



INTERGOVERNMENTAL PANEL ON CLIMATE CHANGE



WMO

UNEP

IPCC Fourth Assessment Report

Expert/Government Review of the Second-Order Draft

Chapter 9

IPCC WGIII Fourth Assessment Report, Second Order Draft

Chapter-Comment	Batch	From Page	From Line	To Page	To line	Comments	Considerations by the writing team
9-1	A	0	0	0	0	Grammatical points, typos, etc (These may have been picked up already) Page 5 lines 17-19. Yes, but a rather clumsy sentence. Page 6 line 28. Strange way of stating the obvious. Page 8 lines 44-45. Full stop in mid-sentence. Page 31 line 28: all Page 37 line 43. Delete: both Page 39 line 19: options for residues Page 59 line 28. Delete: opportunities for Page 59 line 31. Delete: will be. Page 64 line 24: silvo-pastoral Page 72 lines 24-25. No main verb. Page 73 line 40: carbon (David Viner, University of East Anglia)	Accept
9-2	A	0	0	0	0	This is a very good written chapter. Generally, the text could be shortened and made more focused. There are numerous repetitions throughout the chapter and some unsupported statements. (Andrei Kirilenko, University of North Dakota)	Noted and accept
9-3	A	0	0	0	0	The chapter has improved a lot since the previous draft! (Somogyi Zoltán, Forest Research Institute)	Noted
9-4	A	0	0	0	0	It is striking how many people from The Netherlands are authors. The IPCC should thrive at doing more networking, and inviting and allowing people also from other countries (including the not most developed ones!!!) to contribute. (Somogyi Zoltán, Forest Research Institute)	Noted
9-5	A	0	0	0	0	General comments: The text is greatly improved, but the discussion is under a (too) ideal background. Regional differentiations are not reflected. Many of the policies would be difficultly implemented in some regions. (Shaohong WU, Institute of Geographical Sciences and Natural Resources Research, Chinese Academy of Sciences)	Regional balance is attempted by having as much regional data as possible, literature has its limitations
9-6	A	0	0	0	0	The use of units for emission reductions (tC or tCO ₂) is sometimes confusing. One example is: page 34, line 11-24, where the text states the estimates in MtCO ₂ , while the respective Figures 9.14 refer to C. (Martina Jung, Ecofys)	Accept
9-7	A	0	0	0	0	It might be interesting to include somewhere in this chapter a summary of the discussion on methane emissions from plants caused by the publication of the	Partly reject, we deal with bio physical aspects as albedo and such , and also refer back to

**Expert/Government Review of Second-Order-Draft
Confidential, Do Not Cite or Quote**

IPCC WGIII Fourth Assessment Report, Second Order Draft

Chapter-Comment	Batch	From Page	From Line	To Page	To line	Comments	Considerations by the writing team
						article of Keppler, F.; Hamilton, J T G.; Braß, M.; Röckmann, T. (2006) Methane emissions from plant under aerobic conditions, NATURE, Vol 439, 12 January 2006 (Martina Jung, Ecofys)	WG 1
9-8	A	0	0	0	0	Title--perhaps you have no control over this (though from experience I have found the team can change this) but the title does not say much about its contents. And it really is not forestry, which has a specific meaning, but rather the role of forests and land use change in mitigation--suggest you discuss with chairs of this group to change the title to reflect better what it contains--but for sure it should be changed from Forestry (Sandra Brown, Winrock International)	Cannot be changed
9-9	A	0	0	0	0	General: need to have consistent units throughout--some are in C units and others in CO2--convert all to CO2 (Sandra Brown, Winrock International)	Accept
9-10	A	0	0	0	0	General: chapter is far too long--at this stage of the assessments this chapter should build on what is new not repeat what has been said numerous times before in SAR, TAR, and SP-LULUCF. Need only to mention them in passing and add anything new since the TAR. E.g. I find very little of section 9.2 to be relevant, 9.4.2 to be new, and question its need--this is old stuff and surely does not need to be repeated. Chapter need to focus on mitigation options and amount by what action, and costs. (Sandra Brown, Winrock International)	Accept partly, The chapter should to some degree also be a stand alone
9-11	A	0	0	0	0	General: as this is an assessment there should not be series of paragraphs, one after the other, that contain no references or I argue no references before about 2000--surely they were captured in the previous assesments. Also if nothing is written about on some topics say so and point to need to further reseach without trying to write original, often, "fluffy " stuff. More on this later. (Sandra Brown, Winrock International)	Accept, referencing can be improved
9-12	A	0	0	0	0	General on Exec Summ: this does not reflect in my mind the key points of the chapter. Section 9.4 contains two points in summary yet this section occupyes most of the chapter and most of the analysis and results regarding the objectives of the chapt. Pages 5 and 6 of ES go on forever about stuff poorly assessed in the chapter--the weakest area because i tend to agree--there has not been much work on these other topics and thus less literature--but it does not deserve such a large portion of the ExSum as it is now. Also i do not see how the figures and tables really add to the ExSum and e.g. Table 9.1 is rather complicated but not real	Partly accepted. Rewrite of ex sum will take place. Bt it should still reflect the whole chapter , and amsd is part of the whole assessment

**Expert/Government Review of Second-Order-Draft
Confidential, Do Not Cite or Quote**

IPCC WGIII Fourth Assessment Report, Second Order Draft

Chapter-Comment	Batch	From Page	From Line	To Page	To line	Comments	Considerations by the writing team
						explanation of what it means--the EXSum, if going to contain tables/figs, should be simple and easily understood and a summary of report. (Sandra Brown, Winrock International)	
9-13	A	0	0	0	0	General comments: although TSU said that it will be copy edited--this will need a lot of work and I suggest some of authors who have English as a first language read it thoroughly--a lot of syntax is really poor and not understandable--I will highlight some of the worst cases below. (Sandra Brown, Winrock International)	
9-14	A	0	0	0	0	What I miss is a section with conclusions. I am not sure whether it is still possible to incorporate that at this stage, but it would certainly help (for me at least) to quickly understand whether the aims of the study (as given at p8) are being met. (Peter Van der Meer, Alterra)	Accept, exe summ will be rewritten. Part of confusion is because the spm txt was not in line with our txt
9-15	A	0	0	0	0	Throughout the whole chapter two forms of potential mitigation are being discussed: technical potential and economic potential. Maybe start in the introduction with explanation / definition of these two. (Peter Van der Meer, Alterra)	Reject, we focus on ec potential
9-16	A	0	0	0	0	Has improved substantially since Second Order Draft. A large amount of technical information has been gathered and has been filled in the different paragraphs. However, integration of these studies is not always done, and could help to make the text more easily readable. (Peter Van der Meer, Alterra)	Accept
9-17	A	0	0	0	0	Figure & table legends need editing. (Peter Van der Meer, Alterra)	Accept
9-18	A	0	0	0	0	Please see my Commentary titled "Addressing Potential Abrupt Climate Change" which does not fit into this Excel spreadsheet box. I have accordingly asked Dave Rutu to circulate it to lead authors. It draws attention to a body of peer reviewed and gray literature which appears to have been overlooked in the SOD, although it was brought to attention previously in my comments on the FOD. The main point is that the rest of the literature mostly treats atmospheric CO2 as a flow pollution problem, to be addressed through a reduction in emissions. However CO2 is not a noxious gas, and therefore atmospheric CO2 is an excess stock problem with several possible answers. It is technologically much easier to extract CO2 from the atmosphere by land use improvements that increase biotic absorption and yield biomass fuels (de-fossilization) than it is do without any fuel other than hydrogen (decarbonisation). Although it obvious from the text that the authors are very well aware of this, I suggest that the need to assess GHG fluxes rather than simply focus	Reject, we focus on emission reduction, as well as sink increase. Stocks and fluxes are dealt with in 9.4.1.

**Expert/Government Review of Second-Order-Draft
Confidential, Do Not Cite or Quote**

IPCC WGIII Fourth Assessment Report, Second Order Draft

Chapter-Comment	Batch	From Page	From Line	To Page	To line	Comments	Considerations by the writing team
						on emissions reductions be brought to the attention of readers by a footnote on page 7. Unfortunately time constraints prevent me from providing the detailed comments on this Chapter that I had hoped for, particularly as the mitigation options discussed in Section 9.4 describe what is involved in the forestry sector by the words "land use improvement" that provide one of the themes in Read and Parshotam 2006 (under review) available from the WG3 TS team. Accordingly apart from, p4, I gather my suggestions on this Chapter to a single suggested extra paragraph for Section 9.4.7.7. (Peter Read, Massey University)	
9-19	A	0	0	0	0	Please see my Commentary titled "Addressing Potential Abrupt Climate Change" which does not fit into this Excel spreadsheet box. I have accordingly asked Dave Rutu to circulate it to lead authors. It draws attention to a body of peer reviewed and gray literature which appears to have been overlooked in the SOD, although it was brought to attention previously in my comments on the FOD. The main point is that the rest of the literature mostly treats atmospheric CO2 as a flow pollution problem, to be addressed through a reduction in emissions. However CO2 is not a noxious gas, and therefore atmospheric CO2 is an excess stock problem with several possible answers. It is technologically much easier to extract CO2 from the atmosphere by land use improvements that increase biotic absorption and yield biomass fuels (de-fossilization) than it is do without any fuel other than hydrogen (decarbonisation). Although it obvious from the text that the authors are very well aware of this, I suggest that the need to assess GHG fluxes rather than simply focus on emissions reductions be brought to the attention of readers by a footnote on page 7. Unfortunately time constraints prevent me from providing the detailed comments on this Chapter that I had hoped for, particularly as the mitigation options discussed in Section 9.4 describe what is involved in the forestry sector by the words "land use improvement" that provide one of the themes in Read and Parshotam 2006 (under review) available from the WG3 TS team. Accordingly apart from, p4, I gather my suggestions on this Chapter to a single suggested extra paragraph for Section 9.4.7.7. (Peter Read, Massey University)	See 9 18
9-20	A	0	0	0	0	A separate section on co-benefits will be useful to show how mitigation can be mainstreamed with development programmes. (Joyashree Roy, Jadavpur University)	Reject, we have this in 9.5. we agree it can be improved
9-21	A	0	0	0	0	The authors did a bold and daring chapter. The orientation as well as the work and the conclusions are well-designed, considered and executed. A few overall	Accept we will include REDD

**Expert/Government Review of Second-Order-Draft
Confidential, Do Not Cite or Quote**

IPCC WGIII Fourth Assessment Report, Second Order Draft

Chapter-Comment	Batch	From Page	From Line	To Page	To line	Comments	Considerations by the writing team
						<p>concerns for this otherwise excellent chapter include:</p> <p>1) Dismay that 9.4.2.1 (page 25, lines 36-38) suggests a major new UNFCCC initiative – avoiding deforestation in developing countries – is reduced to a policy prescriptive sentence about the definition of a baseline and the demand that leakage be accounted. These are regulatory decisions that have cost the forestry mitigation potential substantially, without any obvious merit. Baselines for avoided deforestation may be better served by a historical emission rate, not necessarily a model about the future in a wildly dynamic sector... as was the case for Annex B in the Kyoto Protocol. Also, from a perspective of For instance, would projections that were made in the 1980s have imagined the massive soy expansion in the Amazon in the 1990s? In the 1980s, cattle was the most important market driver for Amazonian deforestation - soy beans were a rather mild threat. This sentence (lines 36-38) also demands that avoided deforestation account for leakage. This too is a policy prescriptive statement without merit. The fossil fuel sector rarely deals with leakage in UNFCCC accounting: and there are several legal, moral and technical reasons not to consider leakage in the context of GHG accounting and avoided deforestation. Leakage is important, but should be addressed fairly in policy.</p> <p>2) The chapter missed a golden opportunity – to call for research on how top down (remote sensed) and bottom up (inventory, stand-level) information can be meaningfully “docked” or “interlocked”. Research on how various data sources classify forests, and how these classifications relate to bottom up and top-down information is critical. The chapter should call for more research into merging remote information from satellites and ground-based biomass and carbon inventories. This importance grows as reducing emissions from deforestation and degradation (REDD) policy conversations move the debate from the project level to the national level.</p> <p>3) The strength of the scientific rational for having avoided deforestation as part of any subsequent regime is clearly growing, and the chapter scientifically reflects this. Yet, the chapter’s language remains weak from an overall policy directive. How about something like, “As evidence of climate change grows, it grows increasingly evident that avoided emissions from developing countries are a critical yet untapped policy option.”</p> <p>(John Niles, Coalition for Rainforest Nations)</p>	
9-22	A	0	0	0	0	It was found that biodiversity aspects were not highlighted enough in the chapter: it is now first mentioned in the bio-energy section. Also for the policy sections	Accept, Ancillary benefits section will be improved

**Expert/Government Review of Second-Order-Draft
Confidential, Do Not Cite or Quote**

IPCC WGIII Fourth Assessment Report, Second Order Draft

Chapter-Comment	Batch	From Page	From Line	To Page	To line	Comments	Considerations by the writing team
						biodiversity is an important consideration. (Expert Review Meeting Paris, IPCC)	
9-23	A	0	0	0	0	Finally, a comment was made that the readability of chapter would be better with clearer definitions such as changing the term 'avoiding deforestation' to 'reducing deforestation' throughout the chapter. (Expert Review Meeting Paris, IPCC)	Accept
9-24	A	0	0	0	0	A recurring question focused on the carbon cycle and biophysical feedbacks (related to the work of Working Group I and II). It was considered a weak point of the chapter that no more precise information on the impacts of these feedback mechanisms on the mitigation potential is included. In this respect attention was asked for clarifying for policy makers that forest can be a sink and a source. (Expert Review Meeting Paris, IPCC)	Partly accept. we will highlight this more, but still refer to wg 1
9-25	A	0	0	0	0	I could not find the specific figures that are quoted here in the WG1 assessment in chapter 7. The figures contained in Tables 7.3.1 and 7.3.2 in WG1 chapter 7 appear to be different from those derived in this chapter. I also could not find an evaluation of the period 1993 to 2003 in WG1 chapter 7 as it is referred to in several places in this chapter (though obviously I may have missed it, or may have misinterpreted the information contained in the WG1 report). Please try to achieve consistency between the different reports, or explain any remaining differences where the WG3 assessment differs from the WG1 assessment. It would be very unhelpful if two different IPCC reports were to be seen to be inconsistent. (Andy Reisinger, TSU IPCC Synthesis Report)	Accept, check again
9-26	A	0	0	0	0	Large scale mining, e.g. for mammoth tusks and oil sand, will lead to the increase of C emission from forest soils. This would be a serious problem to be discussed. (Yukihiro Chiba, Forestry and Forest Products Research Institute)	Reject, not the subject
9-27	A	0	0	0	0	General Comment---The technology R & D has been dealt extensively but least mention of Technology Transfer issues is being given very less importance---which(tech transfer) is an important issue for developing countries. (ANISH CHATTERJEE, DEVELOPMENT ALTERNATIVES)	Accept, tech transfer will be highlighted more
9-28	A	0	0	0	0	Pearce, D. 2004. Environmental Market Creation: Saviour or Oversell? Portuguese Economic Journal 3: 115-144 (Katia Karousakis, OECD)	Noted
9-29	A	0	0	0	0	Interest is increasing in looking at new and innovative policies to reduce emissions in developing countries, including developing a carbon market for emissions and	Accept, more on redd

**Expert/Government Review of Second-Order-Draft
Confidential, Do Not Cite or Quote**

IPCC WGIII Fourth Assessment Report, Second Order Draft

Chapter-Comment	Batch	From Page	From Line	To Page	To line	Comments	Considerations by the writing team
						many other payments for environmental services. See Mayrand and Paquin, 2004: Payment for Environmental Services: A survey and Assessment of Current Schemes, UNISFERA. (Katia Karousakis, OECD)	
9-30	A	0	0	0	0	Check all references to table 9.3 (see comment 35) (Government of UK)	Accept
9-31	A	0	0	0	0	The chapter has 93 pages. It seems much longer than planned length and should be largely cutdown. (Government of China Meteorological Administration)	Accept
9-32	A	0	0	0	0	In table 9.2, 9.3, Fig 9.6 and Fig 9.15, country-specific data is elaborated separately out of the region (Asia or east asia), to keep balance throughout the chapter, these country-specific data shall be merged into region or sub-region rather than separately. This can help to reduce the length of the chapter. (Government of China Meteorological Administration)	Reject, we are urged to be regional specific. Some big countries are then named separately
9-33	A	0	0	0	0	Costs of avoided emission made out of forest sinks are used all over the chapter, but no detailed explanation is given on how it has been calculated. (Government of France)	Noted, we explain variety of studies
9-34	A	0	0	0	0	General comment: This chapter requires proof-reading and editing for english grammar. (Government of Environment Canada)	Accept
9-35	A	0	0	0	0	Units for CO2-prices: Sometimes they are \$/tC, sometimes they are \$/tCO2. E.g. C-price is mentioned in P31 L17 and L29-30; P32 Table 9.4; whereas CO2-price is mentioned eg. P33 L22-3. These were just examples, there are many more of these. It would make it easier for reader if he/she doesn't have to make conversion each time (Government of Finland)	Accept
9-36	A	0	0	0	0	Taking into account the UNFCCC and KP provisions is welcomed. However, the focus in some chapters is too much on this issue especially with regard to the CDM provisions whereas Articles 3.3 and 3.4 are not dealt with the same intensity. It is suggested, to shorten CDM text and elaborate a little bit more on 3.3,3.4 As stated in the introduction, there is a wide span between the mitigation potential and the reality. It is – correctly – stated, that there appear to be many barriers that preclude the full use of the mitigation potential. The reason for this may be the nature of different kinds of land ownership: it is not easy to make millions of small land owners change traditional methods of land cultivation, especially in developing countries. This is one large source of	Accept, 9.6.6. will be modified

**Expert/Government Review of Second-Order-Draft
Confidential, Do Not Cite or Quote**

IPCC WGIII Fourth Assessment Report, Second Order Draft

Chapter-Comment	Batch	From Page	From Line	To Page	To line	Comments	Considerations by the writing team
						<p>uncertainty.</p> <p>On the contrary, it is easy to motivate some industries to implement new technologies with the help of new regulation and taxes.</p> <p>Another reason for the uncertainty in the mitigation potential is the too optimistic estimate of the effects of improved land-use practices (see comment on Chapter 9.4.1)</p> <p>(Government of Germany)</p>	
9-1	B	0	0	0	0	<p>Within the forestry chapter, There are concerns with the approach of adding up regional bottom-up estimates, and extrapolating them to global summary statistics. Global (top-down) analyses exist, and are included in the forestry chapter. However, these results are not reflected in the executive summary of the chapter and as a consequence, are not reflected in the Technical Summary or SPM. The authors should present both the bottom-up results and the top-down global results and make comparisons at the regional level. Both sets of results are contained in the literature. The document should discuss the strengths and weaknesses of each of these approaches. U.S. Government</p> <p>(Government of U.S. Department of State)</p>	Accept, these will be integrated/compared better
9-2	B	0	0	0	0	<p>Within the forestry chapter, there are concerns with the approach of adding up regional bottom-up estimates – from various studies that have different underlying assumptions and methods – and, using them to produce global summary statistics. U.S. Government</p> <p>(Government of U.S. Department of State)</p>	Accept, these will be integrated/compared better
9-3	B	0	0	0	0	<p>This chapter has structural problems and is need of significant editing. The chapter lacks focus and currently the reader has to invest a great deal of effort to discern the purpose of sections and sub-sections and find the overall story and take-away messages being constructed. The authors should step back from what's currently written and decide what information they want/need to convey and then develop the chapter and the subsections to clearly present that information. At the moment, there are hard-to-connect interesting bits of text and a plethora of numbers that are not strung together. It is worth noting, however, that Sections 9.5 and 9.6 were much easier to read. In addition to difficult text, figures and tables are incorrectly labeled, missing, duplicated, and numbers cited in the text are not found in some tables. U.S. Government</p> <p>(Government of U.S. Department of State)</p>	Accept,
9-4	B	0	0	0	0	<p>The references are in need for critical review--duplicate entries, incomplete entries, out-of-date entries, insufficient information for accessing, etc. While sympathetic</p>	accept

