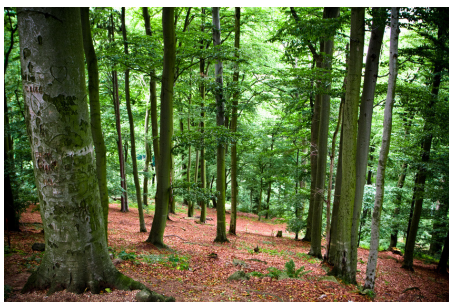


Shaping forest communication in the European Union: public perceptions of forests and forestry

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Executive Summary

Over the last few decades, crucial changes have taken place in the views and demands on forests by society at large. This includes the increased environmental awareness and recreational interests of society. These changes also affect the public's way of looking at the traditional role of forests as producers of raw materials. At the same time the urge to re-orient societies towards increasingly "bio-based economies" results in higher demands for raw material, not only for increasingly sophisticated products, but also for renewable energy.

These changes in public opinion and related societal demands have profound effects on the forest sector, including forest policy makers, forest owners and managers, and the forest industry. Forest owners increasingly cease to be the suppliers of a crude raw material and become service providers, with a multitude of needs to respond to, including the provision of a highly regarded renewable resource. Forest owners face new opportunities to respond to and become engaged in increasingly integrated value-added production and the appropriate governance of resource use. It requires new knowledge and new capabilities to adequately respond to such changing structural conditions and the opportunities that arise with them. These groups experience the need for increased communication and improved marketing and public relations skills to meet the new demands of society. First and foremost, however, it requires an increased understanding of and an effort to listen to society, both consumers and the public at large.

To further investigate trends in public perception of forests and forestry, the purpose of the study is fivefold: (1) to provide the Commission with a thorough analysis of existing surveys about public perceptions on forests and forestry in the EU; (2) to find out the views of key stakeholders (forestry experts, government officials, NGOs, forest owners, etc.) with regard to public opinion on forests and forestry and gather inputs on how public understanding and communication on the role of forests and forestry may be improved; (3) to apply the knowledge obtained to design, execute, and analyse the results of a public survey in the EU-27 countries; (4) to formulate conclusions on how public awareness of the role of forests and forestry in addressing new challenges in European society may be improved; and (5) to design a questionnaire which may be included in Eurobarometer surveys on public opinion in the EU.

Meta-analysis of previous surveys

First a meta-analysis of previous surveys (Chapter 3) is carried out to establish the current state of knowledge on the topic of public perception of forests and forestry in Europe. For the meta-analysis of previous surveys, a comprehensive overview of the current state-of-the-art research about public opinion with regard to forests and forestry is provided, based on an extensive literature review. The review builds upon previous work done within the context of the Ministerial Conference on the Protection of Forests (MCFPE) process, in

particular the study *Europeans and their Forests* (Rametsteiner and Kraxner, 2003). The materials used for the meta-analysis include a total of 26 surveys published from 2003 onwards, originating from 14 different countries and covering the public opinion on forests and forestry in 21 European countries (Turkey included).

Survey of key stakeholders

Next, a survey of key stakeholders then aimed to collect first feedback from experts involved in the forest sector across Europe on their ideas about the public's perception on various forest-related issues. With this input, a representative survey for the EU-27 public is then developed during the next step of the study. Key stakeholders were identified and a survey to obtain their input created (Chapter 4). Key stakeholders are listed by name per EU-27 country for the national level as well as the EU level survey and include representatives from environmental NGOs, forest NGOs, social NGOs, research institutes, state forest enterprises, and governmental bodies / EU and international organisations. The two versions (EU and national level) of the stakeholder survey were online for approximately 3 weeks and in addition were followed up via telephone calls. Out of the total identified list (n=230), 118 valid responses have been collected (response rate of 51.3%). Out of this total, 41 responses were provided for the EU level survey and 77 for the national level survey.

Public opinion survey across the EU-27

As a third step, the findings and feedback received from the key stakeholders was then used as input for developing the public opinion survey (Chapter 5). This representative survey of the general public across the EU-27 aimed to shed light on the latest developments of public perception on forests and forestry in the European Union. Conducted via computer assisted telephone interviews (CATI survey technique), this representative survey was carried out across the EU-27 surveying a total of 11106 randomly selected citizens. Quotas had been set to ensure representativeness of the sample across countries, gender and age groups. A total of seven questions were asked regarding the general condition of forests, including forest area, biodiversity and health, as well as on forest linkages with new societal trends, forest management and forest communication.

Summary of main findings

Based on these three tools (meta-analysis, stakeholder survey and public survey) for collecting information on the current state of public perception on forests and forestry across Europe, results have been collected (Chapters 3, 4 and 5 respectively) and analysed (Chapter 6) regarding public perception on various topics: key concerns regarding forests, the general condition of forests, threats and damages, benefits from and use of forests, management of forests, the interconnections between forests and climate change, and the level of interest for further information. All questions have been asked about the forests in the interviewees' own country.

Public perceives protection / prevention of deforestation as key concern regarding forests: Both survey tools as well as the desk research of previous studies confirmed this to be the key concern for the large majority of Europeans. Furthermore, all three tools indicate an increasing importance and greater public awareness on the issue of climate change and how it relates to forests. From the public survey one can conclude that

environmental issues, such as forest health and pollution, have become a key concern among European citizens more recently because forest experts and previous surveys did not rank this concern as second most important issue. Contrary to expert expectations, neither ecosystem services nor recreational purposes seem to be high on people's lists when thinking of forests. In terms of regional differences, Nordic/Baltic citizens place greater emphasis on the economic uses of forests, while Southern European citizens place a relatively higher importance on protection. Young people place a slightly higher emphasis on the issue of climate change than other age groups.

Public perceives the general condition of European forests to be worse than it actually is: As predicted by forest experts and previous studies, the wide majority of European citizens perceive the total forest area as well as the level of biodiversity to be decreasing. In reality, total forested area in Europe has been increasing slightly over the past two decades (approx. 0.8% per year) and the loss of biodiversity has at least slowed down due to recent policy measures. One possible explanation for the apparent public misconception about trends in the amount of forested area is the fact that while total forested area has continued to increase slightly in the EU-27, there are signs that forest fragmentation has been increasing (Joint Research Centre). This may fuel the perception that forest area is decreasing, particularly in urban areas where many people notice fragmentation due to the development of infrastructure and new or expanding settlements. The public survey results indicate that indeed citizens from urban areas have a more negative image of change in forest area than their rural counterparts. Thus, future studies could investigate the differences in public perception of fragmented versus un-fragmented forests.

Some key threats and damages to forests (storms, diseases, pests and invasive species) not well known by the public: In terms of threats and damages to forests, forest fires are perceived as the most pressing threat followed by harvesting/management damages; at the same time citizens do not have a strong opinion about threats from wild animals, invasive species, pests and diseases, as predicted by the experts. While forest fires continue to damage European forests every summer and risk levels remain high and will likely increase in the future due to the consequences of climate change, more effective fire prevention, preparedness and suppression has helped many countries to better tackle this type of threat. Nevertheless, forest fires are a major issue in the Mediterranean area, where countries reported to the MCPFE that 1.3% of the forest area was damaged by fires. In other EU regions, less - and often considerably less - extensive areas are affected by fire (<0.1% of areas).

Contrary to the high media attention given to forest fires, other very important threats to forest health are much less exposed to the public. As a consequence, the European public currently underestimates the damages caused by insects, diseases, invasive species and storms: when comparing the total annual forest area affected, the share of forest area damaged by *insects and diseases* in the EU ranges from some 10% of the area in South West Europe, to around 3% in Central Europe and around 1% in the Nordic / Baltic countries; over the last decade large *storm damages* have occurred in Europe almost annually with the largest area affected by storm damage having been reported by the Nordic/Baltic region for 2005 affecting 2.8% of the forest area; the largest proportion of forests damaged by storm (6.1% of the forest area) is found in South West Europe; in

other EU regions, such as South East Europe, storms affect considerably smaller areas (0.3% in the case of South East Europe).

Strong regional differences have been observed as regards the perceived threats and damages to forests: while the South East and South West regions place more emphasis on forest fires, Central Europe perceives damages from harvesting and management to be a greater threat as their countries are not at high risk from seasonal forest fires. Interestingly, older people (55+) and citizens living in rural areas place a higher importance on storms as an increasing threat than other age groups and people from urban areas.

European public places higher value on forest conservation and forests' protective functions than on forest utilisation aspects: In line with previous studies and expert expectations, the preservation of biodiversity is perceived as one of the most important functions of forests. Furthermore, the expectation of experts in terms of an increasing importance placed on the value of forests for protecting against climate change and natural disasters was confirmed by the public survey: an overwhelming majority values this benefit over most other forest uses. Interestingly, recreational purposes were not ranked as one of the top two most important benefits by European citizens. This contradicts findings of previous studies and the expectations of forest experts across Europe.

Public perception on preferred management style for various forest uses/benefits varies widely: Based on previous studies and the survey among experts, the overall perception of Europeans on the quality of forest management is rather positive. The clear majority of EU citizens stated they would favour more active management (multifunctional and sustainable management) to better address all three forest functions, whilst experts were divided about the likely EU citizens' opinion about management for protecting biodiversity, for protecting against climate change and for providing recreational opportunities. For the other two forest functions – providing wood as a renewable material and providing wood for bioenergy – experts had predicted that the majority of EU citizens would favour more active management, while in reality, the public opinion survey showed that the European public is more or less evenly divided on what the best forest management style should be (more or less active management) for these two forest uses. Regional differences are quite significant regarding citizens' opinion on the preferred management style for providing wood as a renewable material: citizens in the South West region place a stronger emphasis on less or much less active management than people in the South East region; North West and central Europe are in line with the EU-27 mean.

European public is interested in the interconnections between forests and climate change and the majority believes forests can help in one way or another to tackle climate change: A clear finding of this study is that people are more and more concerned with and interested to learn more about the interplay between forests and climate change. Despite a common perception of the overall importance and urgency of this topic, the European public is currently divided as to what types of forest management measures (wood as renewable material, wood for bioenergy, afforestation) could best help address climate change. The South East and South West regions have a more pronounced negative view on whether more wood as a construction material and more wood for

bioenergy could help tackle climate change. Central European citizens are most supportive of the more afforestation as a means to tackle climate change.

The new status quo of public perception on forests and forestry in the EU-27

As a first step, the conclusions of this study (Chapter 7) highlight the main parameters of the latest state of public perception (June 2009) based on the representative EU-27 survey carried out in this study in order to better understand the baseline, the basic starting point and context for any improvements of forest communication to take place in.

Shifted viewpoint from a traditional commodity-based and recreational management demand to a demand for greater protection and management for ecosystem services: As various parts of the public survey have demonstrated, the European public has clearly shifted its expectations as regards forests and forestry from a traditional commodity and recreational perspective to a demand for greater protection and management for ecosystem services (i.e. emphasis on forest services and benefits centred on protection). This preferred way of looking at forest and forestry related issues has emerged relatively recently as key stakeholders and previous surveys still showed a greater emphasis on utilisation aspects. Corresponding to this general desire to shift away from focussing on utilisation functions of forests, an important finding of the public survey has been that the clear majority of EU citizens would favour more active management (multifunctional and sustainable forest management) as the preferred management style to enable such a shift towards a greater emphasis on forest services and benefits centred on protection. This is a vital outcome of this report as it helps set the tone for future forest communication.

Any future communication has to take into account this basic viewpoint among the European public and – depending on the purpose of the communication – can either build on this viewpoint, e.g. for further promoting the concept of sustainable forest management, or aim to broaden the public’s perspective by highlighting the benefits of utilisation-related forest functions. Even for this latter communication topic, the public survey results have shown that management for energy and wood products, for example, – though these topics are not yet well known by the public – is viewed ambivalently, not negatively.

Public perception on European forests is based on diverse sets of information, including communication on worldwide forest and forestry issues: Partially, this shift in the public’s basic perception of now viewing European forests from a protection perspective rather than a more traditional use perspective can be attributed to the fact that the European public receives information from all types of media outlets with a rather global coverage of the issue. Global communications media have – over the past decade – broadly covered the issue of tropical deforestation and its connection to climate change, worldwide forest fires, illegal logging, deteriorating levels of biodiversity and associated species extinctions, etc. Thus, Europeans no longer view the state and functions of European forests in isolation. Rather, their perception of the state of forests, forest health and damages, biodiversity levels, and their key issues of concern regarding forests is based on their assessment of the global situation and a diverse set of information, including global news on deforestation rates, studies on European wildfires, and citizens’ own impression of forest management activities when walking through their local forest.

Implications for future forest communication

As a final step, the conclusions of this study (Chapter 7) formulate recommendations on how national and EU-wide communication on the role of forests and forestry in addressing new challenges in European society may be improved. The public survey outcomes confirmed expert predictions on the two most requested topics for further information: sustainable forest management and the interplay between forests and climate change. Additional confirmed topics of public interest include biodiversity, recreation and the general condition of forests. One topic for further exploration of real interest remains the use of wood for bioenergy and as a renewable material. While it could have been expected that citizens would be very interested in learning more about these topics since they are relatively new benefits/uses as compared to some of the other topics, the public survey showed relatively low interest. Overall, forest communication is evidently challenged to reach out to the public, and particularly to the younger public, on topics that are currently not high up on the list of interesting topics to society. In particular, this leads to the definition of three key areas for improving future forest communication across Europe:

- 1. The need for a clear and sufficiently detailed message presented in a neutral manner that allows the public to make appropriate distinctions depending on the relevant specific issues and challenges, including forest area, biodiversity and damages, for various geographic contexts (i.e. local forest, European forests, forests worldwide):** One of the key findings of the public opinion survey has been the fact that the European public is clearly worried about the condition of forests. While their concerns may not always reflect trends depicted by the latest data, it is nevertheless a strong stated perception that needs to be addressed by future forest communication. One likely key reason for the rather negative perception of the state of European forests is due to the fact that citizens have a hard time separating the information they receive in the media regarding the global state of forests (particularly deforestation of the tropical rainforests) and what is actually happening in their own country's forests. A future European / national forest communication campaign with a clear message could help further clarify this global perception on forests and sensitise the public toward making appropriate distinctions depending on the relevant specific issues and challenges for the various geographic contexts (i.e. local forest, European forests, or tropical forests worldwide). Additionally, apparently contradictory and controversial complex issues (e.g. that increased wood harvesting and biodiversity need not only be mutually exclusive, but can be mutually reinforcing) need particular attention when communications are drafted in order to present them in a clear and sufficiently detailed and neutral manner.
- 2. The need for stressing the important role of forests and wood in tackling climate change:** The public survey has shown that the majority of Europeans believes that forests can play an important role in tackling climate change. However, most Europeans do not feel well informed about various types of complementary measures (e.g. wood as a renewable material, wood for bioenergy, afforestation) and their impacts. In particular, the European public was divided on the role of forests (wood) as an input for bioenergy and, in turn, the

role of bioenergy in tackling climate change; a very reasonable finding in light of the complexities of the issues at hand and the fact that disagreements continue to exist among experts. Consequently, the public was also divided in opinion on whether or not more information is needed on these specific topics. Future forest communication ought to be aware of the fact that the public is certainly taking an interest in climate change related topics, but once again citizens need clear and sufficiently detailed messages in a geographically-explicit context in order to continue building their opinions on these topics.

- 3. The need for addressing specific audiences:** The detailed geographic and demographic analysis carried out during this study also provides important insights regarding a need to tailor certain aspects of future forest communication for specific audiences. On a regional level, the South East region is the most interested in learning more about forests; whereas the Nordic/Baltic region seems to ‘suffer’ a certain forest communication fatigue. Thus, these regions are best addressed via diversified communication strategies.

Additionally, future forest communication could put emphasis on communicating with the more disinterested public, i.e. the young people. For this demographic group an urgent discrepancy between their apparent lack of sufficient interest in forest-related issues and the fact that they are the future and should be – according to European forest experts – the focus of any future forest communication. While there could be many factors leading to the apparent disinterest of younger people, e.g. lack of educational emphasis on the topic, it could well be that today’s “high-tech IT youth” is overloaded with information and therefore communication strategies need to break through the ‘continuous information overload’ by having punchy and appealing methods and content.

Another potential target group lending itself for further assessment are women – compared to men, women on average place an even higher importance on the amenity functions of forests and are more concerned about forest health and damages.

Finally, future forest communication should acknowledge that rural society is largely not discernible from an urban population in terms of opinion and thus no differentiated communication strategy for urban versus rural areas is needed.

Eurobarometer questions for future follow-up of results and recommendations

Lastly, questions for inclusion in future Eurobarometer surveys have been developed (annexed to this report). These questions have been kept rather similar to the ones used in this study in order to allow for comparability of results. This way the Eurobarometer questions can serve as a follow-up to this study both in terms of changes in public opinion and to measure how improved forest communication has influenced these changes in public opinion. A ‘Special Eurobarometer’ would be one of the preferred formats for such follow-up investigation due to its representativeness as well as the fact that interviews are conducted on a face-to-face basis and the thematic topic can be explored in-depth. Another feasible option to highlight trends in public opinion on one or the other forest-related aspect is to include one or two questions on forests and forestry in the overall ‘Standard Eurobarometer’. Finally, a ‘Flash Eurobarometer’ lends itself for quick and ad-hoc testing of changes in public opinion for specific new forest communication measures as it allows relatively quick results and focuses on specific target groups.

Synthèse

Au cours des dernières décennies, des changements cruciaux sont apparus dans la manière pour la société, au sens large, de percevoir les forêts et ses exigences par rapport aux forêts. Cela comprend d'une part la prise de conscience plus importante de l'environnement et d'autre part les intérêts récréatifs de la société. Ces changements ont également un impact sur la façon dont le public perçoit le rôle traditionnel des forêts en tant que producteur de matières premières. Au même moment, le besoin impératif de réorienter les sociétés vers des « économies dites orientées bio » a pour conséquence une demande accrue de matières premières, non seulement dans le cadre de la fabrication de produits de plus en plus sophistiqués, mais également dans le cadre de leur utilisation pour l'énergie renouvelable.

Ces changements dans l'opinion publique et les demandes sociétales afférentes ont de profonds impacts sur le secteur de la forêt, entre autres sur les décideurs politiques en matière de forêt, sur les directeurs et propriétaires des forêts et sur l'industrie forestière. De plus en plus de propriétaires de forêts cessent d'être des producteurs de matières premières brutes pour devenir des fournisseurs de services, répondant à une multitude de besoins parmi lesquels la production d'une ressource renouvelable hautement considérée. Les propriétaires de forêts se trouvent face à de nouvelles possibilités et s'engagent dans une production à valeur ajoutée de plus en plus intégrée et dans une gestion appropriée de l'utilisation des ressources. Cela requiert de nouvelles connaissances et de nouvelles capacités à s'adapter à ces changements structurels et aux opportunités qui les accompagnent. Ces groupes éprouvent la nécessité d'une communication accrue et d'une amélioration des relations publiques et du marketing qui correspondent aux nouvelles exigences de la société. Cela requiert, cependant, et avant tout, un effort d'écoute et une compréhension plus large de la société, à la fois consommateur et public au sens large.

Afin d'étudier les tendances du public dans la perception des forêts et de la sylviculture, cette étude poursuit cinq objectifs : (1) fournir à la Commission une étude approfondie des enquêtes existantes relatives aux tendances du public dans la perception des forêts et de la sylviculture au sein de l'UE, (2) recueillir les avis des parties prenantes clés (experts sylviculture, fonctionnaires du gouvernement, ONG, propriétaires de forêts, etc.) relatifs à l'opinion publique sur les forêts et la sylviculture et rassembler les données sur la façon dont la compréhension du public et la communication sur le rôle des forêts peuvent être améliorés ; (3) se servir des connaissances acquises pour concevoir, mettre en œuvre, et analyser les résultats d'une enquête publique qui serait réalisée dans les 27 pays de l'UE ; (4) formuler des conclusions sur la manière dont peut être améliorée la conscience du public dans le rôle des forêts et de la sylviculture en abordant les nouveaux défis de la société européenne ; (5) concevoir un questionnaire qui sera inséré dans les enquêtes de l'Eurobaromètre réalisées sur l'opinion publique dans l'UE.

Méta-analyse des enquêtes précédentes

Une méta-analyse des enquêtes précédentes (chapitre 3) est tout d'abord réalisée, afin de déterminer l'état de connaissance actuel de la perception du public sur les forêts et la sylviculture en Europe. A cette fin, une vue globale et compréhensive sur l'état des connaissances actuelles en matière de recherche sur l'opinion publique au sujet des forêts et de la sylviculture est fournie, sur la base d'un examen approfondi de la documentation existante. Cet examen se fonde sur les travaux effectués auparavant dans le cadre de la Conférence ministérielle pour la protection des forêts (MCPFE), tout particulièrement sur l'étude intitulée « les Européens et leurs Forêts » (Rametsteiner et Kraxner, 2003). Les documents utilisés en vue de la méta-analyse comprennent un ensemble de 26 enquêtes publiées à compter de 2003, provenant de 14 pays différents et couvrant l'opinion publique sur les forêts et la sylviculture dans 21 pays européens (Turquie incluse).

Enquête sur les parties prenantes clés

Une enquête sur les parties prenantes clés est ensuite menée dans le but de rassembler les premières réactions des experts impliqués dans le secteur forestier en Europe sur les différentes questions qui se posent en matière de forêt. A l'aide de ces données, une enquête représentative est menée, destinée au public des 27 pays de l'UE. Les parties prenantes clés sont identifiées et une enquête menée afin d'obtenir leurs avis (chapitre 4). Les parties prenantes clés sont listées par nom et par Etat membre, tant au niveau national qu'au niveau européen, et comptent des représentants des ONG environnementales, des ONG des forêts, des ONG sociales, des instituts de recherche, des entreprises étatiques des forêts et des entités gouvernementales et intergouvernementales. Les deux versions (niveaux national et européen) de l'enquête sur les parties prenantes ont été publiées sur le web pendant approximativement 3 semaines et ont fait l'objet d'un suivi téléphonique. Sur la liste totale identifiée (n=230), 118 réponses valides ont été rassemblées (taux de réponse de 51,3%). Sur ce total, 41 réponses ont été données dans le cadre de l'enquête au niveau de l'UE et 77 au niveau national.

Enquête d'opinion publique au sein de l'UE des 27

Lors de la troisième étape, les constatations et réactions des parties prenantes sont utilisés comme données pour mettre en place l'enquête sur l'opinion publique (chapitre 5). Cette enquête représentative de l'opinion publique à travers l'UE des 27 a eu pour but d'éclairer les récents développements de la perception du public sur les forêts et la sylviculture au sein de l'Union européenne. A l'aide des entretiens téléphoniques assistés par ordinateurs (CATI), cette enquête représentative a été menée au sein de l'UE des 27 en interrogeant un total de 11106 citoyens choisis au hasard. Les quotas ont été déterminés pour assurer une représentativité de l'échantillon à travers les pays, les genres et les groupes d'âge. 7 questions ont été posées au total sur l'état général des forêts, parmi lesquelles le domaine forestier, la biodiversité et la santé, ainsi que les liens entre la forêt et les nouvelles tendances sociétales, la gestion des forêts et la communication sur les forêts.

Résumé des constatations principales

Sur la base de ces trois outils (méta-analyse, enquête des parties prenantes et enquête publique) visant à rassembler des informations sur l'état actuel de la perception du public sur les forêts et la sylviculture au travers de l'Europe, les résultats sont regroupés

(respectivement chapitres 3, 4 et 5) et analysés (chapitre 6) en divers thèmes : les enjeux majeurs relatifs aux forêts, l'état général des forêts, les menaces et les dégâts causés, les avantages des forêts et leur utilisation, la gestion des forêts, les liens entre les forêts et le changement climatique et le niveau de nécessité à obtenir des informations supplémentaires. Toutes les questions posées traitent des forêts du pays où vit la personne interviewée.

Le public perçoit la protection / prévention contre la déforestation comme une question majeure sur les forêts: A la fois les enquêtes et le bureau de recherche des études précédentes ont confirmé que ce thème était un enjeu majeur pour une large majorité d'européens. En outre, les trois outils montrent un accroissement de l'importance et une prise de conscience du public sur la question du changement climatique et son rapport avec les forêts. On peut déduire de l'enquête publique que les questions environnementales, telles que la santé de la forêt et la pollution, sont devenues plus récemment un enjeu majeur pour les citoyens européens, ce que les experts des forêts et les études précédentes plaçaient alors en deuxième position par ordre d'importance. Contrairement aux attentes des experts, ni les services d'écosystème, ni les besoins récréatifs ne semblent si importants aux yeux des gens lorsqu'ils pensent aux forêts. En termes de différences régionales, les citoyens du Nord/de la Baltique attachent une plus grande importance à une utilisation économique des forêts alors que les citoyens du Sud de l'Europe attachent plus grande importance à leur protection. Les jeunes accordent plus d'importance au changement climatique que les autres groupes d'âge.

Le public perçoit l'état général des forêts européennes comme pire qu'il ne l'est actuellement: Conformément aux études précédentes et à l'avis des experts des forêts, la grande majorité des citoyens européens ont l'impression que la surface totale de la forêt ainsi que le niveau de la biodiversité diminuent. En réalité, la surface totale de la forêt en Europe a légèrement augmenté au cours de deux dernières décennies (d'approximativement 0,8% par an) et la perte de la biodiversité a été au moins ralenti du fait des récentes mesures prises. Une des explications possible de cette idée fausse est liée au fait qu'alors que la surface a continué à augmenter légèrement, la fragmentation des forêts a également augmenté [Joint Research Centre]. Cette fragmentation a pu entretenir l'idée que la surface de la forêt diminuait, particulièrement dans les zones urbaines où beaucoup de gens remarquent la fragmentation due au développement des infrastructures et à l'expansion ou à la création de nouveaux hameaux. Les résultats de l'enquête publique dévoilent que les citoyens des villes ont en effet une image plus négative des changements sur les forêts que leurs homologues ruraux. Ainsi, il pourrait être intéressant de mener des études sur la différence, dans la perception du public, entre forêts fragmentées et forêts non-fragmentées.

Certaines menaces et dégâts causés aux forêts sont peu connus du public (tempêtes, maladies, nuisibles et espèces envahissantes): En termes de menaces et de dégâts causés aux forêts, les feux de forêt sont perçus comme la menace la plus importante, suivi par les dégâts liés à la gestion/récolte. En même temps, les citoyens n'ont pas un avis très arrêté sur les menaces liées aux animaux sauvages, espèce envahissantes, nuisances et maladies, telles qu'anticipées par les experts. Si les feux de forêt continuent en effet à endommager les forêts européennes chaque été et que les niveaux de risque restent élevés et sont susceptibles d'accroître dans le futur dû aux conséquences du changement climatique,

une politique de prévention, préparation et suppression plus effective des feux a permis à beaucoup de pays européens de mieux s'attaquer à ce type de menace. Néanmoins, les feux de forêts restent un enjeu majeur dans la région méditerranéenne, où les pays ont signalé au MCFPE que 13% de la surface de la forêt avaient été endommagés par des feux. Dans d'autres régions de l'UE, de moins en moins de surfaces – et souvent considérablement moins – sont affectées par les feux (< 0,1% de la surface).

Contrairement à l'attention donnée par les médias aux feux de forêt, d'autres menaces pour la forêt sont beaucoup moins portées à l'attention du public. En conséquence, le public européen sous-estime actuellement les dégâts causés par les insectes, les maladies, les espèces envahissantes et les tempêtes : lorsque l'on compare la surface totale annuelle affectée, la partie endommagée par les insectes et les maladies dans l'UE représente entre 10% de la surface en Europe de l'ouest, environ 3% en Europe centrale et environ 1% dans les pays du Nord/Baltique. De plus, au cours de la dernière décennie, des dégâts causés par de fortes tempêtes ont eu lieu en Europe presque chaque année, la plus grande surface endommagée par des tempêtes ayant été signalé par la région du Nord/de la Baltique en 2005, endommageant 2,8% de la surface de la forêt ; la plus grande proportion des forêts endommagées par les tempêtes se trouve dans le Sud Ouest de l'Europe (6,1% de la surface de la forêt) ; dans d'autres régions de l'UE, telle que le Sud Est, les tempêtes affectent des surfaces considérablement plus petites (0,3% dans le cas l'Europe de l'Est).

Des différences régionales profondes ont été observées concernant la perception des menaces et dégâts causés aux forêts : tandis que les régions du Sud Est et du Sud Ouest attachent plus d'importance aux feux de forêt, l'Europe Centrale perçoit les dégâts des récoltes et de gestion comme étant une plus grande menace, car leurs pays sont moins exposés au risque des feux de forêt saisonniers. Il est intéressant de noter que les personnes plus âgées (55+) et les citoyens vivant dans les zones rurales attachent plus d'importance aux tempêtes en tant que menace grandissante que d'autres groupes d'âge et les citoyens habitant les zones urbaines.

Le public européen attache une plus grande valeur à la conservation des forêts et à ses fonctions protectrices qu'à l'utilisation qu'on peut en faire: Conformément à des études précédentes et aux attentes des experts, la préservation de la biodiversité est perçue comme l'une des fonctions les plus importantes des forêts. En outre, les attentes des experts relativement à l'importance accrue donnée à la valeur des forêts pour protéger du changement climatique et des désastres naturels a été confirmée par l'enquête publique : une majorité écrasante valorise ce rôle par rapport aux autres avantages offerts par la forêt. Il est intéressant de noter que les intérêts récréatifs n'ont pas été rangés par les citoyens européens parmi les deux plus grands avantages de la forêt.

Cela vient en contradiction avec les constatations des études précédentes et les attentes des experts des forêts au sein de l'Europe.

La perception du public sur le type de gestion privilégié pour les utilisations/avantages varie largement: Une nette majorité de citoyens de l'UE a indiqué qu'elle favoriserait une gestion plus active des forêts (gestion durable et multifonctionnelle) afin de mieux aborder les rôles de la forêt relatifs à la protection de la biodiversité, la protection contre le changement climatique et la fourniture d'opportunités récréatives. Les experts n'avaient pas anticipé une réponse aussi tranchée. Concernant les deux autres fonctions de la forêt – fourniture du bois en tant que matière renouvelable et

pour l'énergie bio – les experts avaient pensé que la majorité des citoyens de l'UE aurait favorisé une gestion plus active, alors qu'en réalité, l'enquête d'opinion publique a montré que le public européen est plus ou moins divisé sur le choix du mode de gestion (gestion plus ou moins active) relativement à ces deux rôles de la forêt. Les différences régionales sont assez significatives sur le type de gestion privilégié en vue de la fourniture de bois comme matière renouvelable : les citoyens de la région du Sud Ouest attachent une plus grande importance à une gestion moins ou beaucoup moins active que les habitants de la région du Sud Est ; les réponses des habitants des régions du Nord Ouest et d'Europe Centrale sont conformes à la moyenne européenne.

Le public européen s'intéresse aux liens entre les forêts et le changement climatique et la majorité pense que les forêts peuvent aider, d'une manière ou d'une autre, à lutter contre le changement climatique: Il résulte de cette étude la constatation claire selon laquelle les gens se sentent de plus en plus concernés et sont de plus en plus intéressés par les liens qui peuvent exister entre les forêts et le changement climatique. Cependant, malgré une perception commune de l'importance et de l'urgence de ce sujet, le public européen est actuellement divisé sur le mode de gestion des forêts qui serait le plus adéquat pour aborder le problème du changement climatique (bois matière renouvelable, bois pour énergie bio, boisement). Les régions du Sud Est et du Sud Ouest ont une vision plus négative des hypothèses selon lesquelles plus de bois pourrait servir comme matériel de construction ou plus de bois comme énergie bio aiderait à s'attaquer au problème du changement climatique. Les citoyens d'Europe centrale accordent plus de soutien au boisement comme moyen de lutter contre le changement climatique.

Le nouveau statu quo de la perception du public sur les forêts et la sylviculture dans l'UE-27

En premier lieu, les conclusions de cette étude (chapitre 7) mettent en lumière les principaux paramètres du dernier état des perceptions du public (juin 2009), basé sur l'enquête de représentation de l'UE des 27 menée dans le cadre de cette étude, afin de permettre la compréhension de la base, du point de départ et du contexte nécessaire à toute amélioration dans la communication relative aux forêts.

Passage d'un point de vue traditionnel utilitaire/économique et d'une perspective récréative vers une exigence d'une meilleure protection et d'une meilleure gestion des services de l'écosystème: Comme l'ont démontré diverses parties de l'enquête publique, le public européen a clairement modifié ses attentes en matière de forêts et de sylviculture passant d'un point de vue traditionnel utilitaire et d'une perspective récréative vers une exigence pour une meilleure protection et meilleure gestion des services de l'écosystème (importance donnée aux services et avantages de la forêt centrés sur la protection). Cette préférence dans la manière de concevoir la forêt et la sylviculture est apparu récemment alors que les parties prenantes clés et les enquêtes précédentes montraient encore qu'une plus grande importance était donnée aux aspects utilitaires. Correspondant à ce souhait général de s'éloigner de l'aspect des fonctions utilitaires des forêts, l'enquête publique a très clairement démontré qu'une majorité claire de citoyens favoriserait une gestion plus active (gestion durable et multifonctionnelle de la forêt) de manière privilégiée afin de permettre un tel passage vers une plus grande place des services et avantages de la forêt centrés sur la protection. Ceci est un résultat central de ce rapport puisqu'il permet de dresser les plans d'une communication future sur la forêt.

Toute communication future se doit de prendre en compte ce point de vue de base du public européen et – selon le but de la communication – peut soit développer ce point de vue, par exemple en vue de promouvoir le concept de gestion durable des forêts – soit élargir la perspective du public en soulignant les avantages des fonctions utilitaires de la forêt. Même concernant ce dernier sujet, l'enquête publique a montré que la gestion des produits pour le bois et l'énergie – bien que ces sujets ne soient pas encore bien connus du public – est vue comme ambivalente, non comme négative.

La perception du public des forêts européennes est basée sur diverses sortes d'informations, parmi lesquelles la communication relative à la forêt mondiale et les questions relatives à la sylviculture: Le passage de la perception de base du public d'une perspective utilitaire traditionnelle à une perspective plus axée sur la protection peut être en partie attribué au fait que le public européen reçoit des informations de divers canaux médiatiques ayant une couverture plutôt globale de la question. Les médias de masse ont – au cours de la dernière décennie – largement couvert la question de la déforestation tropicale et de ses liens avec le changement climatique, des feux de forêt mondiaux, des coupes illégales de bois, des niveaux de détérioration de la biodiversité et de l'extinction corrélative des espèces, etc. Ainsi les européens ne voient plus l'état et les rôles de la forêt au seul niveau européen. Leur perception de l'état des forêts, de la santé et des dégâts qui leur sont causés, des niveaux de biodiversité et des questions majeures concernant les forêts est basée sur leur appréciation de la situation globale et des diverses informations reçues, parmi lesquelles les nouvelles générales sur les taux de déforestation, les études sur les feux sauvages européens et la propre impression des gens de la gestion des forêts lorsqu'ils se promènent dans leur propre forêt.

Les implications pour une communication future des forêts

En second lieu, les conclusions de cette étude (chapitre 7) formulent des recommandations sur la façon dont la communication nationale et européenne sur le rôle des forêts et de la sylviculture face aux nouveaux défis dans la société européenne peut être améliorée. Les résultats de l'enquête publique ont confirmé les prédictions des experts sur les deux sujets les plus traités pour plus d'informations : la gestion durable des forêts et la relation entre les forêts et le changement climatique. Les autres sujets d'intérêt comprennent la biodiversité, les loisirs et l'état général des forêts. Un sujet d'intérêt à explorer plus en détail concerne l'utilisation du bois pour l'énergie bio et comme matériau renouvelable. Alors qu'il aurait pu être attendu des citoyens qu'ils soient davantage intéressés à apprendre sur ces sujets puisqu'ils ont des avantages/rôles différents comparés aux autres, l'enquête publique a montré leur relatif peu d'intérêt. Partout la communication sur les forêts est mise au défi d'atteindre le public, particulièrement le jeune public, sur des sujets qui ne figurent pas sur la liste des sujets vus comme intéressants pour la société. En particulier, cela mène à la définition de trois pistes clés en vue d'améliorer la future communication européenne en matière de forêt :

- 1. La nécessité d'un message clair et suffisamment précis présenté de manière neutre, qui permette au public de faire les distinctions appropriées en fonction des sujets spécifiques et des défis, parmi lesquels le domaine forestier, la biodiversité et les dégâts, dans divers contextes (c'est à dire, forêt locale, forêts européennes, forêts mondiales):** Une des constatations clés

de l'enquête sur l'opinion publique est le fait que le public européen est clairement inquiet de l'état des forêts. Bien que leur inquiétude ne reflète pas toujours les tendances dégagées par les dernières données, c'est néanmoins une constatation tranchée qui doit être abordée par la future communication sur les forêts. Une des raisons probables de la mauvaise perception de l'état des forêts européennes est due au fait que les citoyens ont des difficultés à séparer l'information reçue par les médias concernant l'état général des forêts (particulièrement la déforestation des forêts tropicales) de ce qui se passe actuellement dans les forêts de leur propre pays. Une campagne de communication future nationale / européenne sur les forêts avec un message clair pourrait aider à clarifier cette perception globale des forêts et sensibiliser le public pour lui permettre de faire les bonnes distinctions en fonction des sujets spécifiques et des défis, parmi lesquels le domaine forestier, la biodiversité et les dégâts, dans divers contextes (c'est à dire, forêt locale, forêt européennes, forêts mondiales). En outre, certaines questions en apparence contradictoires, controversées et complexes (par exemple, le postulat que l'augmentation des récoltes de bois et de la biodiversité doit non seulement s'exclure mutuellement, mais peut être mutuellement renforcée) requièrent une attention spécifique lorsque la communication est faite dans le but de les présenter d'une manière claire, neutre et suffisamment détaillée.

2. **La nécessité d'insister sur l'importance du rôle des forêts et du bois pour s'attaquer au changement climatique:** L'enquête publique a montré que la majorité des Européens croit que les forêts peuvent jouer un rôle important dans la lutte contre le changement climatique. Cependant, la plupart des européens ne se sentent pas assez bien informés sur les différents types de mesures complémentaires (par exemple, bois comme matière renouvelable, bois pour l'énergie bio, boisement) et leurs impacts. En particulier, le public européen est divisé sur le rôle des forêts (bois) en matière d'énergie bio, et par conséquent, sur le rôle de l'énergie bio pour lutter contre le changement climatique ; une constatation très raisonnable au vue de la complexité des sujets en jeu et du fait que des désaccords existent entre les experts. En conséquence, l'opinion du public est également divisée sur la nécessité ou non d'obtenir plus l'information sur ces sujets. Toute communication future sur les forêts doit être consciente du fait que si le public montre un intérêt certain sur les sujets relatifs au changement climatique, les citoyens doivent, de nouveau, recevoir des messages clairs et suffisamment précis, dans le cadre d'un contexte géographique explicite, pour pouvoir continuer à se former une opinion sur ces sujets.
3. **La nécessité de s'adresser à des audiences spécifiques:** Les analyses géographiques et démographiques menées au cours de cette étude fournissent également des aperçus sur la nécessité d'adapter à certaines audiences certains aspects de la future communication sur les forêts. Au niveau régional, la région du Sud Est est celle qui montre le plus d'intérêt à apprendre davantage sur les forêts, alors que les régions du Nord/de la Baltique semblent souffrir d'une certaine fatigue liée à la communication sur les forêts. Ainsi, les stratégies de communication devront être diversifiées afin de mieux aborder ces différentes régions. En outre, la future communication sur les forêts pourrait mettre l'accent

sur la communication auprès du public le moins intéressé, c'est-à-dire le jeune public. Pour ce groupe démographique, il existe une contradiction entre leur apparent désintérêt sur les sujets relatifs à la forêt et le fait qu'ils sont le futur ou devraient être – selon les experts européens des forêts – le centre de toute communication future sur les forêts. Alors qu'il pourrait y avoir de nombreux facteurs expliquant le désintérêt apparent du jeune public, par exemple le manque d'intérêt porté par l'éducation à ce sujet, il se pourrait bien que le jeune « IT » d'aujourd'hui est surchargé d'informations et c'est pourquoi les stratégies de communication doivent percer à travers cette « surcharge continue d'information » en ayant recours à des méthodes et à un contenu dynamiques et attirants. Une autre cible potentielle se prêtant à des estimations futures sont les femmes – comparées aux hommes, les femmes attachent une importance encore plus grande aux fonctions d'agrément des forêts et sont plus concernées par la santé des forêts et les dégâts causés aux forêts. Enfin; toute future communication relative aux forêts devrait reconnaître que la société rurale n'est pas plus largement perceptible que la population urbaine en termes d'opinion et qu'ainsi aucune stratégie de différenciation dans la communication entre zones urbaines et zones rurales n'est nécessaire.

Les questions de l'Eurobaromètre pour un futur suivi des résultats et des recommandations

En conclusion, les questions à insérer dans les futures enquêtes de l'Eurobaromètre ont été listées (annexées à ce rapport). Ces questions ont gardé un aspect similaire à celles posées dans le cadre de cette étude afin de permettre la comparabilité des résultats. De cette manière, les questions de l'Eurobaromètre peuvent servir de suivi à cette étude tant en termes d'opinion publique que pour mesurer la manière dont la communication sur les forêts a influencé les changements dans l'opinion publique. Un « Eurobaromètre Spécial » serait le format privilégié pour un bon suivi du fait de sa représentativité et du fait que les entretiens sont conduits sur la base d'un face à face et que les sujets thématiques peuvent être explorés en profondeur. Une autre possibilité permettant de mettre en lumière les tendances de l'opinion publique sur l'un ou l'autre des sujets relatifs aux forêts consisterait à inclure une ou de deux questions sur les forêts et la sylviculture dans « l'Eurobaromètre Standard ». Enfin, un « Eurobaromètre Flash » mènerait en soi à un test rapide et ad hoc des changements dans l'opinion pour des mesures spécifiques de communication liée aux forêts car il permet des résultats rapides et se concentre sur des groupes cibles spécifiques.

1 Introduction

Over the last few decades, crucial changes have taken place in the views and demands on forests by society at large. This includes increased environmental awareness as well as outdoor recreational interests of society. It has also affected the basic role that the now more affluent public accords to the traditional role of forests as a producer of raw materials. Additionally, the policy urge to re-orient societies towards increasingly “bio-based economies” results in higher demands for raw material, not only for more sophisticated products, but also for renewable energy.

These changes in public opinion and related societal demands have profound effects on the forest sector, including forest policy makers, forest owners and managers, and the forest industry. Forest owners increasingly cease to be the suppliers of a crude raw material and become service providers, with a multitude of needs to respond to, including the provision of a highly regarded renewable resource. Forest owners face new opportunities to respond to and become engaged in increasingly integrated value-added production and the appropriate governance of resource use. It requires new knowledge and new capabilities to adequately respond to such changing structural conditions and the opportunities that arise with them. These groups experience the need for increased communication and improved marketing and public relations skills to meet the new demands of society. First and foremost, however, it requires an increased understanding of and an effort to listen to society, both consumers and the public at large.

The purpose of the study is fivefold: (1) to provide the Commission with a thorough analysis of existing surveys about public perceptions on forests and forestry in the EU, (2) to find out the views of key stakeholders with regard to public opinion on forests and forestry and gather inputs on how public understanding and communication on the role of forests and forestry may be improved, (3) to apply the knowledge thus obtained to design, execute, and analyse the results of a public survey in the EU-27 countries, (4) to formulate conclusions on how public awareness of the role of forests and forestry in addressing new challenges in European society may be improved, and (5) to design a questionnaire which may be included in Eurobarometer surveys on public opinion in the EU.

2 Methodology

This chapter provides a brief overview of the methodologies and approaches applied to carry out the tasks of this study. More detailed information on the methodologies can be found in the Annex to this study.

2.1 Meta-analysis of previous surveys

A comprehensive overview of the current state-of-the-art research about public opinion with regard to forests and forestry is provided, based on an extensive literature review. The literature review focused on key documents pertaining to public perceptions and attitudes about forests and forestry, with a special emphasis on surveys. Additionally, documents on policies, programmes and campaigns on the sub-regional, regional, national, as well as European levels relevant to forests and forest communication were also consulted.

The method applied is largely identical to the method applied to the meta-analyses of previous surveys (*Europeans and their Forests*, *Europeans and Wood*), both of which were conducted by the project team leader. Various, publically available surveys and scientific studies from European countries have been found and assessed. A broad range of sources have been identified, ranging from forest associations, non-governmental organizations, research institutes, over forest industry to governmental bodies. Further sources for the meta-analysis include academic studies (journal articles, master's theses, doctoral dissertations), journals, press releases, and newsletters from industrial associations, and trade journals, as well as databases of Eurobarometer studies, some of which touch upon forest issues.

The review for this new study thus built upon previous work done within the context of the MCFPE process, in particular it uses the study *Europeans and their Forests* (Rametsteiner and Kraxner, 2003) as a benchmark study in order to focus on and highlight the newest developments in public opinions across Europe since this benchmark study. The study *Europeans and their Forests* was published in 2003 and based on a literature review and public survey (Rametsteiner and Kraxner, 2003). The study generated an extensive overview of public opinions on forests and forestry concerning particular categories. Another major contribution concerning public opinion on forest related issues is the study, *Europeans and Wood: What do Europeans think about wood and its use* (Rametsteiner, Oberwimmer and Gschwandtl, 2007). The study reviewed various consumer and business surveys in Europe which assessed the general attitude towards wood, products derived from wood as well as the forest industry.

The aim of the new meta-analysis for this study was to identify in which areas of interest, regarding forests and forestry, public opinion has changed or not since the publication of these two studies. In order to compare public opinion in a coherent manner, studies focussing on a nationwide representative public opinion were reviewed as it has been the case in the benchmark study. Nevertheless, some studies, which have analysed rather local and regional public opinions, were analysed in cases where they are believed to provide a comprehensive overview on local public opinions throughout a country.

Furthermore, the structure of the present review follows the structure of the study *Europeans and their Forests* (Rametsteiner and Kraxner, 2003), which is based on the MCPFE criteria for sustainable forest management, the European-wide agreed operationalisation of the sustainability concept. By following this general structure, certain points of interest within public opinions can be better compared with each other and analysed.

2.2 Stakeholder survey

The survey of key stakeholders is based on three steps: first key stakeholders from various groups (e.g. government, research institutes, NGOs, forest owners, etc.) were identified per Member State and on a European level. Next, two versions of the survey were developed: one for national level stakeholders and one for EU level stakeholders. Finally, the two versions of the survey were used as a basis for conducting telephone interviews aided by an online survey form to collect responses.

2.2.1 Stakeholder identification

As a first step, stakeholders had to be identified. In principle, those groups are considered as key stakeholders who have in the past formed associations, have shown an active interest in matters related to forests through participating in forest policy processes at EU or MCPFE level. These include:

- forest owner associations such as those represented through CEPF;
 - state forest enterprises such as those represented in EUSTAFOR;
 - forest entrepreneurs such as those represented in ENFE;
 - environmental NGOs such as WWF, Greenpeace, FERN, IUCN;
 - forest industry representatives (primarily CEPI, CEI-BOIS) ;
 - forest research institutions such as EFI, IUFRO, IIASA;
 - international organisations such as UNECE, FAO;
- and last, but not least,
- governmental representatives at national level (forest and/or environmental Ministries); and
 - the EU Commission, such as those General Directorates represented in the Commission Inter-Service Group on Forestry and related agencies such as EEA.

At national levels a number of further stakeholder groups are relevant and were considered where appropriate, including nature tourism organizations, forest workers associations (at international level visible e.g. through ILO), and hunting associations.

