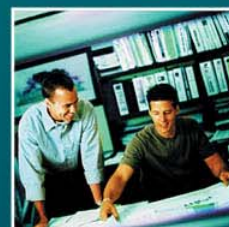
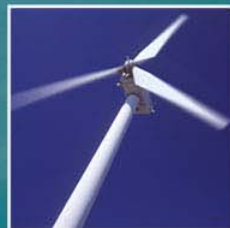
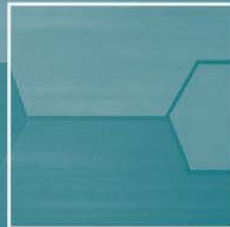
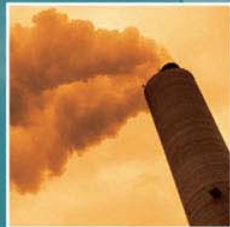


Report for the European Commission

Public Consultation on the role of agriculture and forestry in achieving the EU's climate change commitments – Results

Final Report

February 2011



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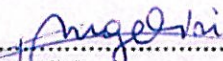
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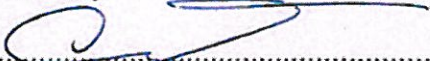
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Executive Summary

Background

The EU has committed to reduce greenhouse gas emissions by 20% below 1990 levels by 2020, and by more if conditions are right. The target is expected to be achieved via a combination of efforts in the sectors covered by the EU Emissions Trading System (ETS), and the other, non-trading sectors via the Effort Sharing Decision (ESD). Neither includes land use, land use change and forestry (LULUCF), international shipping or aviation. However, Articles 8 and 9 of the ESD require the Commission to assess, by mid 2011, modalities for the inclusion of emissions and removals from activities related to LULUCF in the EU's reduction commitment and, as appropriate, make a legislative proposal.

To this end, the Commission launched an internet based public stakeholder consultation which ran from September 2010 until November 2010. The objective of this consultation was to collect views from citizens, organisations and public authorities on how land use activities may contribute to climate change mitigation; if LULUCF should count towards the EU's greenhouse gas reduction commitment; and, if so, the ways in which this could be done.

Purpose of this Report

This report presents an analysis of the results of the public consultation to explore what the EU's different stakeholders think about the possible inclusion of the LULUCF sector in the EU's GHG emissions reduction target. In particular, the objective is to provide a clear and objective analysis of the responses to the public stakeholder consultation as regards: a) the respondents' views and b) the underlying factors explaining the respondents' views.

Entec understands that all responses submitted to the European Commission have been in turn provided to Entec for this study and therefore the results given in this report are based on a complete dataset to the best of our knowledge. Entec cannot be held responsible for biased analysis due to omitted responses.

Main Findings

The following points can be made based on the analysis of the answers to the multiple choice questionnaire (questions 1 to 14):

- Of the 153 responses, contributions were submitted by private companies, business and industry organisations (30%), individuals and private land owners (30%), non-governmental organisations (16%), academia and research (14%) and government and public bodies (10%).
- Most stakeholders (90%) believe that land use activities could contribute to mitigating climate change (Q6).



- Overall, most respondents thought that all land use activities could contribute to climate change mitigation already in the short term and between 2020 and 2050 (52% and 30% of all respondents, respectively). Fewer respondents selected activities beyond 2050 (18%). Respondents favoured the option of ‘increasing CO₂ sequestration in forestry’, although other options such as to ‘increase biomass production and use for substitution of carbon intensive materials’ and ‘increase biomass production and use for substitution of carbon intensive energy sources (fossil fuels)’ were close second and third choices (Q6-1).
- The majority responded that LULUCF should be part of the EU's GHG emissions reduction target in 2020 (64%), with a slight tendency in favour of including the sector only if the EU were to take on a more ambitious commitment than the current one.
- The majority of respondents suggested that, if included, emissions and removals related to afforestation/reforestation, deforestation and forest management should be accounted for on a mandatory basis (75% on average). About 50% of the respondents that thought land use activities could contribute to climate change also wanted changes in the harvested wood products and greenhouse gases associated with wetland management and cropland management to be mandatory (Q8-4).
- Respondents tended to favour the option in which emissions and removals related to LULUCF would be regulated through a separate framework (34%), preferably with a sector target of some sort, or through the effort sharing decision (28%). Only 14% wanted the sector to form part of the EU Emissions Trading System (Q9).
- The vast majority (82%) considered that existing EU and Member State policies are insufficient to ensure that land use activities contribute to climate change mitigation (Q10) and that all activities need to be addressed (Q10-1) via a combination of regional, MS and EU policies (Q10-2) (63%).
- Finally, the majority agreed that there is a need for further harmonisation and standardisation between Member States in terms of monitoring, reporting and verification (MRV) (Q8-7) (60%).

In addition to the set questions, respondents could provide additional comments and views. The main ones were:

- i. It is important that additional emissions are accounted for (and this includes emissions from the whole life cycle and carbon debts);
- ii. Principles of environmental sustainability should be respected at all levels (policy development, management of land/forests, accounting of emissions, etc), and policies should be integrated to avoid contradicting incentives and promote emissions reductions from LULUCF;
- iii. Additional emphasis was given to some mitigation options for reducing emissions. These are: not draining / restoring peat-land; reducing / avoiding of deforestation; afforestation; reducing conversion of high carbon stock land to arable land; adapting crop rotation patterns by lengthening and increasing the complexity of the rotation; and restoring wetlands. Also only short lived crops could contribute within a 2020 time frame;



- iv. Biomass for energy and other non-food uses may have negative implications such as increased use of fossil fuels, emissions, threat to biodiversity and competition for land and should therefore be treated carefully. However, when developed sensibly, i.e. in a way that is sustainable, it could be helpful in achieving climate change mitigation.



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1. Introduction

1.1 Background

The EU has committed to reduce greenhouse gas emissions by 20 below 1990 levels by 2020, and by more if conditions are right. The target is expected to be achieved via a combination of efforts in the sectors covered by the EU Emissions Trading System (ETS), and the other, non-trading sectors via the Effort Sharing Decision (ESD). Neither includes land use, land use change and forestry (LULUCF), international shipping or aviation. However, Articles 8 and 9 of the ESD require the Commission to assess, by mid 2011, modalities for the inclusion of emissions and removals from activities related to LULUCF in the EU's reduction commitment and, as appropriate, make a legislative proposal.

To this end, the Commission launched an internet based public consultation which ran from September 2010 until November 2010. The objective of this consultation was to collect views from citizens, organisations and public authorities on how land use activities may contribute to climate change mitigation; if LULUCF should count towards the EU's greenhouse gas reduction commitment; and, if so, the ways in which this could be done.

1.2 Objective

The objective of the study is to analyse and interpret the results of the public consultation to explore what the European Union's different stakeholders think about the possible inclusion of the LULUCF sector in the EU's GHG emissions reduction target. More specifically, the objective is to provide a clear and objective analysis of the responses to the public consultation as regards: a) the respondents' views and b) the underlying factors explaining the respondents' views.

The project has involved the following main tasks, as set out in the project specifications:

- Task 1 - Run a basic statistical analysis of the replies given to the multiple choice questions (including grading questions or matrix questions) to establish the dominant views on the subject among respondents;
- Task 2 - Run a statistical analysis of the results of the multiple choice questions (including grading questions or matrix questions) to determine the main factors shaping the different viewpoints;
- Task 3 - Based on tasks 1 and 2, sort the forms among 4-6 representative groups (to be characterised) of like-minded people;
- Task 4 - For each of the representative groups identified under task 4, make a summary of their contributions under the free text questions.



1.3 Consultation process

The consultation period stretched between 10 September and 14 November 2010. An internet-based questionnaire¹ was made available on the "Your voice in Europe" website along with a background note and links to relevant legislation and work carried out by the informal expert group on climate policy for LULUCF, established by the Commission. As some respondents appeared to encounter technical difficulties with the reply format, the deadline was extended by a week.

The questionnaire contained 15 questions (with follow-ups) in sections divided as follows:

- Section A (Q1 to Q5) described the profile of the respondents;
- Section B (Q6 to Q7) enquired about opinions on how land use activities contribute to climate change mitigation;
- Section C (Q8, including all sub-questions Q8-1 to Q8-7) enquired about the role of LULUCF in the EU's GHG reduction commitment;
- Section D (Q9 to Q14) enquires about the role of EU policies in addressing land use activities. An additional text box (Q15) allowed respondent to submit further clarifications and comments to the issues raised in the questionnaire.

Respondents were asked to indicate whether the input was individual or from an organisation, and in the latter case to provide their affiliation. In total the consultation resulted in 153 responses, some of which were supplemented with additional documentation via e-mail. By way of comparison with other consultation on related topics, this response rate is higher than that of the consultation in 2004 on the work which resulted in the Forestry Action Plan (50), similar to that of the consultation in 2010 on biofuels and indirect land use change (145), and somewhat lower than that of the consultation on the Green Paper on forest protection and information (260). Others still have attracted many more responses (5,000 in the CAP reform consultation and around 3,000 in the Biodiversity 2020 consultation). However, the number of replies to this consultation is in line with expectations considering its technical nature and therefore the feedback is considered satisfactory.

1.4 Structure of the Report

Following this introductory chapter the report is divided into four main chapters:

- Chapter 2: General trends, in this section analysis from task 1 is reported;
- Chapter 3: Specific trends and interrelationships between responses, in this section analysis from task 2 and 3 is reported;

¹ Via the Interactive Policy Making (IPM) System



- Chapter 4: Analysis of the free text responses, in this section analysis from task 4 is reported;
- Chapter 5: Conclusions.

The detailed findings and associated tables of general trends can be found in Appendix A and the questionnaire used by the respondents is provided in Appendix B.



2. General assessment

2.1 Overview

The objective of this section is to establish the dominant view of the responses. A basic initial analysis of the multiple choice responses was carried out to highlight the key trends (corresponding to Task 1 of the project). A more detailed analysis and graphical representation of the answers to each question is available in Appendix A. The questionnaire is composed of four main sections which are reflected in this chapter:

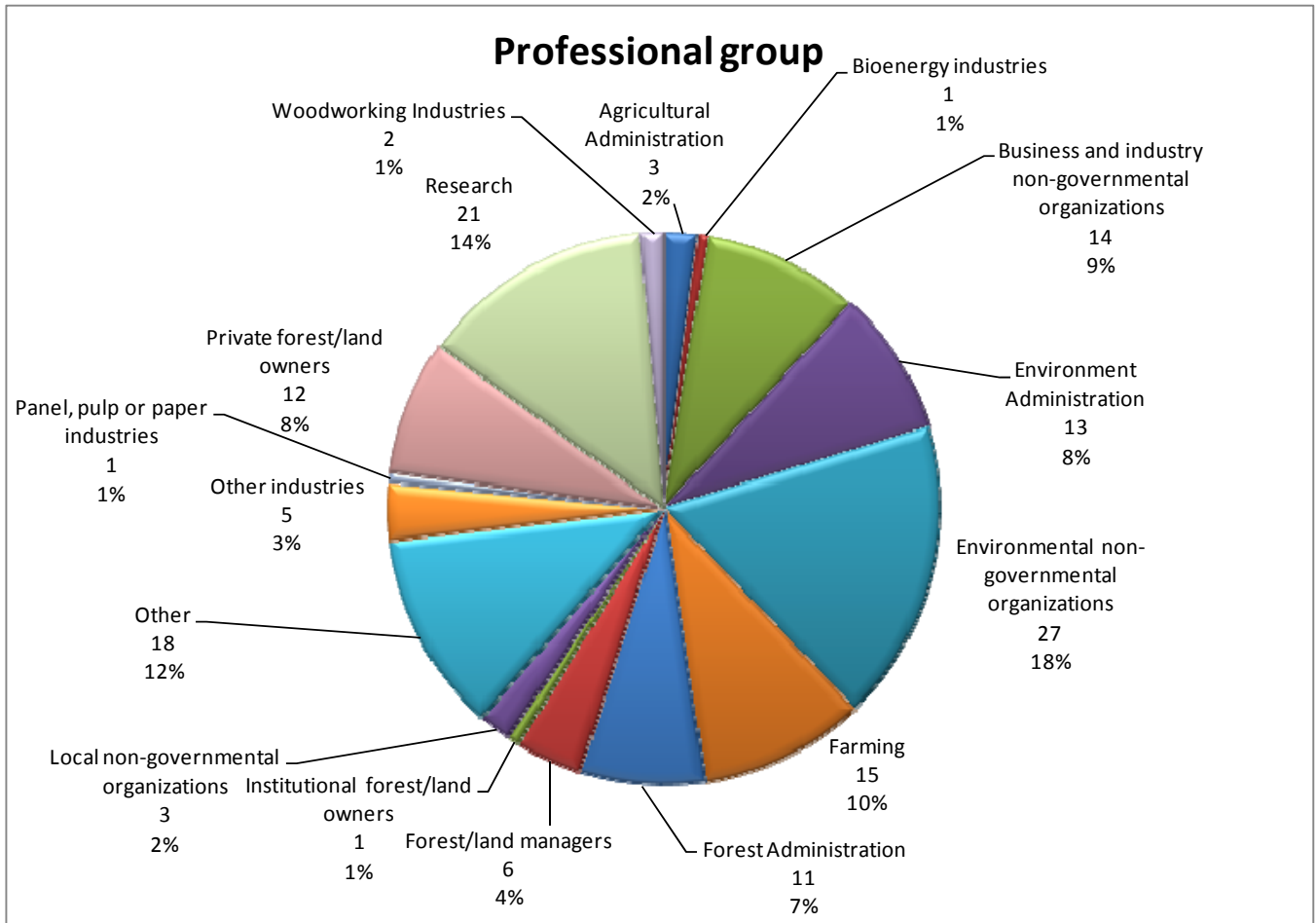
- Section A describes the profile of the respondents;
- Section B enquires about opinions on how land use activities contribute to climate change mitigation;
- Section C enquires about the role of LULUCF in the EU's GHG reduction commitment;
- Section D enquires about the role of EU policies in addressing land use activities.

2.2 Main Findings in Section A

Overall, there were 153 participants in the consultation. The majority of respondents participated on behalf of an organisation (51%), followed by independent views as private citizens (39%) and responses on behalf of a public authority (10%). Roughly a third of the respondents worked for environmental Non Governmental Organisations (NGOs) and research organisations (18% and 14% respectively), whereas the remaining respondents were distributed among a varied range of companies and organisations. The breakdown of professional groups (question 2 in the questionnaire) is shown in the figure below.



Figure 2.1 Professional group breakdown



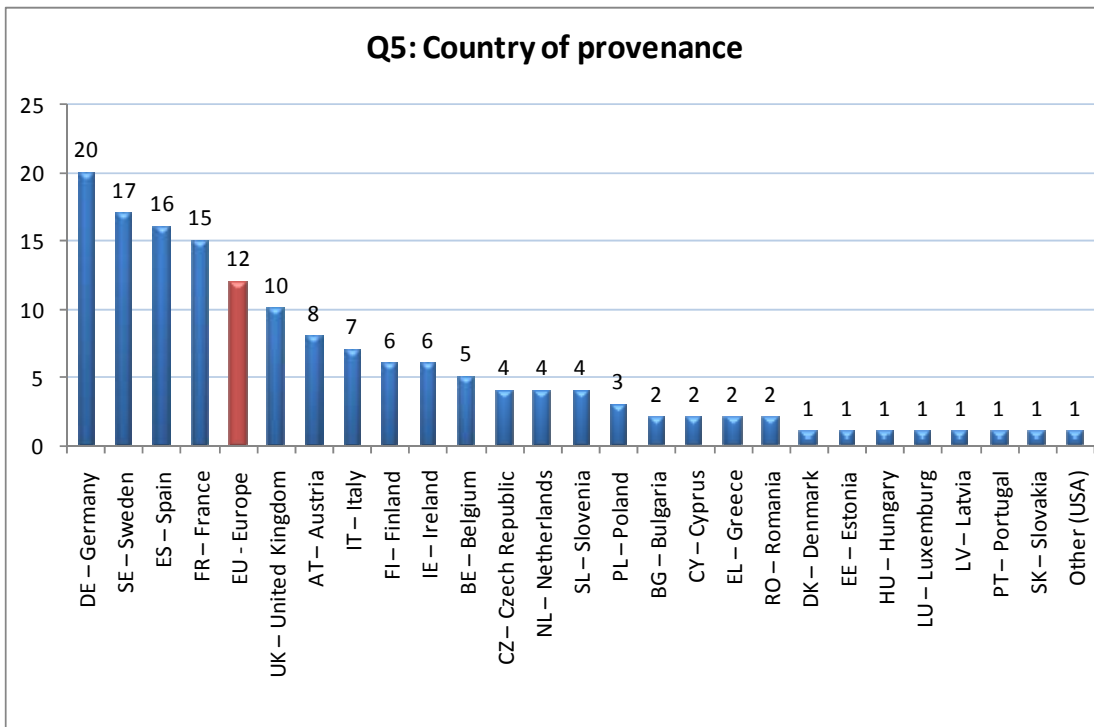
Note the graph shows both the total count of responses for each category and the relative % compared to the total

All the EU Member States were represented with the exception of Malta and Lithuania. The majority of respondents came from five countries: Germany, Sweden, Spain and France, as shown in the next graph. Note that many international organisations and NGOs are based in Belgium and, out of the 17 respondents, 10 were from industry associations and environmental NGOs. To reflect this, a new group was created called Europe which groups European organisations and trade associations that do not necessarily reflect the views of their host countries on this topic. It is interesting to note that countries with higher forest coverage have given more responses (these tend to be on left hand side of the graph in Figure 2.2 than those with relatively lower coverage.²

² Cross-checked with Eurostat data extracted on 04/01/2011 based on Eurostat last update of 12/12/2010.