**Expert/Government Review of Second-Order-Draft
Confidential, Do Not Cite or Quote**

IPCC WGIII Fourth Assessment Report, Second Order Draft

Chapter-Comment	Batch	From Page	From Line	To Page	To line	Comments	Considerations by the writing team
						that this is a last priority in completing the draft, it makes tracking down references difficult and has prevented full review of key pieces of the chapter (especially Section 9.4). U.S. Government (Government of U.S. Department of State)	
9-5	B	0	0	0	0	The authors should present both the bottom-up results and the top-down global results and make comparisons at the regional level. Both sets of results are contained in the literature. The document should discuss the strengths and weaknesses of each of these approaches. U.S. Government (Government of U.S. Department of State)	Accept
9-6	B	0	0	0	0	Sathaye et al. (in press) has a dominant presence across the chapter. A more balanced presentation and discussion is appropriate that considers, among others, Sohngen and Sedjo (in press) and Benitez et al. (2006). Section 9.4.5 is more balanced, but the other relevant sections are not and either need to provide better balance or strongly justify the decision not to. Chapter 3 provides forestry results from more global models than currently covered in this chapter (also see the reference Rose et al. that includes global forestry numbers in the appendix). Consistency across these chapters should be sought in general – baseline, mitigation, studies considered, modeling challenges/deficiencies. U.S. Government (Government of U.S. Department of State)	Accept, more balance will be the target
9-7	B	0	0	0	0	Please present data in common units across the chapter (and report) - e.g., GtC vs MtC, C vs CO ₂ . U.S. Government (Government of U.S. Department of State)	Accept
9-8	B	0	0	0	0	In several places in the chapter, the text focuses on issues that are unique to the Kyoto Protocol – when larger, generic issues also exist. For example, the discussion of permanence focused on the treatment under the Kyoto Protocol. Also the section uses definitions of afforestation and reforestation that are unique to the Kyoto Protocol (however the use of afforestation is used as a generic term in many places within the chapter). U.S. Government (Government of U.S. Department of State)	Noted, we will emphasise also other regimes
9-9	B	0	0	0	0	In several places in Chapter 9, the text focuses on issues that are unique to the Kyoto Protocol – when larger, generic issues also exist. For example, the discussion of permanence focused on the treatment under the Kyoto Protocol. Also the section uses definitions of afforestation and reforestation that are unique to the Kyoto Protocol (however the use of afforestation is used as a generic term in many places within the chapter). U.S. Government (Government of U.S. Department of State)	See 9.8

**Expert/Government Review of Second-Order-Draft
Confidential, Do Not Cite or Quote**

IPCC WGIII Fourth Assessment Report, Second Order Draft

Chapter-Comment	Batch	From Page	From Line	To Page	To line	Comments	Considerations by the writing team
9-10	B	0	0	0	0	Global (top-down) analyses exist, and are included in the forestry chapter. However, these results are not reflected in the executive summary of the chapter and as a consequence, are not reflected in the Technical Summary or SPM. U.S. Government (Government of U.S. Department of State)	Accept, More balance will be strived for
9-37	A	2	1	2	8	give an explanation why Africa and Latinamerica(not all belongs to wet and dry tropics)are not in that list (Government of Germany)	Reject, lack of data, they are merged in wet and dry tropics
9-38	A	2	15	0	0	Missing title of 9.6.1 (Shaohong WU, Institute of Geographical Sciences and Natural Resources Research, Chinese Academy of Sciences)	Accept
9-39	A	2	15	0	0	Insert 9.6.1 an appropriate title of that section (Katia Karousakis, OECD)	Accept
9-40	A	2	44	6	0	Suggest to add references in the executive summary to relevant places of the chapter e.g. at graphs or at relevant information that may need explanation. For example, when reading the text of Figure 9.1, one might ask what the "baseline scenario" might mean, and might want to go to the later sections for explanation. (Somogyi Zoltán, Forest Research Institute)	Accept
9-41	A	2	45	6	49	The executive summary makes very interesting reading, but it needs to be shorten, structured and focused to be useful. The usage of the uncertainty quantifiers is spotty. I think that the language should be simplified here. I am not sure how flexible the format is, but you can consider to put at the end of the key executive summary statements a reference to the corresponding subchapter, similar to the Executive Summary of WG2 Chapter 12. (Andrei Kirilenko, University of North Dakota)	Accept
9-42	A	2	45	0	0	Executive Summary : I miss clear conclusions. Maybe they are there hidden in the text, but it would be good to highlight 3 or 4 main conclusions. Also I wonder whether the figures should be given here, they need more explanation to be understood. (Peter Van der Meer, Alterra)	Accept
9-43	A	2	45	6	49	Descriptions of executive summary are not consistent with the body of Chapter 9. Should be reconsidered. (Government of Japan)	Accept
9-11	B	2	45	2	0	The executive summary is poorly written and has a poor flow of information. It needs to be re-written once chapter section issues are dealt with. U.S. Government (Government of U.S. Department of State)	Accept

**Expert/Government Review of Second-Order-Draft
Confidential, Do Not Cite or Quote**

IPCC WGIII Fourth Assessment Report, Second Order Draft

Chapter-Comment	Batch	From Page	From Line	To Page	To line	Comments	Considerations by the writing team
9-44	A	2	46	2	46	I do not directly understand the direct link between land-use decisions and sustainable development; either explain, or leave this sentence out (it does not have much added value). (Peter Van der Meer, Alterra)	Reject
9-12	B	3	0	0	0	In the Executive Summary the authors should define a reference case emissions scenario for LULUCF, so that mitigation potentials can be compared against this. (Government of Australia)	Reject, explained in chapter, there is no agreed baseline for this sector
9-1	C	3	1	3	2	Land-use changes can also be positive and deliver co-benefits such as employment, income generation opportunities, biodiversity, watershed conservation, provision of timber and fiber, etc... The sentence should reflect the potential positives and potential negatives, so as to provide balance. These co-benefits are mentioned on Chap 9, page 7, lines 36-39 (Government of New Zealand)	Accepted, taken up in the review of TS
9-45	A	3	4	3	9	Here or elsewhere in the Summary - mention the fast increase in the importance of forest plantations. (Andrei Kirilenko, University of North Dakota)	Noted
9-46	A	3	4	3	4	during what time period is ths deforestation number for? (Sandra Brown, Winrock International)	Taken into account: time period is 2000-2005
9-47	A	3	4	8	9	The difference between gross loss (13 million ha/yr) and net loss (7,3 millions ha/yr) should be clearly explained (Government of France)	Accepted – will be explained better
9-48	A	3	4	3	4	Reference for the statement "Deforestation-----reported" may be given. (Government of Pakistan)	Rejected - no references in the summary, references are given in the main chapter
9-13	B	3	4	3	4	It would be of assistance if the authors could provide an estimate of the total area of forests, to give some context for the figure provided for the annual rate of deforestation. (Government of Australia)	Accepted – total area will be given
9-14	B	3	4	3	0	“Alarming” is subjective. The reader, not the writer, should decide. The sentence should be more objective: “Deforestation continues, with a reported gross loss of 13 million ha/yr for the period xxxx-xxxx” where the xxxx-xxxx means the years for which the estimate loss rate applies. Suggest the authors compare current rates to historic rates, and current rates of deforestation to existing forest area, and deforestation’s contribution to global CO2 emissions. U.S. Government (Government of U.S. Department of State)	Accepted – wording will be modified
9-49	A	3	6	3	7	Reference may be cited for "Net forest area-----2004-2005". (Government of Pakistan)	Rejected - no references in the summary, references are given in the main chapter

**Expert/Government Review of Second-Order-Draft
Confidential, Do Not Cite or Quote**

IPCC WGIII Fourth Assessment Report, Second Order Draft

Chapter-Comment	Batch	From Page	From Line	To Page	To line	Comments	Considerations by the writing team
9-15	B	3	6	3	7	The statement "than earlier" is ambiguous. At this stage of the chapter, nothing has been said about what was happening earlier, the authors should rectify this inconsistency. (Government of Australia)	Taken into account: referring to 1990s
9-50	A	3	8	3	9	Awkwardly formulated. (Andrei Kirilenko, University of North Dakota)	Taken into account: text to be modified
9-51	A	3	8	3	9	same as above for "production of forest product has increased" (Peter Van der Meer, Alterra)	accepted
9-52	A	3	8	3	8	"expansion of forests have reduced net loss of forest area" : indicate by how much forest have expanded, and during what time period. (Peter Van der Meer, Alterra)	Accepted, better explanation to be given
9-16	B	3	9	3	0	"Positive carbon implications" has no meaning. Perhaps what is meant is "positive implications for carbon sequestration" U.S. Government (Government of U.S. Department of State)	Accepted
9-53	A	3	10	3	18	"additional sink of around 3150 MtCO ₂ /yr"... "10% achieved through bio energy"... This gives about 0.3 Pg CO ₂ /yr. When compared with numbers given in e.g. Transport sector (Ch 5) this seems to be rather low. And especially low when compared with Figure TS.16. (Government of Finland)	Accept, bottom up and top down for bio energy was discussed in christchurch and will be improved
9-54	A	3	11	3	22	Several problems with this paragraph--first I do not think Fig 9.1 is the correct one--if so then why label it as hypothetical? And why put a hypothetical figure in exec summ? Lines 17-18 are an example of poorly written text--it is not clear what is being said here. Also this paragraph is very dense and would warrant splitting into either sub bullets or making into a few paragraph. Also starting a key point in the exec summ with "There is a lack of integrated..." is not good form and does not give confidence to reader about your point here. Could be more positive and drop this first sentence in the paragraph and insert something to the effect after the results are reported by adding as a caveat. (Sandra Brown, Winrock International)	Accept, exe sum will be re written
9-55	A	3	11	3	11	insert "by forests" after ...carbon mitigation options ... In addition, I do not see the link between this sentence and the following sentence (on regional assessments). Please explain (Peter Van der Meer, Alterra)	Accept, need clarification
9-56	A	3	11	3	22	Regional modeling assessments and top-down global models give very different values of carbon mitigation potentials, ranging on average respectively from 3150 MtCO ₂ /yr to 12800 MtCO ₂ /yr (roughly 4 times more!)...But, there is no critical	Accept, critical assessment will be done

**Expert/Government Review of Second-Order-Draft
Confidential, Do Not Cite or Quote**

IPCC WGIII Fourth Assessment Report, Second Order Draft

Chapter-Comment	Batch	From Page	From Line	To Page	To line	Comments	Considerations by the writing team
						assessment of the models themselves, that could determine the confidence range to be given to these data. (Government of France)	
9-17	B	3	11	5	1	The executive summary should include the regional and global estimates from the top-down models from Section 9.4. Also, see comments on Section 9.4, especially Sections 9.4.5 and 9.4.7, for concerns about these numbers. For instance, the global estimates created by adding-up the regional estimates should be removed. It is not appropriate to add up the regional estimates to generate a global number. The regional estimates were drawn from separate studies that are not consistent in assumptions, data, baselines, technology, options, policies, trade, input and output markets, etc. U.S. Government (Government of U.S. Department of State)	Accept, critical assessment will be done
9-18	B	3	11	3	11	Need to define integrated assessment and put this statement into context with respect to the integrated assessment modeling forestry results presented in the land sub-sections of Chapter 3. U.S. Government (Government of U.S. Department of State)	Accept, critical assessment will be done
9-19	B	3	11	3	13	Figure 9.1 is hypothetical yet is presented as a result and used to justify the statement made here. This figure should not appear in the chapter unless it appears in the referenced literature, and is properly described in the chapter. Figure 9.1 caption last line - what is meant by "the literature does not allow such a dynamic approach"? This does not belong in a caption and also does not reflect the alternative baselines considered by global models (e.g., Sohngen and Sedjo, in press; Benetiz et al. 2006; Riahi et al., in press). U.S. Government (Government of U.S. Department of State)	Accept, the wedge figure will be taken out
9-20	B	3	11	3	0	"Carbon mitigation" has no meaning. Perhaps what is meant is "carbon emission mitigation" U.S. Government (Government of U.S. Department of State)	Accept
9-57	A	3	13	3	15	The word "economic" seems out of place here. Did you mean "economic mitigation"? (Andrei Kirilenko, University of North Dakota)	accept
9-58	A	3	13	3	15	Please make sure, that there is no double counting of mitigation potentials with the numbers stated in chapter 8 Agriculture and chapter 4.3.3.3 Bioenergy and Biomass as in those chapters mitigation potentials for agroforestry and bioenergy are also given. (Government of Germany)	Accept
9-59	A	3	15	3	18	Awkwardly formulated.	Accept

**Expert/Government Review of Second-Order-Draft
Confidential, Do Not Cite or Quote**

IPCC WGIII Fourth Assessment Report, Second Order Draft

Chapter-Comment	Batch	From Page	From Line	To Page	To line	Comments	Considerations by the writing team
						(Andrei Kirilenko, University of North Dakota)	
9-60	A	3	15	3	16	Sentence beginning ‘About 50%...’ This is true for Africa, Caribbean etc., and Other Asia, but not for other regioes shown in the table. The text should reflect this, because the present text gives the idea that reduction is uniform worldwide. (Hector Ginzo, Ministerio de Relaciones Exteriores, Comercio Internacional Y Culto)	Accept
9-61	A	3	16	3	17	Sentence beginning ‘This sink enhancement...’ is confusing. The meaning of ‘...will be located in the tropics for 65% (Table 9.1), be found mainly...’ is not clear, particularly ‘for 65%’. (Hector Ginzo, Ministerio de Relaciones Exteriores, Comercio Internacional Y Culto)	accept
9-62	A	3	16	0	0	Personally impression, 20\$ is a little bit lower. (Shaohong WU, Institute of Geographical Sciences and Natural Resources Research, Chinese Academy of Sciences)	Reject
9-63	A	3	16	3	18	Sentence does not make sense (Government of UK)	Accept
9-21	B	3	16	3	17	“This sink enhancement/emission avoidance will be located in the tropics for 65% (high confidence)” is a poorly constructed clause; “for 65%” of what? In 65% of the tropics, or during 65% of the time, or what? U.S. Government (Government of U.S. Department of State)	Accept
9-64	A	3	17	0	0	after '(Table 9.1)': wording not understandable (Somogyi Zoltán, Forest Research Institute)	Accept
9-65	A	3	17	3	17	Move "Table 9.1"to line 15 (after 3150 MtCO2/yr). (Peter Van der Meer, Alterra)	
9-66	A	3	21	3	22	Specify does this mean whole biosphere or forests only. Is the statement true? How the statement corresponds to: - According to fig 9.1 text, there are considerable uncertainties in the estimates. - If i understand correctly, according to atmospheric inversion (table 9.2), the biosphere was already a sink in 90's but according to land-based estimates it was a source (forests only?). Difference in starting estimate in 2000 in fig. 9.1 would have notable effect for the interpretation of results. If land-based estimates were used as starting point, this may not be true. - Statement is based on economic potential, which most probably will not come true. Should the conclusion be based on market potential instead (which is now mentioned in next paragraph) ? (Government of Finland)	Accept, different approaches will be framed better

**Expert/Government Review of Second-Order-Draft
Confidential, Do Not Cite or Quote**

IPCC WGIII Fourth Assessment Report, Second Order Draft

Chapter-Comment	Batch	From Page	From Line	To Page	To line	Comments	Considerations by the writing team
9-67	A	3	22	0	0	Replace "are" with "should be" and "going into" with "becoming" (Government of UK)	Accept
9-22	B	3	22	3	0	“Going into a net source” is poorly phrased. Is this supposed to be “becoming a net source of CO2 emitted to the atmosphere”? U.S. Government (Government of U.S. Department of State)	Accept
9-23	B	3	24	3	24	Need to define and distinguish market potential from other potentials (e.g., biological, technical, economic) U.S. Government (Government of U.S. Department of State)	Reject, is done in other parts of report
9-24	B	3	25	3	0	“The economic potential does not...” is not good construction (and incorrect; the “potential” itself does not take things into account). Suggest changing to “The models of economic potential do not...” U.S. Government (Government of U.S. Department of State)	Accept
9-68	A	3	26	0	0	insert ", among others," after "because of" (Somogyi Zoltán, Forest Research Institute)	Accept
9-25	B	3	28	3	0	Number here and in Figure 9.2 does not appear consistent with the TAR Synthesis Report. U.S. Government (Government of U.S. Department of State)	Reject, numbers are correct
9-26	B	3	29	3	29	The meaning of the term “biological potential” is not clear. In 9.4.4, all five types of mitigation potential including physical potential (the theoretical upper limit to mitigation) are defined but none of them is “biological potential”. In this chapter, all the units for GHG emissions are MtCO2/yr. Does it mean CO2 is the only gas being considered in this chapter? Or does it mean other GHG gases are insignificant when compared with CO2? (Government of Australia)	Accept, needs clarification
9-69	A	3	31	3	34	Move this section up to line 23 or maybe include this in discussion on integrated assessment vs global modeling assessments which you briefly start at line 11-12. (Peter Van der Meer, Alterra)	Accept
9-70	A	3	31	0	0	Replace "The regional assessments have as a setback" with "The disadvantage of the regional assessments is" (Government of UK)	Accept
9-27	B	3	31	3	34	Remove "sufficiently" since criteria is not presented in the chapter to make this judgment. Also, global models do capture inter-regional and cross sector leakage, which is one of their strengths. It is worth noting (and stating) that the global models provide a boundary estimate and in the future sensitivity analyses guided by regional experts is needed that evaluates alternative adjustments for implementation and institutional barriers. U.S. Government	Accept

**Expert/Government Review of Second-Order-Draft
Confidential, Do Not Cite or Quote**

IPCC WGIII Fourth Assessment Report, Second Order Draft

Chapter-Comment	Batch	From Page	From Line	To Page	To line	Comments	Considerations by the writing team
						(Government of U.S. Department of State)	
9-28	B	3	31	0	0	“Have as a set back” is completely unclear and the authors should expand on its meaning. U.S. Government (Government of U.S. Department of State)	Accept
9-71	A	3	32	3	32	‘...very large potential...’ Is it mitigation potential? Please clarify. (Hector Ginzo, Ministerio de Relaciones Exteriores, Comercio Internacional Y Culto)	Accept
9-72	A	3	33	3	33	Seems to repeat 3/24-25. (Andrei Kirilenko, University of North Dakota)	Accept
9-29	B	3	34	3	0	“Mitigation estimates” might be better written “estimates of mitigation potential”, if that is what is meant U.S. Government (Government of U.S. Department of State)	Accept
9-73	A	3	36	4	0	Fig 9.2 is not referred to in the text of Executive Summary. The large reduction in economic potential between TAR and AR-4, not explained in text. (Government of India)	Accept
9-74	A	4	0	0	0	Figure 9.2 does not appear to be referenced in the text. Should the units be \$/tCO2? - this is unclear (Government of UK)	Accept
9-75	A	4	0	4	0	Fig. 9.1 is the same as Fig 9.11. (Government of Finland)	Accept
9-76	A	4	0	4	0	Fig 9.1 What is the source of this picture? Specify what means hypothetical in figure text. Could confidence intervals or results of different scenarios or models be included in the figure? (Government of Finland)	Accept, needs clarification
9-77	A	4	1	0	0	Figure 9.1 = figure 9.19. Is it necessary display figure in the section of executive summary? (Shaohong WU, Institute of Geographical Sciences and Natural Resources Research, Chinese Academy of Sciences)	Accept, will be taken out
9-30	B	4	1	4	5	Figure 9.1: This figure seems to suggest that from 2012-2022 the baseline for the LULUCF sector could move from a sink to a source. The authors should highlight this in their explanation for the figure. (Government of Australia)	Accept, will be taken out
9-78	A	4	2	4	2	LULUCF - define - e.g. in Abbreviations section. This caption should be simplified for the executive summary.	Accept

IPCC WGIII Fourth Assessment Report, Second Order Draft

Chapter-Comment	Batch	From Page	From Line	To Page	To line	Comments	Considerations by the writing team
						(Andrei Kirilenko, University of North Dakota)	
9-79	A	4	2	4	2	LULUCF : explain what this is (first time you mention abbreviation in text). (Peter Van der Meer, Alterra)	Accept
9-80	A	4	6	0	0	Is it necessary display figure in the section of executive summary? (Shaohong WU, Institute of Geographical Sciences and Natural Resources Research, Chinese Academy of Sciences)	Accept, will betaken out
9-81	A	4	7	0	0	Figure 9.2: replace "4AR" with "AR4" (Somogyi Zoltán, Forest Research Institute)	
9-82	A	4	7	0	4	Figure 9.2--need to re-do the Y-axis--this is not economic potential for the TAR (Sandra Brown, Winrock International)	Accept
9-31	B	4	7	4	50	Figure 9.2: The authors should provide more detail and highlight the differences between the TAR and the AR4 estimates of the economic mitigation potential for the forestry sector. (Government of Australia)	No space in ex sum
9-32	B	4	7	4	0	Figure 9.2 - what time period is relevant here? U.S. Government (Government of U.S. Department of State)	Accept
9-33	B	4	10	4	30	Figure 9.2: It is not clear what the unit “a-1” means in the figure 9.1. Does it means “per year”? (Government of Australia)	Accept
9-83	A	5	0	0	0	Table 9.1: omit WEO and A1b columns under baseline (no content) and Correct region names (South America is missing) (Government of UK)	Accept
9-84	A	5	1	0	0	Bad reference to Table 9.1 (Hector Ginzo, Ministerio de Relaciones Exteriores, Comercio Internacional Y Culto)	Accept
9-85	A	5	1	0	0	Table 9.1 = table 9.10. Is it necessary display table in the section of executive summary? (Shaohong WU, Institute of Geographical Sciences and Natural Resources Research, Chinese Academy of Sciences)	Reject, exe sum can repeat things,
9-86	A	5	1	5	1	table 9.1: explain heading in second row, third column (WEO, Alb, B2) (Peter Van der Meer, Alterra)	Accept
9-87	A	5	1	5	0	Table 9.1 appears to be incomplete and its reference in the text at many places does not match with its contents. (Government of India)	Accept
9-88	A	5	1	0	0	Table 9.1	Accept, will be stack bars