“Dominant” stakeholders and their representatives at EU level are considered as the following:

- Governmental: bodies represented in the Standing Forestry Committee;
- EU: bodies represented in the Commission Inter-Service Group on Forestry; and
- Non-governmental: bodies represented in the Advisory Group on Forestry and Cork¹.

Furthermore, these EU level stakeholders were supplemented with several broader international stakeholders to provide a more complete international picture:

- International bodies: UNECE/FAO Timber Branch, UNECE Timber Committee, FAO Forestry Commission; and
- Research institutes: European Forest Institute (EFI), International Union of Forest Research Organizations (IUFRO).

As a first step, an extensive database of contacts was set up for national level as well as EU/international level stakeholders. This database included at least 3 stakeholders per country (government, forest/environment NGO, forest owner).

Additionally, those people from the current database were asked to provide additional contacts in their respective country. This ensured a broad coverage for this expert survey.

2.2.2 Survey development

The survey questions were developed in three topic modules: (a) the general condition of forests; (b) forest benefits, use and management; and (c) forest communication with the public. Within each of these modules, the most relevant questions on public opinion were identified based on input from the meta-analysis and current topics of importance.

The draft survey was reviewed by a team of external experts on forest communication and facilitated and advised by an expert in stakeholder communication and consultation. These experts included Colin Morton, Gerben Janse, Ingwald Gschwandtl, and Tomas Kotovics.

The final survey has two versions: one for national level stakeholders and one for EU/international level stakeholders. All content-related questions are the same for both surveys. Only the demographic information requested differs slightly. The survey consists of 19 content questions, including several sub-questions. The answer categories are a mix of multiple choice, ranking matrix and open answers.

Average duration of an interview was about 30 minutes. The survey was pre-tested before final approval by the client.

¹ <http://www.eurlex.europa.eu/LexUriServ/LexUriServ.do?uri=OJ:L:2004:120:0050:0060:EN:PDF>

2.2.3 Consultation process

The consultation process was conducted via personal telephone interviews aided by an online survey form. To inform stakeholders identified in the contact database and to allow for some preparation time, an introductory email with the online survey link was sent. Next, all contacts were approached via telephone. Whenever a telephone interview was not the preferred option of the interviewee, the online survey could be filled in.

To gather a representative picture on expert views of public opinion across the EU-27, a particular focus was put on interviewing representatives from the Southern and Eastern European EU countries. Some communication problems were expected as the survey was provided only in English. To overcome language barriers whenever possible, the international project team was able to conduct the telephone interviews in various European languages, including French, German, Italian, Spanish, and Portuguese. Furthermore, the study team could also easily reach stakeholders based in Member States where ECORYS and COWI have country offices (i.e. the Netherlands, Belgium, Spain, Poland, Bulgaria, the Czech Republic, Hungary, and Denmark) and interview these stakeholders in their mother tongue.

2.3 Public survey

The public survey was developed in close cooperation with the forest experts contributing to this study and was based on the outcomes of the expert stakeholder survey.

2.3.1 Interviewing method: computer assisted telephone interviews (CATI method)

It had been agreed to conduct the survey via computer assisted telephone interviews: CATI interviews. ACNielsen applied an alternative approach, called “distributed interviewing”, a process that expands centralized management control and adds unlimited interviewing capacity. Distributed Interviewing is the solution to achieving high quality CATI outputs, particularly for large sample sizes or minimal sets of countries but yet with a centralized control centre based in London. The software permits central monitoring of all worldwide interviews from the London Control Centre. Extensive data analysis is undertaken concurrently to assess potential problems, providing added flexibility to make necessary changes throughout the research process.

2.3.2 CATI survey specifications

This section provides specifications on the agreed sample size, target population and questionnaire design restrictions.

Sample size

The results of the public survey include the responses collected from April until May 2009. In total, **11106** citizens across 27 EU Member States were contacted via telephone and provided valid responses until May 28, 2009.

Table 2.1 below provides a summary of the agreed quotas per Member State for minimum sample size as well as the number of actually completed surveys. The final number of completed interviews turned out at **11106**, thus slightly higher than the minimum target of 11010. Final distributions of the sample across countries and demographic groups are presented in the Annex to this report.

Table 2.1 Overview of total survey responses and target quotas per country

Country	Number of completed surveys	Percentage of total Sample	Target Quota
United Kingdom	632	5,7%	625
France	625	5,6%	625
Germany	625	5,6%	625
Italy	634	5,7%	625
Austria	354	3,2%	350
Malta	300	2,7%	300
Luxembourg	300	2,7%	300
Cyprus	305	2,7%	300
Finland	367	3,3%	350
Greece	350	3,2%	350
Bulgaria	441	4,0%	440
Estonia	301	2,7%	300
Lithuania	304	2,7%	300
Spain	632	5,7%	625
Sweden	360	3,2%	350
Denmark	353	3,2%	350
Ireland	300	2,7%	300
Slovakia	300	2,7%	300
Hungary	440	4,0%	440
Latvia	300	2,7%	300
Netherlands	351	3,2%	350
Czech Republic	440	4,0%	440
Portugal	353	3,2%	350
Belgium	362	3,3%	350
Slovenia	300	2,7%	300
Poland	627	5,6%	625
Romania	450	4,1%	450
Total Number	11106	x	11010
Percent of target	100,9%	100,9%	100%

[Source: ECORYS]

Target population per demographic characteristic

The targeted response group for this public survey quota targets is provided for age and gender per country. The quotas for age and gender are based on collations from the European Marketing Pocket Book (2006).

It should be noted that age brackets for the European Marketing Pocket Book (EMPB) do not exactly match the brackets that are used for this study. ACNielsen solved this by pro-

rating the percentages of male and female for the concerned age brackets. Furthermore, the lowest age bracket had to be adjusted to 18-24 instead of 15-24 (Eurobarometer category) because ACNielsen is legally not allowed to interview persons under the age of 18.

Table 2.2 Total responses by gender

	Number of completed surveys		Minimum Target Quota	
	Male	Female	Male	Female
Total Number	4818	6288	3859	4404
Percentage	43,4%	56,6%	35%	40%

[Source: ECORYS]

Table 2.3 Total responses by age groups

Years of age	Number of completed surveys				Minimum Target Quota			
	18-24	25-39	40-54	55+	18-24	25-39	40-54	55+
Total Number	1040	2569	3542	3955	777	1875	1875	1657
Percentage	9,4%	23,1%	31,9%	35,6%	7%	17%	17%	15%

[Source: ECORYS]

Other demographic indicators, namely education and level of urbanisation were included as demographic information questions at the end of the survey. These demographic factors were utilised during the analysis but they did not have any target quotas attached (see Annex to this report for more detail).

Questionnaire design restrictions

The following restrictions applied to the questionnaire development:

- Length is limited to 8 minutes, 7 questions plus demographic information. Only closed answers.
- Geographic location is the EU-27 Member States.
- Mainly home phones were called; however, in particular to reach the younger interviewees mobile phone numbers were also called.
- No incentives are required for this study type.
- ACNielsen translated the survey into the 21 languages of the European Union.

2.3.3 Reliability of results

The confidence interval is constructed on the basis of the standard error (precision). It is calculated by using the standard deviation divided by the root square of the sample size as an estimation of the standard error, for the proportion this interval is as so with a confidence of 95%.

$$\left[P - 1.96 \sqrt{P(1-p)/N}, P + 1.96 \sqrt{P(1-P)/N} \right]$$

The sample extraction is assumed to respect a certain precision for all the categories of the survey. When the sample is extracted, the error level is fixed with a certain confidence (95% in this case) and the sample size is computed based on this desired confidence level. Since the sample size for this survey has been determined, the following formula can be utilised to compute the error margin E:

$E^2 = (1.96)^2 p (1-p) / N$ as P is assumed not yet known, use 50%. This error margin in turn could be used to determine confidence intervals for each category.

The confidence interval is constructed as: [Estimate +1.96*E, Estimate -1.96*E] with a confidence of 95%.

Thus, for the global sample size (11106 units), the error margin is approximately 1%.

Using the above formula, the error margin has been calculated for each sample size and is displayed in Table 2.4 below.

Table 2.4 Error margins of different sample sizes at 95% confidence levels

Sample size	Error margin
300	5.7%
350	5.2%
440	4.7%
650	3.9%

[Source: ECORYS]

As mentioned further above, with the presented error margins the confidence interval for each question and respective answer can be computed if needed.

Example of confidence interval calculation

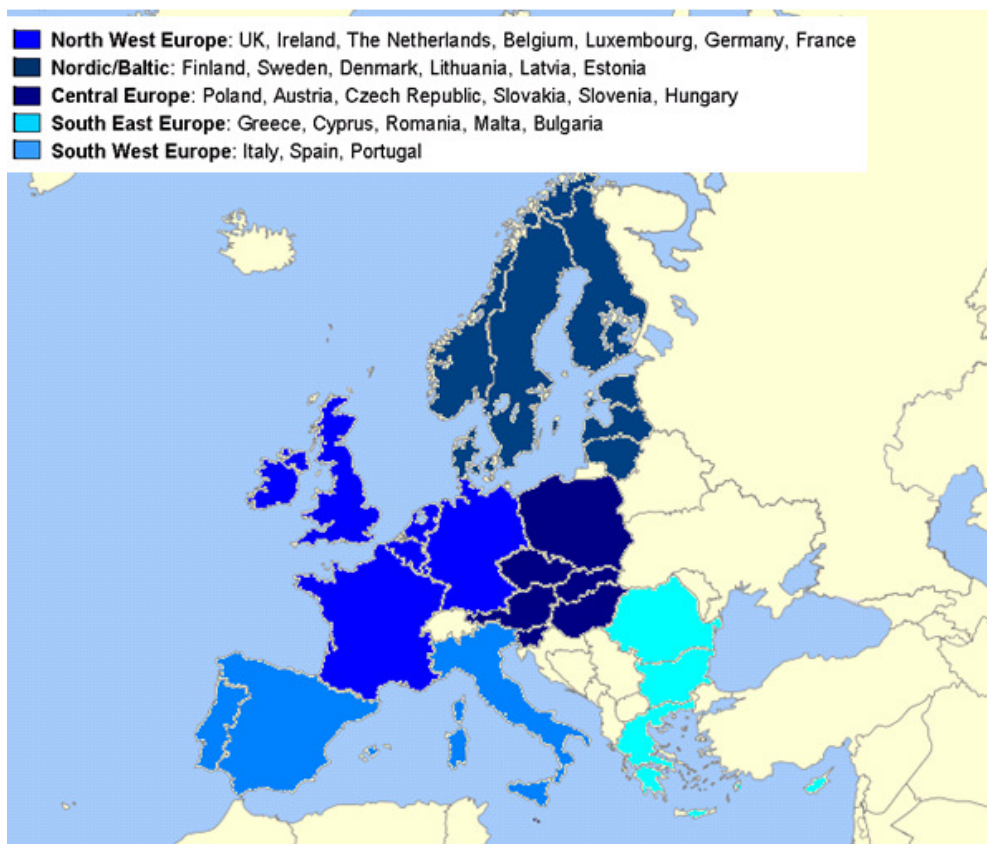
Since this survey contains a very large number of individual questions under different sample sizes, an illustration of the confidence level calculation will follow instead of listing all individual results for each question under each sample size.

As an example a question in a Belgium sample (350), with a response rate of 100 times “yes”, is used at this stage. In such a case, the proportion (P) is computed as $P=100/350=28.6\%$. To that effect the calculated error margin for this question is 5.2%. In a further step the confidence interval at 95% confidence levels can then be calculated as $[28.6\% - 5.2\%, 28.6\% + 5.2\%] = [23.8\%, 33.3\%]$. These results mean that, with a confidence of 95%, the result of this question under the given sample size would never be outside the interval of [23.8%, 33.3%]. For each other sample size the corresponding error margin has to be considered.

2.4 Levels of analysis

During the syntheses of results for all three analysis tools, data is assessed on various levels. On a geographic scale, analysis is carried out on an overall EU-27 level, a regional level (see Figure 2.1), and a country level (highlighting interesting differences per country).

Figure 2.1 Definition of EU regions for analysis



[Source: ECORYS]

Other demographic differences highlighted throughout the analysis include gender (male/female), age, level of education and the degree of rurality / urbanisation. For analysing differences in public perception based on age, four age groups have been defined: 18-24 year olds, 25-39 year olds, 40-54 year olds and 55+ years of age. For analysing differences in public perception based on education levels, four groups have been defined based on the highest level of education completed, i.e. primary education, secondary education, tertiary education. To explore how the degree of urbanisation may influence public perception on forest-related topics, three categories for the type of location people live in have been defined: a rural area or village, a town or small city (<500,000 inhabitants), or a large city (>500,000 inhabitants).

3 Meta-analysis of previous public opinion surveys

The public perceives the natural environment in many different ways. Similarly, public opinion on forests and forestry is manifold and changes over time. Different economic, social and environmental factors and events have influenced and will influence public opinion on forests and forestry. Societies see forests and forestry as a source of various socio-economic goods and services. This variety ranges from protecting nature, to providing recreational environments, to delivering renewable resources, to a source of employment and income.

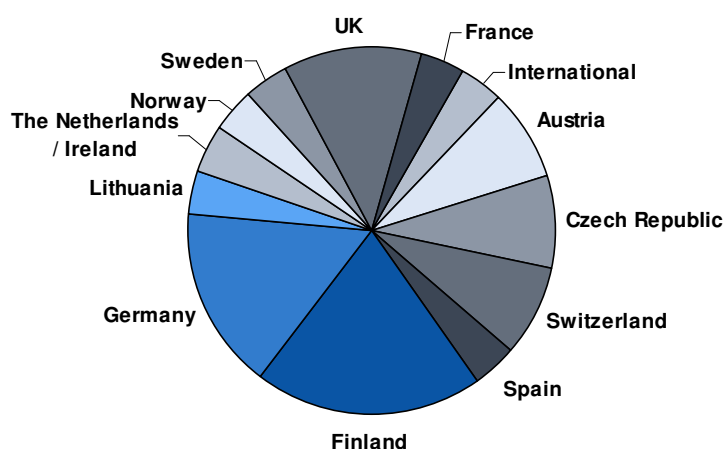
In order to manage forests in consent with society's needs and to implement forest policy effectively, it is important to be aware of the public opinion and consider this opinion in communication strategies. The present public opinion is primarily generated from experiences in the past and media exposure, it is important to draw conclusions.

This part of the study provides an overview of studies published since 2003 and their findings on the public opinion concerning forests and forestry. Since the study *Europeans and their Forests* has been published in 2003, new economic, social and environmental issues as well as challenges have surfaced. The overview presented in this chapter summarises the status quo of public perception on forests and forestry in Europe to date.

3.1 Results of data collection

The materials used for this review are a total of 26 surveys, originating from 14 different countries and covering public opinion on forests and forestry in 21 European countries (Turkey included), published from 2003 onwards.

Figure 3.1 Overview of studies assessed by origin



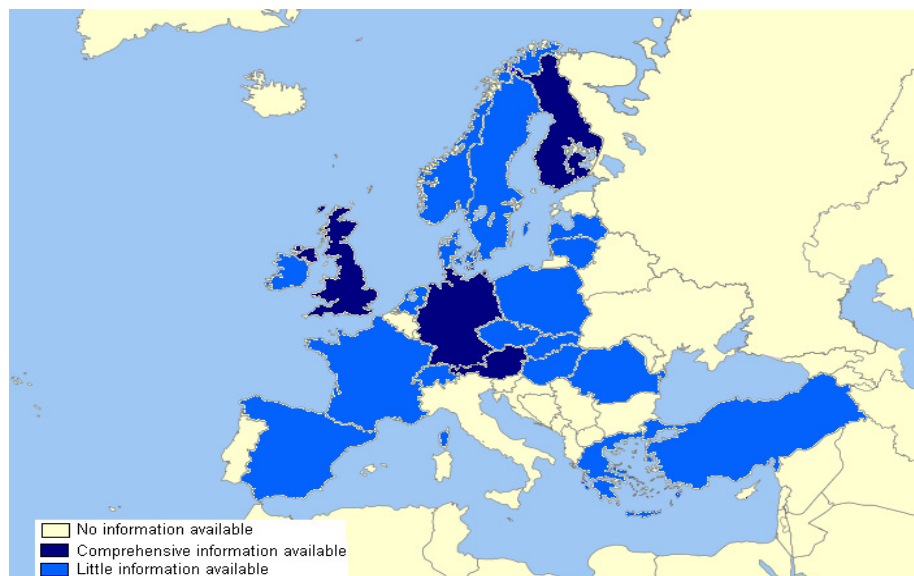
[Source: ECORYS]

Of these, 22 studies were conducted on a national scale and 4 inquiries were carried out internationally. As far as the geographical scope is concerned, most of the inquiries have been conducted in Central, Western and Northern Europe while little information was found for southern and eastern European countries, a problem already mentioned in *Europeans and their Forests*. Few or no representative national surveys were available from Southern/Mediterranean and Eastern European countries. Besides national surveys from the Czech Republic and Lithuania as well as two public surveys which included countries such as Latvia, Poland, Slovakia, the Czech Republic, Romania, Turkey, Greece and Hungary no further literature was found from Southern or Eastern Europe. On the contrary, substantial literature from Northern Europe and traditional forest countries, such as Austria, was found. The majority of studies available were conducted in Germany, Austria, Finland and the United Kingdom.

It should be noted, however, that this distribution does not indicate the quality of the single studies nor their length.

The figure below displays the European countries covered by the information derived from the reviewed literature. As the comprehensiveness of studies varies to great extent, only little overall information was available for most of the displayed countries. In this respect it is important to mention that the surveys from Spain and France only provide very limited information on public opinion regarding forests and forestry as they only address very specific areas of the national public opinion.

Figure 3.2 Overview of information available from European countries



The relevant studies encountered during the data collection and literature review process are presented in the Annex to this report, including a brief description on survey coverage and methodology. In addition to this relevant literature, the study reviewed other surveys related to public opinion on forests and forestry that could not be included for the analysis because they were of local or regional nature or focussed on the opinion of forest owners, and thus did not provide a national overview.

It is further important to note that multiple studies reviewed do not directly elaborate upon the public opinion regarding forests and forestry. These studies rather address communication concepts, public participation procedures and policy instruments related to forests and forestry in order to rather detect the state of public forest communication than the state of the public opinion itself.

Finally, in order to place the findings on public opinion regarding forests and forestry into context, the actual state of the forests is presented for some points of interest, drawing primarily on findings from the *State of Europe's Forests 2007* (MCPFE, 2007) report.

3.2 Analysis of findings

As mentioned above, this review follows the structure of *Europeans and their Forests* and has therefore analysed the found literature and surveys under the following indicators and criteria:

- General opinion of Europeans on Forests;
- Forest Resources (general condition of forests);
- Biological Diversity of Forests;
- Forest Ecosystem Health and Vitality;
- Other Socio-Economic Functions and Conditions;
- Sustainable Forest Management; and
- Protective Functions of Forest Management.

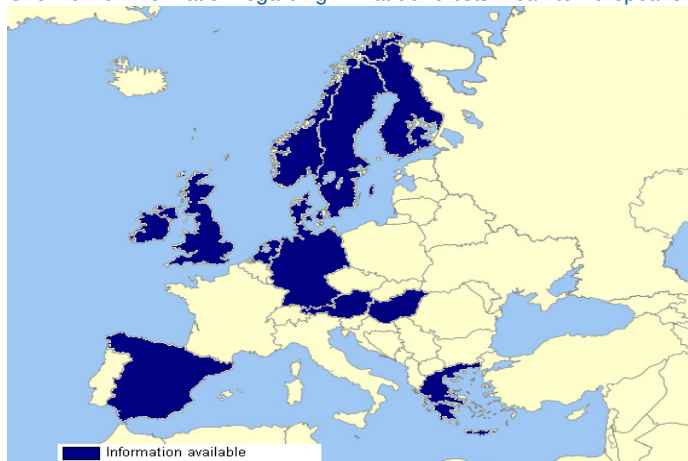
These criteria present a commonly accepted classification with regards to sustainable forest management aspects; they are used as a guidance tool to review all key forest and forestry related topics in a coherent manner.. Unfortunately, not all criteria have been addressed by recent studies and surveys. In such cases, the findings of *Europeans and their Forests* and *Europeans and Wood: What do Europeans think about wood and its use?*, which have detected positive and negative public feelings and opinions regarding forests and forestry across Europe, were employed as a measure for the status quo on public opinions. Where possible, the changes of public opinion over time and with regards to the perceptions of different gender, age and educational groups are highlighted.

Furthermore, some studies have addressed aspects of public opinion which do not solely or precisely apply for one of the above mentioned criteria. In such cases the content of some criteria has been broadened to some extent when compared to the study *Europeans and their Forests*.

3.2.1 What do forests mean to Europeans?

Under this criteria information has been gathered from Austria, Finland, Germany, Norway, Sweden and the UK. To a very small extent a study from Ireland and the Netherlands also covered countries such as Denmark, Greece, Hungary, Ireland, and Spain. No information was found for France and Italy.

Figure 3.3 Overview of information regarding “What do forests mean to Europeans?”



[Source: ECORYS]

To place the conclusions of the collected studies into context, the MCPFE report states that the focus on forestry, sustainable forest management policies and the inclusion of society in forest related issues has undergone significant changes with increasing emphasis on the environmental, social and cultural values of forests (MCPFE, 2007).

A recent study that has conducted a survey with general questions related to forest and forestry across the UK was published in 2007. The study entitled *UK public opinion on forestry* was a follow-up study to a similar survey conducted in 2005 and 2003 (Grant and Smillie, 2007). The results show that the public, as far as the UK is concerned, had

become more sensitized towards forests and forestry issues. Participants stated to have observed an increased presence of forest related topics in the media. Notable, in comparison to the 2003 and 2005 surveys, was the fact that the public saw forests and forestry in close connection to climate change and forests' capability to tackle climate change (Grant and Smillie, 2007, Forestry Commission and Forest Service, 2005 and Forestry Commission and Forest Service, 2003). This trend was noted and included in the EU-27 public opinion survey conducted for the current study for further analysis.

A recent study from Northern Europe, although derived from a number of regional and local surveys, provides good insight on how the public perceives forests in Finland, Norway and Sweden. Vegard Sverre Gundersen and Lars Helge Frivold analysed 53 quantitative surveys carried out in these Nordic countries and published between 1972 and 2006 (Gundersen and Frivold, 2008). One common outcome was the public's preference for a forest stand with increasing tree size and advancing stage of stand development. Large clear-cuts and obvious traces from forest operations were little appreciated. Professional foresters were more positive towards clear-cuts than the general population. Elderly or handicapped people, as well as children and young adolescents, were strongly under-represented in the surveys (Gundersen and Frivold, 2008).

The importance of forests for the Austrian public has surfaced in a nationwide survey concerning Austrian items of national identification carried out in 2005 (INTEGRAL-on behalf of ÖBF, 2005). 97% of the sampled public rated Austrian forests as the second most important object of national identification, only slightly behind the mountains (98%). For another study, a forum for forest communication asked 1000 Austrians about their feelings towards the Austrian forest in 2009 (Forum für Waldkommunikation, 2009); when asked to give human characteristics to the forest 71% found the forest 'important', 62% 'beautiful', 57% 'sympathetic' and another 54% found forests 'interesting'. Other adjectives named were 'creative', 'natural', 'generous' and 'cool'. Portraying forests as a human being, the average answer displayed a man in his best age, cool and forward-looking (Forum für Waldkommunikation, 2009).

In Germany the results of a nationwide quantitative survey concerning forests and forestry were published, together with the findings of a qualitative analysis, in 2007 (Kleinhüchelkotten and Wipperman, 2007). The results were analysed taking into account differences in behaviour patterns and social milieus. As far as the average German opinion is concerned, the answers were as follows; 70% of the questioned public stated that a visit to a forest enhances their quality of life. Furthermore, 49% stated enjoying a visit to a forest. In contrast, only 19% of the questioned German public stated that the forest is not interesting for them.

Similar to the findings in the 2003 report (Rametsteiner and Kraxner, 2003), even though concentrating on various local views and having conducted qualitative interviews and quantitative surveys among community inhabitants and landowners, are those findings from the study *Forests as a mirror of rural conditions; local views on the role of forests across Europe* (Elands et. al, 2004). The paper presents some main comparative results from the quantitative survey in eight of the participating countries, which are Austria, Denmark, Germany, Greece, Hungary, Ireland, The Netherlands and Spain. However, no distinct results for each of these countries are presented and only general geographic

comments are made. The study found out that many rural inhabitants across Europe were very positive about their local forests. The study indicates that forests were mostly perceived by people from rural areas within the perspective of nature and landscape quality and less as a source for economic activity or a carrier of services. As far as geographical differences are concerned, the study reveals that people from Atlantic countries were more negative about forests than people from traditional forest areas, such as Austria; a similar finding to that of the 2003 report (Rametsteiner and Kraxner, 2003).

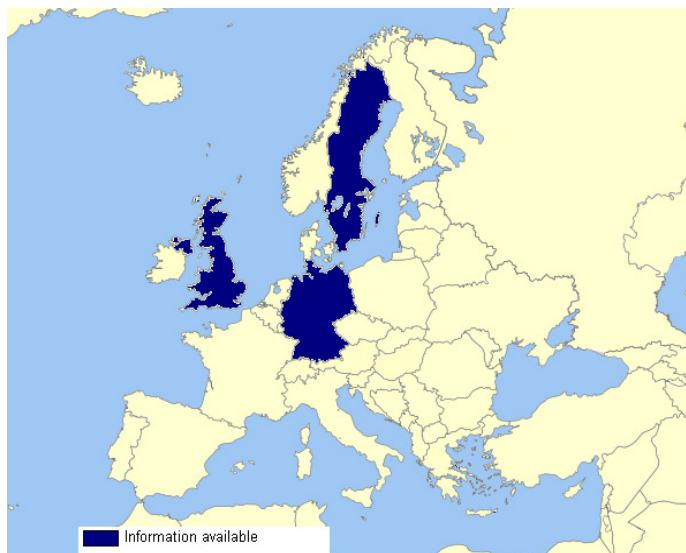
Summary

This section has presented the literature review's findings on the European public's opinion regarding the very general meaning of forests. Besides the fact that information was only available from a limited number of countries, the general meaning of forests to the public varies. In the UK, forests are increasingly linked to the issue of climate change, while the Austrian public regards forests as a national symbol of identification. The public in Finland, Norway and Sweden stated to be very much concerned about specific characteristics of forests stand development, while a majority of the German public thought forests to increase their quality of life.

3.2.2 Forest Resources

Forest resources have been addressed in studies from Germany, Sweden, and UK only. For most European countries information regarding the public opinion on forest resources has not been found.

Figure 3.4 Overview of information regarding Forest Resources



[Source: ECORYS]

Forest Resources are referred to as the overall forest area and stock in Europe. According to the MCPFE report, European forests are growing at an unprecedentedly high and increasing rate that is well above the volume harvested; thus the amount of wood in forests continues to increase (MCPFE, 2007).

As far as the public opinion on forest resources is concerned, very few recent information has been found. For the UK, a 2007 report outlined that 71% of respondents indicated to want more forests in their part of the country, which represents a significant increase compared to the 2005 and 2003 reports (Grant and Smillie, 2007, Forestry Commission and Forest Service, 2005 and Forestry Commission and Forest Service, 2003).

Knowledge about the relation between forest growth and logging has improved continuously over the years 1985 to 1993 among the Swedish public. From 1993 onwards various surveys have depicted a slightly declining trend for the share of the population that think the amount of logging is less than the growth (Skogsindustrierna, 2007). But also an increasing share of people has been registered who believe there is a balance between the amount of logging and forest growth (Skogsindustrierna, 2007).

The false public perception that Swedish forests are over-logged had diminished between 1985 and 1993. Since 1993, the share of the public that thinks the amount of logging to be larger than forest growth has been stable (around 34 to 37%). The exception was a census in the autumn of 2004 when an extra survey on this question showed that the share of people that thinks the Swedish forests are being over-logged increased to 55% (Skogsindustrierna, 2007). Most recent evaluations showed that 31% of respondents stated to believe that the amount of logged wood is greater than forest growth; on the other hand, 20% believed the amount logged is less than forest growth (Skogsindustrierna, 2007).

Notable is the fact that the issue of climate change and the impact forests can have on climate change has surfaced in recent studies. The public in the UK showed much awareness with regards to the fact that forests help remove carbon dioxide from the atmosphere. With regards to using forests as a response to tackle the threat of climate change, 90% of respondents stated forest areas should be increased (Grant and Smillie, 2007). Whether this opinion is as strong in continental Europe or not is hard to detect from existing surveys. Only one survey stated a finding that contradicts the UK result. The German public did not believe forest resource growth to be a major tool for responding to climate change: only 14% thought of natural carbon emissions reduction through an increase of forests (SINUS-Institut/ ECOLOG-Institut - on behalf of BMU, 2008). However, in the most recent German study conducted in 2008, 98% believed that forests can have a positive impact on tackling climate change. Furthermore, 61% of the surveyed public thought that the use of wood as a material also has a positive impact on the climate (Holzabsatzfonds, 2009). A majority (56%) believed to contribute individually to combat climate change by buying timber as a material and 60% even consider building a wooden house (Holzabsatzfonds, 2009).

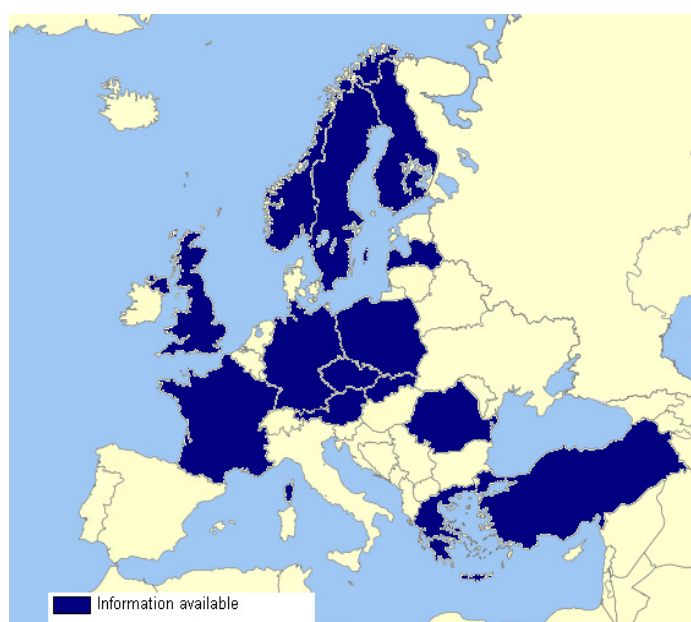
Summary

The above presented studies have all stressed the issue of forest size and forest resources in relation to the issue of climate change. The majority of the German public believed that forests can have a positive impact on climate change. The majority of the UK public wished for more forest cover and was aware of forests' capability to remove carbon dioxide from the atmosphere.

3.2.3 Biological Diversity of Forests

The biological diversity of forests has been subject in studies from Finland, Germany, Sweden and the international survey issued by the WWF. Therefore, in essence, this section reflects public opinions from the following countries: Austria, the Czech Republic, Finland, France, Germany, Greece, Latvia, Norway, Poland, Romania, Slovakia, Sweden, Turkey and the UK.

Figure 3.5 Overview of information regarding Biological Diversity of Forests



[Source: ECORYS]

According to the MCPFE report, the area of protected forests has expanded by about 2 million hectares over the last five years to reach almost 5% of Europe's forests (MCPFE, 2007). In addition forest management procedures increasingly try to promote biodiversity.

Once again it has to be stated that the literature review did not generate a lot of new information regarding the issue of biodiversity. The German report on general environmental awareness stated that 48% of the questioned public totally agreed (with 44% rather agreeing) that the preservation of natural habitats is of great importance to nature and humans (SINUS-Institut/ ECOLOG-Institut - on behalf of BMU, 2008).

The Finnish survey detected that the most important aspect in the decision-making process on forest management was the conservation of biodiversity. The respondents also believed the level of biodiversity to be suffering due to insufficient media and political attention (Valkeapää et. al., 2009).

Another remarkable finding from Finland was the fact that respondents overestimated the coverage/size of protected forests in Finland. The median estimate for the ratio of protected area out of the total forested area was 10%. One third of the respondents estimated the protected area to represent less than 6% of the total forested area, and half of the respondents estimated the protected area to represent more than 10% of the total.

The WWF study (Market Research Institute on behalf of the WWF, 2003) confirmed a strong general opinion across countries about the fact that forests ought to be protected. Across the surveyed countries, 93% of respondents ranked forest protection as important. Interestingly, 99% of Czech interviewees agreed with this point, whereas *only* 87% of interviewed Slovaks approved it (Market Research Institute on behalf of the WWF, 2003). An average of 80% of respondents wished for more forests to be placed under protection. In this respect, the Greek (99%), Romanian (96%) and Turkish (96%) public seemed to have a strong desire for more protection. In contrast, the Scandinavian public in Sweden and Norway stated to support greater protection with 65% and 55% respectively (Market Research Institute on behalf of the WWF, 2003).

Furthermore, the Swedish study not only echoed the relative satisfaction with current levels of forest protection, but also depicted in the most recent survey that 7 out of 10 respondents believed that Swedish forestry policy addresses the needs of plants and animals in a fairly or very good manner (Skogsindustrierna, 2007).

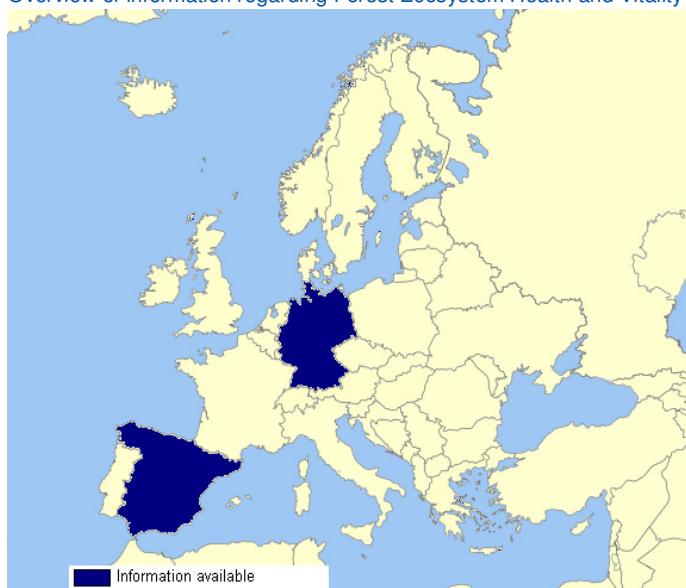
Summary

This section has outlined public opinion on the biological diversity of European forests. In every study assessed the issue of biodiversity and its preservation has been given a high degree of importance, particularly in Germany, the Czech Republic, Slovakia, Greece, Romania and Turkey.

3.2.4 Forest Ecosystem Health and Vitality

Only two studies with very limited substance covered the topic of forest ecosystem health and vitality: one study addresses this topic in Germany, the other one in Spain.

Figure 3.6 Overview of information regarding Forest Ecosystem Health and Vitality



[Source: ECORYS]

Once again, a reference to the state of forests ecosystem health and vitality from the MCPFE report is useful. The report states that forests in Europe are still under stress due to air pollution and depositions, although pollution has decreased. Major challenges for the health and vitality of European forests are severe damages caused by storms and fires (MCPFE, 2007).

Only the German study on general environmental awareness stated that the public believed forest dieback to be a major problem, in this case also caused by climate change. 45% of the respondents believed forest dieback to be rather extensive and 25% even believed it to be very extensive (SINUS-Institut/ ECOLOG-Institut - on behalf of BMU, 2008).

The Spanish study on the general state of the environment stated that the public's awareness toward the destruction of forests increases from the local, over national to the international scale. At the same time, however, only 3.7% believed that the destruction of forests ranks among the two major problems for the environment (Centro de Investigaciones Sociologicas, 2007).

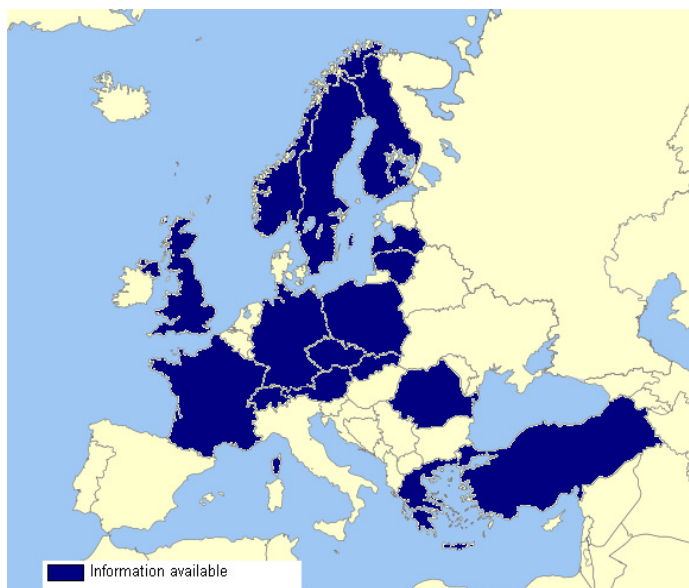
Summary

Although forest ecosystem health and vitality, which includes issues such as forest diseases, insect pests, fires or extreme weather events like storms, is an often addressed topic by public bodies, literature on public opinion related to this issue remains almost non-existent.

3.2.5 Productive Functions of Forests

In contrast to the previous issue, a large variety of studies covering a range of countries has been found regarding public perceptions of forests' productive functions. Besides an international study issued by the WWF, studies from the Czech Republic, Germany, Finland, France, Lithuania, Switzerland and the UK have been assessed. These studies cover public opinion in Austria, the Czech Republic, Germany, Greece, Finland, France, Latvia, Lithuania, Norway, Poland, Romania, Slovakia, Sweden, Switzerland, Turkey and the UK. Thus, the largest number of public opinion studies have been located on this topic, as compared to the other topics addressed during the meta-analysis.

Figure 3.7 Overview of information regarding Productive Functions of Forests



[Source: ECORYS]

Interesting, with respect to the productive functions of forests, is the fact that the total volume of harvested wood has been increasing but has still remained below increment. An increase in value can also be observed for the economic value of non-wood goods and services derived from forests (MCPFE, 2007).

A public survey carried out in Norway, Sweden, Great Britain, Latvia, Poland, Slovakia, Czech Republic, France, Austria, Romania, Turkey and Greece in 2003 – though primarily focussed on the protective functions of forests – also portrayed some results related to other productive functions of forests (Market Research Institute on behalf of the WWF, 2003). As far as productive functions are concerned, the public in these countries rated education and scientific studies (76%), recreation (71%) and sustainable tourism among the three most favoured functions. Activities such as logging (23%), hunting (24%) and construction (28%) were rated as being the most unfavourable forest functions. Within this question, it is interesting to point out some country-specific differences: only 23% of the Austrian public stated being in favour of sustainable tourism, which is by far the lowest consent among all countries surveyed; furthermore, the majority of the Turkish public wished for no human activity in forest at all (56%), very strongly opposed hunting (85%) and logging (91%) (Market Research Institute on behalf of the WWF, 2003).

Biodiversity conservation and nature protection

A Lithuanian survey has depicted the most important benefits of forests as perceived by the Lithuanian public. The respondents rated the improvement of air quality, the provision of habitat for wildlife, securing biological diversity and other ecological benefits to be very important forest functions (Mizaraite and Mizaras, 2006).

Recreational purposes

A French survey trying to depict the public's opinion on various forest functions has identified a variety of statements. The general forest functions were grouped into four categories; a space to escape from city-life, a space for social life, a space to escape from daily life and a space for physical performance. In more detail, 96% of the questioned

French public stated going to the forest to either enjoy the calm serenity and silence, to breathe fresh air and oxygen or to be in contact with nature; 95% stated going to the forest in order to relax in a natural environment followed by 91% of the public who aimed at having a nice time in the forest with family and friends (ONF, 2005). The forest is also ranked as an important environment without barriers (88%) as well as a landscape for inspiration (85%). Lower significance has been attributed to the forest functioning as a stress reliever (68%) and as an environment for practicing physical activity in (45%) (ONF, 2005).

In Germany, 77% of interviewees stated seeing the forest as a place for recreation and relaxation; 55% of the questioned public stated using the forests for recreational walks, other activities included observing nature (42%), collecting herbs (20%), having barbeques and parties (17%), as well as jogging and 'Nordic walking' (17%) (Kleinhüchelkotten and Wipperman, 2007).

The Finnish public was asked to estimate whether Finland had enough forest area for recreational use, including outdoor activities and picking of mushrooms. Nine out of ten respondents evaluated that Finland has a very good or a rather good amount of forests for recreational use (Taloustutkimus Oy, 2007).

According to another Finnish study that evaluated Finnish children's attitudes towards forests, one quarter of the young Finnish generation stated to never visit the forest during the wintertime. Approximately 50% of respondents stated visiting the forest more than five times during wintertime. On the other hand, 37 of respondents visited the forest more than ten times during the summer. Approximately 10% of respondents stated never visiting the forest during summertime (Taloustutkimus Oy, 2006). When asked about the most popular activity during wintertime, approximately one fifth of the respondents mentioned playing in the forests. In addition, during the summer, 38% of the respondents mentioned that they enjoy picking berries, 35% jog, ski or bicycle, 24% play and 17% collect mushrooms (Taloustutkimus Oy, 2006). The majority of respondents (72%) revealed receiving their knowledge about forests in schools; 27% had learned about forests from their parents, and 6% from their grandparents (Taloustutkimus Oy, 2006).

Over 95% of the surveyed Lithuanian public said that they had visited forests for walks. Further important activities included mushroom picking (55%), picnicking (45%) and berries picking (45%). Of the respondents who had visited forests, 25% said that they visited at least 3-4 times per year (Mizaraitė and Mizaras, 2006).

A survey from the Czech Republic stated that the collection of non-wood forest products, such as mushrooms and different kinds of berries, had a high recreational value for people in the Czech Republic (Šišák, 2006).

According to a survey in 2007, the most popular forest activities among Swiss citizens were recreation and various kinds of sports activities followed by the gathering of non-wood forest products (Seeland et. al, 2007).

Wood as a material and source for energy

84% of the German public seemed well aware that the forest is an important source of resources and energy (Kleinhüchelkotten and Wipperman, 2007).

Similarly, the UK survey detected an increased use of forest products as fuel sources across the UK in comparison to its 2003 and 2005 predecessor studies (Grant and Smillie, 2007, Forestry Commission and Forest Service, 2005 and Forestry Commission and Forest Service, 2003).

A Swiss study has shown that a high acceptance of forest products, especially non-wood forest products, among the Swiss population exists (Seeland et. al, 2007). For these products, the quality and environmental friendliness ranked highest in the attitudes of potential consumers.

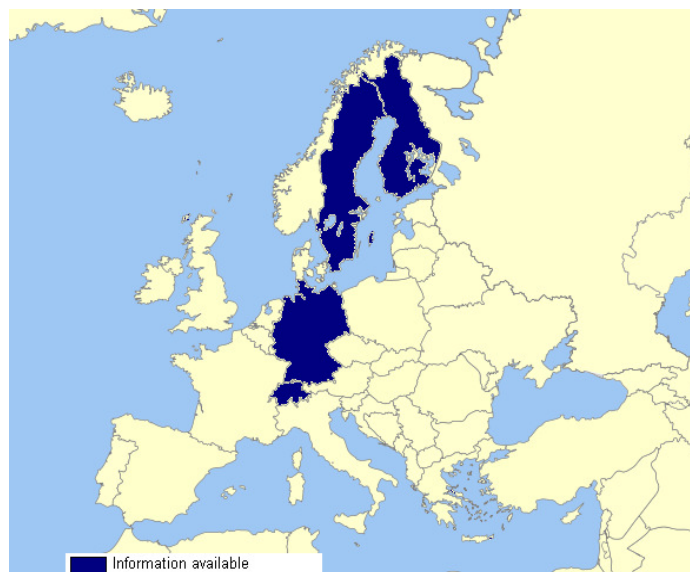
Summary

The meta-analysis of existing literature showed that the public in typical forest countries, such as Sweden, Norway or Austria has had a more sensitised, pragmatic and balanced view on the productive functions of forests as far as the interplay between human and nature is concerned; whereas eastern and southern European public opinions have tended to display a more drastic picture in that respect. In the majority of countries, the public mentioned recreational and educational as well as scientific functions to be positive, while logging, hunting and construction were generally regarded as negative.

3.2.6 Other Socio-Economic Functions and conditions

The issue of other socio-economic functions and conditions has been addressed by studies from Finland, Germany, Sweden and Switzerland. For all other European countries no publicly available studies have been found.

Figure 3.8 Overview of information regarding other Socio-Economic Functions and conditions



[Source: ECORYS]

Different socio-economic functions and conditions can be observed with respect to forests and some may have already surfaced throughout other criteria assessed within this chapter. Figures from the above cited MCPFE report show that European forests play an important role within societies across the continent. Although forests are mainly public in about half of the European countries, and mainly privately owned in the other half, more than 90% of European forests are open to public access. Around 4.3 million people work in the European forest sector (MCPFE, 2007).

In Finland, approximately half of the respondents estimated the Finnish government to be the biggest forest owner in Finland. One third of the respondents estimated private persons and families to be the biggest forest owner group (Taloustutkimus Oy, 2007).

The most recent survey from the Swedish report depicted that 62% of the Swedish public questioned rate the forest industry as one amongst the five most important industries in the country and another 37% believe its importance to increase in the future (Skogsindustrierna, 2007).

The survey from Germany has shown that a majority of people stated that the forest industry and its machinery does a lot of harm to the forest, 58% believed the forest industry to be negative for the overall condition of the forest (Kleinhüchelkotten and Wipperman, 2007).

Similar results were found in another study from Germany which was based on surveys with identical questionnaires. Peter Elsasser concluded in his study *Do “stakeholders” represent citizen interests? An empirical enquiry into assessments of policy aims in the National Forest Programme for Germany* that more than 40% of the population perceived forest owners’ and industries’ behaviour as wrong (Elsasser, 2007). These 40% fully or mostly agreed with the statement that forest owners pursue profit maximisation at the cost of nature. However, in fact, the German forest industry annually incur additional expenses and income losses of nearly €25/ha due to recreational and protective services of the forests (Elsasser, 2007). This misperception can be put in direct connection to the findings of *Europeans and their Forests* where, for example, forest ownership was often misjudged or unknown or the public believed, in contrast to reality, that the overall forest area was decreasing considerably.

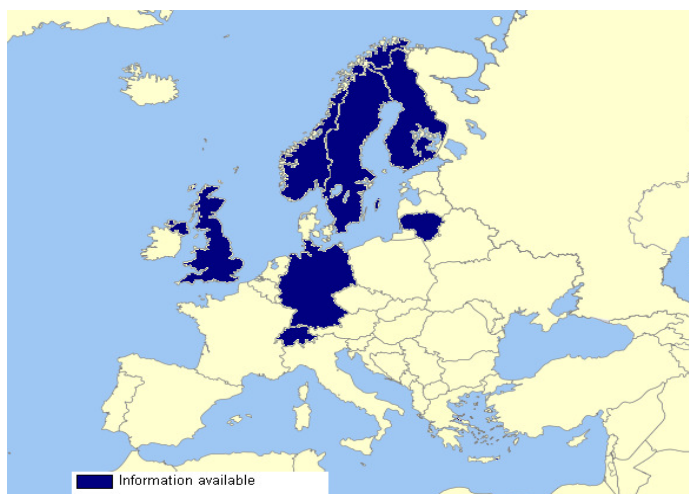
Summary

This section has presented the national public opinions regarding other socio-economic functions of forests in Finland, Germany, Sweden and Switzerland. The public opinions in all these countries are closely linked to forest ownership and forest industry. Within the two northern European countries (Finland and Sweden) the results show that the forest industry and the aspect of forest ownership have been perceived as important. While the Swedish public rated the forest industry as an important industry, the Finnish public perceived the government as the owner of large parts of the forests. The two studies from Germany have revealed that the German public perceived the forest industries behaviour largely as negative.

