in almost all the ecosystems surveyed. There are slightly stronger reservations about the development of wilderness along coastlines and in lakelands (see Figure 6).

Figure 7: Access to wilderness



People with a high level of formal education advocate the expansion of wilderness in almost all landscapes and are more appreciative of its significance for nature conservation. An interesting insight is that people with an intermediate level of formal education are less likely to speak out in favour of developing wilderness areas than people with a more basic level of education (see Table 3).

Varying opinions on the public accessibility of wilderness

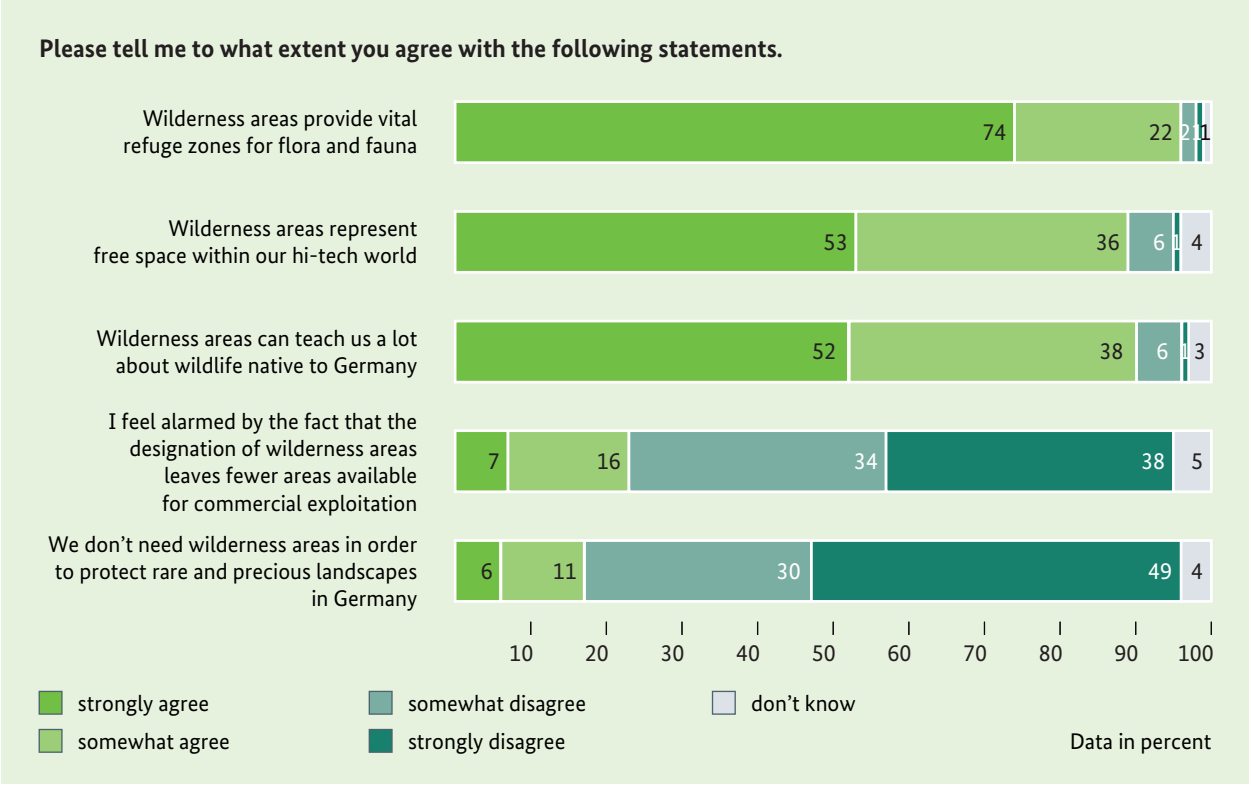
To date it is possible to enter all potential wilderness areas if one sticks to designated pathways (Wegegebot). 16 percent of Germans take the view that these areas should be totally out of bounds to the public, whereas 79 percent argue in favour of some form of access and 5 percent have no opinion on the matter (see Figure 7). The form of access is, however, important here: only 11 percent are in favour of unimpeded access, 35 percent would only allow entry on specific pathways, and 33 percent advocate access in the presence of a guide. If the aim is to cater to all standpoints, this result would suggest the need for varying rights of way and accessibility for the different wilderness areas.

People with a high level of formal education advocate guided access to a relatively high degree, whereas fewer respondents with a basic formal education are likely to favour this variant. Men more often expect individual opportunities to discover wilderness than women (access restricted to pathways and unimpeded access) (see Table 4).

Arguments in favour of wilderness areas meet with broad acceptance

Functional reasoning in support of wilderness areas in Germany meets with strong support: more than nine in ten respondents, respectively, believe that wilderness areas provide an important refuge for animals and plants, an open space in the hi-tech world in which to learn about Germany's nature in its pristine

Figure 8: Views on wilderness areas



form. The protection of nature as a reason for having wilderness areas enjoys even greater acceptance here than its function as a social open space and educational archive for Germany's natural environment. Fewer than 1 in 4 subscribe to the counter-arguments – wilderness areas are unnecessary or detrimental

Table 5: Attitudes to wilderness areas, according to gender, age and education

Please tell me to what extent you agree with the following statements.

Answer category 'strongly agree'	Average	Sex		Age (years)				Education		
Data in percent		M	F	-29	30 - 49	50 - 65	65+	low	medium	high
Wilderness areas provide vital refuge zones for flora and fauna	74	73	75	76	75	72	73	66	76	84
Wilderness areas represent free space within our hi-tech world	53	54	53	53	52	55	55	48	56	59
Wilderness areas can teach us a lot about wildlife native to Germany	52	50	54	53	52	52	52	45	55	59
I feel alarmed by the fact that the designation of wilderness areas leaves fewer areas available for commercial exploitation	7	8	6	11	6	7	4	7	8	5
We don't need wilderness areas in order to protect rare and precious landscapes in Germany	6	7	4	5	5	6	7	7	5	4

heavily over-represented | over-represented | heavily under-represented | under-represented

to commercial exploitation (see Figure 8). This set of opinions is a good starting point for communicating nature conservation based on the concept of wilderness, because public relations can tap into the familiar 'pros' with almost no need to win people over.

People with a good formal education show a stronger acceptance of the three arguments in favour of wilderness areas in Germany than those with a basic level of education. Younger people are more concerned than the older generation about expanding areas of wilderness might take up land that could otherwise be used commercially. 17 percent agree (completely or with some restrictions) that we don't need wilderness areas in order to protect special landscapes; these include a disproportionately high number of men and people with a basic level of formal education (see Table 5).

Greater reservations are shown towards the wolf and racoon than towards the lynx, beaver and wildcat.

In their quest to halt the decline of biological diversity and protect the ecological balance, conservationists campaign for the propagation of native animal species whose numbers have declined in recent decades. The National Strategy on Biological Diversity (BMU 2007) contains corresponding targets, for example "the return of the brown bear, lynx and vulture to the Bavarian Alps by the year 2020, with the lynx also returning to the low mountain ranges"; furthermore, the need is recognised to create "acceptance of large predators such as brown bears, wolves, lynxes and vultures by the year 2015 via targeted communication and information directed at specific target groups". The citizens take a positive view of a stronger propagation of the medium- to large-sized mammals surveyed here (see Figure 9). (Just under) a third advocate propagation of the lynx, beaver and wildcat, respectively, with fewer than 20 percent speaking out against it in each case. The beaver is the most popular of the wild animals surveyed here – whether this is the case because it is often used as a corporate mascot, or whether companies select it as an advertising character because of its extreme popularity remains unclear.

Respondents are less keen on the racoon, with just under half coming out in favour of a stronger propagation. Likely reasons for reservations are that the animal

Figure 9: Approval of the propagation of wildlife

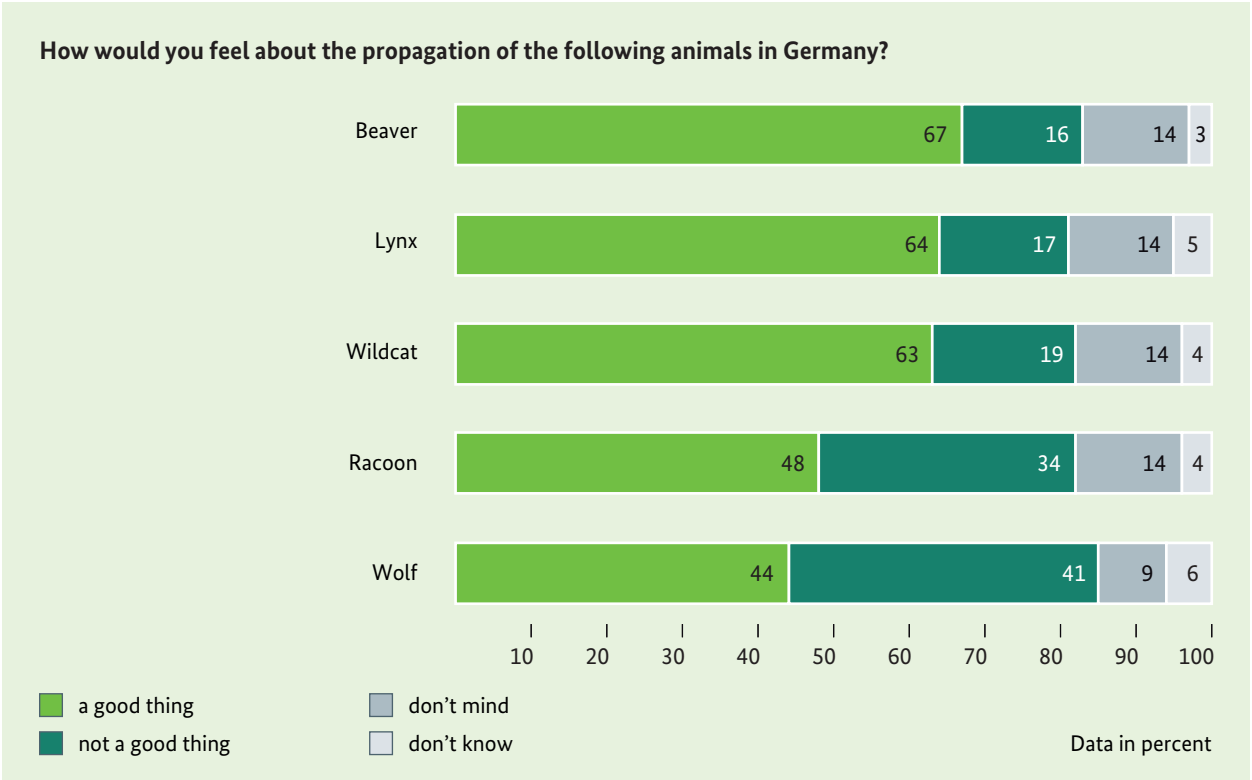


Table 6: Approval of the propagation of wildlife, according to sociodemographic attributes

How would you feel about the propagation of the following animals in Germany?

Answer category 'a good thing' Data in percent	Average	Sex		Age (years)				Education			Net household income (€)			
		M	F	-29	30 - 49	50 - 65	65+	low	me-dium	high	-999	1,000 - 1,999	2,000 - 3,499	3,500+
Beaver	67	68	66	70	69	67	62	63	65	75	74	67	67	64
Lynx	64	65	63	63	68	65	59	57	65	74	69	64	65	66
Wildcat	63	64	62	62	66	62	60	56	61	75	61	62	65	65
Racoon	48	48	48	55	51	44	43	46	45	51	56	45	51	54
Wolf	44	46	42	50	46	43	38	36	42	57	51	40	45	49

heavily over-represented | over-represented | heavily under-represented | under-represented

has a reputation for wreaking havoc in private gardens, and that it constitutes a threat for native bird species. It is not possible to ascertain from the current database the role played by an awareness of neobiota[8] or invasive species.[9]

The wolf attracts the strongest reservations: there are equal numbers of supporters and opponents here. As a large carnivore, the wolf features strongly in mythology and triggers ambivalent emotions: in Grimms' fairy tales, its apparently 'evil' character comes to the fore, whereas in the classic novel 'Steppenwolf' the animal is a symbol for the lone, socio-critical traits of the protagonist's persona. On the other hand, Romulus and Remus, the twins who founded Rome, were suckled by a she-wolf. Whereas some may be afraid of being attacked by a wolf at night or farmers fear for their flocks, others see it as a symbol of freedom and unspoiled nature; it is even seen to represent care and social skills.

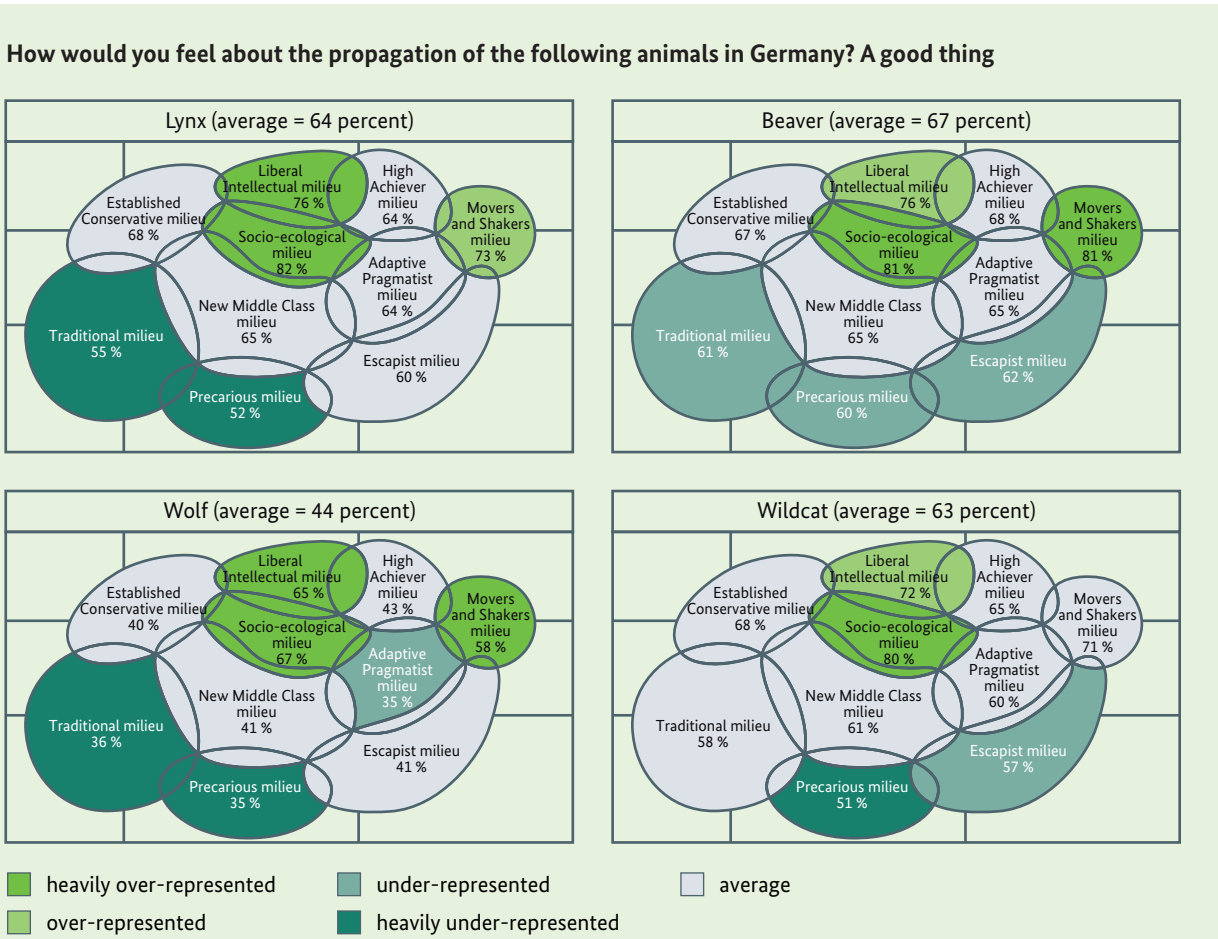
The wolf also polarises the sub-groups to a large extent (see Table 6): the well-educated, younger people, men, and those on a low net household income are more favourably disposed towards it than people with a basic level of education, those over the age of 65, and women. It is not possible to determine from other research why the wolf is more popular among younger respondents than among older people, because no such studies could be found. Perhaps individuals under the age of 30 are more influenced by current reports on wolves. Since the first sighting of a wolf cub in Germany at the turn of the millennium, many nature conservancy institutions have stepped up their measures to educate the general public, presenting the wolf as an animal deserving protection rather than fear. The wolf is also used as an advertising character by manufacturers of outdoor gear; in this case it stands for freedom and adventure. It is interesting to note that the wolf and beaver are more popular with people who have a high level of formal schooling and those on a low income. In addition, those with a good formal education speak out more strongly in favour of the lynx and wildcat than those with a basic level of education. The over 65s also show stronger reservations towards beaver and wolf than younger people. The wildcat and lynx enjoy greater sympathy in the 30 to 49 age group than among younger or older people.

A look through the 'milieu spectacles' reveals the following areas of emphasis (see Figure 10): The Socio-ecological milieu, the Liberal Intellectual milieu and (predominantly) the Movers and Shakers take a particularly positive view of the increasing propagation of the wild animals surveyed. The socially less advantaged milieus have stronger reservations. As supposedly dangerous carnivores, the wolf and lynx encounter even stronger rejection in the Traditional and Precarious lifeworlds.

8 The term neobiota denotes a non-native species.

9 Originally at home in North America, the racoon was first introduced to Germany in 1930s.

Figure 10: Approval of the spread of wildlife according to Sinus-Milieu



2.3 National parks as wilderness areas in Germany

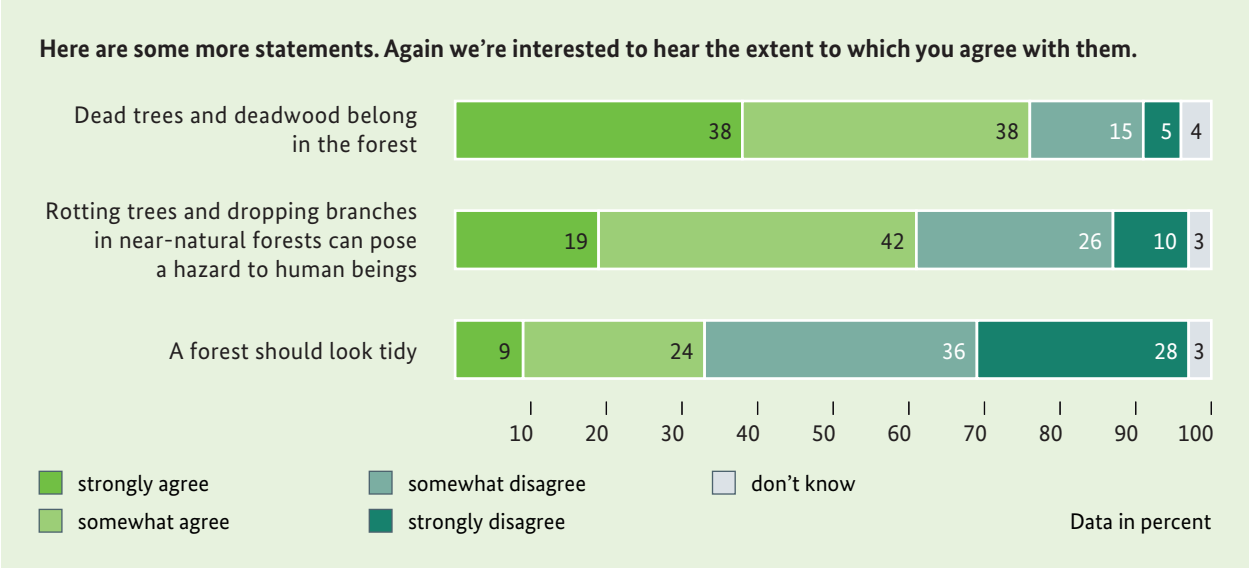
In Germany, wilderness exists first and foremost in national parks. These represent valuable natural landscapes such as the Bavarian Forest, Saxon Switzerland, and the Wadden Sea. The Federal Nature Conservation Act defines them as "areas that have been designated in a legally binding manner, are to be protected in a consistent way, cover a wide area, are

1. largely unfragmented with special characteristics,
2. fulfil the requirements for a nature conservation area in the greater part of their territory, and
3. for the most part have not been at all or only partially affected by human intervention, or are suitable for developing or are being developed into a state which ensures the undisturbed progression, as far as possible, of natural processes in their natural dynamics."

These conservation areas do not allow commercial exploitation in their core zones but are open to nature observation for scientific purposes, educational reasons and simply to experience nature. At the beginning of 2014 there are 15 national parks in Germany, with a terrestrial land area of 204,424 hectares,[10] corresponding to 0.57 percent of Germany's land area (not including the mud flats and open water of the national parks on the coasts of the North Sea and Baltic Sea). Within the scope of the Federal Government's National Strategy on Biological Diversity, 2007 saw initiation of a goal outlined earlier, namely to create the most extensive tracts of wilderness possible on 2 percent of the land area by the year 2020 (compare BfN 2013a). This entails authorisation to extend the development

10 Up until the end of 2013, the terrestrial land surface of the national parks in Germany totalled 194,362 hectares (480,278 acres); the creation of the Black Forest National Park has meant an additional 10,062 hectares (24,863 acres) since 1 January 2014 (compare BfN 2013b and Nationalpark Schwarzwald 2014).

Figure 11: Attitudes towards near-natural forests



of wilderness to further areas and expand national parks. The acceptance of the population is vital to this undertaking. What do people see as the pros and cons of national parks, how do they rate the current number of national parks, and how do the Germans view near-natural forests?

The majority are in favour of near-natural forests

The Germans are favourably disposed towards near-natural forests (see Figure 11). Almost 80 percent of respondents take the view that dead trees and dead wood belong in the forest. However, they also see disadvantages here: 61 percent of the population see risks to human beings from decaying trees and falling branches. A third expect a forest to look tidy – conversely, this means that as many as just under two thirds do not have this explicit expectation. Based on the

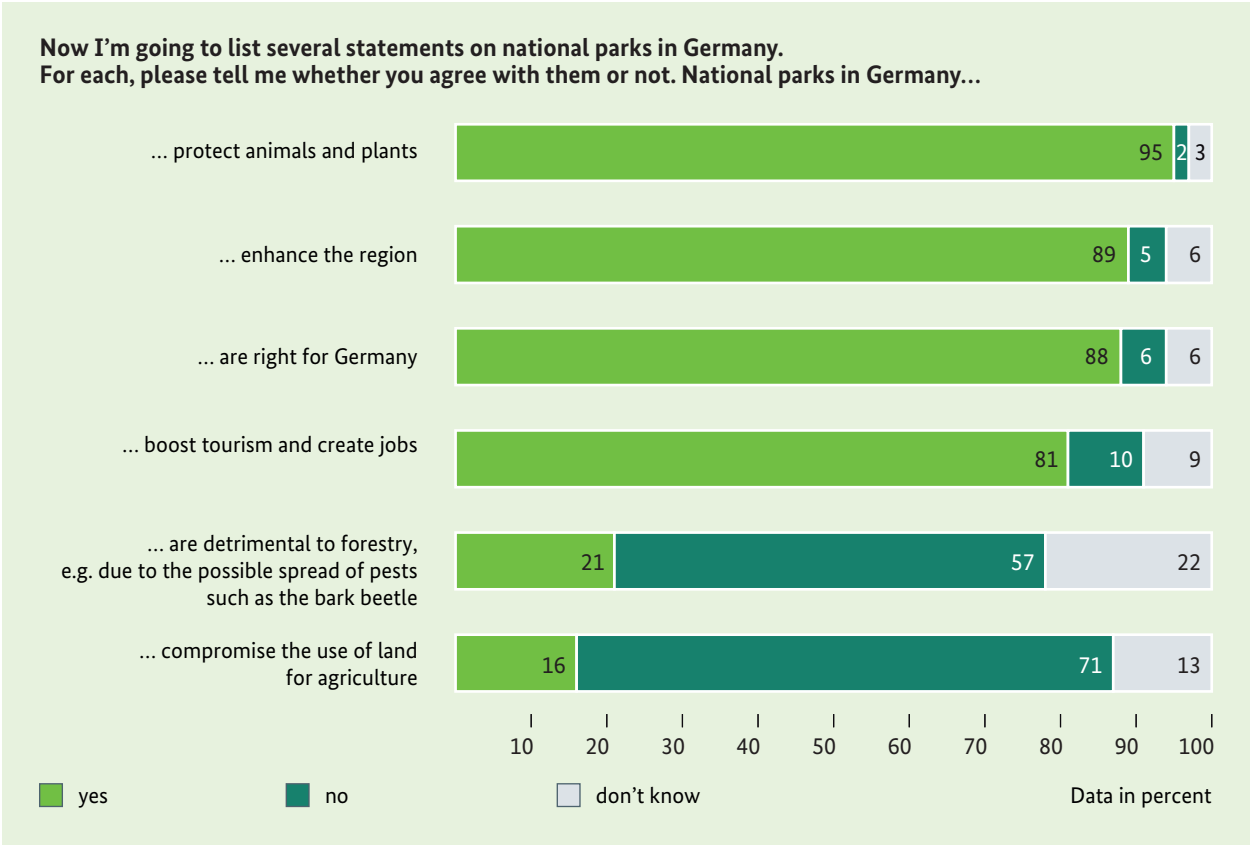
Table 7: Attitudes towards near-natural forests, according to gender, age and education

Here are some more statements. Again we're interested to hear the extent to which you agree with them.