IPCC WGIII Fourth Assessment Report, Second Order Draft

Chapter-Comment	Batch	From Page	From Line	To Page	To line	Comments	Considerations by the writing team
						Editorial: Table 9.1 is very important but rather unreadable. Modification of layout is required. (Government of Japan)	
9-89	A	5	5	0	0	"two third" is too high for my impression. (Shaohong WU, Institute of Geographical Sciences and Natural Resources Research, Chinese Academy of Sciences)	Reject, opinion
9-90	A	5	6	5	9	Elaborate - in addition to the short term mitigations for tropics which are mentioned here - what mitigation options for long term are (reforestation, plantations etc. ??). (Peter Van der Meer, Alterra)	
9-34	B	5	6	5	0	Table 9.1 – Extra columns in table (WEO, A1b) should either be explained or deleted U.S. Government (Government of U.S. Department of State)	Accept
9-35	B	5	7	5	7	Need to qualify statement - deforestation may be the "main mitigation option" but it is not the cheapest per unit of additional carbon. U.S. Government (Government of U.S. Department of State)	Reject, costing is clarified in the chapter main txt
9-91	A	5	11	5	12	The sentence "Most modeling studies..." is likely to leave the reader with the impression that forestry-related mitigation options (the subject of the sentence) are not worth pursuing because of the likelihood of adverse impacts on forest ecosystems and biodiversity. This could be made more accurate by changing the words "are likely to be adversely impacted" to "can be adversely impacted". This helps introduce the opportunities for mitigation and adaptation synergies mentioned in the following sentence. (Reid Miner, NCASI)	Accept
9-92	A	5	12	5	13	"Thorough studies combining mitigation, adaptation and the constraining effect of climate change do not exist" : This is very surprising and unfortunate, as it appears that extreme climate events are likely to happen and may affect the sink potential of forest (as it happened in France during the 2003 summer. See p8, 17&8) (Government of France)	Accept
9-93	A	5	19	5	21	"Available evidence...policies...these conditions...effectiveness". This sentence is not clear, "what policies", "which conditions", "effectiveness for what"? (Government of India)	Accept, need clarification
9-36	B	6	4	6	5	Increased bioenergy production can result in increased deforestation and potentially increased net emissions if policies are not designed properly. This statement needs to be qualified properly. Maybe the authors are only referring to forest residues. U.S. Government	Reject, personal opinion

**Expert/Government Review of Second-Order-Draft
Confidential, Do Not Cite or Quote**

IPCC WGIII Fourth Assessment Report, Second Order Draft

Chapter-Comment	Batch	From Page	From Line	To Page	To line	Comments	Considerations by the writing team
						(Government of U.S. Department of State)	
9-94	A	6	8	6	8	Page 6 line 8. "not willing to pay current carbon prices". The point is too compressed, and it is unclear whether a "market" price or environmental cost is meant. Surely it is unwillingness to pay for carbon at the environmental cost that is most relevant here. (David Viner, University of East Anglia)	Accept, will clarify
9-95	A	6	8	6	9	The sentence beginning 'Due to...' is very strong and confusing. It is true that the guidelines for the A/R CDM are devilish. Well, they are the result of a political agreement, and political agreements on technical matters are not necessarily clear-cut. If the political agreement required that '2+2=5', so be it!. What is confusing is the swipe at bureaucracy. Bureaucracy is always bad; I do not see why single it out in the present case. Finally why people would have been willing to pay for a service which had not (and presently does not have) a market price? If the sentence were deleted, confusion would be avoided and the rest of the text would not suffer any regrettable loss in content. (Hector Ginzo, Ministerio de Relaciones Exteriores, Comercio Internacional Y Culto)	Accept, will clarify
9-96	A	6	8	6	15	How is this conclusion about a society not willing to pay concluded? I find this whole paragraph somewhat biased and not based on literature but seems to reflect personal opinions? Where is the analysis that shows an important risk to be restricted resource access by indigenous populations? For example, if one looks at the BCF portfolio of projects you could in fact analyze this and determine whether this is true or not in X number of cases out of the 20+ projects? (Sandra Brown, Winrock International)	Accept, will clarify
9-97	A	6	8	6	9	Better wording could be "Due to low prices for forestry carbon credits and other uncertainties, few land use...". It encompasses the ideas and may be easier to understand. (John Niles, Coalition for Rainforest Nations)	Accept, will clarify
9-98	A	6	8	6	21	Those two paras are on one hand too specific and detailed for the ES, please shorten, on the other hand when mentioning and assessing mitigation possibilities under the KP it should not be restricted to AR CDM, there are Art. 3.3 and 3.4 and JI. (Government of Germany)	Accept, will clarify
9-37	B	6	8	6	9	Phrase 'not willing to pay current carbon prices' is ambiguous and has a flavour of policy prescriptive. (Meaning is perhaps better captured on p25, line 48 etc). (Government of Australia)	Accept, will clarify
9-38	B	6	9	6	9	Expression 'few land use projects have been undertaken' is ambiguous - and read	Accept, will clarify

Expert/Government Review of Second-Order-Draft
Confidential, Do Not Cite or Quote

IPCC WGIII Fourth Assessment Report, Second Order Draft

Chapter-Comment	Batch	From Page	From Line	To Page	To line	Comments	Considerations by the writing team
						literally is not true. Perhaps what is meant to be said is that few projects have been undertaken with principal purpose of contributing to climate change objectives. (Government of Australia)	
9-39	B	6	9	6	9	Suggest clarifying that few land-use projects refers to "CDM" or carbon sequestration specific projects. U.S. Government (Government of U.S. Department of State)	Accept, will clarify
9-40	B	6	11	6	12	The abbreviation LULUCF has not been spelt out in the summary, only in the body of the chapter. (Government of Australia)	Accept, will clarify
9-99	A	6	16	6	17	"Out of the methodologies to be submitted for the first ten CDM A/R projects, only one was approved in 2005".The information should be updated. By July 2006, 3 methodologies have been approved and several others are expected to be approved in 2006. (Government of China Meteorological Administration)	Accept, will clarify
9-41	B	6	21	6	21	The authors should provide an explanation as to their comment "but often not through simplification". Are they suggesting that further simplification of project rules should occur? (Government of Australia)	Accept, will clarify
9-100	A	6	23	6	26	Just a point--one cannot start a pragaraph with "However" and you do not lose much by dropping this word. But more importantly this whole paragaraph has no context and seems completely out of place--either delete of give it context. (Sandra Brown, Winrock International)	Accept, will clarify
9-101	A	6	28	6	35	This whole paragaraph is fraught with generalizations that are not borne out by evidence. Check out the CDM methodologies available--there are about 4 now approved --and between them they cover practically all possible project types. I get a sense that this paragaraph is once again written with a bias. (Sandra Brown, Winrock International)	Reject, paragr not too general, We highlight regional differences, and the role of many stakeholders. Still,paragr rewritten
9-42	B	6	31	6	0	"All" is unrealistic and inaccurate. Participation of "many" or "key" stakeholders might be alright here, but it will never be "all". U.S. Government (Government of U.S. Department of State)	Accept,
9-102	A	6	37	0	0	"optimize all goals": simultaneous optimization of all goals is most likely not possible given that there will be conflicting objectives. There will be trade-offs involved as pointed out later in the chapter. (Lexter Manfred , University of Natural Resources and Applied Life Sciences, Vienna)	Accept paragr rewritten
9-103	A	6	37	0	0	"optimize all goals": simultaneous optimization of all goals is most likely not	Accept

**Expert/Government Review of Second-Order-Draft
Confidential, Do Not Cite or Quote**

IPCC WGIII Fourth Assessment Report, Second Order Draft

Chapter-Comment	Batch	From Page	From Line	To Page	To line	Comments	Considerations by the writing team
						possible given that there will be conflicting objectives. There will be trade-offs involved as pointed out later in the chapter. (Lexter Manfred , University of Natural Resources and Applied Life Sciences, Vienna)	
9-43	B	6	37	6	0	Suggest editing to read “carbon sequestration could...” U.S. Government (Government of U.S. Department of State)	Accept, paragr rewritten
9-44	B	6	46	6	49	Suggest edit to read “have the potential to make mitigation projects in the forestry sector more attractive”. Suggest deleting the last sentence in this paragraph. Lastly, "largest opportunities" refer to what? U.S. Government (Government of U.S. Department of State)	Accept, paragr rewritten
9-104	A	6	48	6	49	The last sentence is not a strong or clear way to close an otherwise great summary. Making it two sentenes could help, text offered. "If these facators are in place, forestry can provide large amounts of low to medium cost mitigation. If appropriate safeguards are in place, this forsestry mitigation can also generate generate sizeable opportunities for sustainable development." (John Niles, Coalition for Rainforest Nations)	Reject, but paragr rewritten
9-105	A	6	50	0	0	Sustainable development and synergy: SD and Climate change in forest sector is inadequately addressed. The synergy part needs to be strengthened. (Government of India)	Section of SD is revised
9-106	A	7	5	0	0	From "mitigation" hang a footnote to read "In this Chapter 'mitigation' or should be understood as net reductions in forestry emissions, i.e. the emissions reductions plus absorption increases that are the net outcome of the fluxes of greenhouse gases involved in forestry mitigation (Peter Read, Massey University)	Reject, we describe this in sect 9.4
9-107	A	7	5	7	5	From "mitigation" hang a footnote to read "In this Chapter 'mitigation' or should be understood as net reductions in forestry emissions, i.e. the emissions reductions plus absorption increases that are the net outcome of the fluxes of greenhouse gases involved in forestry mitigation (Peter Read, Massey University)	See 9 106
9-108	A	7	8	7	8	"... major form of land cover globally .": indicate what percentage. (Peter Van der Meer, Alterra)	Reject, is part of 9.2
9-45	B	7	12	7	17	Second and third sentences are not clear and not internally consistent. Also, WGII is not the appropriate reference for historical terrestrial sequestration numbers. U.S. Government (Government of U.S. Department of State)	Refine wording
9-109	A	7	13	7	14	"the terrestrial biosphere as a whole is believed to sequester" - the sentence is fine	Reject, the current functioning of forests is

**Expert/Government Review of Second-Order-Draft
Confidential, Do Not Cite or Quote**

IPCC WGIII Fourth Assessment Report, Second Order Draft

Chapter-Comment	Batch	From Page	From Line	To Page	To line	Comments	Considerations by the writing team
						until this point. But this sequestration is out of the air, and it is a secondary question whether or not out of the fossil fuel emissions. In my view not, because there are emissions from many other sources, too, including the deforestations. So I suggest to delete "out of the fossil fuel emissions". If the aim is to compare sequestrations and emissions, a table is suggested with all relevant data. (Somogyi Zoltán, Forest Research Institute)	very important for its mitigation pot.
9-110	A	7	14	0	0	GENERAL COMMENT: most IPCC chapters are usually written by many authors, not just by the CLAs. Therefore, I find it very un-ethical to only refer to the CLAs either in the text, or in the reference. In this chapter, only CLAs are mentioned in the text. I suggest that: (1) all references in the text be replaced by the following pattern: (Kauppi et al. 2001) (2) the IPCC issues a statement, and this statement is included in all publications, how IPCC requires to cite the various chapters. This statement should include that only citing CLAs either in the text, or in the reference section of the publication that cites an IPCC chapter is unacceptable. In my view, the contributing authors, too, should be included in the reference. (Somogyi Zoltán, Forest Research Institute)	Accept.
9-111	A	7	15	7	15	'...forest would cover...' Does it mean 'account for'? Why not say '...forest would take up the largest part...' (Hector Ginzo, Ministerio de Relaciones Exteriores, Comercio Internacional Y Culto)	Accept.
9-112	A	7	16	0	0	Does the number on emissions from deforestation refer to a certain period, e.g. 1993-2003 as well? (Martina Jung, Ecofys)	Accept, clarified
9-113	A	7	16	7	17	The wording of this last sentence could be improved to avoid confusion. It is not clear what is meant by the last part - "...which is (partly) being sequestered on the land as well." (Government of Environment Canada)	Accept, reworded
9-46	B	7	16	7	16	IPCC WGI assigns a wide range to deforestation emissions estimates. Phrasing here in WGIII report should reflect that. (Government of Australia)	Checked
9-114	A	7	19	0	0	I suggest you to write (IPCC, 2001) instead of The IPCC Third Assessment Report (TAR) (YABI Ibouaraïma, LECREDE/DGAT/UAC)	Accept
9-47	B	7	20	7	21	Values 11,670 and 5380 seem wrong. Cited reference does not support these	Rejected, numbers are from those reports

**Expert/Government Review of Second-Order-Draft
Confidential, Do Not Cite or Quote**

IPCC WGIII Fourth Assessment Report, Second Order Draft

Chapter-Comment	Batch	From Page	From Line	To Page	To line	Comments	Considerations by the writing team
						values. U.S. Government (Government of U.S. Department of State)	They state 60 – 87 Gt C cumulative until 2050 From forestry = 5380 Mt CO ₂ /y
9-115	A	7	21	0	0	I suggest you to write (IPCC, 2001) instead of TAR synthesis report (Expédit Wilfrid VISSIN, FLASH/Abomey-Calavi University)	Accept
9-116	A	7	21	0	0	Write (IPCC, 2000) (Expédit Wilfrid VISSIN, FLASH/Abomey-Calavi University)	Accept
9-117	A	7	21	0	0	Write (IPCC, 2000) (YABI Ibouaïma, LECREDE/DGAT/UAC)	Accept
9-118	A	7	21	0	0	I suggest you to write (IPCC, 2001) instead of TAR synthesis report (YABI Ibouaïma, LECREDE/DGAT/UAC)	Accept
9-2	C	7	32	7	34	This sentence implies that only forests that provide an annual yield of fiber and timber are managed sustainably. Forests can be managed sustainably using clearfell rotations and still substitute other materials and energy that would otherwise generate emissions. We suggest deleting the words, "providing an annual yeild of fiber and timber". (over 40% of New Zealand clearfell plantation forests are currently FSC certified see DANA (2004) 'The New Zealand Forest products Industry Review 2004') (Government of New Zealand)	Accepted
9-119	A	7	44	7	47	There is no apparent contradiction. See the 'arithmetical' part of my comments to page 6, lines 8-9. Possibly there would not have been barriers had Annex I countries stuck to fulfilling their emission reduction commitments. Let me suggest deleting the sentence beginning in line 44, and amending the sentence beginning in line 45 thus: 'Examining the causes of the discrepancy between a large theoretical...chapter.' 'discrepancy' replaces 'apparent contradiction' (Hector Ginzo, Ministerio de Relaciones Exteriores, Comercio Internacional Y Culto)	Reject, there are many barriers, and the real mitigation potential is far smaller than the theoretical one
9-48	B	7	44	7	45	The authors should explain why they used the "drafting of the Kyoto Protocol" as the base upon which they analysed the mitigation potential for the sector. (Government of Australia)	Accepted, delete "since the drafting", barriers exist today
9-120	A	8	5	0	0	Write Stokes, 2004 (Expédit Wilfrid VISSIN, FLASH/Abomey-Calavi University)	Accept
9-121	A	8	5	0	0	Write Stokes, 2004 (YABI Ibouaïma, LECREDE/DGAT/UAC)	Accept

IPCC WGIII Fourth Assessment Report, Second Order Draft

Chapter-Comment	Batch	From Page	From Line	To Page	To line	Comments	Considerations by the writing team
9-49	B	8	10	8	14	The statement is too broad.. There are many dimensions to "fully" and "larger", e.g., global, with trade, mitigation options, landuse competition, CGE modeling, versus non-land mitigation). U.S. Government (Government of U.S. Department of State)	Rejected,
9-122	A	8	18	0	0	Write Brack, 2004 ... Apps, 2006 (Expédit Wilfrid VISSIN, FLASH/Abomey-Calavi University)	Accept
9-123	A	8	18	0	0	Write Brack, 2004 ... Apps, 2006 (YABI Ibouaïma, LECREDE/DGAT/UAC)	Accept
9-50	B	8	18	8	18	Richards and Brack 2004 to be deleted and replaced with Brack et al. (In press). This more recent paper discusses the breadth of Australia's National Carbon Accounting System rather than just accounting for the post-1990 plantation estate. (Government of Australia)	Accept
9-124	A	8	20	0	0	Write (IPCC, 2003) (Expédit Wilfrid VISSIN, FLASH/Abomey-Calavi University)	Accept
9-125	A	8	20	0	0	Write (IPCC, 2003) (YABI Ibouaïma, LECREDE/DGAT/UAC)	accept
9-126	A	8	27	8	29	Why are global baselines scenarios needed--surely just like other sectors--mitigation success can be measured against a past base period , just like they do with fossil fuels. And as you state in previous paragraph, many countries are improving their national sysems for carbon accounting. (Sandra Brown, Winrock International)	Accepted
9-51	B	8	27	8	29	This statement regarding new global baseline scenarios seems to be inconsistent with Chapter 3 where new post-SRES baseline land use and land use change net emissions projections are presented. Also, does this statement consider the new Russian and other region forest inventory data in respectively Sohngen et al. and Sohngen and Tennity. The Sohngen et al. Russian forest report is referenced in the chapter but it does not appear to be reflected by this comment. Sohngen and Tennity can be found at http://aeede.osu.edu/people/sohngen.1/forests/GTM/data1.htm . U.S. Government (Government of U.S. Department of State)	Accepted, can be modified
9-127	A	8	31	8	35	These may be problems but are they relevant to mitigation? If so how? Surely this is a topic for WGI chapter on global carbon cycle and role of forests, or as you say WGII. Either tighten this to mitigtion or delete it. (Sandra Brown, Winrock International)	Reject, many reviewers ask for relation to impacts of global change
9-128	A	8	31	8	31	As stated earlier, there are still large gaps of knowledge in terms of feedback effects. However, the knowledge on ecological interrelations is sufficient and even	Reject, impacts of global change are highly uncertain

**Expert/Government Review of Second-Order-Draft
Confidential, Do Not Cite or Quote**

IPCC WGIII Fourth Assessment Report, Second Order Draft

Chapter-Comment	Batch	From Page	From Line	To Page	To line	Comments	Considerations by the writing team
						sometimes simple and well-known, like the relations between water and growth. They can – and should be – taken into account, even in economic scenario analyses. Dobbertin, M. 2005. Tree growth as indicator of tree vitality and tree reaction to environmental stress: a review. European Journal of Forest Research 124: 319-334. (Government of Germany)	
9-52	B	8	31	8	35	Suggest editing this sentence to read “...in terms of how climate change impacts (e.g., change in frequency of disturbances) may influence long-term mitigation potential and costs.” U.S. Government (Government of U.S. Department of State)	Accept
9-129	A	8	37	8	40	Integrate this section more in text or otherwise leave out. (Peter Van der Meer, Alterra)	Accept, deleted
9-130	A	8	38	8	38	Fig 9.3 --not sure this adds anything and takes up space (Sandra Brown, Winrock International)	Accept, deleted
9-131	A	8	42	9	4	It is not necessary to explain why you edit this report in each chapter and it is neither explain the structure of the chapter. (Shaohong WU, Institute of Geographical Sciences and Natural Resources Research, Chinese Academy of Sciences)	Accept
9-132	A	8	42	8	49	goals a- c are commendable, but why repeat current trends in sector and role in global C cycle (surely addressed in either WGII or WGI) --this repeats material elsewhere and can be cut here to shorten the chapte and better focus it. It is far too long and eliminating this section would go a long way in shortening th chapter. Suffice it to give a few punchlines from the other chapters if needed but could be summarized in a paragagraph or two. (Sandra Brown, Winrock International)	Reject, Part of outline given by ipcc, we shorten these sections
9-133	A	8	45	9	4	This section (aim) needs to be formulated again and divided in two sections: First, state the overall objective of the chapter, followed by the three specific aims of the study (using bullets). Then, describe in separate section (outline of chapter) how the chapter is organised. (Peter Van der Meer, Alterra)	Accept rephrased
9-53	B	8	45	8	45	Section 3.2 in Chapter 3 discusses reference scenarios. Probably best to refer to Section 3.3 as well or instead (or just Chapter 3) where the stabilization/mitigation results are presented. Not clear what "frame of stabilization scenarios" means. The bigger issue is that more global studies are covered in the land discussions in Sections 3.2 and 3.3 than in Chapter 9. This inconsistency needs to be justified or corrected via a connection of some kind or adding results to Chapter 9. U.S. Government	Accepted, to be modified, text too loosely connected