3.2.7 Sustainable Forest Management

This particular theme has been addressed in studies from the UK, Norway, Finland, Germany, Switzerland, Sweden and Lithuania. No information has been available from France, Italy and Spain.

Figure 3.9 Overview of information regarding Sustainable Forest Management



[Source: ECORYS]

Referring to the MCPFE report and its findings for Europe, sustainable forest management (SFM) is following a positive trend. Sustainability has been given more prominence in forest laws and other policy instruments. Furthermore, SFM has been increasingly integrated in legal and regulatory frameworks in order to make forestry related institutions more efficient and effective (MCPFE, 2007).

The UK survey has depicted a trend towards a positive public opinion regarding sustainable forest management (Grant and Smillie, 2007). In connection with wildlife, recreational and climate change issues, the public in the UK stated to have a predominantly positive opinion concerning SFM. Compared to the 2003 report, especially the public's knowledge on this topic seems to have increased, although it has to be stated that knowledge had already been the highest in the UK compared to other European countries in 2003 (Rametsteiner and Kraxner, 2003).

A recent Norwegian study provides an example from a northern European country concerning the public's opinion on and participation in SFM (Aestre, 2006). The study outlines that the Norwegian forest management system does not include formal public participation at a general level and shows that, at the time the study was compiled, there was still "a long way to go" in order to enhance the public's participation and knowledge-building (Aestre, 2006). However, the study has not made any quantitative statement with regards to the prior sentence.

The study *Europeans and their Forests* concluded that the recognition of the term SFM in Germany had been traditionally high (Rametsteiner and Kraxner, 2003). Some questions related to SFM have been part of the nationwide survey published in 2007 (Kleinhüchelkotten and Wipperman, 2007). The results of this recent survey, although

none of the questions asked used the term SFM explicitly, echo the 2003 findings. The clear majority of the public (86%) supported the idea that the amount of wood to be cut shall equal the rate of re-growth. Furthermore, the public also showed awareness of the need for SFM as 80% of the sampled Germans stated that much more has to be done in order to save the forests (Kleinhüchelkotten and Wipperman, 2007).

Within the most recent German survey on the principles of SFM, 42% of the questioned public claimed to know the sustainability principle within the forest industry, 12% more than the year before (Holzabsatzfonds, 2009). Regarding the environmentally friendly use of forests, 74% believed Germany to apply this principle better than other countries. 59% were aware of the existence of certificates which label sustainable wood. Remarkably, 70% of respondents believed the need for nature protection and the economic use of forests can go hand in hand (Holzabsatzfonds, 2009).

A broader study on the Swiss public's opinion about the management and regulation of wilderness areas generated some results that back up the findings in *Europeans and their Forests*. The survey *The change of European landscapes: Human-nature relationships, public attitudes towards rewilding, and the implications for landscape management in Switzerland* concluded that the Swiss public may accept many rules of conduct in wilderness areas, enabling an optimal coexistence of wildlife, vegetation, and visitors (Bauer et. al, 2004). In addition, some commonalities between opponents and proponents of wilderness surfaced. Both groups agree on some essential rules that should apply on wilderness areas. The descriptive nature of the study does not allow presenting any quantitative findings or conclusions.

Since 1985 various attitude surveys have been carried out in Sweden to gather the general public's opinion on the Swedish forestry sector. (Skogsindustrierna, 2007). The general public's view of how the Swedish forests are managed has improved continuously over the years from 1985 to 2006 and remained on a constant high and stable level in the 2006 surveys. In 2006, 85% of the public thought that forests are managed very well or fairly well, whereas only 10 % thought that forests are managed fairly bad or very bad, representing the lowest level during the whole period 1985-2007. The majority of people questioned in Sweden also stated not to see the forest industry as a main polluter (Skogsindustrierna, 2007).

Very similar were the findings in Finland; 90% of the respondents thought forest management in Finland was doing a very good or a rather good job. The level of satisfaction towards forest management has increased during last 10 years. Most critical about forest management were respondents aged 50+, and respondents living in the Northern parts of Finland. However, compared to earlier surveys, there had been a slight decrease in the group thinking that 'forest management is doing a very good job' (Taloustutkimus Oy, 2007). In addition, half of the respondents thought Finland had the most developed methods for forest management and felling. One third of the respondents thought Canada had the most developed methods, and one third thought the best methods were practiced in Sweden (Taloustutkimus Oy, 2007).

According to another study from Finland, Finnish people, in general, have accepted regulations and measures concerning forests. Overall, Finnish people prefer supporting

more traditional civil activism that aims at influencing politics over more radical activism. In addition, respondents did not agree with the division of power regarding Finnish forest policy (Valkeapää et. al., 2009). This study has not put forward precise quantitative conclusions.

The only study from Eastern Europe that addressed the issue of forest management comes from Lithuania. When asked about the standard of forest management in the state-owned forests, 24.5% of the Lithuanian public rated forest management as very positive, while 18.3% of respondents could not give a rating (presumably because they did not know enough about either forests or the topic of state forest management) (Mizaraite and Mizaras, 2006). Regarding the standard of forest management in the private forests, 20.2% of respondents were positive and 23.2% of respondents could not give a rating (Mizaraite and Mizaras, 2006).

Summary

The public opinion on SFM in various European countries has been sketched throughout this section. It has surfaced that SFM has generally been perceived positively in Finland, Germany, Lithuania, Sweden, Switzerland and the UK. The Norwegian public perceives the process of public participation to be insufficient. The knowledge about the concept of SFM has been notably high in Germany and UK while some parts of the Lithuanian public appeared to lack general knowledge on the concept of SFM.

3.2.8 Protective Functions in Forest Management

Some aspects of protective functions in forest management have surfaced throughout other sections above, such as the function of forests to tackle climate change. Besides the already mentioned points no further literature has been found.

3.3 Conclusion

The 2003 study *Europeans and their Forests* is comprehensive and has been compiled over several years. It went beyond the scope of this literature review to establish a similar overview on public opinions, as far as comprehensiveness is concerned.

Nevertheless, a coherent and valuable overview of recent studies and surveys about the public's opinion on forests and forestry has been prepared to add new insights from literature published from 2003 onwards to the knowledge base gathered in *Europeans and their Forests*. The overview presented in this chapter provides specific insight into different aspects of public opinion on forests and forestry and reveals that certain trends in perception still continue unchanged while others, especially related to climate change, have surfaced.

The results of this task do provide a robust and broad basis from which (a) input for the development of new surveys under this study can be drawn, and (b) certain conclusions can be drawn in order to build and shape forest communication in the future.

Some misperceptions, especially related to the state of forest health and total forest area, have been depicted among the public in some countries. Regarding other aspects, such as the role of the forest industry and the ownership of forests, perceptions differ among countries or could not really be compared.

The public, at least in some countries, seems to be well informed about the forests' role in relation with climate change and carbon emissions. As climate change has become a centre of attention for many, forests and forestry may use the popularity of this topic in order to also experience a growing interest amongst the public.

4 Stakeholder survey

This chapter provides the results and analysis of the stakeholder survey. This task was carried out as a second step in the assignment after having reviewed the meta-analysis of already available literature, because the perspective of dominant stakeholders is vital to understanding public views on the topic at hand, particularly while identifying areas where communication to the public could be improved. This chapter consists of an in-depth analysis on the perceptions and opinions of principal stakeholders and experts about public views on forests and forestry in the EU. In particular, the views of stakeholders on how public understanding and communication related to forests and forestry could be enhanced were collected. All interviews were held on the basis of a pre-tested survey, covering all essential topics of relevance for the study. Details on methodology, the questionnaires used as well as response rates and distribution across countries and organisations can be found in the Annex to this report.

4.1 Results per topic: forests

Under the first module, stakeholders were asked to think about public opinions regarding some more general forest-related questions, including their first thoughts associated with the word “forest”, and the public’s beliefs about the recent state of forests.

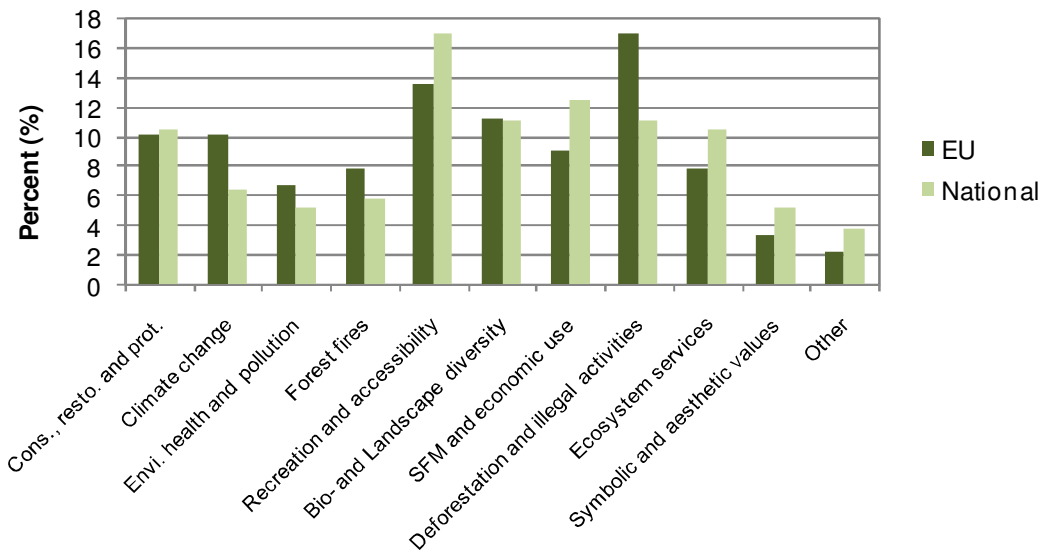
4.1.1 What are the most important topics for citizens when it comes to forests?

Stakeholders were asked to name the first two or three concerns that immediately come to people’s mind when asked about forests. No categories were pre-determined for the answers (open question).

In the view of EU and international experts quite a range of topics are important for EU citizens as a whole. The two aspects most often mentioned first are related to threats to forests (e.g. deforestation), followed by forest conservation and protection. Climate change and biodiversity are stated most frequently as second most important issues. In total, however, forest recreation is the second most often mentioned topic.

National stakeholders clearly put recreation as most frequently mentioned on the map as priority topic number one for citizens of their countries when it comes to forests. A number of further topics are also important: deforestation, forest management in general, conservation and protection, biodiversity, and ecosystem services. All other topics mentioned in this open question by national stakeholders are clearly less relevant.

Figure 4.1 National and EU survey comparison: most important topics when it comes to forests



[Source: ECORYS]

Regional differences

Not surprisingly, forest fires dominate responses from Southern Europe as first most important topic that comes to their minds what their citizens find as important with regard to forests. In Eastern Europe deforestation and illegal logging as well as ecosystem services are mentioned more often, compared to other regions. Respondents from governmental bodies (and research institutions) point more often to environmental health and pollution as well as forest fires, if compared to respondents from non-governmental organisations.

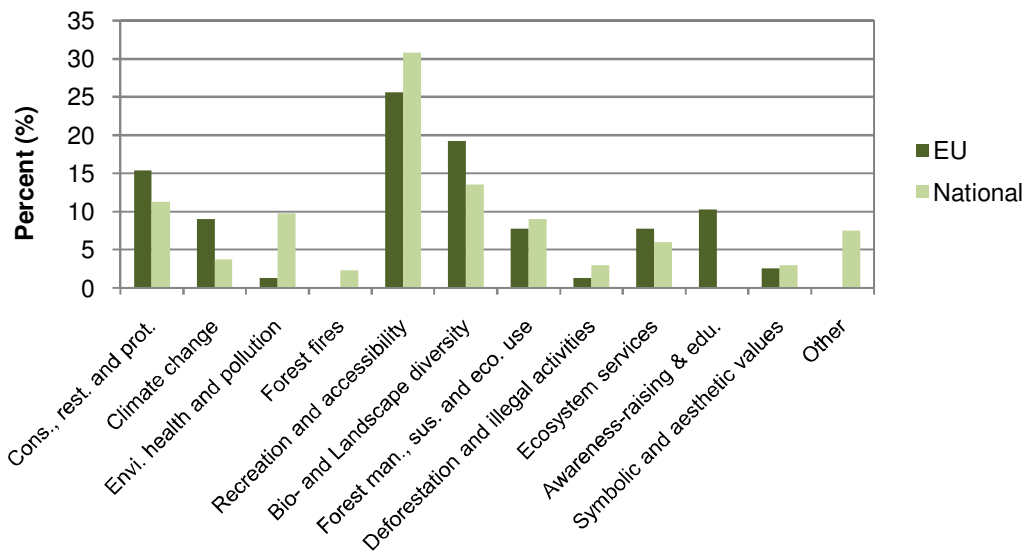
4.1.2 What is particularly important for the younger generation (people under 25 years of age) when it comes to forests?

This nuance of the previous question aims to analyse whether one can detect a difference in perceptions of young people versus the general public. Again, no answer categories were predetermined.

In the views of EU and international stakeholders the young think considerably more about recreation than the general public as something that is important for them with regard to forests, followed by protection and other topics that have to do with biodiversity, nature and climate change.

National stakeholders in general think that younger citizens in their countries are very strongly oriented towards recreation. All other topics pale in importance compared to recreation.

Figure 4.2 National and EU comparison: important topics for the younger generation when it comes to forests



[Source: ECORYS]

Regional differences

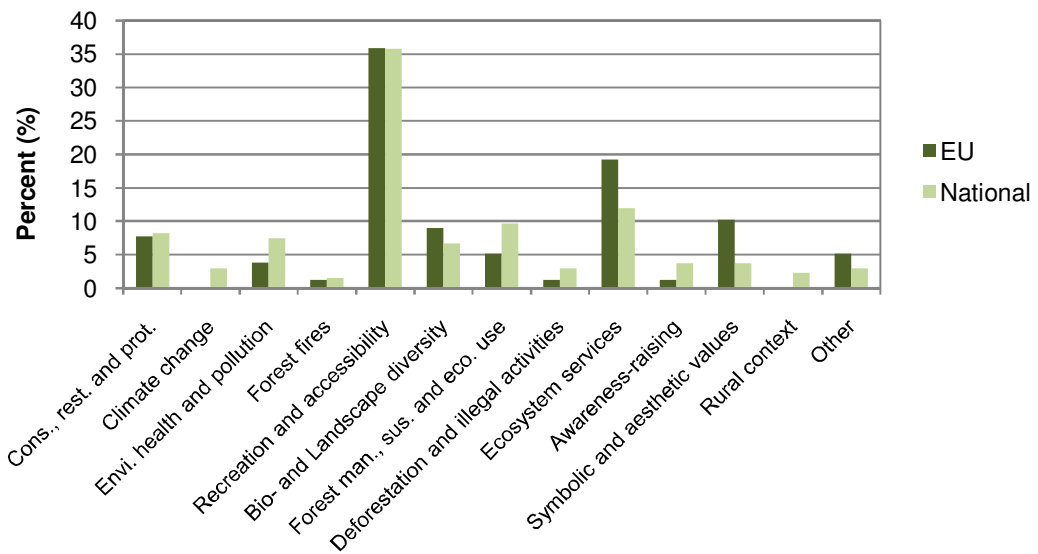
In general, respondents do not seem to think that the younger generation would place particularly strong emphasis on protection issues, except in Southern Europe, where respondents consider their youth to be more interested in protection than in other regions. Respondents from Eastern Europe place recreation similarly high as respondents in Western Europe.

4.1.3 What is particularly important for people living in urban areas when it comes to forests?

EU and international stakeholders believe that for the urban population the by far most important topic with regard to forests is recreation, if compared with the general public as a whole. Issues such as climate change were practically not mentioned as a topic of importance to urban people.

National stakeholders believe that only one topic is particularly relevant for their urban citizens: recreation. Around 80% of respondents mention this topic as one of the most important topics. In comparison, only about a quarter of respondents think that conservation is the most important topic for urban citizens.

Figure 4.3 EU and national comparison: important topics for people living in urban areas when it comes to forests



[Source: ECORYS]

Regional differences

Again, respondents from Southern European countries believe that for their citizens, protection is a more important topic, compared with the opinion from respondents in other regions.

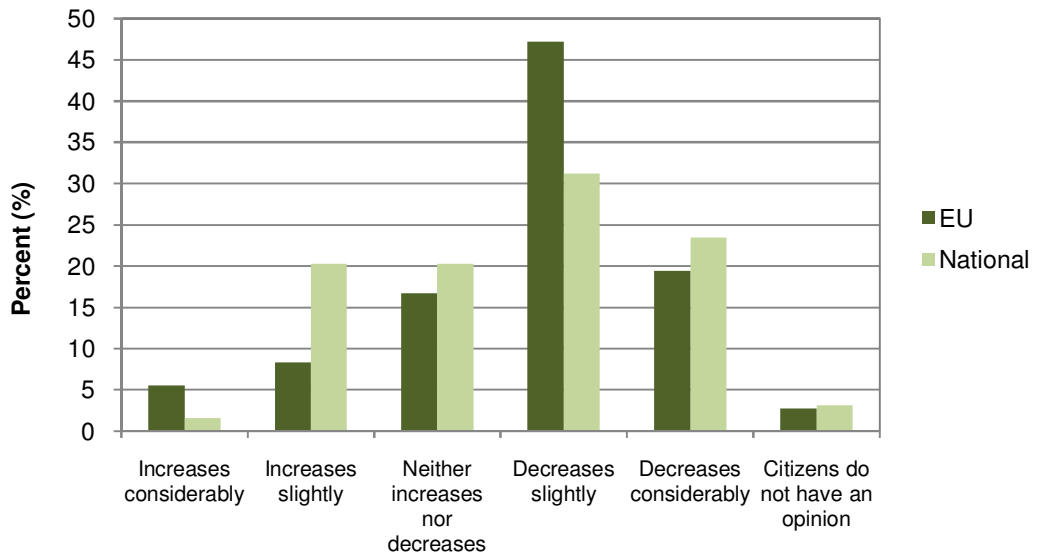
4.1.4 What do people believe about the development of the forest area?

For this question stakeholders were asked to think about what the public believes is happening today: is forest development increasing considerably, increasing slightly, stable, decreasing slightly, or decreasing considerably. Another answer option was also that citizens do not have an opinion.

Amongst EU and international stakeholders a clear majority thinks that the public considers forest area to be decreasing. Only few think that people consider forest area to be increasing (which it in fact does). Practically all respondents also think that people do have an opinion about the forest area.

National stakeholders have, overall, a very similar view regarding their citizen's opinion about the development of the forested area: the most often stated belief is that a majority thinks forest area is decreasing. Compared to international stakeholders, more people think citizens see forest area *in their countries* to increase or to be stable. About half of respondents are of that opinion. Few national stakeholders think that their citizens have no opinion on the development of the forest area in their countries.

Figure 4.4 EU and national survey comparison: public opinion about the development of the forested area



[Source: ECORYS]

Regional differences

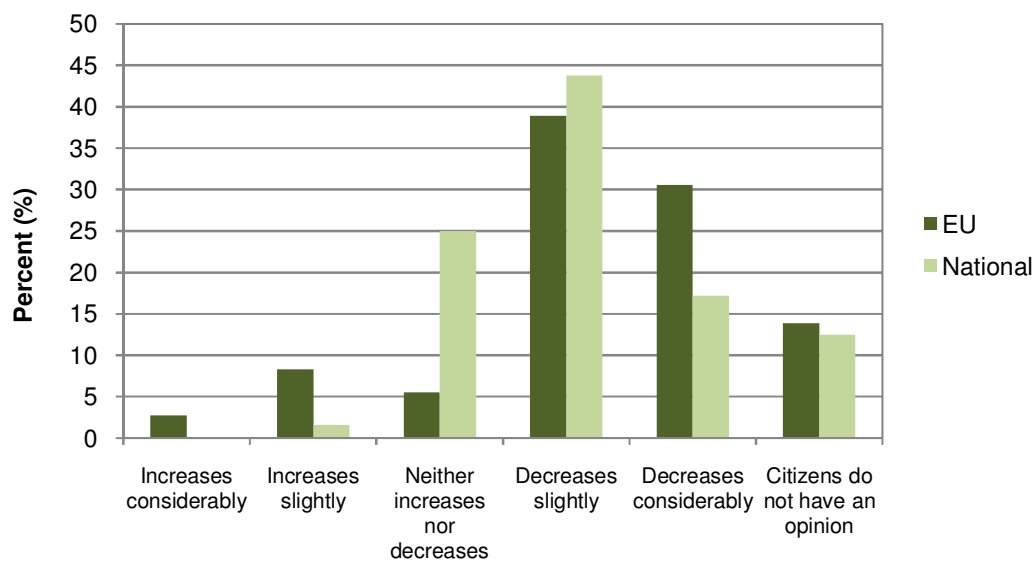
About a third of Eastern European respondents think that citizens in their countries believe forest area to be increasing slightly. Another third believes that citizens in this region think forest area remains stable. Respondents from Southern Europe think that their citizens see the forest area to be decreasing quite considerably.

4.1.5 What do people believe about the development of forest biodiversity?

While some stakeholders are of the opinion that the public might think that forest biodiversity is increasing, around 70% of respondents think that the public sees forest biodiversity as declining. Around a third thinks that the public has a very negative view of considerably decreasing biodiversity.

National stakeholders have also a more positive view on their citizen's belief regarding the development of forest biodiversity *in their countries*. However, still around 61% of respondents think that in the public's opinion forest biodiversity is decreasing slightly.

Figure 4.5 EU and national survey comparison: public opinion about the development of forest biodiversity



[Source: ECORYS]

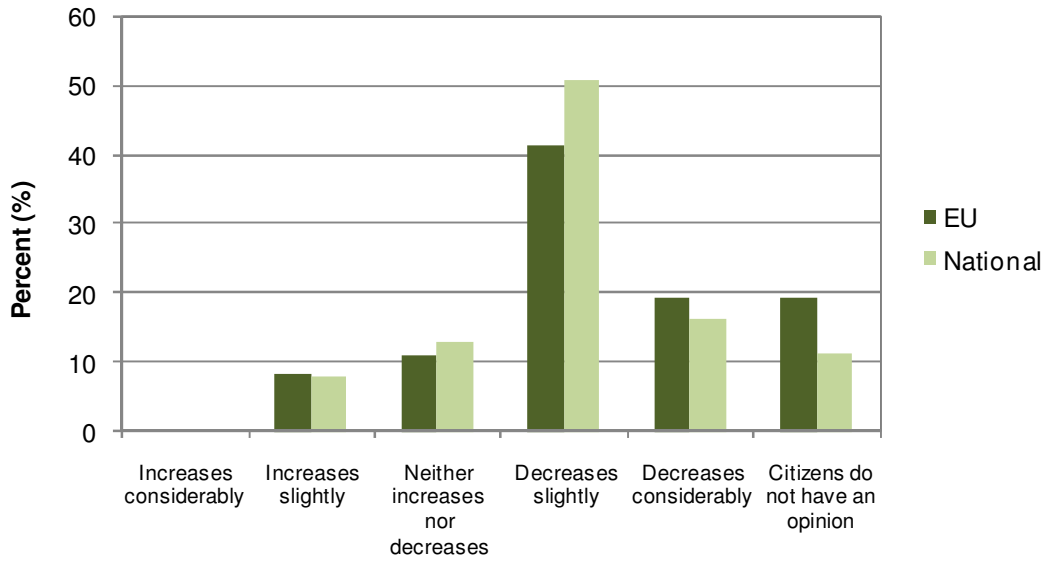
Regional differences

Eastern European respondents have a more positive view of their citizen's opinion on forest biodiversity development.

4.1.6 What do people believe about the development of forest health?

As with forest area and forest biodiversity, international experts believe that the general public sees forest health to be deteriorating. In their views, only few people consider forest health to be stable. However, compared to the opinions about forest area or forest biodiversity developments, more experts think that citizens do not have an opinion about the matter. The overall assessment of people's belief about the development of forest health is fairly similar between EU and national stakeholders. About two thirds of respondents think that citizens judge forest health to be decreasing. This opinion is quite similar across regions in Europe.

Figure 4.6 EU and national survey comparison: public opinion about the development of forest health



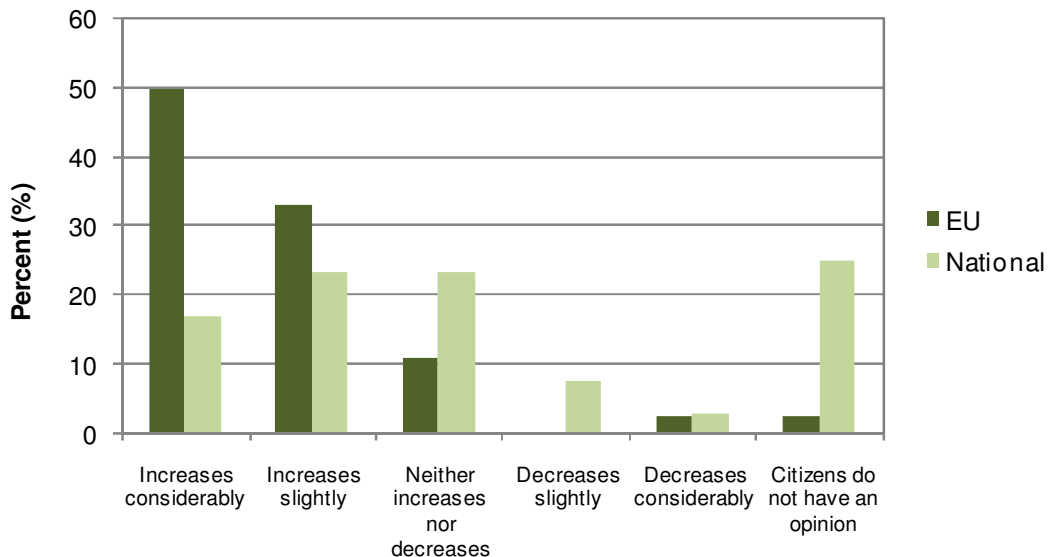
[Source: ECORYS]

4.1.7 What do people believe about damages caused by forest fires?

A large majority (83%) of stakeholders thinks that the public in the EU as a whole sees forest fires to be increasing, with half of all experts believing that the public sees forest fires to be increasing considerably.

Noticeably fewer national stakeholders are convinced that citizens in their countries think that damages by forest fires are on the rise *in their countries*. Nonetheless about 40% of respondents think that their national public sees an increase of forest fires. Notable is also that a quarter of all respondents think that citizens have no opinion – this is particularly so in countries where forest fires are not a dominating issue.

Figure 4.7 EU and national survey comparison: public opinion about damages caused by forest fires



[Source: ECORYS]

Regional comparison

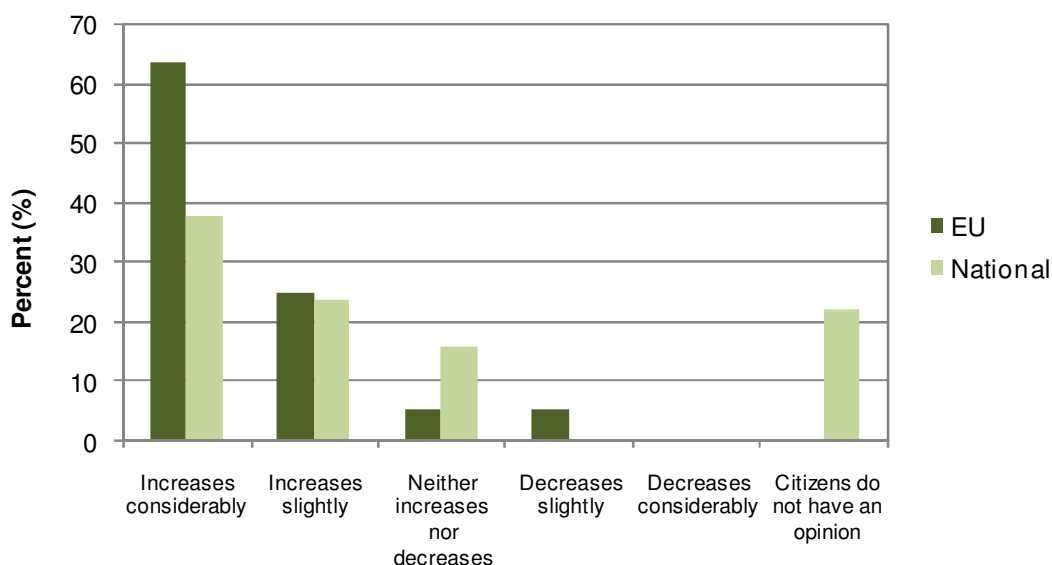
Not surprisingly, all respondents from Southern European countries believe their citizens see an increase in forest fire damage; a large percentage even think that citizens see considerably increasing damage caused by fires.

4.1.8 What do people believe about damages caused by storms?

Even more pronounced than for forest fires, almost all EU / international experts asked consider that the public sees damages to forests by storms to be increasing (89%). None of the experts think that people would not have an opinion on the damages caused by storms.

National stakeholders hold similar views regarding damages to forests by storms *in their countries*. A majority of almost two thirds of respondents think that the public sees damage by storms to be increasing, 40% believe that they even see a considerable increase. This is mainly seen to be driven by a number of storms in recent years that have negatively affected forests in many countries in Europe and that have been covered widely in the media.

Figure 4.8 EU and national survey comparison: public opinion about damages caused by storms



[Source: ECORYS]

Regional differences

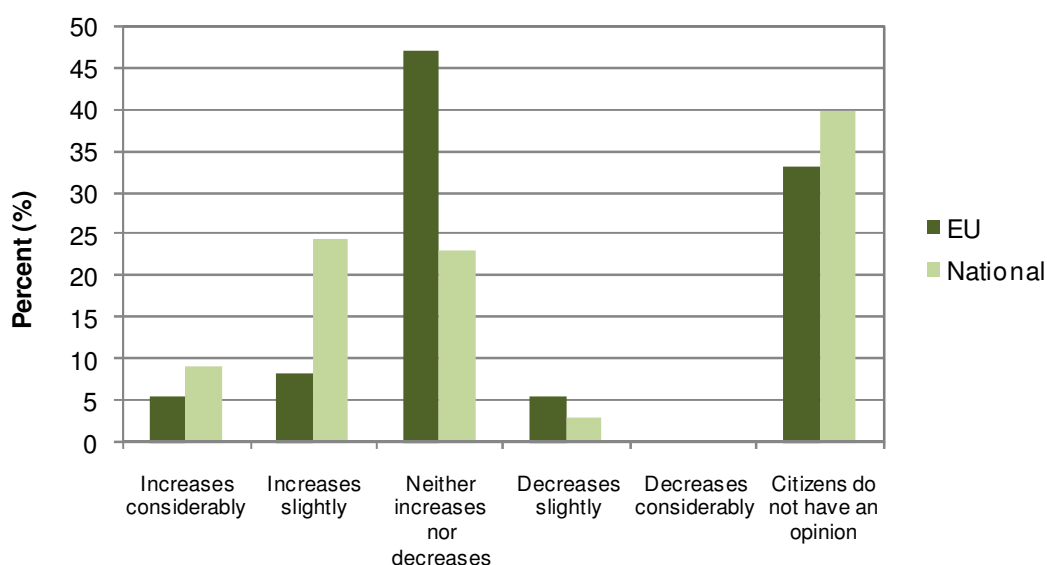
Storm damage is seen as less of an issue for citizens in Southern Europe compared with other regions.

4.1.9 What do people believe about damages caused by wild animals (such as deer)?

Two responses dominate on the question regarding the damages caused by wild animals, such as deer, on forests' natural regeneration: experts believe that the public in the EU either thinks there is no change in the situation, or that citizens do not have an opinion.

The most common response of national stakeholders on the question was that citizens do not have an opinion about the issue (40%). Few of those that believe that the public does have an opinion, think that people see damages to be decreasing.

Figure 4.9 EU and national survey comparison: public opinion about damages caused by wild animals



[Source: ECORYS]

Regional differences

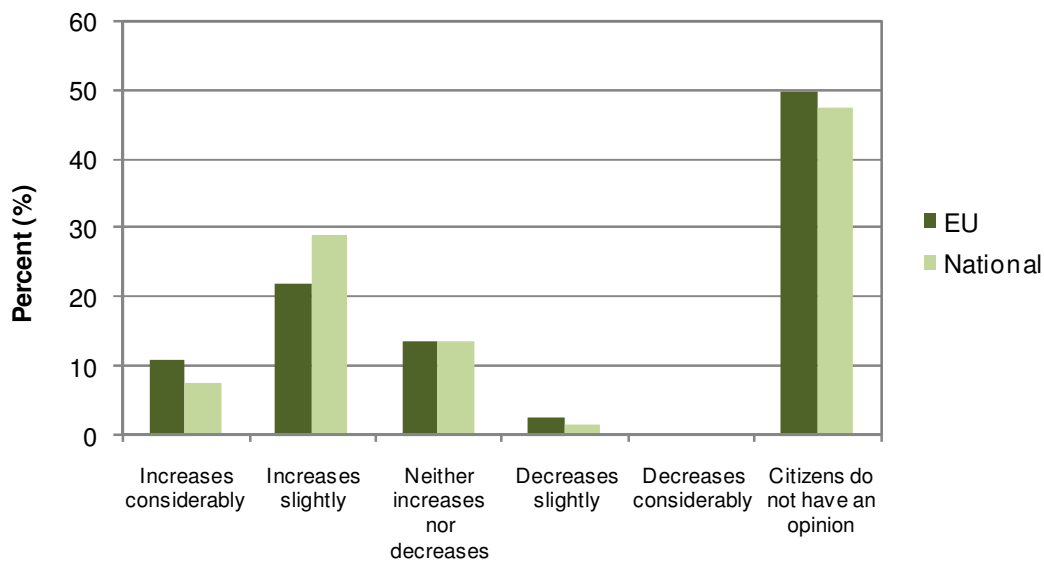
Respondents from Southern Europe think that a large majority of citizens of their countries has no opinion on the issue.

4.1.10 What do people believe about damages caused by invasive species?

With regard to the issue of invasive species damaging forest ecosystems, exactly half of all experts think that EU citizens as a whole have no opinion on this topic. Those experts that do think there is an opinion (about a third) believe that the public sees these damages to be increasing, albeit mostly slightly.

Similarly, about half of national stakeholders believe that citizens in their countries do not have an opinion about invasive species. None of those respondents that think people hold an opinion thinks that these damages would decrease. There is no substantive variation in opinion across regions.

Figure 4.10 EU and national survey comparison: public opinion about damages caused by invasive species



[Source: ECORYS]

4.2 Results per topic: forest benefits, use and management

4.2.1 What is the ranking in order of importance of various forest benefits as perceived by the public?

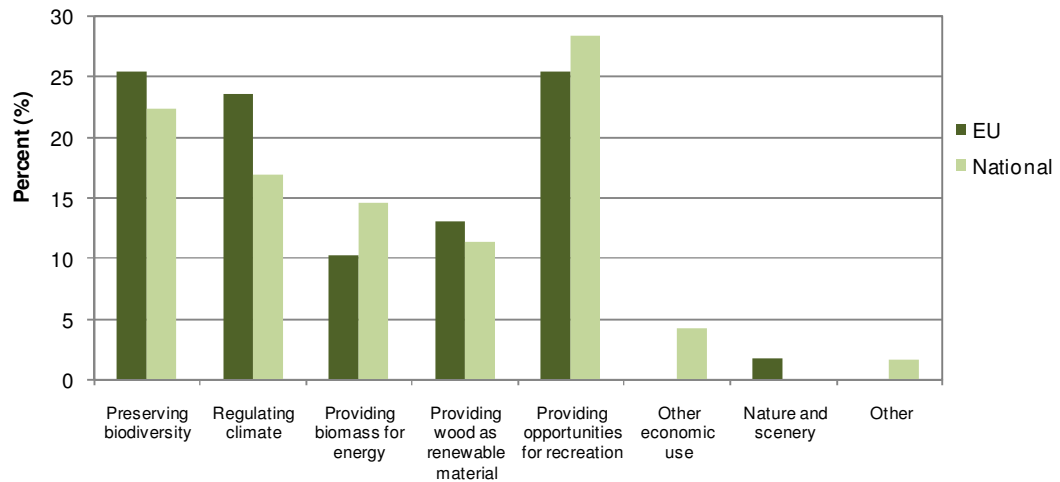
Forests provide different benefits, including: preserving biodiversity, regulating climate, providing biomass for energy, providing wood as a renewable material, or providing opportunities for recreation, amongst others. Stakeholders were asked to state which of those benefits they think is the most important, the second and third most important in the views of citizens. The question was posed as an open question.

EU and international stakeholders in general believe that a number of benefits are about equally important to EU citizens. Four out of a list of five options given (preserving biodiversity, regulating climate, providing biomass for energy, providing wood as a renewable material, or providing opportunities for recreation), are considered important in the views of EU citizens. Interestingly, biomass for bioenergy is seen as being of higher importance compared to providing wood as raw material. Only few respondents named other benefits than the above (such as protective services, or nature/scenery). Most stakeholders were of the opinion that preserving biodiversity is seen as the most important benefit from forests by EU citizens, while others thought that opportunities for recreation would be most important. There was wide agreement that regulating the climate and bioenergy are also seen as very important by EU citizens. The provision of wood as renewable material is not amongst the most often mentioned topics. Most respondents obviously expect that EU citizens do not mention the provision of wood as a main benefit from forests.

At national level, stakeholders expect their citizens to mention the provision of opportunities for recreation most often, followed by the preservation of biodiversity and

regulating the climate. Again, the provision of biomass for bioenergy is expected to be more often seen as important as the provision of wood as renewable material. Given the importance of wood for the forest sector and for many uses, this is a quite remarkable expectation.

Figure 4.11 EU and national comparison: public opinion about the importance of different forest benefits



[Source: ECORYS]

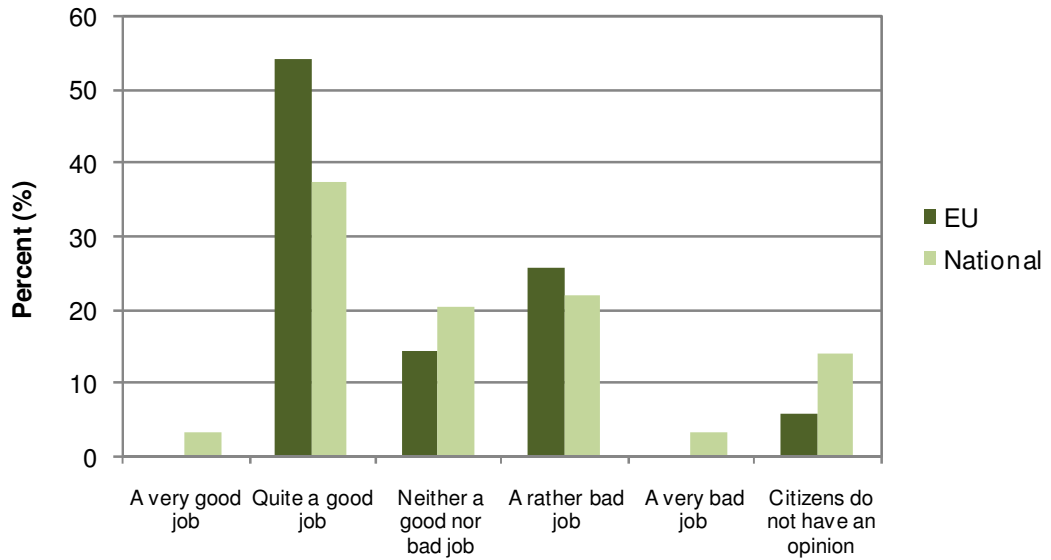
Regional differences

This view is consistent throughout the EU-27 regions (Eastern Europe, Southern Europe, and the rest of EU-27 countries). Not totally surprising, the provision of wood is expected to be pretty much lacking from the benefits map in Southern Europe.

4.2.2 How well do people think forests are currently managed?

Overall, more than half of respondents are of the opinion that the EU public views the quality of forest management in the EU quite favourably (54% of respondents). Only a quarter of respondents thought that citizens would see forestry to do a rather bad job. Almost none thought that citizens would not have an opinion on the matter, and nobody considers that citizens have extreme views (a very good job, or a very bad job). Around 40% of national stakeholders think, citizens in their countries believe that forestry does a good job. It is the most often stated opinion. A somewhat larger percentage of national stakeholders than EU stakeholders thinks that citizens have no opinion on the quality of forest management in their countries.

Figure 4.12 EU and national survey comparison: public opinion about the quality of forest management



[Source: ECORYS]

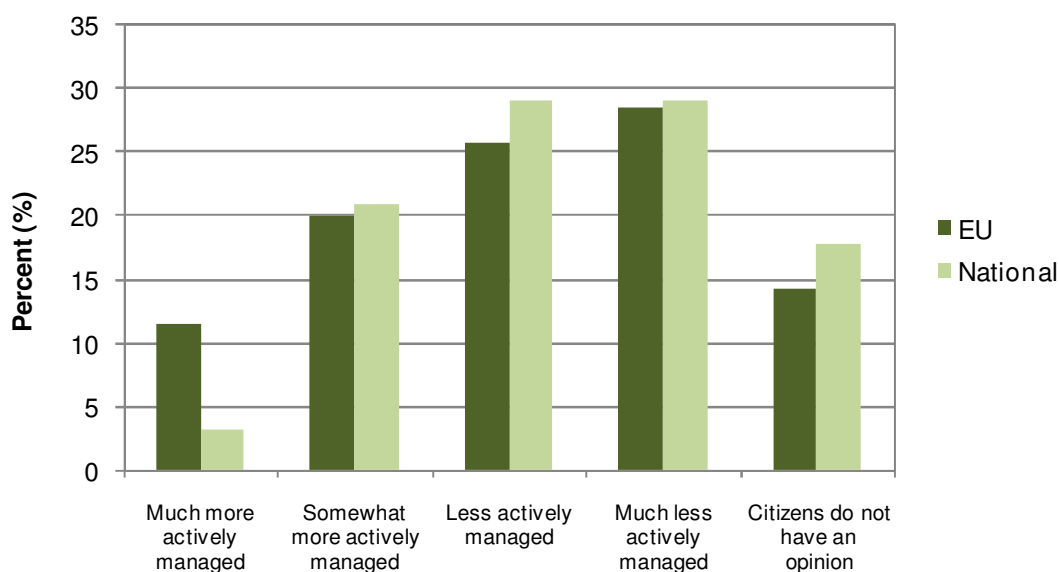
Regional differences

Respondents from Eastern and Southern European countries expect that their citizens are more critical about the quality of forest management. More than a third of respondents believe that the people of their countries on average think that forest management is doing a rather bad job. Governmental officials have a somewhat more positive view compared to non-governmental respondents.

4.2.3 What do people think how forest management should change to preserve biodiversity?

The following questions (sections 4.2.3 to 4.2.7) focus on finding out public opinion regarding the need to change current forest management practices to better achieve various goals, such as the preservation of biodiversity. Experts were asked to provide their opinion about the public's views (the answer category "no change" was not an option).

Figure 4.13 EU and national survey comparison: public opinion about how forests should be managed to preserve biodiversity



[Source: ECORYS]

When asked what EU citizens might think about how forest management should change to preserve biodiversity – either more active or less active management – experts are rather divided over what EU citizens would prefer. However, more than half of the interviewed experts were of the opinion that citizens would prefer less active management to better preserve biodiversity. More than a quarter thought that citizens call for much less management activity. Only a few respondents thought that citizens would have no opinion on the issue.

A considerable majority of national stakeholders think that their citizens on average would ask for less (about 30% of respondents) or much less (a further 30% of respondents) actively managed forests in order to preserve biodiversity. Only a quarter thinks that citizens ask for more active management to preserve biodiversity.

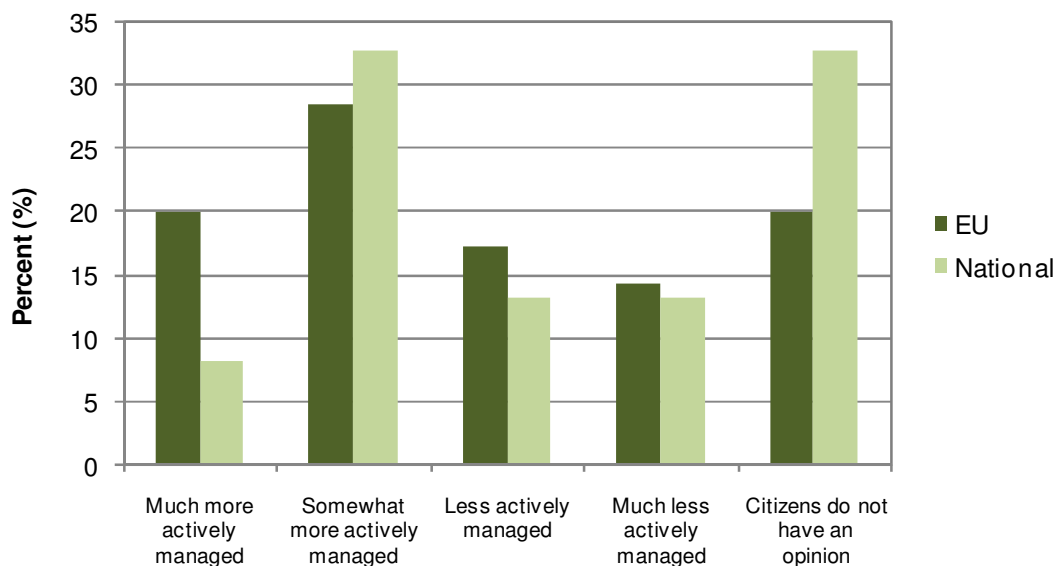
More respondents from Southern Europe are of this opinion, compared to other EU regions.

4.2.4 What do people think how forest management should change to help regulate the climate?

EU and international stakeholders were divided on what EU citizens would call for when it comes to the question of how forestry should act to help regulate the climate. Around 40% of respondents believed that citizens would call for more active management; while around 31% thought that they would call for less active management (20% thought that citizens do not have an opinion).

National stakeholders expect that their citizens either ask for somewhat more actively managed forests to regulate climate (one third of respondents), or not to have an opinion on the issue (another third).