Answer category 'strongly agree' Data in percent	Average	Sex		Age (years)				Education		
		M	F	-29	30 - 49	50 - 65	65+	low	me-dium	high
Dead trees and deadwood belong in the forest	38	39	38	43	37	37	39	31	38	48
Rotting trees and dropping branches in near-natural forests can pose a hazard to human beings	19	19	20	20	16	22	21	25	20	12
A forest should look tidy	9	7	11	8	7	10	11	10	10	5

heavily over-represented · over-represented · heavily under-represented · under-represented

Figure 12: Attitudes towards national parks



current data it is not possible to tell what is meant by a 'tidy forest'. In order to minimise the risk to humans from near-natural forests, trees lining marked pathways are checked at regular intervals and felled or pruned as necessary (safety obligation).

People with a high degree of formal education believe more firmly than those with a basic level of formal education that forests should be left in a near-natural state (see Table 7). This shows that the well-educated are more aware of the significance of deadwood and dead trees for animals and plants. Those with a basic level of formal education believe near-natural forests pose a greater risk to human beings and thus also tend to expect a 'tidy'- looking forest.

Attitudes to near-natural forests are closely linked to the respective lifeworld. Liberal-Intellectuals (58 percent at the top level of agreement) and Socio-ecological respondents (55 percent), like the Movers and Shakers (52 percent) are more strongly convinced that dead trees and deadwood belong in the forest (average: 38 percent). The Socio-ecologicals and Movers and Shakers are also less inclined to expect a tidy-looking forest (each at 1 percent, average: 9 percent), and see a lower risk to human beings (Socio-ecologicals: 8 percent; Movers and Shakers 6 percent, average: 19 percent). The Traditionals are more negative about near-natural forests (31 percent), seeing them as untended and neglected – they expect the forest warden to 'look after' the forest. A tidy forest is more important to the New Middle Class (13 percent). This very security-minded milieu is also more worried about the risks to human beings posed by falling branches and decaying trees (25 percent). Concerns about falling branches and decaying trees are most pronounced within the Precarious milieu (33 percent). Here, nature generally tends to be seen as robust, and it is also frequently perceived as a source of danger.

People recognise the advantages of national parks in Germany

Almost all citizens identify positive sides to national parks: they protect animals and plants, enhance the region, are in keeping with Germany, help boost tourism, and create jobs (see Figure 12). Arguments against national parks encounter a far lower rate of

Table 8: National parks in Germany, according to gender, age and education

Do you think there are already enough national parks in Germany?

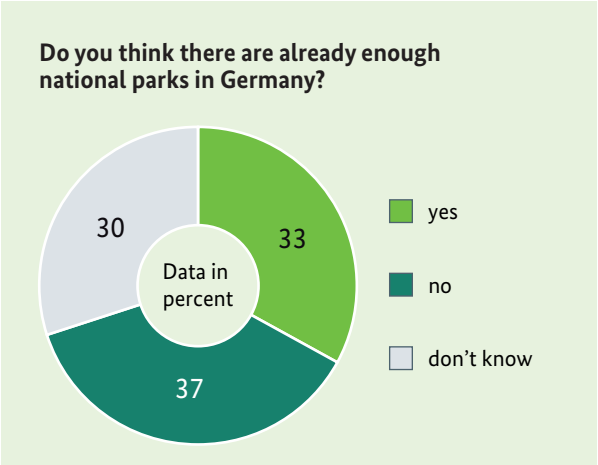
Data in percent	Average	Sex		Age (years)				Education		
		M	F	-29	30 - 49	50 - 65	65+	low	me-dium	high
Not enough national parks	37	38	36	38	42	34	33	30	38	47

heavily over-represented | over-represented | heavily under-represented | under-represented

acceptance. Only 21 percent think that national parks harm the forestry industry, and only 16 percent see it as a risk for agriculture. This positive sentiment is a prerequisite for the setting up and operation of national parks.

Arguments in favour of a national park are more frequently accepted by people with a good rather than basic level of formal education. This group's strong awareness of the need for national parks matches their attitudes to wilderness, as explained in Sections 2.2 and 2.3. People with a basic formal education and men are slightly less appreciative of the importance of national parks in protecting rare and valuable landscapes in Germany. Young adults (up to the age of 29) are slightly more afraid than people over 66 that an expansion of wilderness areas could mean less land for commercial exploitation.

Figure 13: National parks in Germany



Indecisiveness about the number of national parks that exist in Germany

Although national parks enjoy a good image among the population, evaluations of their current number (14 at the time of this survey) vary.[11] 33 percent of citizens think there are enough protected areas of this kind, 37 percent believe there should be more, and 30 percent have no opinion on the matter (see Figure 13). It is striking to note the very high frequency of the 'don't know' response. One can assume that the undecided have as yet had very little contact with the subject of national parks.

This set of opinions is distinct from the fact that 42 percent of the population welcome the idea of more wilderness in Germany and just 3 percent speak out in favour of less wilderness (see Figure 4). If one compares the answers to these two questions, it becomes clear that large segments of the population do not link 'national parks' directly with 'wilderness'.

People aged 30 to 49 and those with a high level of formal education are more often inclined to believe that there are not enough national parks (see Table 8).

This question also manifests similar areas of milieu focus to those for wilderness overall: Liberal Intellectuals (answer category 'not enough national parks': 57 percent, average: 37 percent), Socio-ecologicals (56 percent) and Movers and Shakers (46 percent) advocate national parks (somewhat) more strongly, whereas the Traditionals (28 percent) and Precarious (25 percent) in particular are less in favour.

11 As described above, there were 14 national parks in Germany at the time of the survey. This figure has increased to 15 since the Black Forest acquired national park status at the start of 2014 (compare BfN 2013b and Nationalpark Schwarzwald 2014).

3 Humankind and nature – how we threaten, use and protect nature

'Nature' is a term with at least as many connotations as 'wilderness', but in terms of philology and the history of ideas it is far older and hence also richer in meaning. We know from environmental history that each epoch cultivated its own relationship to nature (Radkau 2000), which was reflected in a variety of nature images (Heiland 1997). What do people today understand by 'nature', and how much of a priority is the protection of nature? The third chapter of the present report provides core building blocks of current nature awareness as previously surveyed in 2009 and 2011. One of these core building blocks is the question of nature as a personal priority. How important is nature for people, particularly what they consider to be intact nature (Section 3.1)? This is followed by the ascertainment and evaluation of how people perceive the threat to nature posed by humankind (Section 3.2). The last sub-section is devoted to the attitudes of the population on the use and above all protection of nature (Section 3.3).

On the one hand, the regular surveying of these questions allows us to recognise tendencies over the course of time. On the other hand the responses form a substantial part of the basis on which to model the nature awareness types.[12] Only marginal deviations show up compared with the preceding studies (compare Section 1.3).

3.1 What nature means to each of us

Nature is attributed a high degree of relevance

The Germans demonstrate a strong appreciation of nature. 92 percent of citizens take the view that nature is part and parcel of a good life. For 91 percent it means health and recreation, and 86 percent feel at home in the natural environment. In addition, 92 percent value the diversity of nature. Nature also has an important role to play in parenting: almost all respondents think it important to introduce their children to nature (89 percent; both levels of acceptance). A mere 8 percent claim that nature is alien to them, while as many as 22 percent (response category: 'somewhat agree' / 'strongly agree') show no interest in nature (see Figure 14).[13] The fact remains that there is a widespread fundamental appreciation of nature within the population.

Direct experience of nature, including that in their own region, plays an important role for people

For the vast majority, the direct encounter with nature and feeling at one with it constitute a high priority (see Figure 14). 85 percent of Germans feel happy when in natural surroundings. A mere 12 percent do not feel at ease in nature. 81 percent of the German population feel at one with the nature and countryside of their own region. Compared with these very high values, slightly fewer at 75 percent (especially at the top level of agreement: only 31 percent opted for this) try to spend as much time as possible in nature. It would seem that there is a not inconsiderable proportion of people who may enjoy the big outdoors and see nature as part of a good life but who do not make any effort to spend as much time as possible in it. Such people presumably value nature but find other aspects of life such as job, family, friends and entertainment media a more important part of their daily agenda. The question of actual accessibility (availability of nature within a reasonable space of time; mobility compromised by age or illness) certainly also plays a role here.

12 The nature awareness types form part of the in-depth report for the 2013 Nature Awareness Study. Data on the nature awareness types can also be found in the 2009 Nature Awareness brochure and in the in-depth reports for the 2009 and 2011 studies (compare BMU and BfN 2010, Kleinhückelkotten and Neitzke 2010, and Kleinhückelkotten and Neitzke 2012).

13 Even though this is a minority position, it could be helpful to look more closely at the manifestations of and reasons for a sense of nature as something alien, and explore these people's general lack of interest in nature.

The well-educated, women and older people find nature important

Differences in behaviour response determined by gender, age and education as ascertained in the preceding studies were once again confirmed in the current survey (see Table 9). It is generally fair to say that nature is more important to women than to men and that they view it more positively. For instance, 56 percent of the women but only 49 percent of the men completely agree with the statement that nature means health and recreation. People with a high level of formal education demonstrate a greater affinity for nature for almost all questions than those with an intermediate or basic level of formal education. Furthermore it can be said that the older the respondents, the more importance they ascribe to nature. For example, 62 percent of the over 65s associate nature with health and recreation, whereas the same is true for just 43 percent of the under 29s.

Figure 14: What nature means to each of us

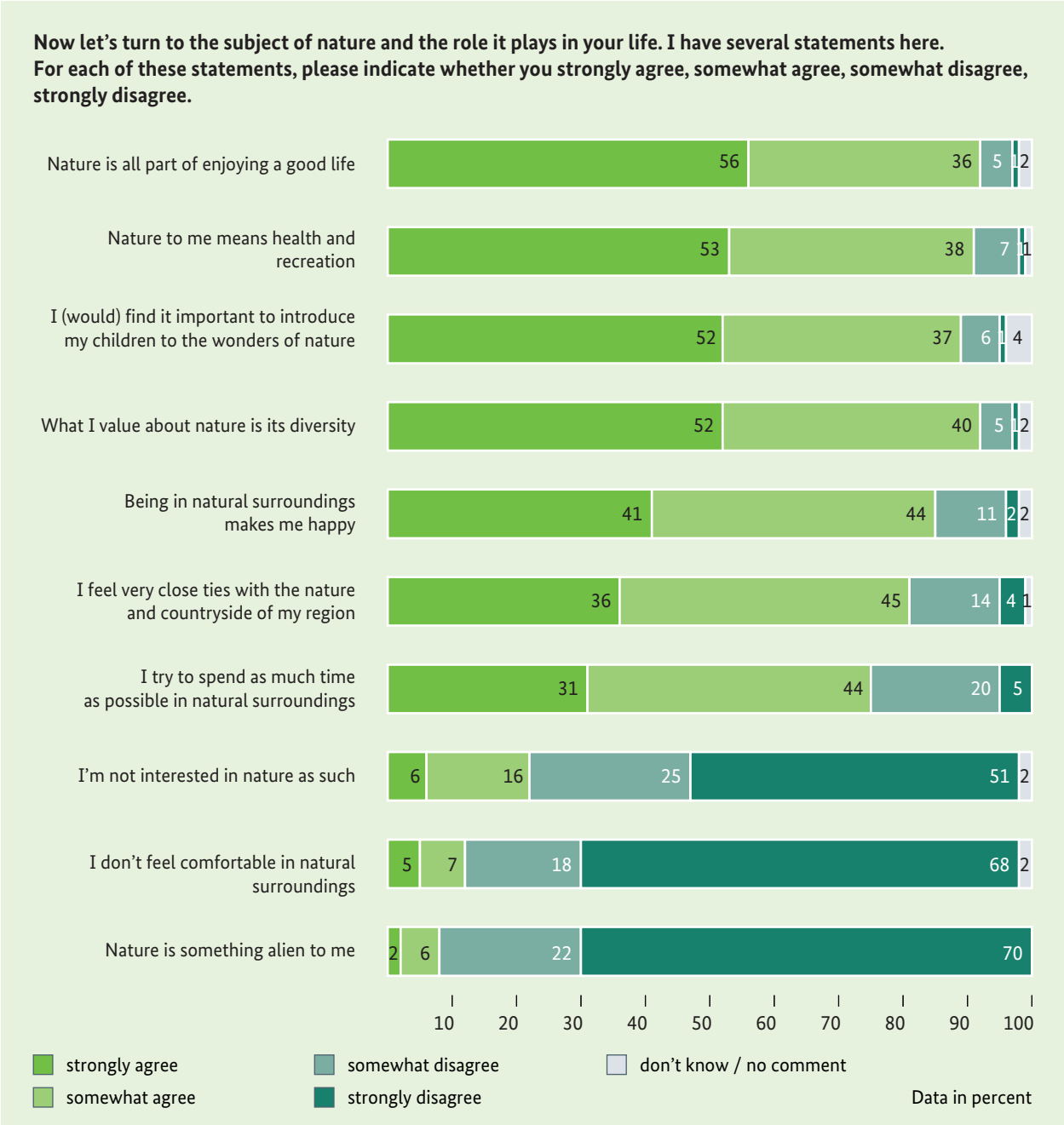


Table 9: What nature means to each of us, according to sociodemographic attributes

Now let's turn to the subject of nature and the role it plays in your life. I have several statements here. For each of these statements, please indicate whether you strongly agree, somewhat agree, somewhat disagree, strongly disagree.

Answer category 'strongly agree'	Average	Sex		Age (years)				Education		
Data in percent		M	F	-29	30 - 49	50 - 65	65+	low	me-dium	high
Nature is all part of enjoying a good life	56	52	60	50	54	57	62	51	55	66
Nature to me means health and recreation	53	49	56	43	52	52	62	49	52	61
What I value about nature is its diversity	52	50	55	46	51	55	55	45	54	64
I (would) find it important to introduce my children to the wonders of nature	52	48	55	49	51	51	56	45	53	63
Being in natural surroundings makes me happy	41	36	45	32	38	44	46	35	42	48
I feel very close ties with the nature and countryside of my region	36	35	37	26	30	42	45	32	39	39
I try to spend as much time as possible in natural surroundings	31	27	35	20	30	33	38	28	33	36
I'm not interested in nature as such	6	6	7	7	5	7	7	7	7	5
I don't feel comfortable in natural surroundings	5	5	6	3	5	7	7	5	7	5
Nature is something alien to me	2	1	2	2	2	1	2	2	1	1

heavily over-represented over-represented heavily under-represented under-represented

Nature also plays a greater role for those with a good level of formal education, for women and for older people. An exception to this is a sense of being at one with the nature and landscape of one's own region: this is an aspect which is similarly pronounced in both men and women at around one third each. When looking at this question from a formal education perspective, one sees that it is not the well-educated who are over-represented but those with an intermediate level of education. People with a higher level of education often have to move home in the course of their career and are altogether more mobile, which in turn leads to looser ties with nature and landscape in their own region.

The following differences between the milieus emerge: throughout all questions in this section, nature holds far greater relevance for the Socio-ecological milieu and for the Liberal Intellectual milieu than for the population average. Nature is less relevant in the modern, lower social class: in the Escapist and above all Precarious milieus. This pattern on the social map is reflected in many questions to do with nature and can be traced back to the varying intensity of people's affinity for nature, which would seem to suggest that it is firmly anchored in the repertoire of values.

3.2 How we perceive the threat to nature

Half the Germans do not see the destruction of nature in terms of a personal threat

How do people rate the threat to nature and the human response to this? Citizens disagree over whether the threat to nature is tantamount to a threat to their own habitat and quality of life: whereas this holds true as far as 45 percent are concerned (both levels of agreement), 52 percent see no risk to their own existence (see Figure 15). Nonetheless, three quarters take the view that people think too little rather than too much about the destruction of nature. From this it is fair to conclude that the reason for society's disinclination to confront the 'destruction of nature' issue need not necessarily stem from a sense of feeling personally endangered.

The perception of a threat to nature is more strongly pronounced in women and those with a good level of formal education. Age plays no significant role in this appraisal. The level of education was the only factor to influence the question as to whether the destruction of nature represents a personal threat: Approximately half the people with a high level of formal education find this to be so; this figure is 39 percent for people with a basic education (both levels of agreement for both) (see Table 10).

The Germans feel annoyed by the reckless treatment of nature

83 percent of Germans feel annoyed by the careless way so many people treat nature (see Figure 15). The high acceptance rating for this question is presumable due to a psychological phenomenon: it is generally easier to get annoyed about others or have high expectations of them than to undertake something oneself or accept restrictions. Two thirds are afraid that hardly any nature will be left intact for the coming generations (both levels of agreement). Intergenerational justice is a key argument in the discourse on environmental protection and nature conservation and also encounters strong approval in the present study. The fear that we are hardly leaving any nature intact for our children and children's children meets with stronger acceptance (24 percent, top level of agreement) than the sense of being under personal threat from the destruction of nature (11 percent).

Figure 15: Perception of the threat to nature

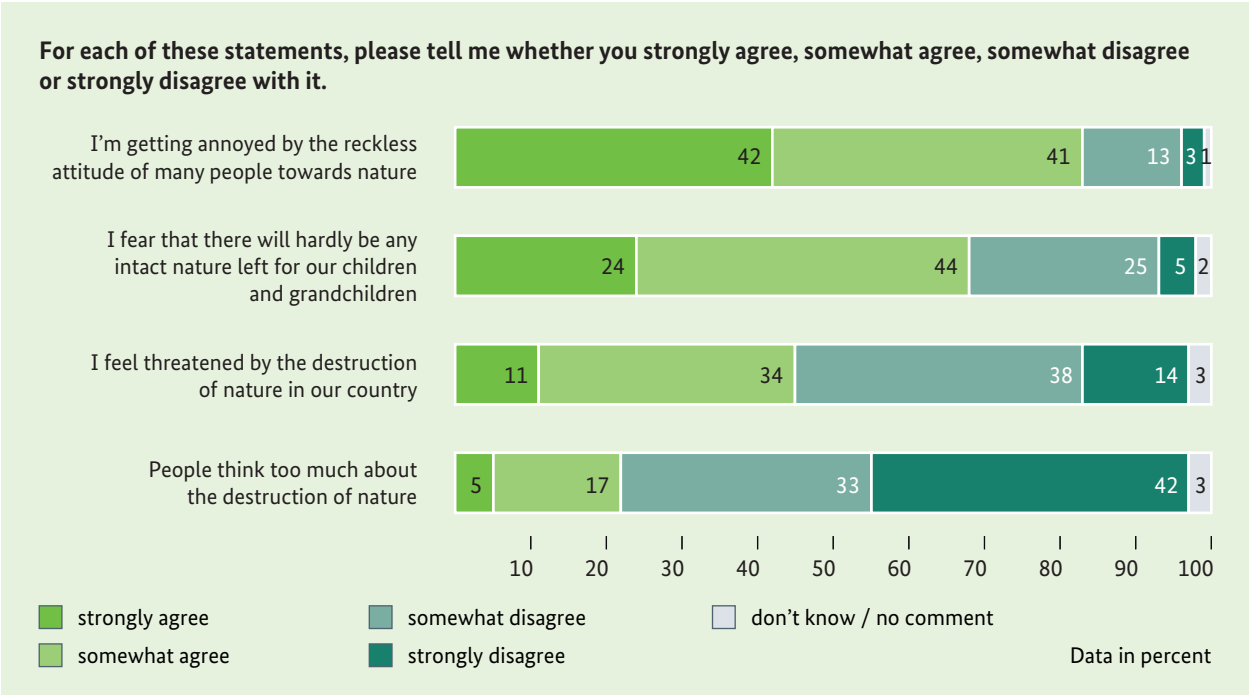


Table 10: Perception of the threat to nature, according to gender and education

For each of these statements, please tell me whether you strongly agree, somewhat agree, somewhat disagree or strongly disagree with it.

Answer category 'strongly agree' / 'somewhat agree' Data in percent	Average	Sex		Education		
		M	F	low	medium	high
I'm getting annoyed by the reckless attitude of many people towards nature	83	80	85	77	84	91
I fear that there will hardly be any intact nature left for our children and grandchildren	68	65	70	63	71	71
I feel threatened by the destruction of nature in our country	45	44	46	39	48	52
People think too much about the destruction of nature	22	25	19	25	22	17

heavily over-represented | over-represented | heavily under-represented | under-represented

Women and people with a good level of formal education are more afraid than men and people with a basic and intermediate formal education of there being no untouched nature for future generations to enjoy. These segments of the population are also more likely to feel annoyed at the reckless treatment of nature (see Table 10): the figure for the basically educated is 77 percent, while 91 percent of the well-educated are angered by the reckless handling of nature (both levels of agreement).