**Expert/Government Review of Second-Order-Draft
Confidential, Do Not Cite or Quote**

IPCC WGIII Fourth Assessment Report, Second Order Draft

Chapter-Comment	Batch	From Page	From Line	To Page	To line	Comments	Considerations by the writing team
						(Government of U.S. Department of State)	
9-54	B	8	46	8	0	“the apparent contradiction between a large theoretical potential and a low rate of implementation” is poorly stated. It is not a contradiction at all, but a widely recognized “fact of life”. The theoretically potential production of terrestrial ecosystems is always much lower than the actual production. This is not a contradiction, though it is a production “gap” that can be exploited in some cases to increase production in managed ecosystems. U.S. Government (Government of U.S. Department of State)	Accepted, refine wording
9-134	A	8	49	0	0	Write ... development. (punctuation) (YABI Ibouraima, LECREDE/DGAT/UAC)	Accept
9-135	A	9	5	0	0	It looks a scanned figure which needs elaborated. (Shaohong WU, Institute of Geographical Sciences and Natural Resources Research, Chinese Academy of Sciences)	Fig is deleted
9-136	A	9	10	13	5	Replace FRA 2001 citations with FRA 2005 where appropriate and correct the numbers. E.g., in Table 9.2. (Andrei Kirilenko, University of North Dakota)	Accepted
9-137	A	9	10	20	42	Most of this section could be deleted with no loss to the chapters main points. If this section has a goal of tying it to past base lines or base periods then it would make some sense but I do not see this linkage. E.g. if one it talking about reducing deforestation as a mitigation option then a brief discussion of the past trends in terms of rates and C emisisions might be useful to set up what sort of reductions might be possible given the drivers, similarly for improvements in forest management, and in rates of new forest establishment. But just to present the material as is which i am sure is covered in other WG reports is not warranted. And if this is the case I would also suggest if you want to use such data then get them directly from those relevant chapters in the FAR of WGII or WGI--but DO NOT re-do it yourself and this just adds confusion to the field. Further more, this whole section is fraught with problems--wrong figures refered to, tables seems to be mis-numbered. Table 9.1 does not contain stock numbes (line 15), (Sandra Brown, Winrock International)	Accepted – text will be revised drastically and focus more on mitigation linkage. On the other hand we can’t just assume that readers of the report are aware and will read primary sources. Some key facts needs to be provided.
9-55	B	9	10	11	30	It would be useful if the authors could explain why global carbon stock in the forest is decreasing faster than net wood volume over the last 15 years. It has a strong implication because the average carbon stock per hectare around the globe is falling. The latest FAO report only estimates the above-ground carbon stock. Other carbon pools such as below-ground carbon, dead wood, litter and soil carbon have not been taken into their account. In table 9.2, it shows forest area in China is	Accepted – better explanation will be given

**Expert/Government Review of Second-Order-Draft
Confidential, Do Not Cite or Quote**

IPCC WGIII Fourth Assessment Report, Second Order Draft

Chapter-Comment	Batch	From Page	From Line	To Page	To line	Comments	Considerations by the writing team
						expanding at the fastest rate among all regions. The authors should elaborate on the driving forces behind this success. (Government of Australia)	
9-138	A	9	14	9	14	replace "decreasing rate" into "reduced rate" (Peter Van der Meer, Alterra)	Accepted
9-139	A	9	15	9	17	The text says tha forest area has decreased to 7.3 million ha/yr but gross deforestation continues to be "alarming" at 13 million ha/yr. This implies reforestation of 5.7 million ha/yr, which is encouraging, but we need a breakdown of that into forest planting, landscape restoration and natural expansion of forests. A new table would be appropriate. (Piers Maclaren, Piers Maclaren & Associates Ltd)	Accepted, gross and net change to be explained carefully
9-56	B	9	15	9	15	Numbers in text not in Table 9.2. U.S. Government (Government of U.S. Department of State)	Taken into account – table 9.2. will be replaced
9-57	B	9	16	9	0	“alarming” is subjective. The reader, not the writer, should decide. The sentence should be more objective: “Deforestation continues, with a reported gross loss of 13 million ha/yr for the period xxxx-xxxx” where the xxxx-xxxx means the years for which the estimate loss rate applies. Suggest the authors compare current rates to historic rates, and current rates of deforestation to existing forest area, and deforestation’s contribution to global CO2 emissions. U.S. Government (Government of U.S. Department of State)	Accepted
9-140	A	9	18	0	0	reference to Figure 9.2 should refer to Table 9.2 (Government of UK)	Rejected – sentence referring to Fig. 9.4. (map showing areas with high net area change)
9-58	B	9	18	9	18	Should Figure 9.4 be referenced? The information is not in in Figure 9.2. U.S. Government (Government of U.S. Department of State)	Accepted – figure and table numbering will be checked
9-141	A	9	19	9	20	"forest planting": use of terminology not clear! in the context of other technical terms used in the same section (such as deforestation) the term "forest planting" may include the establishment of new forests (i.e., forests on non-forest land; on page 5 lines 30-31 the text refers to "planting of new forests") or reforestation of forest land after harvest or disturbance. (Lexer Manfred , University of Natural Resources and Applied Life Sciences, Vienna)	Accepted – term afforestation will be used
9-142	A	9	19	9	20	"forest planting": use of terminology not clear! in the context of other technical terms used in the same section (such as deforestation) the term "forest planting" may include the establishment of new forests (i.e., forests on non-forest land; on page 5 lines 30-31 the text refers to "planting of new forests") or reforestation of	See A 9-141

**Expert/Government Review of Second-Order-Draft
Confidential, Do Not Cite or Quote**

IPCC WGIII Fourth Assessment Report, Second Order Draft

Chapter-Comment	Batch	From Page	From Line	To Page	To line	Comments	Considerations by the writing team
						forest land after harvest or disturbance. (Lexter Manfred , University of Natural Resources and Applied Life Sciences, Vienna)	
9-143	A	9	19	0	0	insert "the" after "from" (Government of UK)	Accepted
9-144	A	9	24	9	25	"The area of forest plantations increased by 2.8 million ha/yr.....about 140 million ha in 2005...". It has either to be 14 million ha or the year has to be 2050 in place of 2005. (Government of India)	Taken into account – sentence not clear enough, will be clarified
9-145	A	10	0	0	0	Table 9.2: italicise separate countries under OECD North America (Government of UK)	Taken into account – table 9.2. will be replaced with another table
9-146	A	10	0	10	0	table 9.2: the superscript "15" should be "14", please correct (Government of China Meteorological Administration)	Taken into account – table 9.2. will be replaced with another table
9-147	A	10	0	10	0	table 9.2: the superscript "13" refer to Fang et al., 2005, however in the reference, Fang et al 2005 is an article for Japanese forest rather than Chinese forests, please check and correct. (Government of China Meteorological Administration)	Taken into account – table 9.2. will be replaced with another table
9-148	A	10	0	10	0	Table 9.2 Columns 4 and 5, 6 and 7...What are the data the values are referring to? For instance, the rate of change in carbon stock of woody biomass in USA (UN-ECE, 2000) = 610 MtCO ₂ /yr and 2,1 tCO ₂ /yr? (Government of France)	Taken into account – table 9.2. will be replaced with another table
9-149	A	10	0	10	0	Table 9.2 Specify if inversion of atmospheric is for whole biosphere, and if land-observations are for forests only (Government of Finland)	Taken into account – table 9.2. will be replaced with another table
9-150	A	10	0	17	0	Table 9.2 is the same as Table 9.3 (Government of Finland)	Taken into account - table 9.2. will be replaced with another table
9-151	A	10	1	0	0	Table 9.2 is duplicated as Table 9.3 on page 17 (Piers Maclaren, Piers Maclaren & Associates Ltd)	Taken into account - table 9.2. will be replaced with another table
9-152	A	10	1	0	0	Table 9.3 = Table 9.2 ? (Andrei Kirilenko, University of North Dakota)	Taken into account - table 9.2. will be replaced with another table
9-153	A	10	1	0	0	Table 9.2. Columns ‘Rate of change in Carbon Stock of Woody Biomass’. Rates are expressed in MtCO ₂ /year and tCO ₂ /year. The values for the former rates should be 1,000,000 times the values for the latter ones. However, they are not. Something is wrong here. (Hector Ginzo, Ministerio de Relaciones Exteriores, Comercio Internacional Y	Taken into account - table 9.2. will be replaced with another table

IPCC WGIII Fourth Assessment Report, Second Order Draft

Chapter-Comment	Batch	From Page	From Line	To Page	To line	Comments	Considerations by the writing team
						Culto)	
9-154	A	10	1	0	0	Table 9.3 = Table 9.2 (Hector Ginzo, Ministerio de Relaciones Exteriores, Comercio Internacional Y Culto)	Taken into account - table 9.2. will be replaced with another table
9-155	A	10	1	11	1	Table 9.2 has been splitted into Portrait and Landscape pages. (Muhammad Latif, Applied Systems Analysis Group)	Taken into account - table 9.2. will be replaced with another table
9-156	A	10	1	0	0	table-9.2 on page 10 and table 9.3 page 17-18... seems to be the same... check recommended (ANISH CHATTERJEE, DEVELOPMENT ALTERNATIVES)	Taken into account - table 9.2. will be replaced with another table
9-157	A	10	1	0	0	Table 9.2. Column 5 and 7, what "tCO2/yr" means? More explanation is necessary. (Mario Tonosaki, Forestry and Forest Products Research Institute)	Taken into account - table 9.2. will be replaced with another table
9-59	B	10	1	10	5	Table 9.2 is a duplicate of Table 9.3 and should be deleted. (Government of Australia)	Taken into account - table 9.2. will be replaced with another table
9-60	B	10	1	10	0	Table 9.2 - Little is said about this table in the text, such that its use should be questioned. In addition, it is hard to use, it is identical to Table 9.3, does not include recent data (2000-2005), and the ranges in the last two columns are enormous and span both positive and negative ranges (especially the last two rows of the last two columns). Table 9.3 is discussed on page 15 but it is dubious that some of the studies are comparable and that one can draw any conclusions from the last two columns (e.g., line 27). If the authors keep the table, they need to provide the reader with better guidance on using and interpreting the numbers. U.S. Government (Government of U.S. Department of State)	Taken into account - table 9.2. will be replaced with another table
9-158	A	12	2	0	0	Figure 9.4. The European part of map is confusing, because such big and important water bodies as Black and Caspian seas are not on the map (they are shown as land). Some of the areas with net changes indicated on the map should be viewed in relation to these seas. (Olga Zyrina, MCPFE, LU Warsaw)	Accepted – new map will be asked from FAO/GFRA
9-159	A	12	3	0	0	Write ... (FAO, 2006) (Expédit Wilfrid VISSIN, FLASH/Abomey-Calavi University)	Accepted
9-160	A	12	3	0	0	Write ... (FAO, 2006) (YABI Ibouraima, LECREDE/DGAT/UAC)	Accepted
9-161	A	12	7	12	11	"Degradation affected 2,4 millions ha/yr in the 1990's", but no current estimate for 2005 is given, although it is not a marginal process. It would help to have a more recent estimate. (Government of France)	Taken into account – but more recent data was not available

IPCC WGIII Fourth Assessment Report, Second Order Draft

Chapter-Comment	Batch	From Page	From Line	To Page	To line	Comments	Considerations by the writing team
9-162	A	12	9	0	0	Write (FAO, 2001) (Expédit Wilfrid VISSIN, FLASH/Abomey-Calavi University)	Accepted
9-163	A	12	9	0	0	Write (FAO, 2001) (YABI Ibouaraïma, LECREDE/DGAT/UAC)	Accepted
9-164	A	12	15	12	15	Is this table reference correct? I don't see FAO 2006 in the table, and table's estimates seem to be more about the economic potential than on biomass change estimates. (Government of Finland)	Taken into account – referring to table 9.2 (new table will be added)
9-61	B	12	15	12	15	Table that is being referred to here does not appear. Table 9.1 on page 5 is not the referenced table U.S. Government (Government of U.S. Department of State)	Taken into account – referring to table 9.2 (new table will be added)
9-165	A	12	17	0	0	Correct footnote reference (Government of UK)	Accepted
9-166	A	12	17	12	17	The footnote could benefit from some explanation for the contradiction, or point to the section that provides the explanation. (Government of Environment Canada)	Accepted
9-167	A	12	17	12	17	check in sentence ending with "region1" whether something is missing (Government of Germany)	Taken into account – reference is to a footnote
9-168	A	12	21	0	0	The first sentence ('The loss of primary...') is too general. The loss of primary forests seem to be devastating for tropical biodiversity, and less so for temperate biodiversity. In fact, I should remove the figure; it is too much of a figure for too short a sentence. (Hector Ginzo, Ministerio de Relaciones Exteriores, Comercio Internacional Y Culto)	Accepted – figure will be deleted
9-169	A	12	25	0	0	Write (MEA, 2005) (YABI Ibouaraïma, LECREDE/DGAT/UAC)	Accepted
9-170	A	13	5	13	5	What has biodiversity change got to do with mitigation poential? Delete this figure - it is already in the MA report (Sandra Brown, Winrock International)	Accepted – figure will be deleted
9-171	A	13	7	13	45	No clear description of Sustainable Forest Management. Include the FAO definition: "the stewardship and use of forests and forest lands in a way, and at a rate, that maintains their biodiversity, productivity, regeneration capacity, vitality and their potential to fulfill, now and in the future, relevant ecological, economic and social functions, at local, national, and global levels, and that does not cause damage to other ecosystems" to make it clear to policy makers that this is what is	Taken into account – text will be revised/clarified

IPCC WGIII Fourth Assessment Report, Second Order Draft

Chapter-Comment	Batch	From Page	From Line	To Page	To line	Comments	Considerations by the writing team
						being discussed throughout the chapter. (Kirsten Macey, Climate Action Network Europe)	
9-62	B	13	8	13	35	Forest privatisation is also well recognised as playing an important role in forest management. It would be helpful for the authors to describe the latest development of forest privatisation and their impacts in this section. (Government of Australia)	Accepted – will me included
9-172	A	13	9	13	10	Give details on other forest uses (FRA 2005) (Andrei Kirilenko, University of North Dakota)	Accepted
9-173	A	13	11	0	0	Write (FAO, 2001) (YABI Ibouraima, LECREDE/DGAT/UAC)	Accepted
9-174	A	13	24	0	0	Write (FAO, 2001) (YABI Ibouraima, LECREDE/DGAT/UAC)	Accepted
9-63	B	13	25	13	30	If the text is going to specifically mention the EU Action Plan, should it mention other efforts, e.g. the USG's President's Initiative to Avoid Illegal Logging (PIAIL)? U.S. Government (Government of U.S. Department of State)	Taken into account – most of the paragraph will be deleted
9-175	A	13	28	13	34	This information is not new. FLEG processes were also introduced in these regions after East Asia Ministerial Conference. And FLEGT action plan is effort by EU and therefore should not be treated like regional process. If this paragraph includes actions taken by each country, Japan's action should also be included such as introduction of government procurement policy, bilateral efforts to eliminate illegal logging with Indonesia, multilateral effort through ITTO. Therefore, "Forest Law Enforcement and Governance (FLEGT) at the East Asia Ministerial Conference and the EU Action Plan for FLEGT are the most comprehensive plans to fight illegal logging and associated trade." should be changed to "Forest Law Enforcement and Governance (FLEG) at the East Asia, Africa, Europe and North Asia Ministerial Conference are the most comprehensive regional processes to fight illegal logging and associated trade." (Government of Japan)	Taken into account – most of the paragraph will be deleted
9-176	A	13	29	13	33	This information is not new. To include result of G8 St. Petersburg Summit, "The world's richest nations (G8) have also agreed to implement measures to tackle illegal logging (G8 Gleneagles 2005)." should be changed to "G8 have also agreed to implement measures to tackle illegal logging at G8 Gleneagles 2005 and reaffirmed the importance of tackling this issue at G8 St. Petersburg 2006". (Government of Japan)	Taken into account – most of the paragraph will be deleted
9-177	A	13	29	13	29	Delete "world's richest nations". Because this is not official denomination.	Accepted

**Expert/Government Review of Second-Order-Draft
Confidential, Do Not Cite or Quote**

IPCC WGIII Fourth Assessment Report, Second Order Draft

Chapter-Comment	Batch	From Page	From Line	To Page	To line	Comments	Considerations by the writing team
						(Government of Japan)	
9-178	A	13	30	0	0	Write (G8 Gleneargles, 2005) (YABI Ibouraima, LECREDE/DGAT/UAC)	Taken into account – most of the paragraph will be deleted
9-179	A	13	32	13	34	The statement that sustainable forest management (SFM) is equivalent with sustainable carbon management may be too general. SFM schemes include a variety of criteria and indicators and indicators explicitly addressing carbon are few if any. In a overall assessment of SFM these carbon related issues may be traded off against other issues (e.g., adaptation to climate change). (Lexter Manfred , University of Natural Resources and Applied Life Sciences, Vienna)	Taken into account – wording will be revised
9-180	A	13	32	13	34	The statement that sustainable forest management (SFM) is equivalent with sustainable carbon management may be too general. SFM schemes include a variety of criteria and indicators and indicators explicitly addressing carbon are few if any. In a overall assessment of SFM these carbon related issues may be traded off against other issues (e.g., adaptation to climate change). (Lexter Manfred , University of Natural Resources and Applied Life Sciences, Vienna)	See A 9-179
9-181	A	13	32	0	0	Write (Contreras-Hermosilla, 2002) (YABI Ibouraima, LECREDE/DGAT/UAC)	Accepted
9-182	A	13	33	13	35	"Sustainable forest management" is a the very important key word to discuss forest policies and measures in the context of climate change. As decision16 of COP/MOP1 defines "'Forest management' is a system of practices for stewardship and use of forest land aimed at fulfilling relevant ecological (including biological diversity), economic and social functions of the forest in a sustainable manner;" ,SFM is the concept including diverse options to fulfill various forest values in the long-term basis. Therefore, the concept of SFM and the processes of "Criteria and indicator" should be covered in this section. (Government of Japan)	Taken into account – wording will be revised
9-64	B	13	35	13	0	Replace with “of afforestation and reduced deforestation offers the greatest potential to enhance sinks and reduce and avoid and offset emissions” U.S. Government (Government of U.S. Department of State)	Rejected – it depends of the time horizon and land availability
9-65	B	13	41	13	0	Change “the mitigation potential” to “potential mitigation opportunities.” Rationale: The assessment should not imply that emissions reductions are an “all or nothing choice” with a decision to be made between achieving “the” potential or doing nothing. U.S. Government	Rejected – no such line (41) on page 13

**Expert/Government Review of Second-Order-Draft
Confidential, Do Not Cite or Quote**

IPCC WGIII Fourth Assessment Report, Second Order Draft

Chapter-Comment	Batch	From Page	From Line	To Page	To line	Comments	Considerations by the writing team
						(Government of U.S. Department of State)	
9-183	A	14	1	14	45	to reinforce above--what is the relevance of a section on wood supply etc. (9.2.3) to this chapter--need to justify linkage to mitigation or delete--this has been covered in depth in other chapters of FAR and in the MA. Also I see several paragraphs with few citations-- this is an assessment--there should be a citation for most key points. (Sandra Brown, Winrock International)	Accepted – more relation to carbon
9-66	B	14	1	14	14	There are no references given for any of the statements or values given. Add the appropriate references (and correct the values as needed based on those references) or delete the text. U.S. Government (Government of U.S. Department of State)	Accepted – references will be added
9-67	B	14	1	14	1	“Are also effective” should be “might also be effective” U.S. Government (Government of U.S. Department of State)	Rejected – such text not on this line
9-68	B	14	2	14	45	It would be beneficial to add discussion about the implications of forest products/trade for forestry aspects of climate change mitigation options. U.S. Government (Government of U.S. Department of State)	Accepted
9-184	A	14	4	14	14	Reference (Andrei Kirilenko, University of North Dakota)	Accepted – reference will be added
9-185	A	14	4	14	9	Source missing (Reinhold Glauner, Institute for World Forestry)	Accepted – reference will be added
9-186	A	14	4	14	4	"far below increment: indicate here how much annual increment is. (Peter Van der Meer, Alterra)	Taken into account – text will be deleted
9-69	B	14	4	14	9	The authors state that “Global wood removals are about 3 billion m ³ and have been stable during the last 15 years”. If global wood removal is really not increasing, why do the authors of this chapter suggest carbon storage in harvested wood products is one of the solutions to reduce CO ₂ emissions from forestry. The implication of non-increasing wood removal is CO ₂ stored in the harvested wood products today will be completely offset by the harvested wood products produced 50 years ago. The life time of the harvested wood products may vary across different applications. the authors need to explain this possible inconsistency. (Government of Australia)	Taken into account – more relation to carbon implications
9-70	B	14	4	14	4	The authors should explain what they mean by "far below the increment". (Government of Australia)	Taken into account – text will be deleted
9-71	B	14	4	14	4	Need to specify time period for 3 billion m ³ . Need to explain "increment" for the general reader. U.S. Government	Accepted

IPCC WGIII Fourth Assessment Report, Second Order Draft

Chapter-Comment	Batch	From Page	From Line	To Page	To line	Comments	Considerations by the writing team
						(Government of U.S. Department of State)	
9-187	A	14	5	14	19	"Illegally removed wood fuel is not recorded... The majority of the removals in Africa, and substantial portions in Asia and South America are woodfuels... Wood energy accounts for [...] up to 80-95 % in some developing countries, More than 2 billions of people are dependent on wood fuel for cooking and eating": Would it be possible to give high and low estimates of removed wood fuel? (Government of France)	Taken into account – data to be checked if available
9-188	A	14	6	14	8	And in general. It would be helpful to have statistics. In particular, even in EU timber use tends to be a balancing figure estimated from harvest figures adjusted for net imports/exports. So it is difficult to get clear figures for the use of timber in construction, for energy, etc. This in turn points to the urgent need to develop better statistics to support policy measures. For example, the paper market is viewed as “mature”, ie starting to decline,), indicating the scope to reallocate mature and maturing timber grown for paper to substitution. (David Viner, University of East Anglia)	Accepted – although we have very limited space
9-189	A	14	7	14	8	The word "woodfuel" may be replaced by "fuelwood" (Government of Pakistan)	Accepted
9-190	A	14	10	14	14	Source missing (Reinhold Glauner, Institute for World Forestry)	Accepted - will be added
9-191	A	14	17	0	0	Write (FAO, 2005) (YABI Ibouraima, LECREDE/DGAT/UAC)	Accepted
9-192	A	14	17	14	17	The word "wood fuel" may be replaced by "fuelwood" (Government of Pakistan)	accepted
9-193	A	14	23	14	25	Explain this statement; I though that prices go up because of increased demand (and not because of increased production) (Peter Van der Meer, Alterra)	Rejected – statement is about value, not about price
9-194	A	14	32	14	34	Sentence "Increasing production of forest products have also positive carbon implications if raw material is coming from sustainably managed forests" is only a part of the truth. Energy needed to produce a product may lead to negative carbon implications. More details are written elsewhere in the chapter, but people not reading the whole chapter might get wrong idea. (Government of Finland)	Taken into account – revision will be made
9-195	A	14	41	0	0	Write (FAO, 2005) (Expédit Wilfrid VISSIN, FLASH/Abomey-Calavi University)	Accepted