Figure 2.2 Country of provenance of the respondents



Note: European organisations have been classified under Europe (in red in the graph)

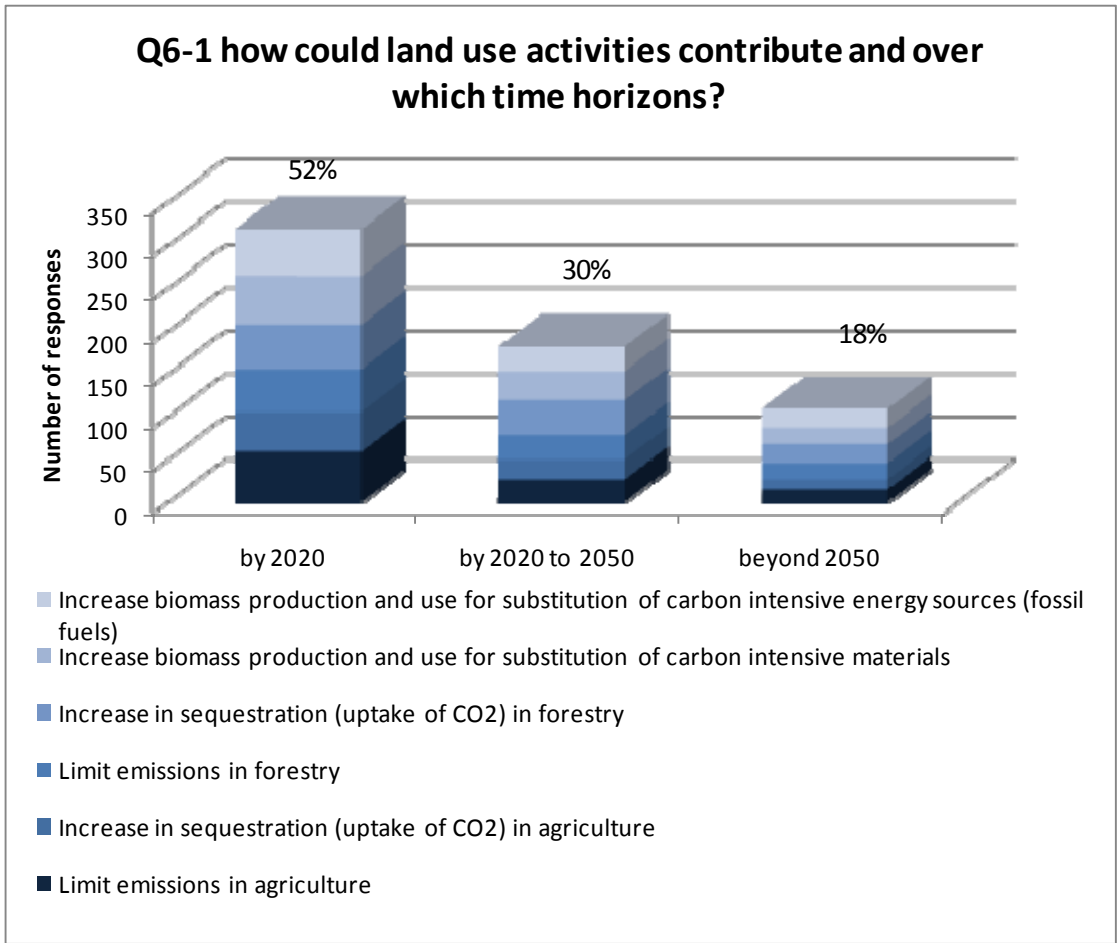
2.3 Main Findings in Section B

The overwhelming majority of respondents (90%) believed that land use activities can contribute to mitigate climate change (question 6).

A range of different activities that could help contribute to mitigation were proposed in the questionnaire (question 6-1) and the respondents favoured the option of ‘increasing CO₂ sequestration in forestry’, although other options such as to ‘increase biomass production and use for substitution of carbon intensive materials’ and ‘increase biomass production and use for substitution of carbon intensive energy sources (fossil fuels)’ were close second and third choices. The option indicated by fewer respondents was to increase the sequestration of CO₂ in agriculture. A summary of these results is shown in Figure 2.3. More than half of the respondents (52%) felt that all of the options were suitable already in the short term (i.e. that the measures could contribute already by 2020). 30% suggested that they could also contribute over the time horizon between 2020 and 2050 and 18% indicated that the activities could contribute to mitigating climate change beyond 2050.



Figure 2.3 Land use activities contribution to climate change mitigation over time



A list of measures was given to respondents in question 6-2 to assess whether, in their opinion, they would contribute to mitigation, increase emissions or have no effect on emissions and removals. In all cases, respondents believed the measures would mostly contribute to mitigation. In particular, four measures appeared to be preferred by respondents:

- i. Use of harvested biomass to substitute materials associated with high greenhouse gas emissions (e.g. building with timber instead of steel, concrete or glass);
- ii. Afforestation;
- iii. Reduction or avoidance of the conversion of forest to other land uses; and
- iv. Prevention of forest fires and storm damages.

Measures on the right side of the graph are those that have been indicated by fewer people, i.e. the total count of responses is lower compared with that of the measures on the left side of the graph. Interestingly, the most "voted"

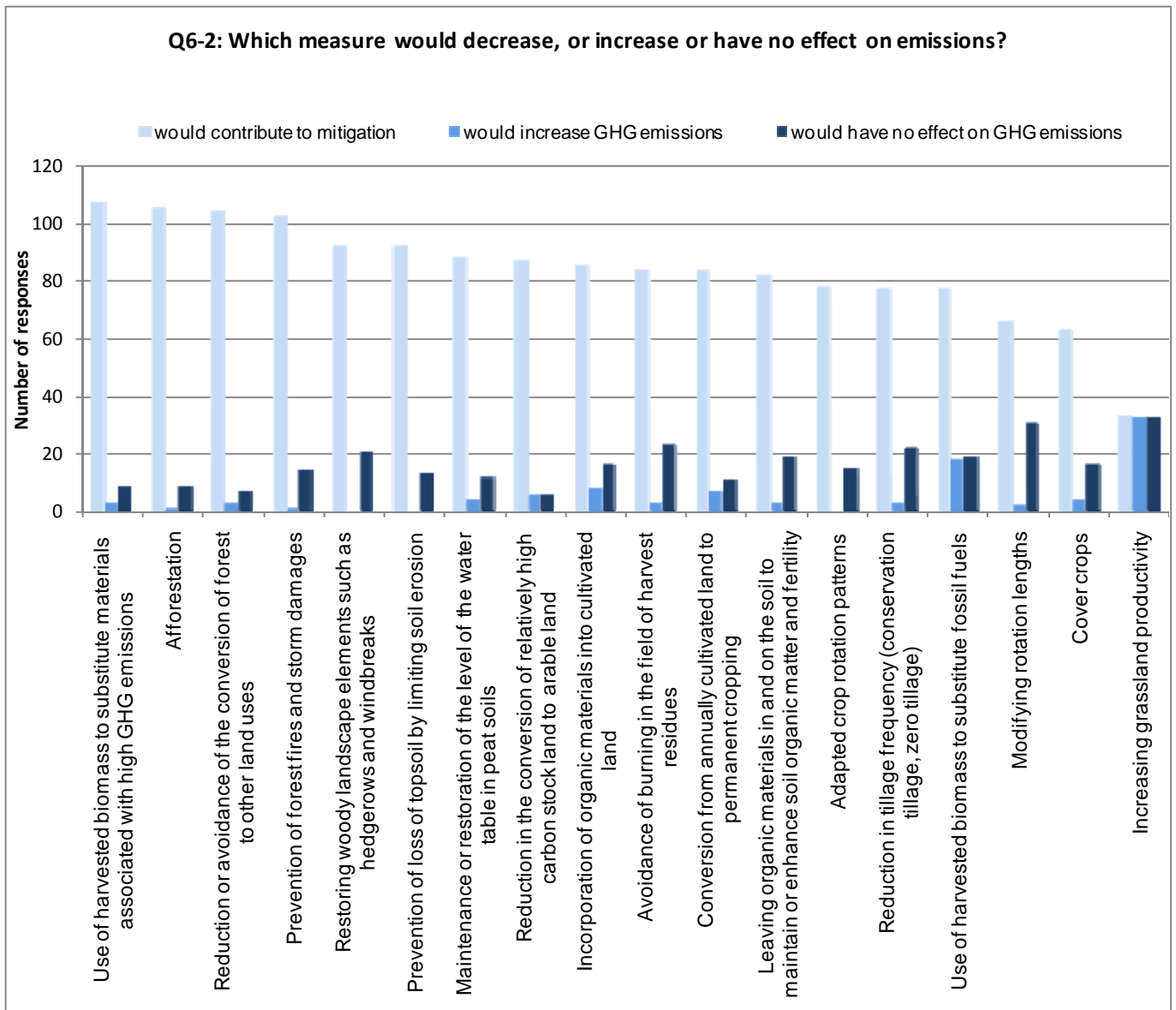


measures are also those that are considered to achieve emissions reductions rather than increase emissions or have no effect, as shown in Figure 2.4. Measures that are considered to increase emissions are (in order of priority):

- i. Increasing grassland productivity;
- ii. Use of harvested biomass to substitute fossil fuels;
- iii. Incorporation of organic materials into cultivated land; and
- iv. Conversion from annually cultivated land to permanent cropping.



Figure 2.4 Which measure would decrease, increase or have no effect on emissions?



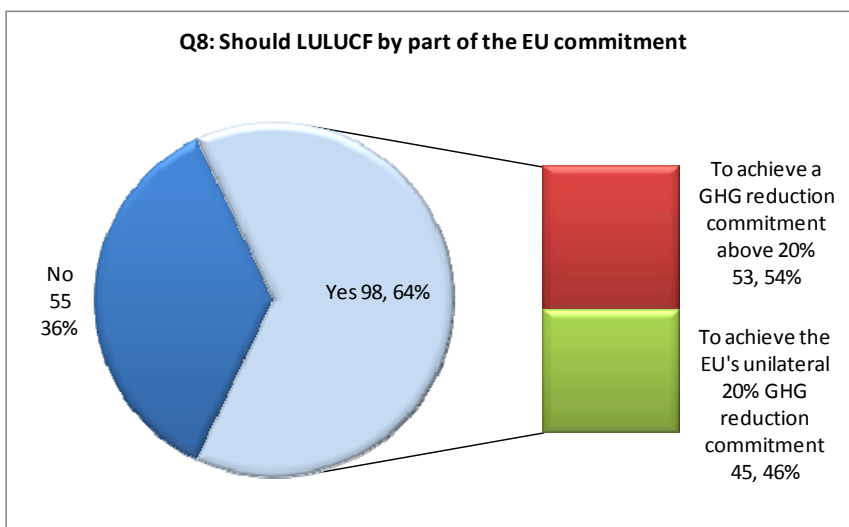
Of those who said that land use activities could contribute to mitigating climate change (question 6), the majority felt strongly that land use activities are indeed important if not instrumental (question 7). In particular, almost 60% expressed the preference that land use activities are important and could help, although the focus should be on making energy, industrial and transport systems more sustainable. Another 25% thought that land use activities are instrumental to a long term solution, as only ecosystems can absorb the carbon emitted to the atmosphere and provide biomass for material and energy substitution. The remaining 16% of the respondents felt that land use activities have a more uncertain role.



2.4 Main Findings in Section C

Similarly to question 6, the majority (64%) also agreed that the sector should be part of the EU GHG reduction commitment (question 8). It is relevant to note that, while most would like the sector to be part of the EU target, there was not a similar level of agreement about the context in which the sector should be included (see Figure below): slightly less than half (46%) suggested that the sector should be included as part of the EU's unilateral 20% GHG reduction commitment, whereas 54% thought that if the LULUCF sector were to be included this should be as part of a greater commitment with a target above 20% (question 8-1).

Figure 2.5 Responses to Q8 and Q8.1



Those that did not agree with including the LULUCF sector in the EU's target felt that reliable and comparable information on emissions removals could be too uncertain or lacking (62%) (Question 8-1*³). Around 60% of the respondents in this group thought that including LULUCF in the target would not be useful as removals from this sector could be reversed. Over half of the respondents mentioned that inaccuracy of accounting rules could be a problem⁴.

When queried about the type of activities that should be included in the EU's GHG reduction target (question 8-3), primarily three activities were chosen (forest management, afforestation/reforestation and deforestation) and most thought that these should count towards the 2020 target (Figure 2.6). These three activities were also those suggested to be included on a mandatory basis rather than voluntary (question 8-4, see Figure 2.7). About 30% of all respondents believed that changes in the harvested wood products pool, wetland management and cropland

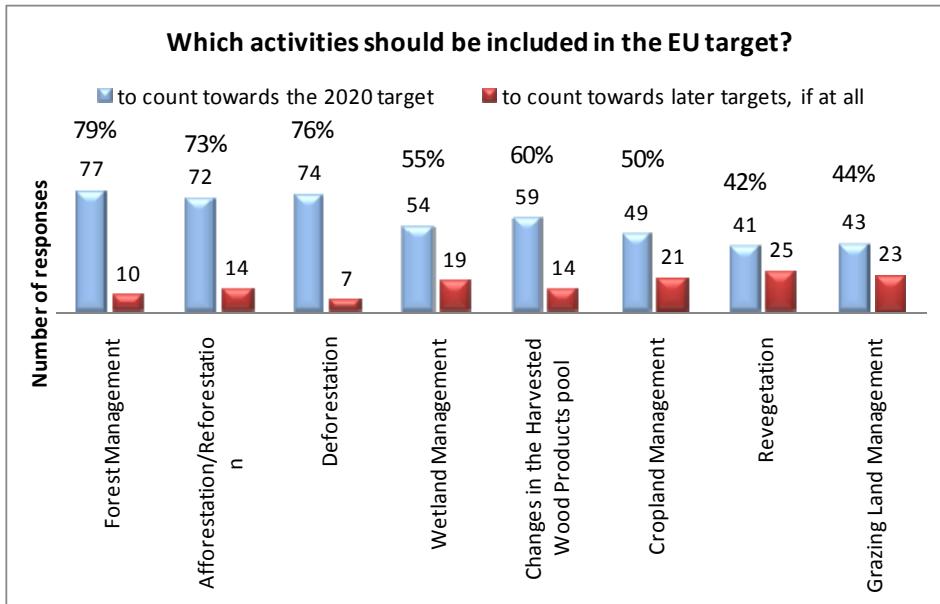
³ Note that questions with an asterisk explore the reasons behind negative answers.

⁴ This question had multiple answers and therefore the total does not add up to 100%.



management should count towards the EU's commitment on a mandatory basis (this corresponds to 50% of those who answered yes to question 8). Grazing land management and revegetation were the least "popular" choices.

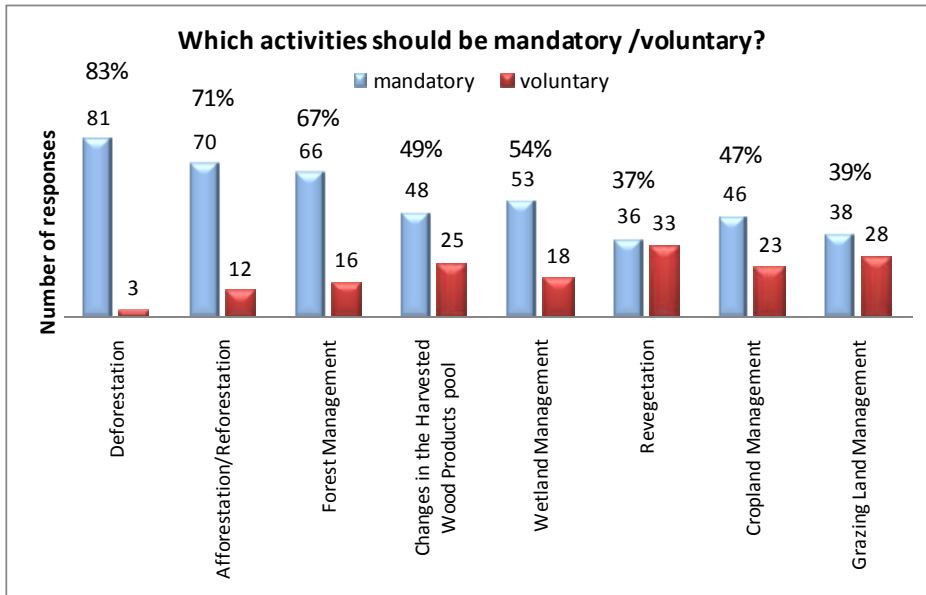
Figure 2.6 Views on which activities should be included in the EU target



Note: the data is arranged by total responses (i.e. blue plus red responses) so that the option with the highest number of "votes" is shown on the left and the one with the lowest on the right. The total number of positive responses to Q8 was 98, the percentages are relative to the total of blue responses over the 98 positive responses to Q8.



Figure 2.7 Which activities should be mandatory or voluntary?



Note: the data is arranged by total responses (i.e. blue plus red responses) so that the option with the highest number of “votes” is shown on the left and the one with the lowest on the right. The total number of positive responses to Q8 was 98, the percentages are relative to the total of blue responses over the 98 positive responses to Q8.

If forest management is included in the target as an activity (question 8-5), about one third of respondents considered that “debits/credits” should be given for all net emission/removals during the commitment period and another third would prefer that credits or debits be received for the change in emissions between the commitment period and a reference period. Slightly more than half preferred 1990 to be the reference period, whereas the remainder preferred another reference period; the most popular alternative being “projected emissions between 2013 and 2020”.

All respondents believed that definitions, monitoring, reporting and verification would need some form of standardisation and harmonisation (question 8-7). In particular, it was felt that definitions need more standardisation rather than harmonisation, whereas for monitoring the opposite was true. In terms of reporting and verification, respondents agreed that standardisation is more appropriate in general.