Figure 4.14 EU and national survey comparison: public opinion on how forests should be managed to regulate climate



[Source: ECORYS]

Regional differences

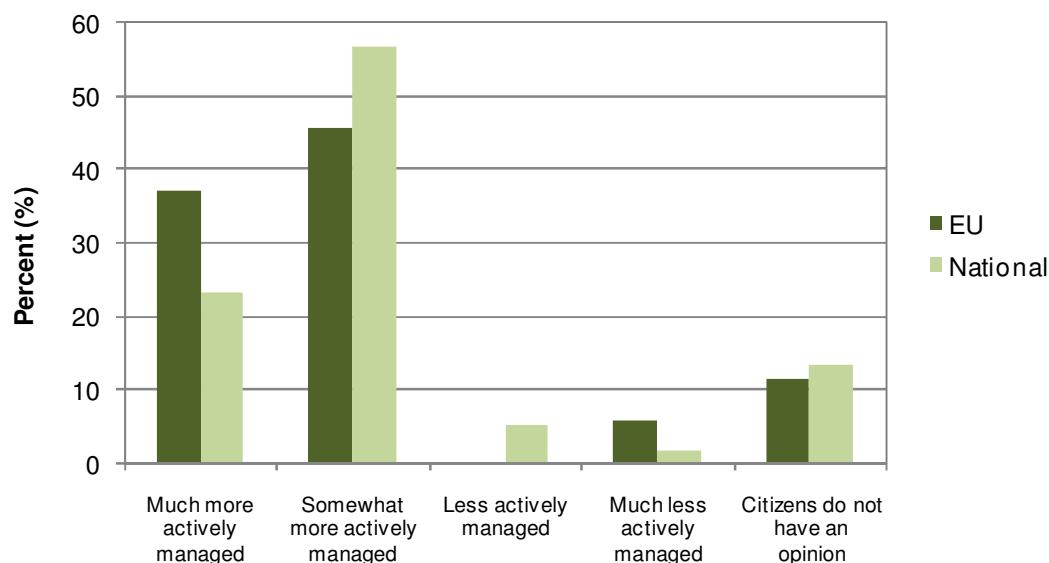
While respondents from Eastern Europe have very different views about their expectations, respondents in Southern Europe expect that citizens would call for much more active or somewhat more active forest management for regulating climate. This might reflect the fact that many Southern European forests are currently not (intensively) managed.

4.2.5 What do people think how forest management should change to provide biomass for bioenergy?

Compared to the questions of how EU citizens want to see forest management change to preserve biodiversity or to help regulate the climate, there was wide agreement amongst stakeholders that citizens would expect more active management of forests if these should provide biomass for bioenergy (approximately 83% of respondents).

National stakeholders have the same views on how their citizens would like to see forest management change with regard to biomass for energy. Respondents in general expect that this would imply an acceptance or expectation of a more active forest management.

Figure 4.15 EU and national survey comparison: public opinion on how forests should be managed to provide biomass for bioenergy

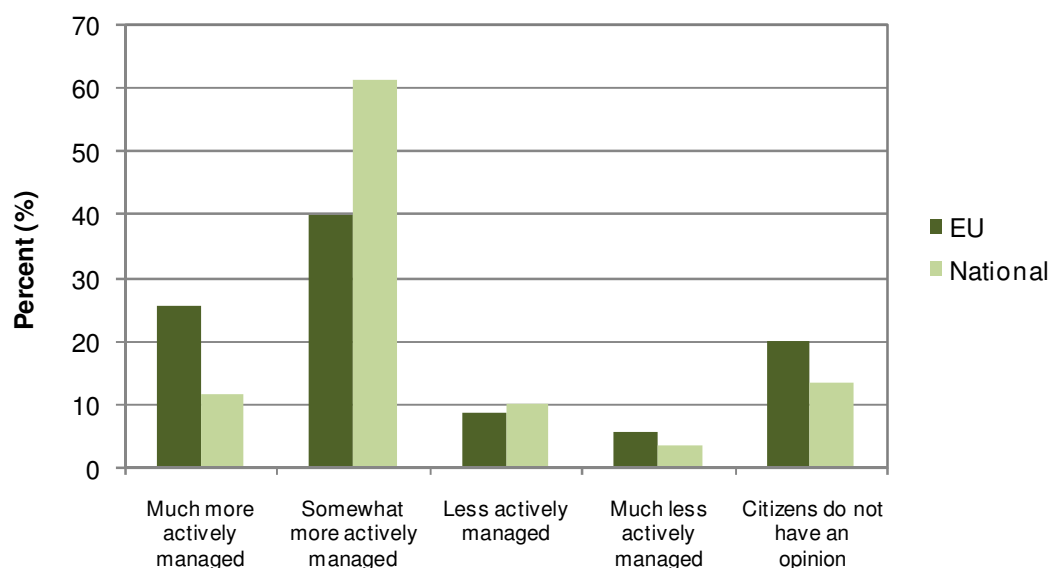


[Source: ECORYS]

4.2.6 What do people think how forest management should change to provide wood as renewable material?

Two thirds of EU and international respondents believe that EU citizens would expect more active management of forests should these provide more wood. Even more national stakeholders (approx. 75%) are of the opinion that most citizens would expect more active forest management with the provision of wood as a renewable material. This opinion is widely shared across EU regions.

Figure 4.16 EU and national survey comparison: public opinion on how forests should be managed to provide wood as a renewable material

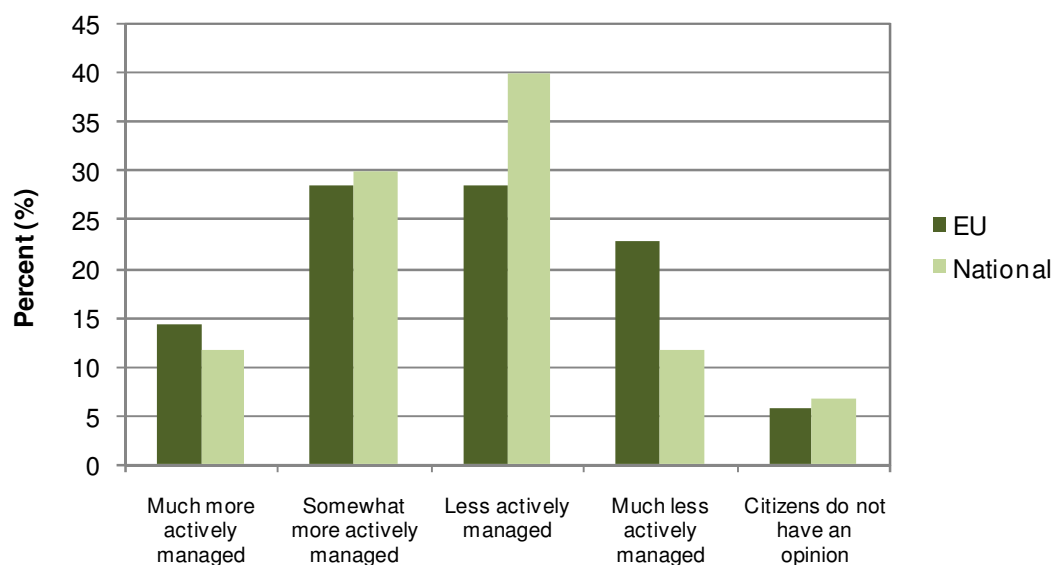


[Source: ECORYS]

4.2.7 What do people think how forest management should change to provide opportunities for recreation?

Somewhat more than half of EU stakeholders tend to believe that citizens want less actively managed forests for recreational purposes. Another 42% think that citizens prefer more active management. This might indicate that experts expect the public to call for a management style that manages forests in a way that allowed forests to look as untouched and natural as possible while still providing good recreational opportunities. Views among national stakeholders are equally divided as those at EU level.

Figure 4.17 EU and national survey comparison: public opinion on how forests should be managed to provide opportunities for recreation



[Source: ECORYS]

Regional differences

On this question Eastern European respondents are by and large convinced that citizens call for less active management, while their Southern European colleagues are unanimously convinced that citizens would call for much more or somewhat more active management.

4.2.8 What are people most critical about when it comes to managing forests?

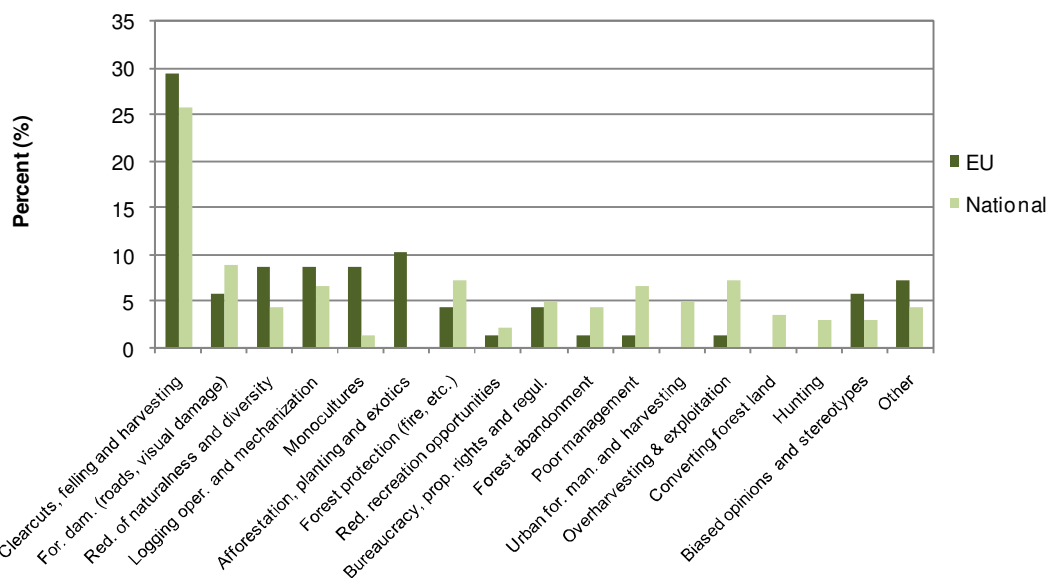
This question aimed to gather the biggest perceived concerns about forest management among the public. It was formulated as an open question, giving stakeholders the opportunity to raise issues that came to their mind.

The responses given by EU and international stakeholders were quite diverse. However, clearcutting, cutting trees and harvesting was the by far single most often named issue (50% of respondents named it first). The second most often named issue about which EU

citizens are expected to be most critical is large scale afforestation and planting, in particular with “exotic” species. A range of other issues were also raised concerning the reduction of naturalness, biodiversity, a concern with monocultures due to large scale afforestation, overharvesting and conversion of forests, inadequate management practices in urban forests, etc.

National stakeholders also see clearcutting, cutting trees and harvesting as the issue they expect citizens of their countries to be most critical about when it comes to forest management in their countries (43% name it as first issue). No other topic is expected to be nearly as prominent. A large number of other topics are also mentioned to raise concern, including forest damage and forest management in urban or peri-urban settings.

Figure 4.18 EU and national survey comparison: public opinion about what is most critical when it comes to managing forests



[Source: ECORYS]

Regional differences

In Eastern Europe respondents expect their citizens to mention overharvesting more often compared to other regions. In Southern Europe forest fire prevention performance is expected to be an issue.

4.2.9 How is climate change changing the public’s opinion of how forests should be managed?

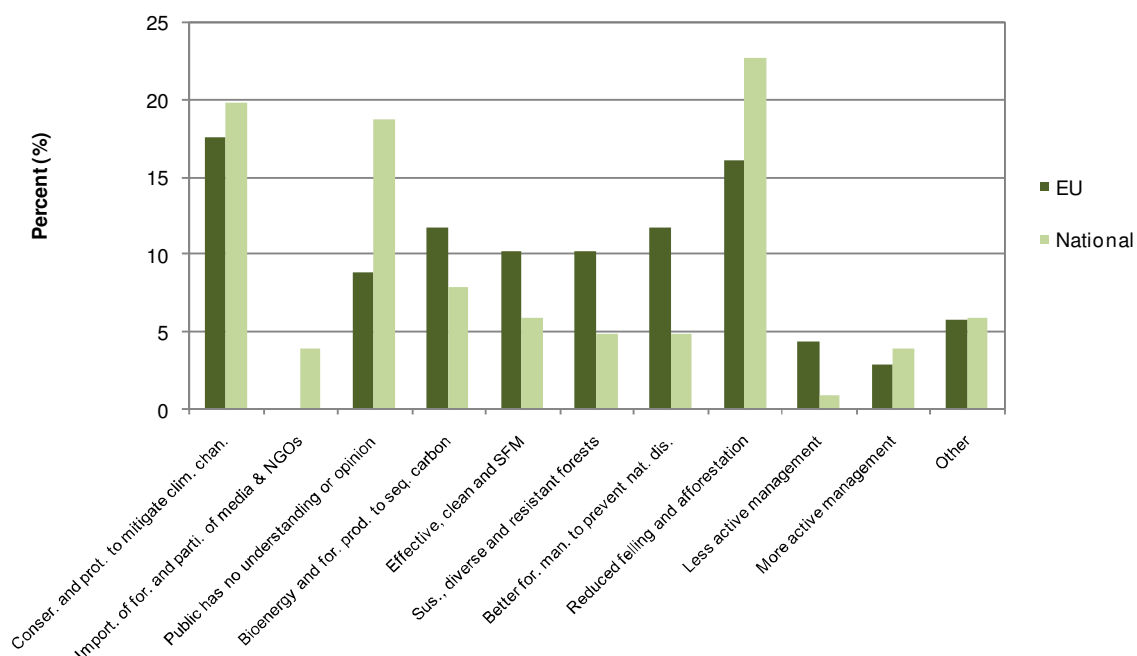
This question aimed to find out whether the public has formed an opinion about how to manage forests to help tackle climate change. The question was formulated as an open question.

While EU and international experts had very different opinions on how the public’s opinion towards forest management would change with the rising issue of climate change, around a quarter of respondents thought that the focus of the public will be on conservation measures and carbon sequestration. All other views on citizen’s expectations

are considerably less widely shared; this includes better forest management to prevent natural disasters and to limit their impacts. Quite a few experts thought that the EU public recognizes the need for more active forest management.

National stakeholders are of a similar opinion in terms of what their respective citizens think about changes to forest management due to climate change as their EU colleagues, i.e. that the clear focus of expectations for changes in forest management will be towards a demand for reduced felling and for afforestation and more management for conservation and on carbon sequestration measures. Quite often respondents expressed that the public probably does not really have an opinion, and might lack knowledge on this very complex issue. In general, the views do not vary considerably across different regions in the EU.

Figure 4.19 EU and national survey comparison: how climate change is changing the public's opinion on how forests should be managed



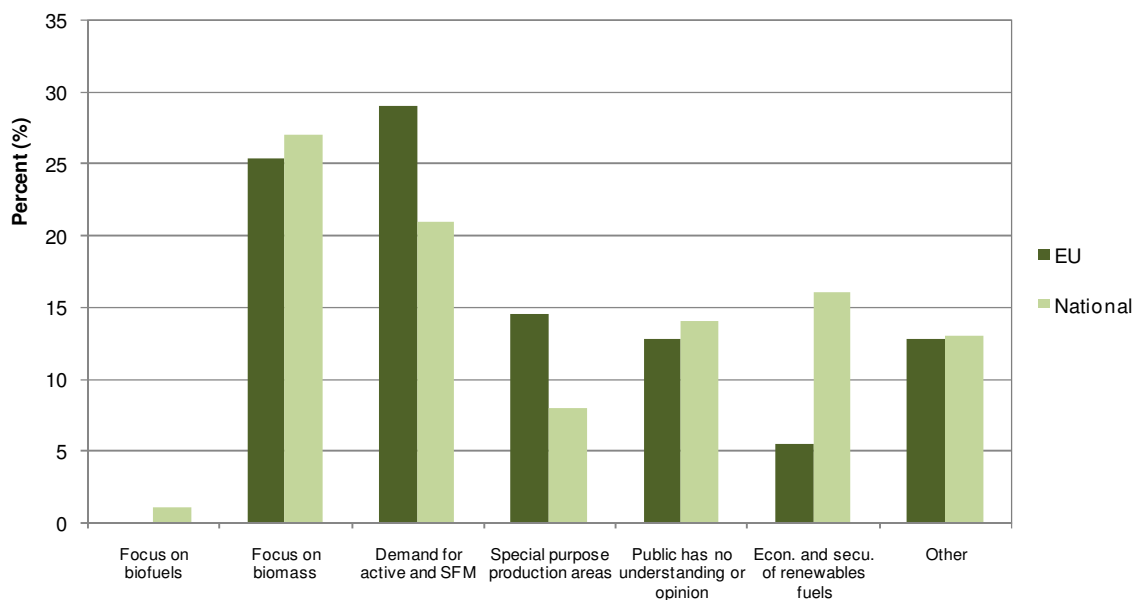
[Source: ECORYS]

4.2.10 How is the role of bioenergy changing the public's opinion on how forests should be managed?

EU stakeholders expect that the main effect of bioenergy policies and discussions would first and foremost result in an increased focus on biomass production and raise the demand for active and sustainable forest management. The view that people would call for the creation of special purpose areas was also mentioned. National stakeholders expect a pragmatic approach to more broadly adopt and use forest biomass for home heating etc. and a discussion on sustainable forest management. More national stakeholders than EU stakeholders are of the view that citizens have not yet formed a solid opinion on how to deal with the issue of biomass for energy, and its implications.

Special purpose areas (short rotation forestry) are more frequently mentioned by Eastern and Southern European respondents, compared with respondents in the rest of the EU-27.

Figure 4.20 EU and national survey comparison: how the role of bioenergy is changing the public's opinion of how forests should be managed



[Source: ECORYS]

4.2.11 Are there any recent surveys or studies on consumer attitudes or public opinion towards the forests or forest management topics discussed so far?

This question was posed in order to collect any recent surveys or studies the study team was not able to identify yet during the meta-analysis in Task 1. The results of this question were consequently added to the meta-analysis.

4.3 Results per topic: forest communication with the public

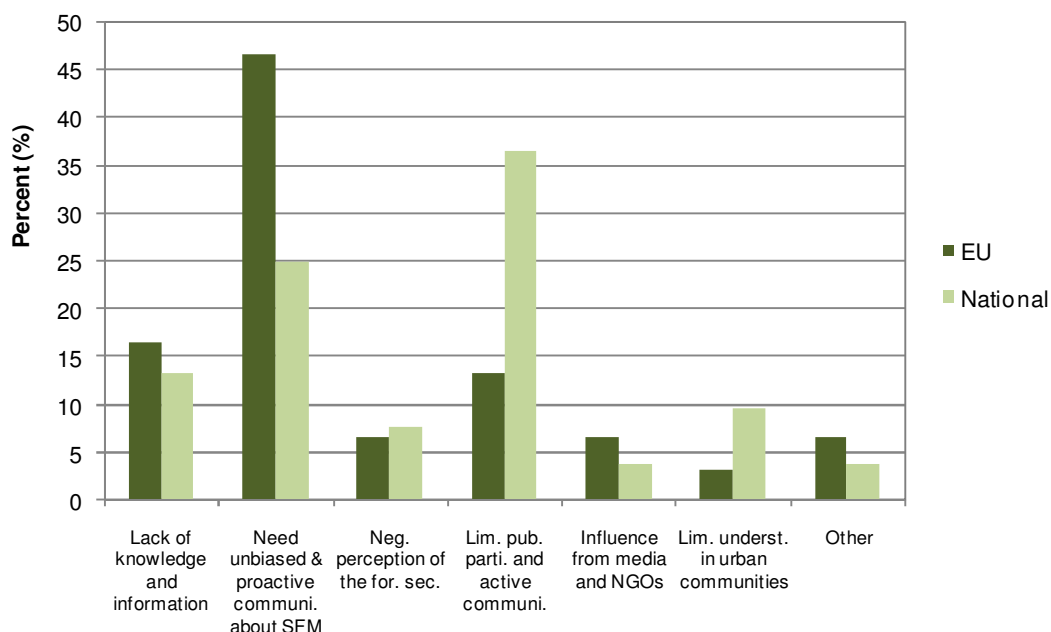
The third module focuses on forest communication with the public. Contrary to the other two modules, this module asked stakeholders about their opinion instead of asking them what they believe the public's opinion is on various forest-related issues.

4.3.1 Does forest communication with the public need to be improved?

Not surprisingly, this question has been answered with a “Yes” by almost all survey respondents. All respondents answering ‘yes’, were then asked to provide some reasons.

The EU and international stakeholders gave a wide range of reasons why, in their views, forest communication needs to be strengthened.

Figure 4.21 EU and national survey comparison: expert opinion on WHAT part of forest communication needs to be improved



[Source: ECORYS]

Most often respondents emphasized that there is a need for unbiased and proactive communication on sustainable forest management. A considerable number of stakeholders also saw a lack of knowledge on forest related issues, and a need to proactively provide unbiased information on sustainable forest management using simple and clear messages. Many also highlighted limited public participation and the lack of active communication. National stakeholders most often mentioned limited public participation and active communication, followed by a need for unbiased and proactive communication on sustainable forest management.

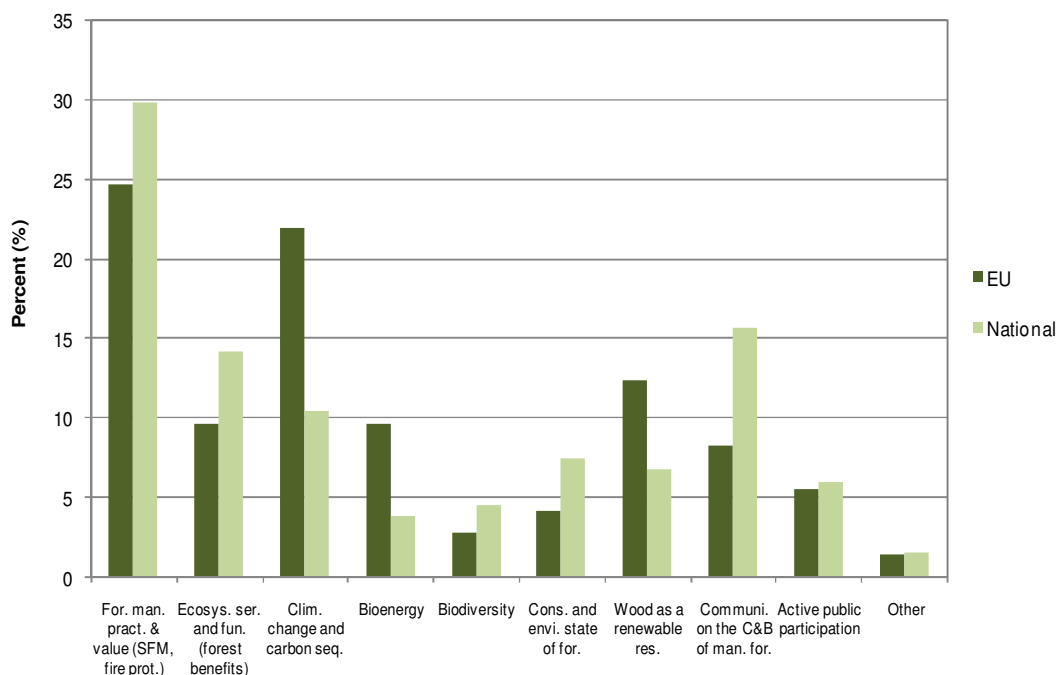
4.3.2 WHAT topics do you think forest communication should focus on?

When asked on what topics forest communication should focus on, the responses of EU and international stakeholders were quite diverse but converge around two most frequently and equally often mentioned issues: forest management practices and values (“sustainable forest management”) - the by far most often mentioned issue as first key topic to come to mind - and “forests and climate change” (the by far most often mentioned issue as second key topic to come to mind). These two issues are followed or complemented by topics focusing on major benefits, namely ecosystem services, bioenergy provision, and biodiversity. Although the provision of wood as renewable material is mentioned, it is only one topic amongst others, and quite often put in the context of climate change measures. It seems less a topic of interest than the use of forests for bioenergy provision.

National stakeholders, like their counterparts at EU level, primarily mentioned forest management practices and values (“sustainable forest management”), including the need

and possibility to protect and utilise forests at the same time, as a key topic for communication, followed by the ecosystem services that forests provide. The latter topic is more prominently mentioned by national stakeholders, compared to EU stakeholders, and seen as a more important forest communication topic than forests and climate change.

Figure 4.22 EU and national survey comparison: expert opinion on WHAT topics forest communication should focus on



[Source: ECORYS]

Regional differences

Information on the overall condition of forests and their importance is seen a more important topic than forests and climate change in particular by respondents from Eastern European countries.

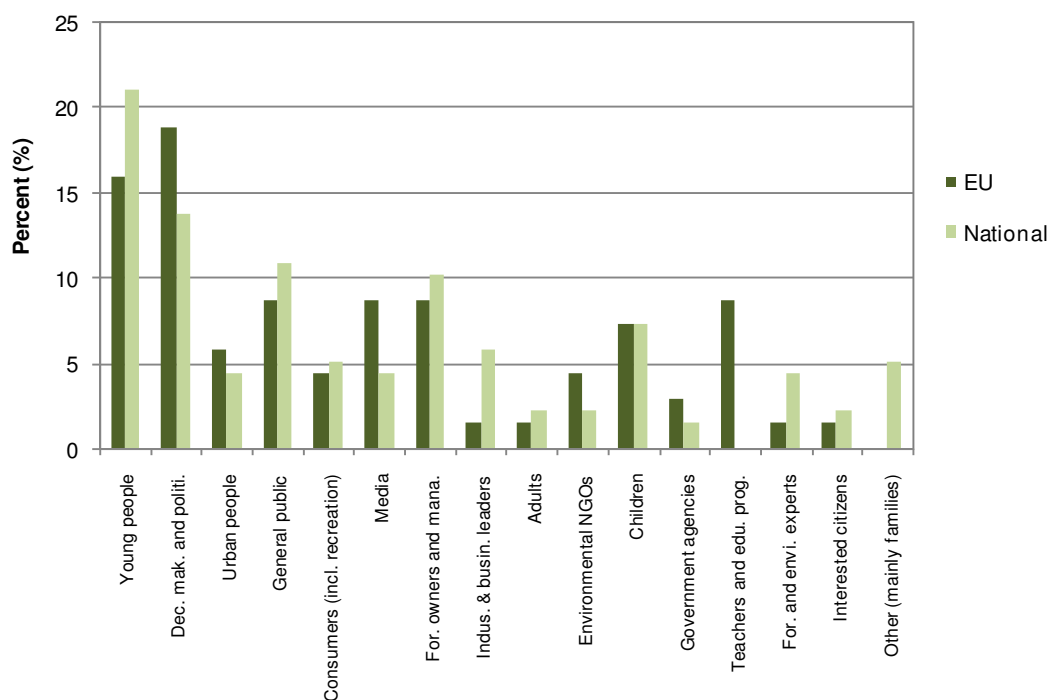
4.3.3 WHO – which target groups – should be the focus of improved communication?

EU and international stakeholders most often named “decision makers and politicians” as the key target group for improved forest communication, followed by young people, such as students, children, and their teachers. Taken all together, people being in or working in the education system were the most frequently named group. Not surprisingly, the diversity of responses reflects the diversity of specific target groups that are and need to be addressed separately in one or another form.

For national stakeholders young people and children are even more important as key target groups than decision makers, which rank second. Young people are thus given more prominence at national than at EU level.

Respondents from Eastern Europe put more emphasis on communicating with the general public than respondents from other regions.

Figure 4.23 EU and national survey comparison: expert opinion on WHO improved forest communication should focus on



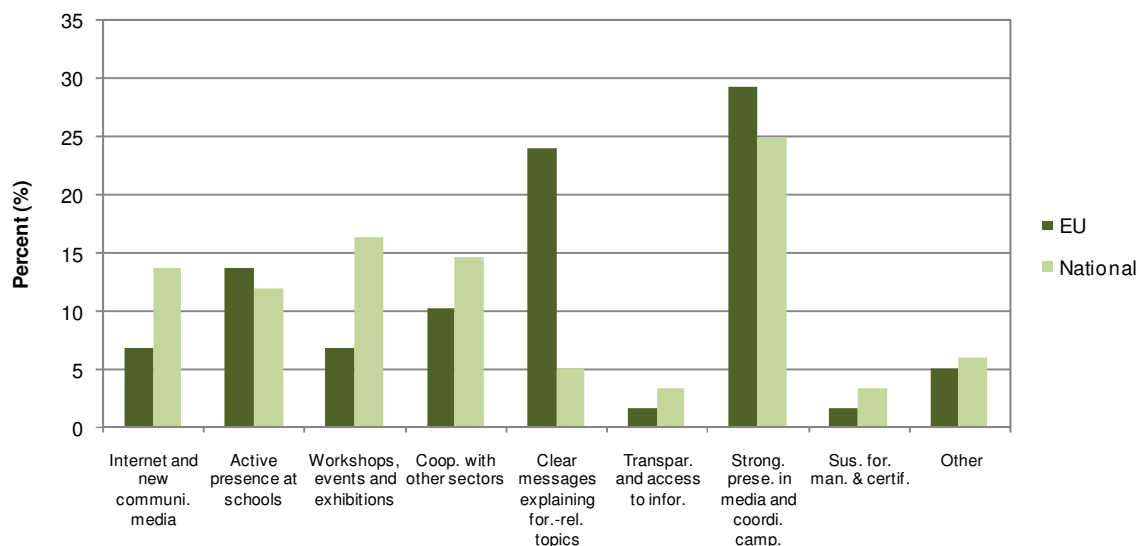
[Source: ECORYS]

4.3.4 HOW can forest communication be most effectively strengthened?

Regarding the question of HOW forest communication can be most effectively strengthened, a quarter of responding EU and international stakeholders called for more presence in the media and for coordinated media campaigns as the first thing that comes to their minds. Many also called for more simple, clear and attractive messages. Respondents furthermore pointed to events and the better use of information and communication technologies to reach target audiences.

National stakeholders had very similar views as to what is most important with regards to how to improve forest communication. Like their EU colleagues, they called for more presence in the media and more and better coordinated media campaigns. Their second most important suggestion was events that foster direct interaction and allow information transfer: workshops, training, events, exhibitions and excursions. In particular Eastern and Southern European respondents emphasise the need to be more present in schools.

Figure 4.24 EU and national survey comparison: expert opinion on HOW forest communication can most effectively be strengthened



[Source: ECORYS]

4.3.5 What were particularly good examples of effective forest communication in the past and why?

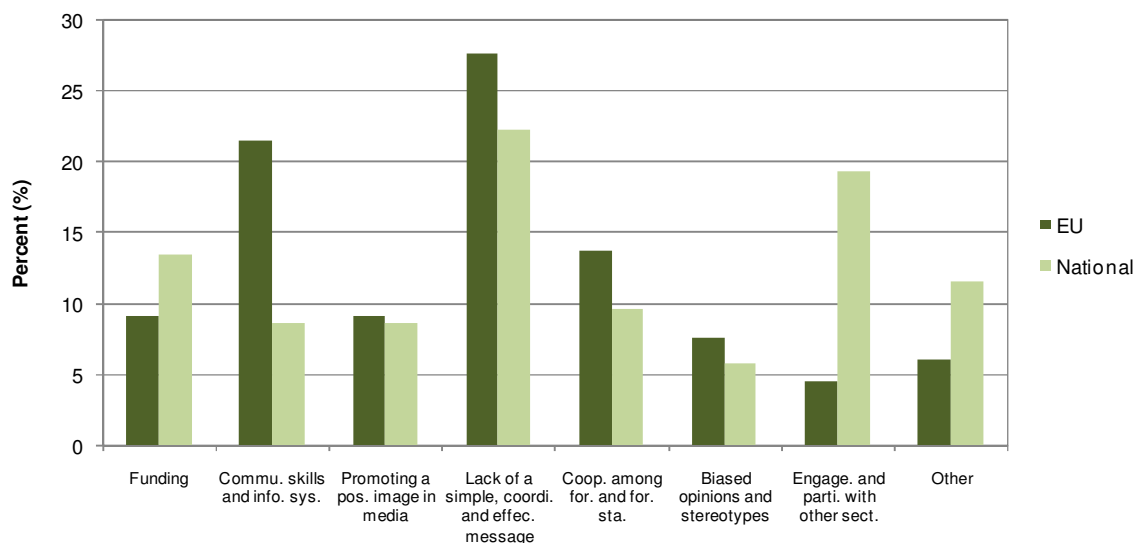
Answers to this question can provide best practice examples that may potentially be used to improve national and EU level forest communication with the public. For a list of responses, see the Annex to this report.

4.3.6 What are the biggest challenges to improving forest communication today?

EU and international stakeholders listed a number of obstacles for improving forest communication which seem to be equally important. The challenge most often mentioned first is the lack of simple, coordinated and effective messages. The second most frequently listed challenge is a lack of communication skills and expertise in the forestry sector.

National stakeholders were equally clear that the biggest obstacle they see in improving forest communication is the lack of simple, coordinated and effective messages. As a second most important challenge they named the engagement with other sectors.

Figure 4.25 EU and national survey comparison: expert opinion on the biggest challenges to improving forest communication today



[Source: ECORYS]

4.4 Discussion and conclusions

The results and analysis of Task 2 shows that EU and national stakeholders have, overall, fairly similar views about what citizens think and expect with regard to forests and forest management. They also agree that forest communication needs to be improved, and what needs to be done to improve it. While there are some differences in expectations of the views of citizens amongst stakeholders in different regions of the EU-27, these differences are widely to be expected.

The stakeholder – often forest communication experts – survey showed that dominant stakeholders believe that citizens in the EU continue to have a fairly bleak view of the development of major aspects of forests, such as forest area or biodiversity. They also expect that citizens recognize more forest damage by fire and storms, while they do not think that citizens hold clear opinions about other issues in forest management, such as damage by wild animals to forests’ natural regeneration or invasive species – even in regions where these damages occur.

Stakeholders expect citizens to be mainly interested in forests as an area for recreation and for protecting biodiversity and conserving nature. They see a younger generation emerging that is even more focused on recreation and seeking pleasure, and possibly somewhat less driven by a concern for a decreasing natural environment. They also recognize that the increasingly urban population in Europe is likely to be focused on recreation as major benefit from forests, while they too want nature to be kept intact.

Dominant stakeholders in general think that citizens recognize forest management as doing quite a good job. However, they are not clear how citizens will react to the issues of climate change and bioenergy from forests. What they see is that citizens are still most critical about clearcutting and cutting trees in general – possibly an effect of the widely

shared (but on average wrong) perception that forest area is declining in their countries or in Europe. While the current situation of balancing forest use and nature protection and biodiversity conservation seems quite complex to understand and communicate, these two new issues will bring about completely new challenges in both management and in forest communication. A large number of stakeholders see it as an opportunity to underline the importance and benefit of forests and of sustainable forest management for society.

5 Public survey

This chapter presents the public survey results. The methodology and statistical findings, such as response rates as well as demographic compilation of participants is presented and set into relation with pre-defined targets in the Annex to this report.

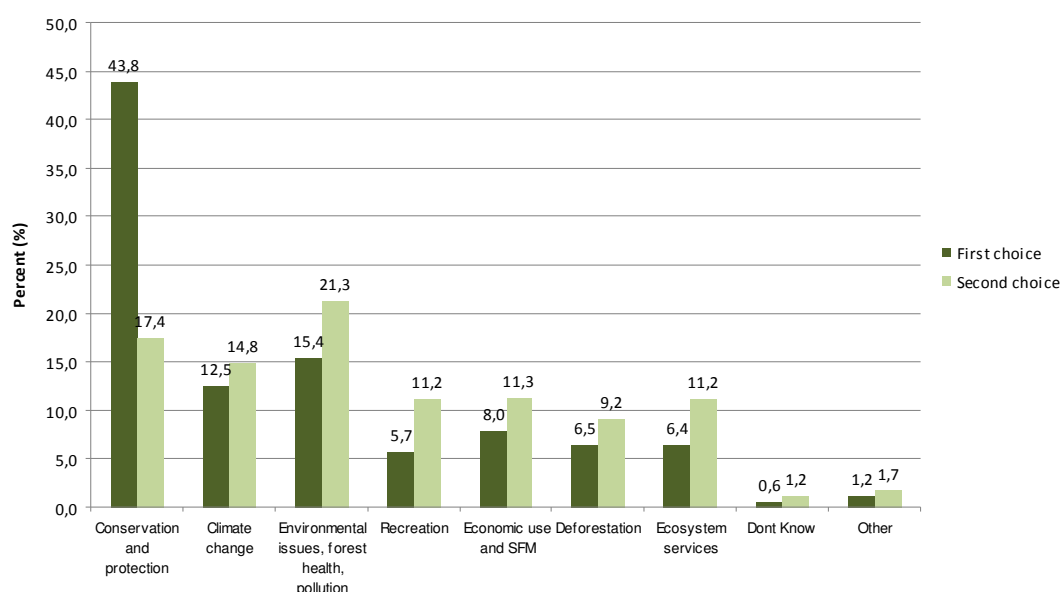
This chapter pays attention to the results generated for each question and explains the findings. In total, seven questions have been asked to the public survey participants.

5.1 Key concerns regarding forests

Question 1. When you think about forests in your country, please let me know which is the most important, which is the second most important topic.

In total, **EU citizens** consider “conservation and protection” to be the by far most important topic when it comes to forests. It was named first by almost half of all respondents (43.8%). This topic was followed by other protection-related topics: environmental issues, forest health and pollution (15.4%), and climate change (12.5%). Only a clear minority mentioned utilisation-related topics such as economic use and sustainable forest management (8%), recreation or ecosystem services (5.7% and 6.4%, respectively).

Figure 5.1 First and second most important topic related to forests



[Source: ECORYS]

There is considerable variation in the response behaviour across **regions**, but also between **countries** within these regions. Conservation and protection is less important to respondents in the Nordic/Baltic region (32.7%), compared to –in particular – citizens of South East European countries, where half of the respondents (50%) listed it as the first most important topic. Within the Nordic/Baltic regions a minority of 13.4% of Finns (and 19.4% of Swedes) rank protection as the first most important topic, compared to around 35-40% of citizens of Baltic countries. In comparison, 63% of respondents from Cyprus place it as first topic of importance (Hungary 60.5%, Portugal 59.8%).

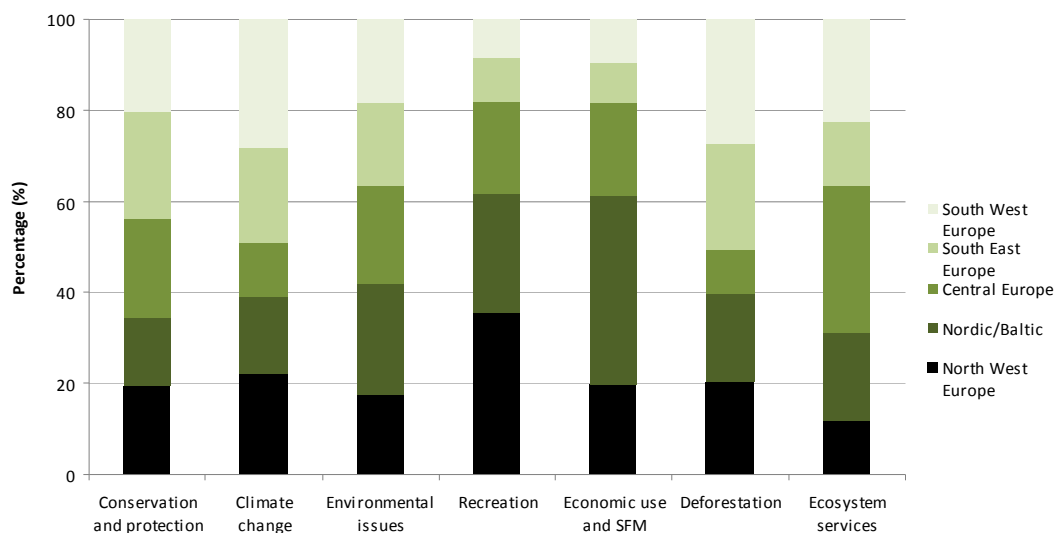
In the Nordic/Baltic region “economic use and sustainable forest management” is ranked at least twice as high in comparison to the other regions. About 16% of citizens in Nordic/Baltic countries name it as first choice, compared to 4.6% in South East Europe (4.0% in South West Europe, 7.5% in North West Europe, 7.3% in Central Europe). This again varies within regions from an impressive 33.2% in Finland and 31.6% in Estonia to a range between 6.7% and 9.4% in the Baltics and Sweden. Economic use is least frequently mentioned in Greece (2% of respondents) and Cyprus, but also in Romania (2.7%).

The same variation exists with regard to the importance of recreation as a topic in relation to forests. This topic is not frequently ranked as first most important topic in any region (most often it is put on the list in North West Europe, by 8.9% of respondents). The variation ranges from 0.6% of citizens in Portugal that put it as first most important topic to 19.1% in the Netherlands.

Climate change is listed as the top issue by 31% of all people interviewed in Malta, followed by Sweden (25.8%). It is virtually non-existent as most important forest-related topic in Estonia (2.3%) and Latvia (3.3%).

Ecosystem services tend to be more important for people living in Central Europe (10.1% rank them as most important topic) compared to other regions. They are considered least important by people in North Western European countries (3.8%). Again a high variation exists across countries in the regions. About 16% of people in Slovakia rank them as most important, followed by Finland (15.3%), and Slovenia.

Figure 5.2 Regional differences: first and second most important topic when thinking about forests



[Source: ECORYS]

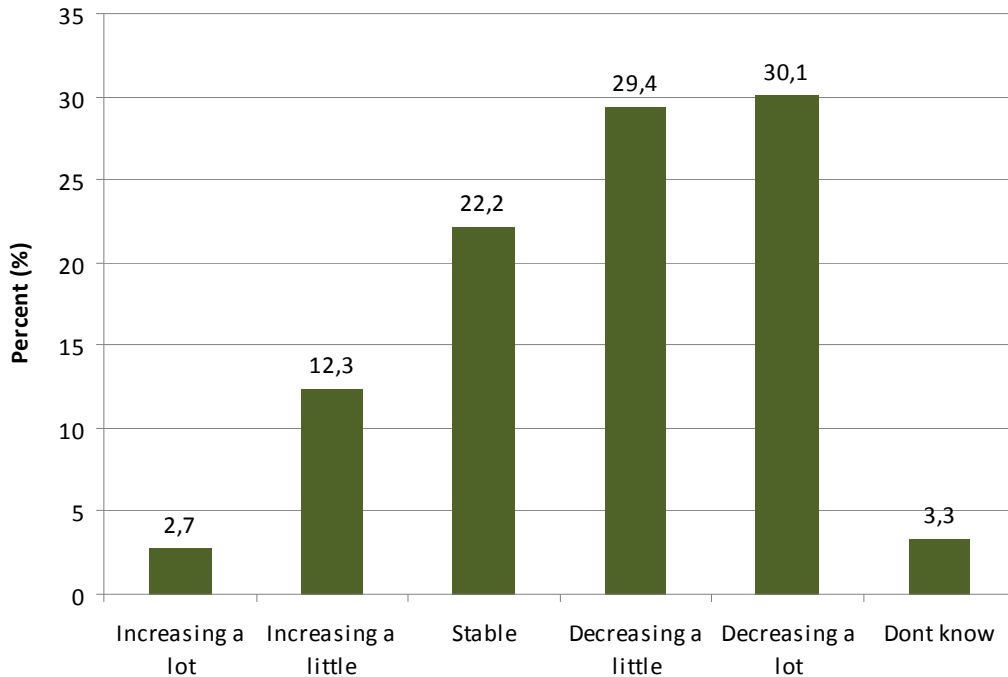
Gender-level differences exist in terms of perceived importance when it comes to environmental issues (approx. 5% more women rank those topics as first, compared to men) and economic use and sustainable forest management (approx. 5% more men report this topic as most important). These differences in responses by gender are more pronounced in the Nordic/Baltic states (nearly a 10% difference). There is no major difference between **age groups**, except for a slight preference towards listing climate change as one of the most important topics among younger people (range 9.6% to 17.7%). There is also no major variation between participants with different **educational backgrounds**. Respondents with no or lower education seem to rank ecosystem services more highly (11.8% to 11%) in contrast to respondents with a secondary or tertiary education (6.9% to 5.7%). Furthermore, responses to this question are very consistent with regard to the **degree of rurality** respondents live in. There is no significant difference depending on the type of area the participants live in, measured in the following classes: “rural area or village”, “town or small city”, “large city” (over 0.5 million inhabitants).

5.2 The general condition of forests

Question 2 (a). What do you think about the forested area in your country?

A significant majority of the responding **EU citizens** (59.5%) considers the forested area to be decreasing in their respective countries. As many as 30.1% think that forested areas in their countries are decreasing a lot. Only some 15% of EU citizens think that the forested area in their country is increasing.

Figure 5.3 Public perception regarding the development of the total forested area

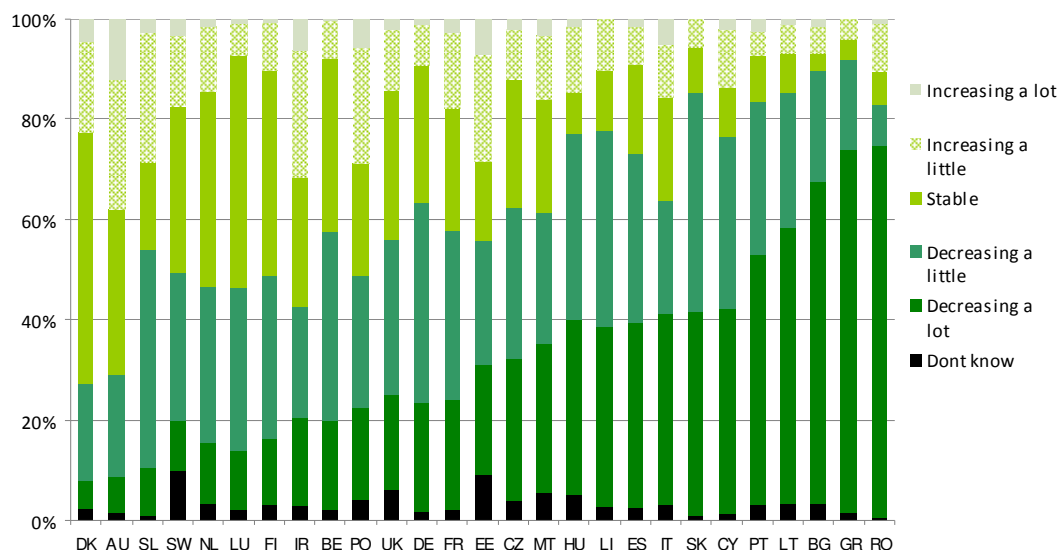


[Source: ECORYS]

There is some variation at **regional level**. Particularly South East (79.4%), South West (68.8%) and Central (55.3%) European regions report a decreasing forest cover. While the Nordic/Baltic (51%) and North West (51.7%) European regions also report decreasing forest coverage; it is not as high as for the other regions.

At **country level** only in Denmark and Austria a clear majority of citizens consider the forested area in their countries to be stable or increasing (72.8% and 71.2% of respondents respectively). In Austria a total of 37.8% believes forests are actually to increase. In Denmark some 72.8% of the population sees the forest area to be stable. Also a majority of people in Ireland (57.7%), Luxembourg (53.7%), the Netherlands (53.6%), Finland (51.2%), Poland (51.2%) and Sweden (50.6%) perceive the forested area in their respective countries to be stable or increasing. This is to be compared to 90.6% of Greek, 86.4% of Bulgarian and 84.3% of Slovak citizens that see the forested area in their countries to be decreasing.