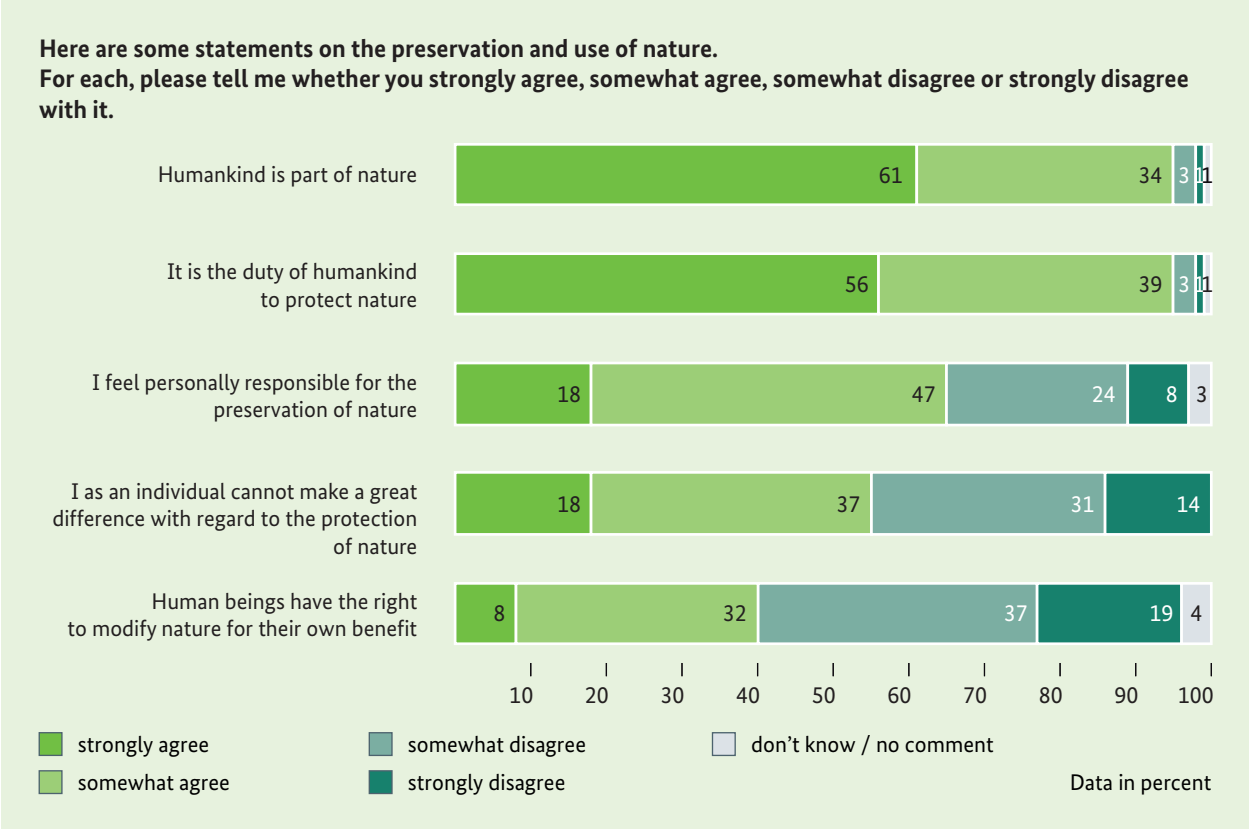
Public perception of nature under threat differs depending on lifeworld: besides the Socio-ecologicals (91 percent) and Liberal Intellectuals (93 percent), the Established Conservatives (92 percent) are particularly angry that many people treat nature so recklessly ('strongly agree' / 'somewhat agree', population average: 83 percent). The first two milieus ascribe high relevance to nature, which explains their standpoint, whereas the Established Conservatives are very anxious for social norms to be respected. They see the decline of morality, decency and virtue as a great challenge of our time. The destruction of nature in Germany represents the strongest threat for the Socio-ecologicals (61 percent) and Established Conservatives (52 percent). The young middle-class Adaptive Pragmatics hardly feel threatened by this at all (33 percent, 'strongly agree' / 'somewhat agree', population average: 45 percent). For 22 percent of the population, there is no reason to worry unduly about the destruction of nature. However, far fewer representatives of the Movers and Shakers (7 percent), Socio-ecologicals (7 percent) and Liberal Intellectuals (12 percent) believe that we think too much about the destruction of nature. In return, milieus on the lower, modern fringe of the social map (Precarious: 35 percent, Escapists: 33 percent) and the High Achievers (33 percent) find it somewhat exaggerated to worry about the destruction of nature.

3.3 Sustainable use and preservation of nature

The general belief is that humankind is duty bound to protect nature – and yet individuals are less inclined to place the responsibility on their own shoulders

The vast majority of citizens (95 percent) take the view that humankind is part of nature and thus obliged to protect it (see Figure 16). Acceptance of one's personal responsibility to preserve nature is far lower than that of a general obligation on the part of humankind: 18 percent 'strongly agree' and a further 47 percent 'somewhat agree' that they themselves are also responsible for preserving nature. Over half (55 percent) think that they as individuals are unable to make much difference to nature conservation (both levels of agreement). The statement that human beings have

Figure 16: Attitudes towards nature conservation



the right to modify nature for their own benefit is accepted by 40 percent.

People's level of education has a strong influence on how they view issues to do with nature conservation. Whereas only 13 percent of those with a basic level of education feel personally responsible for preserving nature, this holds true for 24 percent of those with a high level of formal education (top level of agreement, population average: 18 percent). Women are more inclined to emphasise the obligation of human beings to protect nature, but men agree more strongly with the statement that human beings have the right to modify nature for their own benefit (see Table 11).

Nature preservation is seen as a major political challenge – and yet many expect nature conservation to make do with less money in times of financial crisis

There is a consensus almost right across the board that nature conservation is a highly relevant political issue: 86 percent see it as a major political task in Germany. For 40 percent of respondents, this task is being fulfilled to a sufficient degree; this percentage believes that enough is already being done to protect Germany's nature (see Figure 17).

Just under one third of respondents think that nature must not be allowed to stand in the way of economic development, which means they give precedence to economic progress (both levels of agreement). Financial downturn leads to an increase in the numbers who attach more importance to the economy: 62 percent of the population think it necessary to cut funding for nature conservation during such phases. Compared with the year 2011, agreement on this point has risen significantly (top level of agreement 2013: 20 percent; 2011 percent: 15 percent). The underlying line of argument could perhaps be summed up as follows: If everyone has to get by on less, then nature conser-

Table 11: Attitudes towards nature preservation, according to gender and education

For each, please tell me whether you strongly agree, somewhat agree, somewhat disagree or strongly disagree with it.

Answer category 'strongly agree' Data in percent	Average	Sex		Education		
		M	F	low	medium	high
Humankind is part of nature	61	60	62	55	66	67
It is the duty of humankind to protect nature	56	53	59	50	60	62
I feel personally responsible for the preservation of nature	18	18	19	13	20	24
I as an individual cannot make a great difference with regard to the protection of nature	18	18	18	21	19	11
Human beings have the right to modify nature for their own benefit	8	10	6	11	6	5

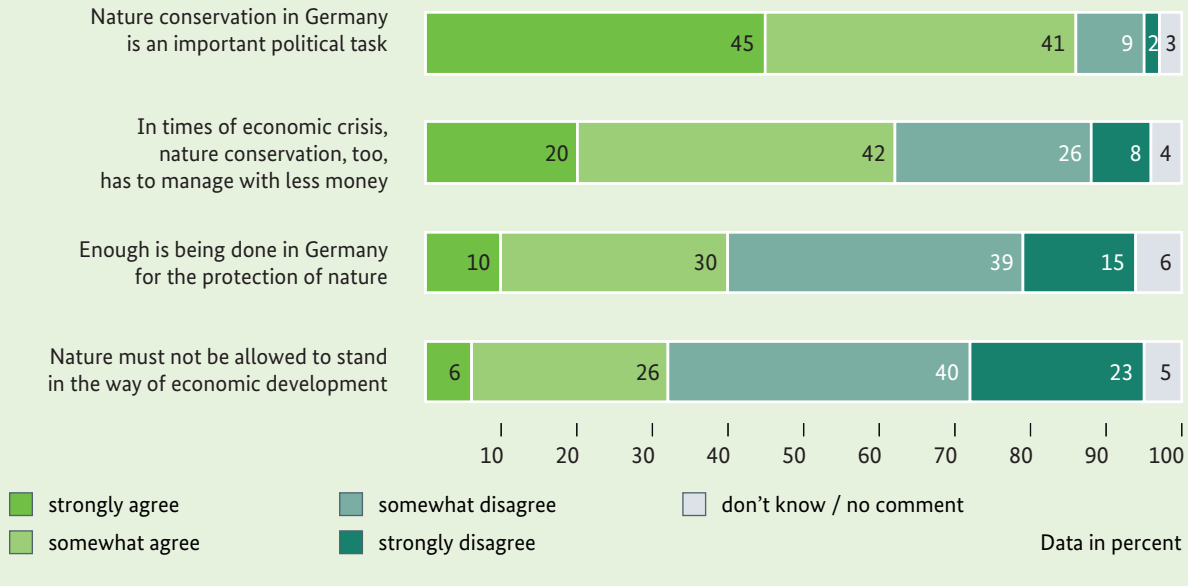
heavily over-represented | over-represented | heavily under-represented | under-represented

vation must do the same – no matter how important its goals might be. The other questions of the item set depicted in Figure 17 provide no indication of any significant differences to the 2011 survey.

More men than women take the view that nature should not be allowed to stand in the way of economic progress. In addition, the well-educated show more concern about using nature for commercial purposes (22 percent and 36 percent, both levels of agreement). Level of education and gender have a similarly

Figure 17: Nature preservation caught between politics and the economy

And what is your opinion of the following statements?



strong influence on how people rate the importance of nature conservation in time of economic crisis: 23 percent of men are in favour of cutting down on expenditure; this figure is only 18 percent for women. People with a high level of formal education are cautious in this respect: only around 1 in 10 come out in favour of this.

The sustainable use of nature is very important to the population

Virtually all citizens support a sustainable approach to nature out of total conviction or at least on principle: nature should be maintained in its current state for the next generations and be used in such a way as to permanently safeguard the diversity and habitants of flora and fauna. It is important to preserve the unique quality and beauty of landscape and nature in the process. Nor should people in poorer countries suffer from the way we treat nature (see Figure 18).

The extent to which the principles of a sustainable use of nature are accepted differs depending on education level and gender. The top levels of agreement show people who hold the university entrance certificate to have a far more pronounced awareness of the need for sustainability than those with a basic education (see Table 12). Women are more appreciative of both inter- and intra-generational justice than men: They are more inclined to take the view that coming generations (top level of agreement: 59 percent, men: 54 percent, population average: 57 percent) and those in poorer countries (52 percent, men: 46 percent, population average: 49 percent) should not suffer any disadvantage from the way we treat nature.

A look at attitudes towards a sustainable use of nature according to Sinus-Milieu reveals similar areas of focus to those of the previous sets of questions: the milieus with a fundamentally post-material orientation, i.e. the Socio-ecological, and Liberal Intellectuals, are particularly in favour of a sustainable approach. The young Movers and Shakers also find the sustainable use of nature very important, and think in global terms for the longer term. The Escapists show altogether little awareness of the need for a sustainable use of nature. This fun-oriented milieu concentrates more on the here and now; it has no intention of compromising on the present, and is bored by the idea of long-term plans. The Precarious Milieu finds the sustainable use of nature somewhat unimportant, as its attention is focused more on the challenges currently being faced closer to home. Difficult family circumstances, precarious job situations, and existential anxiety about the future make anything to do with the use of nature and the possible consequences seem secondary.

Figure 18: Approval of the principles behind a sustainable use of nature

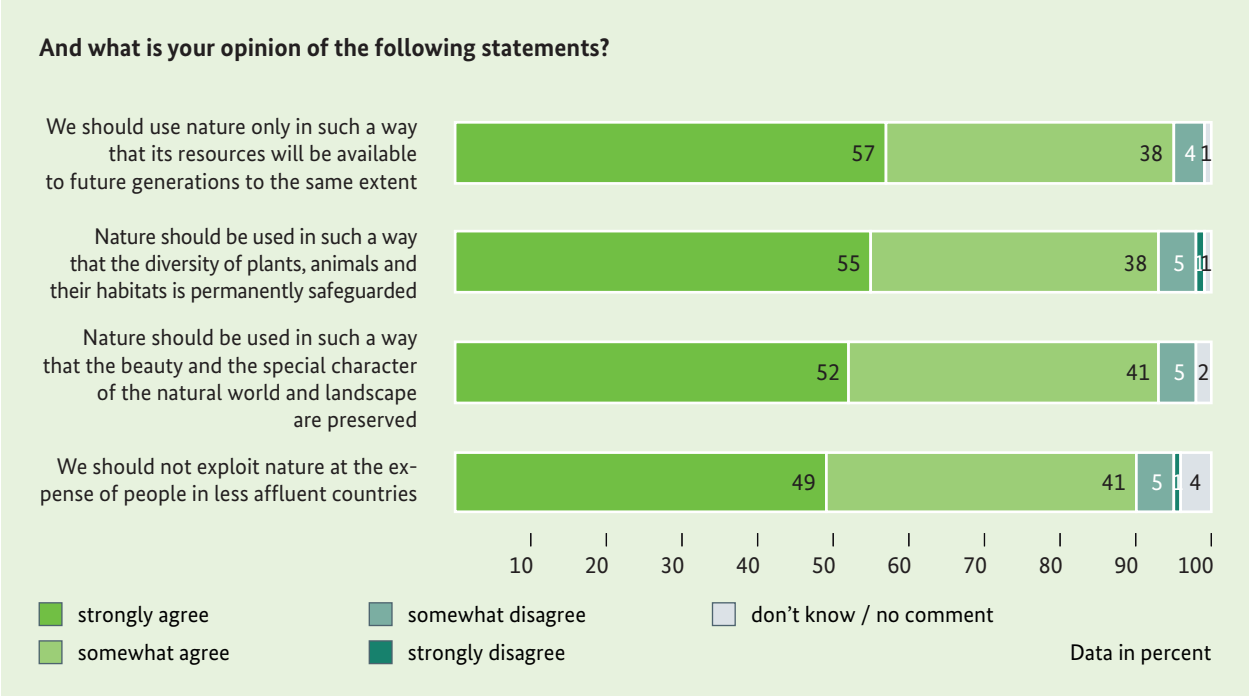


Table 12: Approval of the principles behind a sustainable use of nature, according to gender and education

For each of these statements, please tell me whether you strongly agree, somewhat agree, somewhat disagree or strongly disagree with it.

Answer category 'strongly agree' Data in percent	Average	Sex		Education		
		M	F	low	medium	high
We should use nature only in such a way that its resources will be available to future generations to the same extent	57	54	59	51	58	63
Nature should be used in such a way that the diversity of plants, animals and their habitats is permanently safeguarded	55	53	57	49	56	63
Nature should be used in such a way that the beauty and the special character of the natural world and landscape are preserved	52	50	53	45	55	58
We should not exploit nature at the expense of people in less affluent countries	49	46	52	45	50	54

heavily over-represented | over-represented | heavily under-represented | under-represented

Besides these general findings, it is possible to ascertain the following details: the sustainable use of nature is somewhat less important to the Traditionals in terms of protecting nature and landscape (top level of agreement: 46 percent, population average: 52 percent) and the diversity of flora and fauna (48 percent, population average: 55 percent) – even though they feel a relatively strong bond with their native Germany, as established above. Their responses to questions on a sustainable use of nature that isn't detrimental to human beings – whether future generations or those in far-off countries – correspond to the mean. The young, middle-class Adaptive Pragmatics are particularly concerned about people in poorer countries (top level of agreement: 57 percent, average: 49 percent), as are the Liberal Intellectual (70 percent), Socio-ecologicals and Movers and Shakers (both 60 percent).

4 Culture – shaping a sustainable co-existence between humankind and nature

Having focused on wilderness (Chapter 2) and man's relationship with nature and nature conservation, along with general attitudes towards the principle of sustainability (Chapter 3), this chapter of the Nature Awareness Study deals with the way our society actually approaches nature and conservation, in brief our culture of nature. The study describes a gradient ranging from pristine nature to artificiality and introduces an 'arc of suspense' which manifests itself in various forms and to different degrees in the respective sections.

The word 'culture' is derived from the Latin cultura, meaning 'tilling, nurturing, cultivation', but it also embraces 'appreciation and adoration'. Other words stemming from this Latin term are 'colony' and 'cult'. 'Culture' in the German language dates back to the end of the 17th century, and from the very beginning was used to refer to the cultivation of land and nurturing of spiritual goods. In the broadest sense of the word, 'culture' therefore means everything that humankind itself creates as opposed to nature which it had no hand in creating or changing. Cultural achievements include all formative transfigurations of a given material as in technology or the creative arts, but also spiritual constructs such as law, morality, religion, economics and science.

Chapter structure

The range of topics covered in this chapter is almost as extensive. It begins by looking at our cultural landscape, in other words the natural landscape as processed and reshaped by human beings. We discuss the conflict between agriculture and nature conservation, and then move on to examine the role of near-natural landscaping in the name of flood control. A second section addresses the attitudes of the population towards energy transition, a topical issue in terms of environmental, energy and climate policy. The expansion of renewable energies and the supply networks that go with them add a new facet to the cultural landscape, leading to a diverse array of conflicts in situ, which is why they are explored here. The section closes with the topic of ecologically sound consumption; this is the first time it has been taken up in a nature awareness study. Even though consumption might at first glance seem at odds with nature, ecologically sound consumer behaviour can express an appreciation (cultura) of an intact natural environment and at the same time contribute towards nature conservation. Overall, culture must be managed in such a way that it does not jeopardise its own reproducibility. The sustainable design of human life with and within the natural world thus represent a core concern of this chapter.

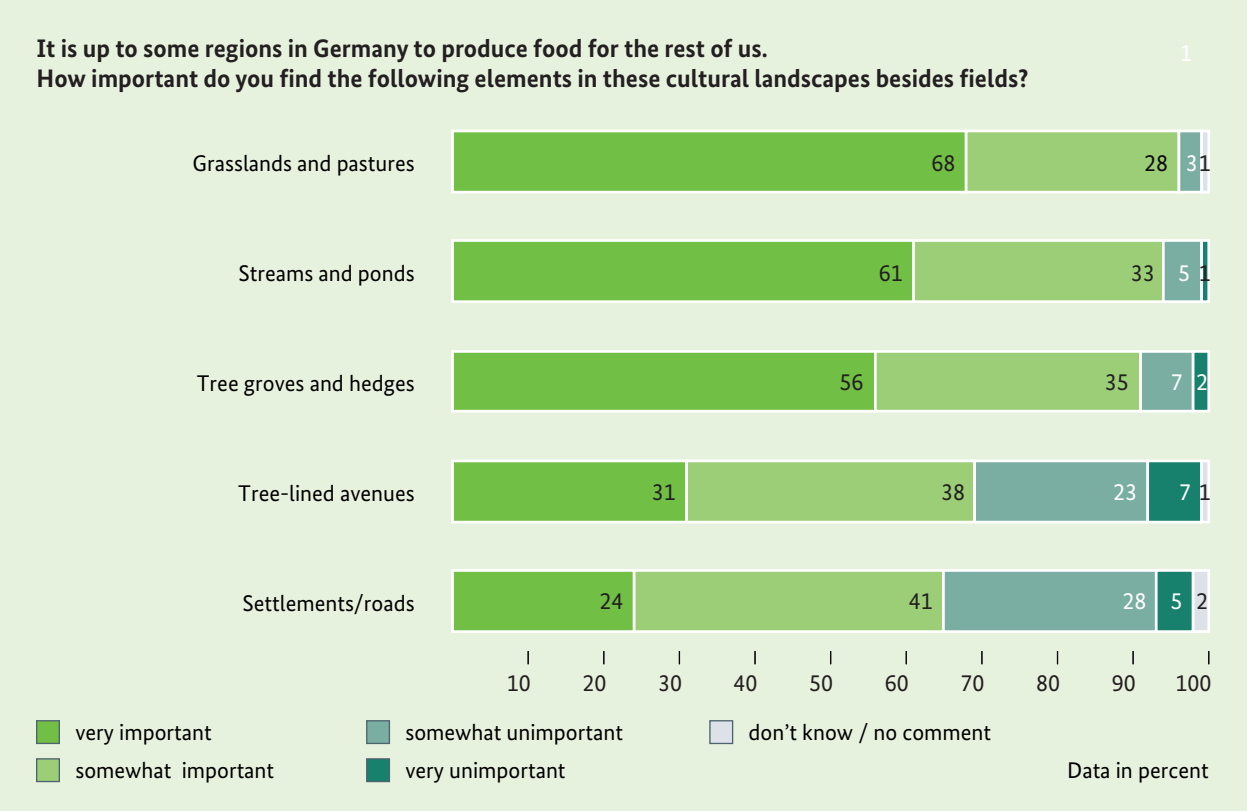
4.1 Cultural landscapes: farm land, rivers and flood control

In the European context, a cultural landscape is understood to mean a region that in the course of history has developed from a natural landscape under the impact of agriculture and human settlement. The term and what it describes thus designate the middle ground between wilderness or pristine nature on the one hand and urban industrial landscapes on the other.[14]

From a nature conservation perspective, the type and intensity of human use and settlement are vital to the determination and assessment of cultural landscapes. Many very species-rich biotopes (for example wet meadows, moors, orchard meadows) only came into being by the first half of the 20th century thanks to traditional methods of farming – most laypersons often take them for nature or even wilderness without further ado (see Lüneburger Heide). Since then, however, intensified farming has become a burden on the

14 This categorisation becomes more differentiated and complex the more blurred the normally clear dividing line between urban and rural space becomes – for example due to the changing function of former village structures, the development of infrastructures, or the expansion of towns and cities in the course of suburbanisation. The term Zwischenstadt ('in-between city'), coined in the 1990s (Sieverts 1997), reflects the disintegration of these boundaries. It sparked a lively debate, particularly among planners, as to whether Zwischenstadt can be considered a landscape category in its own right, and how it should be evaluated (Vicenzotti 2011).

Figure 19: Importance of different types of landscape



ecosystem due to measures such as the use of pesticides or an increased input of nitrates; biodiversity has declined as a result of phenomena such as monocultures and vast fields (Piechocki 2010).

The Federal Government has set the following targets in this respect within the scope of the National Strategy on Biological Diversity (compare Chapter 5):

> "By 2020 the biodiversity in agro-ecosystems will have increased substantially. By 2015 the populations of the majority of species (particularly wild species) typical for the cultural landscapes used for farming will have been secured and will again be increasing."
>
> "By 2015, the proportion of land used for valuable conservationist agro-biotopes (high-grade grassland, orchard meadows) will have increased by at least 10 percent compared with 2005. In 2010, semi-natural landscape elements (such as hedges, borders, copses and small bodies of water) account for at least 5 percent of agricultural areas" (BMU 2007, Section 2.4).

The majority favour near-natural landscape elements

In determining the nature awareness of the population it is therefore important to find what the population thinks about the German cultural landscape and in particular the role of specific near-natural elements. The first question relates expressly to those largely agricultural regions in Germany dedicated primarily to food production.

A majority speaks out in favour of natural or near-natural landscape elements in regions used for farming (see Figure 19). Those most important to them are grasslands and pastures (68 percent 'very important'), followed by streams and pools (61 percent), tree groves and hedges (56 percent). Tree-lined avenues prove to be slightly less important (31 percent) – perhaps because they tend to be seen as part of the traffic infrastructure. Just 24 percent of the population find settlements and roads very important as part of largely agrarian regions.

Responsibility for the landscape elements is seen to lie first and foremost with nature conservation

On asking where the responsibility for preserving these important landscape elements should lie, and based on the first response option 'considerable responsibility', nature conservation is named in first place (61 percent), followed by forestry (51 percent), local government (39 percent), and agriculture (38 percent). Hunting lags a long way behind (22 percent). If one takes the first two response options together, besides nature conservation (92 percent) a great deal of the responsibility is thought to lie with forestry (90 percent) and agriculture (83 percent) (see Figure 20).

The next topic dealt with in this study is flood control. Recent years have seen recurring cases of particularly serious and costly flood events, in each case reactivating the public debate on meaningful ways to improve flood protection. What role can nature conservation play here?

Rivers should be managed in a near-natural way

The National Strategy on Biological Diversity also sets targets for river management:

> "By 2020, watercourses and their water meadows will be protected in their role as habitats so that the typical diversity of this natural area in Germany will be guaranteed".
>
> "By 2020, the majority of watercourses will have more natural flood plains" (BMU 2007, Section B 1.2.4).