2.5 Main Findings in Section D

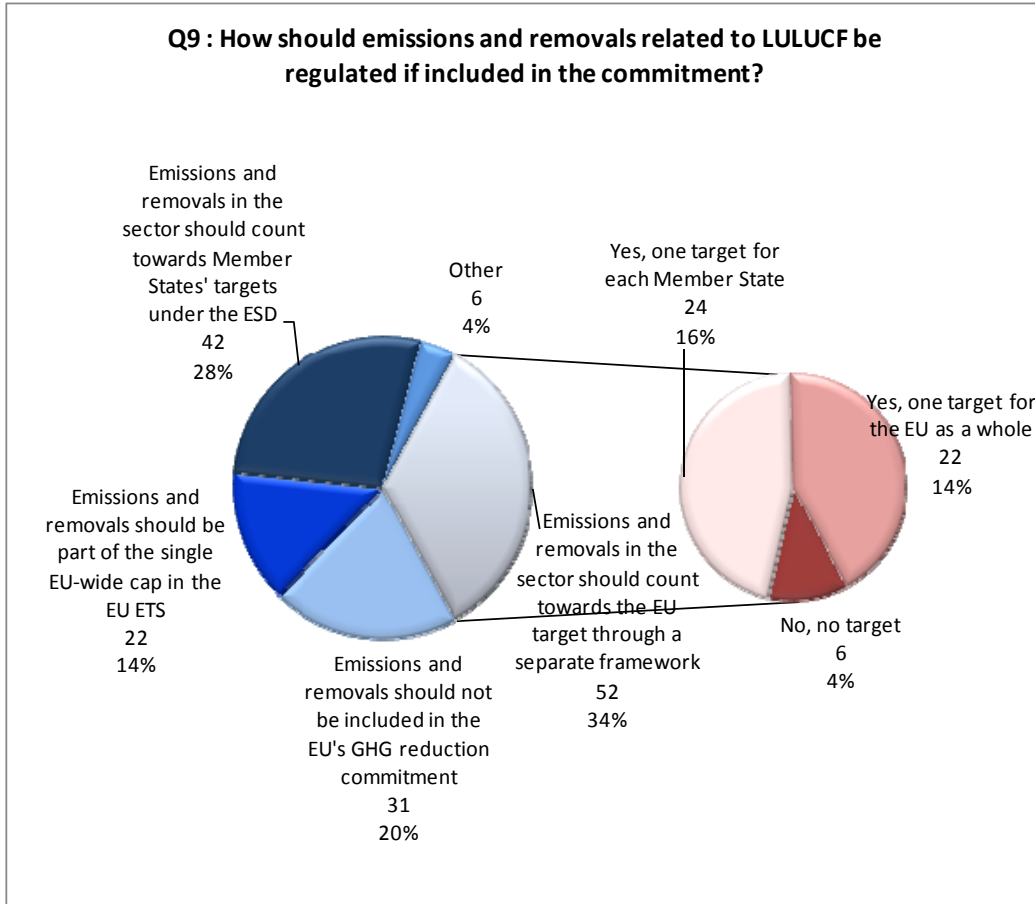
34% of respondents believed that the most appropriate way to include the sector in the target is via a separate framework unrelated to the targets given in the EU ETS and the ESD (question 9), generally with a target of some sort. 28% expressed a preference for the sector to be regulated via the ESD and only 14% via the ETS. Most of those⁵ that did not wish to see the sector included in the target in the first place confirmed this view by choosing

⁵ There were 55 respondents who answered no to question 8. Of these 24 also answered that emission and removals should not be included in the EU GHG reduction commitment, whereas 22 thought that emissions and removals in the sector should count



the answer 'Emissions and removals in the sector should not be included in the EU's GHG commitment' (Figure 2.8).

Figure 2.8 How should LULUCF emissions be regulated if included in the target?



Note: the key to the sector in light blue (34%, with 52 responses) is 'Emissions and removals in the sector, accounted for according to rules agreed by the EU, should count towards the EU's GHG reduction commitment through a separate framework and not be linked to the targets under the Effort Sharing Decision or the EU ETS'. This sector is further disaggregated in the small pie and the sum of the percentages in this pie equals 34%.

The majority of respondents (80%) did not feel that the current policy framework was adequate to regulate the LULUCF sector and have identified areas for further action (question 10). All areas were considered useful (question 10-1)⁶, although grazing land management received the fewest "votes". All other activities were, roughly

towards the EU's GHG reduction commitment through a separate framework and not be linked to the targets under the ESD or the EU ETS. The remaining respondents (6 in total) chose the other two answers (3 each).

⁶ These include: deforestation, afforestation/ reforestation, revegetation, forest management, cropland management, grazing land management, wetland management, increasing the stock of long-lived wood products, material substitution, energy substitution.



speaking, equally favoured and no specific trends emerged. The best way to organise these actions was considered to be a combination of policies at regional, national and EU level (question 10-2).

Questions were asked regarding the involvement of land owners in the abatement of GHG emissions. In particular, the public was asked to give opinions regarding whether land owners should be rewarded for emissions reductions (question 11) and whether they should be responsible for net emissions (question 12). Around 75% of respondents felt that in both cases the land owners should be rewarded and responsible for, if not all emissions, then at least for those that are directly linked to action taken by them. However, about a quarter of respondents felt that in both cases that land owners should not be held responsible for net emissions nor should they be rewarded for achieving emissions reductions.

75% agreed that the use of biomass to displace GHG intensive materials should be rewarded at one of the points in the supply chain (question 13), with a slight majority of respondents (32%) feeling that the final consumer should be rewarded and another 24% thinking the producers should be. The remaining 20% thought that the intermediate users and the manufacturers of the wood product should be beneficiaries.

Figure 2.9 Biomass displacing GHG intensive materials

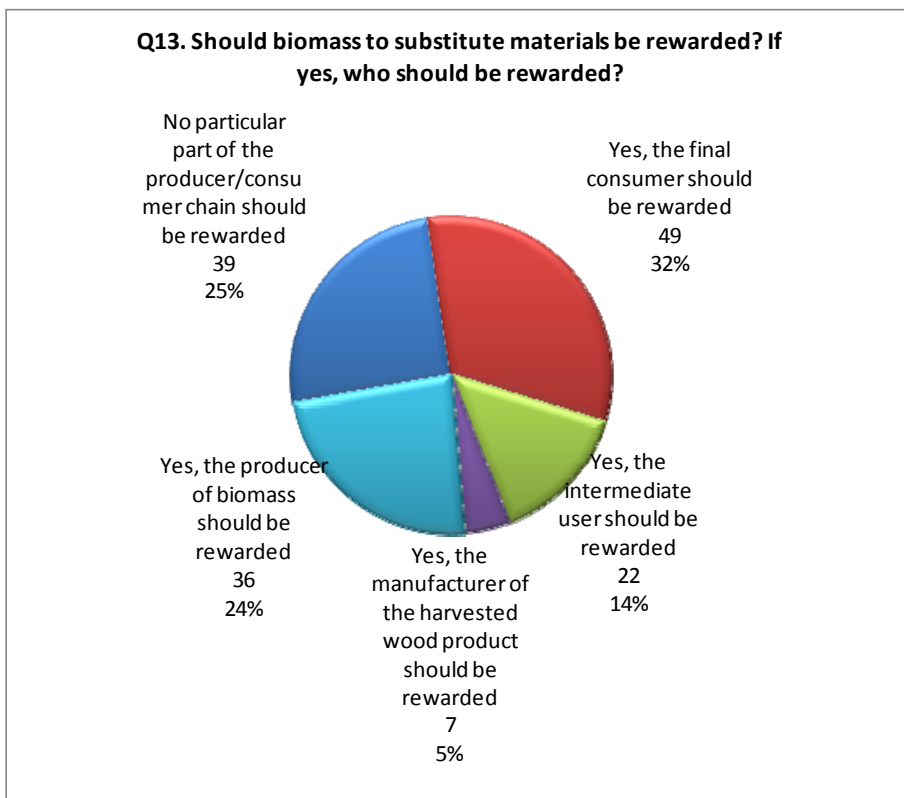
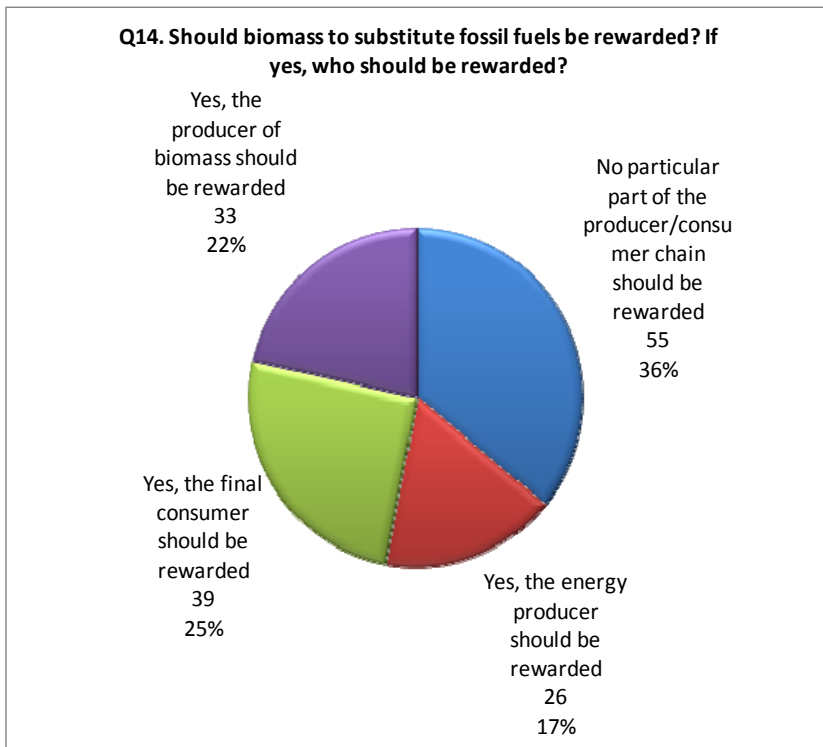


Figure 2.10 Use of biomass to substitute fossil fuels



Similarly, 64% considered that the use of harvested biomass to substitute fossil fuels (through direct combustion or biofuel generation) should be rewarded. Again, the range of responses is mixed with no clear preference for one segment of the supply chain compared to the other. Broadly speaking, the final consumers are still marginally preferred as beneficiaries.



3. Specific trends and interrelationships between responses

3.1 Introduction

In this chapter the main objective is to identify potential relationships between the information submitted in the profile section (A) and the answers given in sections B, C and D. This is to understand if the respondent country of provenance and his/her profession may have had a role in shaping the answers.

3.2 Identification of Groups of Profiles

Cluster analysis was undertaken to identify groups with similar preferences. The analysis showed that although no clustering occurs across all questions/responses, some trends can be derived for single questions/answers for the following five groups:

1. **Government and public bodies:** this group consists of public authorities such as Forest administrations, Environmental administrations and Agricultural administrations.
2. **Individuals and (individual) private forest /land owners:** this group is formed by a variety of contributors ranging from Private forest/land owners and private citizens. It should be noted that those who responded in a private capacity predominantly belong to professional fields or interest groups such as Forest administration, Environmental administration, Agricultural administration, Business and industry NGOs, Environmental NGOs, Farming, Forest land/managers and local NGOs.
3. **Research organisation:** this group represents private and public organisations (academia) involved in research related to LULUCF topics.
4. **Private companies and industry organisations:** this group includes all privately owned companies and industry associations that represent business in the agricultural and forestry sector. For example, these include the pulp and paper industry, the bioenergy industry, the wood working industry, farming and forestry, etc⁷.
5. **NGOs:** this group includes Environmental and Local NGOs.

The trends identified have been summarised for each group in the sections below. Generally, only issues of convergence or that are particular to a specific group are highlighted.

⁷ For the purpose of this classification this group is composed by all other groups that do not belong to group 1, 2, 3, and 5.



3.2.1 Government and public bodies

There were 15 respondents in total in this group.

All representatives of government and public bodies agree that land use activities can contribute to mitigate climate change. The majority also agreed that of the measures proposed in the questionnaire all would contribute to mitigation except for increasing grassland productivity which was considered to have no effect on GHG emissions. When asked about the potential of land use activities to contribute to climate change mitigation the responses were roughly split between respondents stating that the activities are instrumental to a long term solution and those that believe that, although land use activities are important, the key challenge is to make our energy, industrial and transport systems more sustainable.

On the role of LULUCF in the EU's GHG reduction commitment, the majority responded that the sector should be part of the commitment but as part of a target above 20%, although some would like it to be part of the unilateral target of 20%. Only 2 out of 15 respondents did not want the sector to be part of the commitment at all. The main reasons for inclusion in the target were that it would recognise the contribution the sector is already making as well as making sure that emissions and removals from all sectors in the economy are adequately accounted for.

Representatives of this group generally believed that activities such as deforestation, afforestation/reforestation, forest management and changes in the harvested wood products pool should count towards the 2020 target whereas activities such as revegetation, cropland management, grazing land management and wetland management should count towards later targets, if at all. The majority agreed that accounting for deforestation, afforestation/reforestation and forest management should be mandatory for all MS, whereas for other activities it may be voluntary. Only for wetland management were the group's opinion split equally between mandatory and voluntary.

A small majority agreed that credits/debits should be given for the difference in net emissions/removals between the commitment period and a reference period (Reference level). There was no definite agreement about the treatment of emissions caused by natural disturbances such as extreme fire seasons. In general, representatives agreed that some form of standardisation and/or harmonisation between MS in terms of MRV is needed.

Half of the respondents believed emissions and removals in the sector should count towards the EU's GHG reduction commitment through a separate framework and not be linked to the targets under the ESD or the EU ETS. The vast majority concurred that EU and MS policies are insufficient to ensure that land use activities contribute to climate change mitigation, and the two main areas for further action are material and energy substitution through a combination of additional/amended policies at regional, MS and EU level.

On the issue of rewards, the majority agreed that land owners should be rewarded and also be responsible for net removals/emissions reductions only if they are the direct result of action taken by the landowner. In terms of rewarding biomass use as a substitute for GHG intensive materials, the majority of the group believed that the final consumer should be rewarded. There was no clear tendency as to who should be rewarded for biomass use as fossil fuel substitute.



3.2.2 Individuals (including individual forest /land owners)

There were 46 respondents in total in this group.

People that replied to the questionnaire as individuals have a very varied professional background, e.g. from farmers, owners or managers of forest/ land (note that this group only includes individual owners and managers that have replied on their own behalf and not on behalf of a private organisation), and environmental administrators, who may be directly involved in work related to the LULUCF sector, to teachers, consultants, students and media experts that have a more indirect exposure to it.

Most agreed that land use activities could contribute to climate change already by 2020. All measures were believed by the vast majority to contribute to mitigation except for increasing grassland productivity for which the opinion is equally split between those that believe the measure could contribute to mitigation and those that thought it would have no effect at all. A smaller percentage believed that this measure would increase emissions.

The wide majority agreed that although land use activities can make a significant contribution the focus should be on making the energy, industry and transport sectors more sustainable. Two thirds suggested that the emissions / removals related to LULUCF should be part of the EU's reduction commitment. 46% favoured the inclusion of the sector provided that it is to achieve a target higher than 20%, and 30% preferred the sector to be part of the EU's unilateral 20% commitment.

In general, the majority of respondents believed that all LULUCF activities should count towards the 2020 target and most also thought that accounting should be made mandatory for all (although with various degree of agreement between activities). Opinions on how emissions under forest management should be accounted for were divided although slightly more "votes" were given to the option "Debits/Credits should be given for all net emissions/ removals in the commitment period (Gross-Net)". Similarly there was no decisive agreement on how to treat emissions from natural disturbances. The group as a whole agreed that there is the need for harmonisation and/or standardisation between MS.

Slightly more respondents (17 in total) preferred to include LULUCF emissions under a separate framework; however 14 preferred not to include emissions from the sector in the EU commitment at all. Two thirds agreed that EU and MS policies are insufficient to ensure the contribution of the LULUCF sector to mitigation and the overwhelming majority felt that this should be improved via a combination of policies at regional, MS and EU level.

3.2.3 Academia and research

There were 21 respondents in total in this group.

This group consists of researchers in universities or other public research organisations who are directly involved in issues related to the LULUCF sector.



Answers given by this group of people suggest that land use activities could contribute to mitigating climate change and that emissions from LULUCF should be part of the EU's emissions reduction commitment, although here the opinion is that it should already form part of the EU's unilateral 20% target.

In general, the majority agreed that all of the activities listed in question 8-3 should be part of the 2020 target (albeit with a varying level of agreement). Representatives of this group had a split opinion on how emissions from revegetation should be accounted for, with 50% thinking they should be accounted for on a voluntary basis and the other 50% on a mandatory basis. This split of opinion on that particular activity was not encountered in other groups, which clearly favoured voluntary accounting.

With respect to how emissions from forest management should be accounted for the most popular choice was that Debits/Credits should be given for all net emissions/removals in the commitment period (Gross-Net).

There was a preference in this group to reward land owners and at the same time to hold them responsible for emissions resulted from their actions. However, whereas the majority of researchers would like to reward the final consumers of biomass as substitute for GHG intensive materials, they feel that no rewards should be given when biomass is used as a fossil fuel substitute.

3.2.4 Private companies and industry organisations

There were 46 respondents in total in this group.

Replies from this group came mostly from industry, farming, forestry and land owner associations who represent over 60% of the respondents in this category. The majority of the group (39 out of 46) agreed that land use activities could contribute to mitigation. However, 28 respondents in this group were in favour of including LULUCF emissions in the EU GHG commitment and 18 were against (mainly farming and private forest/ land owner associations). This group presented the lowest level of agreement to this answer compared to the other groups in this study ⁸.