Figure 5.4 National comparison: public perception on total forest area development



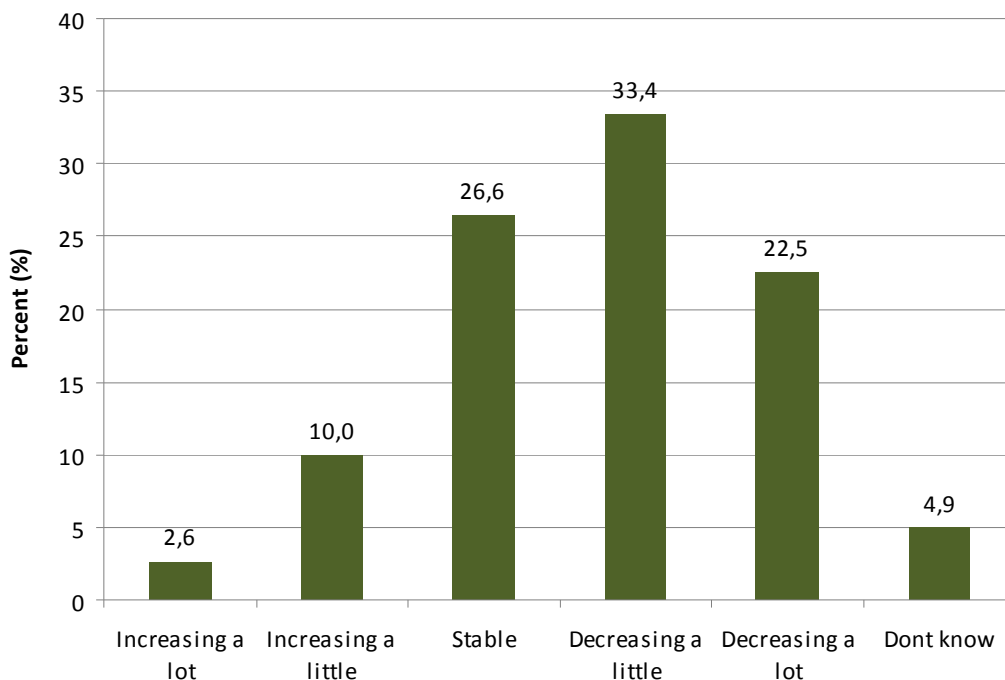
[Source: ECORYS]

In terms of **gender** differences, women seem to have a more negative image of change in forest area. The difference, in terms of ranking it as a stable to increasing forest cover, is 32.2% to 43.9%. These differences seem not to be as apparent in South East Europe. With regard to **age**, individuals below 55 of age have a more negative perception of forest area change (64.7% of respondents aged 18 to 24 see forest area to decrease compared to 53.5% of respondents over 55 years of age). No major difference exists between respondents based on **educational** backgrounds. With regard to the perception of respondents living in areas with different degrees of **rurality**, there is a tendency amongst individuals from rural areas to have a more positive image of forest area change. Around 43.6% of people living in a rural setting report a stable or increasing forest cover, while only 34.4% report the same if living in an urban setting (cities with over 500,000 inhabitants).

Question 2 (b). What do you think about the diversity of plant and animal species in forests in your country?

A majority of **EU citizens** (55.9%) considers the animal and plant diversity to be decreasing in their respective countries, 22.5% even think that forest biodiversity in their countries is decreasing a lot.

Figure 5.5 Public perception regarding the development of forest biodiversity

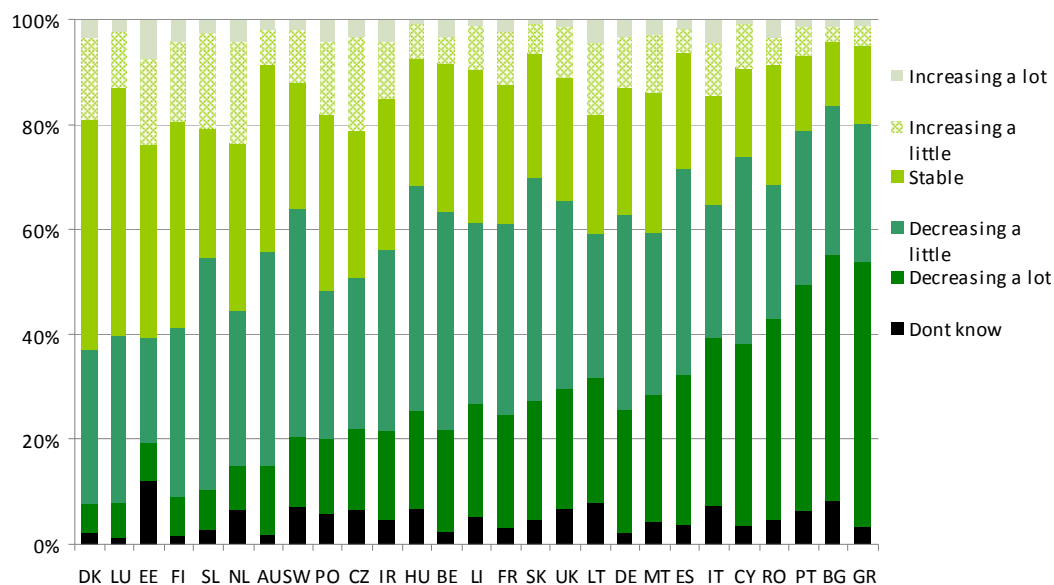


[Source: ECORYS]

With regard to **regional** differences, more respondents in South East and South West Europe perceive the forest biodiversity to decrease in their countries (68.8% and 64.6%, respectively). The perceived decrease is not seen by as many people in North West (54.5%) and Central (51.8%) Europe. The Nordic/Baltic region is the only region where a minority of respondents sees the biodiversity of animal and plants to decrease (44.2% of respondents), while exactly half of respondents sees forest biodiversity to be stable or somewhat increasing.

At **country** level, the patterns are similar to the perception of change in forest area, but not as pronounced. Respondents in Denmark (63.2%), Finland (58.9%), the Netherlands (55.6%), Luxembourg (60.3%), Estonia (60.8%) and Poland (51.7%) perceive forest plant and animal diversity as stable or increasing. Again, the population of Greece and Bulgaria sees forest biodiversity in their countries to decrease the most (76.9% of Greeks and 75.5% of Bulgarians see forest biodiversity to decrease). One of the most positive impressions of forest biodiversity was reported by Estonians, where around 23.9% of people see forest biodiversity to increase.

Figure 5.6 National differences: public perceptions regarding the development of forest biodiversity



[Source: ECORYS]

In terms of **gender** differences, women seem to have a more negative perception of change in forest plant and animal diversity than men: about 58.9% of women see biodiversity declining, compared to 52% of men. This more negative view on forest biodiversity change is similar in all regions except in South East European countries, where both see the situation as bad. With regard to **age** individuals below 55 in age have again a more negative perception of the change in plant and animal diversity in their countries: around 60.4% of respondents that are 18 to 24 of age and around 59.2% of 25 to 54 year olds see forest biodiversity to decrease, compared to slightly less than half (49.6%) of respondents being older than 55 years of age. Respondents with no **education** convey a more negative perception of plant an animal diversity: 64.7% say it is decreasing, in contrast to 52.8% of respondents with a secondary education. There is a tendency among individuals from **rural areas** to have a more positive image of plant and animal diversity: 44.5% of people living in a rural setting report a stable or increasing plant and animal diversity, while only 35.8% report the same if living in an urban setting.

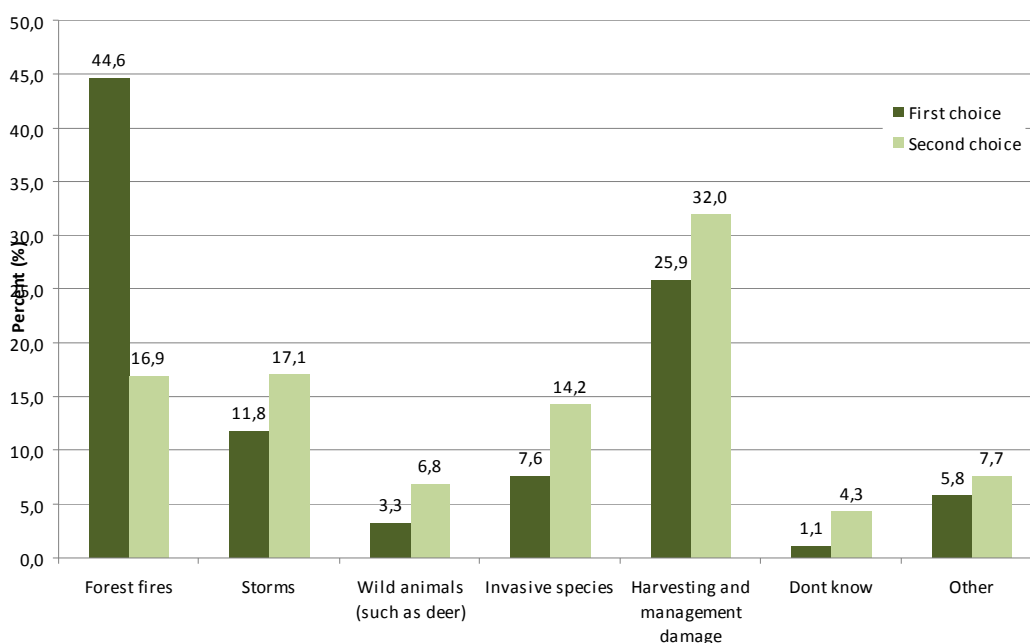
5.3 Damages and threats to forests

Question 3. I would like you now to think about damages and threats to forests in your country. I am going to read out some issues and would like to know which you find the most concerning, and which you find the second most concerning.

For **EU citizens** as a whole the two main issues of concern in terms of threats to forests are forest fires (44.6% of EU citizens select this issue as the most important threat) and harvesting and management damages (25.9% of respondents select this issue as the most important threat). All other damages and threats to forests are perceived as an important issue by considerably fewer respondents. Storms are mentioned by 11.8% of EU citizens as most important threat, invasive species are mentioned by 7.6%, and wild animals by

3.3%. Storms and invasive species were given as second choice more often than other threats.

Figure 5.7 Public perception on damages and threats to forests



[Source: ECORYS]

There is considerable variation in perceived threat across and within **regions**, with a strong emphasis on forest fires as the first most important threat in South East (59.6%) and South West (85.3%) Europe. There is a stronger emphasis on harvesting and management damages in Central Europe (35.1% rank it as first most important issue) and an overall more even distribution of opinions about the importance of different damages and threats in North West Europe and the Nordic/Baltic region (see table below).

Table 5.1 Regional differences: public perception on damages and threats to forests

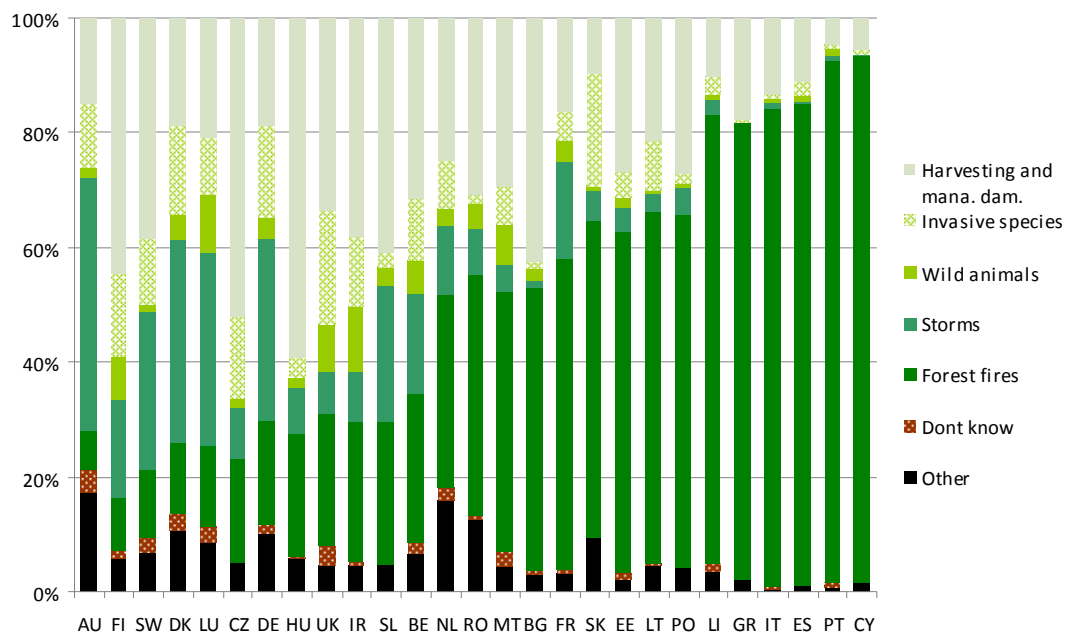
	Forest fires	Storms	Wild animals	Invasive species	Harvesting & management damage	Don't know	Other
North West Europe	29.0	18.2	6.2	12.2	25.3	1.8	7.3
Nordic/Baltic	36.4	15.8	3.0	10.0	27.4	1.6	5.8
Central Europe	33,6	14,0	1,6	7,9	35,1	0,6	7,2
South East Europe	59,6	3,1	2,8	1,9	26,7	0,7	5,3
South West Europe	85,3	0,6	1,0	1,5	10,5	0,2	0,9

[Source: ECORYS]

Responses related to the most concerning damage or threat to forests vary considerably across **countries**. For example, in Austria only some 7.1% of respondents see forest fires as a first priority issue, while storms are prioritised by more citizens than in any other EU-27 country (43.8% of Austrian respondents choose storms as the most important threat). But for countries where forest fires pose a much greater risk, such as Cyprus (91.8%), Portugal (90.9%), Greece (79.4%) and Spain (83.9%), the pattern is different.

Invasive species are seen more of a problem by the UK and Slovak citizens (the most concerning issue for 19.8% of respondents and 19.7% respectively). Damages caused by wild animals, such as deer, are not perceived to be a serious issue by a large majority, except in Ireland, where some 11% of people rank it as first most concerning threat.

Figure 5.8 National differences: public perception on damages and threats to forests



[Source: ECORYS]

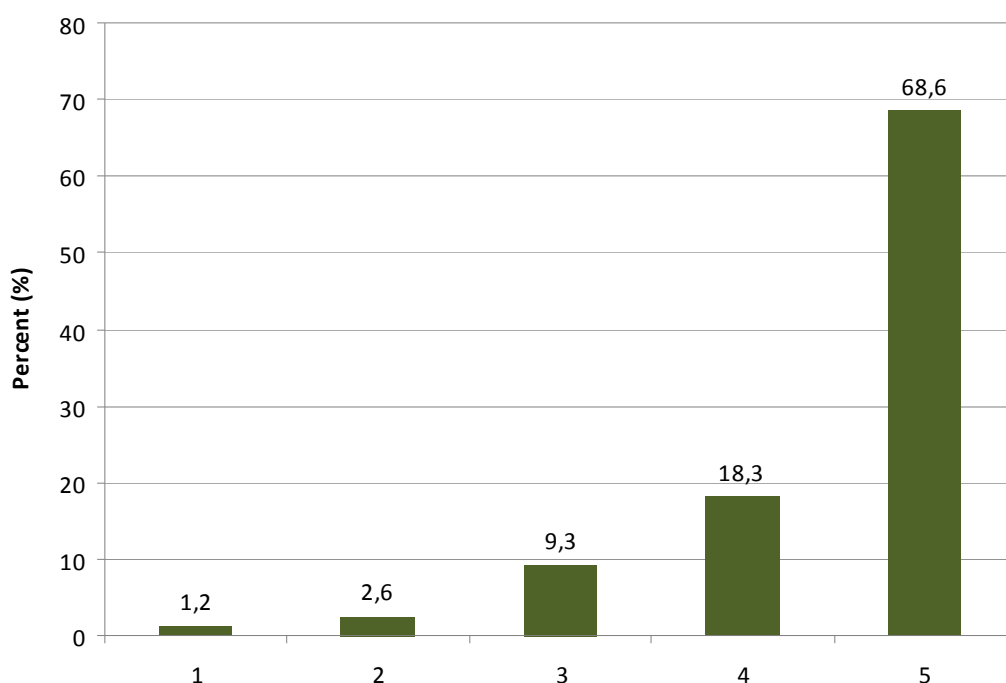
Concerning **gender** differences in terms of what people consider as damaging or threatening issues no apparent differences were detected. With regard to **age** differences, storms are perceived as more important among 55+ participants (14.5% rank them as most concerning) in contrast to 18 to 24 year olds (6.4%). This tendency is opposite for harvesting and management damage (only 20.5% of respondents aged 55+ rank it as the most important concern, compared to more than a third (34.4%) of those 18 to 24 years of age. Concerning educational differences, respondents with no or a primary **education** rank forest fires as more important (50% and 57.8% respectively) in contrast to people with a secondary and tertiary education (41.6% and 44.5% respectively). Further, respondents with no education rank storms much lower (2.9% in contrast to a range of 10.6% to 14.9% for higher education levels), while individuals with a primary education rank harvesting and management damage much lower (14% in contrast to a range of 26.3% to 29.4% for other education levels). With regard to differences in responses depending on the area people live in (degree of **rurality**), no major differences were detected. All issues were ranked approximately the same, except for storms and forest fires. It appears as if individuals from a rural area allocate more importance to storms than people from an urban setting (17.5% versus 7.8% rank it first), the opposite relation applies to forest fires (38.4% versus 48.9% rank it first).

5.4 Importance of benefits from forests

Question 4 (a). The next questions deal with the use of forests in your country. On a scale from 1 to 5, where 1 is “not at all important” and 5 is “very important”: when it comes to forests, how IMPORTANT is the preservation of the many animal and plant species in forests?

A clear majority of **EU citizens** rank the preservation of animal and plant species in forests as very important (68.6%). This is in line with question 1, in which conservation and protection received the highest rank as a topic related to forests. Overall, 86.9% of EU citizens state that the preservation of biodiversity is either important or very important.

Figure 5.9 Public perception on the importance of biodiversity conservation as a forest function

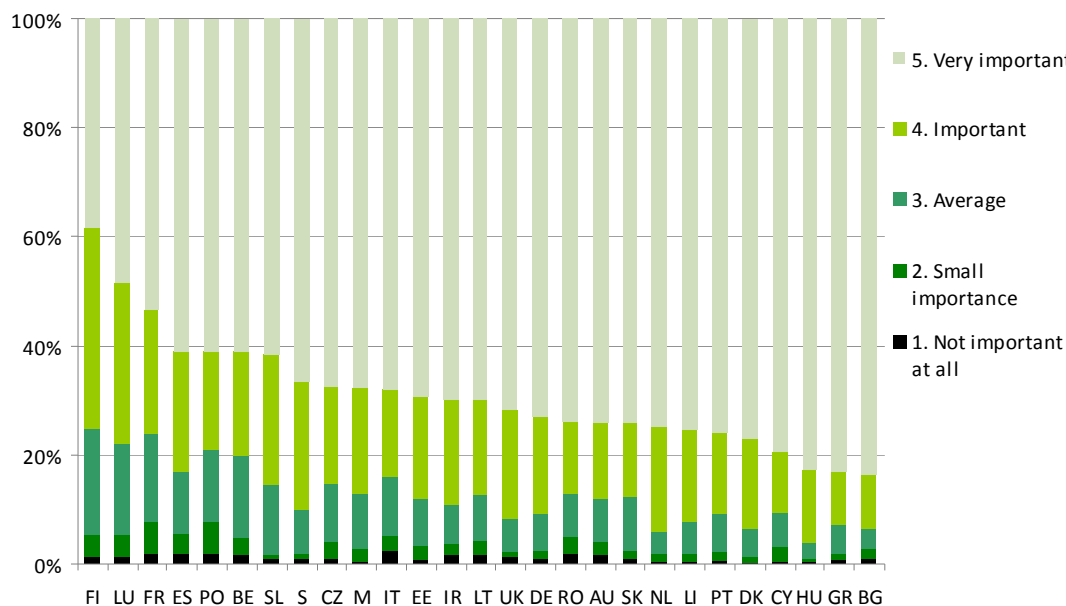


[Note: 1 = not at all important; 5 = very important]

[Source: ECORYS]

No significant **regional** differences were found. There are clear differences among citizens of different **EU countries**. Only 38.4% of the respondents from Finland rank preservation of animal and plant species as very important compared to around 83.7% of citizens in Bulgaria or 83% in Hungary.

Figure 5.10 National differences: public perception on the importance of biodiversity as a forest function



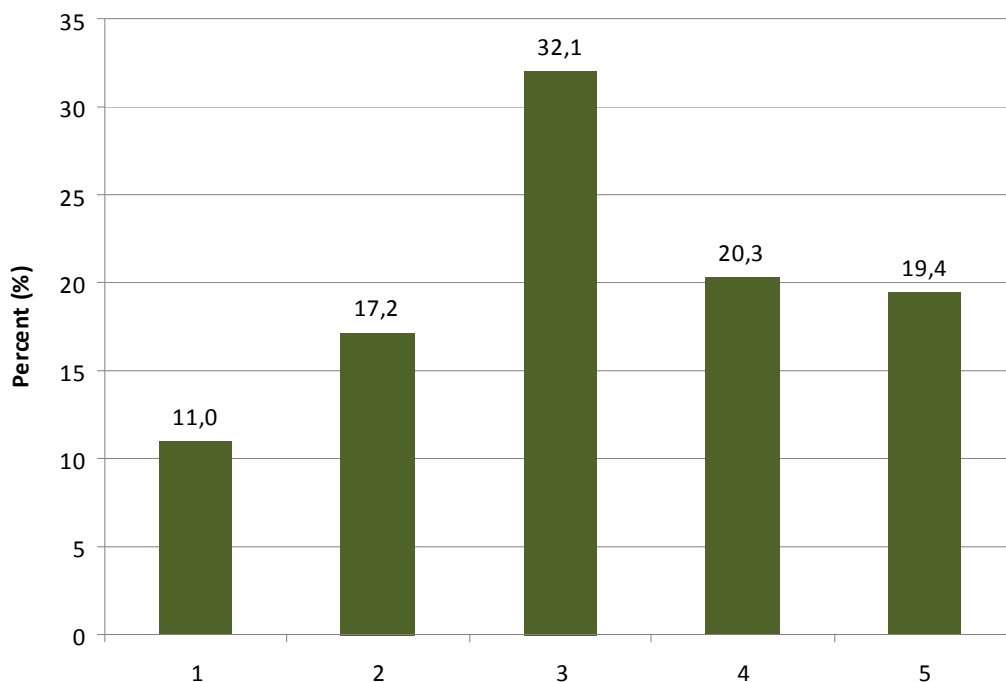
[Source: ECORYS]

In terms of **gender** differences, women seem to allocate more importance towards the preservation of biodiversity than men (72% of women rank it as very important compared to 65.3% of men). This variation seems to primarily be due to a difference between the sexes in the Nordic/Baltic region (71.6 % of women rank it as very important compared to only 58.1% of men) and the Central European region (73.9% versus 64.1% of men). No major differences exist between **age** groups, but in the groups between the ages of 25 and 54 approximately 5% more respondents allocate high importance to the preservation of biodiversity. Respondents that have completed a primary **education** allocate less importance to the preservation of biodiversity (77.3% in comparison to no education (82.4%), secondary (85.5%) and tertiary (88.3%) education). No significant difference exists with regard to the degree of **rurality**, i.e. due to the area the participants live in.

Question 4 (b). The next questions deal with the use of forests in your country. On a scale from 1 to 5, where 1 is “not at all important” and 5 is “very important”: when it comes to forests, how IMPORTANT is the provision of wood to produce furniture, paper, or construction material?

For **EU citizens** as a whole the use of forests to produce furniture, paper and construction materials is rather evenly distributed (in terms of importance). As such, 32.1% assign an average importance to the provision of wood to the manufacturing sector, while 19.4% see this function as very important and 11.0% as not important.

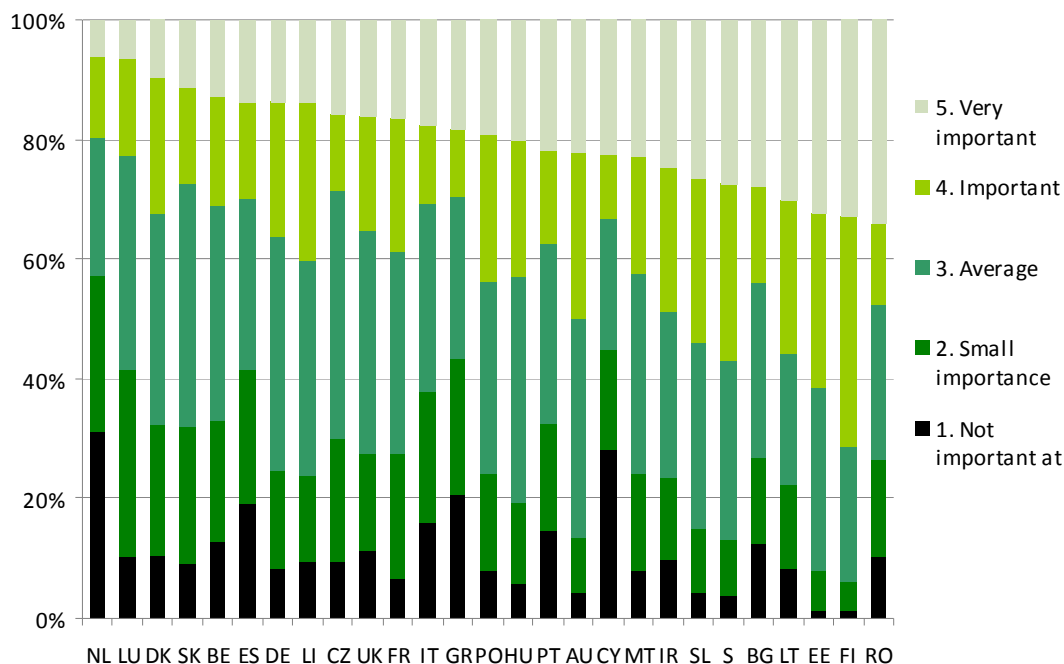
Figure 5.11 Public perception on the importance of the forest functioning as a renewable material source



[Note: 1 = not at all important; 5 = very important]
 [Source: ECORYS]

With regard to **regional** differences, there is a tendency towards the provision of wood to the manufacturing sectors as being ranked more highly in the Nordic/Baltic region (53.1%), in comparison to North West (34.1%), Central (41.1%), South East (40.1%) and South West (31.9%) Europe. A **country** by country comparison shows that the distribution between countries is quite different. Countries that are more dependent on forest-based manufacturing industries would be expected to allocate more importance, and this is indeed the general pattern: in Finland around 33% of respondents see the provision of wood to produce furniture, paper, or construction material as very important (32.2% in Estonia, 30.3% in Latvia). Similarly, in Romania 34% of respondents see it as very important. This is in contrast to the respondents from the Netherlands, 31.1% of which see this function of forests as not important. Similarly low relevance is given to the provision of wood by forests in Cyprus and Greece (28.8% of respondents rank it as not important and 20.9% respectively).

Figure 5.12 National differences: public perception on the importance of the forest functioning as a renewable material



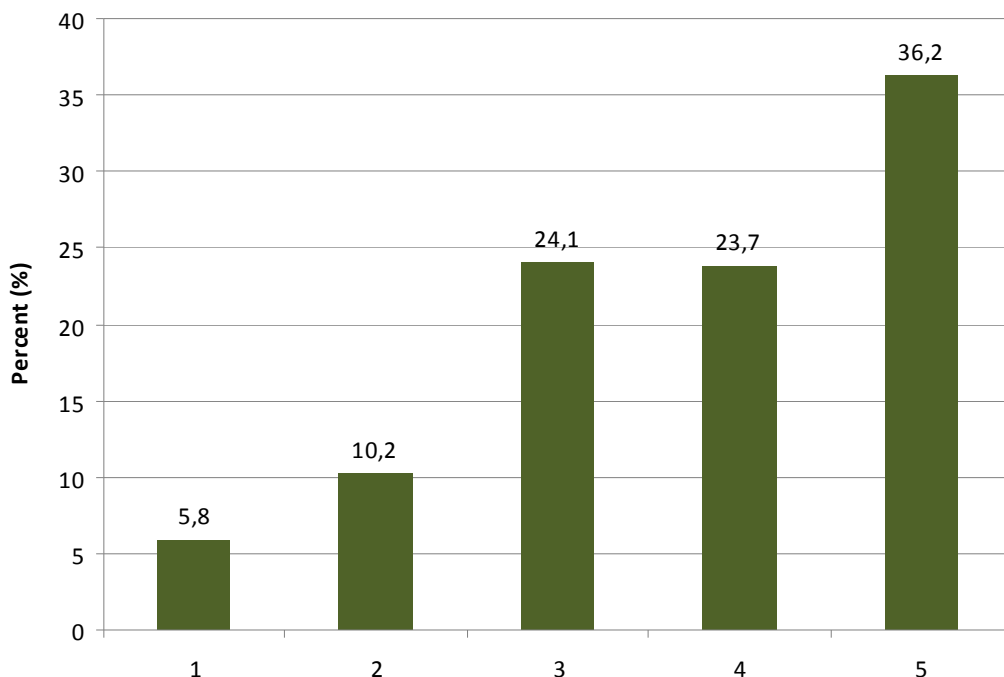
[Source: ECORYS]

The importance of the provision of wood for furniture, paper, or construction material is seen about equally by women and men. There is no significant **gender**-based difference amongst the EU citizens. With regard to **age**, participants at 55+ assign more importance to the provision of wood as a renewable material: 25.2% say it is very important, in contrast to 11.2% in the age group 18 to 24. Respondents that have completed a primary **education** allocate more importance to the provision of wood for manufacturing purposes (55% in comparison to no education (44.1%), secondary (39.5%) and tertiary (38.5%) education). Respondents living in **rural** areas and villages in the EU give somewhat but not much more importance to the provision of wood for manufacturing, compared to respondents from urban areas.

Question 4 (c). The next questions deal with the use of forests in your country. On a scale from 1 to 5, where 1 is “not at all important” and 5 is “very important”: when it comes to forests, how IMPORTANT is the provision of opportunities for recreation in forests?

EU citizens in total consider the provision of opportunities for recreation as more important than the provision of wood as a renewable material or as a source for bioenergy. It is, however, seen as clearly less important than the conservation and protection of forests. Around 36.2% of EU citizens see recreation as a very important forest function.

Figure 5.13 Public perception on the importance of the recreational function of forests

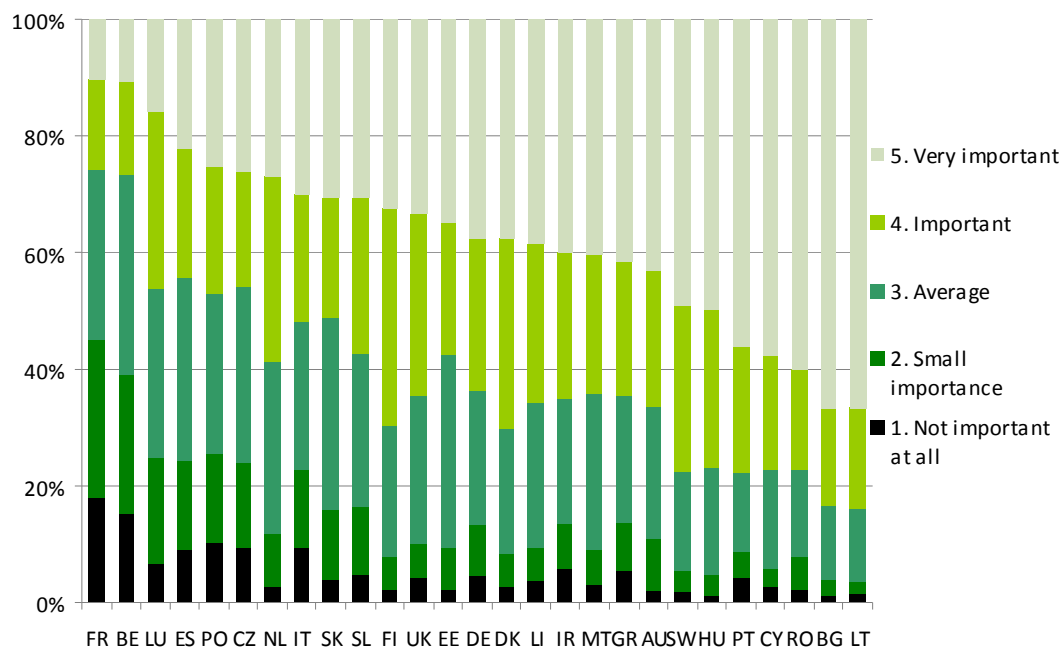


[Note: 1 = not at all important; 5 = very important]

[Source: ECORYS]

With regards to **regional** patterns, the strongest emphasis on recreation is in South East Europe and the Nordic/Baltic region. In these regions 54.5% and 42.9% of respondents respectively marked opportunities for recreation as very important, in contrast to North West (25.4%), Central (33.6%) and South West (32.6%) Europe. A comparison across **countries** shows a largely similar picture across countries, except for France and Belgium: in comparison, these two countries place a much lower emphasis on recreation (only 10.2% and 10.5% of respondents rank it as very important, respectively). The following countries also rate this function at a less than EU average level: Spain (55.9%), Luxemburg (53.7%), Czech Republic (54.3%) and Poland (53.1%).

Figure 5.14 National differences: public perception on the importance of the recreational function of forests



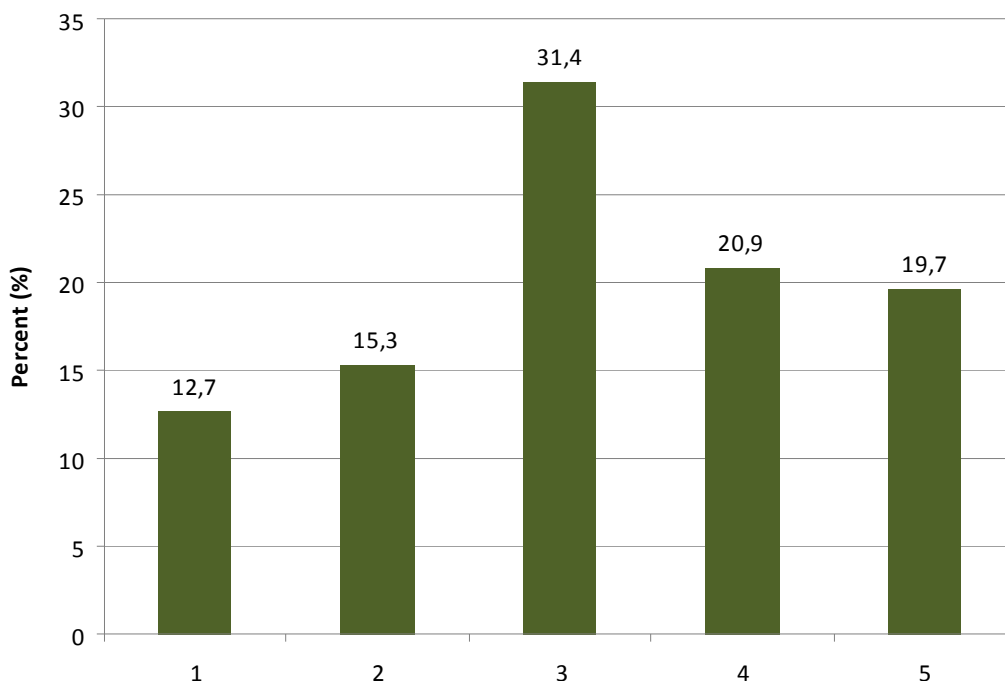
[Source: ECORYS]

No major differences in importance allocated to recreation were observed between **women and men**. Recreation is seemingly ranked as more important with increasing **age**: there is a gradual increase of importance from the age group 18 to 24 (24.8% ranked it as very important) to people aged 55 years and over, where 40.6% ranked the provision of opportunities for recreation as very important. There is a tendency for respondents that have completed a secondary and tertiary **education** to rank the recreational function of forests as less important: 35.9% to 35.5% rank it as very important, while 50% to 45.9% of the respondents having no education or completed a primary education rank it as very important. No significant difference has been detected between respondents from a **rural** versus urban setting.

*Question 4 (d). The next questions deal with the use of forests in your country. On a scale from 1 to 5, where 1 is “not at all important” and 5 is “very important”: when it comes to forests, how **IMPORTANT** is the provision of wood from forests for bioenergy?*

The importance allocated to the provision of wood for bioenergy by the **EU citizens** as a whole is almost identical to the importance given to the provision of wood for furniture, paper and construction: some 31.4% of EU citizens rank it to be of average importance, while 40.6% say it is important or very important. Around 28% of respondents do not - or rather not - find it important.

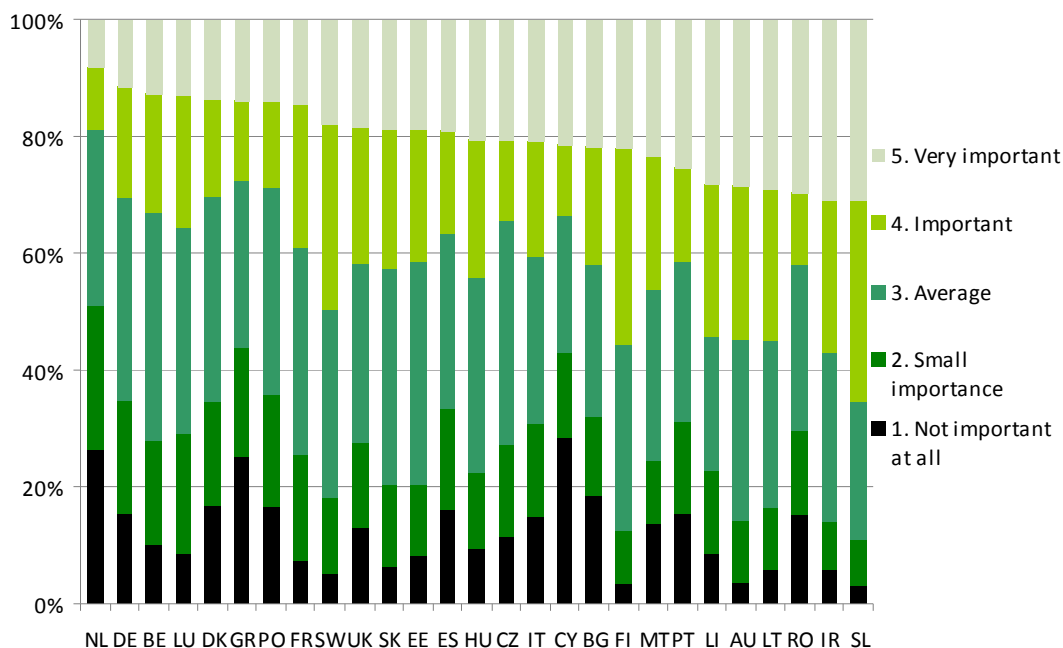
Figure 5.15 Public perception on the importance of the forest function for providing bioenergy



[Note: 1 = not at all important; 5 = very important]
 [Source: ECORYS]

A comparison of responses across **regions** shows that the Nordic/Baltic region appears to allocate more importance to the provision of wood for bioenergy (47.7% as important to very important), in contrast to North West (36.4%), Central (42.5%), South East (38.6%) and South West (39.3%) Europe. The variation of the importance of using forests as a source of bioenergy given by respondents at **country** level is significant however. A majority (51%) of citizens in the Netherlands considers it not to be important; similarly, in Greece 43.7% and in Cyprus 43% rank it as not important. It is seen as very important, on the other hand, in Slovenia (65.3% of respondents), Lithuania (54.3%), Latvia (55%), Ireland (57%), Finland (55.9%), Sweden (49.7%) and Austria (54.8%). In the remaining countries respondents show less marked views on the importance of forests to provide wood for bioenergy.

Figure 5.16 National differences: public perception on the importance of the forest function for providing bioenergy



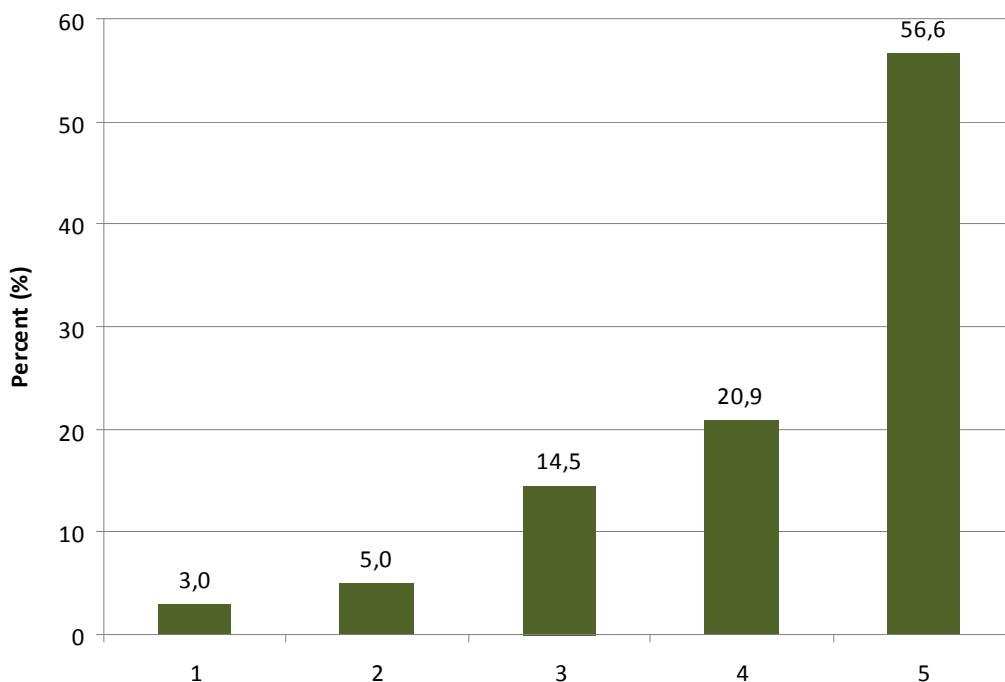
[Source: ECORYS]

With regard to **gender** differences, there is a tendency for women to consider the role of forests for bioenergy as more important, a difference that seems predominantly to be more apparent in Central, South East and South West Europe ($\pm 5-8\%$ of women see it as very important compared to men). **Age** seems to positively influence the importance allocated to bioenergy, but while 55+ has the highest percentage of citizens rating it to be very important (23.2%) it also has the highest number of respondents saying it is not important (14%). Respondents that have completed a primary **education** rank the provision of wood for bioenergy as being of more importance: 56.5% state it is important to very important in comparison to respondents with no education (47.1%), secondary (42%) and tertiary (38.7%) education. Again, no significant difference was found in the responses between respondents living in **rural** or urban settings.

*Question 4 (e). The next questions deal with the use of forests in your country. On a scale from 1 to 5, where 1 is “not at all important” and 5 is “very important”: when it comes to forests, how **IMPORTANT** is the protection of people from natural disasters and detrimental effects of climate change such as drought, floods, heatwaves?*

The protection of people from natural disasters and the detrimental effects of climate change is clearly ranked as very important by 56.6% of **EU citizens**. In total, 77.5% of EU citizens rank this forest function as important to very important. Thus, the protection of people from natural disasters and detrimental effects of climate change is seen as the second most important aspect of forests after the conservation of biodiversity, followed by providing opportunities for recreation, as well as the provision of wood for bioenergy as well as a renewable material.

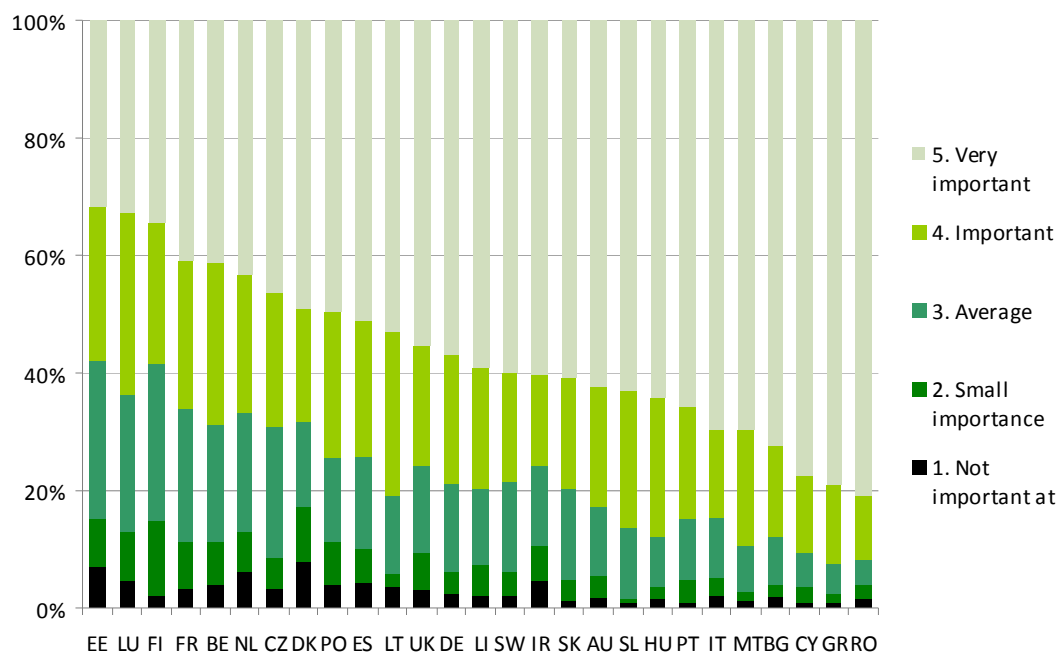
Figure 5.17 Public perception on the importance of forests' protective function against disasters and climate change



[Note: 1 = not at all important; 5 = very important]
 [Source: ECORYS]

On the whole, all regions prioritise the protection of people over other uses (except conservation and protection of forests themselves), but South East Europe clearly allocates more importance in comparison to the other regions (76.2% ranked as very important). North West Europe and Nordic/Baltic region rank the importance lower (48.2 and 47.9%, respectively, as very important), while South West and Central Europe follow in line with the overall mean. No major differences exist in the importance given to protection across **countries** in the EU: Finland and Estonia seem to prioritise protection slightly less (58.6% and 57.8% ranked it as important to very important compared to the EU mean of 77.6%).

Figure 5.18 National differences: public perception on the importance of forests' protective function against disasters and climate change



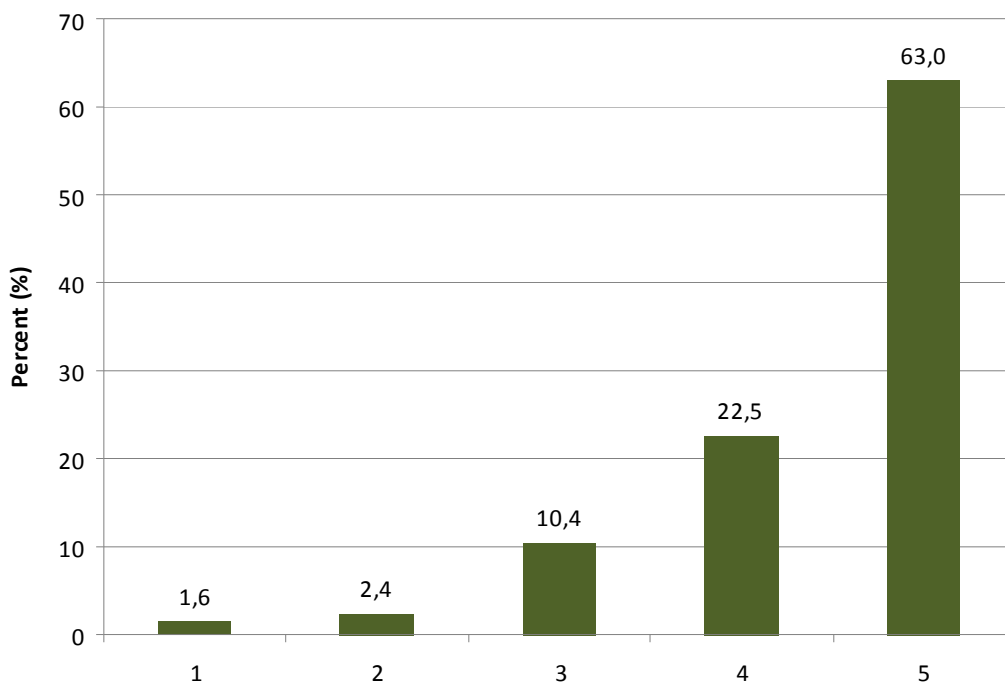
The protection of people from natural disasters and the detrimental effects of climate change is considered more important among **women**, as compared to **men**: a total of 61.5% of women in the EU ranked it as very important in contrast to 50.2% of men. This difference is present in all regions except the South East European region. No difference exists in the importance given to protective functions between **age** groups, but people between 18 and 24 years of age allocate somewhat less weight to the issue of protection (47.7% as very important in contrast to 54.5-59.4% in the other age groups). No significant differences were found between respondents from different **educational** backgrounds. Again, no significant difference was detected between respondents from a **rural** as compared to an urban setting.