IPCC WGIII Fourth Assessment Report, Second Order Draft

Chapter-Comment	Batch	From Page	From Line	To Page	To line	Comments	Considerations by the writing team
9-196	A	14	41	0	0	Write (FAO, 2005) (YABI Ibouaraïma, LECREDE/DGAT/UAC)	Accepted
9-197	A	14	45	0	0	Write (Kartila and Puustjärvi, 2004) (Expédit Wilfrid VISSIN, FLASH/Abomey-Calavi University)	Accepted
9-198	A	14	45	0	0	Write (Kartila and Puustjärvi, 2004) (YABI Ibouaraïma, LECREDE/DGAT/UAC)	Accepted
9-199	A	14	46	20	41	Policy makers should be made aware of the new literature on impacts of climate change on forests include relevant literature: - Tropical Forests and Atmospheric Carbon Dioxide: Current Knowledge and Potential Future Scenarios Lewis, S; Phillips, O; Baker, T; Malhi, Y; Lloyd, J (2005) - Rising Atmospheric CO2 Reduces sequestration of Root-Derived Soil Carbon, (2005) Heath, J; Ayres, E; Possell, M; Bardgett, R et al - Global Response of terrestrial ecosystem structure and function to CO2 and climate change: results from six dynamic global vegetation models. Global Change Biology (2001) Cramer, W et al - Temporary carbon sequestration cannot prevent climate change (2005) Kirschbaum, M (Kirsten Macey, Climate Action Network Europe)	Noted. Detailed discussion impossible due to space constraints, references to relevant chapters in WG1 and to difficulties of factoring out the effects of climate change to be added.
9-72	B	15	17	15	22	Change “supports” to “directionally consistent with” U.S. Government (Government of U.S. Department of State)	Accept
9-200	A	15	18	0	0	Write (IPCC, 2000) (Expédit Wilfrid VISSIN, FLASH/Abomey-Calavi University)	Accept
9-201	A	15	18	0	0	Write (IPCC, 2000) (YABI Ibouaraïma, LECREDE/DGAT/UAC)	Accept
9-202	A	15	22	0	0	Write Houghton, 2005 (Expédit Wilfrid VISSIN, FLASH/Abomey-Calavi University)	Accept
9-203	A	15	22	0	0	Write Houghton, 2005 (YABI Ibouaraïma, LECREDE/DGAT/UAC)	Accept
9-204	A	15	23	0	0	Write Defries, 2002 (Expédit Wilfrid VISSIN, FLASH/Abomey-Calavi University)	Accept
9-205	A	15	23	0	0	Write Defries, 2002 (YABI Ibouaraïma, LECREDE/DGAT/UAC)	Accept
9-206	A	15	25	0	0	Write (UN-ECE/FAO, 2000) (Expédit Wilfrid VISSIN, FLASH/Abomey-Calavi University)	Accept
9-207	A	15	25	0	0	Write (UN-ECE/FAO, 2000)	Accept

IPCC WGIII Fourth Assessment Report, Second Order Draft

Chapter-Comment	Batch	From Page	From Line	To Page	To line	Comments	Considerations by the writing team
						(YABI Ibouaraïma, LECREDE/DGAT/UAC)	
9-208	A	15	25	9	31	Clarify meaning of this text. (Government of UK)	Accept, text to be revised
9-73	B	15	27	15	27	It is not clear that the numbers in the last two rows of the last two columns of Table 9.3 mean anything. The ranges are huge and span positive and negative. The statements need to be better supported or qualified. The different assumptions made in the different approaches to estimating carbon sources and sinks makes comparisons between the methods problematic, if not impossible. As a result, the carbon flux columns in Tables 9.2 and 9.3 are actually “comparing apples and oranges”; they are not comparable, and some note added to the table should say so. U.S. Government (Government of U.S. Department of State)	Accept, explanatory text to be provided
9-209	A	15	30	15	31	Could the WG1 estimate of terrestrial sink be included in the table 9.1? (Government of Finland)	Noted, references to relevant WG1 sections to be added
9-210	A	15	31	15	31	Error of reference :Brasseur et al, 2007 (Government of France)	Noted, reference to be verified
9-211	A	15	33	14	47	Incorporate the studies of Asner et al (2005, 2006): in a study they used extensive high-resolution satellite images in Brazilian Amazon and found that across 2,030,637 km ² of the Brazilian Amazon from 1999 to 2004, at least 76% of all harvest practices resulted in high levels of canopy damage. See also publication by Curran & Trigg (2006) which discusses implications of these findings. (Peter Van der Meer, Alterra)	Noted, it is unlikely that space can be made for discussion of canopy damage its other impacts. The successtul use of remote sensing in mapping forest cover attributes relevant for C dynamics will be referenced.
9-212	A	15	35	0	0	Write ... Laurence, 2004 (Expédit Wilfrid VISSIN, FLASH/Abomey-Calavi University)	Accept
9-213	A	15	35	0	0	Write ... Laurence, 2004 (YABI Ibouaraïma, LECREDE/DGAT/UAC)	Accept
9-214	A	15	37	0	0	Write Defries, 2002 (Expédit Wilfrid VISSIN, FLASH/Abomey-Calavi University)	Accept
9-215	A	15	37	0	0	Write Defries, 2002 (YABI Ibouaraïma, LECREDE/DGAT/UAC)	Accept
9-216	A	15	39	15	42	The sum of emissions from conversion of forests (71%) and loss of soil carbon after deforestation (20%), emissions from forest degradation (4.4%), emissions from the 1997-1998 Indonesian exceptional fires (8.3%), and sinks from regrowth (-3.3%), is 100.4%, over 100%. Although there are uncertainties in each component, it is recommended	Noted, values to be adjusted.

IPCC WGIII Fourth Assessment Report, Second Order Draft

Chapter-Comment	Batch	From Page	From Line	To Page	To line	Comments	Considerations by the writing team
						to take the decimal away so that the sum is 100%. (Government of China Meteorological Administration)	
9-217	A	15	43	0	0	Write ... Justice, 2000 (Expédit Wilfrid VISSIN, FLASH/Abomey-Calavi University)	Accept
9-218	A	15	43	0	0	Write ... Justice, 2000 (YABI Ibouaïma, LECREDE/DGAT/UAC)	Accept
9-219	A	15	43	15	47	"Remote sensing methods used as a tool for mapping land cover and its change over time and estimating C sources and sinks remains a challenge": Would it be possible to give successful examples of remote sensing-based inventory of GHG?+K112 (Government of France)	Accept, text to be revised and references added to emphasize the positive.
9-74	B	16	1	16	8	In recent years there has been vigorous debate about whether under a warmer future climate, existing tropical forests will be net carbon sinks or sources. Trees may emit more CO2 under higher temperature because of reduced photosynthesis but maintained levels of respiration. Decomposition rates may increase and trees may start to die. It would be good if a summary of that debate was added, perhaps in this section on CO2 flux. The section as it currently stands insufficiently covers the topic. U.S. Government (Government of U.S. Department of State)	Noted. Due to space limitations the issue can only be mentioned with references to the relevant sections in WG1.
9-220	A	17	0	18	0	Table 9.3 is a replica of Table 9.2 (Government of UK)	Noted, error to be corrected
9-221	A	17	0	18	0	table 9.3 seems to repeat the table 9.2, it would be wise to combine these two tables into one table (Government of China Meteorological Administration)	Noted, error to be corrected
9-222	A	17	0	17	0	Columns 4 and 5, 6 and 7...What are the data the values are referring to? For instance, the rate of change in carbon stock of woody biomass in USA (UN-ECE, 2000) = 610 MtCO2/yr and 2,1 tCO2/yr???? (Government of France)	Noted, error in units to be corrected
9-226	A	17	0	0	0	The contents of table 9.3 are not different from that of 9.2 (Expédit Wilfrid VISSIN, FLASH/Abomey-Calavi University)	Noted, error to be corrected
9-227	A	17	0	0	0	The contents of table 9.3 are not different from that of 9.2 (YABI Ibouaïma, LECREDE/DGAT/UAC)	Noted, error to be corrected
9-223	A	17	1	0	0	Table 9.3 seems to be a duplication of Table 9.2 (Somogyi Zoltán, Forest Research Institute)	Noted, error to be corrected
9-224	A	17	1	17	40	Table 9.3 seems to be same as 9.2 or if different it is not clear. Also if going to use	Noted, error to be corrected and values for

IPCC WGIII Fourth Assessment Report, Second Order Draft

Chapter-Comment	Batch	From Page	From Line	To Page	To line	Comments	Considerations by the writing team
						then need to update with FAO 2006 not these old data (Sandra Brown, Winrock International)	forest area updated
9-225	A	17	1	18	0	Table 9.3 is the same as Table 9.2. Column 5 and 7, what "tCO ₂ /yr" means? More explanation is necessary. (Mario Tonosaki, Forestry and Forest Products Research Institute)	Noted, errors to be corrected
9-75	B	17	1	18	30	Table 9.3: It is unclear whether the terms "carbon stock of woody biomass" and "annual carbon flux" is referring to the sum of all carbon pools in the forest or only above-ground biomass. It is well understood that reliable data about carbon stock inventory and CO ₂ emissions is not available for forestry sector in many regions. Nonetheless, it would be useful to a reader if uncertainty level (quantitative or qualitative) of those estimations for each forest carbon pool could be summarised by using a table format. (Government of Australia)	Accept, explanatory text to be added space permitting
9-76	B	17	1	18	50	Table 9.3: In the text, the global forest area 3,952 million hectare is taken from FAO 2006. However in table 9.3, the global total is based on FAO 2001 report. As these two numbers does not match each other the authors should explain the discrepancy. (Government of Australia)	Noted, error to be corrected and values for forest area updated
9-77	B	17	1	17	0	Table 9.3 is a duplicate of Table 9.2 U.S. Government (Government of U.S. Department of State)	Noted, error to be corrected and values for forest area updated
9-78	B	17	1	17	0	In Table 9.3, the tCO ₂ /yr units should be changed to tCO ₂ /ha/yr (in columns 5 and 7). U.S. Government (Government of U.S. Department of State)	Noted, error in units to be corrected
9-79	B	17	5	17	5	Table 9.3: Columns 4 and 5, 6 and 7 are inconsistent. There is no correspondence between the Mt and t figures. The authors need to rectify this discrepancy. (Government of Australia)	Noted, error in units to be corrected
9-228	A	19	0	0	0	Figure 9.6: clarify abbreviations in key. Do not abbreviate positive and negative, correct spelling of "annual" in y-axis label. (Government of UK)	Accept, Figure to be revised for clarity
9-229	A	19	1	19	5	LULUCF - define - e.g. in Abbreviations section. The caption should be more clear. (Andrei Kirilenko, University of North Dakota)	Accepted
9-230	A	19	1	19	4	Fig. 9.6: The figure indicates that LULUCF in China has been a net sink since 1980s. However this figure reported a net sources before around year 2000, which is not right and is not consistent with scientific reports published (such as Fang et al, 2001; Zhang and Xu, 2003)) as well as the table 9.2 and table 9.3. (Government of China Meteorological Administration)	Noted, figure to be revised for clarity, this figure is based on a study by Houghton 2003 as referenced in caption, alternative values for China are to be added to Table 9.2/9.3

**Expert/Government Review of Second-Order-Draft
Confidential, Do Not Cite or Quote**

IPCC WGIII Fourth Assessment Report, Second Order Draft

Chapter-Comment	Batch	From Page	From Line	To Page	To line	Comments	Considerations by the writing team
9-80	B	19	1	19	0	Units on the table axis are “Tg C yr-1” but the previous table uses “Mt CO2”. Many readers will not notice the factor of 12/44 and could misinterpret the values. The same units (mass of carbon or mass of CO2) should be used throughout. It should use grams instead of tonnes throughout as well. U.S. Government (Government of U.S. Department of State)	Accept, Figure to be revised and units adjusted
9-81	B	19	1	19	1	Figure 9.6 - a reference to this figure in the text could not be found. It is an important one, and should be discussed in some detail. Also, please provide guidance and the take away points on how to interpret this figure in the context of Table 9.3. U.S. Government (Government of U.S. Department of State)	Accept, reference to the figure to be added.
9-231	A	19	2	0	0	In the caption of Figure 9.6 the phrase "Pos=source" is not understood. It may be clarified. (Government of Pakistan)	Accept, Figure to be revised for clarity, including explanation that positive values on this figure represent net sources of carbon to the atmosphere
9-232	A	19	3	0	0	The title of figure 9.6 is not completed (Expédit Wilfrid VISSIN, FLASH/Abomey-Calavi University)	Accept, Figure caption to be revised for clarity
9-233	A	19	3	0	0	The title of figure 9.6 is not completed (YABI Ibouaïma, LECREDE/DGAT/UAC)	Accept, Figure caption to be revised for clarity
9-234	A	19	4	0	0	Write (Houghton, 2003b) (Expédit Wilfrid VISSIN, FLASH/Abomey-Calavi University)	Accept
9-235	A	19	4	0	0	Write (Houghton, 2003b) (YABI Ibouaïma, LECREDE/DGAT/UAC)	Accept
9-236	A	19	6	0	0	Write ... Cole, 2003 (Expédit Wilfrid VISSIN, FLASH/Abomey-Calavi University)	Accept
9-237	A	19	6	0	0	Write ... Cole, 2003 (YABI Ibouaïma, LECREDE/DGAT/UAC)	Accept
9-238	A	19	13	19	22	In this extract, we can read that "C accumulation in soils and non-forest vegetation may account for nearly 50% of the terrestrial uptake in northern extra-tropical regions" and that "the fraction of carbon sink attributable to changes in land-use and land management might be as high as 98% or as low as 40%"...What could be the critical assessment given to these data? Furthermore, effects of N and CO2 fertilization, historic land-use change, shifting natural disturbance patterns and climate change on the carbon sinks in tropical forest are not well known: Is there any model to describe (even roughly) the relative importance of each factor in the sink potential of forest? (Government of France)	Accept, text to be revised to make the significance of these values clear., extended discussion of the relative importance of these factors is not possible due to space limitations but reference to relevant WG1 sections will be added

**Expert/Government Review of Second-Order-Draft
Confidential, Do Not Cite or Quote**

IPCC WGIII Fourth Assessment Report, Second Order Draft

Chapter-Comment	Batch	From Page	From Line	To Page	To line	Comments	Considerations by the writing team
9-82	B	19	13	19	15	This is useful text that could be merged with the Table 9.3 discussion on page 15. U.S. Government (Government of U.S. Department of State)	Noted, text will be revised
9-239	A	19	15	19	20	The impact of Phosphorous is understated. (John Niles, Coalition for Rainforest Nations)	Noted
9-240	A	19	16	19	18	Clarify the meaning/conclusion of this sentence; it is interesting to know what do the estimates of LUC fail to account for. but what do the estimates of LUC in the tropics account for? (Government of Germany)	Noted, text to be revised for clarity
9-241	A	19	23	0	0	Write Houghton, 2003b (Expédit Wilfrid VISSIN, FLASH/Abomey-Calavi University)	Accept
9-242	A	19	23	0	0	Write Houghton, 2003b (YABI Ibouraima, LECREDE/DGAT/UAC)	Accept
9-83	B	19	23	19	0	“Attributable” should be “attributed”. Casperson et al. made such an attribution, but that does not make it reality. U.S. Government (Government of U.S. Department of State)	Accept
9-84	B	19	37	19	41	“Reducing deforestation can have significant biodiversity, soil and water conservation benefits but may result in loss of economic welfare.” This statement does not seem to give credit to the significant economic benefits that can be obtained from biodiversity whose conservation can be greatly assisted by decreasing deforestation activities, including the following economic benefits: pharmaceutical opportunities, water purification, pest control, pollination, soil protection, recreation and ecotourism, etc. See reference “Environmental services of biodiversity” by Norman Myers, PNAS 93, 2764-2769, 1996. Also, conserving biological diversity and its sustainable use have a fundamental role in the daily lives of humans and is critical for human health. A source of reference is a book resulting from a 1995 conference sponsored by NIH, NSF, the Smithsonian Institution, NAPE, PAHO that discussed issues linking human health to biodiversity. Book: Biodiversity and Human Health. Grifo F and J Rosenthal (editors). 1997. Island Press, Washington, DC, ISBN 1-55963-501-0. U.S. Government (Government of U.S. Department of State)	Text could not be found on this page, please locate!
9-243	A	20	1	20	2	The statement "woody encroachment may lead to loss of carbon from soils" requires some qualification. Where, or under what circumstances, may this occur? (Government of Environment Canada)	Accepted, the reference to the circumstances to be added.
9-244	A	20	9	0	0	Write (Cochrance, 2003)	Accept

**Expert/Government Review of Second-Order-Draft
Confidential, Do Not Cite or Quote**

IPCC WGIII Fourth Assessment Report, Second Order Draft

Chapter-Comment	Batch	From Page	From Line	To Page	To line	Comments	Considerations by the writing team
						(Expédit Wilfrid VISSIN, FLASH/Abomey-Calavi University)	
9-245	A	20	9	0	0	Write (Cochrance, 2003) (YABI Ibouaïma, LECREDE/DGAT/UAC)	Accept
9-246	A	20	9	0	0	replace "grow" with "be growing"? (Government of UK)	Accept
9-247	A	20	10	20	10	The word "an" before estimated may be deleted and "as" may be added before "7700 MtCO ₂ /yr" (Government of Pakistan)	Noted, typo to be corrected
9-248	A	20	23	0	0	Write (IPCC, 2001) (Expédit Wilfrid VISSIN, FLASH/Abomey-Calavi University)	Accept
9-249	A	20	23	0	0	Write (IPCC, 2001) (YABI Ibouaïma, LECREDE/DGAT/UAC)	Accept
9-250	A	20	29	0	41	These are not much new. Such facts have been well known. (Shaohong WU, Institute of Geographical Sciences and Natural Resources Research, Chinese Academy of Sciences)	Noted, the text is needed as summary to explain the relevance of global trends to mitigation potential as requested in review of FOD.
9-251	A	20	29	20	41	Include risks of climate change and soils see literature references Jones, C; Cos, P; and Huntingford, C (2003) Uncertainty in climate-carbon-cycle-projections associated with the sensitivity of soil respiration to temperature, Tellus Vol 55, Is 2 p.642 April. Heath, J et al (2005) Rising Atmospheric CO ₂ Reduces Sequestration of Root-Derived Soil Carbon, in Science 9 September, Vol 309, no, 5741pp1711-1713 and Kirschbaum, M, (2004) Soil Respiration under prolonged soil warming: are rate reductions caused by acclimation or substrate loss? in Global Change Biology, Vol 10, Issue 11, page 1870 November. (Kirsten Macey, Climate Action Network Europe)	Noted, detailed analysis of the impact of climate change is not possible due to space limitations. Some of the suggested material will be incorporated space permitting.
9-85	B	20	29	20	29	As written, the opening sentence of this paragraph does not fit with what follows in the paragraph. U.S. Government (Government of U.S. Department of State)	Accept, text to be revised
9-252	A	20	30	20	41	Climate change may affect the whole forest ecosystems. The list of the text currently only referst to the biomass, but soil processes may also be affected, and a lot of emissions may occur from permafrost and organic soils in large areas due to climate change. Also, the sink may be stronger on large areas due to higher temperatures. These must be added to the list. (Somogyi Zoltán, Forest Research Institute)	Accept, the impact on soils and permafrost to be added
9-86	B	20	33	20	38	There are no references given to the claims under (3), (4), and (5). Referred	Accept, references to relevant sections in Ch.