Those who did not want the sector to be included in the commitment, did so because they thought that it could hamper the use of biomass for energy and material substitution and that comparable and reliable information on emissions and removals may be lacking and/or too uncertain.

The group suggested that all measures listed in question 8-3 should be included to count toward the 2020 target and the majority also agreed that emissions from all the activities should be accounted for on a mandatory basis (the exceptions being grazing land management for which the opinion was equally split between mandatory and voluntary).

⁸ To put this into context answers with the highest number of votes corresponded to 86% of votes in the "Government and public bodies" group, 76% in the "Individuals and private forest/ land owners" group, 80% in the "NGOs" group, and 81% in the "Academia" group, whereas it corresponded to 64% of votes in this group.



There was no consensus on how emissions and removals in LULUCF should be included in the EU's GHG reduction commitment, although the two preferred options were that emissions and removals in the sector should count towards Member States' targets under the ESD and, notably, that they should be regulated under the ETS.

The majority believed that current EU and MS policies are insufficient to ensure the contribution of land use activities to climate change mitigation and that a combination of regional, MS and EU policies would be helpful.

On the reward for biomass use as fossil fuel substitute, the representatives of this group were mainly split between two options: no rewards to anyone (approximately 40%) and rewarding the biomass producer (37%).

3.2.5 NGOs

There were 25 respondents in total in this group.

The representatives of this group responded on behalf of environmental associations such as bird protection associations and more general wildlife and nature conservation organisations.

As opposed to other groups in this study, the main message emerging was that NGOs were firmly opposed to LULUCF emissions and removals being part of the EU's GHG emissions reduction target. The main reasons for this were that:

- Comparable and reliable information on emissions and removals may be lacking and/or too uncertain;
- There is a risk that removals can be reversed;
- Accounting rules could be inaccurate;
- Sufficient mitigation potential could be achieved through alternative solutions;
- It could have negative impacts on other ecosystem services.

The whole group agreed that EU and MS policies were insufficient and that a combination of measures at all levels would be the most appropriate.

On the issue of rewards, the message was that as long as emissions reductions occurred as a result of land owners' action, land owners should receive rewards and should also be held responsible for emissions / reductions resulting from their actions.

In addition, and unlike other groups, NGOs consider bioenergy to potentially increase GHG emissions and therefore are not in favour of its use under the current policy framework.



4. Analysis of the Free Text Responses

As well as a multiple choice section, the questionnaire was designed to offer the possibility to respondents to provide free text comments (question 15). Of the 153 participants, 90 chose to submit further comments via the questionnaire, and 5 organisations also supplemented their comments with separate documents. This section outlines the key issues raised by respondents in each group.

To ensure a consistent and robust analysis, for each contribution a set of headings related to subject matter and points of view were developed. The classification was carried out in parallel by two consultants to avoid anomalies being introduced due to people employing different heuristics. Once the headings were developed and consolidated, the number of entries under each heading was counted and statistical analysis was performed on the total counts to investigate what type of relationships existed between the comments and the respondent's profile. The grouping developed in section 3.3 was used.

A list of 8 broad categories was identified: issues related to biomass; accounting of emissions; financial issues; mitigation; monitoring reporting and verification (MRV), policy development; and other general points. Due to the varieties of inputs some sub-categories were also developed to ensure that detailed information would not be lost under the broader headlines. The high level categories and sub-categories are summarised in Table 4.1 below as well as the number of comments received for each of these.

Table 4.1 Main categories identified in the free text analysis

Category	Sub-categories	Total
Accounting	Additional emissions to be accounted for, including indirect emissions	33
	Avoid rebound effects/ perverse incentives	5
	No offsetting	7
Biomass	Biomass for energy may have negative implications: increased use of fossil fuels / emissions / threat to biodiversity / competition for land	17
	Biomass for energy / material is beneficial	6
Financial	Tax on GHG intensive products rather than subsidies	4
	Incentives / tax relieves to afforestation / reforestation, and climate friendly products	3
	Reward good practice rather than results/ product	3
Mitigation	Specific mitigation measures could make a significant impact	14
	Net carbon fixation in forests can be achieved through a cluster of areas that use growth enhancing techniques	3
	Short lived crops can contribute to 2020 target	13
	Create database of mitigation options and of MRV emissions	6



Category	Sub-categories	Total
MRV	MRV should be standardised and harmonised between countries	6
Policy development	Principles of sustainability and multi-functionality should be adhered to	15
	Policies should be integrated	11
	Promote/Improve sustainable forest management / practices	7
	LULUCF is not the priority	9
	Reduce bureaucracy, make it simple	5
Other	Forestry sector already contributing and happy to contribute to EU activities	2
	No agreement on force majeure	1
	Accounting should be at national level	1
	Reference level preferred to reference period	2
	Be consistent with UNFCCC decision	1
	No carbon trading in forests, soils and agriculture	1
	LULUCF should adopt discounting approach in accounting	2
	Promote existing techniques and innovation	1
	More research is needed	2
Questionnaire design	Answers depend on the context and different interpretations can be given. Timescales and sustainable practices influence the outcome.	7

In some cases a sub-category represents a range of issues; this occurs when different aspects of the same problem are being discussed. For example, some participants have commented that carbon bound in harvested wood should be accounted for and others have pointed out that carbon emissions/removals from soils should also be taken into account. By categorising these comments under “additional emissions should be accounted for”, the analysis takes into account all points and delivers a more consolidated view of the important issues. To avoid the loss of details the sub categories with most responses are described in Table 4.2 below.

Table 4.2 Description of sub-categories

Category	Issues included in the category
Additional emissions to be accounted for, including indirect emissions	<p>Carbon bound in harvested wood products should be accounted for</p> <p>Default accounting that biomass is 0 is not acceptable</p> <p>Feed, food, fuel, forest (timber) to be accounted for. Emissions of the whole supply chain of imported products (from indirect land use changes and C-changes in the soil to the waste phase) have to be assessed.</p> <p>Need to account for carbon emissions/ removals in soils.</p>



Category	Issues included in the category
	All indirect carbon emissions from peatland should be fully taken into account.
Avoid rebound effects/ perverse incentives	Land use changes (e.g. afforestation) for the purposes of carbon sequestration may affect the net GHG balance in other sectors Need to avoid perverse incentives between carbon stocks in forest/ harvested wood products/ biomass for energy
Biomass for energy/ material is beneficial	Hemp and flax used as building materials have a high potential for storing GHG Conversion of unused land to poplar cultivation should be promoted
Specific mitigation measures could make a significant impact	Not draining/ restoring peat; reducing/ avoiding of forest conversion; Afforestation; reduction of conversion of high carbon stock land to arable. Adapting crop rotation patterns by lengthening and increasing the complexity of the rotation Restoring wetlands; avoiding forest conversion
MRV should be standardised and harmonised between countries	Harmonised sustainable principles Reliable monitoring and reporting system is needed An enforcement and compliance architecture must be established alongside a single MRV system
Principles of sustainability and multifunctionality should be adhered to	LU activities should that remove C should not lead to loss of other important ecosystem functions Rewards for biomass are acceptable only if its production and consumption is sustainable. No biomass should be produced on peatland Ecosystems must be protected Organic farming to be central in climate change policy Sustainability should be a criteria
Policies should be integrated	Policies should consider UNFCCC Between REDD and LULUCF Between EU GHG target and CAP Between environmental, agricultural, energy and climate change policies.
Promote/Improve sustainable forest management / practices	Swedish model could be a good example Development of forestry in Central Europe could be a good example.
LULUCF is not the priority	Adaptation to climate change is the driver rather than sustainable forest management Land use activities must not distract from efforts to make our energy, industrial and transport systems more sustainable Emission reduction should be prioritised over sequestration measures LULUCF not a priority, reducing dependency on fossil fuels is

As shown in Table 4.1, the main messages emerging from the respondents comments are the following:



The main views emerging from the free text responses are the following:

- i. It is important that additional emissions are accounted for (and this includes emissions from the whole life cycle and carbon debts);
- ii. Principles of sustainability should be respected at all levels (policy development, management of land/forests, accounting of emissions, etc), and policies should be integrated to avoid contradicting incentives and promote emissions reductions from LULUCF;
- iii. Additional emphasis was given to some mitigation options for reducing emissions. These are: not draining / restoring peat; reducing / avoiding of forest conversion; afforestation; reducing conversion of high carbon stock land to arable land; adapting crop rotation patterns by lengthening and increasing the complexity of the rotation; and restoring wetlands. Also only short lived crops could contribute within a 2020 time frame;
- iv. Biomass for energy may have negative implications such as increased use of fossil fuels, emissions, threat to biodiversity and competition for land and should therefore be treated carefully. When developed sensibly it could be helpful in achieving climate change mitigation.

A few respondents revealed a general sense of frustration with the questionnaire format which they viewed as too restrictive; however, they conveyed their views in a separate document to further justify and explain their answers and these have been taken into account in this analysis.

Some views came out strongly from certain groups. **Individuals (including individual forest/land owners)** and **academia and research** stressed the need to account for additional emissions (3 respondents), from carbon in harvested wood products to carbon in soils, including indirect impacts of EU agriculture and food consumption (e.g. feed and fertilisers imports) and emissions from land use globally as well as specific emissions, e.g. from peat land and sequestration from soils (5 responses). **Individuals** thought that the indirect impacts were especially important when setting climate incentives or taxes in the farming sector. Also individuals (3 respondents) thought that, although LULUCF is an important sector, the priority should be to reduce our dependency on fossil fuels. This means reducing emissions in the energy, industry and transport sectors.

More comments were received from **private companies and industry organisations** than any other group. This group showed a distinct preference for the following points:

- i. They favour a clear and transparent approach to calculating emissions where contributions from all phases of the life cycle are accounted for (10 responses). This is to be achieved via a single, harmonised MRV system which would minimise inconsistencies between countries (4 responses). It was suggested by some stakeholders that a database of emissions and mitigation options would be useful to direct efforts in the most cost effective way (4 responses). It was also recommended by many that the administrative burden (i.e. the bureaucracy) of the procedure should be kept as low as possible to avoid organisations being put off by the scheme (4 responses).
- ii. In addition, representatives of this group stressed the need for policy integration (8 responses) and for a holistic approach to policy development (7 responses).



- iii. Incentives and tax relieves to afforestation / reforestation, and climate friendly products to promote the use of wood and wood products as materials and energy substitute were considered the way forward (3 responses). Indeed many considered biomass production as beneficial to mitigation (4 responses).

Comments from **NGOs**, 25 in total, were the most consolidated and covered four main issues:

- i. It was considered that an inclusion of land use related activities should not lead towards a lower reduction commitment in the other sectors and therefore emissions from the LULUCF sector should not count towards the 20% target;
- ii. As a general comment to question 6, only short-lived crops could make a contribution within the 2020 time frame;
- iii. The preferred mitigation options were: not draining / restoring peat; reducing / avoiding forest conversion; afforestation; reducing conversion of high carbon stock land to arable land; adapting crop rotation patterns by lengthening and increasing the complexity of the rotation; and restoring wetlands;
- iv. Emissions from all phases of the life cycle including carbon debts should be accounted for in the development of international accounting rules⁹ and for rewards¹⁰. This is important for bioenergy which is considered to pose a serious threat of increasing GHG emissions (as opposed to the private organisations' view described in the previous section).

As an alternative, NGOs suggested that if land use activities were to be included in the EU reduction commitments they should be covered by a separate target from the 30% or 20% target and should include full accounting for both reductions and increases of all GHG emissions from land use and forestry activities, including full accounting for emissions from bioenergy. Genuine and additional mitigation should be rewarded but it should be ensured that accounting rules are clear, strict and transparent, allowing for real emission reductions, avoiding leakage or “hidden emissions”. Future emissions increases/decreases should be compared to past emissions (the best option would be a historical base period of 1990-2012, assuming legislation comes into force 2013). Ideally all activities should be included as mandatory activities and a move towards full land-based carbon accounting should occur as soon as possible. Revegetation would need to be complemented by an equivalent activity of devegetation to address unbalanced accounting, and data uncertainties which are considered to be very significant for cropland management and harvested wood products would need to be addressed.

⁹ NGOs suggest that current international rules are proposing to increase emissions from logging and not account for them so there needs to be a serious redirection of policy to achieve climate mitigation from the forest and land use sectors.

¹⁰ NGOs would like the energy producer to be rewarded only if forest harvesting emissions are accurately accounted for, the full life cycle of biomass production transport and processing is included in the emissions profile and issues surrounding carbon debt are addressed. In addition, rewards should only be provided as long as they are over and above business-as-usual activities.



5. Conclusions

Overall, there were 153 contributions to the consultation. These have all been assessed as part of this study along with additional supporting documents to the questionnaires that have been received by the Commission. The level of participation can be considered in line with that from previous consultations on the same topic. For example, this response rate is higher than that of the consultation in 2004 on the work which resulted in the Forestry Action Plan (50), it is similar to that of the consultation in 2010 on biofuels and indirect land use change (145), and is somewhat lower than that of the consultation on the Green Paper on forest protection and information (260). Others still have attracted many more responses (5,000 in the CAP reform consultation and around 3,000 in the Biodiversity 2020 consultation). However, the number of replies to this consultation is in line with expectations considering its technical nature and therefore the feedback is considered satisfactory.

A set of 15 questions (with follow-ups) about land use activities/forestry emissions and a fact sheet (supporting the consultation questionnaire) were the basis of the consultation. The consultation was advertised mainly to specific stakeholders groups due to the technical nature of the subject although anyone interested was free to respond as the consultation was made public on the Europa "Your voice in Europe" website. The process was therefore driven by the participants and the results are not representative of the European population in a statistical sense.

In some cases, members of a particular group appear to have consolidated their approach before answering the questionnaire and therefore many contributions within certain groups were identical. This was especially true for environmental NGOs and some professional associations which appear to have coordinated their actions across borders and submitted the same responses and the same comments.

More contributions have been received from Western Europe than Eastern Europe. Virtually all inputs to the consultation came from respondents with a professional understanding of the issue or relationship to the LULUCF sector, even when contributions were submitted by private citizens. Non professionals were a small minority.

The overall conclusion of this analysis of consultation responses is that LULUCF sector stakeholders have played an active role in the debate. However, the outcome of this consultation has demonstrated that opinions amongst stakeholders converge on some issues and diverge on others.

In general the analysis of the questions 1 to 14 revealed that most stakeholder groups believe that land use activities can contribute to mitigating climate change (Q6). In general most people thought that all land use activities could be useful in the short term (2020) and between 2020 and 2050. All activities proposed in the questionnaire (Q6-2) were considered by the majority to contribute to mitigation, except for increasing grassland productivity which received a mixed response with roughly similar numbers of people thinking this measure would not have any effect on GHG emissions, that it could contribute to mitigation and that, on the contrary, it would contribute to increase GHG emissions.



A clear majority of the respondents who wanted to include LULUCF suggested that, if included, emissions and removals related to afforestation/reforestation, deforestation and forest management should be accounted for on a mandatory basis. About 30% of all respondents (which correspond to 50% of those that think land use could contribute to climate change mitigation) wanted changes in the harvested wood products pool and greenhouse gases associated with wetland management and cropland management to be mandatory (Q8-4).

There is a widespread consensus that LULUCF emissions should be part of the GHG emissions reduction target proposed by the EU for 2020 (except for NGOs who are against the inclusion) (Q8). Respondents tended to favour the option in which emissions and removals related to LULUCF would be regulated through a separate framework (34%), preferably with a sector target of some sort, or through the effort sharing decision (28%). Only 14% wanted the sector to form part of the EU Emissions Trading System (Q9).

Finally, the majority agreed that there is a need for further harmonisation and standardisation between Member States in terms of monitoring, reporting and verification (MRV) (Q8-7).

Whilst there were no clusters of responses across all questions, the analysis showed that some trends could be found in five groups for certain questions (see Section 3).



6. Appendix A: General Trends

The graphs illustrated here, give a general overview of the responses given to each question in the questionnaire, except question 15 which is the free text box.