The results of the survey show these targets to enjoy broad acceptance within the population: 93 percent (both levels of acceptance, see Figure 21), respectively, find near-naturally managed rivers and streams more attractive than those that have been straightened, and agree ('strongly' and 'somewhat') that near-natural

Figure 20: Responsibility for preserving the landscape

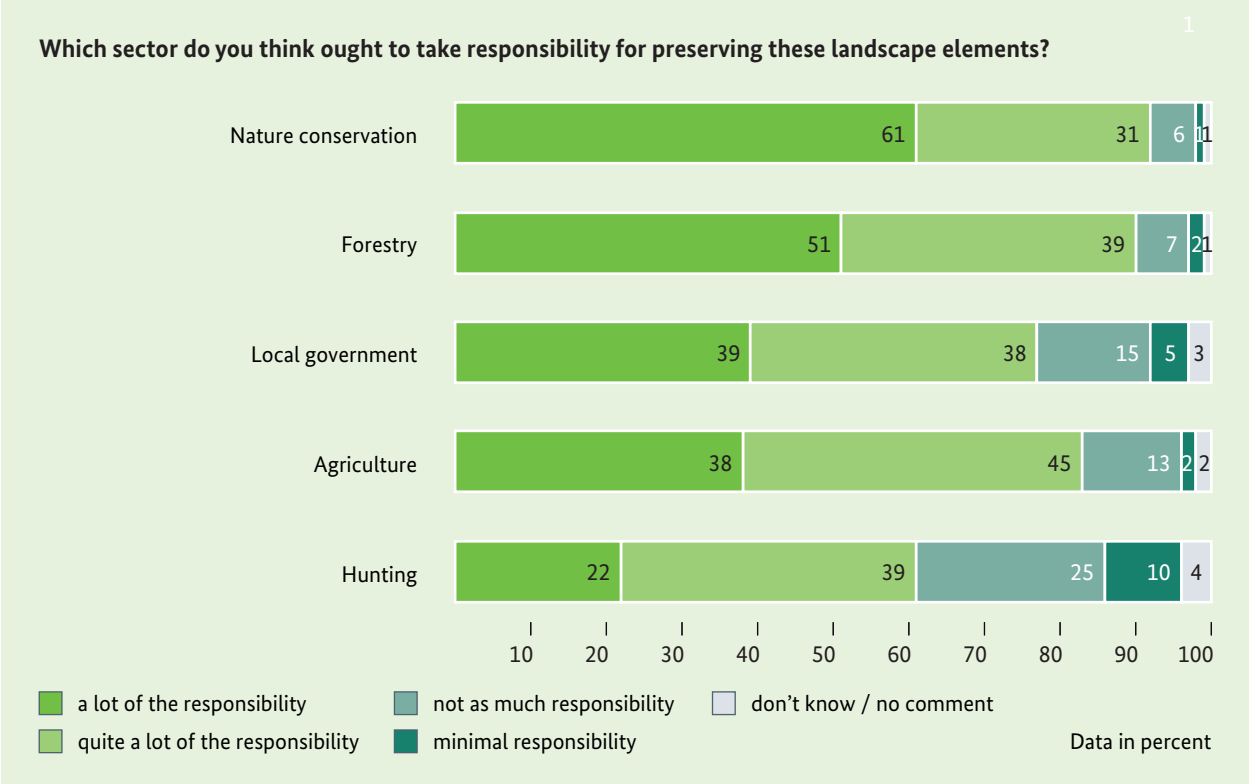
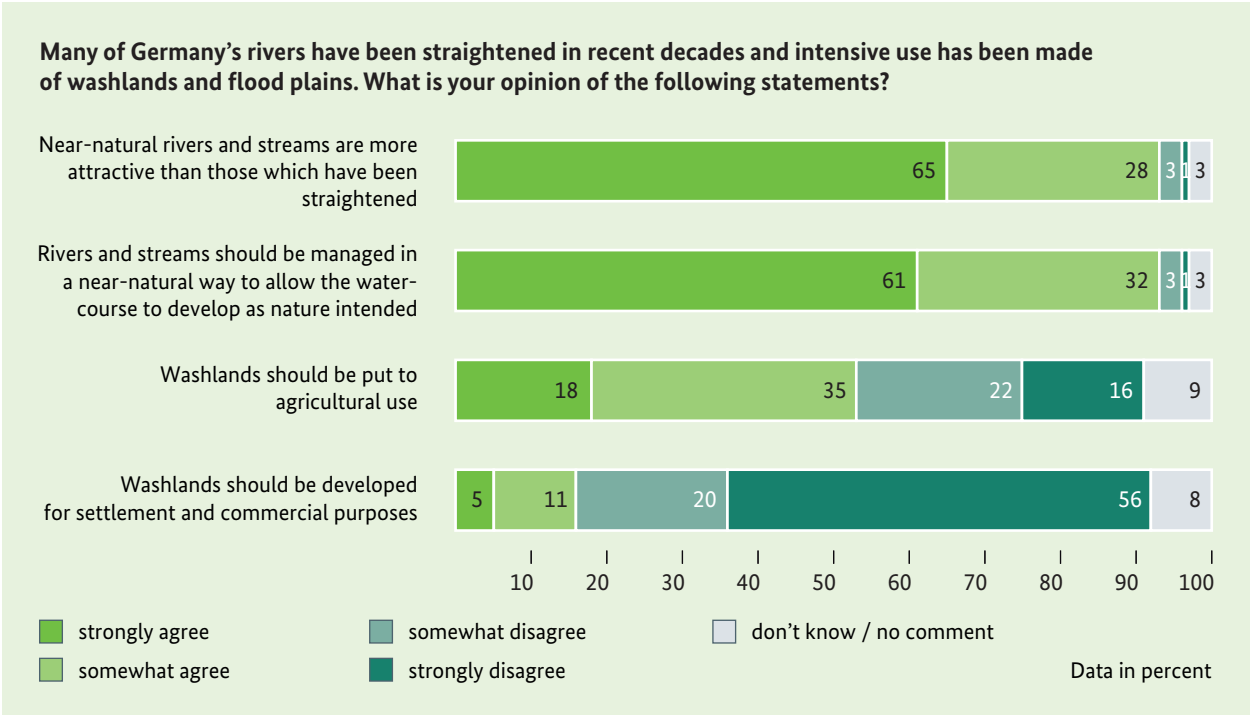
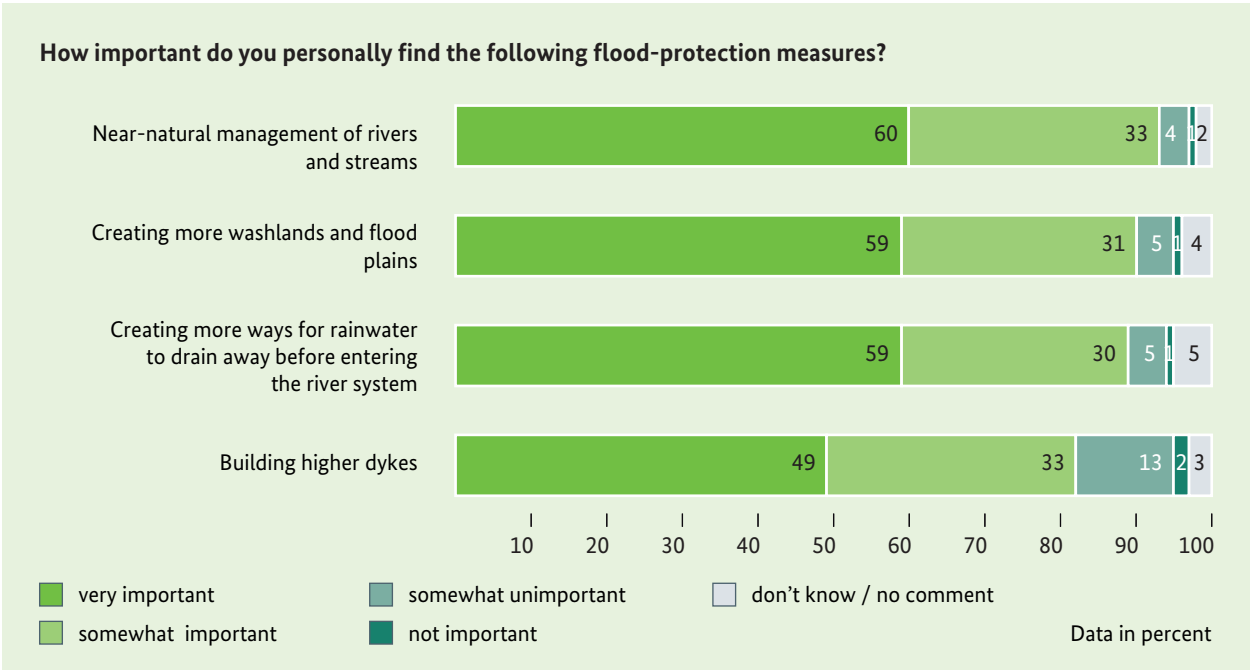


Figure 21: Design of rivers and washlands



management is important to allow the rivers to develop as nature intended (see Figure 21). The question as to whether human beings should use flood plains reaps cautious responses: only 18 percent of respondents 'strongly agree' that flood plains should be used for agricultural purposes – and fewer still come out in favour of using them for settlement or commercial ends (5 percent). This suggests that people rate flood-related risks as being less serious for residents and businesses than for farmland.

Figure 22: Approval of flood control measures



Near-natural flood control measures encounter greater acceptance than engineered solutions

On opening up the perspective and asking about the importance of various flood defence measures, near-natural measures receive higher agreement scores than engineered flood control (see Figure 22): 60 percent find the near-natural management of rivers and streams very important, 59 percent the creation of washlands and flood plains, and likewise 59 percent the creation of rainwater infiltration areas. The building of higher dykes is deemed very important by 49 percent of citizens. This result shows that the population considers nature conservation to play an active and in many respects (including aesthetic and ecological) constructive role in flood control.

4.2 Energy transition and renewables

As in the preceding study of 2011 (compare final scientific report, Kleinhückelkotten and Neitzke 2012) the present Nature Awareness Study also enquires about attitudes towards the energy transition. This was a highly topical issue 2 years ago, when the Federal Government decided to phase out nuclear energy and fast track the development of renewables in the wake of the Fukushima nuclear disaster. The coalition government formed at the end of 2013 between the CDU and SPD has meanwhile announced a new proposal for legislation designed to reform the legal framework of the energy transition while reinforcing its fundamental objectives.

The energy transition is allied to nature conservation in many respects. In very general terms, the planned substitution of fossil fuels by renewables reduces the emission of the greenhouse gas carbon dioxide (CO_2), thus making a key contribution to protecting the climate from global warming. As the threat to biodiversity from climate change is set to increase still more in future, the principle of energy transition must be seen as part of nature conservation. On the other hand, the many protests against individual projects of the energy transition – for example wind farms or power grids – reveal citizens' concerns about the impact of such projects on the ecosystem and landscape.

It is therefore interesting to know what the German population currently thinks of the energy transition, and how it rates its impact on nature and the goals of nature conservation. Besides people's basic attitudes, the main focus here is on specific landscape elements and individual renewable energies. The results are relevant not just for nature conservation but also for energy and climate policy.

The majority are in favour of the energy transition

Acceptance of the energy transition remains high in 2013: 56 percent of respondents think it is the right approach, 10 percent think the opposite, and 30 percent are undecided (see Figure 23). Compared with the 2011 survey, one is struck by the considerable decline in acceptance: back then, 63 percent were in favour of expanding the use of renewables. The reason for the decline is very probably due to the fact that the year of

Figure 23: Approval of the energy transition compared over time

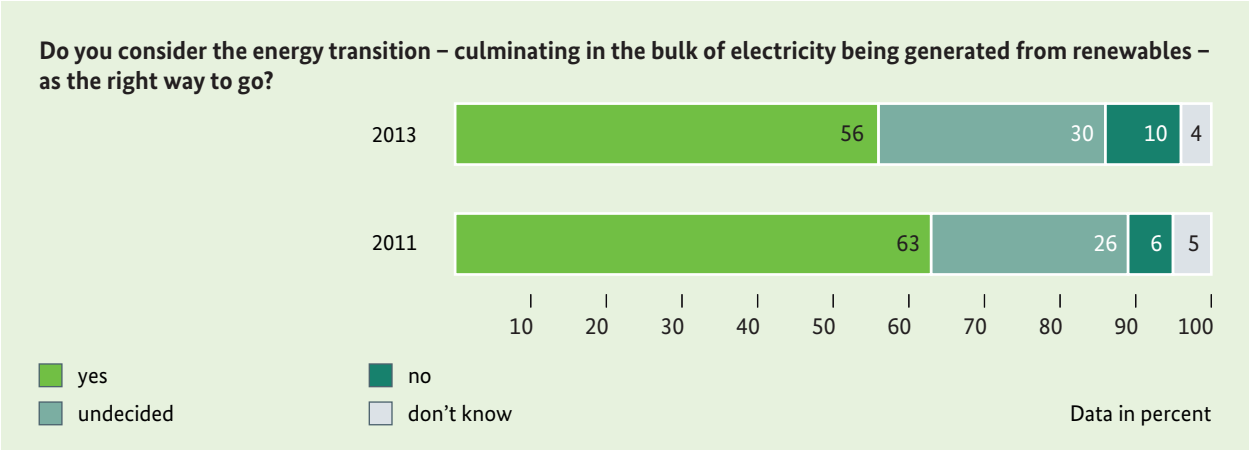
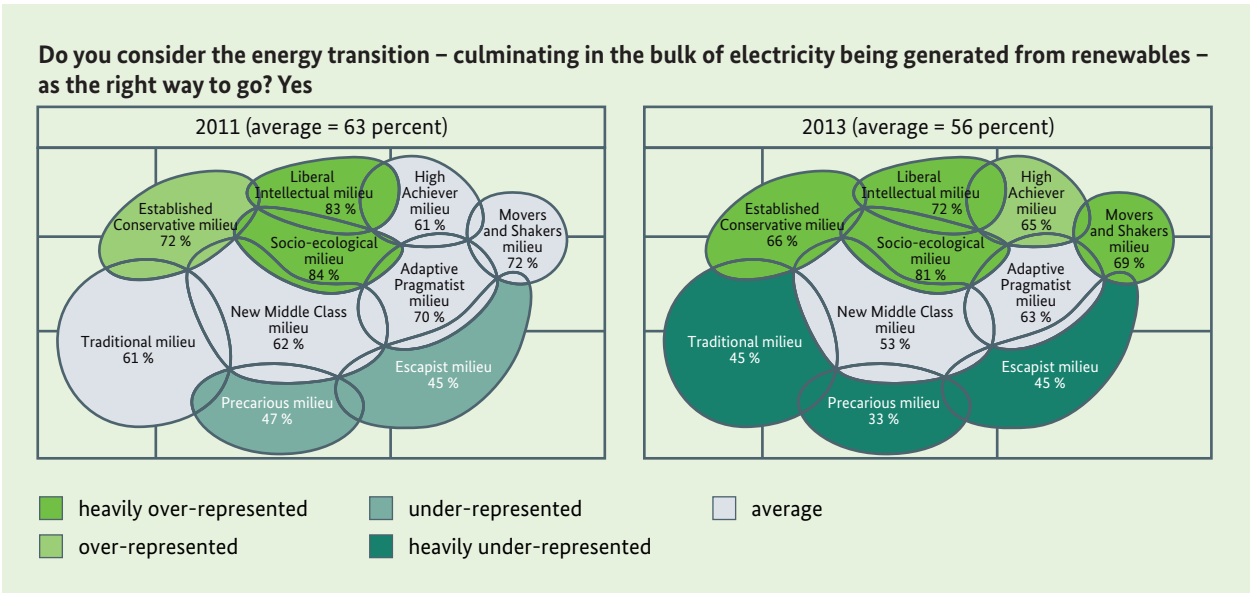


Figure 24: Approval of the energy transition according to Sinus-Milieu in 2013 compared with 2011



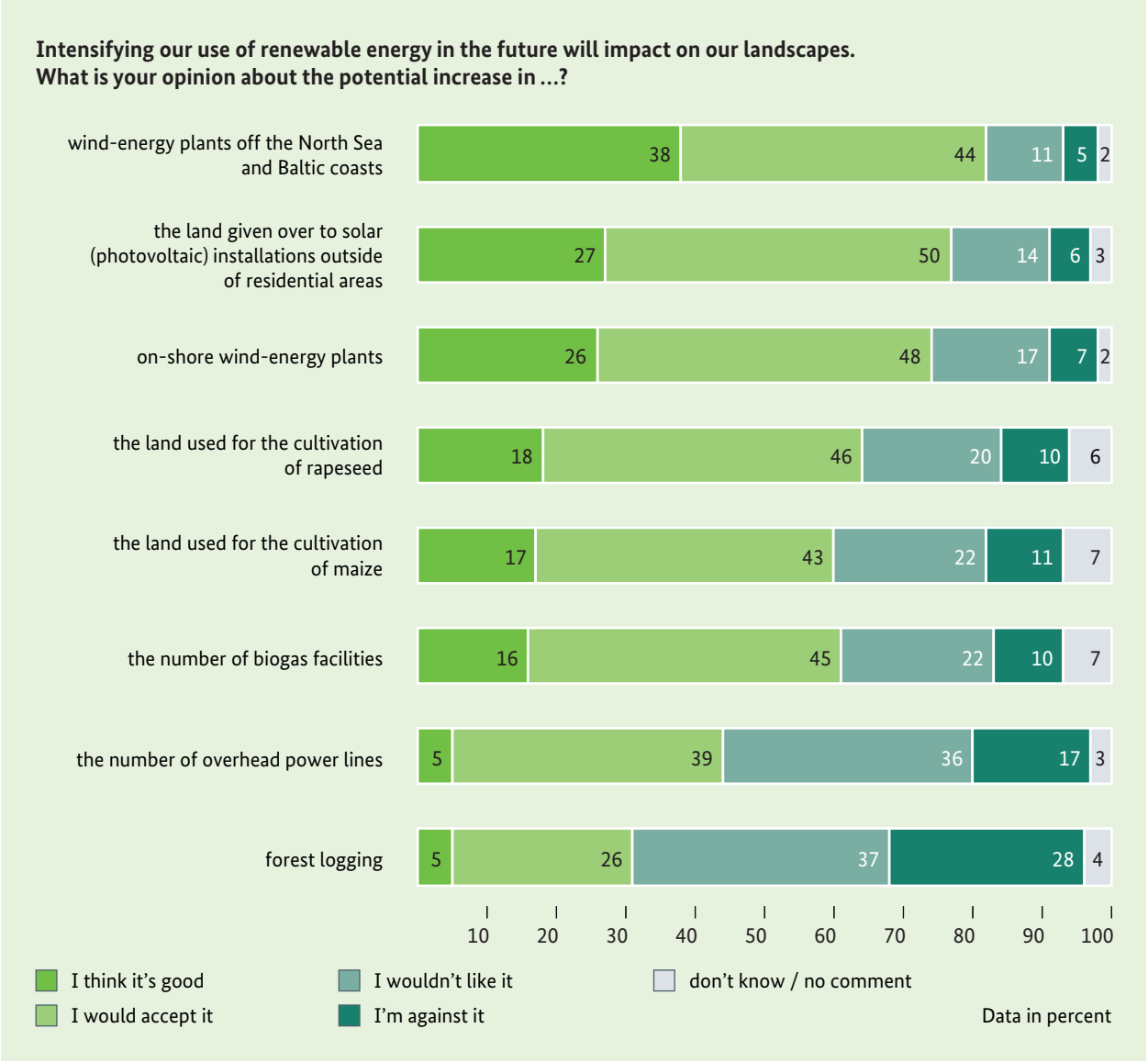
the survey– 2013 – saw a debate on the further funding of renewable energies impinge on the federal election. The Renewable Energies Act (EEG) was a subject of hot debate in view of the rising electricity prices – for instance, opponents of the EEG launched a nationwide campaign to cancel it for reasons of cost and efficiency. This debate has evidently affected the population's attitude towards the energy transition, but was unable to 'overturn' the enduring support of the majority.

The picture becomes somewhat more differentiated when one considers the socio-demographic attributes. The energy transition does not appear to be a gender-sensitive topic. In other words, men and women assess it in roughly the same way. It is, however, influenced by age, education and income. Younger respondents in particular (under 29), and those with a higher level of formal education are more inclined to be in favour. Acceptance is also far higher among people on a net household income of €3,500 than those on an income of between €1000 and €2000. This would suggest that the 2013 debate centring on the cost aspects impacted particularly on the attitude of those on a low income.

Support for the energy transition is no longer a question of lifestyle and has become more a matter of social status

The theory that the cost debate has substantially influenced attitudes towards the energy transition is also confirmed by taking a glance at the milieu landscape (see Figure 24). This clearly shows a top-to-bottom difference: a disproportionately high number of members from the up-market social milieus agree with the energy transition, while the socially less advantaged do so to a lesser degree. The hard core of advocates is to be found in the Socio-ecological milieu (81 percent), with the least acceptance in the Precarious milieu (33 percent). Compared with the preceding study, agreement with the energy transition in 2013 has become a class issue. In 2011, on the other hand, agreement with the energy transition had to do with lifestyle; it showed a similar distribution to many other questions on nature conservation. The Socio-ecologicals and Liberal Intellectual were more in favour of the energy transition, and the Established Conservatives were also slightly over-represented. Already in 2011, the Escapist and Precarious milieus with their limited interest in nature took a far less positive stance. In 2013 it is striking to note the reappraisal of the energy transition within the Liberal Intellectual milieu (although it still remains high), along with the drop in supporters from the milieus of the Adaptive Pragmatics, Traditionals and New Middle Class, who have undergone a mental reset. This means the energy transition has also become a question of social justice.

Figure 25: Acceptance of measures that alter the landscape to generate renewables



Evaluation of changes to the landscape as a result of the energy transition varies

Despite the general acceptance of the energy transition, many have reservations when it comes to its impact on the landscape. The next question therefore asked how people rate the possible increase in specific renewable energies in this respect (see Figure 25). A distinction was made here between approval ('I think it's good') and acceptance ('I would accept it'), and also between not liking the idea ('I wouldn't like it') and rejection ('I'm against it'). These distinctions are important not just in terms of attitude; they also potentially tell us something about the ability to mobilise support or protest.

The expansion of wind farms enjoys the strongest support (38 percent) and a very high degree of acceptance (44 percent). Only 11 percent say they don't like the idea and 5 percent are against it. Compared to 2011, support has, however, dropped radically by 9 percentage points from 47 percent. Solar energy systems (for example photovoltaic) in rural locations are supported by 27 percent, and a further 50 percent accepted the expansion of such plants. 14 percent do not think it is a good idea, and 6 percent are against it. Here again, support has significantly decreased over the past two years (2011: 32 percent 'I think it's good'). The expansion of wind farms in rural locations is supported by 26 percent, and accepted by 48

percent; 17 percent do not think it is a good idea, and 7 percent are against it. In the preceding study, 28 percent thought a potential increase in wind farms in the countryside was a good thing. This difference may not seem that big upon comparing all categories, but current support has dropped significantly (compared to 2011: 'I would accept it': 51 percent; 'I wouldn't like it': 14 percent; 'I'm against it': 5 percent; 'don't know ': 2 percent).

The expansion of areas dedicated to energy crops (rapeseed, maize) still enjoys majority support or acceptance, but a 30 percent non-acceptance rate (response options 'I wouldn't like it' and 'I'm against it') for rapeseed and 33 percent for maize underscores very clear reservations – possibly also due to the public 'food or fuel' debate of recent years and the question of large-scale cultivation of maize in the countryside. Nonetheless, the past two years have not seen any significant difference in citizens' sympathy for the cultivation of maize and rapeseed.

The ratios for the expansion of biogas plants also match this picture. Approval has declined (2011: 'I think it's good': 18 percent; 'I would accept it': 50 percent; 'I wouldn't like it': 19 percent; 'I'm against it': 6 percent; 'don't know/no idea': 7 percent).

When it comes to extending power grids, the picture is overturned: reservations (53 percent in total) outweigh positive attitudes (44 percent in total). Over the past two years there has been no sign of any significant change to attitudes on overhead power lines.

Increased logging in German forests for energy purposes is only found good or acceptable by a minority (31 percent), whereas a clear majority (65 percent) are against it. In addition, public scepticism of this source of energy has increased in the last two years (2011: 'I think it's good': 4 percent, 'I would accept it': 31 percent; 'I wouldn't like it': 37 percent; 'I'm against it': 23 percent; 'don't know/no idea': 5 percent).

Younger and well-educated respondents are more strongly in favour of the renewable energies

The socio-demographic data for all energy technologies surveyed here produces more or less the same picture: acceptances decreases with age. For instance, 32 percent of the under 29s are in favour of having more wind farms in rural areas, whereas only 20 percent of the old 66-year-olds advocate this; 18 percent of the under 29s are in favour of biogas plants compared to only 14 percent of the old 66-year-olds. Age plays no role when it comes to logging and overhead power lines. Approval of expanding the production of renewable energies also increases with increasing level of formal education: onshore wind farms are supported by 23 percent of those with a low level of formal education but by 30 percent of the better educated. Education plays hardly any role when it comes to logging, grid expansion, and increased production of biomass. Income and gender play no notable part overall.

These figures produce a picture of public approval for the expansion of individual technologies in the field of renewable energies. However, they can be only partly interpreted as acceptance values for concrete projects, because specific in-situ conditions and potential (perceived) personal impact come into play, which cannot be considered within the scope of this general survey. Furthermore, it is important to remember that even a relatively small group of rejecters in quantitative terms (for example, 7 percent in the case of wind farms in rural areas) are capable of engaging in high-impact opposition within the political process, licensing procedures and in the (local) mass media.