IPCC WGIII Fourth Assessment Report, Second Order Draft

Chapter-Comment	Batch	From Page	From Line	To Page	To line	Comments	Considerations by the writing team
						scientific articles should be cited in support of the claims, or the statements should be deleted. U.S. Government (Government of U.S. Department of State)	9 to be added
9-253	A	20	34	9	36	The text says: Carbon sinks...may decrease as forests mature [I agree totally] but this trend may reverse if their rebounding economies cause increased logging (!!). The authors appear to be confusing gross sequestration with net sequestration (ie sinks). The expression "carbon sinks" is normally taken to include the carbon sources that are derived from logging, so that if forest stocks decline as a result of increased logging, the forests will become a net source. The fact that replacement stands actively absorb carbon (for that matter, only during daytime - they emit it at night) is irrelevant: the proof of the pudding is in the carbon stocks retained in biomass - have they increased or decreased? (Piers Maclaren, Piers Maclaren & Associates Ltd)	Noted, text to be revised for clarity to address the perceived confusion
9-254	A	20	36	20	36	Add context: "...cause increased logging in a sustainable forest management regime. (Government of Environment Canada)	Noted, text to be revised for clarity
9-255	A	21	0	0	0	Box 9.1: correct last three lines of text with "...ranging between a decline in the C sink by 440 MtCO ₂ /yr, in the case of a significant increase in logging (Izrael et al. 1997), to an additional sink of up to 720 MtCO ₂ /yr, in the case of a strong positive..." (Government of UK)	Noted, Box to be deleted and text revised where it occurs further in Ch 9
9-256	A	21	0	21	0	Box 9.1 is repetition from what is written in P46 L5 - (Government of Finland)	Noted, Box to be deleted
9-274	A	21	0	76	0	Use of terminology 'avoided deforestation' should be replaced with 'reduction of deforestation' or 'reducing emissions from deforestation' as appropriate, as it is unlikely that policy makers will be able to avoid all deforestation but likely that mitigation measures will reduce deforestation. (Kirsten Macey, Climate Action Network Europe)	Accept: Chapter authors agreed to use reducing emissions from deforestation and degradation.
9-257	A	21	1	21	3	Box 9.1, first line: give the estimate for Russia, not FSU, since the rest of the paragraph discusses Russia alone. (Andrei Kirilenko, University of North Dakota)	Noted, Box to be deleted
9-258	A	21	1	0	0	Box 9.1: the box only talks about Russia, which is one country of the former SU. Also, there are many other countries, like ten, most of which are now EU member states, that are "countries in transition". (Somogyi Zoltán, Forest Research Institute)	Noted, Box to be deleted
9-259	A	21	1	0	0	Box 9.1. Why this Box here ? Text largely overlaps with text of paragraph 9.4.7.4	Noted, Box to be deleted

**Expert/Government Review of Second-Order-Draft
Confidential, Do Not Cite or Quote**

IPCC WGIII Fourth Assessment Report, Second Order Draft

Chapter-Comment	Batch	From Page	From Line	To Page	To line	Comments	Considerations by the writing team
						(P46). Take box out ? (Peter Van der Meer, Alterra)	
9-260	A	21	1	0	0	In Box 9.11, some figures are not consistent with those of page 46 section 9.4.7.4.. For example, the third sentence of Box 9.11 says "Natural disturbances (fire) play...up to 150-200 MtCO ₂ /yr." while page 46 Line 7 "up to 1600 MtCO ₂ /yr". The fifth sentence says "For the decade 1900-2000...370-740MtCO ₂ /yr..." while page 46 line 11 "350-750MtCO ₂ /yr". To ensure consistency, those descriptions should be checked. (Government of Japan)	Noted, Box to be deleted and text revised where it occurs further in Ch 9
9-261	A	21	1	21	1	Box 9.1: With regards to the last sentence, a time scale for these projects would be helpful. Also, given the research developments in other regions since 1997 can some judgement be made as to the likelihood or accuracy of these estimates? (Government of Environment Canada)	Noted, Box to be deleted and text revised where it occurs further in Ch 9
9-262	A	21	2	24	0	This section is one of the most important ones of the whole chapter. Unfortunately, its scope is rather limited, and is not consistent with current climate change agreements, and likely future agreements on LULUCF. ATTACHED is a WORD file with several pages of text where I explain (1) what is incorrect and why, (2) what is missing, (3) and what and how should be added. (Somogyi Zoltán, Forest Research Institute)	Small revisions
9-263	A	21	2	24	40	How many times do these chapters on mitigation via forests have to reinvent yet again a conceptual approach--there is basically nothing new here that has not said before. I am not sure who the authors feel they are writing to, but this section 9.4.1. is rather academic and once again takes up space that is not needed. Basically it contains nothing new that is not already known and seems a waste of valuable page space for it. Fig 9.7 is nice but not sure it adds anything new? Once again if this section is to be used and has good linkages to following sections then it may be justified--but this linkage is not made clear. (Sandra Brown, Winrock International)	Report needs to be stand alone, text can be shortened to some extent
9-264	A	21	3	0	0	Section 9.4. It would be good to have some introduction here on the structure of paragraph 9.4. This paragraph is 28 p (!) long and presents a lot of information in a relatively un-structured way. What is especially missing is at the end of sub-paragraphs some kind of (sub) conclusion, implications, or reasoning for the next steps. (Peter Van der Meer, Alterra)	Accept: We have added a short introduction and restructured and shortened the chapter.

**Expert/Government Review of Second-Order-Draft
Confidential, Do Not Cite or Quote**

IPCC WGIII Fourth Assessment Report, Second Order Draft

Chapter-Comment	Batch	From Page	From Line	To Page	To line	Comments	Considerations by the writing team
9-265	A	21	4	0	0	(iii) The fertilization of forests is not sustainable. Once started, it has to be continued. Its success depends on other nutrients available, and on the water supply (see above). The mitigation potential estimated in Fig. 9.17A, where nearly one third to one half of the potential depends on fertilization, seems very unrealistic. No other ecological constraints and feedback reactions are regarded. (Government of Germany)	Noted: This and subsequent comments seem to be referencing the wrong page number. The text surrounding Figure 9.17A does state that fertilization at this scale would not be realistic. Note, however, that per ha N addition in that “hypothetical” fertilization scenario is a fraction of the atmospheric depositions per ha observed in Germany over the past decades!
9-266	A	21	4	0	0	(ii) The fertilization of forests is crucial. But it is not practicable for millions of hectares, especially in developing countries. Another shortcoming in this respect is the availability of water to realize enhanced growth. Since severe droughts will become more frequent in future, even the “normal potential” of a site will be difficult to achieve in the future. For example, in Germany and Switzerland the tree growth was substantially reduced in the drought year 2003 (Dobbertin 2005), only at high altitudes a small increase was recorded. At the same time the supply with nitrogen was high, but it could not be transformed in growth, since water was lacking. (Government of Germany)	Noted: but this study refers to a project in Canada’s boreal forest – not developing countries. We are certainly not advocating this as a large-scale mitigation option but are reporting results from a research paper.
9-267	A	21	4	0	0	(i) tree improvement is a long term task: It is unlikely to yield measurable effects within the next 100 years. The main constraints are the “carrying capacity” of the sites, so that, due to the fertility of the site (as a result of nutrients, water and temperature) the effects will be small. (Government of Germany)	Reject: Tree improvement does yield measurable benefits already because it includes planting of genetically selected superior stock as practiced in many countries. Benefits from tree breeding of course require a much longer time horizon.
9-842	A	21	4	21	4	The potential to maintain or increase the stand-level C density through management practices like tree improvement or fertilization: (Government of Germany)	This is referencing the wrong page/line number and detailed responses are provided in the sub-comments 265-267
9-268	A	21	5	22	10	There is no discussion of demand for timber which is a key driver of deforestation. (Kirsten Macey, Climate Action Network Europe)	Reject: deforestation and the multitude of factors driving it are discussed in several locations in the chapter.
9-87	B	21	6	21	12	This is very poorly worded and confuses photosynthesis (gross primary production) with NPP. They are not the same and should not be treated as if they were here. U.S. Government (Government of U.S. Department of State)	Reject: we will refine the wording but the numerical references are to NPP. The amount of C involved in the GPP – autotrophic respiration cycle is even larger.
9-269	A	21	8	21	10	Reference (Andrei Kirilenko, University of North Dakota)	Taken into account
9-270	A	21	8	0	10	There appear Net Primary Productivity (NPP) and Net Primary Production in the	Accept: Used production consistently

**Expert/Government Review of Second-Order-Draft
Confidential, Do Not Cite or Quote**

IPCC WGIII Fourth Assessment Report, Second Order Draft

Chapter-Comment	Batch	From Page	From Line	To Page	To line	Comments	Considerations by the writing team
						same context. I think NPP should be Net primary Production. (Yukihiro Chiba, Forestry and Forest Products Research Institute)	
9-271	A	21	10	0	0	Correct footnote reference (Government of UK)	Accept
9-272	A	21	10	21	10	The digit "2" appearing after "Forest" should be written as superscript. (Government of Pakistan)	Accept
9-273	A	21	11	21	12	From where is this calculation? Global Figure? (Reinhold Glauner, Institute for World Forestry)	Assuming a specific density of 0.5 g/cm ³ and a C content of 0.5 g C / g dry matter.
9-275	A	22	1	22	10	Why the suspicion that forest management is always "worse" from a GHG perspective? Every example is suggesting things will be worse. Such representation should be documented or other more positive examples should be cited. (John Niles, Coalition for Rainforest Nations)	Accept – will reword examples
9-276	A	22	1	0	0	I suggest you to write (Figures 9.3 and 9.7) instead of (Figures 9.7 and 9.3) (Expédit Wilfrid VISSIN, FLASH/Abomey-Calavi University)	Accept
9-277	A	22	1	0	0	I suggest you to write (Figures 9.3 and 9.7) instead of (Figures 9.7 and 9.3) (YABI Ibouaïma, LECREDE/DGAT/UAC)	Accept
9-278	A	22	9	0	0	It looks a scanned figure which needs elaborated. (Shaohong WU, Institute of Geographical Sciences and Natural Resources Research, Chinese Academy of Sciences)	Accept – need to add reference to text
9-88	B	22	10	22	14	The figure is not clear or helpful. For example, are the green arrows into and out of the atmospheric CO ₂ pool, or something else? Does arrow width have meaning? If not, why are there different widths? What do the red arrows mean? Do the red arrows reflect flow of carbon between “other land use” and “forests ecosystems” or do they reflect change in land area or something else (is it supposed to be “forest ecosystems”)? The figure is not helpful in supporting a statement that net emissions depend on the balance of many things. U.S. Government (Government of U.S. Department of State)	TIA: Several of these points will be considered in revising the figure. However, the purpose of the figure and supporting text is not that “net emissions depend on the balance of many things” – see text for explanation.
9-279	A	22	15	22	20	this material repeats what has been said above (Sandra Brown, Winrock International)	Accept – text will be integrated with earlier text.
9-89	B	22	20	22	20	"If any" unnecessary. U.S. Government (Government of U.S. Department of State)	Accept
9-280	A	22	25	23	3	The four general categories of options which are given here are further described in para 9.4.2.. However, bio-energy is not listed here (an also not in Figure 9.8). Either include here or take out as separate subparagraph (9.4.2.5).	Accept – added fuel substitution (i.e. bioenergy) to the fourth category. It already mentioned in Fig 9.8

IPCC WGIII Fourth Assessment Report, Second Order Draft

Chapter-Comment	Batch	From Page	From Line	To Page	To line	Comments	Considerations by the writing team
						(Peter Van der Meer, Alterra)	
9-281	A	22	25	0	0	Remove 'avoidance' and replace with 'reduction' (Kirsten Macey, Climate Action Network Europe)	Accept
9-282	A	22	25	23	8	While descriptions about mitigation options and Figure 9.8 are important to understand the concept of these options, consistency between Figure and text in terms of wording and exemplification is not clear. And also, options in text should be numbered to help understanding for matching between Figure 9.8 and text. (Government of Japan)	Accept – Options numbered and text revised
9-90	B	22	25	22	32	Fundamentally, this is two categories, not three. The first is to maintain or increase forest area and the second is to maintain or increase carbon density in forests. The third one given is simply the first one multiplied by the second; it is not fundamentally a different category, and probably confuses things later on -- two things to do, in combination if possible, are (1) increase area of forests and (2) increase carbon density (i.e., grams of carbon in long-lived pools per unit ground area) in forests. U.S. Government (Government of U.S. Department of State)	Reject – while we agree that options 2 and 3 differ only somewhat – the activities to achieve them are rather different and because we have structured later parts in the chapter accordingly, we retain this distinction here.
9-283	A	22	27	22	33	Why not combine the two bullets and state at stand and landscape level? This whole discussion once again appears rather academic and not sure it really adds clarity. If it is linked to other sections--this distinction between stand and landscape level--then demonstrate with an example and how the results in later sections consider this. My bottom line--as the technical and economic potential results in later sections are the key to this chapter, then all other material before it should be tightly linked, if not these other sections are just academic musings. In fact one could argue that the mitigation potential analyses should be presented first, activity by activity, then all the relevant material from the sections 9.2-9.4 presented as needed as factors not considered. I guess now it is too late to make such changes but not too late to show the linkages and why the material in 9.2-9.4 is relevant to the essence of the chapter. (Sandra Brown, Winrock International)	Noted – authors will work on further improving linkages between sections of the chapter
9-284	A	22	27	22	32	Measures in category 2 can also increase landscape-level carbon density. On the other hand, measures in category 3 can also increase stand-level carbon density. Therefore, it is not necessary to separate them into two categories. In addition, agroforestry, urban forestry, etc. are also important measures for enhancing carbon stock which should be included. It may be more appropriate to combine the category 2 and 3 into one category, namely like "maintaining or increasing carbon density". In this case, other forestry measures can also be included as one of	Reject – while we agree that options 2 and 3 differ only somewhat – the activities to achieve them are rather different and because we have structured later parts in the chapter accordingly, we retain this distinction here. Agroforestry is addressed in the agricultural chapter 8.

**Expert/Government Review of Second-Order-Draft
Confidential, Do Not Cite or Quote**

IPCC WGIII Fourth Assessment Report, Second Order Draft

Chapter-Comment	Batch	From Page	From Line	To Page	To line	Comments	Considerations by the writing team
						measures. (Government of China Meteorological Administration)	
9-285	A	22	29	22	29	Add "including thinning" after the word "techniques" to help the readers understand. (Government of Japan)	Noted – there is a long list of possible silvicultural activities – thinning is but one of them and we have not included it explicitly here because in many cases thinning is to increase stem size of crop trees but does not increase C storage per ha.
9-3	C	22	29	22	30	The use of the words, "or other silvicultural techniques that contribute to sustainable forest management" could be interpreted to mean that other silvicultural techniques not listed do not contribute to sustainable forest management. That, however, is not the intent of the sentence. We suggest the following: "...even-aged stand management, or other appropriate silvicultural techniques." and delete, "that contribute to sustainable forest management". Sustainable forest management is addressed adequately already on line 18 of the same page. (Government of New Zealand)	Accepted
9-286	A	23	0	0	0	Figure 9.8: Do not abbreviate management (2A), align arrows correctly in boxes, insert comma after Apps in the Figure caption (Government of UK)	Accept – figure will be revised.
9-91	B	23	4	23	0	Figure 9.8. The caption needs to define dC/dT. U.S. Government (Government of U.S. Department of State)	Accept
9-92	B	23	4	23	8	Figure 9.8 - It appears that the costs considered for "Cost timing" includes conversion and maintenance costs, but not the opportunity cost of land use, which, for example would rise as forest acreage is increased. This is an important cost component that certainly influences implementation and it should be noted in the text which costs are represented by the figure and which are not. Also, Figures 9.8 and 9.9 have the same captions. U.S. Government (Government of U.S. Department of State)	Noted – but this is a simple diagramme to make a few key points, considering only the key costs. And yes, the caption of Figure 9.9 is wrong and will be fixed.
9-287	A	23	5	23	8	Is a figure from a presentation allowed as a reasonable source for an IPCC report? Nice though the figure is as an introduction to this topic and it could be used to replace much of the text preceding it, it seems Apps should be a contributing author if he is going to contribute this to the chapter. Though i am sure a few experts on this topic would question some of the trends in options--thus given this is not peer reviewed, it could be dropped. (Sandra Brown, Winrock International)	TIA: The reference to this figure will be changed but the figure is a nice summary and serves to summarize preceding text.
9-288	A	23	7	0	0	I am concerned about the substantial effects of fertilizer on mitigation potential. It	Noted and while the literature remains weak

**Expert/Government Review of Second-Order-Draft
Confidential, Do Not Cite or Quote**

IPCC WGIII Fourth Assessment Report, Second Order Draft

Chapter-Comment	Batch	From Page	From Line	To Page	To line	Comments	Considerations by the writing team
						would be needed to evaluate the promotion of decomposition of SOM and the manufacturing processes. This relates to Page 26 Line 37. In addition, I think that the figures in Figure 9.8 are not helpful for readers. (Yukihiko Chiba, Forestry and Forest Products Research Institute)	on the net benefit of fertilization on C stocks, it is generally considered an activity to enhance C stocks. Will investigate if literature studies to the contrary can be found.
9-289	A	23	7	0	0	Figure 9.8 is very unique and helpful to understand the concept of mitigation options. However, it is not clear whether the subtle differences on arrows and curved lines are on purpose or accidental error caused by hand writing. Reconsideration on visual design would be appreciated. (Government of Japan)	Noted – the quality of the figure will be further improved.
9-290	A	23	8	0	0	Write (Apps, 2006) (Expédit Wilfrid VISSIN, FLASH/Abomey-Calavi University)	Accept
9-291	A	23	8	0	0	Write (Apps, 2006) (YABI Ibouraïma, LECREDE/DGAT/UAC)	Accept
9-292	A	23	10	23	16	2) the total potential is underestimated and understated. Avoided Deforestation = avoid emissions, maintain a stock, stabilize land surface parameters, and avoid future emissions on the land from development. This magnitude is lost in this section and understated. (John Niles, Coalition for Rainforest Nations)	Noted – but in this section we are talking about the time lines of benefits (and Figure 9.10 elaborates this further in comparison to a baseline in which these issues are considered).
9-293	A	23	10	23	16	The whole part is well-intentioned, but I disagree. The reader is left with a major erroneous thought: avoided deforestation does not have significant upfront costs. (John Niles, Coalition for Rainforest Nations)	Reject – we are not talking about the cost of avoided D but are emphasizing the need to invest upfront in A/R with no or negative C benefits for the first few years.
9-93	B	23	12	23	0	Figure 9.8: “1A Increase areas of high C stocks” is in a sense a combination of category 1 and category 2. 1A should be Establish new forest area, and 1B should be Prevent loss of existing forest area. Then, using this approach, 2A would be increase carbon density through management and 2B would be prevent carbon density loss by avoiding forest degradation -- although the dividing line between 2A and 2B is a fine one. Reference to an oral talk through a personal communication is not an appropriate reference for IPCC. U.S. Government (Government of U.S. Department of State)	Accept – also more consistent with previous bullets.
9-294	A	23	18	0	19	"the longterm strategy is to maintain or increase forest carbon stocks". According to such longterm strategy, effectiveness of carbon sequestration is nodoubted. But forest harvest processes would be accelerated and the natural forest would gradually converted into artificial forest. Therefore, forest ecosystem functions and biodiversity would likely be disturbed. Would these will be taken into account. (Shaohong WU, Institute of Geographical Sciences and Natural Resources	Noted: yes – issues of biodiversity etc are implicitly addressed through the reference to “sustainable management strategy”.

**Expert/Government Review of Second-Order-Draft
Confidential, Do Not Cite or Quote**

IPCC WGIII Fourth Assessment Report, Second Order Draft

Chapter-Comment	Batch	From Page	From Line	To Page	To line	Comments	Considerations by the writing team
						Research, Chinese Academy of Sciences)	
9-94	B	23	24	23	24	An example at the end of this sentence would be very useful (e.g., see Chapter 5 Transportation). U.S. Government (Government of U.S. Department of State)	Accept
9-95	B	23	24	23	0	“e.g. not deforesting a mature forest” could use some clarification. This is not a one-time thing. “e.g. not deforesting a mature forest and then ensuring it is not deforested in the future” would be more complete. The idea is to not just delay the deforestation, but prevent it over the long term. U.S. Government (Government of U.S. Department of State)	Accept – wording adopted
9-295	A	24	0	0	0	Figure 9.9: Missing text from the figure caption. (Government of UK)	Noted, technical error to be corrected
9-296	A	24	0	0	0	Box 9.2: Missing descriptive title? Refer to Figure 9.9 rather than to "graph" in second paragraph. (Government of UK)	Noted, the box may be deleted or revised
9-297	A	24	0	24	0	box 9.2: delete in last line of first para "above" insert "below" and insert before Figure 9.9 "dashed line" check lay out, title is not completely visible right now (Government of Germany)	Noted, the box may be deleted or revised
9-96	B	24	0	24	0	Figure 9.9 - Caption does not match figure; it is the caption for Fig 9.8. See caption for fig 9.10. U.S. Government (Government of U.S. Department of State)	Noted, technical error to be corrected
9-300	A	24	0	0	0	Write (Apps, 2006) (title of box) (Expédit Wilfrid VISSIN, FLASH/Abomey-Calavi University)	Accept
9-301	A	24	0	0	0	Write (Apps, 2006) (title of box) (YABI Ibouaïma, LECREDE/DGAT/UAC)	Accept
9-298	A	24	1	24	40	Whole of Box 9.2--without an introductory statement not sure what this box is about and it goal--need something to set up the purpose of this box (Sandra Brown, Winrock International)	Noted, the box may be deleted or revised
9-299	A	24	3	0	0	Box 9.2 is not up to the standard of the rest of the chapter and should be deleted or at least made more understandable. The first para is obscure. In the second paragraph, the text says "carbon sequestration in a planted forest assumes a conservative rate of 4 tCO2/ha/yr..." NO! a conservative rate would assume no sequestration. Forests can be sinks, sources or neutral. The author is confusing the word 'forest' with the word 'stand'. This is evidenced by the statement that "the entire forest area ...is harvested". Stands are harvested, but not normally forests. The diagram continues this mistake by purporting to show the behaviour of forests,	Noted, the box may be deleted or revised

IPCC WGIII Fourth Assessment Report, Second Order Draft

Chapter-Comment	Batch	From Page	From Line	To Page	To line	Comments	Considerations by the writing team
						but is all about modelling a single stand. (Piers Maclaren, Piers Maclaren & Associates Ltd)	
9-97	B	24	3	24	0	Box 9.2. The text box needs a title. It also needs an opening sentence/paragraph which describes the topic of the box, e.g. “ comparing patterns of carbon sequestration in planted forests versus emissions saved from power plant upgrades.” The text also needs a summarizing sentence, “e.g. well-managed forest plantations are as good as industrial measures.” Finally, the caption needs to be changed to the one on page 27 that is mislabeled as being for figure 9.10. U.S. Government (Government of U.S. Department of State)	Noted, the box may be deleted or revised
9-98	B	24	5	24	30	Box 9.2 describes the cumulative carbon benefit in tC from energy and material substitution with harvested wood. However, it does not mention these benefits have already been taken into account in the energy sector and industrial sector. It may create the problem of double counting if this part of carbon benefit is considered as part of carbon sequestration in forestry as well. the authors need to explain how they have dealt with this possible double counting. (Government of Australia)	Noted, the box may be deleted or revised
9-99	B	24	5	24	30	Box 9.2 (especially Fig 9.2) seems to convey important and valuable messages. However, the explanatory text in this Box is difficult to understand. (Government of Australia)	Noted, the box may be deleted or revised
9-100	B	24	45	24	46	The description of Figure 9.9 needs to be reformatted. (Government of Australia)	Noted, technical error to be corrected
9-318	A	25	0	25	0	Something should be said on the distorting effects of trade and agricultural policies. (David Viner, University of East Anglia)	Reject – does not belong here.
9-302	A	25	1	29	27	This section is rather pedantic and mostly said before. It can be justified if updated with new material since the TAR--why not start with such an introduction that in this section new topics not previously addressed in this chapter in the TAR will be presented...in other words what is new since the TAR (NOTE i use "since" here correctly as it implies time--throughout most of chapter the word 'since" is incorrectly used and should be replaced by "because" or "as" two words preceding a conditional clause). Also the use of the word "should" is common which implies policy! (Sandra Brown, Winrock International)	Noted – the text will be shortened and updated where possible but authors agreed that an introduction of mitigation measures is appropriate for this chapter.
9-101	B	25	1	25	0	Section 9.4.2 - section is filled with conceptual examples that are not particularly useful. Actual examples would be much more meaningful and effective. U.S. Government	Noted – will re-examine the examples.