Figure 6.1 Q2: Professional group

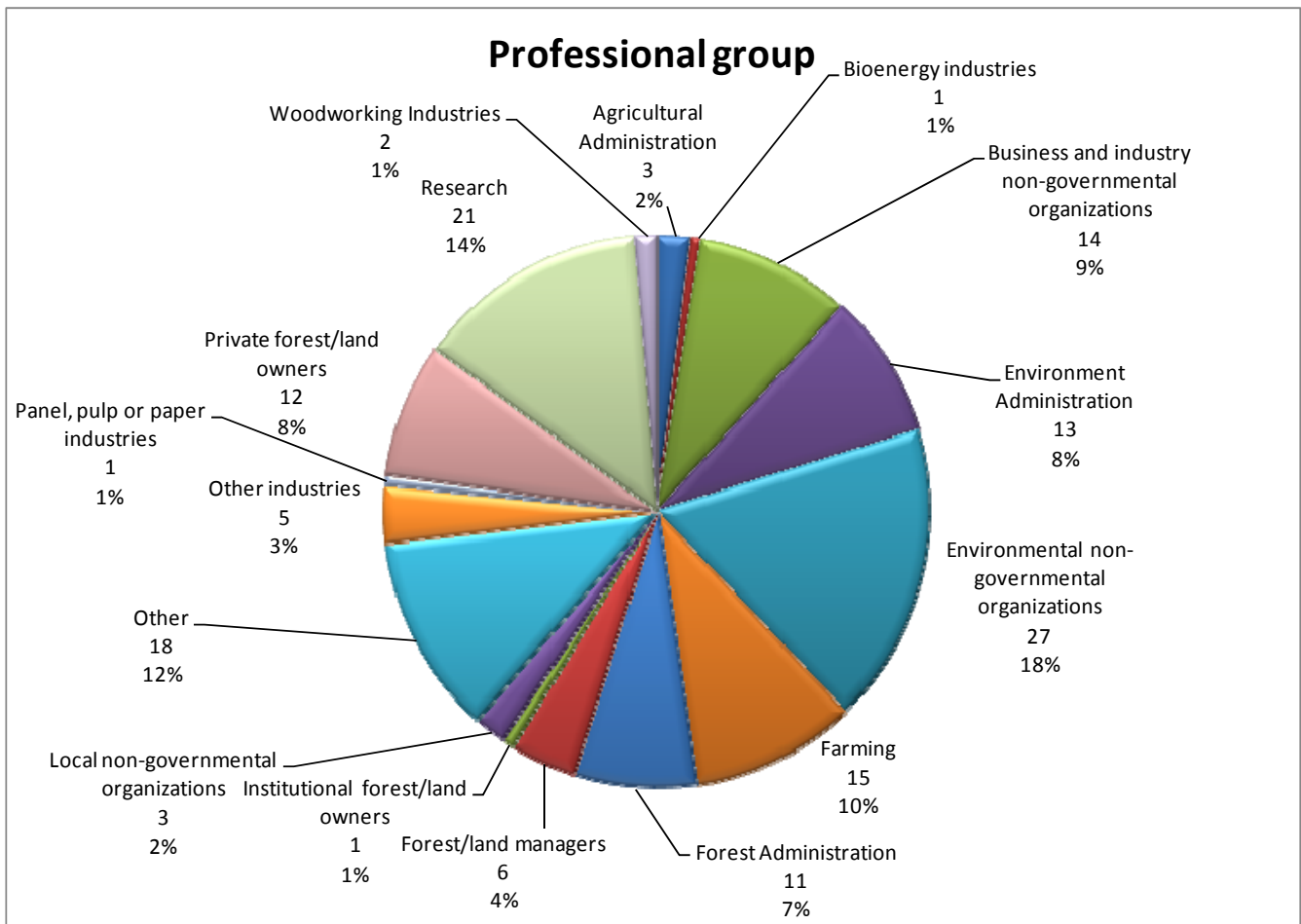


Figure 6.2 Q4: Organisation type

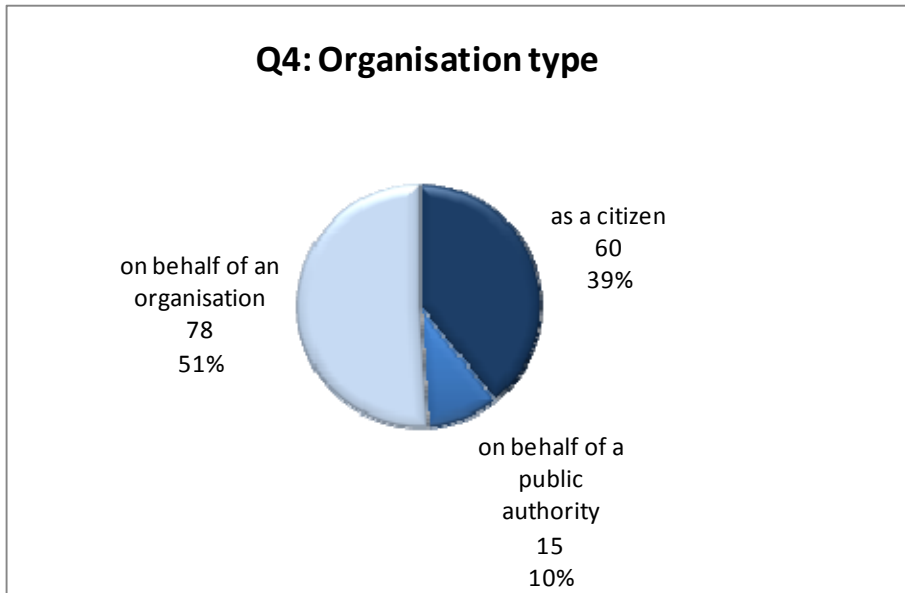


Figure 6.3 Q5 Country of provenience

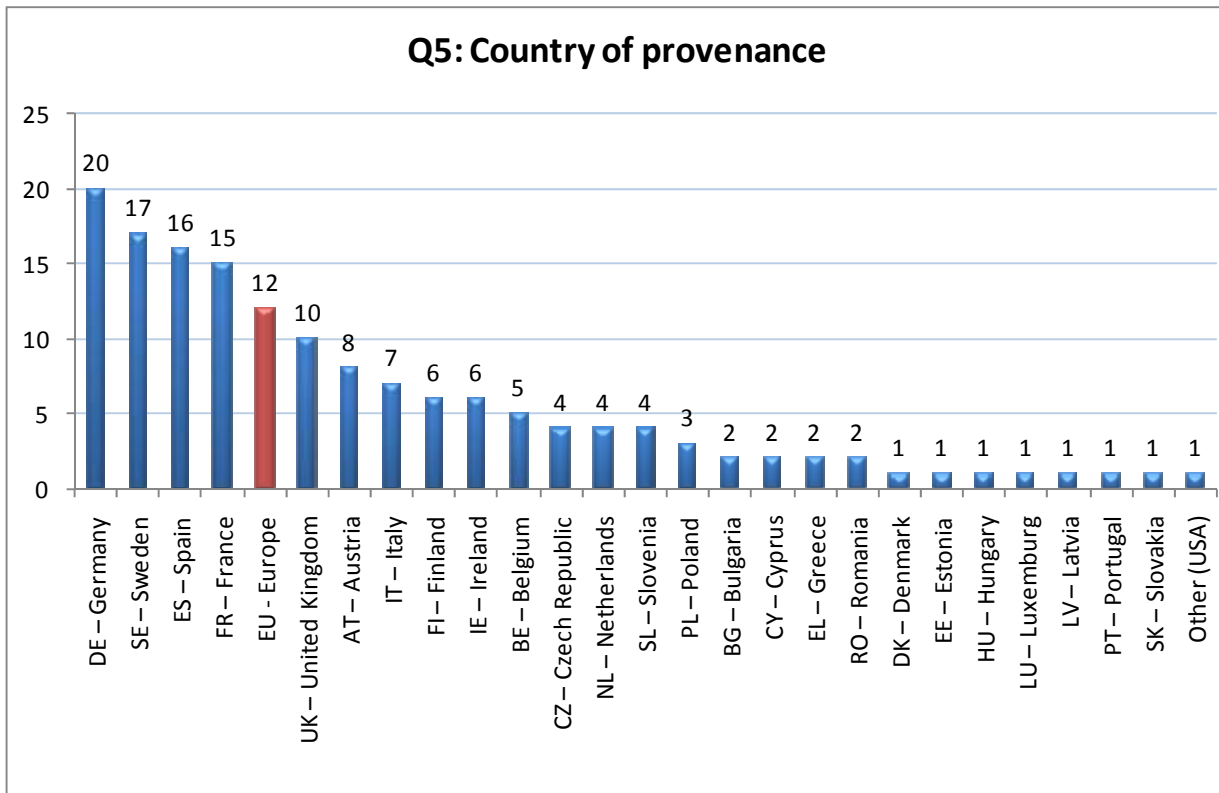


Figure 6.4 Respondent profile

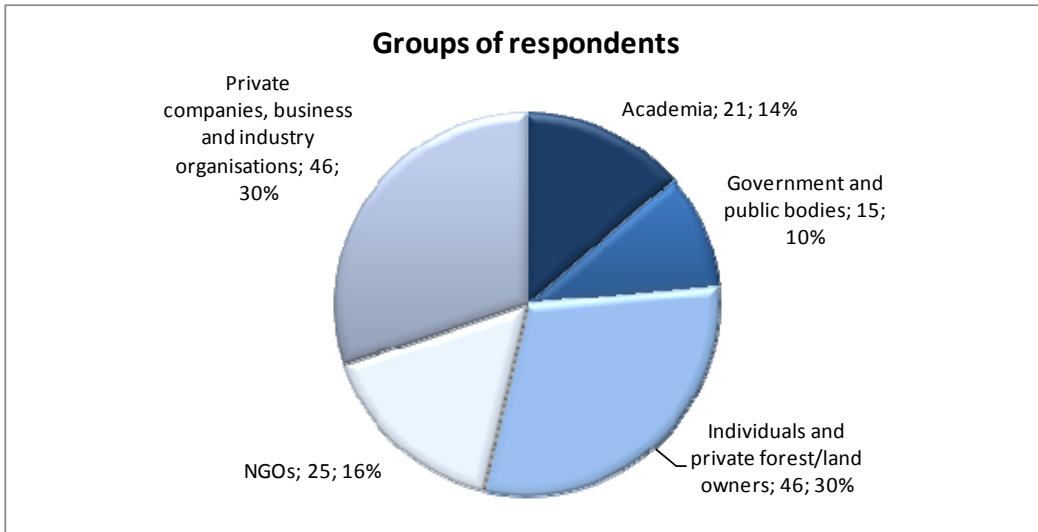


Figure 6.5 Q6-1 How could land use activities contribute and over which time horizons?

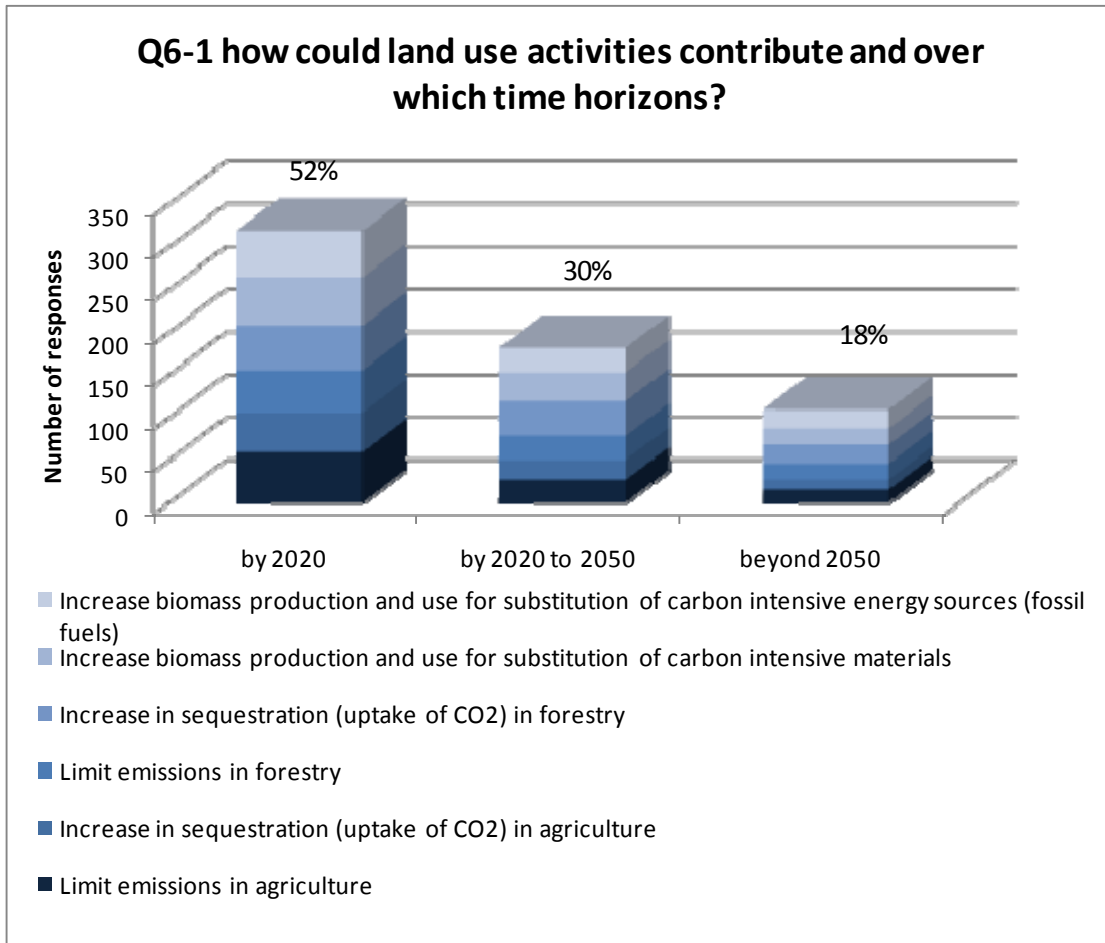


Figure 6.6 Q6-2: Which measure would decrease, or increase or have no effect on emissions?

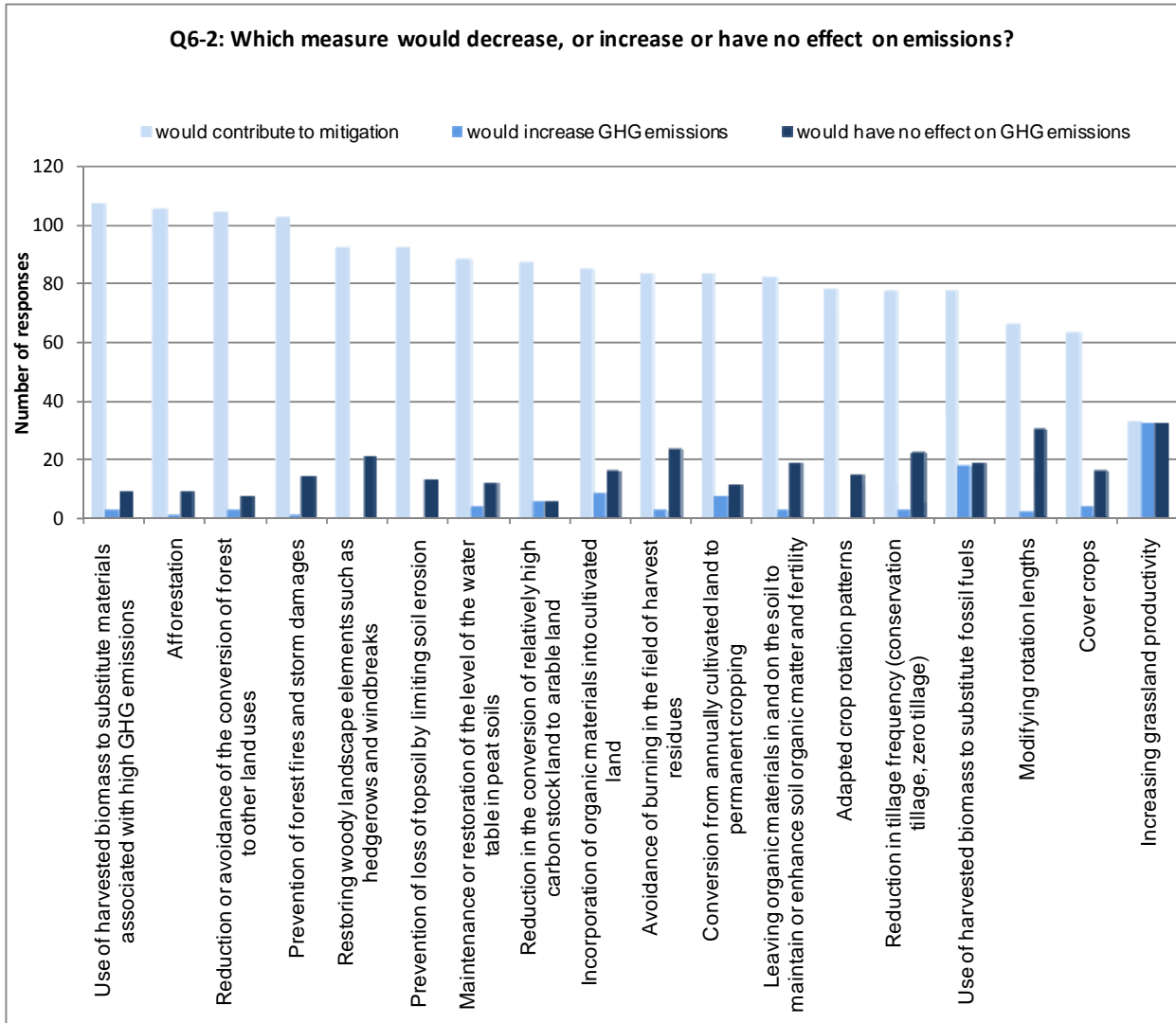


Figure 6.7 Q7: Which statement best describes your view on the potential of land use activities to contribute to mitigation?