4.3 Ecologically sound consumption

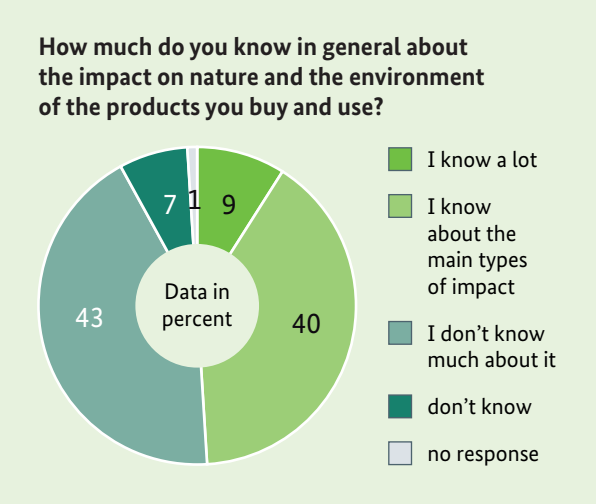
The last aspect to be addressed in this chapter is that of ecologically sound consumption. In the context of sustainable consumption, ecologically sound behaviour means shopping and consuming in a way that maintains the integrity of nature, with the aim of preserving biological diversity in as intact a form as possible for future generations. Ecologically sound consumption offers the population a course of everyday action with immediate relevance for a sustainable use of nature. The term 'ecologically sound consumption' stands alongside everyday terms such as 'environmentally compatible consumption', 'ecological consumption' or 'sustainable consumption'. Here we refer to ecologically sound consumption as sustainable consumption with reference to biological diversity.

Half are aware of how consumption impacts on nature

The first question on this subject in the present study was how much people know about the impact of consumer products on nature and the environment. After all, without some detailed knowledge of such impact, consumers have no concrete indication of any need to change their consumer behaviour and how to go about it.

The answer to this question results in a mixed picture: at 49 percent, almost half the respondents believe they know a lot or at least the essentials about how consumer products impact on nature and the environment, whereas 50 percent take the opposite stance (see Figure 26). At this point it is important to consider that the admission of not knowing something always costs a certain amount of effort, so that the actual number of those without (sufficient) knowledge is more likely to be slightly higher. All in all, this finding points to a clear lack of information about impacts of consumption on nature and environment. This holds particularly true for people with a low degree of formal education and on lower incomes.

Figure 26: Knowledge about the eco-friendliness of products



Dairy products as well as fruit and vegetables are more often purchased from organic sources than meat

In order to ascertain purchase behaviour, we asked which ecologically sound products people had bought in the past month. Respondents were presented with three sample product categories for their answers: animal products from organic sources (for example organic milk or organic eggs), organically grown fruit and vegetables, and organic meat. These products are generally familiar, play an important role in day-to-day shopping, and organic versions (for instance designated by an organic label) are available in many

Figure 27: Purchase of nature-friendly products

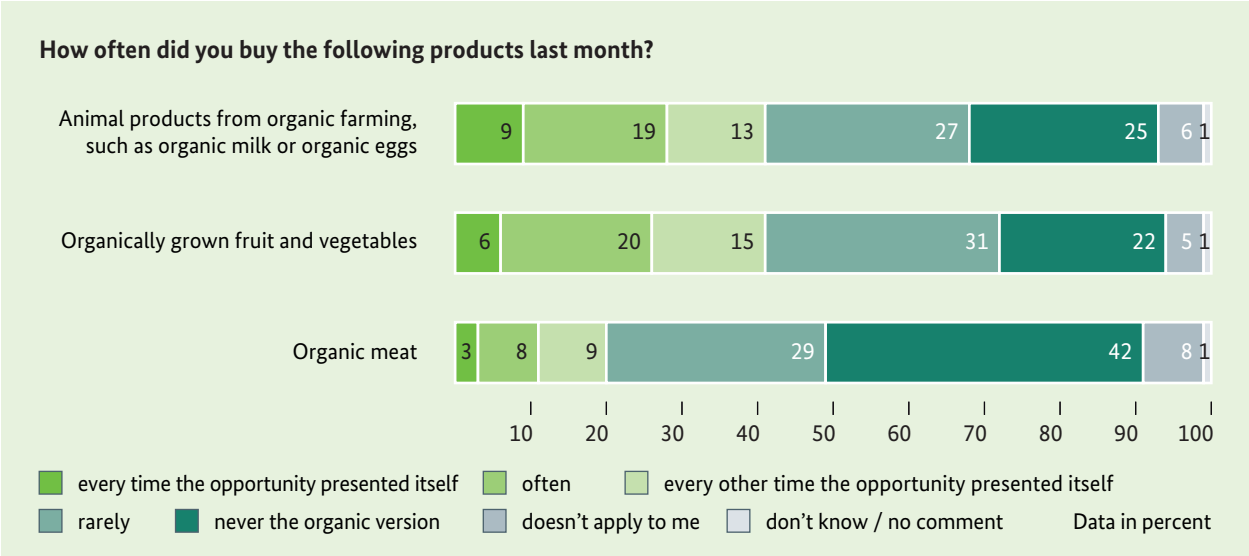


Table 13: Purchase of nature-friendly products, according to sociodemographic attributes

How often did you buy the following products last month?

'at least every other time' Data in percent	Average	Sex		Age (years)				Education			Net household income (€)			
		M	F	-29	30 - 49	50 - 65	65+	low	me-dium	high	-999	1,000 - 1,999	2,000 - 3,499	3,500+
Animal products from organic farming, such as organic milk or organic eggs	41	36	45	31	44	42	41	31	41	55	25	36	43	52
Organically grown fruit and vegetables	41	35	48	32	46	42	42	31	44	55	23	37	48	49
Organic meat	20	16	23	14	22	20	21	14	21	29	8	16	22	28

heavily over-represented | over-represented | heavily under-represented | under-represented

outlets. Besides staggered frequency of purchase, the response categories also allowed for the situation that respondents were unable to find organic versions in their particular stores, or that they did not consume a particular category at all (for example, vegetarians as non-consumers of organic meat).

Animal products represented the category in which people most frequently purchased from organic sources (eggs, milk) 'every time' (9 percent of all respondents), followed by organically grown fruit and vegetables (6 percent), and organic meat (3 percent). This pattern continues for the response options 'often' and 'every other time' (see Figure 27).

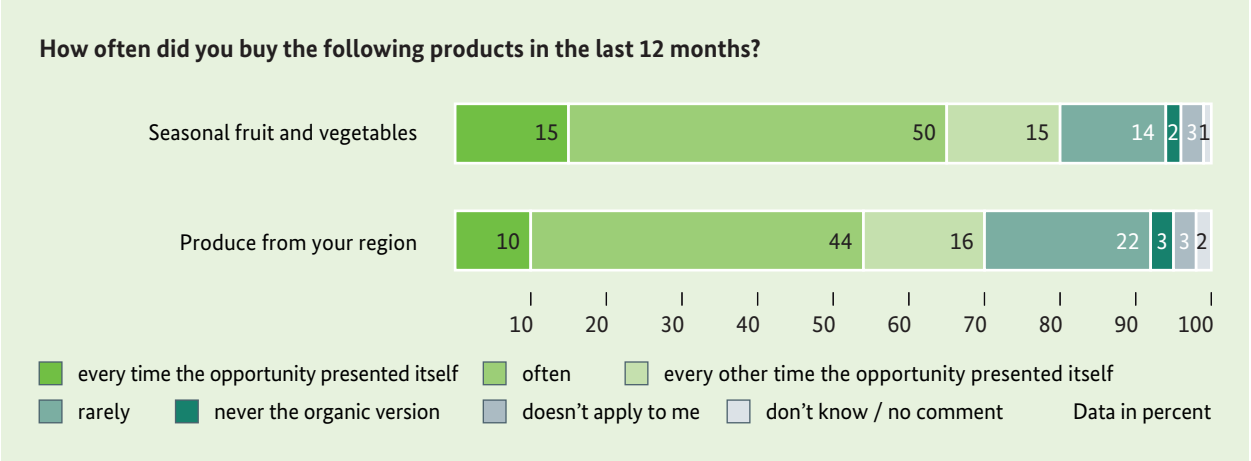
One finds clear differences when it comes to differentiation by socio-demographic attributes (see Table 13). An answer of at least every other time ('every time the opportunity arose', 'often', and 'every other time the opportunity arose') was used as a base. Men purchase organic products far less frequently than women across the board. People with a basic level of education likewise purchase products from organic sources far less often. The same applies to the under 29s. People on a net household income of less than €2,000 buy all the ecologically sound products surveyed here more rarely. In conjunction with the previously established lack of information about the impact of products on nature and the environment, the relatively low number of those buying organic products suggests that, as well as improved information, the range of products available and the price difference need to be tackled as well.

Seasonal products are purchased more than regional products

The next question concerns regionality and seasonality of foods – the former again refers to fruit and vegetables. Seasonal fruit and vegetables are once more shown to be far more firmly established in consumer behaviour: 15 percent claimed to buy these products 'every time' the opportunity presented itself, and a further 50 percent do so 'often'. As for regional products, 10 percent buy them 'every time' and a further 44 percent 'often'. A mere minority 'rarely' buy seasonal (14 percent) or regional (22 percent) products (see Figure 28).

For this question, a look at the sub-groups (see Table 14) tells us that here again – as in the case of organic products – women choose the nature-friendly version

Figure 28: Purchase of seasonal and regional products



more often than men, and the better educated are also more inclined to do, similarly to above. But unlike in the case of organic produce, where the age group of the 30-49-year-olds was (slightly) over-represented, here it is above all the older respondents who more often buy nature-friendly products – with regionality being closer to the hearts of the over-50s. It is also interesting to note that respondents' income does not play much of a role when it comes to regional and seasonal products, quite the reverse of the situation with organic products in fact. This could be a good strategic starting point for nature conservation in further developing the links between its interests and regionality and seasonality, seeing as neither is impeded by differences in income.

Paper products made from recycled material are a common commodity

Ecologically sound consumption embraces more than foodstuffs. In order to ascertain for which products and services the consumers choose the nature-friendly version, five such versions were selected (paper, cosmetics, travel, wood furniture and clothing); respondents were then asked whether they bought these on the last three purchase occasions (see Figure 29).

It transpired that in the toilet paper and tissues product category, a clear majority of all consumers chose the nature-friendlier version (here recycled paper) at

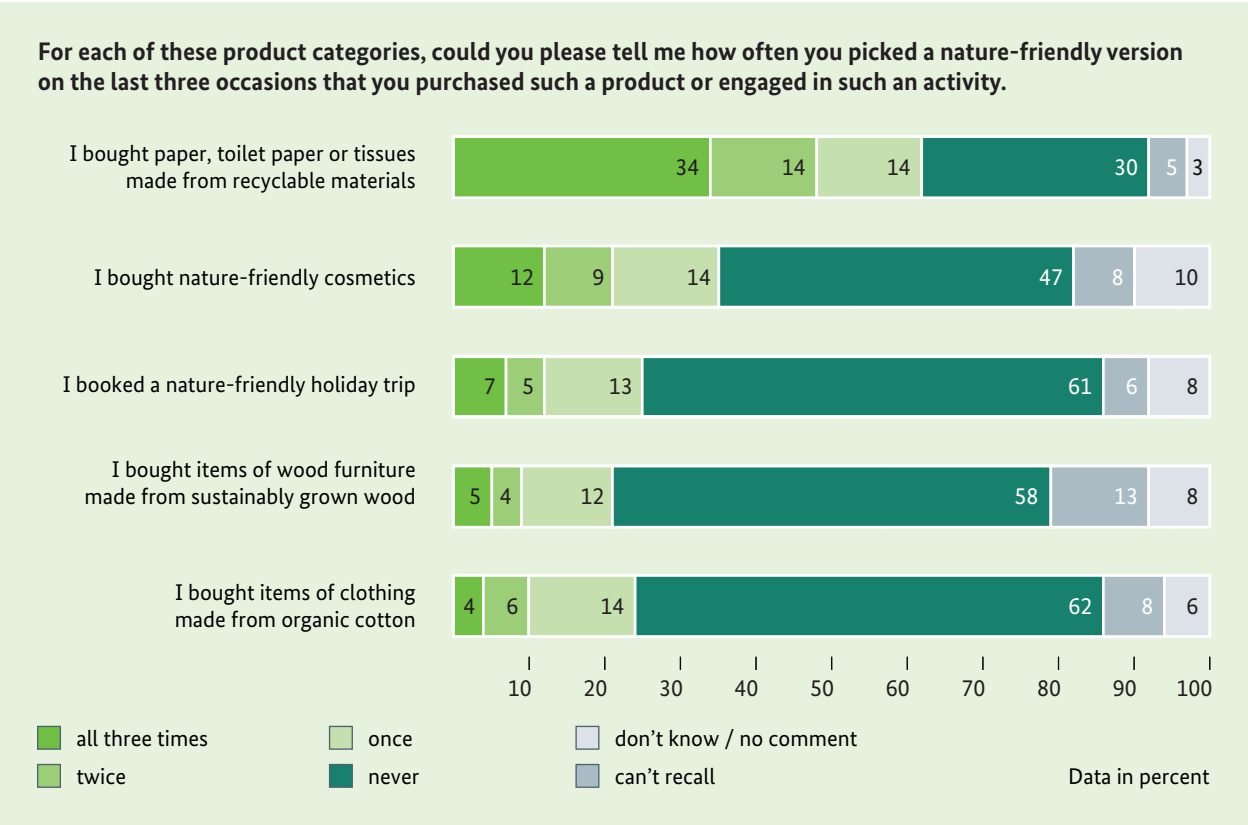
Table 14: Purchase of regional and seasonal nature-friendly products, according to sociodemographic attributes

How often did you buy the following products in the last 12 months?

'at least every other time' Data in percent	Average	Sex		Age (years)				Education			Net household income (€)			
		M	F	-29	30 - 49	50 - 65	65+	low	me-dium	high	-999	1,000 - 1,999	2,000 - 3,499	3,500+
Seasonal fruit and vegetables	80	74	86	70	82	81	84	77	80	86	79	78	82	83
Produce from your region	70	65	75	53	70	75	77	66	72	75	66	70	71	75

heavily over-represented | over-represented | heavily under-represented | under-represented

Figure 29: Decision in favour of nature-friendly products and activities



least once on the last three purchase occasions; only 30 percent said they didn't go for such a product at all. It is fair to assume that the 'Blue Angel' seal, awarded since 1978, plays a role here; it can often be found prominently displayed on this product group.[15] Cosmetics are the second group for which a relatively large number of consumers decided to buy the nature-friendly version, but far less frequently than for the paper products (12 percent 'all three times' compared to 34 percent). Holiday trips take third place (7 percent 'all three times'), followed by furniture made from sustainably produced wood (5 percent), and clothes made from organically grown cotton (4 percent). For each of these last three categories, a majority of respondents said they did not once select a nature-friendly version.

The socio-demographics behind this question show clear differences between the product groups. It is only younger people (under 29) and those with a lower level of formal education who buy nature-friendly paper products rather less often (response category: 'all three times'). When it comes to holiday trips, it is men, younger people and those with a lower level of educational attainment who more often claim never to have chosen nature-friendly on the last three occasions. Whether or not people purchase nature-friendly cosmetics and clothes made from organic cotton is primarily a question of gender (women clearly over-represented) and education (higher level of education over-represented), whereas gender plays no role at all for furniture. Education and income are the more important factors here.

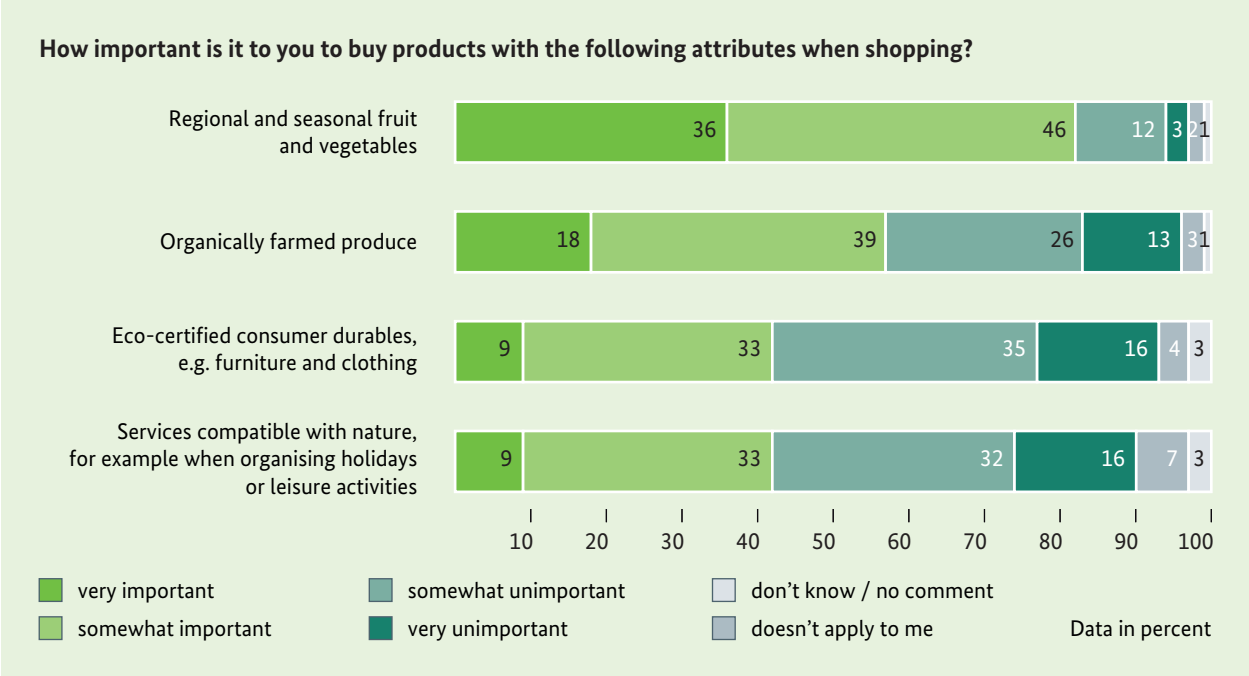
Regionality and seasonality are more important than organic

The next question looked into the personal relevance of nature- and eco-friendly products and services when shopping (see Figure 30). Whereas the previous question focused on (self-reported) actual purchase behaviour, this was about the importance of the purchase criterion.

It transpired that regionality and seasonality are claimed to be personally very important when shopping – even more so than the organic aspect (36 percent as opposed to 18 percent, top level of agreement).

15 Conversely, many people associate the Blue Angel specifically with recyclable paper (Stieß et al. 2013).

Figure 30: Significance of ecologically sound consumption



Commodities certified as having been manufactured to nature-friendly standards (furniture and clothing cited here as examples) play less of a role; the same applies to ecologically sound services such as holidays (9 percent each).

The level of educational attainment plays an important role when it comes to personal relevance (see Table 15): the higher the level of formal education, the greater the relevance of the nature-friendly version – this applies to all product categories. In the case of organic foods, net household income also plays a crucial role: the higher the income, the more important the nature criterion. Women are more inclined than men to look for ecologically sound product attributes, except in a service context.

Just under half see scope to change things via ecologically sound consumption

Ecological criteria are obviously important for nature-friendly consumer behaviour, but it is also important to consumers to know whether their decisions can make a systemic difference to nature and biological diversity. In psychology, one refers here to the expectation of self-efficacy (Bandura 1977). Two aspects of this were examined within the scope of the nature awareness study: how people see the consequences of their own consumer behaviour and how it affects what is stocked by the retail trade.

49 percent of consumers agree with the statement that they cannot really help nature by purchasing ecologically sound products; 46 percent reject this statement. This means that a slight majority is sceptical about the effectiveness of their personal consumption in preserving nature; having said that, the proportion of those who believe in such an effect is certainly considerable.

42 percent of consumers think that their nature-friendly purchase behaviour influences the product lines stocked by their supermarket, whereas 53 percent do not think this is the case. The result is similar in structure to the previous one. Also comparable is the influence of gender and education: women across the board rate both their influence on product assortment and on the preservation of nature higher than men, and people with a basic level of formal education consider their influence to be less in both cases (see Table 16).

The following questions concern the cost of ecologically sound consumption in terms of the amount of time it takes, the amount of money one has to spend, and the effort involved in procuring the necessary information.

Table 15: Significance of ecologically sound consumption, according to sociodemographic attributes

How important is it to you to buy products with the following attributes when shopping?

'very important' / 'somewhat important' Data in percent	Average	Sex		Age (years)				Education			Net household income (€)			
		M	F	-29	30 - 49	50 - 65	65+	low	medium	high	-999	1,000 - 1,999	2,000 - 3,499	3,500+
Regional and seasonal fruit and vegetables	82	78	85	73	83	82	86	79	79	88	77	81	82	84
Bio-Lebensmittel aus ökologischer Landwirtschaft	57	52	61	50	61	55	58	49	56	70	41	53	60	67
Eco-certified consumer durables, e.g. furniture and clothing	42	38	46	39	44	43	40	36	43	51	33	37	46	46
Services compatible with nature, for example when organising holidays or leisure activities	42	39	44	38	42	42	43	34	44	50	39	40	45	40

heavily over-represented | over-represented | heavily under-represented | under-represented

For around half the respondents, ecologically sound consumption means higher costs in terms of time, money and knowledge

53 percent (a small majority) do not consider nature-friendly shopping to be any more cost-intensive (see Figure 31). 42 percent say they cannot afford the products, and 56 percent disagree with this statement. 42 percent likewise agree with the statement that the purchase of nature-friendly products is a hassle because of the lack of appropriate retail outlets in their area – 54 percent disagree with this. And finally, 41 percent find it easy to decide which products are nature-friendly, whereas 55 percent find it difficult. However, the hard core of those who really do find it easy to be a nature-friendly consumer ('strongly agree') is somewhat small in all four responses for this set of questions – just 1 in 5 to 1 in 10 respond accordingly. The core problems to crystallize here are the ability to make the right decision – i.e. product information in the broadest sense of the word – and ready availability, followed by the economic costs and the additional time that respondents feel is involved.

Women and people with a high level of formal education find it easy to decide which products are nature-friendly. These sub-groups often also fail to see shopping for nature-friendly products as being any more time-consuming than other goods. Men and people with a basic level of formal education have more trouble identifying nature-friendly products – perhaps this is why they think shopping for nature-friendly products is more time intensive (see Table 17).

The cost argument plays a big role when it comes to nature-friendly products

The next aspect to be surveyed was attitudes towards ecologically sound consumption. The first question was about price. 77 percent strongly or somewhat agree with the statement that nature-friendly products

Table 16: Perceived means of exerting an influence via ecologically sound consumption, according to gender and education

When referring to nature-friendly products, we mean goods that are produced/manufactured with the aim of keeping the impact on nature to a minimum. What is your opinion about the following statements?

'strongly agree' / 'somewhat agree' Data in percent	Average	Sex		Education		
		M	F	low	medium	high
I don't believe that I can really help nature by purchasing nature-friendly products	49	52	46	56	51	37
I'm convinced I can influence what my supermarket stocks by asking for specific products	42	39	45	34	42	55

heavily over-represented · over-represented · heavily under-represented · under-represented

are often over-priced; only 21 percent find this not to be the case (see Figure 32). The 'too expensive' response produces hardly any differentiation between men and women but reveals a strong difference based on income bracket (see Table 18): whereas over 80 percent of people on a net household income of up to €1,999 agree with the statement, only 73 percent of those on a higher income do so. This income effect was only to be expected, but the fact remains that approximately three quarters of the higher income brackets in this survey consider nature-friendly products to be excessively expensive. It should be pointed out here that the wording was deliberately chosen so that people could take the response option to mean both 'are too expensive' and 'are sold at a higher price than necessary'. A problem for manufacturers and the retail trade emerges here: if nature-friendly products or services are sold at a higher price than their conventional

Figure 31: Perception of the individual effort required for ecologically sound consumption

When referring to nature-friendly products, we mean goods that are produced/manufactured with the aim of keeping the impact on nature to a minimum. What is your opinion about the following statements?