5.5 Forest management

Question 5 (a). People often have very different opinions on how forests in your country SHOULD BE managed. On a scale of 1 to 5 where 1 means “much less” and 5 means “much more”: in your opinion, SHOULD forests be much MORE actively managed or much LESS actively managed to provide opportunities for recreation in forests, and for experiencing nature?

A clear majority of **EU citizens** (63%) are of the opinion that forest should be much more actively managed to provide recreation opportunities. As much as 85.5% of EU citizens think that forests should be more - to much more - managed.

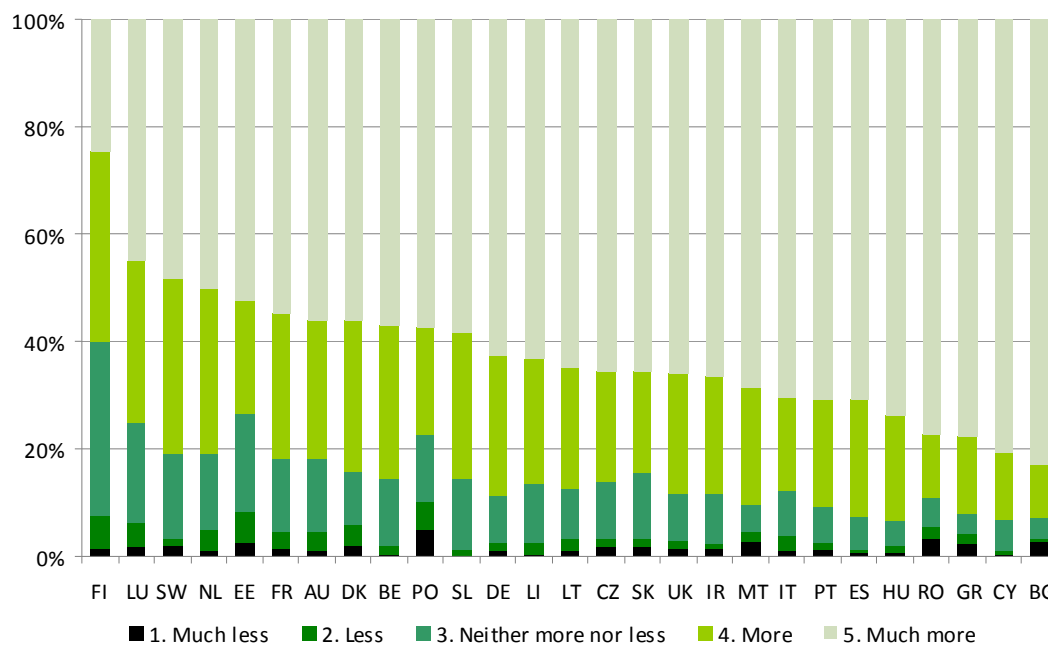
Figure 5.19 Public perception on the preferred forest management style for providing recreation opportunities



[Note: 1 = much less actively managed; 5 = much more actively managed]
 [Source: ECORYS]

On the whole, all **regions** prioritise more active management of forests so as to increase recreational opportunities. The data also shows that people in countries in South East and South West Europe allocate more importance to forest management with a view to provide recreation opportunities (77.9% and 70.7% of respondents, respectively), while much less people in Nordic/Baltic region find it very important (50.7%). Central Europe and North West Europe are approximately in line with the overall EU-27 mean. In general there are minor differences across EU **countries**. Citizens of Finland show a noticeable difference from other countries, as they put considerably less emphasis on management that provides recreation opportunities (still, more than half, 59.9% of the Finns call for more management to provide recreation opportunities, while about a third thinks that things can remain as they are now. The percentage of persons in countries except Finland to call for more management to provide opportunities for recreation lies between 73.4% (Estonia) and 93.4% (Hungary).

Figure 5.20 National differences: preferred forest management style for providing recreation opportunities



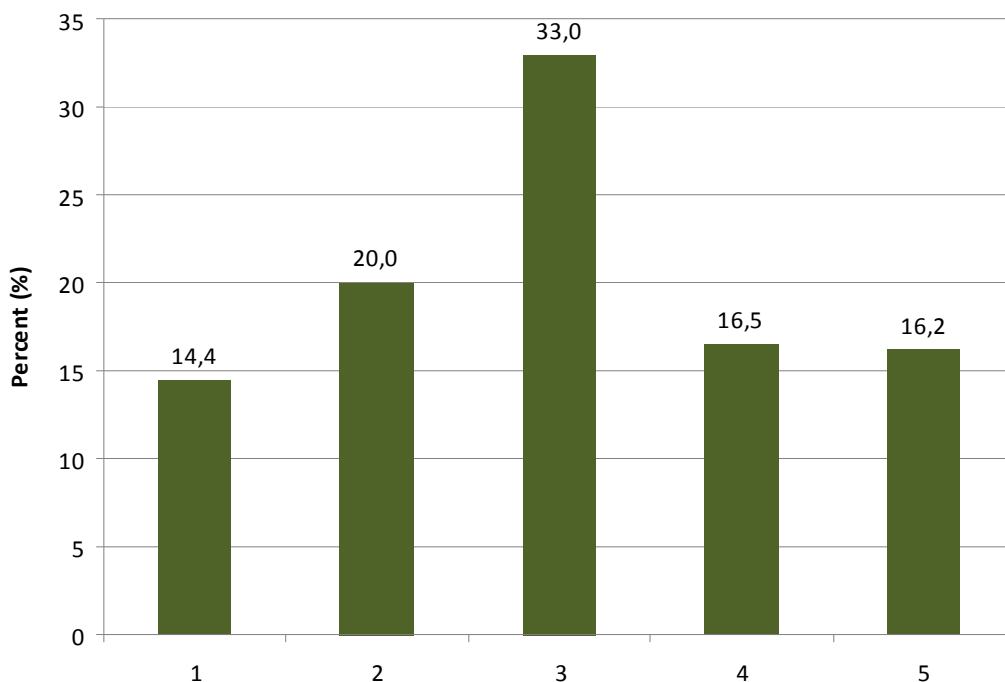
[Source: ECORYS]

Gender-based differences in replies were found in North West Europe, South West Europe, Central Europe and the Nordic/Baltic region, in all of which approximately 7% more women call for more active management for recreation opportunities, compared to men. No difference in responses was found between **age** groups, between **educational** backgrounds, or between participants from a **rural** or urban setting.

Question 5 (b). People often have very different opinions on how forests in your country SHOULD BE managed. On a scale of 1 to 5 where 1 means “much less” and 5 means “much more”: in your opinion, SHOULD forests be much MORE actively managed or much LESS actively managed to provide wood to produce furniture, paper, or construction material?

About an equal number of **EU citizens** calls for less or much less active management to provide wood in their respective countries (34.4%) than do those that are of the opinion that forest management can remain as is (33%), or that forest management should be more or much more active to provide wood to produce furniture, paper, or construction material (32.7%). Thus, citizens in the EU as a whole are fairly divided as regards how forest management should change with regard to the provision of wood.

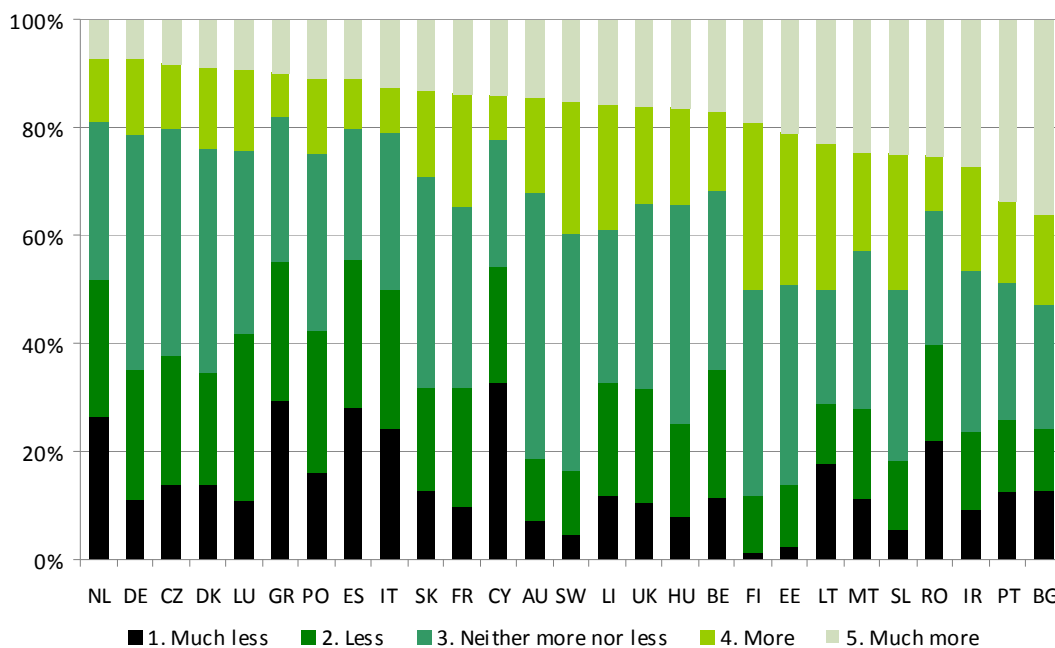
Figure 5.21 Public perception on preferred forest management style for provision of wood as a renewable material



[Note: 1 = much less actively managed; 5 = much more actively managed]
 [Source: ECORYS]

There are some quite marked **regional** differences. People in South West Europe have a stronger emphasis on less to much less management in their countries to provide wood (46.9%) as do respondents in South East Europe (39.4%). Contrary to that opinion more people than the EU average call for more to much more management in the Nordic/Baltic region (41.8%). Respondents in the regions of North West and Central Europe are in line with the overall mean. Comparing results of individual **countries** thus shows a significant variation among countries. Countries that are more dependent on forest-based manufacturing industries would be expected to state that forests need to be more actively managed: the countries that seem to provide weight to more or much more actively managed forests are Finland (50.1%), Bulgaria (52.8%), Slovenia (50%) and Latvia (50%), while less or much less active management is supported by Italy (50%), the Netherlands (51.9%), Spain (55.4%), Greece (55.1%) and Cyprus (54.1%). The remaining countries have a more even distribution.

Figure 5.22 National differences: preferred forest management style for providing wood as a renewable material



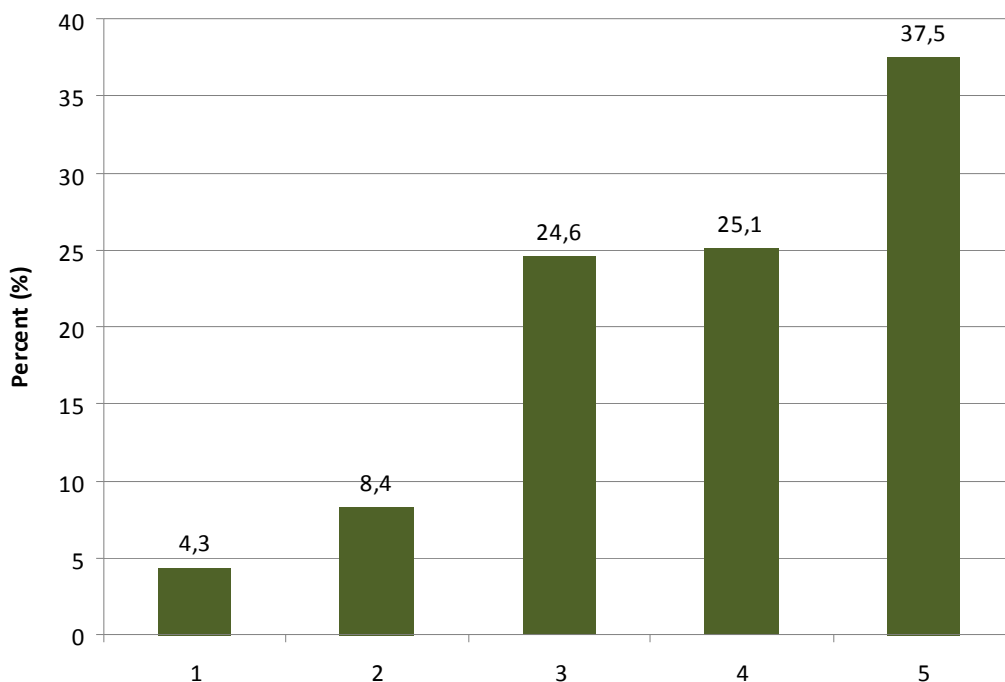
[Source: ECORYS]

No **gender**-based differences were found in response behaviour across EU citizens as a whole. More priority to active forest management to provide wood is given with increasing **age**: a total of 40.3% of people that are 55 or older call for more or much more active management for wood production, while only 23.9% - i.e. less than a quarter of respondents - that are 18 to 24 years old think the same. Respondents that have completed a primary **education** call for more active management: 53.3% state that it should be more to much more actively managed, in comparison to respondents with no education (41.2%), secondary (34.6%) and tertiary (30.2%) education. No major difference in opinions was detected between EU citizens that are living in either a **rural** or an urban environment. However, there is a tendency that about 5% of respondents living in a rural setting assign more importance to more active management for wood production, compared to those living in urban regions.

Question 5 (c). People often have very different opinions on how forests in your country SHOULD BE managed. On a scale of 1 to 5 where 1 means “much less” and 5 means “much more”: in your opinion, SHOULD forests be much MORE actively managed or much LESS actively managed to preserve the animal and plant species in forests and conserve nature?

A clear majority of **EU citizens** puts a strong emphasis on more (25.1%) or much more (37.5%) active forest management to preserve the animal and plant species in forests and to conserve nature. Only a minority of 12.7% of respondents in the EU state that there should be less or much less active management for preservation of animal and plant species.

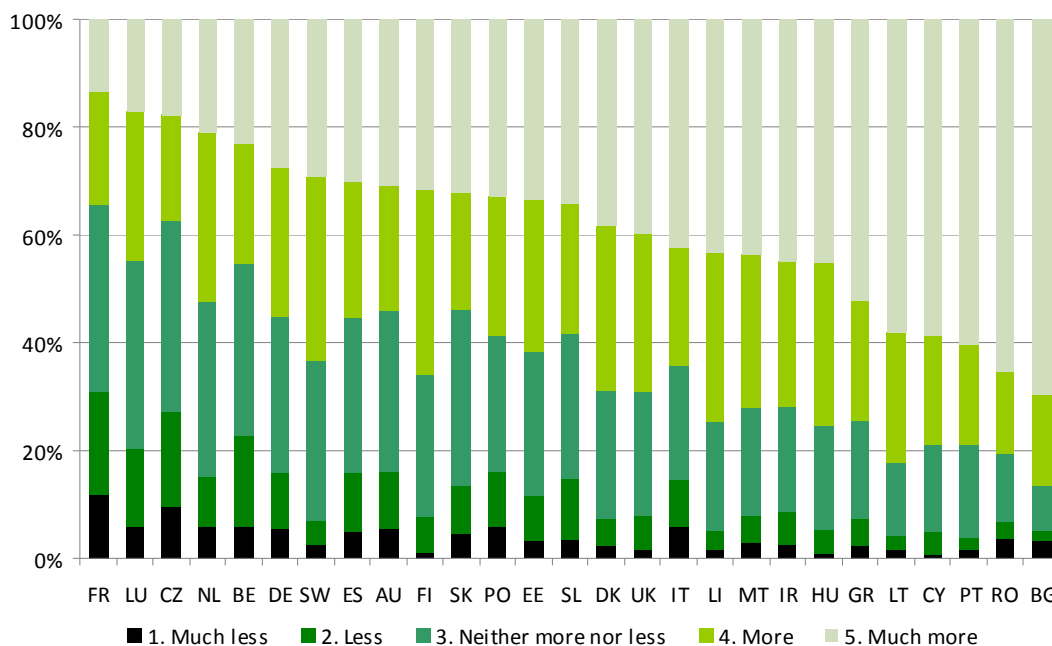
Figure 5.23 Public opinion on the preferred forest management style for preserving animal and plant species



[Note: 1 = much less actively managed; 5 = much more actively managed]
 [Source: ECORYS]

On a **regional** level, South East Europe (79.2%), South West Europe (64.1%) and the Nordic/Baltic region (69.2%) show stronger support for more and much more active forest management for the preservation of forest biodiversity. Citizens in the regions of North West (53%) and Central Europe (56.6%) show somewhat less support for more active forest biodiversity management. **Country**-level differences are not significant on the whole, but respondents from a few countries deviate from the general pattern. Compared to the EU average, fewer respondents in France (34.4%), Belgium (45.3%), Luxembourg (45%), and the Czech Republic (37.5%) call for more active forest management for forest biodiversity preservation.

Figure 5.24 National differences: preferred forest management style for preserving animal and plant species



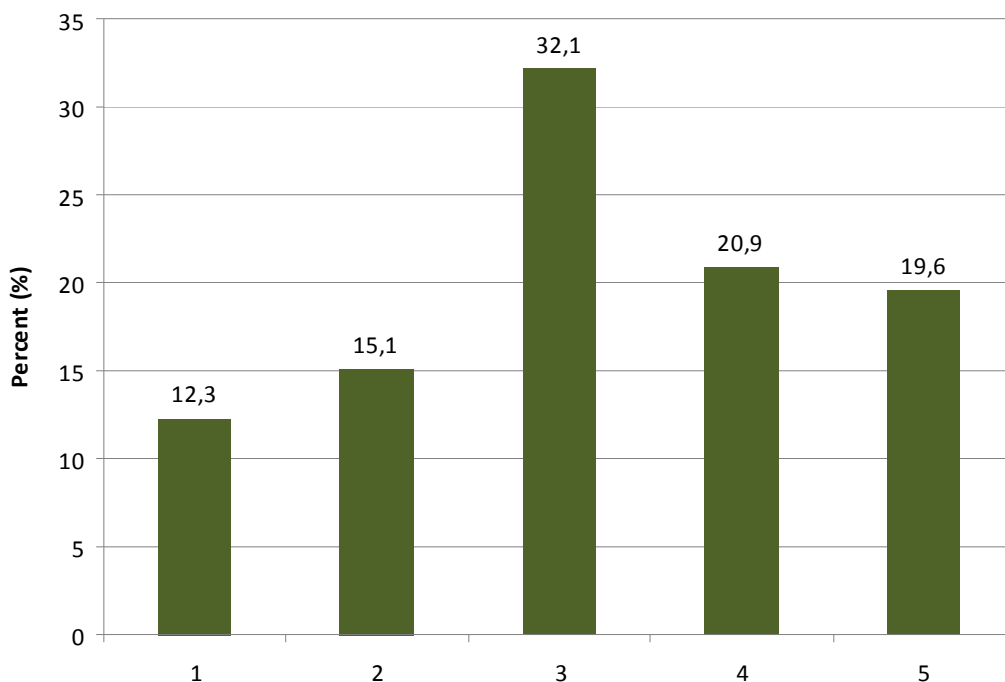
[Source: ECORYS]

No **gender**-based differences were detected across EU citizens. However, more priority to active forest management in their country towards forest biodiversity preservation was given with increasing **age**: 66.1% of respondents that are 55 or more years of age are of the opinion that there should be more active forest management for forest biodiversity preservation, while only 53.9% of respondents between 18 and 24 years of age think the same. Further, with regards to **educational** differences, respondents having completed a secondary and tertiary education call for a lower degree of active management to preserve biodiversity: 60.5% and 62.5%, respectively, consider there should be more to much more, in comparison to 70.6% and 72.8% among people with no or a primary education. As with the majority of other questions, no major differences were found between people living in a **rural** or urban setting in the EU.

Question 5 (d). People often have very different opinions on how forests in your country SHOULD BE managed. On a scale of 1 to 5 where 1 means “much less” and 5 means “much more”: in your opinion, SHOULD forests be much MORE actively managed or much LESS actively managed to provide wood from forests to produce bioenergy?

With regard to management to provide wood for bioenergy, **EU citizens** as a whole were again about equally divided, however, with a slight bias towards more active management. About 40.5% of respondents are of the opinion that forest management in their respective countries should be more or much more active to provide wood for bioenergy, while 32.1% state that forests do not need to be managed any different than is already the case, and 27.4% suggest that forests should be less or much less managed to provide wood for bioenergy.

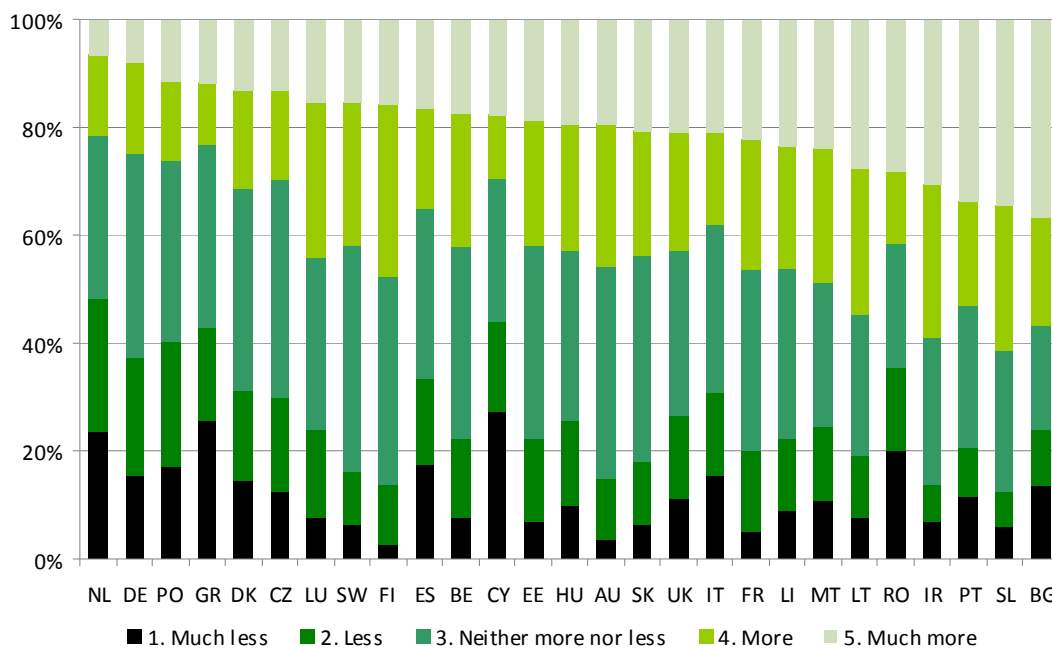
Figure 5.25 Public opinion on the preferred forest management style for providing wood for bioenergy



[Note: 1 = much less actively managed; 5 = much more actively managed]
 [Source: ECORYS]

On a **regional** level, these differences only manifest themselves slightly. The highest number of respondents calling for more active management is found in the Nordic/Baltic region (43.8% call for more or much more), while South East Europe has the highest number of respondents calling for much more active management for bioenergy production (24.7%, in contrast to 18.7% in the Nordic/Baltic region). The remaining regions (North West, Central and South West Europe) are more or less according to the overall mean. The distribution across **countries** follows this pattern. The emphasis on more and much more active management to provide for bioenergy is low in Germany (24.8% of respondents call for more active management), the Netherlands (21.7%), the Czech Republic (29.8%), Poland (26.3%), Greece (23.1%) and Cyprus (29.5%). The remaining countries have a stronger emphasis to more or much more active management (ranging from 31.4% to 61.3% of respondents per country).

Figure 5.26 National differences: preferred forest management style for providing wood for bioenergy



[Source: ECORYS]

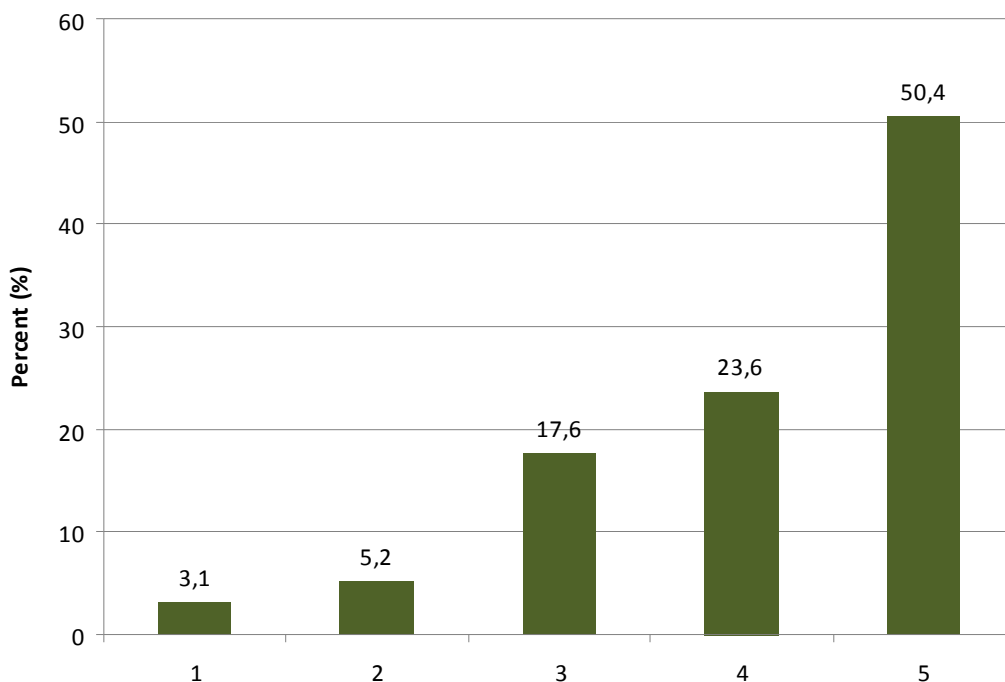
As in most questions, there is no major variation between **female and male** respondents across the EU as a whole. Analysing variations within regions shows that women tend to support more active management for bioenergy production, compared to men. No major **age**-related differences were found in response behaviour of EU citizens as a whole.

Respondents that have completed a primary **education** call for more active management: 57.1% state that it should be more to much more actively managed, in comparison to respondents with no education (44.1%), secondary (43.2%) and tertiary (38.1%) education. No significant difference between participants from a rural or urban setting exists: there is again a tendency that somewhat more ($\approx +5\%$) people from a rural area call for more active forest management for bioenergy than respondents from urban areas.

Question 5 (e). People often have very different opinions on how forests in your country SHOULD BE managed. On a scale of 1 to 5 where 1 means “much less” and 5 means “much more”: in your opinion, SHOULD forests be much MORE actively managed or much LESS actively managed to protect people from natural disasters and detrimental effects of climate change?

Among all the respondents (**EU citizens**), 74% suggest that forests should be more or much more actively managed to protect people from natural disasters and detrimental effects of climate change. As much as 50.4% think it should be much more actively managed for that purpose. Thus, more EU citizens call for more active management to protect people from disaster and climate change, compared to management to provide wood.

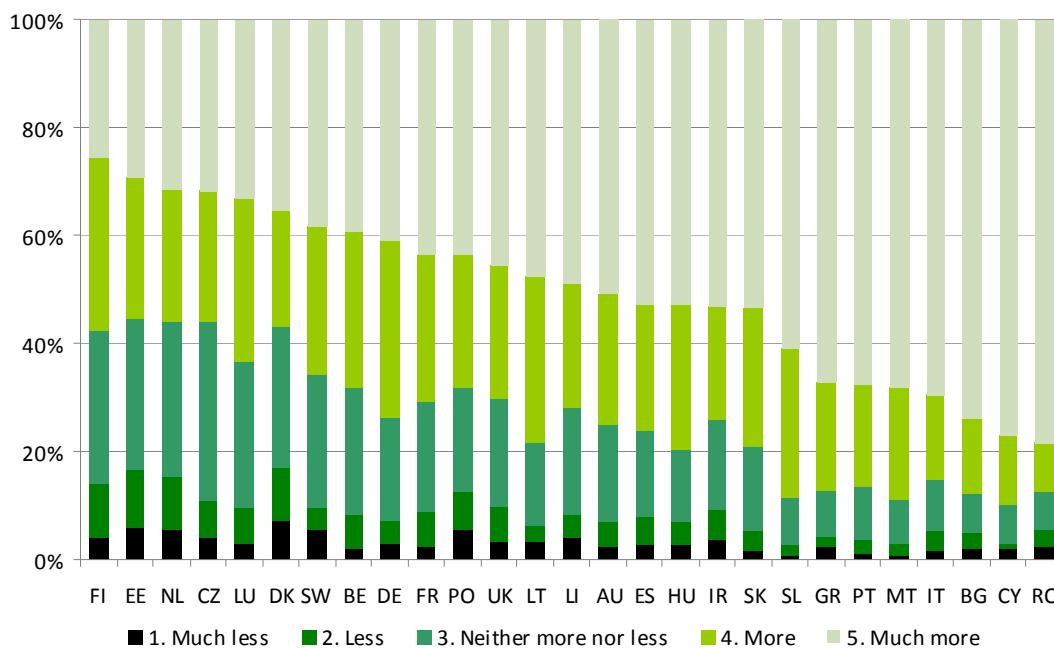
Figure 5.27 Public opinion on the preferred forest management style for protecting from disasters and climate change



[Note: 1 = much less actively managed; 5 = much more actively managed]
 [Source: ECORYS]

At the **regional** level, fewer citizens of countries in the Nordic/Baltic region put a high emphasis on active forest management for the protection of people (64%). The remaining regions are either close to or above the overall mean of 74%, North West (69%), Central (72.9%), South East (88.2%) and South West (82.0%) Europe. At a **country** level, responses from people in most countries do not deviate far from the overall mean ($\pm 10\%$). However, the following countries have a slightly lower emphasis on much or much more active forest management: Denmark (56.9%), Finland (57.8%), the Netherlands (56.1%), the Czech Republic (56.1%) and Estonia (55.5%).

Figure 5.28 National differences: preferred forest management style for protecting against disasters and climate change



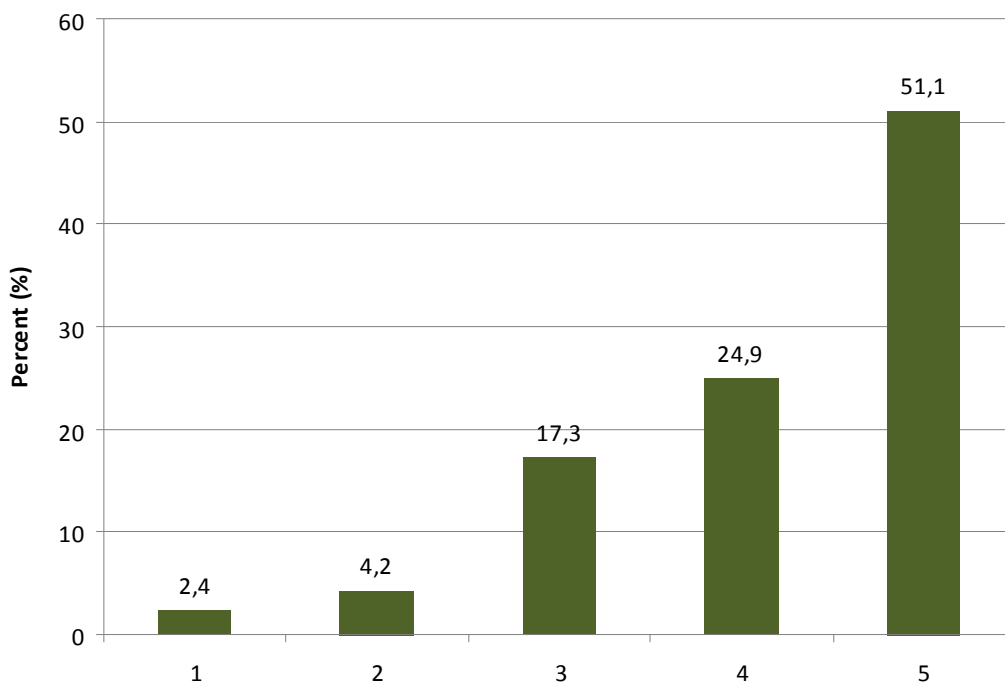
[Source: ECORYS]

In general, there is a stronger emphasis on much or much more active forest management for protecting people among **women** (54.7% of women compared to 44.9% of men call for more active management). These differences are apparent in all regions ($\pm 10\%$), except in the South East European region, where the difference is less pronounced ($\pm 3\%$). There are minor differences between the **age** groups in terms of more or much more active management. As such, there is a gradual increase in the call for more active management from the respondents aged 18 to 24 years (69.6%) to 55 years or older (75.8%). Respondents that have completed a primary **education** call for more active management: 82% state that it should be more to much more actively managed, in comparison to respondents with no education (67.6%), secondary (76.2%) and tertiary (72.9%) education. No differences were detected between participants from a **rural** or urban setting.

Question 5 (f). People often have very different opinions on how forests in your country SHOULD BE managed. On a scale of 1 to 5 where 1 means “much less” and 5 means “much more”: in your opinion, SHOULD forests be much MORE actively managed or much LESS actively managed to protect forests from damages caused by storms, fire, or climate change?

From all measures asked, **EU citizens** most strongly support more active management to protect forests themselves - from damages caused by storms, fire or climate change. Around 76% of EU citizens say that forests should be more or much more actively managed to protect forests, while as much as 51.1% support much more active management.

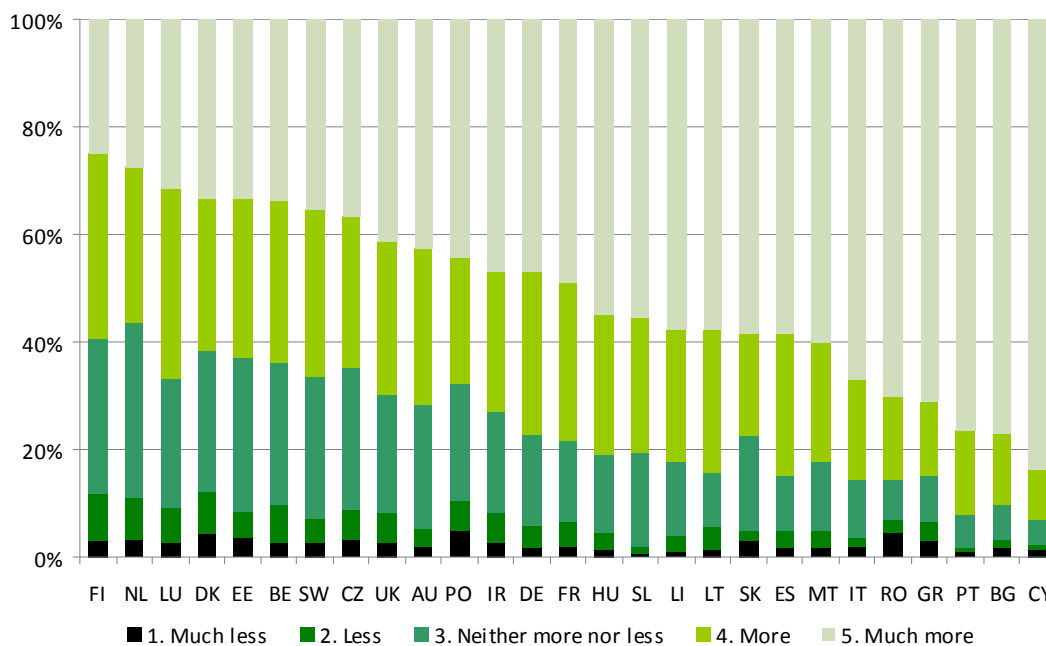
Figure 5.29 Public opinion on the preferred forest management style for protecting forests against damages



[Note: 1 = much less actively managed; 5 = much more actively managed]
 [Source: ECORYS]

When comparing responses from different **regions**, there is a gradual increase in prioritisation of a more and much more active management approach to protect forests from damages from the North / North West to the South / South East. Around 68.9% of respondents from the Nordic/Baltic regions support more to much more active management, compared to 70.9% in North West Europe, 73.0% in Central, 86.7% in South West and 87.2% South East Europe. The variation of opinions at **country**-level is not significant. As such, the Netherlands (56.4%) and Finland (59.4%) are the only countries that have a mean (more or much more) below 60%. In all remaining countries a range from 61.8% to 93.1% of respondents calls for more active management.

Figure 5.30 National differences: preferred forest management style for protecting forests against damages



[Source: ECORYS]

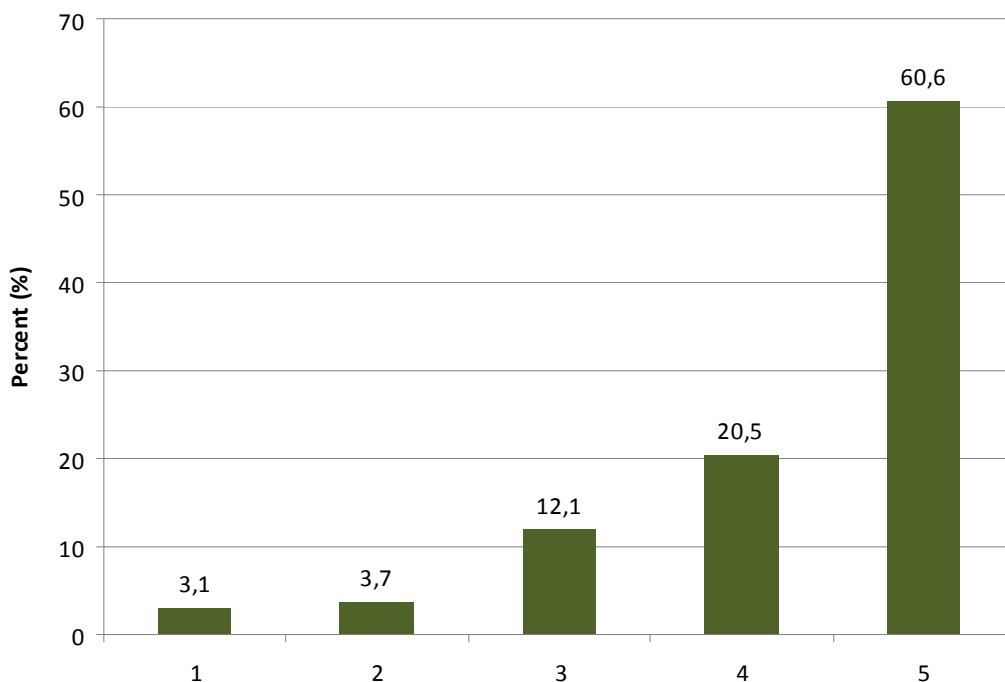
Women seem to favour more active forest management with regards to protecting forests, compared to men. Around 55.7% of women in the EU call for much more active management to protect forests, compared to 45.1% of men. This pattern is consistent throughout all regions. **Age** seems to influence the extent to which the participants favour a more or much more active management approach: 75.8% among the 55+ group are of the opinion that forests should be more actively management, compared to 69.6% among citizens that are 18 to 24 years old. Respondents that have completed a primary **education** seem to favour more active management once more: 82.3% state that it should be more to much more actively managed, in comparison to respondents with no education (64.7%), secondary (78.1%) and tertiary (75%) education. There is no difference in response behaviour dependent on whether the participants live in a **rural** or urban setting.

5.6 Forests and climate change

Question 6 (a). An important concern to many people is CLIMATE CHANGE. If it comes to forests in your country and climate change - on a scale from 1 to 5 where 1 means “no, not at all” and 5 means “yes, a lot”: do you think that, if forests are well managed, growing trees can help reduce climate change?

A majority of **EU citizens** (60.6%) thinks that growing trees can help a lot to reduce the impact of climate change in their respective countries. A total of 81.1% of respondents in the EU think that growing trees can help against climate change.

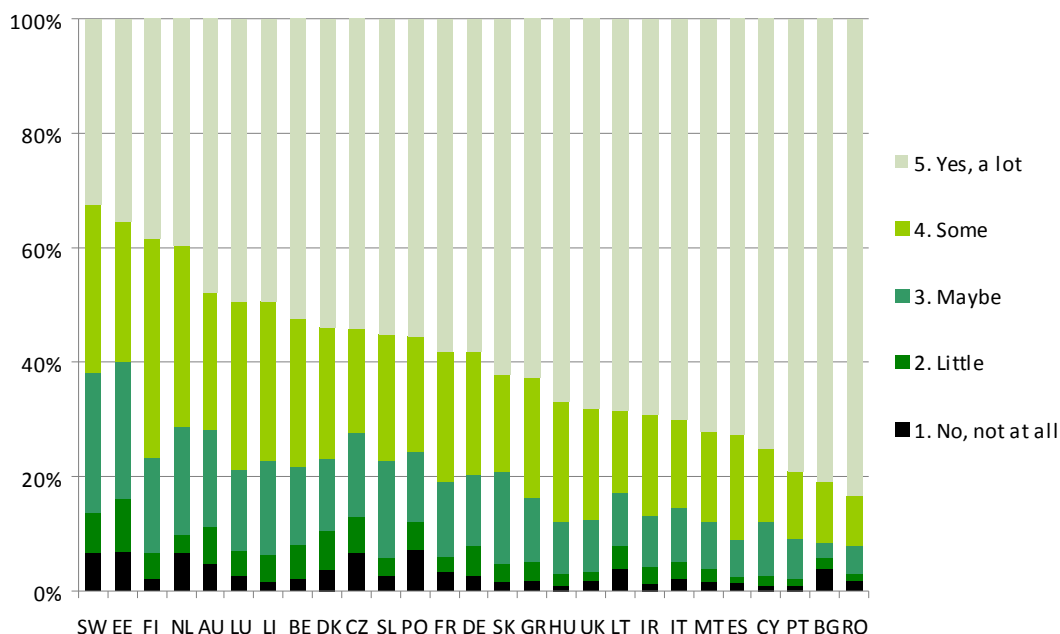
Figure 5.31 Public opinion on whether growing trees can help reduce climate change



[Note: 1 = no, not at all; 5 = yes, a lot]
[Source: ECORYS]

There are rather minor differences across different **regions** in the EU. Somewhat fewer respondents living in the Nordic/Baltic region seem to think that growing trees would help against climate change (72.5%), compared to 77.3% to 89% of respondents in all other regions. No major **country**-level differences were identified from the data, as respondents in all countries strongly support the view that growing trees may help to reduce the impact of climate change. Despite this overall trend, the range of citizens thinking that growing trees can help range from 60.1% (Estonia) and 61.9% (Sweden) to 92.2% (Romania) and 91.4% (Bulgaria).

Figure 5.32 National differences: public opinion on whether growing trees can help reduce climate change



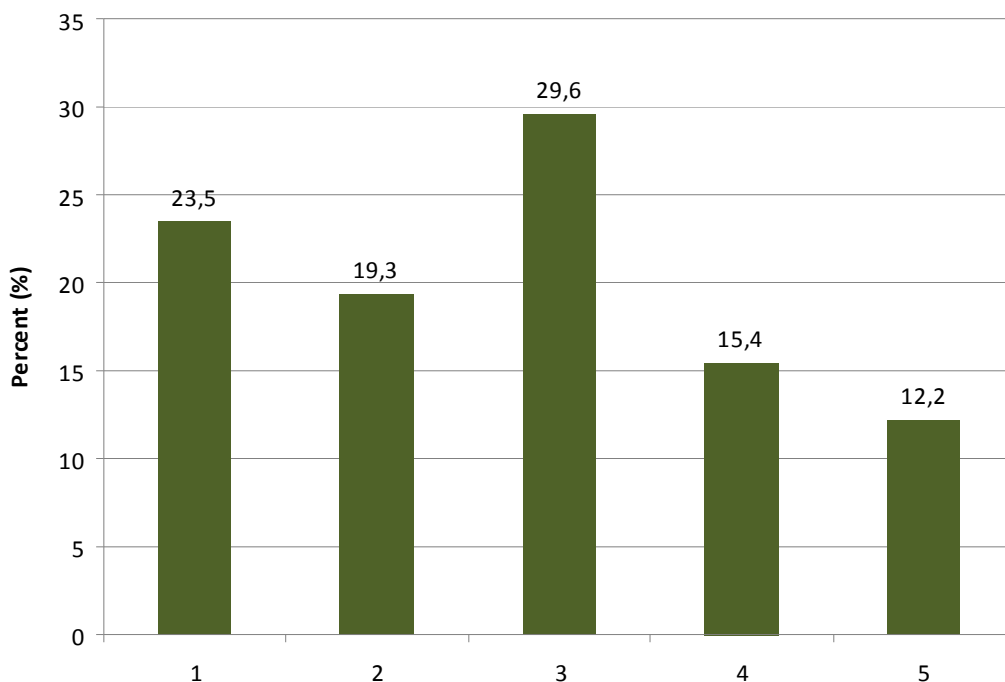
[Source: ECORYS]

There are no major **gender**-based differences in response behaviour amongst women and men in the EU: the difference in opinion is in the range of $\pm 5\%$. There are however some regional difference, as approximately 10% more women in Central Europe find it much more important. The perceived importance of growing trees as a means to mitigate climate change increases with **age**: within the group of persons aged 55+, 83.7% claim that planting trees can help (a little or a lot), while around 72.3% think so in the age group 18 to 24 years of age. No major differences were found based on the respondents' **educational** backgrounds. No differences were detected in opinions of respondents from a **rural** as compared to respondents from an urban setting.

Question 6 (b). An important concern for many people is CLIMATE CHANGE. If it comes to forests in your country and climate change - on a scale from 1 to 5 where 1 means “no, not at all” and 5 means “yes, a lot”: do you think that, if forests are well managed using a higher share of wood as construction material can help reduce climate change?

EU citizens as a whole seem to have very different opinions as regards whether the use of wood as a construction material can help reduce climate change. On the whole, the largest group - somewhat less than half (42.8%) - of EU citizens thinks that it can not help at all or can rather not help to use more wood as a renewable material. Around one third (29.6%) of respondents seem to be undecided. Only about one quarter, 27.4% of EU citizens, think that it would help somewhat or a lot.