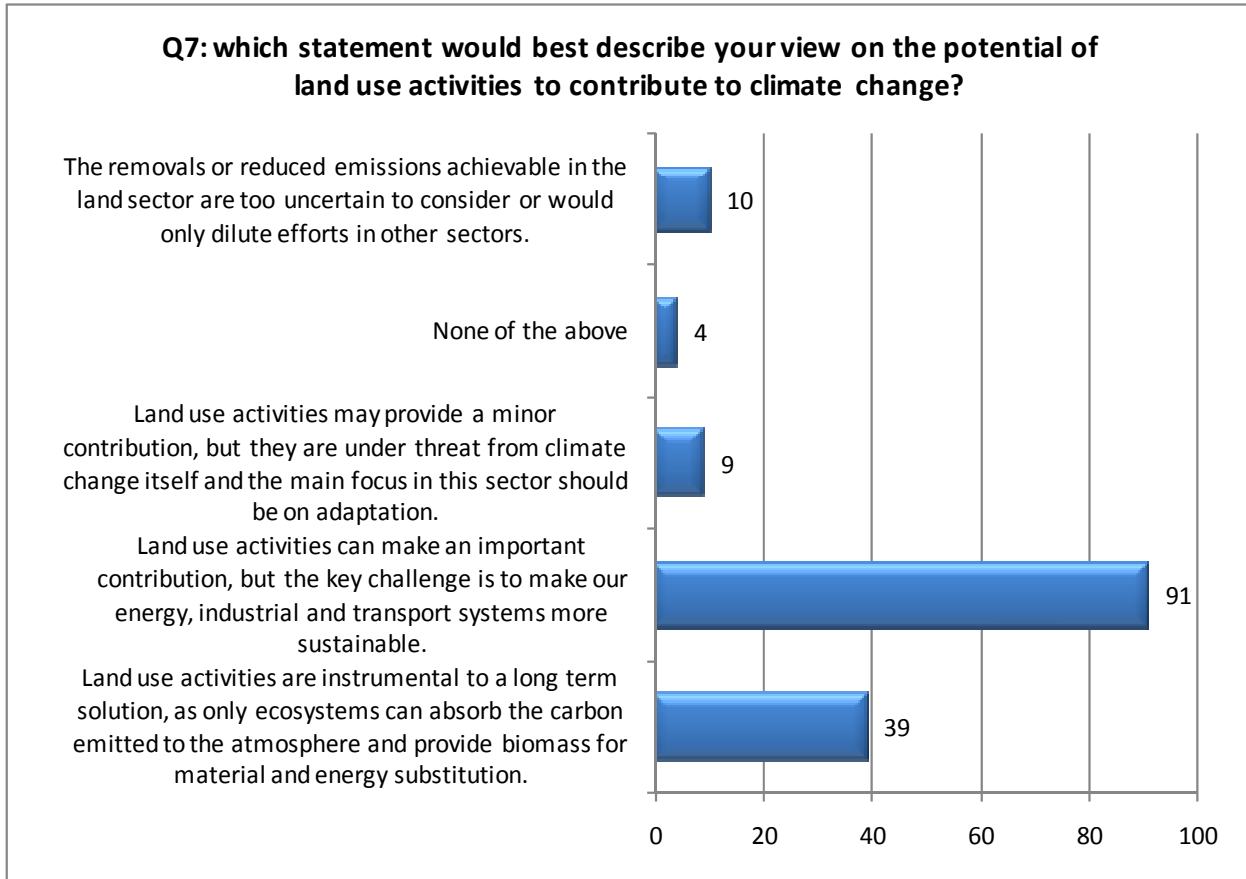


Figure 6.8 Q8: Should LULUCF be part of the EU commitment? If so how?

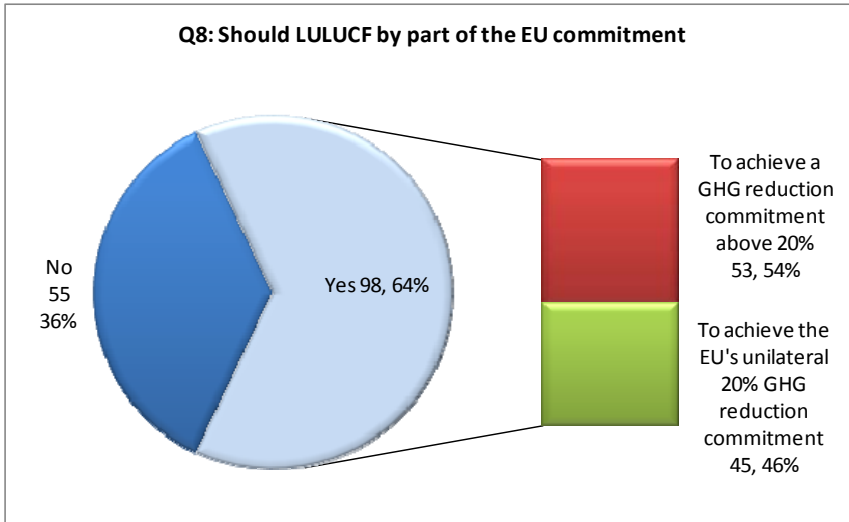


Figure 6.9 Q8-2: Reasons for including LULUCF in the EU GHG commitment

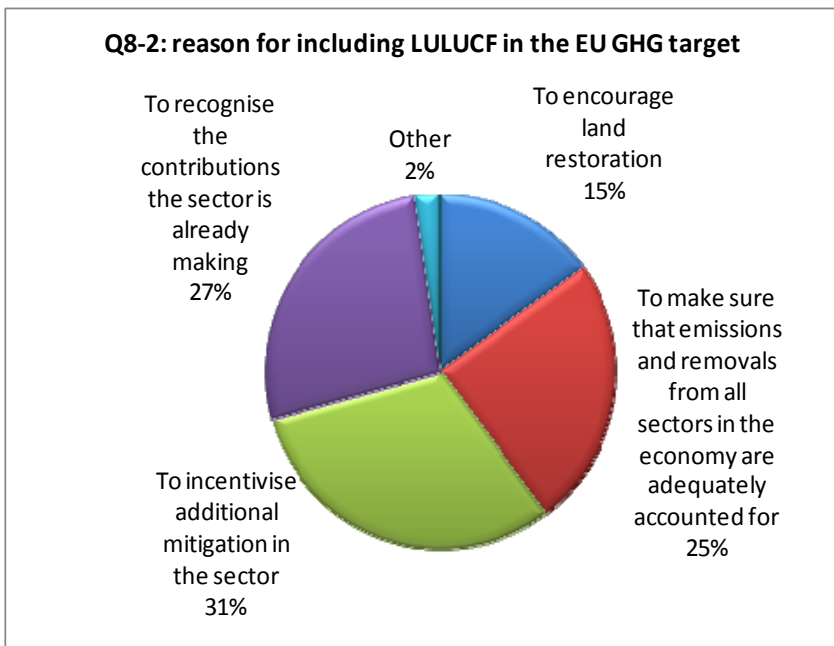


Figure 6.10 Q8-1*: Reasons for not including LULUCF in the EU GHG commitment

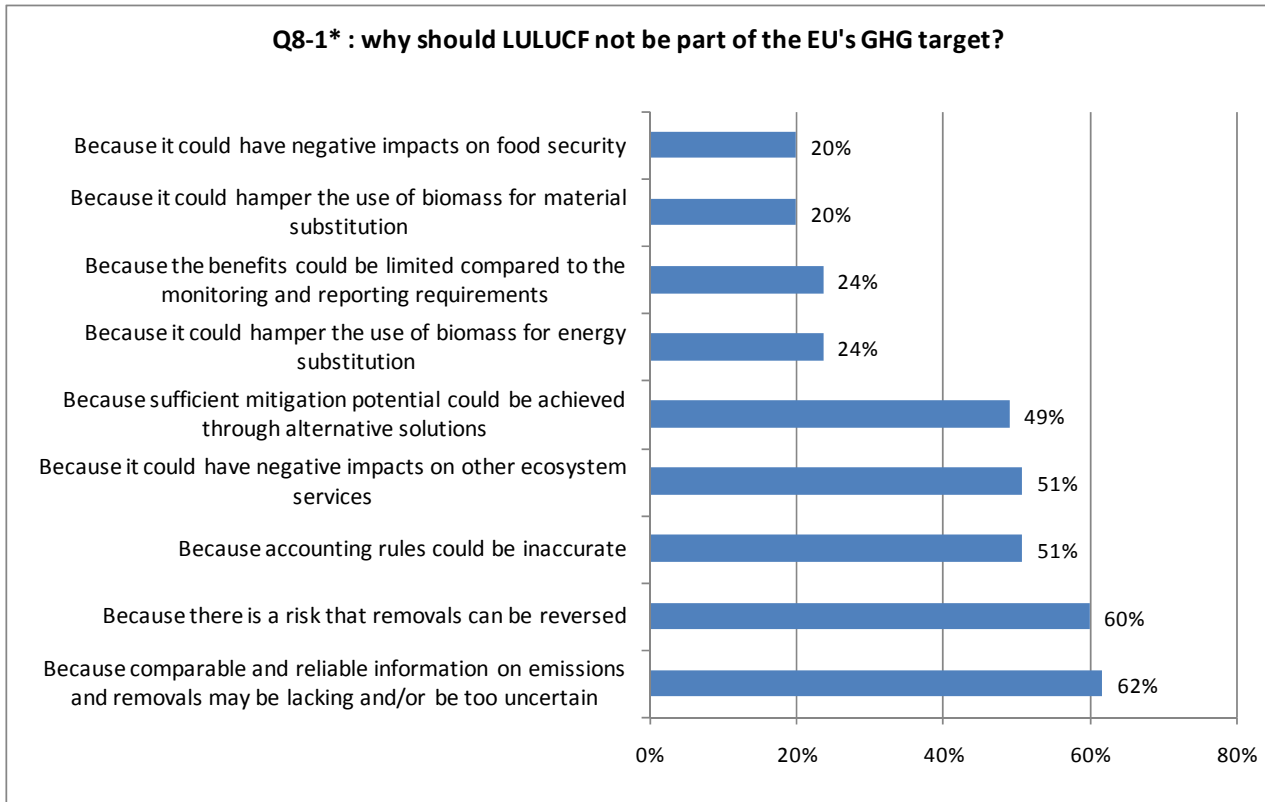


Figure 6.11 Q8-1*: Other reasons for not including LULUCF in the EU GHG commitment

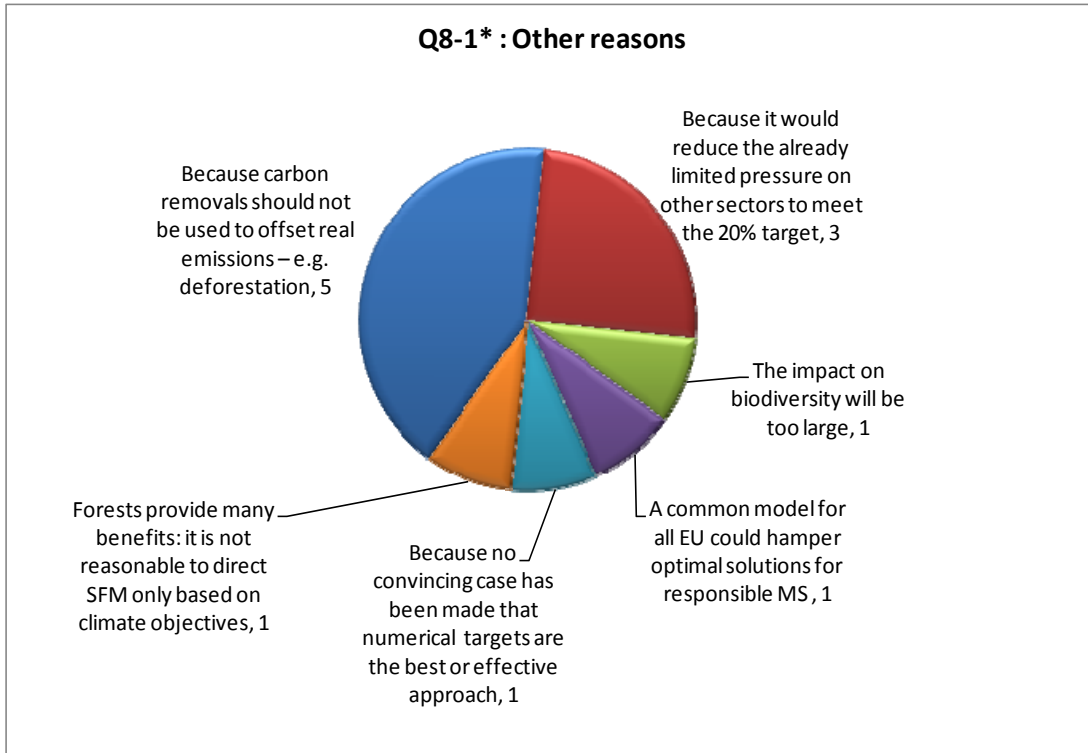


Figure 6.12 Q8-3: Which activities should be included in the EU target?

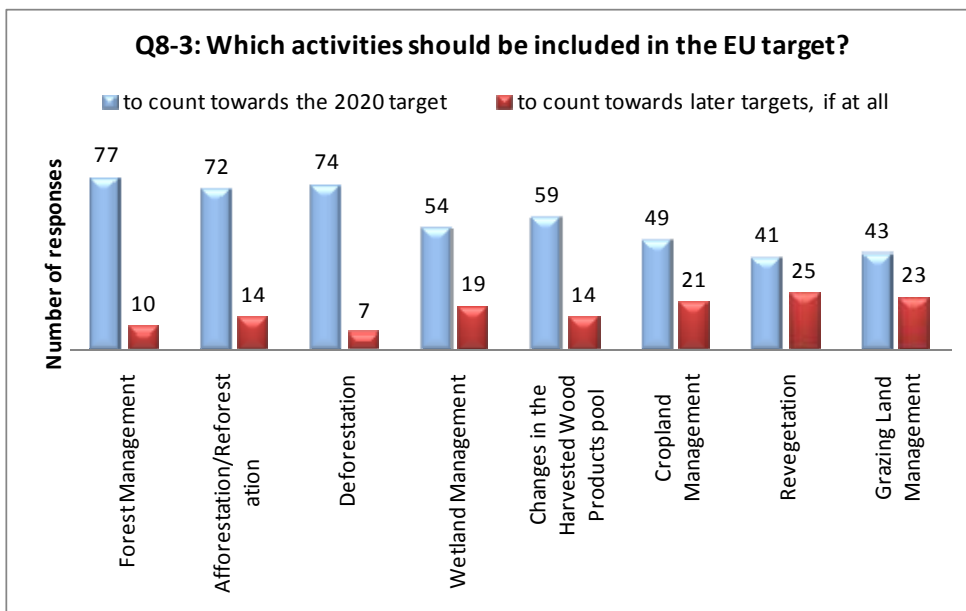


Figure 6.13 Q8-4: Which activities should be mandatory/voluntary?

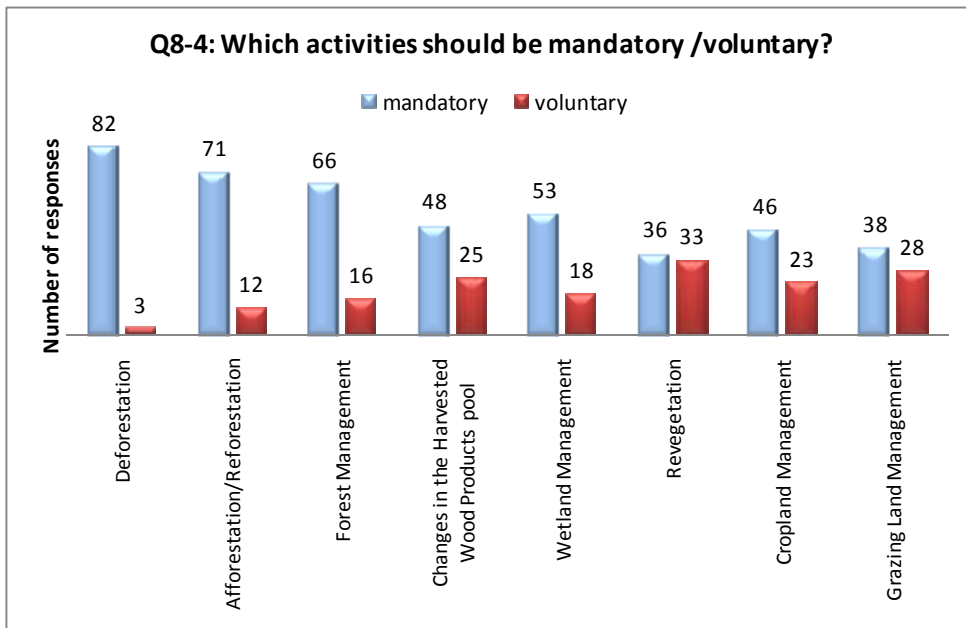


Figure 6.14 Q8-5: Preferred accounting methods for forest management

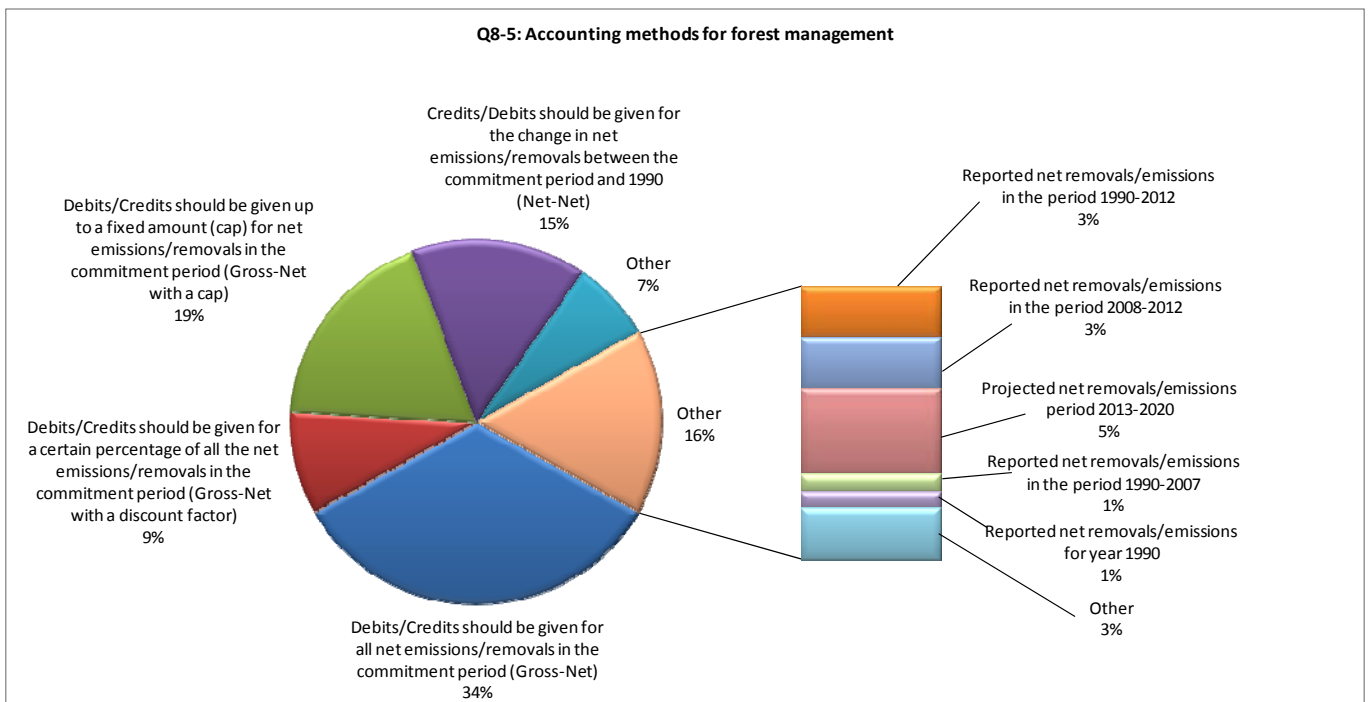


Figure 6.15 Q9: How should LULUCF emissions be regulated?