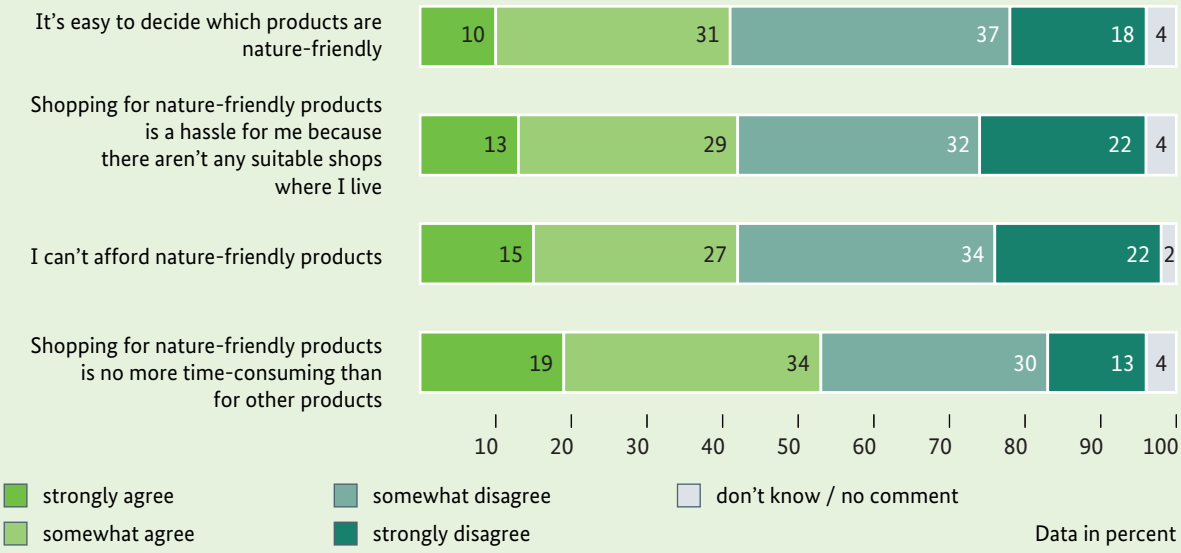


Table 17: Perception of the individual effort required for ecologically sound consumption, according to gender and education

When referring to nature-friendly products, we mean goods that are produced/manufactured with the aim of keeping the impact on nature to a minimum. What is your opinion about the following statements?

'strongly agree' / 'somewhat agree' Data in percent	Average	Sex		Education		
		M	F	low	medium	high
Shopping for nature-friendly products is no more time-consuming than for other products	53	50	55	49	55	58
Shopping for nature-friendly products is a hassle for me because there aren't any suitable shops where I live	42	43	41	45	44	35
I can't afford nature-friendly products	42	40	43	50	42	28
It's easy to decide which products are nature-friendly	41	38	44	35	43	47

heavily over-represented | over-represented | heavily under-represented | under-represented

pendants, then many people suspect, initially at least, that this price difference is not necessarily a result of a greater (equivalent) value – for example in the form of higher production costs – but that extra (monetary) profit is being siphoned off.

A total of 63 percent respondents agree that nature-friendly foods are part of a healthy diet, with significantly higher agreement rates for women (67 percent) and those with a high formal education (74 percent). The statement that organic foods taste better holds true for 47 percent, whereas 45 percent do not believe this is so.

Figure 32: Attitudes towards ecologically sound consumption

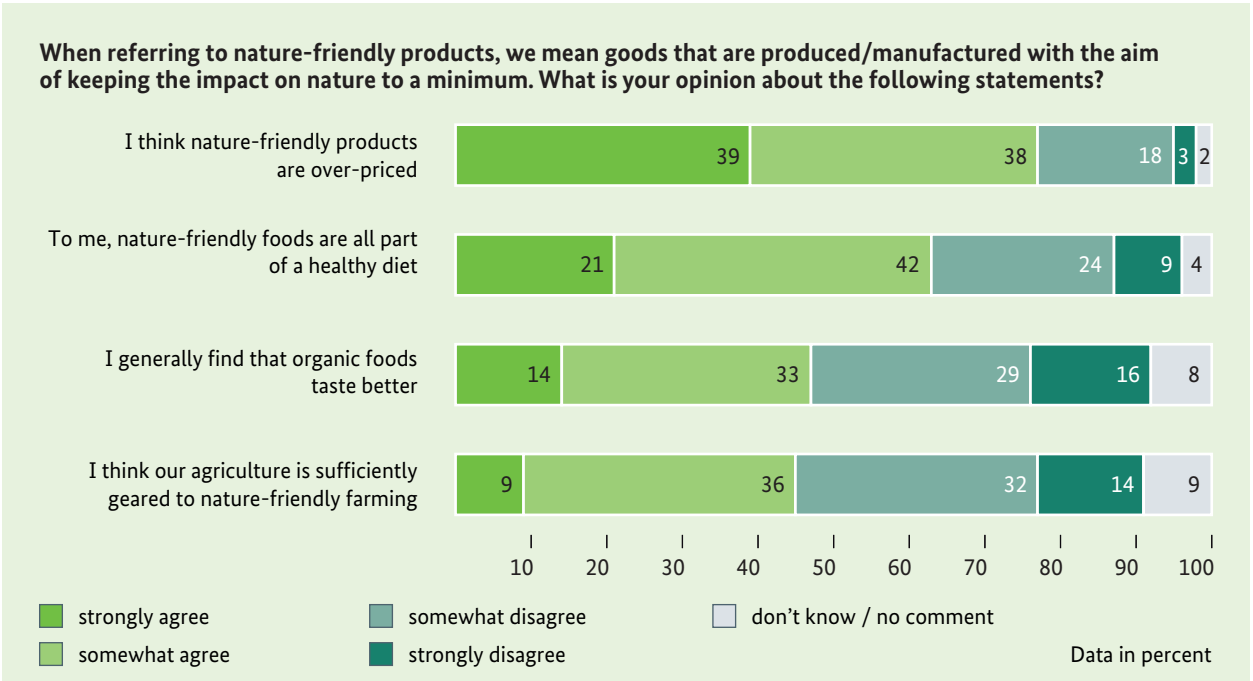


Table 18: Attitudes towards ecologically sound consumption, according to sociodemographic attributes

When referring to nature-friendly products, we mean goods that are produced/manufactured with the aim of keeping the impact on nature to a minimum. What is your opinion about the following statements?

'strongly agree' / 'somewhat agree' Data in percent	Average	Sex		Education			Net household income (€)			
		M	F	low	me-dium	high	-999	1,000 - 1,999	2,000 - 3,499	3,500+
I think nature-friendly products are over-priced	77	78	75	83	76	67	82	81	73	73
To me, nature-friendly foods are all part of a healthy diet	63	58	67	53	65	74	57	58	66	73
I generally find that organic foods taste better	47	41	52	35	48	62	39	40	50	57
I think our agriculture is sufficiently geared to nature-friendly farming	45	47	43	51	45	33	46	49	48	35

heavily over-represented | over-represented | heavily under-represented | under-represented

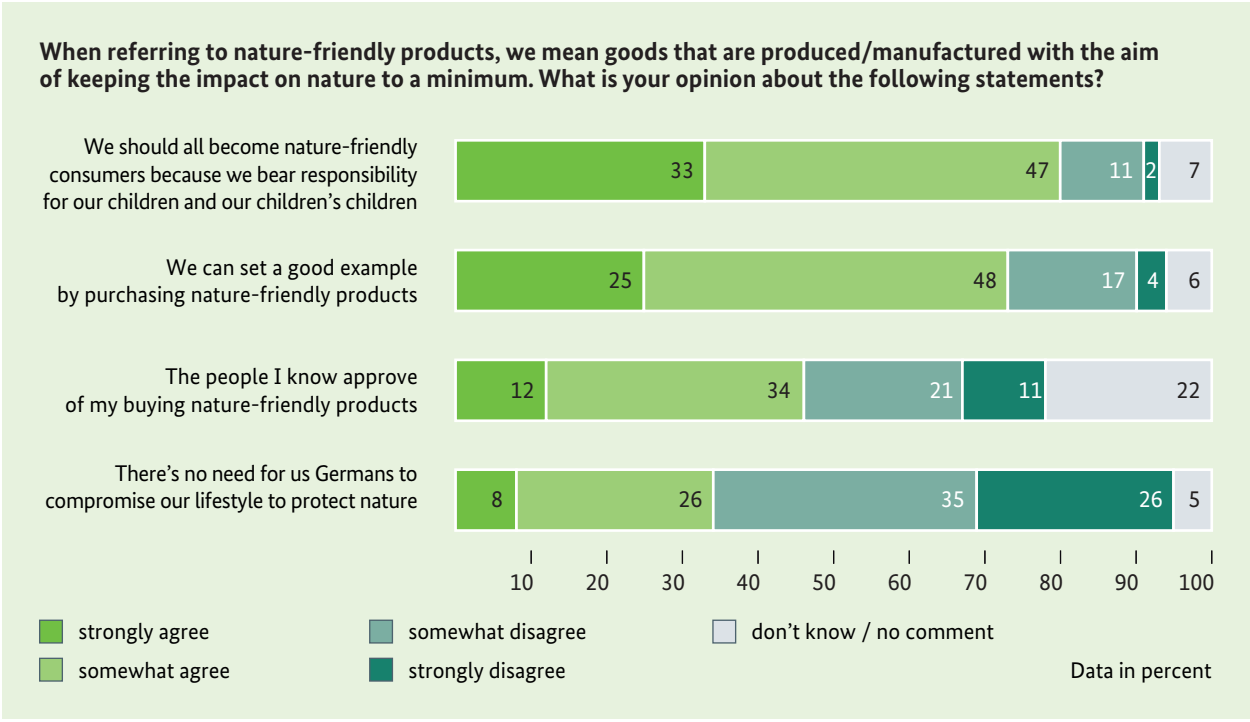
An interesting question is whether the consumers believe that 'our agriculture' is sufficiently geared to producing eco- and nature-friendly products. Only 9 percent agree strongly, and 36 percent somewhat. As many as 32 percent disagree somewhat, and 14 percent strongly. The ability of German agriculture to produce eco- and nature-friendly products is thus viewed somewhat sceptically – especially by those with a higher level of formal education.

Social norms play a major role in purchase decisions

The next questions concern how people perceive the moral obligation to consume ecologically sound goods, by which we mean the subjective norms in this respect. The predominating motive proves to be intergenerational justice, which is the responsibility for the coming generations (see Figure 33). 80 percent see this to a lesser or greater degree as a reason to engage in a nature-friendly form of consumption. Setting a good example for others plays a role for 73 percent, and 46 percent find their own social environment supportive of such behaviour. The latter question, however, reveals higher scores for the responses 'strongly disagree' and 'somewhat disagree' (together 33 percent), and the 'don't know' category (22 percent) with a particularly high count here. This indicates that most people do not feel pressured into nature-friendly consumer habits by their personal environment – or at least have their doubts about whether this is so. This applies more to men and those with a lower level of formal education, whereas women, especially the better educated, are confronted far more often by the expectation to practice ecologically sound consumption (see Table 19).

The last question on this subject was whether 'we Germans' need to compromise on our lifestyle in order to protect nature. The motivation for this question came from the enduring and in recent years intensified debate on the need for growth and the role of a change in lifestyle (sustainable sufficiency) for an ecological restructuring of the industrial society (compare Jackson 2011, Paech 2012, Seidl and Zahrnt 2010).

Figure 33: Subjective norms relating to ecologically sound consumption



Can there be a majority consensus for compromising on lifestyle in the interests of nature?

A third take the view that compromising on lifestyle to protect nature is not necessary (top two agreement levels). 61 percent strongly or somewhat disagree with this statement. If one is to believe this response pattern, then compromising on lifestyle in the interests of nature conservation does have majority appeal in Germany. This is a surprising result if one considers

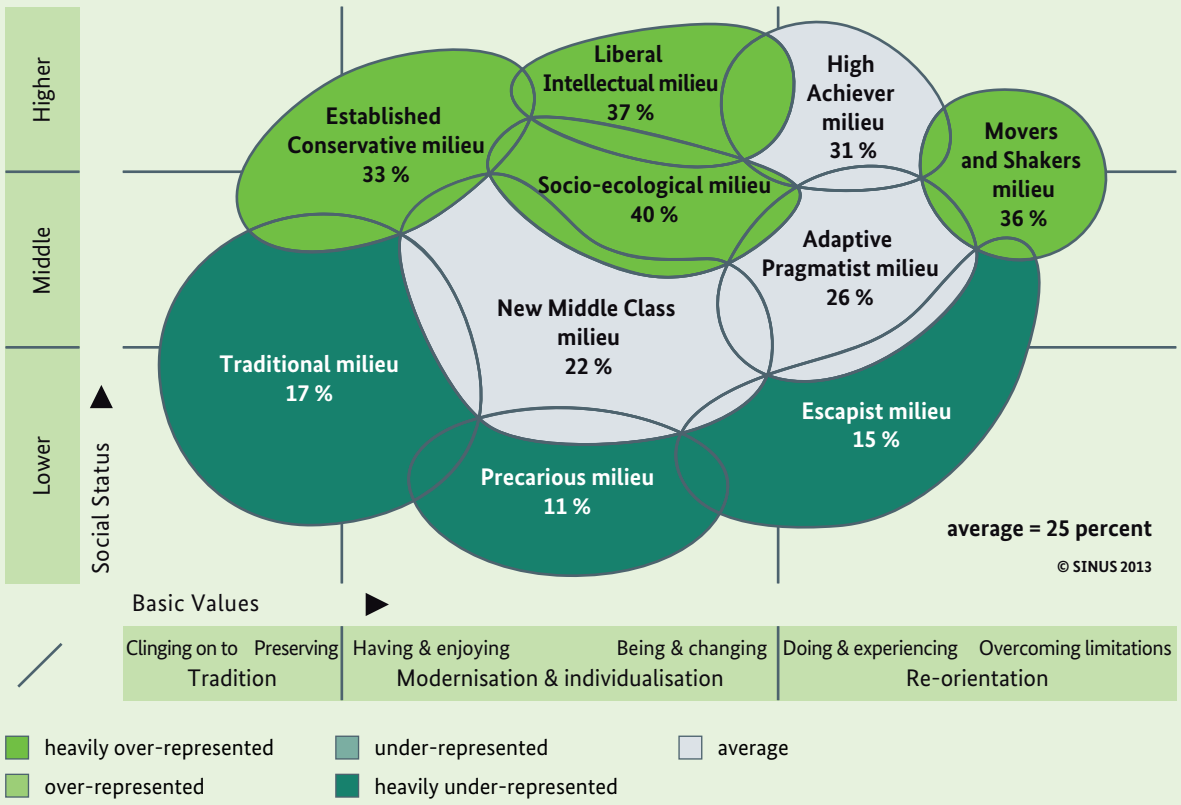
Table 19: Subjective norms relating to ecologically sound consumption, according to gender and education

When referring to nature-friendly products, we mean goods that are produced/manufactured with the aim of keeping the impact on nature to a minimum. What is your opinion about the following statements?

'strongly agree' / 'somewhat agree' Data in percent	Average	Sex		Education		
		M	F	low	medium	high
We should all become nature-friendly consumers because we bear responsibility for our children and our children's children	80	78	83	74	83	89
We can set a good example by purchasing nature-friendly products	72	69	75	65	73	83
The people I know approve of my buying nature-friendly products	46	43	50	37	46	62
There's no need for us Germans to compromise our lifestyle to protect nature	33	34	32	36	36	27

heavily over-represented · over-represented · heavily under-represented · under-represented

Figure 34: Attitudes towards nature-friendly products according to Sinus-Milieu



that the supporters of an ecologically motivated sustainable sufficiency policy generally see themselves in a defensive position, because the idea of foregoing affluence is considered unpopular. Such scepticism can be justified by taking into account net household income as a factor affecting the response behaviour here. Those on lower incomes are over-represented when it comes to rejecting a compromised lifestyle, whereas those on higher incomes are clearly under-represented. If one considers that the ecological footprint of the population correlates strongly with income – the higher people's income, the larger the footprint –, then it becomes apparent: the same income group engaging to a disproportionately high degree in nature consumption comes out in favour of compromising on lifestyle with above-average frequency.

A close look at the milieu structure in the field of ecologically sound consumption (see Figure 34) reveals the milieus with a higher social status as the keenest to set a good example – with the exception of the High Achievers, whose response behaviour borders on the average. In contrast, the Traditionals, Escapists and particularly the Precarious express the view with far below-average frequency that one should set a good example.

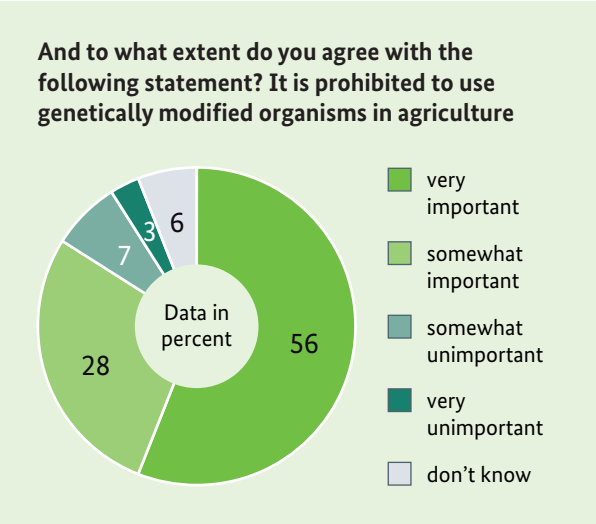
Genetic engineering is rejected

The last topic of the section on consumption deals with attitudes towards genetically modified organisms in agriculture. In the present survey, 56 percent thought it very important to ban the use of genetically modified organisms in agriculture, and a further 28 percent found responded with 'somewhat important' (see Figure 35). This means that a clear majority of the population is in favour of a ban, with stronger rejection coming from women than from men, and

from those with a higher formal education than from the less well educated. As for the socio-demographic categories, the 50 percent mark for rejection is reached throughout.

The genetic engineering issue was already included in the 2009 study but without the 'don't know' response category (Section 1.3 'Explanatory notes on this brochure'). On comparing results for the 'very important' response option, it was seen to rise by 5 percentage points in 2013 (2009: 51 percent, 2013: 56 percent). However, looking at the overall response categories, the differences are not significant (2009: Very important: 51 percent, somewhat important: 36 percent, somewhat unimportant: 11 percent, very unimportant: 2 percent).

Figure 35: Approval of the ban on genetically modified organisms in agriculture



5 Maintaining biological diversity: a task for society

Biological diversity is in global decline. According to the Convention on Biological Diversity (CBD), the term means "the variability among living organisms from all sources including, inter alia, terrestrial, marine and other aquatic ecosystems and the ecological complexes of which they are part; this includes diversity within species, between species and of ecosystems" (CBD 1992). Biological diversity is endangered by direct and indirect human intervention in nature: the destruction of habitats (from measures such as construction of infrastructure, soil sealing, and industrialised agriculture), over-use and degradation of land (over-grazing, chemical pollution), climate change and alien species are only some of the causes.

The diverse life forms and habitats represent an essential basis for human existence. Besides justice (for example inter- and intra-generational justice), further reasons to protect biological diversity are the vital importance of plants and animals for the human diet, ecosystem services (compare MEA 2005), and bionics ('template' for technical inventions). And last but not least, varied landscapes also offer space for human recreation and as such are an important part of our well-being and quality of life (compare BfN 2014).

Resolute action is required in order to protect and maintain the diversity of life on Earth, and use it in a sustainable way that enables people now and in future to share what it has to offer. The Convention on Biological Diversity (CBD), backed by 193 states, including the EU, provides the international legal framework.

The National Strategy on Biological Diversity was agreed by the Federal Cabinet on 7 November 2007 to implement the Convention on Biodiversity. It sums up the targets as follows:

> "In the year 2015, at least 75 percent of the population will rate the conservation of biological diversity as one of the top priorities for society. The importance of biological diversity will be firmly entrenched in social consciousness. Human actions will increasingly take a cue from it and this will lead to a clear reduction in the pressure on biological diversity" (BMU 2007, p. 60ff).

This political goal calls for operationalisation so it can be measured. Target achievement is measured via the indicator for 'public awareness of biological diversity', which is part of a set of indicators drawn up in the National Strategy on Biological Diversity (Ackermann et al. 2013). The indicator is computed on the basis of data collected at regular intervals by the Nature Awareness Studies. The overall indicator is presented in Section 5.1, which is followed by sub-sections on the sub-indicators 'knowledge', 'attitude' and 'behaviour'.

5.1 Indicator for 'public awareness of biological diversity': overall indicator

The indicator for 'public awareness of biological diversity' was developed in 2009 (compare Kuckartz and Rädiker 2009, Ackermann et al. 2013). Using the data from the Nature Awareness Studies, it has been deployed ever since as a tool with which to visualise research findings on the awareness of biodiversity among the German population over the age of 18.

The indicator comprises the sub-indicators 'knowledge', 'attitude' and 'behaviour'. These cover:

- knowledge of the meaning of 'biological diversity', including at least one sub-component,
- attitude patterns expressing an awareness of the need to maintain biodiversity, and
- a declared willingness to act and contribute personally to preserving biological diversity.

Table 20: Development over time of the indicator for 'public awareness of biological diversity'

All data in percent	2009	2011	2013*
Sub-indicator 'knowledge'	42	41	40
Sub-indicator 'attitude'	54	51	54
Sub-indicator 'behaviour'	50	46	50
Overall indicator	22	23	25

* Unweighted: sub-indicator 'knowledge': 41 percent, sub-indicator 'attitude': 53 percent, sub-indicator 'behaviour': 50 percent, overall indicator: 25 percent

The indicator is set up in such a way as to determine the percentage of the population that sees biological diversity as a priority task of society and fulfils the necessary conditions in all three areas – knowledge, attitude and willingness to take action. As a result of this design, the value of the overall indicator generally lies well below that of the respective best sub-indicator. A detailed explanation of the procedure along with a comprehensive discussion of the data can be found in the in-depth report on the indicator for public awareness of biological diversity, due to be uploaded onto the BfN website in the middle of 2014.

How has the awareness of biological diversity developed since 2009? A comparison over time[16] does not reveal any significant changes. There are slight deviations to the tune of 1 to a maximum of 4 percentage points, but statistical testing procedures showed these to be within the margin of error.[17] It was possible to determine the following values for the individual sub-indicators (see Table 20):

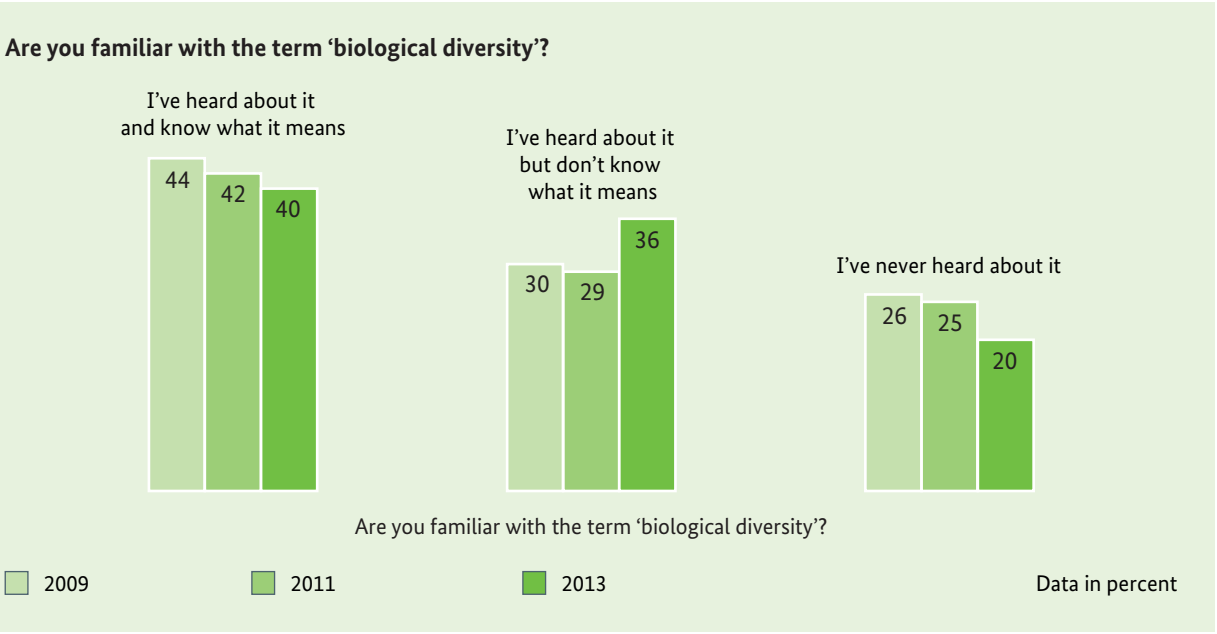
- Knowledge: 40 percent of the population fulfil the 'knowledge' criterion, which means they are aware of the term 'biological diversity' and are able to explain its meaning. In 2011 this value was 41 percent, and in 2009 42 percent.
- Attitude: the criteria of the sub-indicator 'attitude' are currently met by 54 percent of Germany's resident population over the age of 18. Any differences to the preceding studies are minimal: whereas the criteria were fulfilled by 51 percent of respondents in the year 2011, in 2009 and 2013 a total of 54 percent met the requirements of this sub-indicator, respectively.
- Behaviour: 50 percent of the population demonstrated the desired willingness to act in 2013. Whereas the value for 2011 was a little lower (46 percent), the value for 2009 was just as high as today at 50 percent.