Figure 5.33 Public opinion on whether the use of wood as a renewable material can help reduce climate change

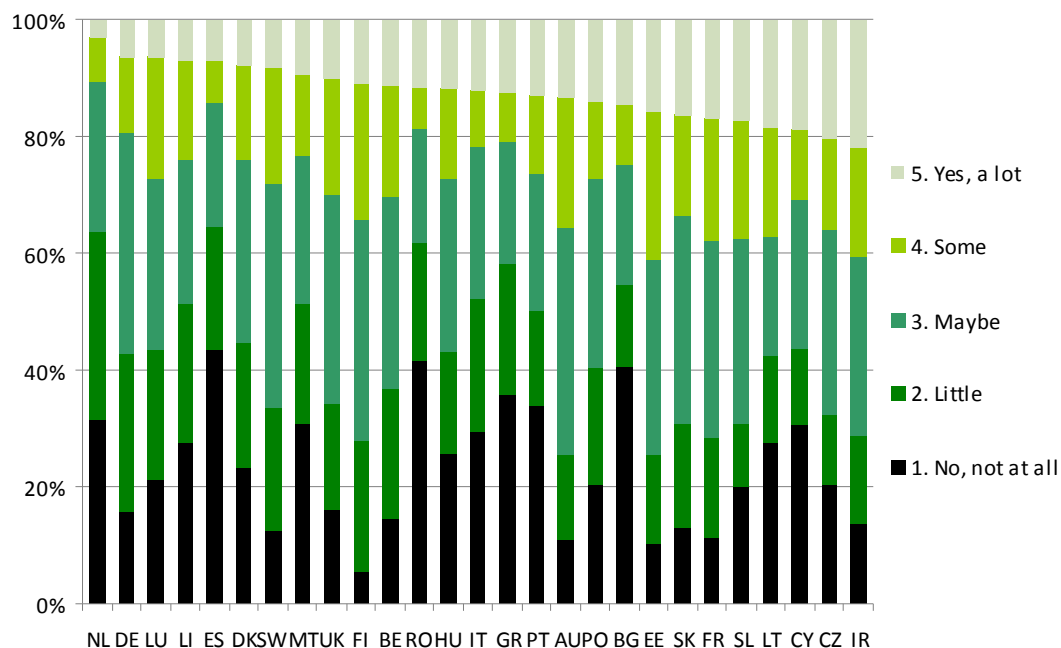


[Note: 1 = no, not at all; 5 = yes, a lot]

[Source: ECORYS]

On a **regional** level, the distribution in Nordic/Baltic, North West and Central Europe is very even across all alternatives, with a slight trend towards a more negative view on the issue. It is only in South East and South West Europe that this negative view is more pronounced (54.7% and 56.5% of respondents respectively think that it can not help at all or can rather not help to use more wood to reduce climate change). Citizens of the following **countries** have a more positive view that using wood as construction material can help a little or a lot to mitigate climate change: France (37.8% of respondents think it can help), Austria (35.9%), Finland (34.3%), Estonia (41.2%), Slovakia (33.7%) and Slovenia (37.7%). A larger share of respondents than the EU average in the following countries think that using wood as construction material can not help at all or rather not help: Italy (52.2% of respondents are of that opinion), the Netherlands (63.5%), Spain (64.6%), Bulgaria (54.4%), Lithuania (51.3%), Romania (61.8%), Greece (58.3%) and Malta (51.3%). The remaining countries have a very even distribution in line with the overall opinion of EU citizens.

Figure 5.34 National differences: public opinion on whether wood as a renewable material can help reduce climate change



[Source: ECORYS]

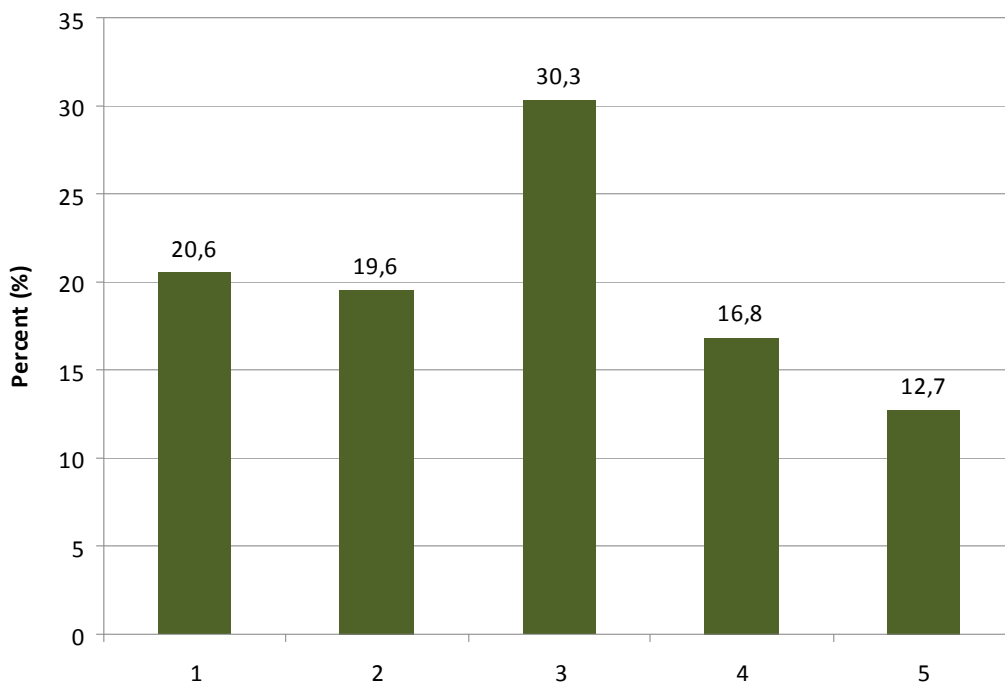
There is no major difference in opinions between **women and men** in the EU on the role of using wood as construction material to mitigate climate change. With regard to **age**, younger participants seem to have a more negative view on the use of wood-based construction materials to mitigate climate change: 50.8% of respondents in the age group 18-24 think that it can not help, in contrast to 37% among respondents of 55 or more years of age. Respondents that have completed a primary **education** seem to favour the use of construction materials to mitigate climate change: 43.7% state that it would help somewhat to a lot, in comparison to respondents with no education (35.3%), or a secondary (31.3%) or tertiary (25%) education. In contrast to participants living in **rural** areas or villages, more people living in urban areas (46.1%) think that the use of wood does not help reduce climate change (46.1% of respondents in urban, compared to 36.9% in rural areas are of that opinion).

Question 6 (c). An important concern for many people is CLIMATE CHANGE. If it comes to forests in your country and climate change - on a scale from 1 to 5 where 1 means “no, not at all” and 5 means “yes, a lot”: do you think that, if forests are well managed using a higher share of wood for producing energy can help reduce climate change?

Overall, **EU citizens** have very similar views regarding the use of wood for producing energy as for the use of wood as construction materials. Overall, somewhat more EU citizens seem to think that using wood for energy is more effective than using wood for construction material as a means to tackle climate change. Nonetheless, the largest share of EU citizens thinks that using a higher share of wood for producing energy can not help reduce climate change (40.2% of respondents, compared to 42.8% that think using wood for construction has no effect). Somewhat less than one third seems to be undecided,

while the remaining 29.5% think that using wood for bioenergy can help somewhat or a lot.

Figure 5.35 Public opinion on whether using wood for bioenergy can help reduce climate change

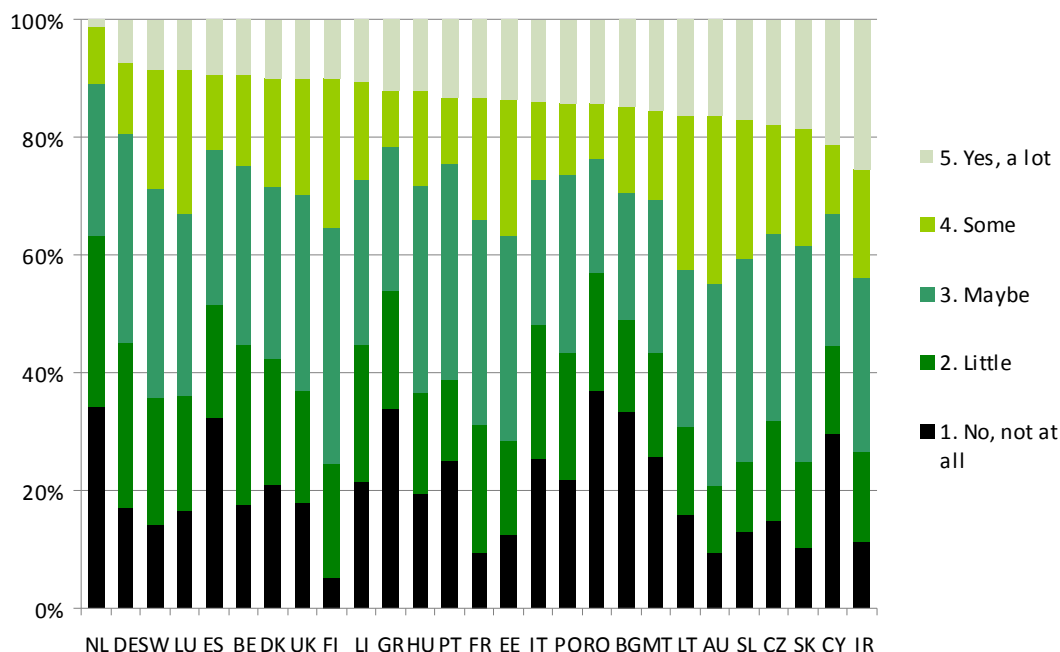


[Note: 1 = no, not at all; 5 = yes, a lot]

[Source: ECORYS]

When comparing responses across **regions**, the distribution of responses from citizens living in Nordic/Baltic and Central European countries is similar and rather evenly distributed (approx. 33% each are more negative, rather undecided, or rather positive about the effect of wood for bioenergy on climate change mitigation). Citizens in North West Europe respond as reported for the overall mean of the EU, while people in South East and South West Europe portray a slightly more negative view on the use of wood for energy as a means for reducing climate change (50.2% and 47.4% find its effects as negligible or non-existent). There is a tendency among respondents of the following **countries** to have a more positive view, i.e. using wood for energy can help a little or a lot to mitigate climate change: France (33.9%), Austria (44.9%), Finland (35.4%), Ireland (44%), Estonia (36.5%), Latvia (42.3%), Slovakia (38.3%) and Slovenia (40.7%). There is a tendency among the citizens of the following countries to think the opposite, i.e. negligible or no effect of using wood for energy on climate change: the Netherlands (63.2%), Spain (51.6%), Romania (56.9%) and Greece (54%). Responses in the remaining countries are more or less identical with the opinions of the EU citizens as a whole.

Figure 5.36 National differences: public opinion on whether using wood for bioenergy can help reduce climate change



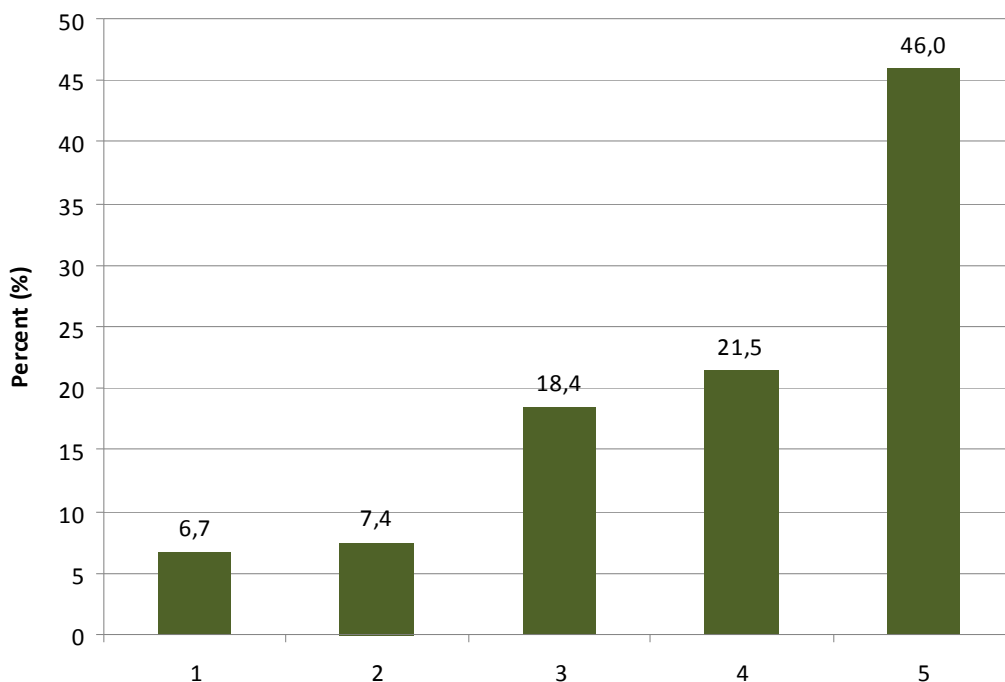
[Source: ECORYS]

Women in the EU are more divided on the issue of using wood for energy to mitigate climate change (36% to 32% being either negative, undecided or more positive about it), while men tend to rank the issue more negatively (45.6% consider the effect to be negligible or non-existent). This difference is slightly more pronounced in South West Europe. Respondents that have no or a primary **education** seem to favour the use of wood as a source of energy to reduce climate change: 47.1% and 44.1%, respectively, state that it would help somewhat to a lot, in comparison to respondents with a secondary (32.8%) or tertiary (27.3%) education. Individuals living in a rural setting are more divided about the topic (approx. 33% each being more negative, undecided or more positive about the effect of using wood for bioenergy), while people from an urban setting have a more negative perception of effects of wood for bioenergy (41.9% of towns and 43.1% of larger cities think that the effects are negligible or non-existent).

Question 6 (d). An important concern to many people is CLIMATE CHANGE. If it comes to forests in your country and climate change - on a scale from 1 to 5 where 1 means “no, not at all” and 5 means “yes, a lot”: do you think that, if forests are well managed new trees should be planted in your country to provide wood as a raw material for products and bioenergy?

Regarding the question whether new trees should be planted in the country of the respective respondents to provide wood as a raw material for products and bioenergy, a majority of **EU citizens** (around 67.5%) is clearly in favour of planting new trees in the context of tackling climate change: 46% of EU citizens support this measure “a lot”.

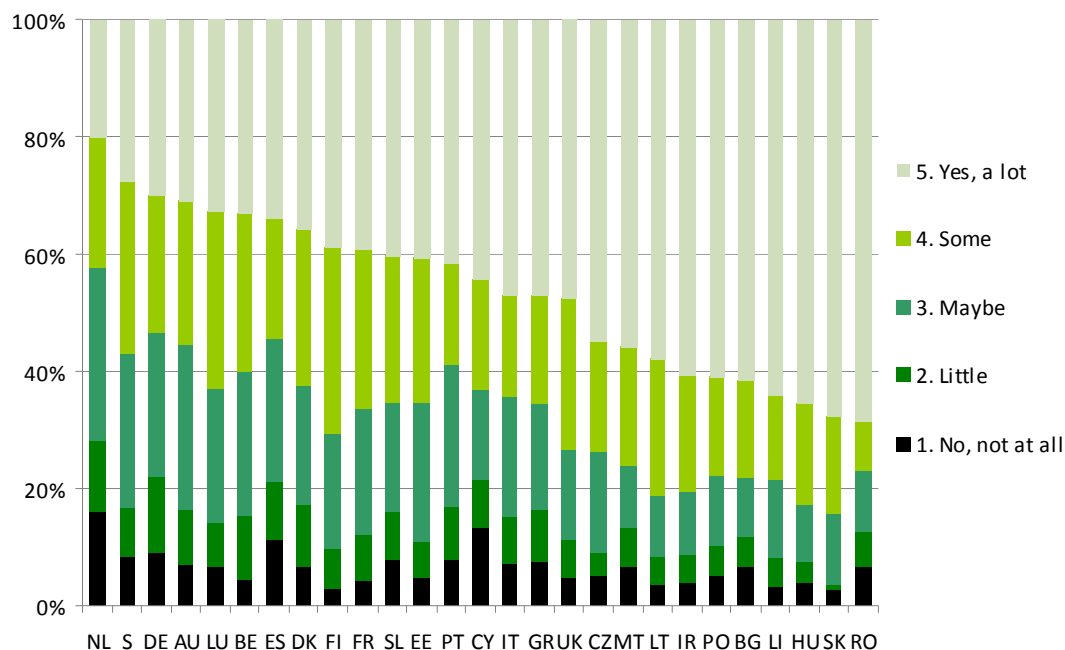
Figure 5.37 Public opinion on whether planting new trees can help reduce climate change



[Note: 1 = no, not at all; 5 = yes, a lot]
 [Source: ECORYS]

There is more support for planting new trees to provide wood as a raw material for products and bioenergy in the Central European **region**, where 74.0% of respondents rather support it or support it a lot, while some 59.2% of the population in South West Europe thinks so. The responses from the remaining regions are in line with the overall EU-27 mean responses. In general, respondents in all EU **countries** appear to consider that the planting of new trees would have a positive impact on mitigating climate change. There is somewhat less support for this measure by citizens of the Netherlands (42.5% think it would help somewhat or a lot), Germany (53.4%), Austria (55.4%), Spain (54.4%) and Sweden (56.9%). Highest support for planting new trees is indicated by respondents in Slovakia (84.3%) and Hungary (82.7%).

Figure 5.38 National differences: public opinion on whether planting new trees can help reduce climate change



[Source: ECORYS]

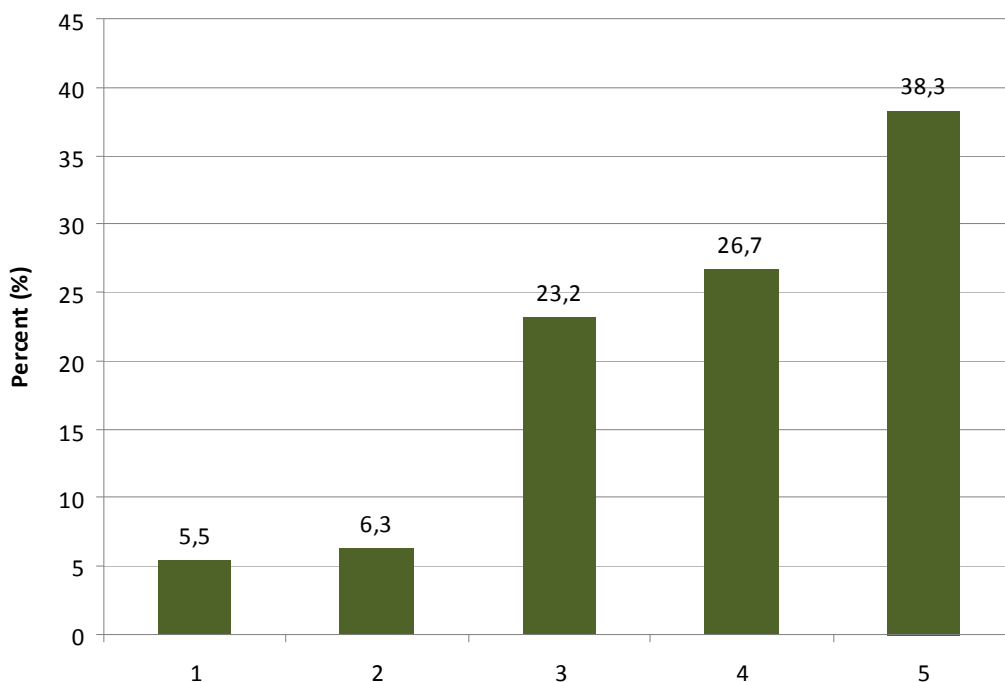
In general, across the EU, there is less support by men for planting new trees to provide wood as a raw material for products and bioenergy, compared to **women** (64.2% of men versus 70% of women are positive about it). The main gender-based differences can be found in Central and South West Europe (10% more women are positive about it compared to men). There are no major differences in opinions between respondents from different **age** groups. Respondents that have no **education** seem less inclined to favour the use of wood as a source for raw materials and bioenergy: 55.9% state that it would help somewhat to a lot, in comparison to respondents with a primary (73.6%), secondary (71.2%) or tertiary (65.9%) education. There is also no difference in opinions depending on whether the respondent is from a **rural** or urban setting.

5.7 Interest in learning about forests and forest communication

Question 7 (a). When you consider INFORMATION about forests and their use: Can you please tell me, on a scale from 1 to 5, where 1 means you are not interested about and 5 means you would be very interested in more information. How interested are you in learning more about the balancing of forest protection and forest use?

A majority of all **EU citizens** (65%) states to be interested to very interested in learning more about balancing of forest protection and forest use, while only 11.8% show no to very little interest.

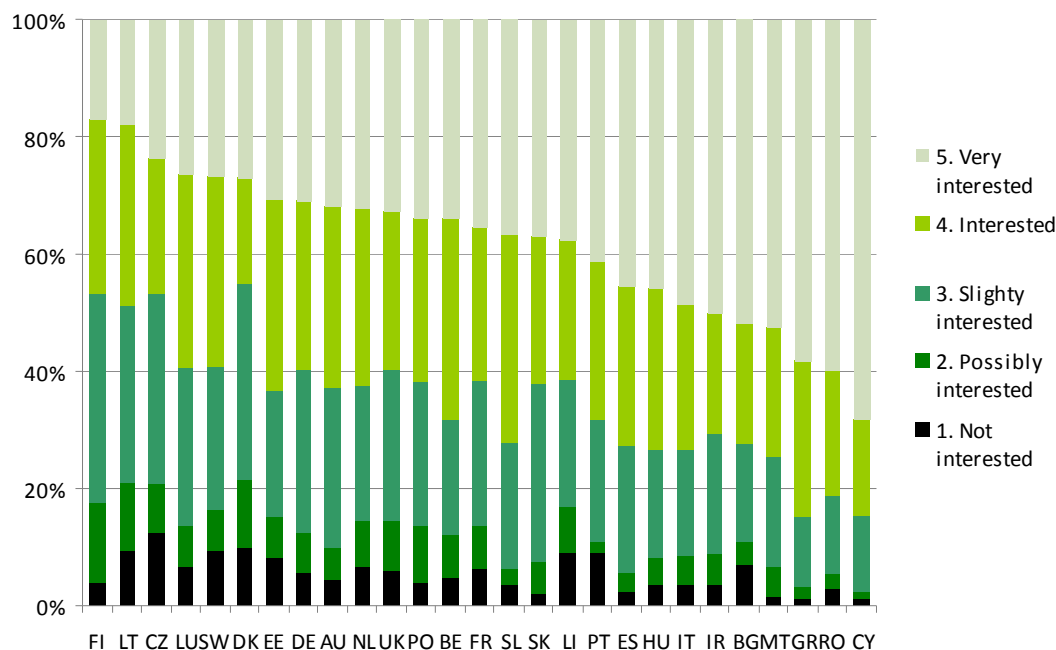
Figure 5.39 Public interest in learning more about the balancing of forest protection and forest use



[Note: 1 = no, not at all interested; 5 = yes, very interested]
 [Source: ECORYS]

Comparing **regions**, the lowest rate of interest in more information on balancing forest protection and use is shown by respondents from the Nordic/Baltic region, where 53.8% are interested or very interested. This is to be compared to people in South West and South East Europe where 72.0 and 79.4%, state to be interested in more information. Responses from the population in North West and Central Europe are approximately in accordance to the overall EU-27 mean. On **country** level, most countries appear to have an interest in learning more about forest protection and use. In terms of no or very limited interest, only in a few countries does a higher number of citizens express to have little or no interest, these are: Denmark (21.5% of respondents state to have nor or little interest), the Czech Republic (20.9%) and Latvia (21%). The responses in the remaining EU countries show means around or above the overall EU mean results.

Figure 5.40 National differences: public interest in learning more about the balancing of forest protection and use



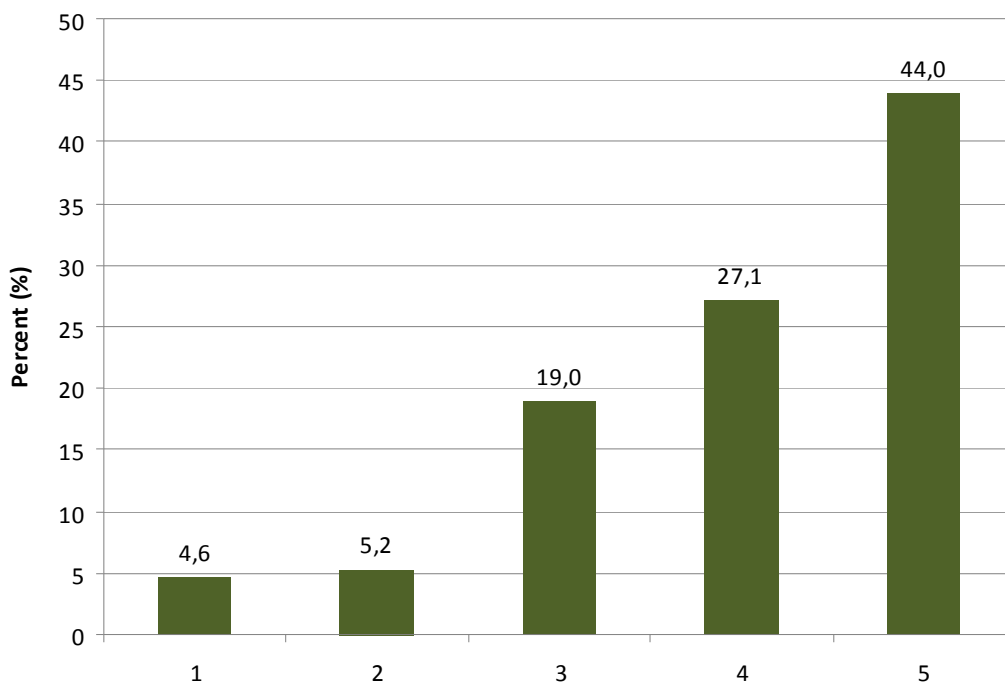
[Source: ECORYS]

There is no major **gender** difference in interest in information on balancing forest protection and use, except in South West Europe where about 10% more women express interest in information compared to men. Respondents of the **age** group aged 18 to 24 states to be less interested in learning more on the topic than other age classes. In the age group 18 to 24 years of age, 54.8% state to be interested compared to 61.2% of the age group 25 to 39 years, 66.9% of the age group 40 to 54 years, and 68.7% of the age group 55 years and more. No major differences were found based on the respondents' **educational** backgrounds. No difference in interest in more information on the topic was expressed by respondents from **rural** as compared to respondents from urban areas.

Question 7 (b). When you consider INFORMATION about forests and their use: Can you please tell me, on a scale from 1 to 5, where 1 means you are not interested about and 5 means you would be very interested in more information. How interested are you in learning more about the diversity of animal and plant species in forests and nature conservation?

Most **EU citizens** state to be interested in learning more about the biodiversity in forests and nature conservation. As such, 71.1% declare being interested to very interested, while only 9.8% show no to very little interest. Thus, forest biodiversity is perceived as a more interesting topic, overall, compared to balancing protection and use of forests.

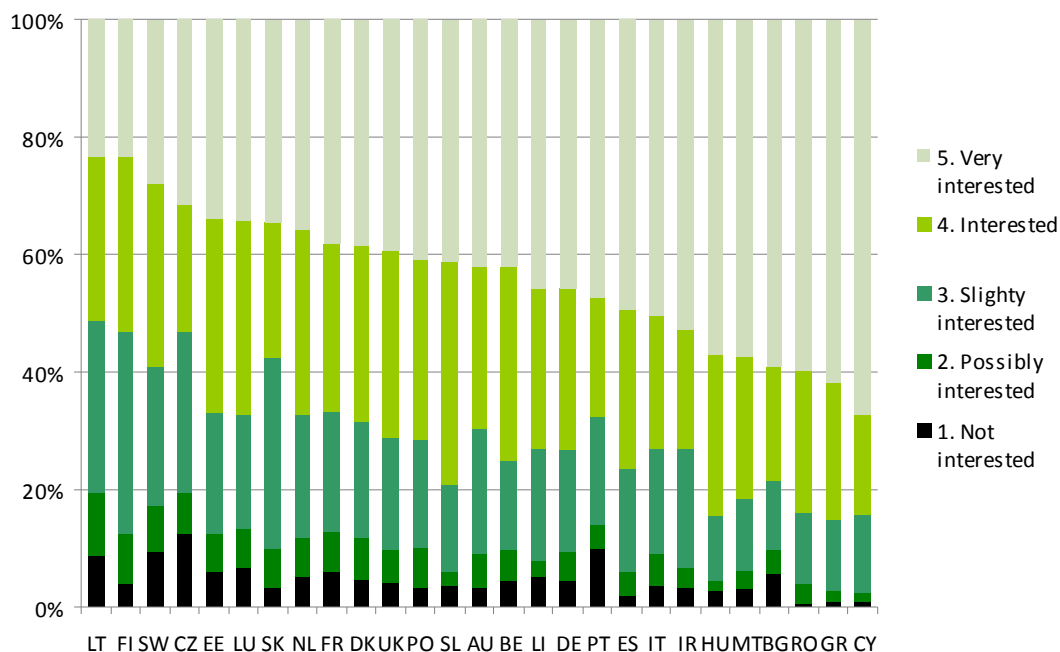
Figure 5.41 Public interest in learning more about forest biodiversity and nature conservation



[Note: 1 = no, not at all interested; 5 = yes, very interested]
 [Source: ECORYS]

The lowest rate of interest in more information on biodiversity is expressed by respondents from the Nordic/Baltic **region**, where 61.9% state to be interested or very interested. In South East Europe, in comparison, some 82.6% are interested or very interested. Response rates in South West, North West and Central Europe are approximately in accordance with the overall EU mean. Only in a few **countries** a somewhat higher share of respondents show no or very little interest in learning more about biodiversity and nature conservation, such as in Sweden (17.2% of citizens show little or no interest), the Czech Republic (19.5%) and Latvia (19.3%).

Figure 5.42 National differences: public interest in learning more about forest biodiversity and conservation



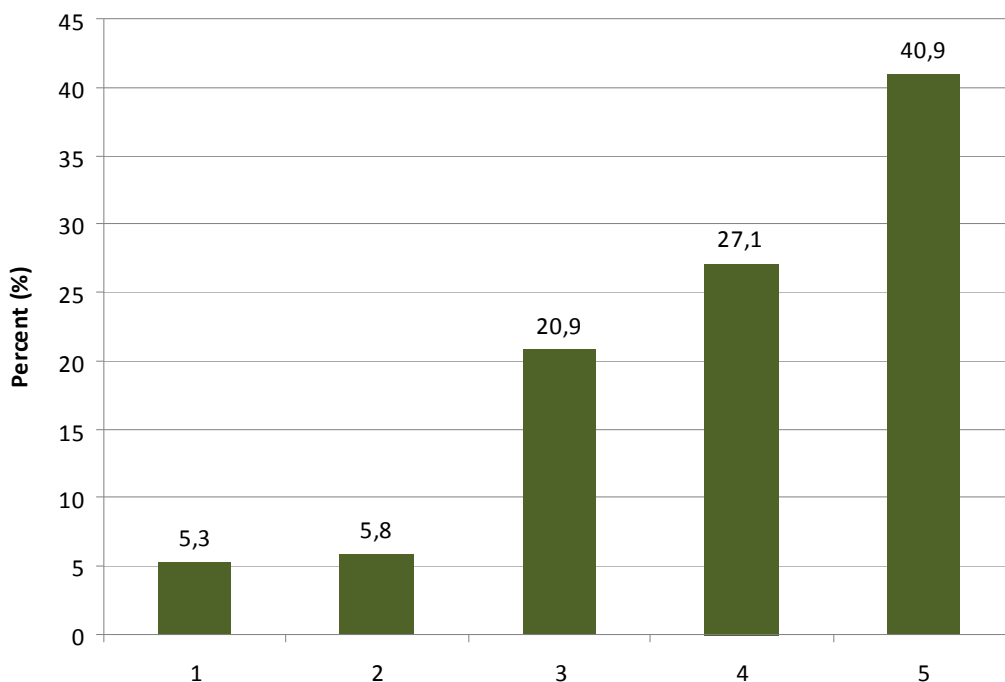
[Source: ECORYS]

There are some minor **gender** differences, particularly in South West and Central Europe, where about 10% more women are more interested in learning about biodiversity and nature conservation compared to men. Interest in learning about forest biodiversity seems to increase with **age**: 62.4% of respondents in the age group 18 to 24 years considers learning on forest biodiversity to be interesting, compared to 73.9% of people that are 55 years or older. No major differences were found based on the respondents' **educational** backgrounds. No difference was found in interest in information about forest biodiversity between respondents from **rural** and urban areas.

Question 7 (c). When you consider INFORMATION about forests and their use: Can you please tell me, on a scale from 1 to 5, where 1 means you are not interested about and 5 means you would be very interested in more information. How interested are you in learning more about forests and climate change?

A majority of 68% of **EU citizens** expresses to be interested in learning more about forests and climate change. Only some 11.1% of respondents declare to have no or very little interest. Thus, in comparison, forest and climate change is seen as a somewhat less interesting topic than forest biodiversity.

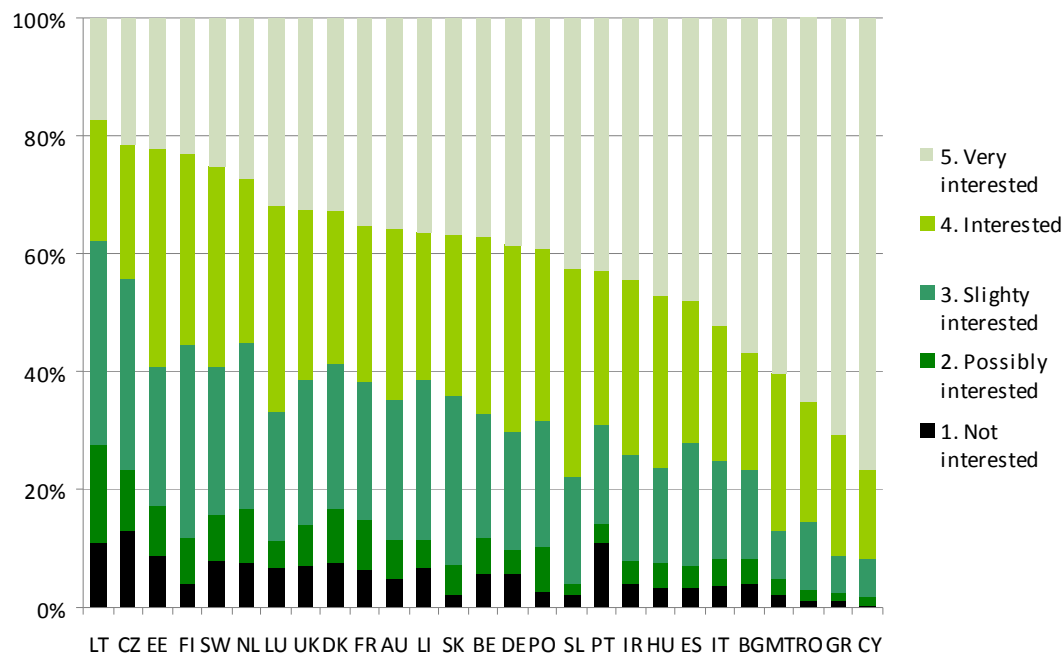
Figure 5.43 Public interest in learning more about forests and climate change



[Note: 1 = no, not at all interested; 5 = yes, very interested]
 [Source: ECORYS]

When comparing responses across **regions**, more citizens of countries in South East Europe express interest in learning about forests and climate change: about 85.5% of people from this region state that they are interested - or very interested - in more information. In contrast, the Nordic/Baltic region exhibits the lowest degree of interest: on the same question 55.6% expressed being interested or very interested. Responses in North West, South West and Central Europe are all close to or slightly above the overall EU mean. Variations at **country** level are not significant. In some countries slightly more respondents state not to be or to be less interested in learning more about forest and climate change, these are: Latvia (27.7%), the Czech Republic (23.4%), Estonia (17.3%), Denmark (16.7%) and the Netherlands (16.5%). The responses in the remaining EU countries are around or above the overall EU results.

Figure 5.44 National differences: public interest in learning more about forests and climate change

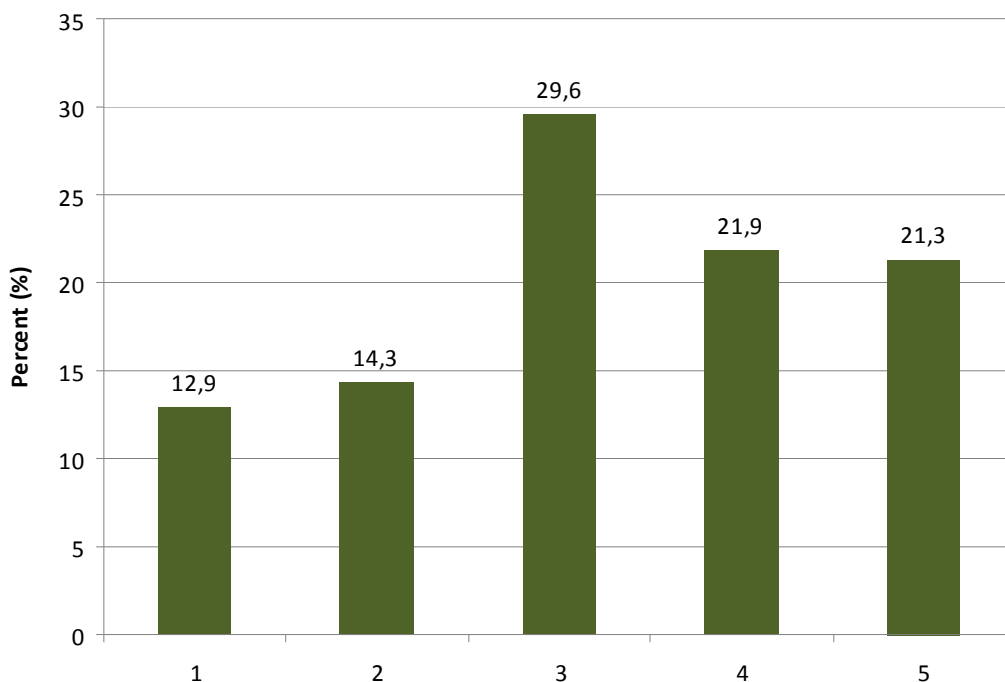


There are some minor **gender** differences in the interest in learning more about forest and climate change, particularly in South West and Central Europe, where about 10% more women are interested in learning about forests and climate change, compared to men. No major difference was found between **age** groups, but respondents from the age group 18 to 24 years tend to be less interested in more information than the remaining age classes: some 61.3% of people between 18 and 24 years state to be interested or very interested in the topic, compared to 70.3% of those that are 55 years of age or older. No major differences were found based on the respondents' **educational** backgrounds. No difference was found in responses between people living in **rural** as compared to people living in urban environments.

Question 7 (d). When you consider INFORMATION about forests and their use: Can you please tell me, on a scale from 1 to 5, where 1 means you are not interested about and 5 means you would be very interested in more information. How interested are you in learning more about forests and the provision of wood as a raw material for products and bioenergy?

The interest to learn more about the provision of wood as a raw material for products and bioenergy is not as high amongst **EU citizens** as for the other topical areas. The most frequent choice is an average interest (chosen by about one third of respondents), while 43.2% express being interested or very interested and 27.2% state having no or very little interest.

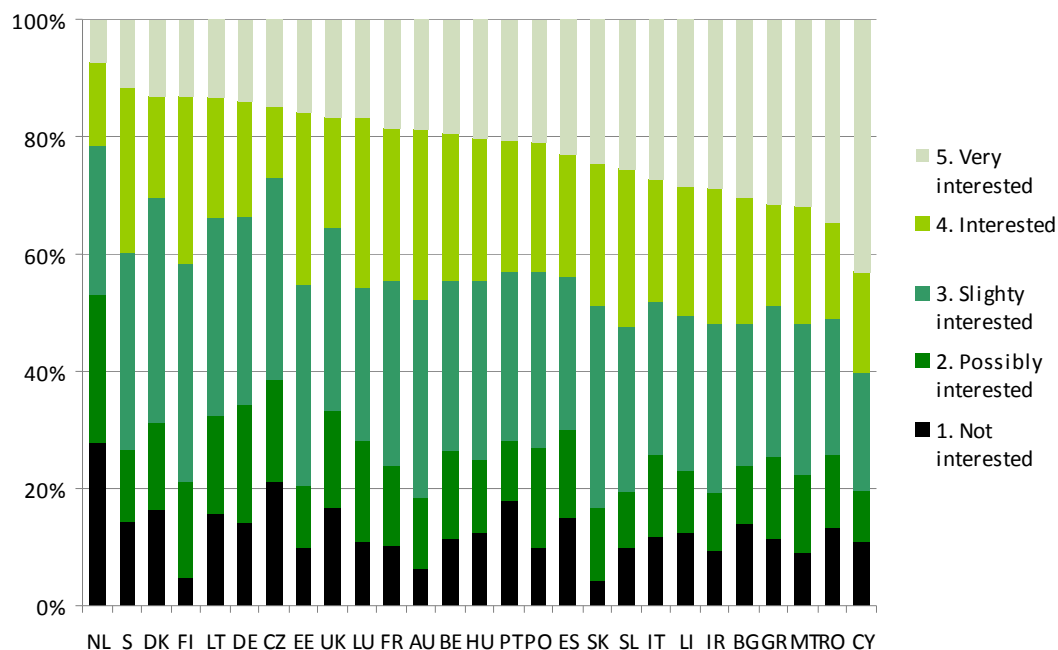
Figure 5.45 Public interest in learning more about the provision of wood as a raw material for products and bioenergy



[Note: 1 = no, not at all interested; 5 = yes, very interested]
 [Source: ECORYS]

Across **regions**, the distribution is approximately in line with the overall EU mean. There is however some difference between South East Europe and North West Europe in terms of being interested or very interested in learning or receiving more information. In South East Europe 52.4% of respondents show interest in information, but only 38.8% in North West Europe. Responses in the Nordic/Baltic region, North West and South West Europe are all close the EU-27 means. Even at **country** level, the distribution is, more or less, in line with the EU-27 means. Only respondents in Germany (34.2% show no or very little interest), Denmark (31.2%), the Netherlands (53%) and the Czech Republic (38.6%) show comparatively little interest, while 60.3% of people in Cyprus state to be interested or very interested to learn more about the provision of wood for manufacturing or bioenergy. The remaining countries have response rates around or above the overall EU results.

Figure 5.46 National differences: public interest in learning more about wood as a material and for bioenergy



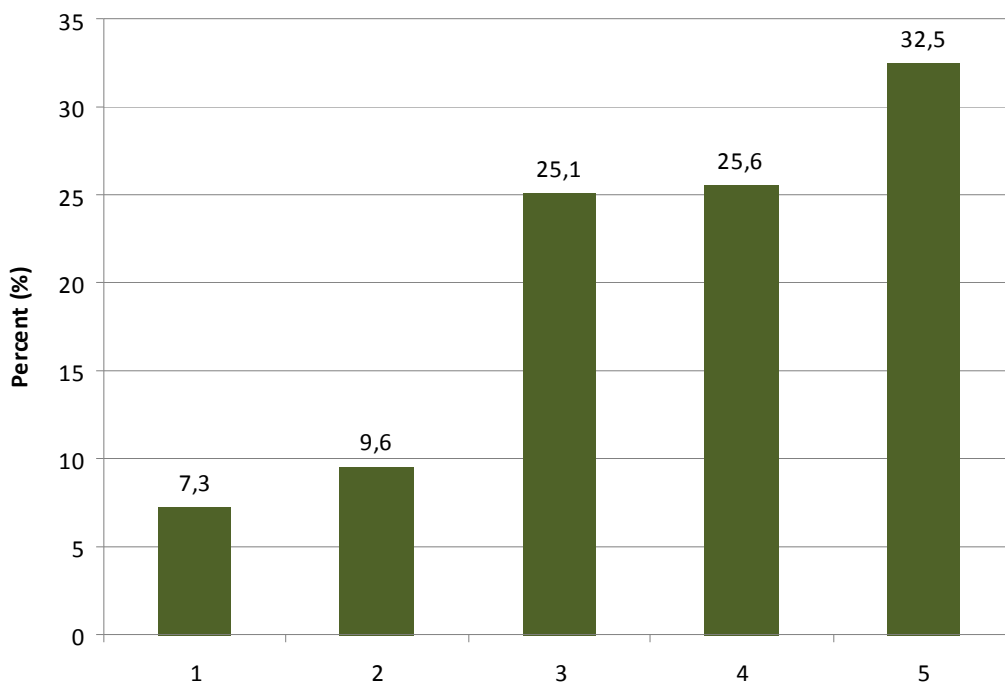
[Source: ECORYS]

No significant difference between **women and men** was detected with regard to interest in information on the provision of wood. Again, the **age** group 18 to 24 years of age considers learning to be of less interest than the remaining age classes: only some 34.6% of 18 to 24 year olds express interest, compared to 45.7% of people that are 55 years or older. Respondents that have no or a primary **education** seem more interested in information concerning the use of wood as a source of raw materials and bioenergy: 55.9% and 52.3%, respectively, state being interested or very interested, in comparison to respondents with a secondary (43.5%) or tertiary (42.2%) education. Again, no difference was found between response behaviour of people in **rural** as compared to people in urban areas.

Question 7 (e). When you consider INFORMATION about forests and their use: Can you please tell me, on a scale from 1 to 5, where 1 means you are not interested about and 5 means you would be very interested in more information. How interested are you in learning more about forests and recreation?

A majority of **EU citizens** also expresses to be interested in learning more about forests and recreation. 58.1% state that they are interested or very interested in learning more, while only 16.9% declare having no or very little interest. Thus, information on forest and recreation is of less interest to EU citizens than either forest biodiversity or forest and climate change topics.

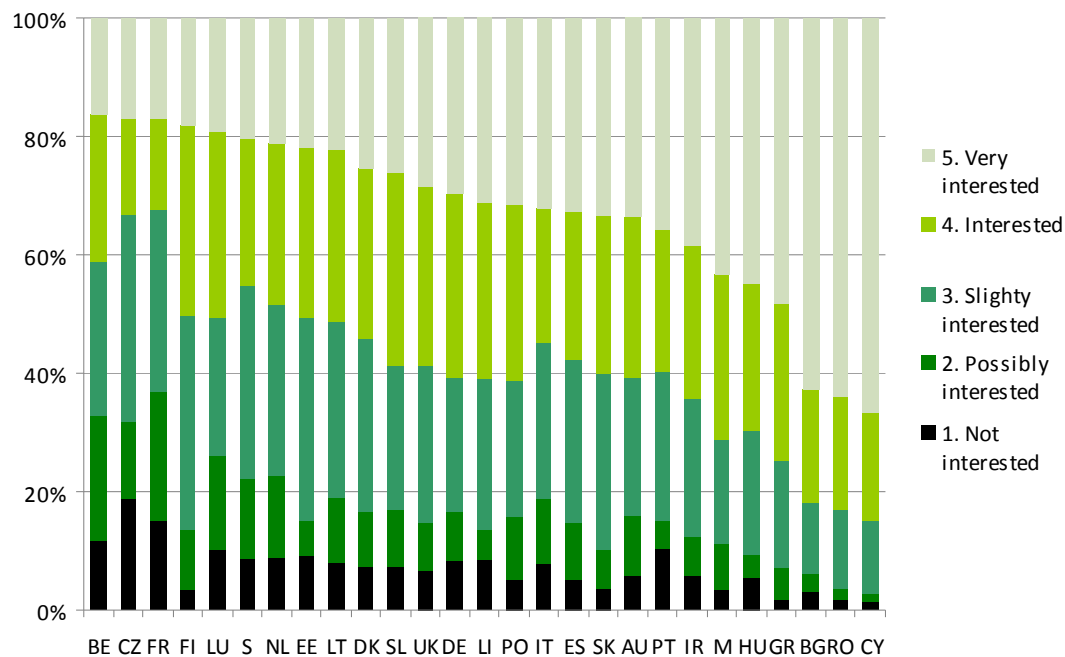
Figure 5.47 Public interest in learning more about forests and recreation



[Note: 1 = no, not at all interested; 5 = yes, very interested]
 [Source: ECORYS]

At the **regional** level, responses in all regions are more or less in line with the overall EU mean, except for South East Europe where an average of 79.6% of respondents state to be interested or very interested in learning more. At the **country** level, the distribution of responses in countries is, with some variation, quite similar to the responses of the EU citizens as a whole. The countries where a higher percentage of respondents express no or very little interest in learning more are as follows: Germany (37.1%), Belgium (32.6%) and the Czech Republic (31.8%). On the other hand, in terms of countries where more respondents state to be interested or very interested in learning more are again predominately South Eastern European countries, such as Romania (82.9%), Greece (74.9%), Cyprus (84.9%) and also Malta (71.3%). The response rates in the remaining countries show means around or above the overall EU results.