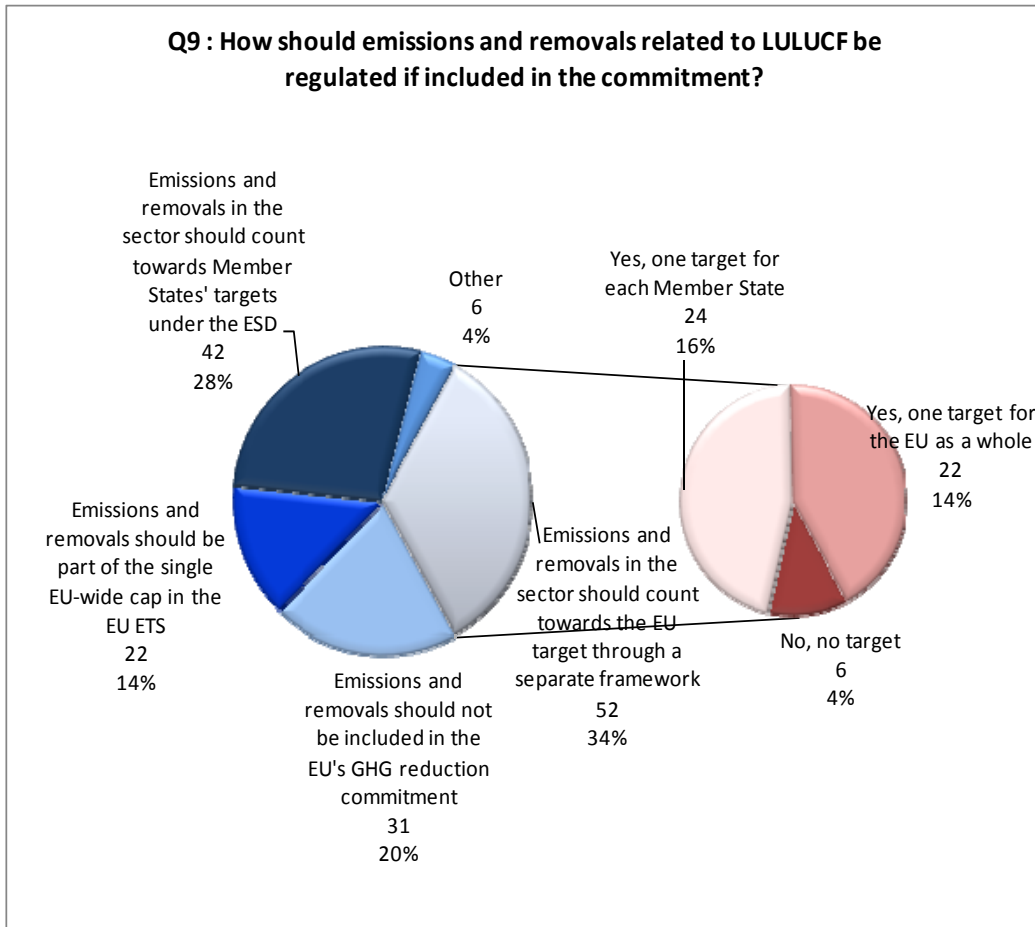


Figure 6.16 Q10: Are existing EU and MS policies sufficient?

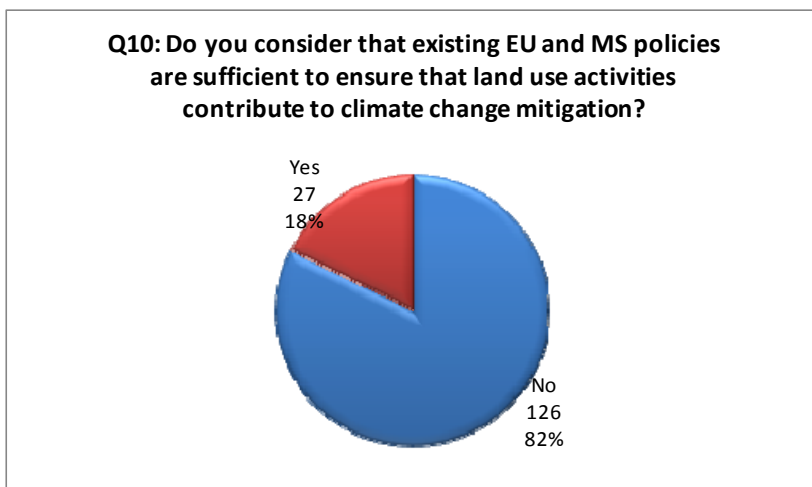


Figure 6.17 Q10-1: What are the areas for further action?

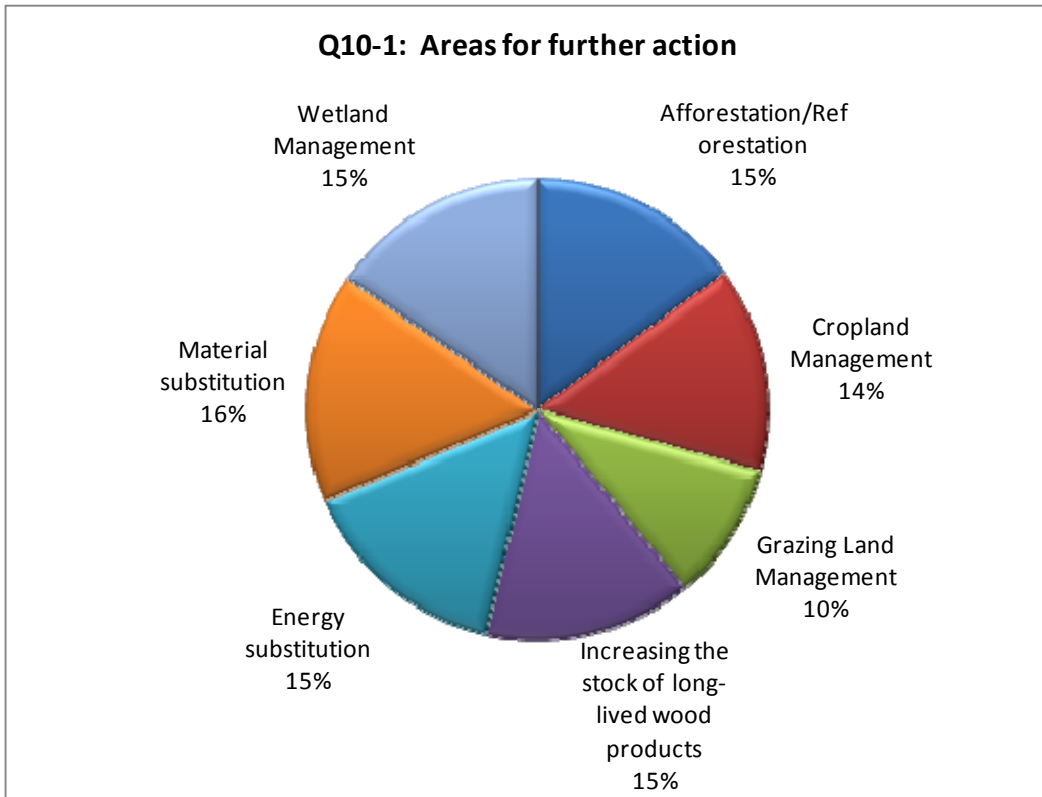


Figure 6.18 Q10-1: How is best to organise further activities?

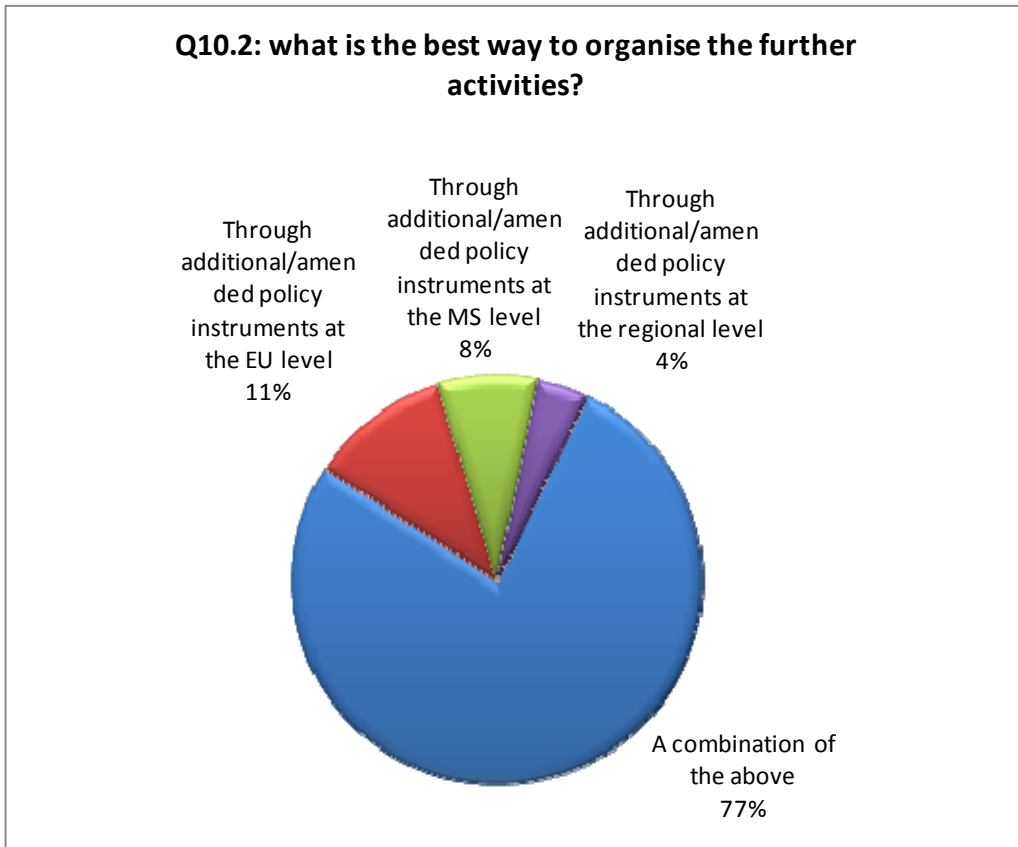


Figure 6.19 Q11 and Q12: Role of landowners

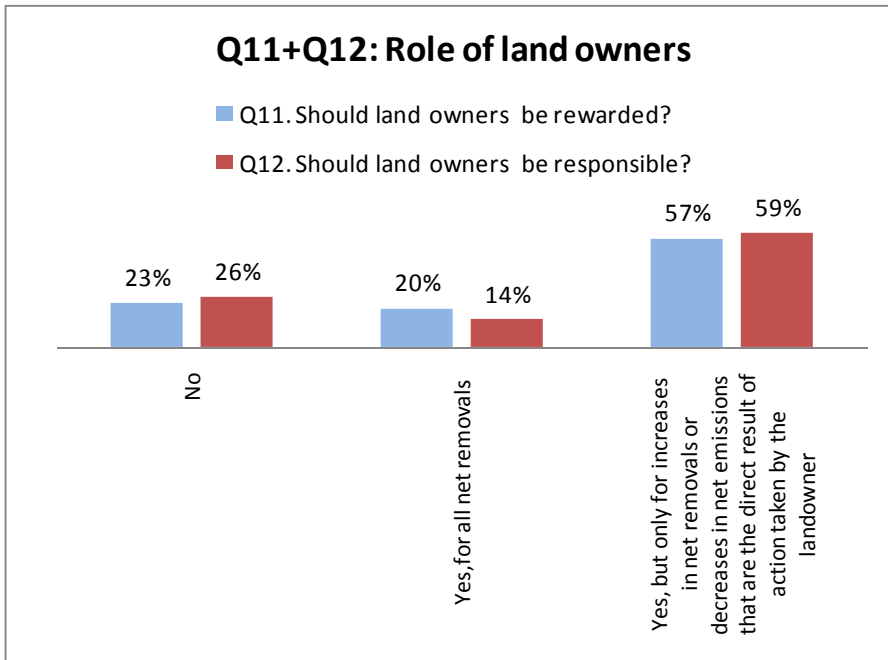


Figure 6.20 Q13: Should biomass as material substitute be rewarded?

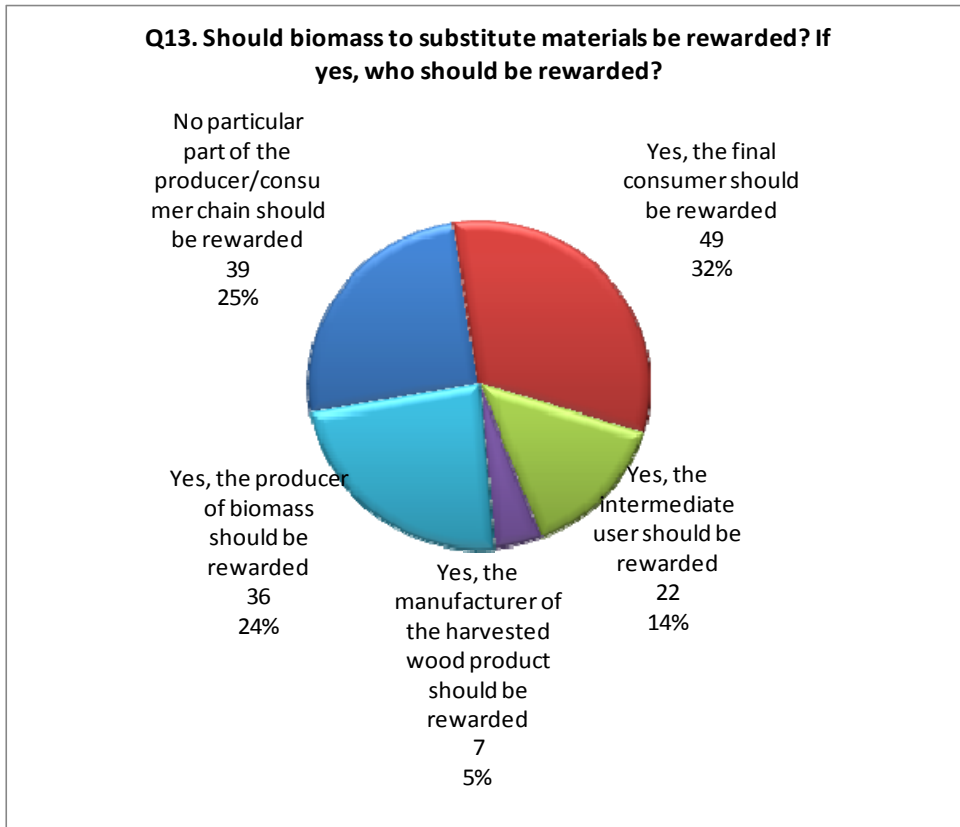
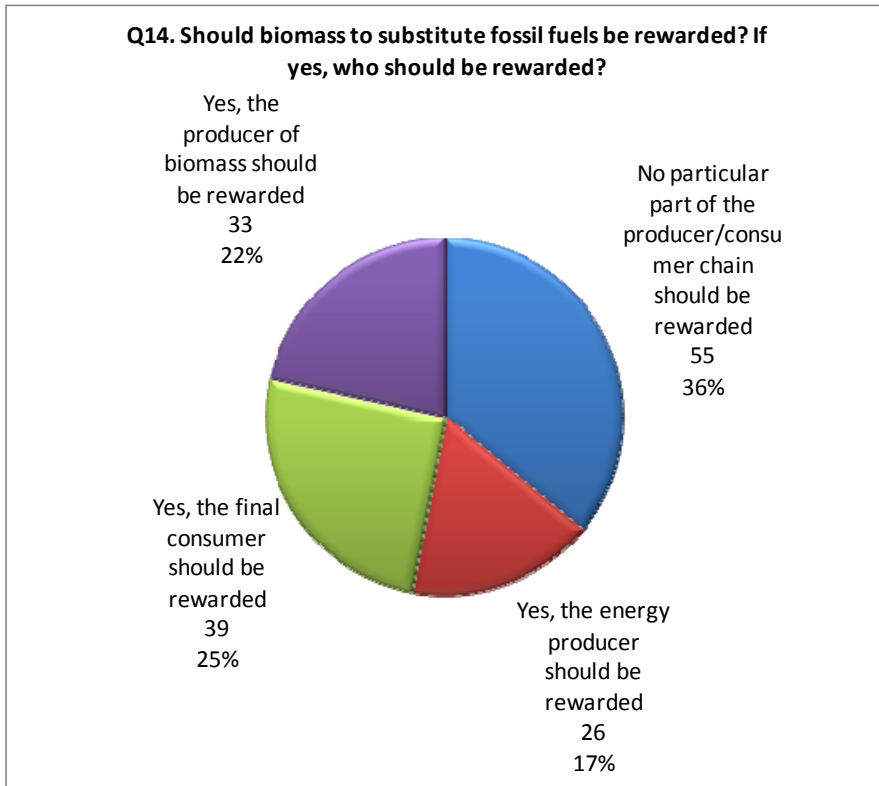


Figure 6.21 Q14: Should biomass as fossil fuel substitute be rewarded?