**Expert/Government Review of Second-Order-Draft
Confidential, Do Not Cite or Quote**

IPCC WGIII Fourth Assessment Report, Second Order Draft

Chapter-Comment	Batch	From Page	From Line	To Page	To line	Comments	Considerations by the writing team
						(Government of U.S. Department of State)	
9-303	A	25	7	25	9	The text says "afforestation ...generates a continuing C sink on the afforested areas." So trees keep growing forever? No, afforestation generates a C sink on the afforested areas until carbon saturation is reached, whereby loss of carbon increases through decay or removal to the point where the loss offsets any sequestration by actively growing trees. (Piers Maclaren, Piers Maclaren & Associates Ltd)	Accept – text reworded to identify limited C sink period
9-304	A	25	7	25	9	Need to include reference that afforestation is still temporary (the UN process has acknowledged this already due to the temporary credits). This is due to the issue of non-permanence which needs to be expressed here. (Kirsten Macey, Climate Action Network Europe)	Noted – though the discussion here is not about permanence but about a suite of mitigation activities within a forestry-based portfolio.
9-4	C	25	9	25	9	Please replace the word 'should' with 'could', so the sentence reads: "The portfolio could also consider ..." (Government of New Zealand)	Accepted
9-305	A	25	10	0	0	Replace "HWP" with "Harvested Wood Products (HWP)" (Government of UK)	Accept
9-306	A	25	11	28	0	No references to biodiversity impacts of plantations due to afforestation, the first mention of biodiversity is on page 29 - consider including earlier. (Kirsten Macey, Climate Action Network Europe)	Noted – the introduction to section 9.4 now states the structure of the chapter – i.e. non-C impacts are discussed in later section of the chapter.
9-307	A	25	12	0	0	Suggest to change title: maintaining forest area (i.e. avoiding OR reducing deforestation) requires a much different strategy than to increase forest area. Suggest to only keep maintaining forest area (Somogyi Zoltán, Forest Research Institute)	Reject: this title is consistent with earlier descriptions of options and we want to maintain this consistency throughout the chapter
9-308	A	25	12	26	25	Replace avoid and avoidance with reduce and reduction' to describe mitigation efforts to address deforestation. (Kirsten Macey, Climate Action Network Europe)	Accept
9-309	A	25	20	0	0	Write ...Anser et al., 2005). (Expédit Wilfrid VISSIN, FLASH/Abomey-Calavi University)	Reject – author’s name is Asner
9-310	A	25	20	0	0	Write ...Anser et al., 2005). (YABI Ibouiraïma, LECREDE/DGAT/UAC)	Reject – author’s name is Asner
9-102	B	25	25	25	28	One would expect higher prices to increase deforestation pressure and increased yields to reduce the pressure (though an income effect could increase pressure as well). Neither should be characterized as reduced economic returns. U.S. Government	Accept – text revised

IPCC WGIII Fourth Assessment Report, Second Order Draft

Chapter-Comment	Batch	From Page	From Line	To Page	To line	Comments	Considerations by the writing team
						(Government of U.S. Department of State)	
9-311	A	25	29	25	31	In line 30, ‘...as each natural system exists of both emissions...’ What does this mean? (Hector Ginzo, Ministerio de Relaciones Exteriores, Comercio Internacional Y Culto)	Accept – sentence deleted
9-312	A	25	29	25	31	The sentence can be deleted - it is said elsewhere and doesn't make sense here. (John Niles, Coalition for Rainforest Nations)	Accept – sentence deleted
9-313	A	25	30	0	0	insert comma after "C stocks", replace "exists" with "consists" (Government of UK)	Accept – sentence deleted
9-314	A	25	36	37	0	How can a baseline of anticipated rates of deforestation be determined? (Yukihiko Chiba, Forestry and Forest Products Research Institute)	Noted – that is a good question and we have added a few additional words on this issue.
9-103	B	25	38	25	42	As is, this list of items seem to be different ways of saying the same thing (e.g., the opportunity cost of a forest is the highest value alternative use which is likely to be the cause of deforestation). If these are supposed to be discrete they need to be re-written somehow (more like the text of page 26, lines 16-18). U.S. Government (Government of U.S. Department of State)	Accept – reworded the paragraph
9-315	A	25	44	0	0	Suggest to delete "maintaining or" from title (Somogyi Zoltán, Forest Research Institute)	Reject – want to maintain consistency with terminology used earlier in the chapter.
9-104	B	25	45	25	48	Defining afforestation and reforestation is confusing since the rest of the chapter refers to afforestation only. Link this discussion to the usage in the remainder of the chapter. If the terms are to be used, the definitions in the report’s glossary should be used. U.S. Government (Government of U.S. Department of State)	Accept – we introduce A and R here and will refer only to A in the rest of the chapter.
9-316	A	25	48	26	1	For most owners, changes in C valuation would have to be very large (>\$100/t) to drive afforestation/reforestation. The general level of timber prices would usually be more significant. (David Viner, University of East Anglia)	Reject – while this may be true in Europe the sensitivity to C prices varies regionally – see for example the EPA study.
9-317	A	25	48	0	0	Replace "Marrakesh Accords" with "Kyoto Rulebook", and include reference to the Rulebook that was approved in Montreal last year (the MA was just a draft) (Somogyi Zoltán, Forest Research Institute)	Noted – we are investigating the proper citation.
9-325	A	26	0	26	0	Generally: Something should be said specifically on continuous cover forestry, and the consequence of a more stable C sink. (Viner D., Sayer M., Uyarra M., and Hodgson N., 2006 Climate Change and the European Countryside: Impacts on Land Management and Response Strategies. Report Prepared for the Country Land and Business Association., UK. Publ., CLA, UK 180 pages).	Noted – will review the reference. L 35-36 – Accept L 50 – Reject – while this may be true in the UK – fertilizers are used at different stand ages in different regions of the world.

IPCC WGIII Fourth Assessment Report, Second Order Draft

Chapter-Comment	Batch	From Page	From Line	To Page	To line	Comments	Considerations by the writing team
						Lines 35-36. Extending rotations does not imply doing so beyond the maximum sustainable yield. In economic terms, this depends anyway on the end use. Line 50. Fertiliser use, where it occurs at all, will normally only be in the first year of a new plantation. (David Viner, University of East Anglia)	
9-5	C	26	5	26	5	We suggest the intent is clearer if the words 'timing of' are inserted immediately before 'gross changes'. (Government of New Zealand)	Accepted
9-319	A	26	13	26	14	Evidence should be given for statement that "carbon may be transferred into wood products" (Kirsten Macey, Climate Action Network Europe)	Reject – wood is made of 50% carbon by dry weight – what more evidence do you need?
9-320	A	26	13	26	13	Add closing bracket at the end of the sentence. (Government of Pakistan)	Accept
9-321	A	26	19	16	20	meaning of sentence is unclear (Government of UK)	Accept – will be revised.
9-105	B	26	19	26	20	Add an example of a “secondary benefit of afforestation. U.S. Government (Government of U.S. Department of State)	Accept
9-106	B	26	27	26	49	There are no references given for any of the statements made here. U.S. Government (Government of U.S. Department of State)	Accept
9-322	A	26	29	26	29	A minor point--but the word "decay" implies only the microbial activities and not the whole decomposition process--replace it. Also the statement about losses by DECOMPOSITION are not always exceeded by regrowing northern forests and forests of the PNW of US and Canada where decomposition is very slow and the forest floor builds up to very high values --often in excess of 50t C/ha (see papers by Harmon, Krankina and the like). (Sandra Brown, Winrock International)	Accept – decay replaced with decomposition. Noted –published papers show that releases are smaller than uptake at least for the first few years after stand-replacing disturbances.
9-323	A	26	34	0	0	"C" or "carbon" should be deleted. (Yukihiko Chiba, Forestry and Forest Products Research Institute)	Accept
9-324	A	26	45	26	45	delete whole line, insert instead "amounts of avoided emissions". Rationale: avoiding slash burning cannot increase stocks it can keep stocks only. (Government of Germany)	Accept
9-326	A	27	0	28	0	Figure 9.11: Caption is unclear, unless the caption for Figure 9.10 should actually refer to this Figure? (Government of UK)	Accept – the captions of the figures are misplaced – 9.11 belongs to 9.10 and 9.11 is missing.

IPCC WGIII Fourth Assessment Report, Second Order Draft

Chapter-Comment	Batch	From Page	From Line	To Page	To line	Comments	Considerations by the writing team
9-327	A	27	0	0	0	Figure 9.10: Missing either a dotted or a dashed line. Clarify what a.-d. represent. Caption is very unclear and second sentence does not appear to be related to what is shown in the figure. (Government of UK)	Accept – the captions of the figures are misplaced – 9.11 belongs to 9.10 and 9.11 is missing.
9-328	A	27	4	27	15	these figures are not well explained and I do not see a dashed line on 9.10. Also on 9.11--even though this is from a peer reviewed model (I assume) some might argue the results as it is not clear what the details are. Also it might be better to show the baseline and mitigation activity and the shade the benefit? (Sandra Brown, Winrock International)	Accept – the captions of the figures are misplaced – 9.11 belongs to 9.10 and 9.11 is missing.
9-329	A	27	4	27	10	Figure 9.10: Cannot distinguish line styles on printed page. (Government of Environment Canada)	Accept – the captions of the figures are misplaced – 9.11 belongs to 9.10 and 9.11 is missing.
9-330	A	27	4	27	10	check term "benefit": shouldn't it be named more neutral for instance "effect". there is no dashed line. explain why the "no harvest" option is without any effect on mitigation, as it is stated before that only very old trees do not sequester C anymore. Add a remark to the figure " for explanation of a, b, c, d see Figure 9.11" (Government of Germany)	Accept – the captions of the figures are misplaced – 9.11 belongs to 9.10 and 9.11 is missing.
9-107	B	27	4	27	10	The authors need to provide a description of what panels a. - d. represent. (Government of Australia)	Accept – the captions of the figures are misplaced – 9.11 belongs to 9.10 and 9.11 is missing.
9-108	B	27	4	27	0	Figure 9.10 caption is misplaced, it should be on page 24 in Box 9.2. U.S. Government (Government of U.S. Department of State)	Accept – the captions of the figures are misplaced – 9.11 belongs to 9.10 and 9.11 is missing.
9-109	B	27	5	27	10	There is no reference given for this material. U.S. Government (Government of U.S. Department of State)	Noted – we are considering an alternative source for similar information
9-331	A	27	6	0	0	Fig. 9.10 caption seems to come from some other picture, or there is a problem with the picture - I see only the solid line. Shift the simulation scenario descriptions from Figure 9.11 to Figure 9.10. Also, if I understand it correctly, a bar on Figure 9.11 represents the integral of the function from the corresponding plot on the Figure 9.10. This would work for scenarios a-c, but not for d. Data error? Finally, a reference is needed. (Andrei Kirilenko, University of North Dakota)	Accept – the captions of the figures are misplaced – 9.11 belongs to 9.10 and 9.11 is missing. 9.11 is not the integral under the curve but the cumulative (sum of) the differences between the simulations with and without mitigation activity.
9-332	A	27	6	0	0	Figure 9.10. What do 'a'-'c' represent? (Hector Ginzo, Ministerio de Relaciones Exteriores, Comercio Internacional Y Culto)	Accept – the captions of the figures are misplaced – 9.11 belongs to 9.10 and 9.11 is missing.
9-333	A	27	6	0	0	Figure 9.10: Where is the dashed line referred to in the text? Figure is unclear.	Accept – the captions of the figures are

**Expert/Government Review of Second-Order-Draft
Confidential, Do Not Cite or Quote**

IPCC WGIII Fourth Assessment Report, Second Order Draft

Chapter-Comment	Batch	From Page	From Line	To Page	To line	Comments	Considerations by the writing team
						Explain link to Figure 9.11 (Martina Jung, Ecofys)	misplaced – 9.11 belongs to 9.10 and 9.11 is missing.
9-334	A	27	6	0	0	In Figure 9.10, what are the differences among a, b, c, and d□ (Yukihiro Chiba, Forestry and Forest Products Research Institute)	Accept – the captions of the figures are misplaced – 9.11 belongs to 9.10 and 9.11 is missing.
9-335	A	27	6	0	0	In figure 9.10, the captions under the graph do not seem to be correct (Government of Japan)	Accept – the captions of the figures are misplaced – 9.11 belongs to 9.10 and 9.11 is missing.
9-336	A	27	11	28	12	check term "benefit": shouldn't it be named more neutral for instance "effect", (Government of Germany)	Accept – the graph shows the differences between the simulations with and without mitigation activity.
9-110	B	27	11	27	0	Figure 9.10 – Utility of these graphs is unclear. Better labeling would be helpful as would a caption that explicitly refers to graphs (a) - (d). Also, is a conceptual or specific case being illustrated? Please specify. U.S. Government (Government of U.S. Department of State)	Accept – the captions of the figures are misplaced – 9.11 belongs to 9.10 and 9.11 is missing.
9-111	B	27	13	27	0	Figure 9.11 - The caption is way too long and has no reference of any kind. If this much is needed then it should be in the text. U.S. Government (Government of U.S. Department of State)	Noted – a better way to describe this needs to be found.
9-112	B	27	15	28	12	There is no reference given for this -- saying “based on simulation runs” with a particular model is not enough. What was the methodology and where is the scientific reference to the model and the methodology? U.S. Government (Government of U.S. Department of State)	Noted – we will either provide a better reference or use an alternate source for the information.
9-337	A	28	6	28	7	Provide FRA 2005 data on the use of wood fuels (Andrei Kirilenko, University of North Dakota)	Reject – not relevant for this example.
9-338	A	28	12	0	0	Write (CBM-CFS3). (Expédit Wilfrid VISSIN, FLASH/Abomey-Calavi University)	Accept
9-339	A	28	12	0	0	Write (CBM-CFS3). (YABI Ibouaïma, LECREDE/DGAT/UAC)	Accept
9-340	A	28	15	0	0	I should add ‘stored’ after ‘reduce’ and before ‘c’ to improve the meaning of the sentence. as the sentence is presently written, the reader may be led to think that the concentration of C in forest products is reduced by not harvesting a forest. (Hector Ginzo, Ministerio de Relaciones Exteriores, Comercio Internacional Y Culto)	Accept
9-341	A	28	17	0	18	For easier understanding, it would be helpful to describe possible reasons why and how rotation lengths affect the mitigation potential in a positive or negative way.	Accept

IPCC WGIII Fourth Assessment Report, Second Order Draft

Chapter-Comment	Batch	From Page	From Line	To Page	To line	Comments	Considerations by the writing team
						(Yukihiro Chiba, Forestry and Forest Products Research Institute)	
9-113	B	28	18	28	18	Add an example of a negative influence of increasing harvest rotation lengths on carbon pools. U.S. Government (Government of U.S. Department of State)	Accept – added HWP
9-342	A	28	20	29	0	In this section, no particular data are presented and the context might be too general. (Yukihiro Chiba, Forestry and Forest Products Research Institute)	Accept – we have received additional references on product substitution and will provide more detail.
9-343	A	28	35	28	42	The CLIO (Viner D., Sayer M., Uyarra M., and Hodgson N., 2006 Climate Change and the European Countryside: Impacts on Land Management and Response Strategies. Report Prepared for the Country Land and Business Association., UK. Publ., CLA, UK 180 pages) study used Tipper et al., (2004), which is not referenced, which was based on Finnish data. See also page 29 lines 23-27. (David Viner, University of East Anglia)	Noted – will have a look at the UK study – cannot find publication of Tipper et al.
9-344	A	28	35	28	42	Reference is not able to be checked consider removing this paragraph. (Kirsten Macey, Climate Action Network Europe)	Noted – new references have been identified and this paragraph will be updated
9-345	A	28	35	28	42	Some peer-reviewed literature dealing with substitution effects includes: (1) Borjesson, P., and Gustavsson, L. , "Greenhouse gas balanced in building construction: Wood versus concrete from life-cycle and forest land-use perspectives". Energy Policy 28(2000):575-588, (2) Lippke, B., Wilson, J., Perez-Garcia, J., Bowyer, J., and Meil, J. , "CORRIM: Life-cycle environmental performance of renewable building materials". Forest Products Journal 54(6):8-19, (3) Peirquet, P., Bowyer, J., and Huelman, P., "Thermal performance and embodied energy of cold climate wall systems". Forest Products Journal 48(6):53-60, (4) Lenzen, M., and Treloar, G. , "Rejoinder to: Greenhouse gas balanced in building construction: Wood versus concrete from life-cycle and forest land-use perspectives". Energy Policy 30(2002):249-255, (5) Peterson and Solberg, "Environmental and economic impacts of substitution between wood products and alternative materials: a review of micro-level analyses from Norway and Sweden," Forest Policy and Economics, Vol 7 (2005) 249-259. (Reid Miner, NCASI)	Noted – it is appreciated that references are provided – will review and update.
9-346	A	28	35	28	39	Without floor area and timber used per unit floor area information, these type of discussions are scientifically meaningless. 150t-CO2 house, from my estimation, is almost 1,000m2 of floor area. Is it a typical European wooden house? (Mario Tonosaki, Forestry and Forest Products Research Institute)	Noted – paragraph will be updated.
9-347	A	28	35	28	40	Add: "Research from Sweden and Finland suggests that constructing apartment buildings with wooden frames instead of concrete frames reduces lifecycle net	Accept – we will use this information and that from other suggested references to update this

**Expert/Government Review of Second-Order-Draft
Confidential, Do Not Cite or Quote**

IPCC WGIII Fourth Assessment Report, Second Order Draft

Chapter-Comment	Batch	From Page	From Line	To Page	To line	Comments	Considerations by the writing team
						carbon emissions by 110 to 470 kg CO ₂ per m ² of floor area (Gustavsson et al., 2006). The carbon advantages of wood construction were shown to prevail over a wide range of system parameters (Gustavsson and Sathre, 2006). Research from North America concluded that using forest products led to significant reduction in atmospheric carbon by displacing more fossil fuel-intensive construction materials (Perez-Garcia et al., 2005)." References: Gustavsson, L., Pingoud, K. and Sathre, R. 2006. Carbon dioxide balance of wood substitution: comparing concrete- and wood-framed buildings. Mitigation and Adaptation Strategies for Global Change, 11(3):667-691. /// Gustavsson, L. and Sathre, R. 2006. Variability in energy and carbon dioxide balances of wood and concrete building materials. Building and Environment, 41(7):940-951. /// Perez-Garcia, J., Lippke, B., Comnick, J. and Manriquez, C. 2005. An assessment of carbon pools, storage, and wood products market substitution using life-cycle analysis results. Wood and Fiber Science, Vol. 37 (CORRIM Special Issue), pp. 140-148. (Government of Sweden)	paragraph.
9-348	A	28	35	28	40	The sources used in the paragraph are not original or they are not from peer-reviewed journals. It can be questioned why just these numbers were chosen. Such numbers are in essence case-specific and dependent on the baseline and other assumptions chosen. If numbers are presented, it would be advisable to base them on larger number of representative studies published preferably in peer-reviewed journals. (Government of Finland)	Accept – we will use new suggested references to update this paragraph.
9-114	B	28	35	28	42	Does this include deforestation carbon losses and full life-cycles net emissions in general? U.S. Government (Government of U.S. Department of State)	Not sure what the question is – harvest for production of forest products is not deforestation (which is defined as a land-use change). But the paragraph will be replaced and updated.
9-349	A	28	41	28	42	For well heat insulated and air-tight wooden building, 'less' energy is needed for heating and/or cooling compared to concrete building with bigger heat capacity. So this would not 'offset' the savings from building houses with wood. Maybe experimental results of old existing wooden and concrete houses tell 'more' energy consumption of wooden house. But if this chapter is mentioning future mitigation possibility, these two sentences are scientifically not correct and give wrong message to policy makers. (Mario Tonosaki, Forestry and Forest Products Research Institute)	Accept – new references will be considered and the paragraph will be updated.
9-350	A	28	41	28	42	The statement "However, Chapter 6 also notes that during the life time of a wooden	Accept – new references will be considered