The overall indicator for 'public awareness of biological diversity' shows a value of 25 percent for 2013. As in the case of the sub-indicators, it is not possible to determine any significant difference in the overall indicator compared with the preceding surveys. In 2009 the overall indicator showed a value of 22 percent and that for 2011 was 23 percent. This increase lies within the margin of error.

16 For the purpose of chronological comparison, the results of the indicator for 'public awareness of biological diversity' were contrasted with the 2009, 2011 and 2013 Nature Awareness Studies. In 2013, the indicator and its sub-indicators were computed with the weighted data, like all the other data from the nature awareness study. Weighting is normally used to compensate for any deviations between sample and population, thus guaranteeing the representativeness of the survey. In the preceding studies of 2009 and 2011, the indicators were computed and presented without weighting (unlike the other data from these studies), because the samples were very 'clean', and the indicator had originally been processed and evaluated as a discrete project. The theoretical difference that would have existed between weighted and non-weighted data amounts to a mere two percentage points at most, and as such is within the range of the random variation that occurs in surveys. However, in the interests of scientific optimisation and in order to guarantee a consistent presentation within the nature awareness studies, all data from the indicator for 'public awareness of biological diversity' are presented here in weighted form. The methodological procedure is discussed in greater detail in the final scientific report.

17 Since the indicator for biological diversity is made up of aggregated and non-metric values, any significances were not computed by t-test. Instead, an error-tolerance table (F-table) was used to form the upper and lower confidence intervals to see how far the true value of the population differed from that of the sample. Based on this observation, the total value of the indicator cannot be said to have improved significantly (nor deteriorated significantly) between 2009 and 2013. For this to be the case, the lower confidence interval from 2013 would have had to have been higher than the upper confidence intervals for the total values for the years 2009, 2011 and 2013.

Figure 36: Awareness of the term 'biological diversity' compared over time



A subsequent stage highlights the basic questions upon which the three sub-indicators are computed.

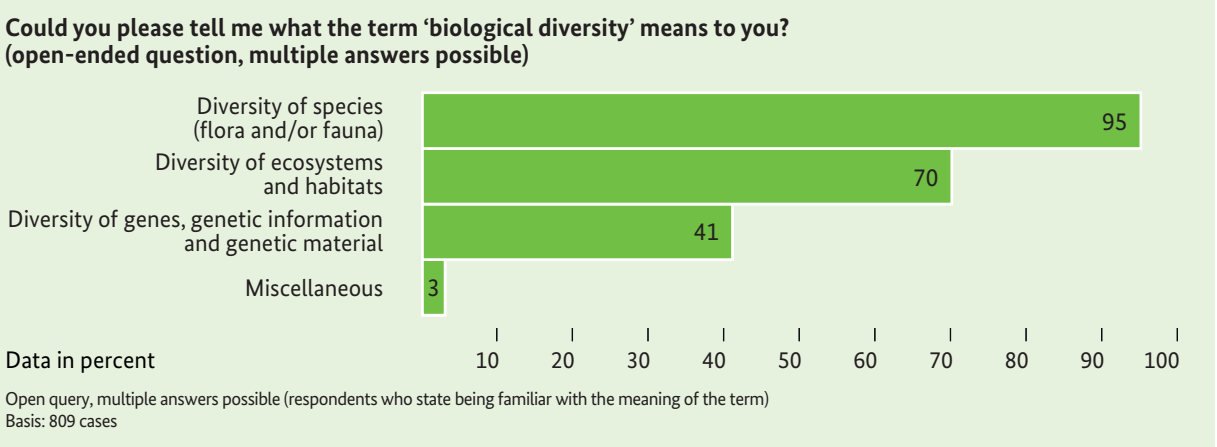
5.2 Sub-indicator: knowledge

Awareness of the term 'biological diversity' has increased, although fewer people know what it means

Three quarters of the German resident population over the age of 18 have heard of 'biological diversity' at least once. 40 percent of citizens are also able to explain what it means. 36 percent have heard of it but do not know its meaning. Only around 20 percent of respondents say they have never heard of 'biological diversity' (see Figure 36).

Awareness of what the term actually means increases with the level of education and net household income: 60 percent of the well-educated but only 28 percent of those with a basic education say they know what it means. Gender-specific differences also come into play here: 44 percent of the men and 37 percent of the women claim to know what the term means. In the western states of Germany (42 percent), far more people say they know the term and what it means than in the eastern states (33 percent).

Figure 37: Understanding of the term 'biological diversity'



Open query, multiple answers possible (respondents who state being familiar with the meaning of the term)
Basis: 809 cases

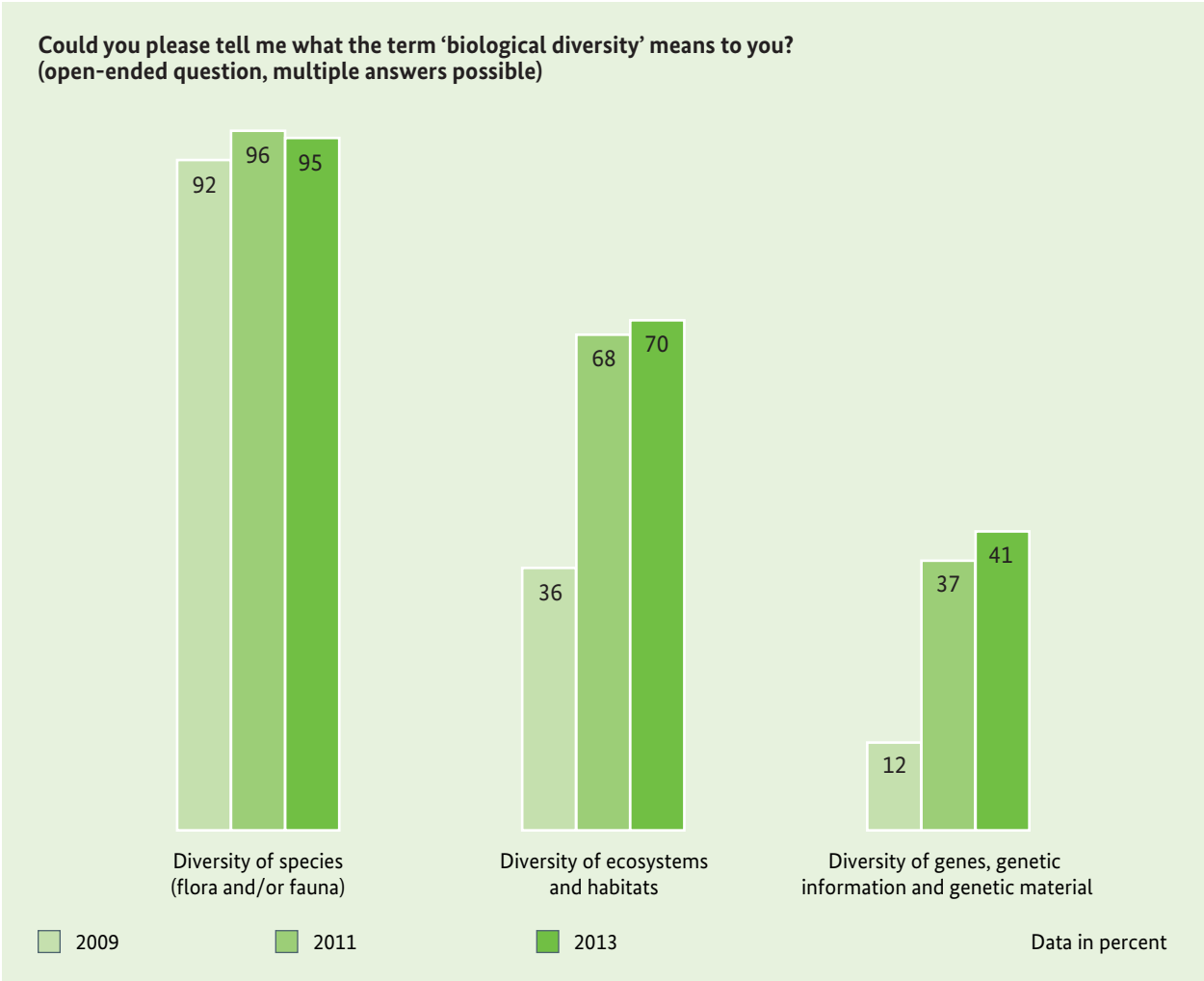
There are significant differences in the level of awareness compared to 2009 (see Figure 36): the proportion of those claiming to know what the term means has dropped slightly. The number of those who do not know what it means but have heard of it has risen by 6 percentage points. At the same time, there are now far fewer people than in the last study who have never heard of biological diversity. This marked rise in awareness of the term shows a certain degree of success on the part of measures to communicate nature conservation. However, people's knowledge of its meaning has not increased to the same extent. This gap must be closed in future.

A differentiation according to Sinus-Milieu reveals the following differences: whether or not people are aware of the term 'biological diversity' and know what it means is above all a question of their social situation: the up-market social milieus are far more inclined to claim that they do (for example the Socio-ecologicals: 63 percent, Movers and Shakers: 58 percent, Established Conservative milieu: 54 percent, High Achievers: 53 percent, Liberal Intellectuals: 52 percent). Social milieus lower down the social scale are far less likely to know what the term means (Traditionals: 29 percent, Escapists: 30 percent, Precarious: 24 percent).

The majority equate biological diversity with the variety of species

Technically speaking, the term 'biological diversity' relates to three levels: ecosystems, organisms, and genes. Almost all respondents claiming to know something about the term say that it means the diversity of animals and plants (95 percent) (see Figure 37) – regardless of their level of education, income

Figure 38: Understanding of the term 'biological diversity' compared over time



bracket or age. There are, however, differences here in terms of the region in which they live: people from the western states of Germany (96 percent) associate 'biological diversity' with animals and plants far more frequently than those from the eastern German states (90 percent).

Many are also familiar with the idea of a diversity of ecosystems and habitats (70 percent) – the well-educated (78 percent) slightly more so than those with a basic formal education (67 percent). In contrast, only 41 percent are familiar with the diversity of genes, genetic information and genetic material as part of the term 'biological diversity'. Younger people are more aware of this aspect than older respondents.

The comparison over time shows that biological diversity is now understood by a far greater number of people within the group of those claiming to know the term (see Figure 38). The proportion of the population who also interpret biological diversity in term of diversity of genes tripled between 2009 and 2011, and has risen by a further 4 percentage points since 2011. The proportion of respondents who include in their interpretation of biological diversity a diversity of habits and ecosystems likewise almost doubled between 2009 and 2011, and has seen a minimal rise of 2 percentage points since 2011.

5.3 Sub-indicator: attitude

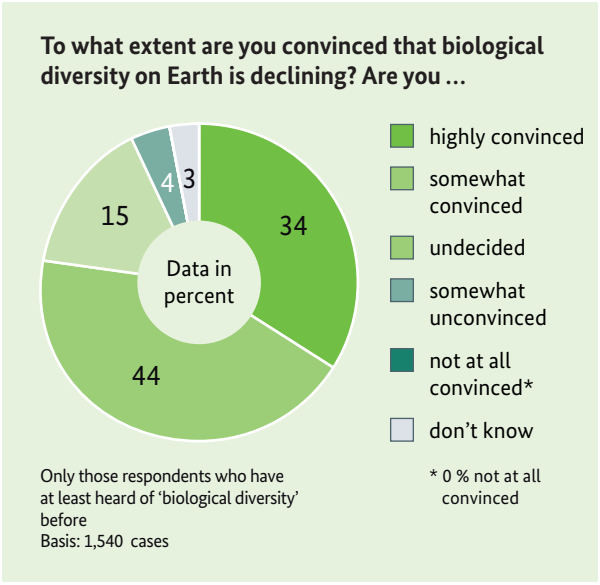
Three quarters see biological diversity under threat

Approximately three quarters are convinced that the biological diversity on Earth is in decline (see Figure 39). Well-educated people are more convinced of this (42 percent top level of agreement; population average 34 percent) than those with a basic level of formal education (26 percent). A small proportion of 15 percent are not sure about this question, while 4 percent are somewhat unconvinced.

For three quarters of respondents, the preservation of biological diversity represents a priority task for society

In response to the question whether the preservation of biodiversity is among the priority tasks society has to face, 36 percent answer with an unreserved 'yes', and a further 35 percent say 'generally yes' (see Figure 40). In the 2011 study, 35 percent of respondents likewise answered the question with 'yes'. There are, however, differences in the level of education here: 45 percent of the well-educated but only 28 percent of those with a basic education see it as a priority task for society (top level of agreement).

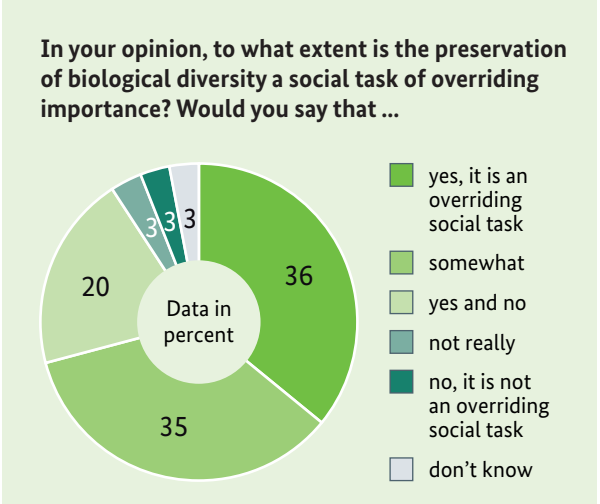
Figure 39: Perceived decline in biological diversity



Biodiversity is assigned a high degree of relevance with regard to the next generations

Whereas there is a prevailing consensus that the biological diversity should be maintained for coming generations (both levels of agreement: 94 percent), far fewer people see its decline as being detrimental to them personally (58 percent). Nonetheless, three thirds of

Figure 40: Social significance of preserving biological diversity

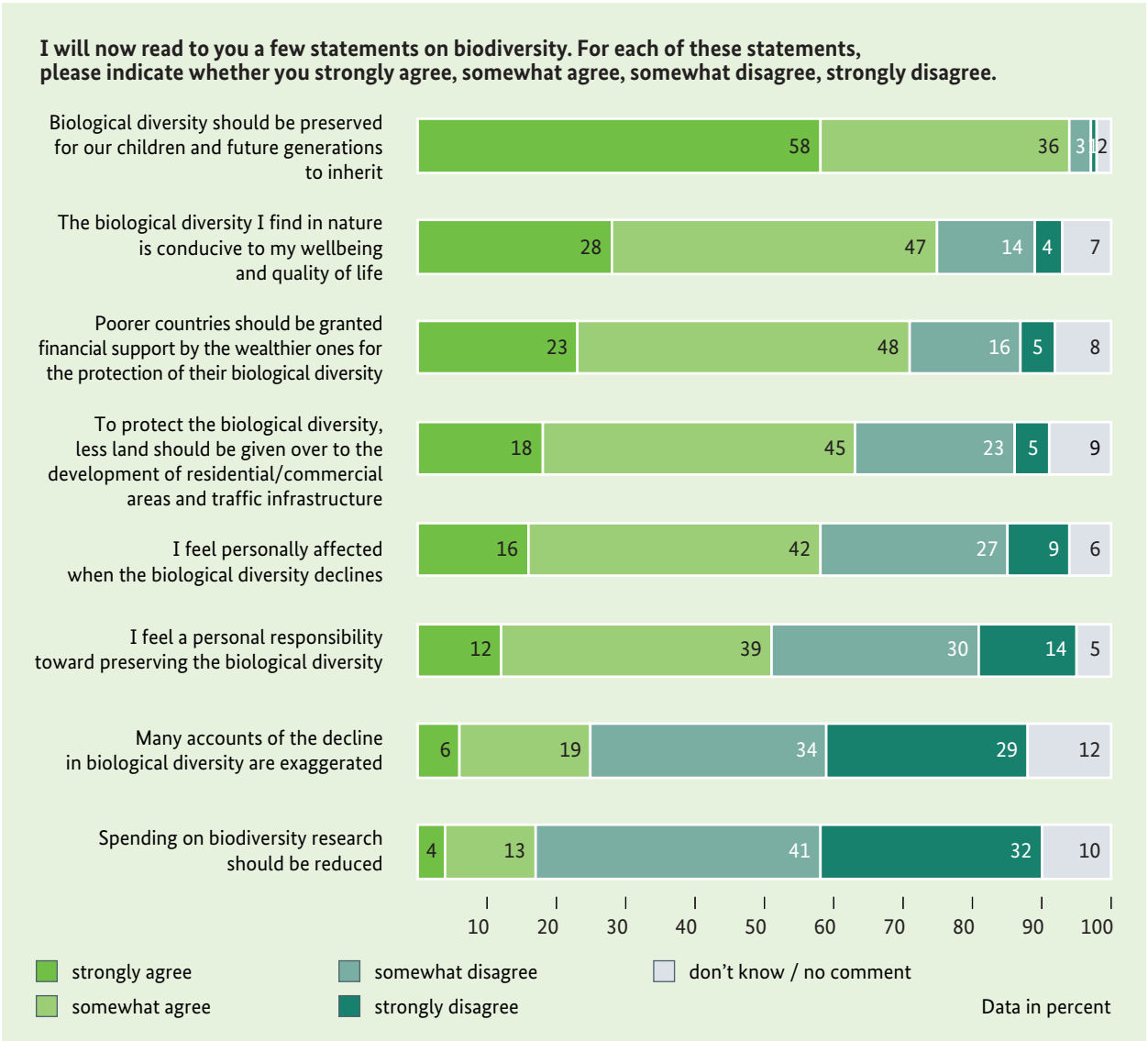


citizens take the view that biological diversity promotes their well-being and quality of life (see Figure 41). 71 percent advocate giving financial support to poorer countries to help them protect their native biodiversity. Slightly fewer (63 percent) believe that the use of land for settlement, commerce and infrastructure should be reduced in the interests of biodiversity. There has been a decline in the proportion of those supporting a reduced infrastructure to protect biodiversity since the 2011 survey. At that time, 27 percent came out in favour as opposed to a current figure of just 18 percent who 'strongly agree'. This development is not that easy to explain, given the fact that the economic crisis was a far hotter topic of public debate in 2011 than it is today and prompted people to rate economic growth more highly than nature conservation. The fact that infrastructure currently takes precedence over nature conservation could also be explained by today's higher aspirations in terms of mobility.

Half the citizens feel personally responsible for biological diversity. This and the fact that, for example, just 17 percent advocate funding cuts for research biological diversity points to the high relative importance of biodiversity among the population.

Generally speaking, it is fair to say that the well-educated know more about biodiversity and show greater awareness of its decline than those with a basic level of education. It thus follows that this group manifests the

Figure 41: Personal significance of biological diversity



greatest differentiation when it comes to the influence of biodiversity on their own life and quality of life. 22 percent of the well-educated believe that the dwindling of biodiversity would be detrimental to them personally, as opposed to 13 percent among those with a basic education. The well-educated also have a more pronounced sense of personal responsibility (18 percent) than people with a basic education (8 percent).

5.4 Sub-indicator: willingness to act

The less time, effort and money involved, the greater the willingness to act

The Germans show greater willingness to contribute towards preservation of biological diversity if the actions concerned call for relatively little time, effort and/or money. The present study confirms findings from the two preceding studies in this respect. Such behaviour entails staying away from designated protected areas, and buying regional fruit and vegetables (92 percent, both levels of agreement, see Figure 42). There is also strong willingness to switch from health & beauty items manufactured in ways that endanger biological diversity (78 percent) or to consult a shoppers' guide with advice on endangered species of fish, for example (64 percent). Citizens' willingness to look for information can also be rated as high – 76 percent would be very or somewhat prepared to seek information on 'biological diversity'. 67 percent would also point out the need to protect biological diversity to their friends and acquaintances.

On the whole, personal willingness to engage in the preservation of biodiversity diminishes the greater the effort and personal initiative required. 41 percent would write a letter to the government or a local authority, whereas 56 percent would not be prepared to do so. Germany's population is somewhat split over the question of donating money. Just under half (48 percent) would be prepared to donate money to a nature conservation association dedicated to preserving biological diversity; the other half shows no such inclination. Similar is true with the willingness to donate towards the preservation and maintenance of a protected area – 52 percent would be prepared to do so and 45 percent would not. And 79 percent of respondents would be prepared to sign a petition calling for the protection of biological diversity, while only 36 percent, would play an active part in a nature conservancy organisation. The factors that motivate and inhibit engagement in nature conservation can be gleaned from the 2011 awareness study (BMU/BfN 2012), in which this topic constitutes a main focus. The results of almost all these questions have remained relatively constant compared to the 2009 and 2011 studies. There does, however, appear to be a much increased willingness to write letters to the Government (41 percent, 2011: 33 percent) or sign petitions (79 percent, 2011: 73 percent, both levels of agreement, respectively). This positive effect can perhaps be explained by the more prompt and immediate availability of online petitions and pre-prepared letters in social networks and internet forums.

Well-educated people and women are more inclined to play their part in preserving biological diversity

People's level of formal education has a strong influence on their expressed willingness to act in such a way: those with the university entrance certificate are more prepared to make a personal contribution towards protecting biodiversity (see Table 21). Individuals with a basic education demonstrate far less willingness. However, when it comes to steering clear of designated protected areas, there is no significant difference between people with a basic and those with an intermediate level of education. As for playing an active part in a conservancy association, similar interest is shown not just by those with a high level of formal education but also by people with intermediate educational attainment.

Differences in the willingness to take action are also seen between the genders: women show greater willingness to act in the interests of biological diversity in the consumer context (purchase of regional fruit and vegetables, health & beauty items, and reference to a shopping guide for fish). The fact that women are more aware of the need for ecologically sound consumer behaviour has already been discussed at length in Section 4.3 ('Consumption'). Women also show greater willingness than men to steer clear of designated protected areas. This willingness to behave in such a way conforms to responses to the question of which type of access to wilderness would be desired: here again, women are less inclined than men to expect free access to wilderness areas (compare Section 2 'Wilderness – humankind's search for unspoiled nature'). There are hardly any significance differences with regard to age.