7. Appendix B: Questionnaire



Public consultation on the role of EU agriculture and forestry in achieving the EU's climate change commitments

With this questionnaire, we seek your views on the potential opportunities and challenges of including LULUCF in the EU's greenhouse gas reduction commitment. In particular we ask questions on how land use activities may contribute to climate change mitigation (Section B), if the LULUCF sector should count towards the EU's greenhouse gas reduction commitment (Section C) and, if so, the ways and conditions in which this could be done and also how measures may be mobilised (Section D). We welcome contributions from citizens, organisations and public authorities which will provide guidance for the further work by the Commission. Results will be published on the Internet. It is important to read the specific privacy statement attached to this consultation for information on how your personal data and contribution will be dealt with. In the interests of transparency, organisations have been invited to provide the public with relevant information about themselves by registering in the Interest Representative Register and subscribing to its Code of Conduct. If an organisation does not register, the submission will be published separately from the registered organisations.

Before answering this questionnaire, please consult the available background documents on LULUCF.

Warning

Question 8-8 (if you reply yes to Q8) and question 15 may require long answers. In order to avoid losing time and information (due to possible disconnection) we recommend that you first type them offline and that you later copy-paste them into the relevant field instead of directly typing them online. Thank you!

A) Your information

1) What is your name? **(compulsory)**

(between 3 and 100 characters)

2) What is your main professional field / interest group? **(compulsory)**
(at most 1 answer)

- Agricultural Administration
- Environment Administration
- Forest Administration
- Environmental non-governmental organizations
- Business and industry non-governmental organizations
- Green finance
- Farming
- Private forest/land owners
- Institutional forest/land owners
- Forest/land managers
- Bioenergy industries
- Renewable energy industries (except bioenergy)
- Panel, pulp or paper industries

- Woodworking Industries
- Other industries
- Local non-governmental organizations
- Research
- Other

Please specify what you mean by "other" in the previous question: **(compulsory)**
(between 3 and 100 characters)

3) Please provide your (professional) contact details: postal & e-mail addresses/phone number/fax number... **(compulsory)**
(between 10 and 500 characters)

4) You are answering this consultation ... (please tick the right answer) **(compulsory)**
(at most 1 answer)

- on behalf of a public authority
- on behalf of an organisation
- as a citizen

Could you please specify ? **(compulsory)**
(between 3 and 50 characters)

Could you please specify ? **(compulsory)**
(between 3 and 50 characters)

5) What is your country of residence/country where your organisation or institution is based? **(compulsory)**

[\(at most 1 answer\)](#)

- AT – Austria
- BE – Belgium
- BG – Bulgaria
- CY – Cyprus
- CZ – Czech Republic
- DE – Germany
- DK – Denmark
- EE – Estonia
- EL – Greece
- ES – Spain
- FI – Finland
- FR – France
- HU – Hungary

- IE – Ireland
- IT – Italy
- LT – Lithuania
- LU – Luxemburg
- LV – Latvia
- MT – Malta
- NL – Netherlands
- PL – Poland
- PT – Portugal
- RO – Romania
- SE – Sweden
- SL – Slovenia
- SK – Slovakia
- UK – United Kingdom
- CH – Switzerland
- IS – Iceland
- LI – Liechtenstein
- MK – former Yugoslav Republic of Macedonia
- NO – Norway
- TR – Turkey
- Other

B) How can land use activities contribute to climate change mitigation?

6) Do you consider that land use activities could make a significant and cost-effective contribution to climate change mitigation? **(compulsory)**
 (at most 1 answer)

- Yes
- No

6-1) In what way(s) do you think land use activities could contribute and over which time horizons?

	by 2020	by 2020 to 2050	beyond 2050
Limit emissions in agriculture <i>optional</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Increase sequestration (uptake of CO2) in agriculture <i>optional</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Limit emissions in forestry <i>optional</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Increase sequestration (uptake of CO2) in forestry <i>optional</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Increase biomass production and use for substitution of carbon intensive materials <i>optional</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Increase biomass production and use for substitution of carbon intensive energy sources (fossil fuels) <i>optional</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

6-2) Please indicate for each mitigation measure below if you consider it could (i) contribute to overall climate change

mitigation, (ii) increase GHG emissions, or (iii) have no significant effect on GHG emissions. When answering this question, please take into account leakage and rebound effects, if any.

By mitigation is meant a reduction of net emissions or increase in net removals compared to business as usual, i.e. relative to what would have happened if no measure was taken. Leakage can occur when for instance one mitigation policy/practice reduces local emissions while inducing an increase in emissions elsewhere. In this case, globally, emissions are only displaced. i.e. they leak from one place to another. Rebound effect refers to the behavioral or other systemic responses to the introduction of new measures taken to reduce GHG emissions, when these responses tend to offset the beneficial effects of the measures.

	would contribute to mitigation	would increase GHG emissions	would have no effect on GHG emissions
Conversion from annually cultivated land to permanent cropping (especially on organic soils) <i>optional</i>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Incorporation of organic materials (farmyard manure, straw, crop residues) into cultivated land <i>optional</i>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Avoidance of burning in the field of harvest residues (which are not utilised for bioenergy or put into the soil) <i>optional</i>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Reduction in tillage frequency (conservation tillage, zero tillage) <i>optional</i>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Prevention of loss of topsoil by limiting soil erosion <i>optional</i>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Maintenance or restoration of the level of the water table in peat soils <i>optional</i>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Increasing grassland productivity	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

optional			
Cover crops optional	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Adapted crop rotation patterns optional	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Reduction or avoidance of the conversion of forest to other land uses optional	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Afforestation optional	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Leaving organic materials (farmyard manure, straw, stems, branches and foliage, crop and usually harvested residues) in and on the soil to maintain or enhance soil organic matter and fertility optional	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Prevention of forest fires and storm damages optional	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Modifying rotation lengths optional	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Restoring woody landscape elements such as hedgerows and windbreaks optional	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Use of harvested biomass to substitute materials associated with high greenhouse gas emissions (e.g. building with timber instead of steel, concrete, glass) optional	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Use of harvested biomass to substitute fossil fuels (through direct combustion or	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

biofuel generation) optional			
Reduction in the conversion of relatively high carbon stock land to arable land optional	○	○	○

7) Which statement would best describe your view on the potential of land use activities to contribute to climate change mitigation? **(compulsory)**
(at most 1 answer)

- Land use activities are instrumental to a long term solution, as only ecosystems can absorb the carbon emitted to the atmosphere and provide biomass for material and energy substitution.
- Land use activities can make an important contribution, but the key challenge is to make our energy, industrial and transport systems more sustainable.
- Land use activities may provide a minor contribution, but they are under threat from climate change itself and the main focus in this sector should be on adaptation.
- The removals or reduced emissions achievable in the land sector are too uncertain to consider or would only dilute efforts in other sectors.
- None of the above

C) The role of LULUCF in the EU's greenhouse gas reduction commitment

8) The EU has committed unilaterally to reduce greenhouse gas emissions by 20% by 2020 compared to 1990, and by up to 30% if conditions are right. Do you consider that emissions and removals related to LULUCF, either fully or partly, should be included in the EU's greenhouse gas commitment? **(compulsory)**
(at most 1 answer)

- Yes
- No

8-1) In what context should the sector be included ? **(compulsory)**
(at most 1 answer)

- To achieve the EU's unilateral 20% greenhouse gas reduction commitment
- To achieve a greenhouse gas reduction commitment above 20%

8-2) Why do you consider the inclusion of LULUCF desirable (you can select multiple items): **(compulsory)**

- To recognise the contributions the sector is already making
- To incentivise additional mitigation in the sector
- To encourage land restoration
- To make sure that emissions and removals from all sectors in the economy are adequately accounted for
- Other

Please specify what you mean by "other" in the previous question: **(compulsory)**
(between 3 and 100 characters)

8-1*) Why do you consider an inclusion of LULUCF undesirable? (you can select multiple items): **(compulsory)**

- Because comparable and reliable information on emissions and removals may be lacking and/or be too uncertain
- Because there is a risk that removals can be reversed
- Because accounting rules could be inaccurate
- Because it could hamper the use of biomass for material substitution
- Because it could hamper the use of biomass for energy substitution
- Because the benefits could be limited compared to the monitoring and reporting requirements

- Because sufficient mitigation potential could be achieved through alternative solutions
- Because it could have negative impacts on food security
- Because it could have negative impacts on other ecosystem services
- Other reason(s)

Please specify what you mean by "other" in the previous question: **(compulsory)**
 (between 3 and 100 characters)

8-3) Under the Kyoto Protocol, LULUCF is divided into a number of different activities, and additional activities are considered in the international negotiations. Which activities should be included in the EU's GHG reduction target and when? Please select from the options below.

	to count towards the 2020 target	to count towards later targets, if at all
Deforestation <small>optional</small>	<input type="radio"/>	<input type="radio"/>
Afforestation/Reforestation <small>optional</small>	<input type="radio"/>	<input type="radio"/>
Revegetation <small>optional</small>	<input type="radio"/>	<input type="radio"/>

Forest Management <i>optional</i>	<input type="radio"/>	<input type="radio"/>
Cropland Management <i>optional</i>	<input type="radio"/>	<input type="radio"/>
Grazing Land Management <i>optional</i>	<input type="radio"/>	<input type="radio"/>
Wetland Management <i>optional</i>	<input type="radio"/>	<input type="radio"/>
Changes in the harvested wood products pool <i>optional</i>	<input type="radio"/>	<input type="radio"/>

8-4) Under the Kyoto Protocol, accounting is mandatory for some activities and voluntary for others. In your view, should accounting for the following activities be mandatory for all Member States?

	Mandatory	Voluntary
Deforestation <i>optional</i>	<input type="radio"/>	<input type="radio"/>
Afforestation/Reforestation <i>optional</i>	<input type="radio"/>	<input type="radio"/>
Revegetation <i>optional</i>	<input type="radio"/>	<input type="radio"/>
Forest Management <i>optional</i>	<input type="radio"/>	<input type="radio"/>
Cropland Management <i>optional</i>	<input type="radio"/>	<input type="radio"/>
Grazing Land Management <i>optional</i>	<input type="radio"/>	<input type="radio"/>
Wetland Management <i>optional</i>	<input type="radio"/>	<input type="radio"/>
Changes in the Harvested Wood Products pool <i>optional</i>	<input type="radio"/>	<input type="radio"/>

8-5) If included, how should emissions and removals related to forest management be accounted for? Please consult the background documents (link at the top of this questionnaire) for more information about the different accounting methods. **(compulsory)**

(at most 1 answer)

- Debits/Credits should be given for all net emissions/removals in the commitment period (Gross-Net)
- Debits/Credits should be given for a certain percentage of all the net emissions/removals in the commitment period (Gross-Net with a discount factor)
- Debits/Credits should be given up to a fixed amount (cap) for net emissions/removals in the commitment period (Gross-Net with a cap)
- Credits/Debits should be given for the change in net emissions/removals between the commitment period and 1990 (Net-Net)
- Credits/Debits should be given for the difference in net emissions/removals between the commitment period and a reference period (Reference level)
- Other

Please specify what you mean by "other" in the previous question: **(compulsory)**

(between 3 and 100 characters)

What should the reference level for forest management be based on? **(compulsory)**

(at most 1 answer)

- Reported net removals/emissions for year 1990
- Reported net removals/emissions in the period 1990-2007
- Reported net removals/emissions in the period 1990-2012

- Reported net removals/emissions in the period 2008-2012
- Projected net removals/emissions period 2013-2020
- Other

Please specify what you mean by "other" in the previous question: **(compulsory)**
(between 3 and 100 characters)

8-6) To what extent should emissions caused by natural disturbances (such as large storms or extreme fire seasons) be accounted for under forest management? **(compulsory)**
(at most 1 answer)

- All emissions associated with natural disturbances should be accounted for in the commitment period
- Some of the emissions associated with natural disturbances should be accounted for in the commitment period
- Emissions associated with natural disturbances could be carried over to the next commitment period
- None of the emissions related to the natural disturbance should be accounted for

8-7) Do you think that there is a need for further harmonisation or standardisation between Member States?

For the purpose of this question harmonisation means ensuring that various elements are comparable between Member States whereas standardisation means that various elements must be identical in all Member States.

	Harmonisation	Standardisation	Neither
Definitions <small>optional</small>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Monitoring <small>optional</small>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Reporting <small>optional</small>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Verification <small>optional</small>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

8-8) Where do you think harmonisation or standardisation would be most needed (possibly beyond the categories listed here above)? **(optional)**
(maximum 5000 characters)

D) The role of the EU in policies addressing land use activities

9) Currently, the EU's greenhouse gas reduction commitment is regulated by the EU Emissions Trading System (Directive 2009/29/EC) and the Effort Sharing Decision (406/2009/EC). In your view, how should emissions and removals related to LULUCF be regulated if included in the commitment? **(compulsory)**
(at most 1 answer)

- Emissions and removals in the sector, accounted for according to rules agreed by the EU, should
- count towards the EU's GHG reduction commitment through a separate framework and not be linked to the targets under the Effort Sharing Decision or the EU ETS

- Emissions and removals in the sector, accounted for according to rules agreed by the EU, should count towards Member States' targets under the Effort Sharing Decision (406/2009/EC)
- Emissions and removals in the sector, accounted for according to rules agreed by the EU, should be part of the single EU-wide cap on emission allowances in the EU Emissions Trading System
- Emissions and removals in the sector should not be included in the EU's greenhouse gas reduction commitment
- Other

Please specify what you mean by "other" in the previous question: **(compulsory)**
(between 3 and 100 characters)

9-1*) Please indicate your preferences below. Should there be a sector specific target in terms of net emissions/removals? **(compulsory)**
(at most 1 answer)

- Yes, one target for each Member State
- Yes, one target for the EU as a whole
- No, no target

If no target, at what level should LULUCF debits and credits generated by emissions and removals in the sector be accounted for? **(compulsory)**
(at most 1 answer)

- Debits and credits should be accounted for at the level of Member States
- Debits and credits should be accounted for at the EU level

10) Do you consider that existing EU and Member States policies are sufficient to ensure that land use activities contribute to climate change mitigation? **(compulsory)**

(at most 1 answer)

Yes

No

10-1) In which areas do you think further action may be necessary? **(optional)**

Deforestation

Afforestation/Reforestation

Revegetation

Forest Management

Cropland Management

Grazing Land Management

Wetland Management

Increasing the stock of long-lived wood products

Material substitution

Energy substitution

10-2) How might this be best organized? **(compulsory)**

(at most 1 answer)

Through additional/amended policy instruments at the regional level

Through additional/amended policy instruments at the MS level

Through additional/amended policy instruments at the EU level

A combination of the above

11) In your view, should landowners be rewarded for net removals? **(compulsory)**

(at most 1 answer)

- Yes, land owners should be rewarded for all net removals
- Yes, land owners should be rewarded but only for increases in net removals or decreases in net emissions that are the direct result of action taken by the landowner
- No

12) In your view, should landowners be responsible for net emissions? **(compulsory)**

(at most 1 answer)

- Yes, land owners should be responsible for all net emissions
- Yes, land owners should be responsible but only for decreases in net removals or increases in net emissions that are the direct result of action taken by the landowner
- No

13) In your view, should use of harvested biomass to substitute materials associated with high greenhouse gas emissions (e.g. building with timber instead of steel, concrete, glass) be rewarded? Who should be rewarded? **(compulsory)**

(at most 1 answer)

- Yes, the producer of biomass should be rewarded
- Yes, the manufacturer of the harvested wood product should be rewarded
- Yes, the intermediate user should be rewarded
- Yes, the final consumer should be rewarded
- No particular part of the producer/consumer chain should be rewarded

14) In your view, should the use of harvested biomass to substitute fossil fuels (through direct combustion or biofuel generation) be rewarded? Who should be rewarded? **(compulsory)**

(at most 1 answer)

- Yes, the producer of biomass should be rewarded
- Yes, the energy producer should be rewarded

- Yes, the final consumer should be rewarded
- No particular part of the producer/consumer chain should be rewarded

15) Would you like to make further comments on the questions or raise any other issues concerning land use, land use change and forestry and climate mitigation in the EU? **(optional)**
(maximum 5000 characters)

Useful links

Directive 2009/29/EC of the European Parliament and of the Council of 23 April 2009 amending Directive 2003/87/EC so as to improve and extend the greenhouse gas emission allowance trading scheme of the

Community: <http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=OJ:L:2009:140:0063:0087:EN:PDF>
Decision No 406/2009/EC of the European Parliament and of the Council of 23 April 2009 on the effort of Member States to reduce their greenhouse gas emissions to meet the Community's greenhouse gas emission reduction commitments up to

2020: <http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=OJ:L:2009:140:0063:0087:EN:PDF>
Directive 2009/28/EC of the European Parliament and of the Council of 23 April 2009 on the promotion of the use of energy from renewable sources and amending and subsequently repealing Directives 2001/77/EC and

2003/30/EC: <http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=OJ:L:2009:140:0136:0148:EN:PDF>
: <http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=OJ:L:2009:140:0136:0148:EN:PDF>

Background documents

Fact Sheet on LULUCF accounting in

EU: http://ec.europa.eu/environment/consultations/pdf/background_climate.pdf

Personal data and specific privacy

statement: http://ec.europa.eu/environment/consultations/pdf/privacy_climate.pdf