Figure 5.48 National differences: public interest in learning more about forests and recreation

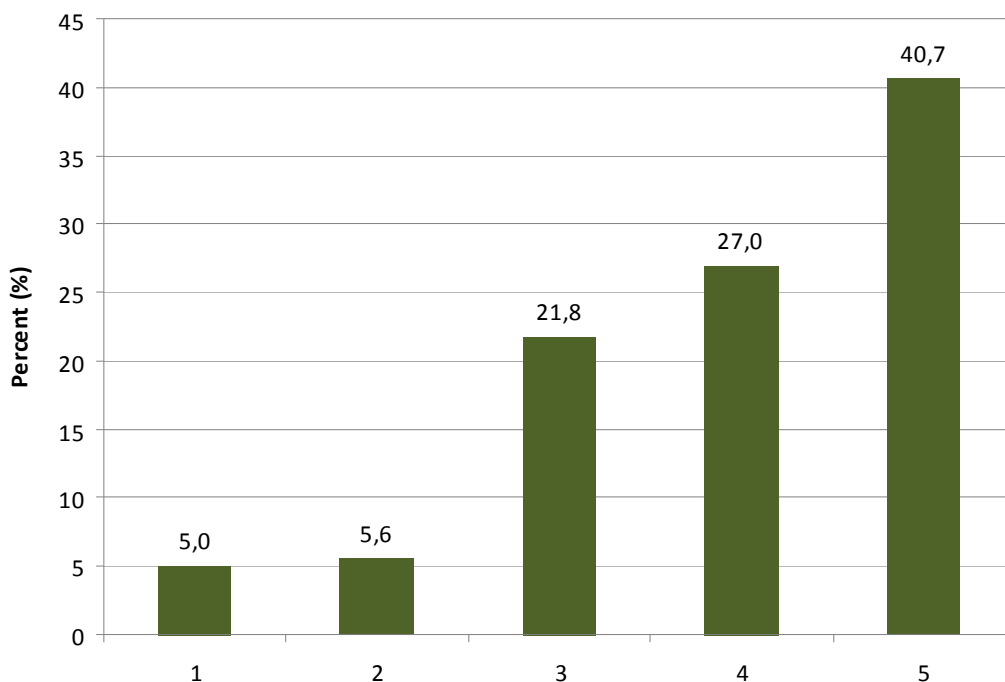


No significant difference between **genders** was found in interest on forest and recreation. However, on a regional level, 5-6% of women in Central and South West Europe indicate a much higher interest. The youngest age group (18 to 24 years) again considers the topic of forest and recreation to be of considerably less interest than the remaining age classes: of the age group 18 to 24 years 47.4% state to be interested or very interested, compared to 61.4% that are 55 years or older. No major differences were found based on the respondents' **educational** backgrounds. No difference is detected depending on whether the participant is from a **rural** or urban setting.

Question 7 (f). When you consider INFORMATION about forests and their use: Can you please tell me, on a scale from 1 to 5, where 1 means you are not interested about and 5 means you would be very interested in more information. How interested are you in learning more about the general condition of forests (health, vitality)?

A majority of the **EU citizens** state to be interested in learning more about the general condition (health and vitality) of forests. 67.7% state that they are interested or very interested in learning more, while only 10.6% declare having no or very little interest. Overall, thus EU citizens seem clearly more interested in forest biodiversity and climate change topics than forest use related topics.

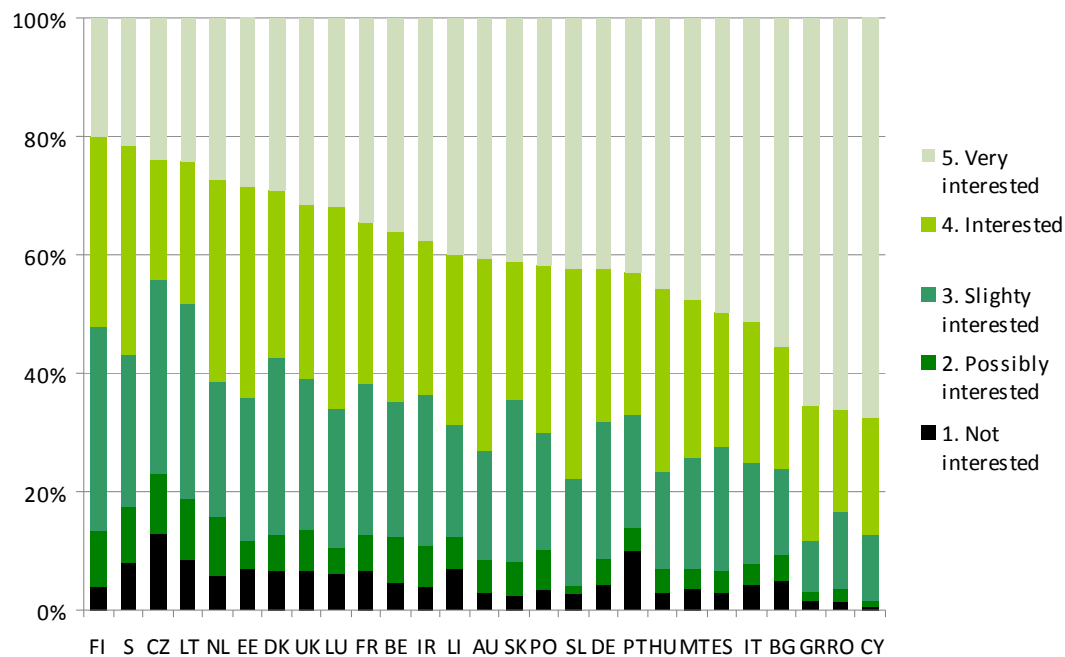
Figure 5.49 Public interest in learning more about the general condition of forests



[Source: ECORYS]

On a **regional** level, the distribution is more or less in line with the overall EU means. The biggest variation is between South East Europe (81.7% state to be interested to very interested) and the Nordic/Baltic region (57.7% state to be interested to very interested in learning or receiving more information). The response rates in North West, Central and South West European regions are all close the EU-27 means. At the **country** level, the distribution is approximately in accordance with the overall EU-27 means. The few exceptions where a higher share of respondents expresses no or very little interest in learning are citizens from the Czech Republic (23%) and Latvia (18.7%). With regards to countries more interested in learning, these include Greece (88.3%), Cyprus (87.2%) and Malta (78%). Citizens in the remaining countries express levels of interest around the overall EU means.

Figure 5.50 National differences: public interest in learning more about the general condition of forests



[Source: ECORYS]

No significant difference between **genders** was found with regard to interest in the general forest condition. However, on a regional level, 6-8% of women in Central, South East and South West Europe indicate a much higher interest. The **age** group 18 to 24 years of age again considers learning to be of less interest than the remaining age classes: some 60% of 18 to 24 year olds state to be interested or very interested compared to 70.1% of people that are 55 or older. No major differences were found based on the respondents' **educational** backgrounds. No difference was found between respondents from **rural** as compared to those from urban environments.

6 Synthesis of Findings

This chapter provides a synthesis of findings collected via three main channels: (a) literature review of existing public opinion surveys; (b) stakeholder survey on what they believe the public thinks; and (c) public opinion survey across the EU-27.

This synthesis of findings pays particular attention to addressing the fundamental misconceptions in public perception. Furthermore, the role of forests and forestry in dealing with new challenges faced by the European society is addressed.

6.1 Public perceptions on the key concerns regarding forests

This section analyses the public's perceptions on what forests mean to citizens and what citizens consider as the most important concerns related to forests.

6.1.1 Summary of findings per analysis tool

Main lessons from previous surveys (T1)

According to previous studies, the general meaning of forests to the public varies widely. In the UK, for example, forests are increasingly linked to the issue of climate change, while the Austrian public regards forests as a national symbol of identification. The public in Finland, Norway and Sweden, on the other hand, is very much concerned about specific characteristics of forest stand development, while a majority of the German public thinks one of the main characteristics of forests is to increase their quality of life.

Outcomes of stakeholder survey (T2)

This study's survey among key forest stakeholders determined that these experts believe the European public views two topics as most important when it comes to forests: deforestation and forest protection. In terms of regional differences, experts believed that Eastern European citizens will place a relatively higher importance on the issues of illegal logging, deforestation and ecosystem services than the rest of Europe. Experts expected young people to place a relatively higher importance on recreation rather than on protection as compared to other age groups. Finally, when asked about differences in perceptions based on the level of rurality, experts expected citizens living in urban areas to place a high importance on recreation when thinking of forests.

Outcomes of public opinion survey (T3 + T4)

The outcomes of the public survey confirmed the experts' estimation in terms of the most important concern related to forests: the large majority of Europeans chose 'conservation

and protection' as their most important topic when thinking about forests. As second most important topic, citizens mentioned environmental issues; while only a minority mentioned utilisation-related topics, recreation or ecosystem services as major topics.

In terms of regional differences, Nordic/Baltic citizens place a relatively greater emphasis on the economic uses of forests, while Southern European citizens place a relatively higher importance on protection. In terms of gender differences, women place relatively greater emphasis on protection, while men care more about sustainable management issues and ecosystem services. Young people place a slightly higher emphasis on the issue of climate change than other age groups. And respondents with lower education as well as respondents with a higher degree of rurality tend to rank ecosystem services at a relatively higher level of importance than people with more education as well as people living in urban areas.

6.1.2 Synthesis of findings

Common issues raised

All three analysis channels found forest protection / preventing deforestation to be the most important topic when citizens think about forests. Furthermore, new findings collected via stakeholder and public surveys during this study confirm findings of previous studies indicating an increasing importance and greater public awareness on the issue of climate change and how it relates to forests.

Major differences between results gathered via different tools

From the public survey one can conclude that environmental issues, such as forest health and pollution, have become a key concern among European citizens only more recently because forest experts questioned during the stakeholder survey as well as previous surveys did not rank this concern as second most important issue. Contrary to expert expectations portrayed in the stakeholder survey, neither ecosystem services nor recreational purposes seem to be high on people's lists when thinking of forests (as indicated by the public survey results).

Current state of public perception and implications for forest communication

As such, the question related to the most important topics concerning forests for people are value judgments and express preferences of individuals. They can therefore not be compared to facts except for some basic truisms, e.g. that utilisation of a resource is only possible if the resource exists, and not vice versa. Hence, the preference for protection over utilisation reflects this appropriately, especially seen in the light of the public's perception of the condition of forests as described in the next section.

For future forest communication, this clear public focus on the importance of the amenity perspective (protection, biodiversity conservation, environmental issues) could be utilised to gain momentum and support for more comprehensive measures on these aspects. At the same time, this current public prioritisation of the amenity aspects also indicates room for better communication regarding the commodity perspective, i.e. sustainable forest management, etc.

6.2 Public perceptions on the condition of European forests

This section briefly reviews the major findings related to public perceptions on the state of European forests. Topics included the development of the forested area, the level of biodiversity and forest health, and the role played by and extent of damage of various threats to forests.

6.2.1 Summary of findings per analysis tool

Main lessons from previous surveys (T1)

Although forest ecosystem health and vitality, which includes issues such as forest diseases, insect pests, invasive species, fires or extreme weather events like storms, is an often addressed topic on political agendas as well as national and international media, the literature on public opinion related to this issue remains almost non-existent.

Outcomes of stakeholder survey (T2)

As regards the development of **forest area**, the experts unanimously stated that the majority of the public believes the total area to be decreasing. Slight differences are expected for Eastern and Southern Europe: stakeholders from Eastern Europe believe about half of their citizens perceive the forest area to be increasing slightly; stakeholders from Southern Europe believe their citizens perceive the forest area to be decreasing quite considerably.

As regards **biodiversity**, the majority of stakeholders indicated that the public sees biodiversity to be declining. Eastern Europeans were expected to have a slightly more positive view on this topic than the rest of Europe.

Two-thirds of the stakeholders believe the public perceives **forest health**, including forest vitality, effects from environmental issues and damages, to be declining. Additionally, many experts have expressed concern that the public may not have an opinion about this topic.

When asked about the public's perception on various **damages to forests**, the largest majority of the surveyed experts ranked **storms** as the highest perceived threat across the European public. The majority of stakeholders then identified **forest fires** to be the second most challenging threat as perceived by the general public. Most experts believe the public does not know enough about the threat of **wild animals** and **invasive species** to have formed an opinion about whether or not these threats are increasing or decreasing. Diseases and pests had not been mentioned by the experts as damage types of high concern to the general public.

Outcomes of public opinion survey (T3 + T4)

As expected by the experts interviewed during the stakeholder survey, the majority of Europeans think total **forest area** is decreasing. On a country level, only in Denmark and Austria the majority of citizens perceive the area to be stable or increasing. Overall,

women, people younger than 55 and people living in urban areas have a more negative image of change in forest area than the average European.

As regards **biodiversity**, the public survey result shows that once again the majority of Europeans perceives the level of biodiversity to be decreasing. Relatively more people from South East and South West Europe perceive a decrease in biodiversity than people from other regions. Once again, women, citizens below the age of 55, people living in urban areas as well as people with no education have a slightly more negative perception about this topic than the average European.

As regards **damages to forests**, the majority of citizens perceive **forest fires** to be the most important threat. As second, but already far less important, threat the majority of citizens ranked **damages from harvesting and management**. Damages caused by **wild animals** or **invasive species** were considered as an important issue by only a minority of respondents. It should be noted here that pests and diseases had not been specified as an answer category because they were not mentioned frequently by the key stakeholders. These issues could have been mentioned as additional points (open answer option in the public survey) or be included in the perception of overall forest health.

Strong regional differences have been observed: while the South East and South West regions place more emphasis on forest fires, Central Europe perceives damages from harvesting and management to be a greater threat. There are also some interesting differences depending on the other demographic factors: older people (55+) and citizens living in rural areas place a higher importance on storms as an increasing threat; citizens with no education or only primary education rank forest fires as a more important concern than citizens with higher levels of education.

6.2.2 Synthesis of findings

Common issues raised

As predicted by forest experts interviewed during the stakeholder survey and previous studies reviewed during the meta-analysis, the wide majority of European citizens perceive the total forest area as well as the level of biodiversity to be decreasing. In terms of threats and damages to forests, forest fires are perceived as the most pressing threat; at the same time citizens do not have strong opinion about threats from wild animals and invasive species, as predicted by the experts.

Major differences between results gathered via different tools

One interesting difference to what experts predicted is what citizens ranked as the second most important threat: damages from harvesting and management. According to experts, storms were predicted to be a very important concern among citizens given the recent storm disasters and coverage thereof in the media.

Current state of public perception and implications for forest communication

Total forest area increases – contrary to public perception: The share of forest and other wooded land of the total land area in EU-27 countries ranges from around 77% in Finland and 75% in Sweden to 1% in Malta (FAO, Forest Resources Assessment 2005 and Eurostat News release STAT/08/146). The latest FAO figures indicate an average

annual increase in European forested area of 877,000 hectares, or 0.9%, between 1990 and 2000 and a slightly slower expansion of total forested area between 2000 and 2005 of 661,000 hectares/year, or 0.7%. This forest area increase occurs in practically all EU-27 Member States, according to the most recent *State of Europe's Forests Report* (MCPFE 2007²). Changes in forest area are mainly caused by afforestation of former agricultural lands aiming to increase long-term timber supply, to increase the level of non-wood goods and services, and to provide alternatives for agricultural use of land. In general, afforestation activities have slowed down somewhat since 1980.

One possible explanation for the apparent public misconception about trends in the amount of forested area is the fact that while total forested area has continued to increase slightly in the EU-27, there are signs that forest fragmentation has been increasing (JRC). This may fuel the perception that forest area is decreasing, particularly in urban areas where many people notice fragmentation due to the development of infrastructure and new or expanding settlements. The public survey results indicate that indeed citizens from urban areas have a more negative image of change in forest area than their rural counterparts. Thus, future studies could investigate the differences in public perception of fragmented versus un-fragmented forests.

Forest biodiversity – existing data shows slightly more promising trends than perceived: No comprehensive assessment currently exists on the status change of forest biodiversity in the EU-27. According to the most recent and most authoritative *Report on the State of Europe's Forests* (MCPFE 2007), forest management practices have changed in ways that promote the conservation and enhancement of biological diversity, notably through the increased use of natural regeneration and more mixed species stands. Measures are also being taken to encourage deadwood accumulation. The same assessment reports that the area of mixed forests in Europe has increased annually during the last 15-year period by over 1%. Nearly 50% of the forests in Europe are regenerated by natural means (natural regeneration, natural regeneration enhanced by planting, and coppicing). The share of natural regeneration is increasing while the share of planting and seeding is decreasing. Over 85% of forests in Europe are semi-natural. Plantations cover about 8% of the forest area, located mainly in North West Europe.

According to the European Environmental Agency (EEA 2008³), which is mainly based on the same data as the MCPFE 2007 report, more forests are now allowed to grow into older development stages, which have positive effects on forest biological diversity. Afforestation programmes as well as decreasing grazing pressure lead to large-scale conversion of former agricultural land. Nevertheless, afforestation may also threaten existing biodiversity values in some localities, such as peatland when it is combined with draining.

According to the same report, so far, Europe's efforts in halting biodiversity loss in forests has had mixed results. According to IUCN, 11 mammal species depending on

² MCPFE 2007: Köhl M. and Rametsteiner E. eds. (2007) *The State of Europe's Forests 2007*. Ministerial Conference for the Protection of Forests in Europe, Liaison Unit Warsaw, Poland

³ EEA (2008): *European forests — ecosystem conditions and sustainable use*; EEA Report No 3/2008; European Environmental Agency, Copenhagen, Denmark

forest in some stage of their life cycle should be considered as threatened. In the case of forest birds, common populations show a decline in north and south Europe, while they are largely stable in the West and East.

The EEA assessment 2008 suggests that the 2010 target of halting the loss of biodiversity will not be met for all aspects of European forest biodiversity. This is a consequence of a range of factors, whereby the status of a limited number of threatened species, invasive species and nitrogen deposits are the three main areas of concern, according to EEA.

In sum, although existing data does not allow a comprehensive judgment, the trends measured in a number of main indicators for the development of forest biodiversity are actually indicating improvements in the conditions for forest biodiversity, contrary to public perception. However, especially with regard to some threatened species, such as forest birds, the trend seems actually to be a slowdown in their decline, rather than a stabilisation or a reversal towards greater numbers.

Some key threats and damages to forests (storms, diseases, pests and invasive species) not well known by the public: In terms of perceived threats and damages to forest health, forest fires are perceived as the most pressing threat followed by harvesting/management damages; at the same time citizens do not have a strong opinion about threats from wild animals, invasive species, pests and diseases because they do not know much about these topics.

Hundreds of thousands of hectares of forest are burnt annually. While forest fires continue to damage European forests every summer and risk levels remain high, more effective fire prevention, preparedness and suppression has helped many countries to better tackle this type of threat. Nevertheless, forest fires are a major issue in the Mediterranean area, where countries reported to the MCPFE that 1.3% of the forest area was damaged by fires. In other EU regions, less - and often considerably less - extensive areas are affected by fire (<0.1% of areas). The threat by and risk levels of fires remains high, as the devastating fires of the 2007 season demonstrated (particularly in Greece where 270,000 ha of land were burned, killing 76 individuals and injuring many others). Forest fire risk has been increasing due to climate change, population growth and activity as well as urbanisation. Given the possible climatic changes driven by global warming, the number of future wildfires across Europe is likely to increase. This is mainly due to increasing temperatures combined with the low humidity levels.

Adding to the severity of fire impacts is the fact that, contrary to insect infestations or wildlife damage, forest areas affected by fire are usually totally destroyed – at least temporarily.

Contrary to the high media attention given to forest fires, other very important threats to forest health are much less exposed to the public. As a consequence, the European public currently underestimates the damages caused by insects, diseases, invasive species and storms.

Forest damages by biotic and abiotic agents do not show a uniform pattern throughout Europe, and data available does not allow making a full evidence-based judgment for the EU-27 as a whole. Nevertheless, from the available data collected through the MCPFE,

the share of forest area damaged by *insects and diseases* in the EU ranges from some 10% of the area in South West Europe, to around 3% in Central Europe and around 1% in the Nordic / Baltic countries.

Except for Central Europe and the Nordic/ Baltic region, data availability on forest damage caused by *wildlife* is poor. The forest area affected by damages caused by wildlife exceeded 5% in the Nordic/ Baltic region and is around 0.3% in Central Europe. Wildlife is thus less of a damaging factor than insects and diseases.

In the last decade large *storm damages* have occurred in Europe almost annually. The largest area affected by storm damage was reported by the Nordic/Baltic region for 2005 affecting 2.8% of the forest area. The largest proportion of forests damaged by storm (6.1% of the forest area) is found in South West Europe. In other EU regions, such as South East Europe, storms affect considerably smaller areas (0.3% in the case of South East Europe). Thus, storms are a considerable damaging factor for European forests, affecting a larger share of the European forest areas than forest fires, or wildlife damage.

Direct human-induced damage factors include *harvesting and forest operations damage*, which may cause severe economical losses and decrease of the ecosystems' health and vitality. Contrary to expert predictions, the European public does rank this type of threat as relatively more important, second only to forest fires. Intensive tourism and recreational activities also impact forests and other wooded land, causing negative side effects such as contamination and vandalism. Human-induced damages by unidentifiable causes comprise damages from air pollution, traffic and cattle rearing. Damages from forest operations and other human-induced sources occur on less than 1% of the forest areas, according to the MCPFE (2007). However, data in the EU-27 on human-induced damages is not comprehensive.

Table 6.1 Estimated annual damage per type of threat (in % of total forested area affected)

Type of threat / damage	Annually affected forest area (% of total area)
Insects and diseases (invasive species)	1 – 10%
Storms	0.3 – 6.1%
Wild animals	0.3 – 5.0%
Forest fires	<0.1 – 1.3%
Harvesting / management	< 1.0%

[Source: based on MCPFE 2007 figures]

In summary, forest fires are perceived as the most pressing threat followed by harvesting/management damages; at the same time citizens do not have a strong opinion about threats from wild animals, invasive species, pests and diseases because they do not know much about these topics. This new insight on the status of public perception on forest health and damages should be assessed in light of future forest communication.

6.3 Public perceptions on benefits from and use of forests

This section draws together the various findings related to the perceived importance of forest benefits and various forest uses. Questions aimed to ascertain the level of understanding of the public as regards various types of benefits that forests can offer - both direct and indirect benefits.

6.3.1 Summary of findings per analysis tool

Main lessons from previous surveys (T1)

The public opinion on the productive functions of forests has been studied for many European countries. Previous studies conclude that the public in typical forest countries, such as Sweden, Norway or Austria seem to have a more sensitised, pragmatic and balanced view on the productive functions of forests as far as the interplay between human and nature is concerned; whereas eastern and southern European publics tend to view forest functions more from the amenity perspective. In the majority of countries, the public mentioned recreational and educational and scientific purposes as positive functions, while extensive logging, hunting and construction were generally regarded as negative forest-related activities.

Outcomes of stakeholder survey (T2)

The majority of stakeholders surveyed predicted that the European public will place the **preservation of biodiversity** and **opportunities for recreation** as the top benefits/services from forests. The role forests can play for **regulating climate** and **providing biomass for energy** were also predicted to be up and coming topics citizens will care about. Experts furthermore stated that citizens will likely not perceive the **provision of wood as a renewable material** as an important benefit. This type of ranking was expected to be consistent across all regions.

Outcomes of public opinion survey (T3 + T4)

The clear majority of European citizens sampled in the public opinion survey rank the **preservation of biodiversity** as a very important benefit of forests. Southern regions place an even higher emphasis on this benefit than Northern regions. **Recreational purposes** have been ranked as a considerably less important benefit than the preservation of biodiversity. The strongest emphasis on recreation is observed in South East Europe and the Nordic/Baltic region. The **protection from climate change and natural disasters** has been ranked as very important across Europe: all regions prioritise this aspect over other uses, particularly in South East Europe. Interestingly, the provision of biomass for energy and the provision of wood as a renewable material are ranked to be of more or less equal importance. For both of these benefits the perceptions of European citizens are much more diverse ranging from no importance to average importance to high importance levels. Age seems to positively influence the importance given to both of these types of forest services.

6.3.2 Synthesis of findings

Common issues raised

In line with previous studies and expert expectations as stated in the stakeholder survey, the preservation of biodiversity is perceived as one of the most important functions of forests. Furthermore, the expectation of experts in terms of an increasing importance placed on the value of forests for protecting against climate change and natural disasters was confirmed by the public survey: an overwhelming majority values this benefit over all other forest uses.

Major differences between results gathered via different tools

Interestingly, recreational purposes were not ranked as one of the top two most important benefits by European citizens. This contradicts findings of previous studies and the expectations of forest experts across Europe surveyed during the stakeholder questionnaire. Additionally, recreation was ranked as a more important benefit with increasing age, rather than as a very important value for young people, as predicted by experts.

A further difference of results between the two surveys carried out during this study is the fact that the forest function for providing bioenergy in the public's view is more or less of equal importance as its function for providing renewable materials, while experts had predicted that the public would place much higher importance to the bioenergy aspect relative to the renewable material aspect.

Current state of public perception and implications for forest communication

The public's opinion that utilisation aspects are less important than protective functions indicates a societal trend towards a greater concern for nature and a more critical eye towards resource exploitation. According to this most recent update on EU-wide public opinion, the protection of forests, conservation of forest biodiversity, and protection of people (in that order) precede any utilisation function of forests. Thus, for future forest communication, depending on the objectives of such communication, either this focus on the amenity perspective can be further nourished to continuously garner concrete forest protection actions; or sustainable forest use functions and benefits, including ecosystem services, can be stressed in future communication to enable the public to gain a more balanced perception of both the amenity and the commodity perspective of forests. Currently, recreation is the most relevant form of utilising forests, according to the public.

6.4 Public perceptions on the management of forests

This topic aimed to gauge the public's perception as to different types of management approaches and their suitability for reaching various environmental and/or production objectives.

6.4.1 Summary of findings per analysis tool

Main lessons from previous surveys (T1)

Previous studies concluded that sustainable forest management (SFM) is generally perceived positively, in particular in Finland, Germany, Lithuania, Sweden, Switzerland and the UK. However, most countries have not yet explored public opinion on this issue.

Outcomes of stakeholder survey (T2)

As regards the **quality of forest management**, more than half of the expert stakeholders interviewed thought that the majority of the EU public views current forest management practices as doing a good job. One quarter of experts thought that citizens may have a negative perception of current management practices. No extreme views – either positive or negative – were expected however. Overall, eastern and southern Europeans were expected to be more critical towards current management practices.

For better protecting **biodiversity**, experts were divided over what EU citizens would prefer – more or less active management. On average, their guess was that citizens would demand less active management. For better protecting against **climate change**, again experts were divided over what EU citizens would prefer; on average, however, they guessed that citizens would demand more active management. For providing **wood for bioenergy** as well as for providing **wood as a renewable material**, the majority of experts believed citizens will request more active management. For providing **recreational opportunities**, expert views were divided: for Eastern Europe experts predicted a majority of citizens to demand less active management, while for southern Europe they predicted the majority to demand more active management.

Outcomes of public opinion survey (T3 + T4)

While the question about citizen's perception on the overall quality of forest management was omitted in the public survey, the following results can be concluded for the public's preferred style of management per forestry benefit/use.

For better protecting **biodiversity**, the clear majority of Europeans surveyed via the public questionnaire requests more or much more active management. South East Europe and the Nordic/Baltic region show the most pronounced support for more or much more active management. Furthermore, greater importance for more active management is placed with increasing age. On the contrary, citizens with secondary or tertiary education, on average, place less importance on more active management for protecting biodiversity. For better protecting against **climate change**, the large majority of Europeans requests more - or much more - active management. Relatively fewer people in the Nordic/Baltic region put emphasis on active management for this cause. In terms of demographics, women, older people and citizens with primary education tend to place higher emphasis on more active management for protecting against climate change. For providing **wood for bioenergy**, citizens are divided in opinion, about half favour less active management and the other half favour more active management. The Nordic/Baltic region has the highest proportion of people calling for more active management for this cause, while the south west of Europe has the lowest proportion calling for more active management. Once again, people with primary education call for more active management as compared to other levels of education. For providing **wood as a renewable material**, again an

equal distribution across the scale has been observed. However, for this item regional differences are quite significant: citizens in the South West region place a stronger emphasis on less or much less active management than people in the South East region. North West and central Europe are in line with the EU-27 mean. For providing **recreational opportunities**, the clear majority of Europeans would like to see more active management.

6.4.2 Synthesis of findings

Common issues raised

Based on previous studies and the survey among experts, the overall perception of Europeans on the quality of forest management is rather positive. Interestingly, however, there are discrepancies between expert predictions and actual public views on the preferred management style for all types of uses/benefits.

Major differences between results gathered via different tools

The clear majority of EU citizens stated they would favour more active management (multifunctional and sustainable management) to better address the forest functions of protecting biodiversity, protecting against climate change and providing recreational opportunities. Experts had not predicted such a clear preference statement.

For the other two forest functions – providing wood as a renewable material and providing wood for bioenergy – experts had predicted that the majority of EU citizens would favour more active management, while in reality, the public opinion survey showed that the European public is more or less evenly divided on what the best forest management style should be (more or less active management) for these two forest uses.

Current state of public perception and implications for forest communication

As in previous questions probing preferences of the public, the main lesson to draw for forest communication is more to calibrate the expectation of forest communicators better with the public's opinion, rather than to address a potential 'misperception' of the public. A lesson learned for future communication is that perception of preferred forest management styles varies widely (depending on the use/benefit objective) but overall is positive (more active management preferred) for environmental purposes and neutral only for production type of purposes (because citizens are divided whether more or less management would be needed). Thus, particularly for the fields where opinions vary widely, management objectives and practices may have to be adapted or explained further in order to be more widely accepted as positive by the European public.

6.5 Public perceptions on the interplay of forests and new societal challenges

This part of the study explored the perceived relations between forests and new societal challenges including climate change and bioenergy. In particular for these new challenges and their relationship with forests, it is important to analyse whether public perceptions match the facts and/or what has been communicated so far on the topic.

6.5.1 Summary of findings per analysis tool

Main lessons from previous surveys (T1)

Previous studies have stressed the importance of forest size and forest resources in relation to the issue of climate change. On a country level, the majority of the German public, for example, believes that forests can have a positive impact on climate change. The majority of the UK public wishes for more forest cover and is very much aware of forest's capability to remove carbon dioxide from the atmosphere.

Outcomes of stakeholder survey (T2)

Most experts interviewed via the stakeholder survey believed that climate change is influencing the public's opinion on forest management towards greater protection and consequently more active management. In addition, many experts thought the public does not have formed an opinion on this topic yet.

As regards the role of bioenergy as a means to lower GHG emissions and tackle climate change, experts stated that this new societal challenge will likely raise the public's demand for more active and more sustainable management. For example, some experts could imagine that citizens request the creation of special purpose areas. At the same time, however, many experts also thought citizens may not have formed an opinion on this topic yet.

Outcomes of public opinion survey (T3 + T4)

Questions asked during the public survey were based on the outcomes of the stakeholder survey and slightly differ in content. They focus on exploring the perceived linkages of forests and climate change.

When asked whether more **wood as construction material** can help reduce climate change, public opinions varied greatly across Europe. While the South East and South West regions have a more pronounced negative view on this topic thinking it cannot really help climate change (particularly the Netherlands, Spain, Bulgaria, Lithuania, Romania, Greece and Malta), others – namely France, Austria, Finland, Estonia, Slovakia and Slovenia – have a more positive viewpoint. Older people, people with primary education, and rural people have a slightly more positive opinion than the average EU citizen.

Similarly, public opinions varied greatly across Europe when asked whether **more wood for bioenergy** can help reduce climate change. Once again the South East and South West have a more pronounced negative view on this topic. Women are more divided in opinion than men. People with no or only primary education - on average - are in favour of this option for tackling climate change. Citizens living in urban areas have a more negative opinion while rural people are more divided on the topic.

When asked whether **more afforestation** can help reduce climate change, the majority of EU citizens clearly believe in this option, i.e. planting new trees can help tackle climate change. The support for this option is greatest in central Europe – particularly Slovakia

and Hungary -, while the support is somewhat less pronounced in the Netherlands, Germany, Austria, Spain and Sweden.

6.5.2 Synthesis of findings

Common issues raised

A clear finding of this study is that people are more and more concerned with and interested to learn more about the interplay between forests and climate change.

Major differences between results gathered via different tools

Despite a common perception of the overall importance and urgency of this topic, the European public is currently divided as to what types of forest management measures (wood as renewable material, wood for bioenergy, afforestation, etc.) could (best) help address climate change.

Current state of public perception and implications for forest communication

Carbon accumulates in forest ecosystems through absorption of atmospheric CO₂ by plants, and is retained for periods of different length in the woody biomass, litter and soils, as well as in wood products. However, carbon is also emitted by both natural processes (e.g. due to disturbances) and human activities. From 2000 to 2005, the total amount of carbon that was added to the woody biomass of the forests of the EU-27 countries averaged 128 million tonnes of CO₂ per year. This could offset less than one-tenth of the CO₂ equivalent emissions from these countries, according to the MCPFE (2007). These figures do not include the carbon stored in harvested wood products. However, they show that forests are –in accordance with public opinion- able to help mitigate climate change.

Afforestation is one means to sequester carbon under a wide range of conditions. In a similar way, harvested wood products represent a carbon stock in their own right. Adding to this carbon stock by using a higher share of wood instead of substitution materials which have high energy requirements associated with their production is in principle a means to help mitigate climate change. While a large number of studies and reports exist on the topic on the relative CO₂ substitution effects, there is no unanimous agreement across sectors about the exact amount of net effects of using more wood instead of materials such as concrete and steel. Nonetheless, it is the substitution of energy-intensive and non-renewable materials by wood that represents the largest long-term contribution that forests and wood can make to climate change mitigation. Thus, the people's varied perception of this core issue should be addressed by active facts-based communication.

Wood is one of the major sources of renewable energy in the EU and its importance is often underestimated, notably because of measurement problems. Wood-based energy, as far as it substitutes fossil fuels such as oil or gas, is thus considered a more CO₂ neutral source of energy. While using more wood for energy can thus help reduce climate change through the substitution effect, there is an ongoing debate on the limits and conditions under which a valuable resource such as wood should be used for energy (cascading utilisation before burning), and about the effects of larger land-use changes should more

demand for renewable energy lead to larger-scale afforestation programmes of species suitable for short rotation biomass production, such as eucalyptus, willow or poplar.

Similar to the substitution of energy intensive materials by wood, a substitution of fossil energy by renewable energy can thus help reduce climate change, if the latter are sustainably produced. Thus, the people's varied perception of this core issue should be addressed by active facts-based communication.

As mentioned above, afforestation is one means to sequester more carbon from the atmosphere. Public support for this option to tackle climate change has likely been shaped via intensified and prolonged media coverage on tropical deforestation and related issues. The important point with respect to the implications of the current overwhelmingly positive public perception of afforestation measures is the fact that this enthusiasm could theoretically be utilised for generating further public awareness and political momentum for LULUCF and REDD related afforestation and climate mitigation measures.

The question for future forest communication on the linkages with all these new societal trends remains what 'objective' information should be conveyed as these new fields are still being explored and best practices are not always clear, i.e. should items like 'carbon conscious agriculture', special purpose areas for bioenergy production, etc. be promoted via active communication – even if not fully explored and backed up with scientific, economic, etc. studies yet?

6.6 Public opinion on forest communication

The final topic analysed during the study is public opinion about the availability and quality of various types of forest communication. In combination with the findings on the topics above, the outcomes of this analysis will provide a thorough picture on current public perceptions and can thus feed into lessons learned on how to improve forest communication in the future and what type of information is currently missing or portrayed with a misleading emphasis (see next chapter).

6.6.1 Summary of findings per analysis tool

Main lessons from previous surveys (T1)

The studies reviewed did not specifically address the issue of quality and types of forest communication.

Outcomes of stakeholder survey (T2)

When asked about what they see as major problems with current forest communication, experts unanimously agreed that communication needs to be improved and emphasis ought to be placed on unbiased and proactive communication with clear and simple messages. Currently experts observe a lack of knowledge and limited participation among the general public on forest-related issues, both of which they suspect may be a result of the rather fragmented and reactive forest communication approach currently implemented.

Experts pointed out the following two content topics as priorities for improved forest communication: forest management practices and values (**sustainable forest management**) as well as the interplay between forests and **climate change**. Further issues of importance include **forest benefits**, **ecosystem services**, and information on the **general condition of forests** and their importance (the last topic particularly for Eastern Europe).

Experts would primarily target young people and their educators as well as decision makers and politicians with improved forest communication. The general public is of course also an important audience.

Preferred means for improved communication among experts include more presence in the media and coordinated media campaigns combined with simple, clear and attractive messages. Furthermore events, better use of ICT tools and greater presence in schools were highlighted as good tools for improving forest communication.

Outcomes of public opinion survey (T3 + T4)

When asked what topics they would like to learn more about, the clear majority of the European public is interested or very interested in more information on balancing protection and use functions of forests (i.e. **sustainable forest management**). Slightly lower interest is recorded in the Nordic/Baltic region and for 18-24 year olds. Similarly, a majority of citizens is interested in learning more about the linkages between forests and **climate change**, particularly citizens from South East Europe. Nordic/Baltic citizens and 18-24 year olds once again show slightly lower levels of interest. Next, the topics of **biodiversity**, **recreation** and the **general condition of forests** all represent topics that European citizens would not mind learning more about. Similar to the interest patterns for the two most popular topics, citizens from South East Europe are slightly more interested and citizens from the Nordic/Baltic region are slightly less interested than the average European. The public's interest in learning more about the provision of wood for **bioenergy** or as a **renewable material** is considerably lower than for the other topics. No considerable differences were observed between regions. Again – as for all other topics – 18-24 year olds are less interested in learning about these topics than other age groups.

6.6.2 Synthesis of findings

Common issues raised

Public survey outcomes confirmed expert predictions on the two most requested topics for further information: sustainable forest management and the interplay between forests and climate change. Additional confirmed topics of considerable public interest include biodiversity, recreation and the general condition of forests.

Major differences between results gathered via different tools

One topic for further exploration of real interest remains the use of wood for bioenergy and as a renewable material. While it could have been expected that citizens would be very interested in learning more about these topics since they are relatively new

benefits/uses as compared to some of the other topics, the public survey showed relatively low interest.

Another divergence to reconcile is the discrepancy between young people being listed as the experts' primary target audience and that same group's stated level of (lack of sufficient) interest in learning more about any forest-related topic.

Current state of public perception and implications for forest communication

Forest communication is evidently challenged to reach out to the public, and particularly to the younger public, on topics that are currently not high up on the list of interesting topics to society.

6.7 Summary

This chapter provided a synthesis and thematic review of the results gathered via the three channels for information/data collection applied in this study (meta-analysis of previous studies, questionnaire for key stakeholders, and public survey). Findings were juxtaposed per theme to generate the latest status quo of current public perception on forests and forestry across the EU-27. First interpretations on potential implications for future forest communication have been outlined.

The next chapter draws conclusions based on this synthesis chapter and provides some recommendations for the way forward of European communication on forests and forestry.

7 Conclusions

This chapter builds on the synthesis of findings in the previous chapter and offers first conclusions on crucial parameters of the latest status quo of public perception on forests and forestry and on the key areas where communication on the role of forests and forestry could be improved.

Whenever relevant, some first recommendations on how to potentially improve communication on these topics are elaborated.

7.1 Crucial parameters of the latest status quo of public perception on forests and forestry in the EU-27

As a first step, the main parameters of the latest state of public perception (June 2009) based on the representative EU-27 survey carried out in this study are presented to better understand the baseline, the basic starting point and context for any improvements of forest communication to take place in.

7.1.1 Shifted viewpoint from a traditional commodity-based and recreational management demand to a demand for greater protection and management for ecosystem services

As various parts of the public survey have demonstrated, the European public has clearly shifted its expectations as regards forests and forestry from a traditional commodity and recreational perspective to a demand for greater protection and management for ecosystem services (i.e. emphasis on forest services and benefits centred on protection). This preferred way of looking at forest and forestry related issues has emerged relatively recently as key stakeholders and previous surveys still showed a greater emphasis on utilisation aspects.

Corresponding to this general desire to shift away from focussing on utilisation functions of forests, an important finding of the public survey has been that the clear majority of EU citizens would favour more active management (multifunctional and sustainable forest management) as the preferred management style to enable such a shift towards a greater emphasis on forest services and benefits centred on protection. This is a vital outcome of this report as it helps set the tone for future forest communication.

Any future communication has to take into account this basic viewpoint among the European public and – depending on the purpose of the communication – can either build on this viewpoint, e.g. for further promoting the concept of sustainable forest

management, or aim to broaden the public's perspective by highlighting the benefits of utilisation-related forest functions. Even for this latter communication topic, the public survey results have shown that management for energy and wood products, for example, – though these topics are not yet well known by the public – is viewed ambivalently, not negatively.

7.1.2 Public perception on European forests is based on diverse sets of information, including communication on worldwide forest and forestry issues

Partially, this shift in the public's basic perception of now viewing European forests from a protection perspective rather than a more traditional use perspective can be attributed to the fact that the European public receives information from all types of media outlets with a rather global coverage of the issue. Global communications media have – over the past decade – broadly covered the issue of tropical deforestation and its connection to climate change, worldwide forest fires, illegal logging, deteriorating levels of biodiversity and associated species extinctions, etc. Thus, Europeans no longer view the state and functions of European forests in isolation. Rather, their perception of the state of forests, forest health and damages, biodiversity levels, and their key issues of concern regarding forests is based on their assessment of the global situation and a diverse set of information, including global news on deforestation rates, studies on European wildfires, and citizens' own impression of forest management activities when walking through their local forest.

7.2 Identified key areas for communication improvement

Given the update on the current underlying perceptions of the European public described in the previous section, it is now possible to identify key areas for communication improvement – as indicated by the outcomes of the analyses carried out in this study.

7.2.1 Key area 1 – the need for a clear and sufficiently detailed message presented in a neutral manner that allows the public to make appropriate distinctions depending on the relevant specific issues and challenges, including forest area, biodiversity and damages, for various geographic contexts (i.e. local forest, European forests, forests worldwide)

One of the key findings of the public opinion survey has been the fact that the European public is clearly worried about the condition of forests. While their concerns may not always reflect trends depicted by the latest data, it is nevertheless a strong stated perception that needs to be addressed by future forest communication. In addition to the fact that citizens may pick up on signals, such as their surrounding forests being lost to infrastructure development, urban sprawl and increasing pressures on forests due to climate change and damages, one likely key reason for the rather negative perception of the state of European forests is due to the fact that citizens have a hard time separating the information they receive in the media regarding the global state of forests (particularly deforestation of the tropical rainforests) and what is actually happening in their own country's forests. A future European / national forest communication campaign with a

clear message could help further clarify this global perception on forests and sensitise the public toward making appropriate distinctions depending on the relevant specific issues and challenges for the various geographic contexts (i.e. local forest, European forests, or tropical forests worldwide).

Additionally, apparently contradictory and controversial complex issues (e.g. that increased wood harvesting and biodiversity need not only be mutually exclusive, but can be mutually reinforcing) need particular attention when communications are drafted in order to present them in a clear and sufficiently detailed and neutral manner.

7.2.2 Key area 2 – the need for stressing the important role of forests and wood in tackling climate change

The outcome of this study underlines the importance Europeans place on learning more about the interconnections between forests and climate change. The public survey has shown that the majority of Europeans believes that forests can play an important role in tackling climate change.

Even though global media coverage has been rather intense on various topics related to this issue over recent years, most Europeans do not feel well informed about various types of measures and their impacts. Thus, future forest communication should make this a priority topic to ensure the European public is well informed about the forests' role in combating climate change.

In particular, the European public was divided on the role of forests (wood) as an input for bioenergy and, in turn, the role of bioenergy in tackling climate change; a very reasonable finding in light of the complexities of the issues at hand and the fact that disagreements continue to exist among experts. Consequently, the public was also divided in opinion on whether or not more information is needed on these specific topics. Future forest communication ought to be aware of the fact that the public is certainly taking an interest in climate change related topics, but once again citizens need clear and sufficiently detailed messages in a geographically-explicit context in order to continue building their opinions on these topics.

7.2.3 Key area 3 – the need for addressing specific audiences

The detailed geographic and demographic analysis carried out during this study also provides important insights regarding a need to tailor certain aspects of future forest communication for specific audiences. On a regional level, the South East region is most interested in learning more about forests; whereas the Nordic/Baltic region seems to 'suffer' a certain forest communication fatigue. Thus, these regions are best addressed via diversified communication strategies.

Furthermore, when reviewing other demographic indicators, future forest communication could put emphasis on communicating with the more disinterested public, i.e. the young people. For this demographic group an urgent discrepancy between their apparent lack of

sufficient interest in forest-related issues and the fact that they are the future and should be – according to European forest experts – the focus of any future forest communication. While there could be many factors leading to the apparent disinterest of younger people, e.g. lack of educational emphasis on the topic, it could well be that today’s “IT youth” is overloaded with information and therefore communication strategies need to break through the ‘continuous information overload’ by having punchy and appealing methods and content.

Another potential target group lending itself for further assessment as regards specific forest communication are women. The public survey results show that women – on average – place an even higher importance on the amenity functions of forests and are more concerned about forest health and damages than men.

Finally, the public survey also showed that future forest communication should acknowledge that rural society is largely not discernible from an urban population in terms of opinion and thus no differentiated communication strategy for urban versus rural areas is needed.

7.3 Eurobarometer survey for follow-up of changes in public opinion

The Eurobarometer survey questions (see Annex to this report) can be utilised to follow-up changes in public opinion in the future. All or some of these questions can be included in a Eurobarometer survey a few years from now in order to check potential changes in public opinion compared to the results of the representative EU-27 survey carried out during this study.

To achieve this comparability of results and thus to allow for a follow-up of results and recommendations of this study, the Eurobarometer questions are similar to the ones posed in this study. The language has been further simplified, however, based on feedback and experiences during this study’s public survey. This hopefully further reduces misinterpretations and limits “I don’t know” answers. Since it is possible to ask a few more questions during the Eurobarometer survey, several additional questions have been added.

In terms of the preferred Eurobarometer format for this type of survey, the ‘Special Eurobarometer’ seems one of the most suitable outlets. This type of Eurobarometer survey allows for the representative sample of approximately 1000 interviews per Member State while at the same time offering sufficient time and ‘space’ for this in-depth thematic analysis. Additionally, the personal face-to-face interviews lend themselves better for additional clarifications in case the respondent does not feel comfortable with terminology. If a ‘Special Eurobarometer’ on this thematic topic for some reason cannot be included in the standard polling wave at the time new results should be gathered, another feasible option is to include one or two of the key questions in the ‘Standard Eurobarometer’ to gauge any changes in public perception to highlight one or the other aspect under review. Finally, a ‘Flash Eurobarometer’ could be considered in case ad hoc and quick results are needed to check potential changes in public opinion of a specific

target group, i.e. to assess whether new forest communication strategies are reaching their intended objectives in terms of reaching the young people.

7.4 Concluding remarks

The results of this study shed some interesting new light on various parts of public perception regarding European forests and forestry. Compared to previous studies the analysis reflects the most recent developments in public opinion based on the past few years of forest communication. While the outcomes showed some useful overall trends in public perception, the study also pointed out key shortcomings of current forest communication across the European Union and provided three key areas for improvement. Furthermore, when comparing public opinion to reality, the study has also highlighted some key areas where reliable data is currently not accessible, e.g. forest management damages or the role of forests in mitigating climate change, and thus future communication strategies could include a message on the necessity of having a comprehensive and continuous forest monitoring in order to have access to more complete and reliable data in the future. Finally, the Eurobarometer questions serve as a valuable tool for future follow-up on the quantitative outcomes of this study.