Figure 42: Willingness to make an active contribution towards preserving biological diversity

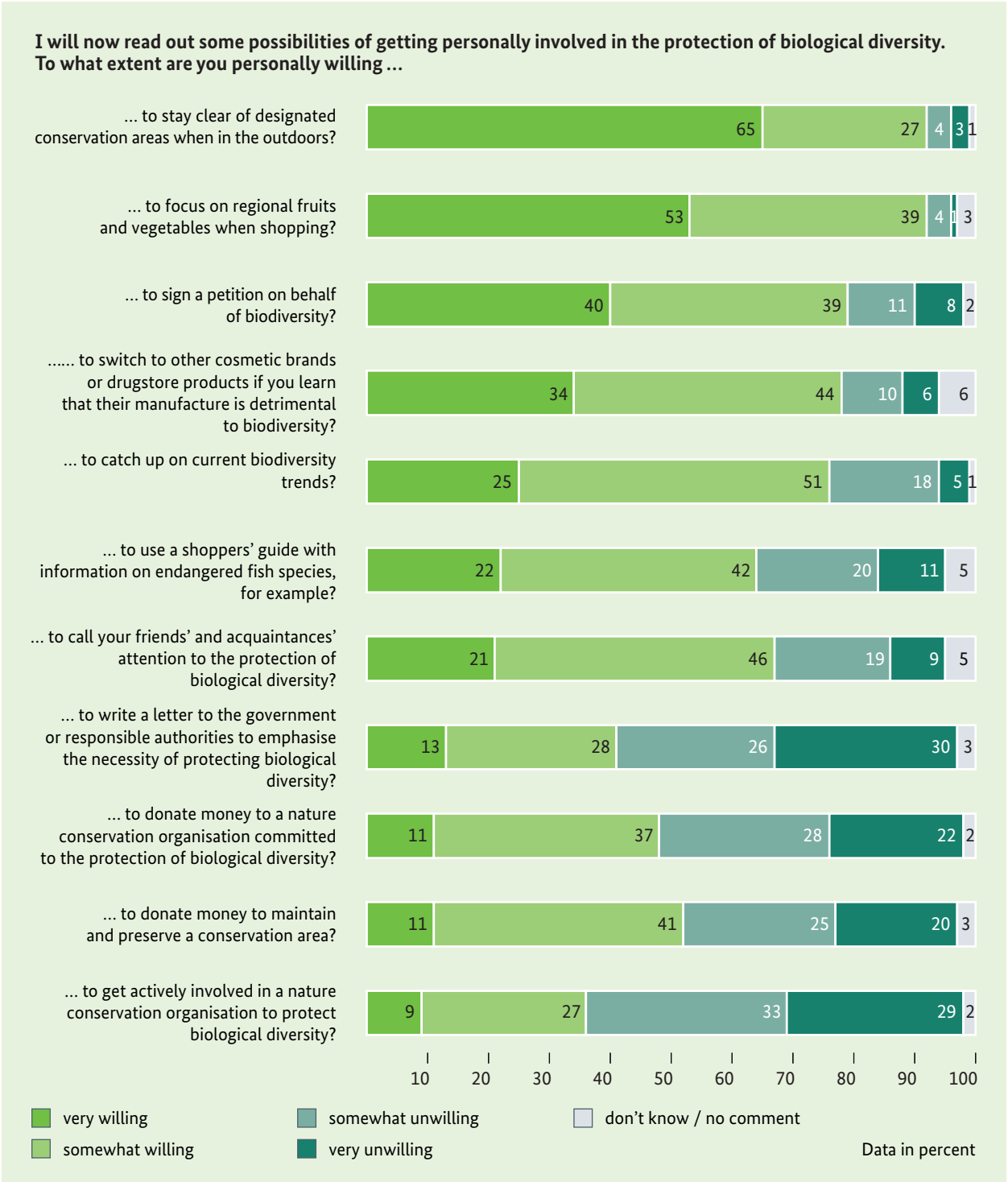


Table 21: Willingness to make an active contribution towards preserving biological diversity, according to gender and education

To what extent are you personally willing ...

Very willing Data in percent	Average	Sex		Education		
		M	F	low	medium	high
... to stay clear of designated conservation areas when in the outdoors?	65	62	67	62	63	72
... to focus on regional fruits and vegetables when shopping?	53	49	58	48	56	60
... to sign a petition on behalf of biodiversity?	40	38	42	32	42	51
... to switch to other cosmetic brands or drugstore products if you learn that their manufacture is detrimental to biodiversity?	34	30	37	25	33	46
... to catch up on current biodiversity trends?	25	25	24	16	26	35
... to use a shoppers' guide with information on endangered fish species, for example?	22	19	25	16	24	29
... to call your friends' and acquaintances' attention to the protection of biological diversity?	21	20	22	15	22	31
... to write a letter to the government or responsible authorities to emphasise the necessity of protecting biological diversity?	13	13	12	9	14	17
... to donate money to a nature conservation organisation committed to the protection of biological diversity?	11	11	11	7	13	17
... to donate money to maintain and preserve a conservation area?	11	11	11	7	10	17
... to get actively involved in a nature conservation organisation to protect biological diversity?	9	10	7	4	12	12

heavily over-represented | over-represented | heavily under-represented | under-represented

Besides the Liberal Intellectuals and Socio-ecologicals, the Movers and Shakers are especially willing to do their bit to maintain biological diversity

A look at the top level of agreement reveals clear areas of milieu focus: the Socio-ecologicals and Liberal Intellectuals tend to show greater willingness to act. The young trendsetters in the Movers and Shakers milieu are also substantially over-represented for almost all type of action surveyed here, which can be put down to their strong awareness of the subject matter. Only when it comes to buying regional fruit and vegetables do they attain average scores (51 percent, population average 53 percent).

The Socio-ecological and all up-market milieus appear particularly willing to steer clear of designated protected areas when spending time in nature – the only exception is the High Achiever milieu (59 percent; Conservative Established milieu 74 percent, Liberal Intellectuals 75 percent, Socio-ecologicals 79 percent; average 65 percent, top level of agreement each time).

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Section 2: 'Wilderness – humankind's search for unspoiled nature'

A2.1 Could you please tell me what springs to mind on hearing the word 'wilderness'. Please name everything that occurs to you. (Figure 2)

Data in percent		Data in percent	
1. (Wild) animals	55	13. Mountains/mountainous areas	6
2. Forests, rain forest, jungle	44	14. Freedom	6
3. Unspoiled nature	33	15. Nature conservation and environmental protection	6
4. Plants	23	16. Freedom and adventure	5
5. Absence of humankind and civilisation	18	17. Moors, swamps	5
6. Rivers	14	18. Remoteness (solitude)	5
7. Nature (in general)	14	19. Grasslands	5
8. Chaos and neglect	13	20. Africa (Kenya, Congo)	5
9. National parks and nature reserves	8	21. Health	5
10. Habitat for animals and plants	7	22. Threatened wilderness	4
11. Biodiversity	7	23. Danger	3
12. Recreation and relaxation	6		

Open-ended question, multiple answers possible

A2.2 Now let's turn to the subject of nature and the role it plays in your life. I have several statements here. For each of these statements, please indicate whether you strongly agree, somewhat agree, somewhat disagree, strongly disagree (Text Section 2.2, page 25)

Data in percent	Strongly agree	Somewhat agree	Somewhat disagree	Strongly disagree	Don't know / no comment
1. The wilder the nature, the better I like it	23	42	28	6	1

A2.3 Does Germany have any areas of wilderness in your opinion? (Figure 3, Table 1)

Data in percent	
1. Yes	64
2. No	24
3. Don't know/no comment	12

A2.4 How much wilderness do you think there should be in Germany? More wilderness, less wilderness, OK as it is, or don't you have an opinion on this? (Figure 4, Table 2)

Data in percent	
1. More	42
2. Less	3
3. OK as it is	42
4. No opinion	11
5. Don't know/no comment	2

A2.5 In which areas of Germany do you feel more wilderness should be allowed to develop? (Figure 6, Table 3)

Data in percent	
1. In forests	79
2. On moorlands	66
3. On former military exercise grounds	63
4. In mountainous and rocky regions	62
5. In river landscapes	61
6. On flood plains	57
7. In post-mining landscapes	54
8. In lakelands	50
9. Around coastlines	44

Base: 842 cases (only respondents who think there ought to be more wilderness); multiple answers possible

A2.6 To what extent should wilderness in Germany be open to public access? (Figure 7, Table 4)

Data in percent	
1. No access	16
2. Guided access	33
3. Access on pathways	35
4. Unrestricted access	11
5. Don't know	5

A2.7 Please tell me to what extent you agree with the following statements. (Figure 8, Table 5)

Data in percent	Strongly agree	Somewhat agree	Somewhat disagree	Strongly disagree	Don't know / no comment
1. Wilderness areas provide vital refuge zones for flora and fauna	74	22	2	1	1
2. Wilderness areas represent free space within our hightech world	53	36	6	1	4
3. Wilderness areas can teach us a lot about wildlife native to Germany.	52	38	6	1	3
4. I feel alarmed by the fact that the designation of wilderness areas leaves fewer areas available for commercial exploitation	7	16	34	38	5
5. We don't need wilderness areas in order to protect rare and precious landscapes in Germany	6	11	30	49	4

A2.8 How would you feel about the propagation of the following animals in Germany? (Figure 9, Table 6)

Data in percent	A good thing	Not a good thing	Don't mind	Don't know
1. Beaver	67	16	14	3
2. Lynx	64	17	14	5
3. Wildcat	63	19	14	4
4. Racoon	48	34	14	4
5. Wolf	44	41	9	6

A2.9 Here are some more statements. Again we're interested to hear the extent to which you agree with them. (Figure 11, Table 7)

Data in percent	Strongly agree	Somewhat agree	Somewhat disagree	Strongly disagree	Don't know / no comment
1. Dead trees and deadwood belong in the forest	38	38	15	5	4
2. Rotting trees and dropping branches in near-natural forests can pose a hazard to human beings	19	42	26	10	3
3. A forest should look tidy	9	24	36	28	3

A2.10 Now I'm going to list several statements on national parks in Germany. For each, please tell me whether you agree with them or not. National parks in Germany... (Figure 12)

Data in percent	Yes	No	Don't know / no comment
1. ... protect animals and plants	95	2	3
2. ... enhance the region	89	5	6
3. ... are right for Germany	88	6	6
4. ... boost tourism and create jobs	81	10	9
5. ... are detrimental to forestry, e.g. due to the possible spread of pests such as the bark beetle	21	57	22
6. ... compromise the use of land for agriculture	16	71	13

A2.11 Do you think there are already enough national parks in Germany? (Figure 13, Table 8)

Data in percent	
1. Yes	33
2. No	37
3. Don't know	30

Section 3: Humankind and nature – how we threaten, use and protect nature

A3.1 Now let's turn to the subject of nature and the role it plays in your life. I have several statements here. For each of these statements, please indicate whether you strongly agree, somewhat agree, somewhat disagree, strongly disagree. (Figure 14, Table 9)

Data in percent	Strongly agree	Somewhat agree	Somewhat disagree	Strongly disagree	Don't know / no comment
1. Nature is something alien to me	2	6	22	70	0
2. I don't feel comfortable in natural surroundings	5	7	18	68	2
3. I'm not interested in nature as such	6	16	25	51	2
4. I try to spend as much time as possible in natural surroundings	31	44	20	5	0
5. I feel very close ties with the nature and countryside of my region	36	45	14	4	1
6. Being in natural surroundings makes me happy	41	44	11	2	2
7. What I value about nature is its diversity	52	40	5	1	2
8. I (would) find it important to introduce my children to the wonders of nature	52	37	6	1	4
9. Nature to me means health and recreation	53	38	7	1	1
10. Nature is all part of enjoying a good life	56	36	5	1	2

A3.2 For each of these statements, please tell me whether you strongly agree, somewhat agree, somewhat disagree or strongly disagree with it. (Figure 15, Table 10)

Data in percent	Strongly agree	Somewhat agree	Somewhat disagree	Strongly disagree	Don't know / no comment
1. People think too much about the destruction of nature	5	17	33	42	3
2. I feel threatened by the destruction of nature in our country	11	34	38	14	3
3. I fear that there will hardly be any intact nature left for our children and grandchildren	24	44	25	5	2
4. I'm getting annoyed by the reckless attitude of many people towards nature	42	41	13	3	1

A3.3 Here are some statements on the preservation and use of nature. For each, please tell me whether you strongly agree, somewhat agree, somewhat disagree or strongly disagree with it. (Figure 16, Table 11)

Data in percent	Strongly agree	Somewhat agree	Somewhat disagree	Strongly disagree	Don't know / no comment
1. Humankind is part of nature	61	34	3	1	1
2. It is the duty of humankind to protect nature	56	39	3	1	1
3. I as an individual cannot make a great difference with regard to the protection of nature	18	37	31	14	0
4. I feel personally responsible for the preservation of nature	18	47	24	8	3
5. Human beings have the right to modify nature for their own benefit	8	32	37	19	4

A3.4 And what is your opinion of the following statements? (Figure 17, Figure 18, Table 12)

Data in percent	Strongly agree	Somewhat agree	Somewhat disagree	Strongly disagree	Don't know / no comment
1. We should use nature only in such a way that its resources will be available to future generations to the same extent	57	38	4	0	1
2. Nature should be used in such a way that the diversity of plants, animals and their habitats is permanently safeguarded	55	38	5	1	1
3. Nature should be used in such a way that the beauty and the special character of the natural world and landscape are preserved	52	41	5	0	2
4. We should not exploit nature at the expense of people in less affluent countries	49	41	5	1	4
5. Nature conservation in Germany is an important political task	45	41	9	2	3
6. In times of economic crisis, nature conservation, too, has to manage with less money	20	42	26	8	4
7. Enough is being done in Germany for the protection of nature	10	30	39	15	6
8. Nature must not be allowed to stand in the way of economic development	6	26	40	23	5

Section 4: Culture – shaping a sustainable co-existence between humankind and nature

A4.1 It is up to some regions in Germany to produce food for the rest of us. How important do you find the following elements in these cultural landscapes besides fields? (Figure 19)

Data in percent	Very important	Somewhat important	Somewhat unimportant	Very unimportant	Don't know / no comment
1. Grasslands and pastures	68	28	3	0	1
2. Streams and pools	61	33	5	1	0
3. Tree groves and hedges	56	35	7	2	0
4. Tree-lined avenues	31	38	23	7	1
5. Settlements/roads	24	41	28	5	2

A4.2 Which sector do you think ought to take responsibility for preserving these landscape elements? (Figure 20)

Data in percent	A lot of the responsibility	Quite a lot of the responsibility	Not as much responsibility	Minimal responsibility	Don't know / no comment
1. Nature conservation	61	31	6	1	1
2. Forestry	51	39	7	2	1
3. Local government	39	38	15	5	3
4. Agriculture	38	45	13	2	2
5. Hunting	22	39	25	10	4

A4.3 Many of Germany's rivers have been straightened in recent decades and intensive use has been made of washlands and flood plains. What is your opinion of the following statements? (Figure 21)

Data in percent	Strongly agree	Somewhat agree	Somewhat disagree	Strongly disagree	Don't know / no comment
1. Near-natural rivers and streams are more attractive than those which have been straightened	65	28	3	1	3
2. Rivers and streams should be managed in a near-natural way to allow the watercourse to develop as nature intended	61	32	3	1	3
3. Washlands should be put to agricultural use	18	35	22	16	9
4. Washlands should be developed for settlement and commercial purposes	5	11	20	56	8

A4.4 How important do you personally find the following flood-protection measures? (Figure 22)

Data in percent	Very important	Somewhat important	Somewhat unimportant	Not important	Don't know / no comment
1. Near-natural management of rivers and streams	60	33	4	1	2
2. Creating more washlands and flood plains	59	31	5	1	4
3. Creating more ways for rainwater to drain away before entering the river system	59	30	5	1	5
4. Building higher dykes	49	33	13	2	3

A4.5 Do you consider the energy transition – culminating in the bulk of electricity being generated from renewables – as the right way to go? (Figure 23)

Data in percent	
1. Yes	56
2. Undecided	30
3. No	10
4. Don't know	4

A4.6 Intensifying our use of renewable energy in the future will impact on our landscapes. What is your opinion about the potential increase in ...? (Figure 25)

Data in percent	I think it's good	I would accept it	I wouldn't like it	I'm against it	Don't know / no comment
1. wind-energy plants off the North Sea and Baltic coasts	38	44	11	5	2
2. the land given over to solar (photovoltaic) installations outside of residential areas	27	50	14	6	3
3. on-shore wind-energy plants	26	48	17	7	2
4. the land used for the cultivation of rapeseed	18	46	20	10	6
5. the land used for the cultivation of maize	17	43	22	11	7
6. the number of biogas facilities	16	45	22	10	7
7. the number of overhead power lines	5	39	36	17	3
8. forest logging	5	26	37	28	4

A4.7 How much do you know in general about the impact on nature and the environment of the products you buy and use? (Figure 26)

Data in percent	
1. I know a lot	9
2. I know about the main types of impact	40
3. I don't know much about it	43
4. Don't know	7
5. No response	1

A4.8 How often did you buy the following products last month? (Figure 27, Table 13)

Data in percent	Every time the opportunity presented itself	Often	Every other time the opportunity presented itself	Rarely	Never the organic version	Doesn't apply to me	Don't know / no comment
1. Animal products from organic farming, such as organic milk or organic eggs	9	19	13	27	25	6	1
2. Organically grown fruit and vegetables	6	20	15	31	22	5	1
3. Organic meat	3	8	9	29	42	8	1

A4.9 How often did you buy the following products in the last 12 months? (Figure 28, Table 14)

Data in percent	Every time the opportunity presented itself	Often	Every other time the opportunity presented itself	Rarely	Never the organic version	Doesn't apply to me	Don't know / no comment
1. Seasonal fruit and vegetables	15	50	15	14	2	3	1
2. Produce from your region	10	44	16	22	3	3	2

A4.10 For each of these product categories, could you please tell me how often you picked a nature-friendly version on the last three occasions that you purchased such a product or engaged in such an activity. (Figure 29)

Data in percent	All three times	Twice	Once	Never	Can't recall	Don't know / no comment
1. I bought paper, toilet paper or tissues made from recyclable materials	34	14	14	30	5	3
2. I bought nature-friendly cosmetics	12	9	14	47	8	10
3. I booked a nature-friendly holiday trip	7	5	13	61	6	8
4. I bought items of wood furniture made from sustainably grown wood	5	4	12	58	13	8
5. I bought items of clothing made from organic cotton	4	6	14	62	8	6

A4.11 How important is it to you to buy products with the following attributes when shopping? (Figure 30, Table 15)

Data in percent	Very important	Somewhat important	Somewhat unimportant	Very unimportant	Doesn't apply to me	Don't know / no comment
1. Regional and seasonal fruit and vegetables	36	46	12	3	2	1
2. Organically farmed produce	18	39	26	13	3	1
3. Services compatible with nature, for example when organising holidays or leisure activities	9	33	32	16	7	3
4. Eco-certified consumer durables, e.g. furniture and clothing	9	33	35	16	4	3

A4.12 When referring to nature-friendly products, we mean goods that are produced/manufactured with the aim of keeping the impact on nature to a minimum. What is your opinion about the following statements? (Figure 31, Figure 32, Figure 33, Table 16, Table 17, Table 18, Table 19)

Data in percent	Strongly agree	Somewhat agree	Somewhat disagree	Strongly disagree	Don't know / no comment
1. I think nature-friendly products are over-priced	39	38	18	3	2
2. We should all become nature-friendly consumers because we bear responsibility for our children and our children's children	33	47	11	2	7
3. We can set a good example by purchasing nature-friendly products	25	48	17	4	6
4. To me, nature-friendly foods are all part of a healthy diet	21	42	24	9	4
5. Shopping for nature-friendly products is no more time-consuming than for other products	19	34	30	13	4
6. I don't believe that I can really help nature by purchasing nature-friendly products	15	34	31	15	5
7. I can't afford nature-friendly products	15	27	34	22	2
8. I generally find that organic foods taste better	14	33	29	16	8
9. Shopping for nature-friendly products is a hassle for me because there aren't any suitable shops where I live	13	29	32	22	4
10. The people I know approve of my buying nature-friendly products	12	34	21	11	22
11. I'm convinced I can influence what my supermarket stocks by asking for specific products	11	31	30	23	5
12. It's easy to decide which products are nature-friendly	10	31	37	18	4
13. I think our agriculture is sufficiently geared to nature-friendly farming	9	36	32	14	9
14. There's no need for us Germans to compromise our lifestyle to protect nature	8	26	35	26	5

A4.13 And to what extent do you agree with the following statement? It is prohibited to use genetically modified organisms in agriculture (Figure 35)

Data in percent	
1. Very important	56
2. Somewhat important	28
3. Somewhat unimportant	7
4. Very unimportant	3
5. Don't know	6

Section 5: biological diversity

A5.1 Are you familiar with the term 'biological diversity'? (Figure 36)

Data in percent	
1. I've heard about it and know what it means	40
2. I've heard about it but don't know what it means	36
3. I've never heard about it	20
4. Don't know	4

A5.2 Could you please tell me what the term 'biological diversity' means to you? (open-ended question, multiple answers possible) (Figure 37, Figure 38)

Data in percent	
1. Diversity of species (flora and/or fauna)	95
2. Diversity of ecosystems and habitats	70
3. Diversity of genes, genetic information and genetic material	41
4. Miscellaneous	3
Base: 809 cases, only those respondents who say they are familiar with the meaning of the term	

A5.3 To what extent are you convinced that biological diversity on Earth is declining? Are you ... (Figure 39)

Data in percent	
1. highly convinced	34
2. somewhat convinced	44
3. undecided	15
4. somewhat unconvinced	4
5. not at all convinced	0
6. Don't know	3
Base: 1,540 cases, only those respondents who have at least heard of 'biological diversity' before	

A5.4 The Federal Republic of Germany has undertaken commitments to preserve biological diversity within the framework of international conventions. In your opinion, to what extent is the preservation of biological diversity a social task of overriding importance? Would you say that ... (Figure 40)

Data in percent	
1. yes, it is an overriding social task	36
2. somewhat	35
3. yes and no	20
4. not really	3
5. no, it is not an overriding social task	3
6. Don't know	3

A5.5 I will now read to you a few statements on biodiversity. For each of these statements, please indicate whether you strongly agree, somewhat agree, somewhat disagree, strongly disagree. (Figure 41)

Data in percent	Strongly agree	Somewhat agree	Somewhat disagree	Strongly disagree	Don't know / no comment
1. Biological diversity should be preserved for our children and future generations to inherit	58	36	3	1	2
2. The biological diversity I find in nature is conducive to my wellbeing and quality of life	28	47	14	4	7
3. Poorer countries should be granted financial support by the wealthier ones for the protection of their biological diversity	23	48	16	5	8
4. To protect the biological diversity, less land should be given over to the development of residential / commercial areas and traffic infrastructure	18	45	23	5	9
5. I feel personally affected when the biological diversity declines	16	42	27	9	6
6. I feel a personal responsibility toward preserving the biological diversity	12	39	30	14	5
7. Many accounts of the decline in biological diversity are exaggerated	6	19	34	29	12
8. Spending on biodiversity research should be reduced	4	13	41	32	10

A5.6 I will now read out some possibilities of getting personally involved in the protection of biological diversity. To what extent are you personally willing ... (Figure 42, Table 21)

Data in percent	Very willing	Somewhat willing	Somewhat unwilling	Very unwilling	Don't know / no comment
1. ... to stay clear of designated conservation areas when in the outdoors?	65	27	4	3	1
2. ... to focus on regional fruits and vegetables when shopping?	53	39	4	1	3
3. ... to sign a petition on behalf of biodiversity?	40	39	11	8	2
4. ... to switch to other cosmetic brands or drugstore products if you learn that their manufacture is detrimental to biodiversity?	34	44	10	6	6
5. ... to catch up on current biodiversity trends?	25	51	18	5	1
6. ... to use a shoppers' guide with information on endangered fish species, for example?	22	42	20	11	5
7. ... to call your friends' and acquaintances' attention to the protection of biological diversity?	21	46	19	9	5
8. ... to write a letter to the government or responsible authorities to emphasise the necessity of protecting biological diversity?	13	28	26	30	3
9. ... to donate money to maintain and preserve a conservation area?	11	41	25	20	3
10. ... to donate money to a nature conservation organisation committed to the protection of biological diversity?	11	37	28	22	2
11. ... to get actively involved in a nature conservation organisation to protect biological diversity?	9	27	33	29	2

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