**Expert/Government Review of Second-Order-Draft
Confidential, Do Not Cite or Quote**

IPCC WGIII Fourth Assessment Report, Second Order Draft

Chapter-Comment	Batch	From Page	From Line	To Page	To line	Comments	Considerations by the writing team
						building more energy is needed for heating and/or cooling. This would offset the savings from building houses with wood." is not supported by information in Chapter 6. Presumably the statement is related to the ideas of "thermal mass" discussed on pgs. 15-16 in Chpt. 6. However Chapter 6 does not specifically discuss wood vs. concrete in terms of their thermal mass effects. In general, the potential advantages of thermal mass are complex and depend on insulation placement, solar exposure, building orientation, local climate, etc. The statement that "during the life time of a wooden building more energy is needed for heating and/or cooling" is excessively simplistic. We suggest deleting this statement. (Government of Sweden)	and the paragraph will be updated.
9-351	A	28	41	28	42	Delete "However, Chapter 6 also notes that during the life time of a wooden building more energy is needed for heating and/or cooling. This would offset the savings from building houses with wood". There is no source that shows energy needed during the life time of a wooden building is larger than a house of other building material. Chapter 6 only notes the necessity of comprehensive analysis. (Government of Japan)	Accept – new references will be considered and the paragraph will be updated.
9-352	A	28	41	28	43	The last two sentences are very superficial. They are not generally true and they would need a detailed discussion that is not possible in the small space left for substitution issues. For instance, basic assumption when estimating substitution impacts is to use equivalent functional units. Why this is not possible is not explained here. Suggest to remove the sentences. (Government of Finland)	Accept – new references will be considered and the paragraph will be updated.
9-353	A	28	45	28	46	Forest biomass and 'waste' products from wood processing "and from wood utilization" ---. Demolition timber, waste furniture, and waste pallet and packaging etc. have more quantity potential and cost competitiveness compared to forest residues and wood industry residues. In some countries, such waste products are just crushed and land filled, and not considered as resources. But these waste resources have great potential to save forest resources through material recycling and to save fossil fuel through energy recycling. (Mario Tonosaki, Forestry and Forest Products Research Institute)	Accept. Rewrite "Forest biomass, industry residues and 'waste' products can be used..."
9-354	A	28	49	28	49	Add additional reference on the carbon balance implications of biomass cascading: Sathre, R. and Gustavsson, L. 2006. Energy and carbon balances of wood cascade chains. Resources, Conservation and Recycling, 47(4):332-355. (Government of Sweden)	Accept. Add citation.
9-355	A	29	6	0	0	Replace "energy carrier" with "source of energy". (Government of UK)	Accept

**Expert/Government Review of Second-Order-Draft
Confidential, Do Not Cite or Quote**

IPCC WGIII Fourth Assessment Report, Second Order Draft

Chapter-Comment	Batch	From Page	From Line	To Page	To line	Comments	Considerations by the writing team
9-356	A	29	9	0	0	Write energy, 2002). (Expédit Wilfrid VISSIN, FLASH/Abomey-Calavi University)	Accept
9-357	A	29	9	0	0	Write energy, 2002). (YABI Ibouaïma, LECREDE/DGAT/UAC)	Accept
9-358	A	29	12	0	0	serious potential side effects of recovering logging residues are site degradation through excessive nutrient export. In any case, currently for Central European forestry industrial roundwood prices are higher than prices for biomass for energy. Thus, there is just a positive economic net effect for the forest owner if additional quantities biomass can be extracted. (Lexter Manfred , University of Natural Resources and Applied Life Sciences, Vienna)	Noted. Is this an issue for section 9.5 or 9.6 to address?
9-359	A	29	12	0	0	serious potential side effects of recovering logging residues are site degradation through excessive nutrient export. In any case, currently for Central European forestry industrial roundwood prices are higher than prices for biomass for energy. Thus, there is just a positive economic net effect for the forest owner if additional quantities biomass can be extracted. (Lexter Manfred , University of Natural Resources and Applied Life Sciences, Vienna)	Noted again.
9-115	B	29	14	29	21	Important points are being lost because the paragraph is not clearly written. Main point is unclear. U.S. Government (Government of U.S. Department of State)	Noted. Some simplification might be possible
9-360	A	29	15	29	15	The word "sustainable" may be replaced by "sustainably". (Government of Pakistan)	Accept
9-116	B	29	17	29	20	Sentence is difficult to understand/seems internally contradictory. Does 3.7 Gt CO2 relate to an emissions saving (not 'released')? What time period is involved to achieve outcome? Is '3.7' estimate an annual figure or some kind of aggregate? Does calculation represent a full life cycle assessment, or an outcome at one step of life cycle only? (Government of Australia)	Noted. The para will be edited and figure checked for consistency.
9-361	A	29	21	29	21	The inverted commas appearing at the end of the line should be removed. (Government of Pakistan)	Accept
9-362	A	29	23	29	26	Add waste from wood utilization, like demolition timber, waste furniture, and waste pallet and packaging. (Mario Tonosaki, Forestry and Forest Products Research Institute)	Accept. Add "waste products" to list after the industrial/process residues
9-363	A	29	29	50	4	Sub-sections 9.4.3 ~ 9.4.7 show many examples, models, figures and tables. What is the linkage with or do these cases meet the longterm strategy (page 23, lines 18 ~	Section 9.4.3 will be deleted Some issues needs to be addressed elsewhere

Expert/Government Review of Second-Order-Draft
Confidential, Do Not Cite or Quote

IPCC WGIII Fourth Assessment Report, Second Order Draft

Chapter-Comment	Batch	From Page	From Line	To Page	To line	Comments	Considerations by the writing team
						19. (Shaohong WU, Institute of Geographical Sciences and Natural Resources Research, Chinese Academy of Sciences)	
9-364	A	29	29	0	0	Paragraph 9.4.3: relevance of this section not clear. Maybe move to 9.4.5 ?? (Peter Van der Meer, Alterra)	Accept, will be deleted
9-365	A	29	29	30	2	Title 9.4.3 seems not appropriate since only LU change is addressed where as there are also mitigation options mentioned earlier (Government of Finland)	Accept, will be deleted
9-117	B	29	29	30	0	Section 9.4.3 - It is not clear why it is included in the chapter. A section on reference scenarios logically belongs after section 9.3 and before section 9.4. However, section 9.4.3, as drafted, would need significant improvements to serve as a discussion of future trends in absence of climate change mitigation. It focuses on AIM and IMAGE 2.2, but there are a number of other and more recent global studies (both integrated assessment and sectoral) with reference forest results (and regional detail) in land-use acreage and net emissions from land-use change (See Figures 3.9 and 3.13 for results and studies). U.S. Government (Government of U.S. Department of State)	Accept, will be deleted
9-366	A	29	33	29	33	Repalce "sinks" with "removals" to be more consisent with commonly accepted language. (Sandra Brown, Winrock International)	Section deleted
9-367	A	29	35	0	0	Write (IPCC, 2000) (Expédit Wilfrid VISSIN, FLASH/Abomey-Calavi University)	Section deleted
9-368	A	29	35	0	0	Write (IPCC, 2000) (YABI Ibouaïma, LECREDE/DGAT/UAC)	Section deleted
9-118	B	29	38	29	42	This text needs to be updated. See Chapter 3 (3.2.1.6 and 3.2.2.2) for references for more recent studies. U.S. Government (Government of U.S. Department of State)	Section deleted
9-369	A	29	44	0	0	Clarify meaning of sentence. (Government of UK)	Section deleted
9-119	B	29	44	29	44	"Mitigation" or "reference"? The section is about reference scenarios. U.S. Government (Government of U.S. Department of State)	Section deleted
9-120	B	29	46	29	46	Add "IMAGE 2.2" between "These" and "runs". Also, the reference list does not include Brinkman et al. There is a Brinkman reference but it is not a published report, nor does it appear to be publically available as is required. U.S.	Section deleted

IPCC WGIII Fourth Assessment Report, Second Order Draft

Chapter-Comment	Batch	From Page	From Line	To Page	To line	Comments	Considerations by the writing team
						Government (Government of U.S. Department of State)	
9-370	A	30	0	31	0	It seems to me (who is not an economist) that analyses of market potential are in key role when the mitigation potential is assessed. Although the research is missing, could this section include analyses: - what are the major barriers causing difference between economi and market potential - Speculation how their effect could be minimized. (Government of Finland)	Section deleted
9-371	A	30	2	30	7	different from Figure 9.1 here sink is negative, try to avoid those changes from figure to figure (Government of Germany)	Section deleted
9-372	A	30	3	30	7	Figure 9.12: It would be helpful to get some additional information in the text on the run of the curves (e.g. emissions from deforestation in particular in the tropics are significant. Why is it that in short term - 2010 - the forest Cbalance for S-America is becoming negative meaning a sink? (Government of Germany)	Section deleted
9-121	B	30	3	30	7	Figure 9.2 shows a reference case example for sub-global regions. It would be helpful if a global reference case could be displayed as well.. (Government of Australia)	Section deleted
9-373	A	30	9	0	0	Paragraph 9.4.4.: this is important section, but fails to really address the estimate in economic perspective. Table 9.4 is a start but is not well explained in the text. For instance, difference between biomes are not discussed. Also, how would fluctuation of demand and production affect prices ? (Peter Van der Meer, Alterra)	Section deleted
9-374	A	30	9	50	12	To help understanding of non-expert, simplification and summarization of the descriptions on economic assessment should be considered. (Government of Japan)	Accept, we'll clarify
9-122	B	30	9	30	24	Section 9.4.4 - The objective of this section is not clear. What is the point being made by the first few paragraphs U.S. Government (Government of U.S. Department of State)	Section restructured, and put after the estimates
9-375	A	30	26	30	26	Who at the IPCC gives five types of mitigation potential? (Sandra Brown, Winrock International)	Def is given in ch 1, we'll delete it here
9-376	A	30	26	0	0	Write IPCC. (Expédit Wilfrid VISSIN, FLASH/Abomey-Calavi University)	Accept

**Expert/Government Review of Second-Order-Draft
Confidential, Do Not Cite or Quote**

IPCC WGIII Fourth Assessment Report, Second Order Draft

Chapter-Comment	Batch	From Page	From Line	To Page	To line	Comments	Considerations by the writing team
9-377	A	30	26	0	0	Write IPCC. (YABI Ibouraima, LECREDE/DGAT/UAC)	Accept
9-378	A	30	26	31	2	take into account the definition in TS at page 16, and try to make the definitions here consistent with the definitions there and add definition of biological potential a term used in ES at page 2 and 3 and at page 46 of chapter 9. (Government of Germany)	Def is given in ch 1, we'll delete it here
9-123	B	30	26	31	2	This taxonomy of potentials is very not useful because they are not used by the studies or the chapter. Suggest picking definitions that are used and that you use in the chapter. These definitions are a bit constraining in that they overly-define categories that are not generally represented in studies. Technical, economic, and market potential are common, with market potential being (a) the potential when other landuses and land based mitigation options are endogenized, and (b) the potential when non-land sectors and mitigation options are endogenized. U.S. Government (Government of U.S. Department of State)	Def is given in ch 1, we'll delete it here
9-124	B	30	29	30	30	This seems to be the first time "economic potential" is defined in this chapter. There is no sense putting the definition here after the phrase has already been used on page 3 (three times), page 4 (twice), page 5, page 8 (four times), and page 26. U.S. Government (Government of U.S. Department of State)	Def is given in ch 1, we'll delete it here
9-379	A	30	30	31	2	"(4) and (5)" are the category, (5) also deals with policies. (Shaohong WU, Institute of Geographical Sciences and Natural Resources Research, Chinese Academy of Sciences)	Def is given in ch 1, we'll delete here
9-380	A	31	13	31	13	Which IPCC assessments--need to be more specific (Sandra Brown, Winrock International)	Accept
9-125	B	31	19	31	21	By definition, it is impossible that economic potential is greater than technical potential. This needs a better explanation. However, Table 9.4 does not show any evidence of this, especially the 150% (line 31). U.S. Government (Government of U.S. Department of State)	Accept, table to be checked, and simplifiee
9-381	A	31	27	31	28	Sentence seems to be incomplete. (Hector Ginzo, Ministerio de Relaciones Exteriores, Comercio Internacional Y Culto)	Agree will rewrite
9-382	A	31	27	31	31	An example of a poorly written paragaraph that does not make sense grammatically. Ratios are mixed with percentage--be consistent. What does "the latter against al costs" mean? And the upper range in last line of 150% is larger than the range given in the first sentence?	Agree will rewrite

**Expert/Government Review of Second-Order-Draft
Confidential, Do Not Cite or Quote**

IPCC WGIII Fourth Assessment Report, Second Order Draft

Chapter-Comment	Batch	From Page	From Line	To Page	To line	Comments	Considerations by the writing team
						(Sandra Brown, Winrock International)	
9-126	B	31	28	31	31	If technical potential is the theoretical limit to mitigation, it is hard to understand why “at carbon prices from \$100/tC to \$183/tC, the range of economic potential is estimated to be 58%-150% of the technical potential” Why under this price range does it appear that GHG emissions could be sequestered above the theoretical limit? (Government of Australia)	Agree, needs checking
9-127	B	31	29	31	0	Saying “a small fraction” is too subjective. The value 16% has been listed. Leave it to the reader to decide whether that is a small fraction or not. U.S. Government (Government of U.S. Department of State)	Agree
9-128	B	31	30	31	31	How the economic potential can exceed the technical potential needs explaining. This implies that the economic potential is based on unproven technologies. Is this what is meant? U.S. Government (Government of U.S. Department of State)	Agree, needs check
9-383	A	31	31	31	31	Should the upper limit be reduced to fit inside the range given in the line 26? (Andrei Kirilenko, University of North Dakota)	Agree needs check
9-384	A	32	0	32	0	Table 9.4: in the first row under the column "Technical potential", the midpoint is 26. Please check, the correct figure may be 0.026. (Government of China Meteorological Administration)	Agree, needs check
9-387	A	32	0	0	0	Table 9.4. Layout needs to be improved, e.g. make clear that there are 3 different biomes. (Peter Van der Meer, Alterra)	Agree, needs simplification
9-385	A	32	1	0	0	Table 9.4 is very informative, but could be made more clear. The values should be double-checked; some are apparently in Mt (e.g. "26 midpoint", D Global "176"), others are in Gt. Economic potential can exceed the technical potential (A US "0.220). Since all the values are negative, can the opposite values be presented? (Andrei Kirilenko, University of North Dakota)	Agree, needs simplification
9-386	A	32	1	32	20	Whole Table needs to be converted to CO2 as in most other tables (Sandra Brown, Winrock International)	Agree, needs simplification
9-129	B	32	1	32	0	Table 9.4. column 1 is disorganized. Suggest describing the mitigation options, e.g. use “forest management” instead of FM? Use “developing” and “developed”, rather than Annex-1 and non-Annex 1. U.S. Government (Government of U.S. Department of State)	Agree, needs simplification
9-130	B	32	1	32	0	Table 9.4 - (1) The main points of this table are not well articulated, nor is the table and its discussion integrated with the technical/economic potential discussion that	Change table into a graph? Table needs work

IPCC WGIII Fourth Assessment Report, Second Order Draft

Chapter-Comment	Batch	From Page	From Line	To Page	To line	Comments	Considerations by the writing team
						follows on top-down and regional estimates. The authors need to tie it all together. (2) The table is hard to read. (3) The time horizon for some of the technical potential estimates are not given. If not 2010, then how should these numbers be interpreted relative to the other numbers in the table? (4) The table should also include the regional and global Sohngen and Sedjo (in press) and Benitez et al. results, and should consider including forest results from integrated assessment modeling or a discussion on how to think about those results which provide a picture of the market potential when all sectors are available for mitigation (see ch.3, section 3.3). (5) Why were the annualized values from USEPA (2005) used? It would be more appropriate to use the actual 2010 and 2040 values than the annualized values that obscure the intertemporal distribution of mitigation. U.S. Government (Government of U.S. Department of State)	
9-131	B	33	4	33	0	Section 9.4.5 – Including results from global models is very important. However, a few points. First, it is difficult to take much away from this section since the comparisons are not direct, i.e., comparable results, ideally via tables, from the first few pages (especially Figures 9.13 and 9.14). As a result, the assessment is constrained. Second, additional global results are available and should be included in tables and discussed/compared (see Ch. 3, section 3.3). Third, global economic potential results should be more explicitly compared to the bottom-up estimates and included in the executive summary. U.S. Government (Government of U.S. Department of State)	Partly agree, a better comparison will be made, as well as a check for latest results
9-132	B	33	8	33	8	Strengers et al. (2004), vs 2006? Reference in figure 9.13 - same question. U.S. Government (Government of U.S. Department of State)	Noted, check
9-388	A	33	12	0	19	Could you ask the authors provide original jpg figures. (Shaohong WU, Institute of Geographical Sciences and Natural Resources Research, Chinese Academy of Sciences)	Figures will be improved
9-389	A	33	17	33	19	Caption does not explain figures shown in figure, e.g. afforestation% (Reinhold Glauner, Institute for World Forestry)	
9-133	B	33	17	33	0	Figure 9.13 - This figure is not clear--reference, mitigation, what mitigation policy, change from reference, etc? Also, the maps don't provide the same geographic coverage which begs the question of what is being modeled in each case? Finally, the Sohngen and Sedjo (in press) results should be included somehow as well. Like Figure 9.14, figure harmonization is needed, as well as guidance on interpretation. U.S. Government (Government of U.S. Department of State)	Agree, more interpretation explanation is needed

**Expert/Government Review of Second-Order-Draft
Confidential, Do Not Cite or Quote**

IPCC WGIII Fourth Assessment Report, Second Order Draft

Chapter-Comment	Batch	From Page	From Line	To Page	To line	Comments	Considerations by the writing team
9-134	B	34	6	34	6	An explanation of the the risk index and the result is needed to make this a more useful statement. U.S. Government (Government of U.S. Department of State)	Agree, needs clarification
9-390	A	34	14	0	24	I suggest mentioning that the future change in forest disturbance can correct this sequestration potential. (Andrei Kirilenko, University of North Dakota)	Reject, we point at other places at risks under climate change
9-135	B	34	18	34	22	Not clear what, if anything, it means to cover the range in Richards and Stokes. Please clarify or remove. U.S. Government (Government of U.S. Department of State)	Agree, Section will be rewritten
9-391	A	35	0	42	0	Concerning the reduction of carbon emissions when using wooden materials, only the values with a unit [tonne] are mentioned. I'm afraid, however, these values would be ambiguous to understand the meaning. (Yukihiro Chiba, Forestry and Forest Products Research Institute)	Don't understand,
9-136	B	35	10	35	11	Figure 9.14? Also, little spatial information in Figure 9.14, certainly do not see the consistency of spatial distribution across models/studies. Furthermore, a table would be better for illustrating this point. U.S. Government (Government of U.S. Department of State)	Will add clarifying txt
9-137	B	35	13	35	21	Strengers et al. also use 0.5 degree grid cells and should be cited and compared to Benitez et al. Benitez et al. results need to be put into context relative to the other models. U.S. Government (Government of U.S. Department of State)	Agree, model section will be improved
9-392	A	35	23	0	0	Here you mention four major global forest analyses to be included in the table, while Table 9.5 only gives the result of three (IMAGE results not given in table?) (Martina Jung, Ecofys)	model section will be improved
9-138	B	35	26	35	26	Were IMAGE results from version 2.2 of the model, and from EMF-21 runs? Or, were the results from the more recent version 2.3 runs from van Vuuren et al. paper in Climatic Change? Also, does Table 9.5 include the IMAGE results? The caption does not list the IMAGE model. U.S. Government (Government of U.S. Department of State)	model section will be improved
9-393	A	35	29	0	0	Precise the date of Benitez et al., (YABI Ibouraima, LECREDE/DGAT/UAC)	model section will be improved
9-139	B	35	29	35	30	The last sentence is not meaningful--either expand upon it or remove it. What are the results from the comparison?. U.S. Government (Government of U.S. Department of State)	model section will be improved
9-397	A	36	0	0	0	Table 9.5. Too much data, unreadable. Either summarise or move to appendix.	Agree, can be improved

IPCC WGIII Fourth Assessment Report, Second Order Draft

Chapter-Comment	Batch	From Page	From Line	To Page	To line	Comments	Considerations by the writing team
						(Peter Van der Meer, Alterra)	
9-140	B	36	1	36	10	The authors need to more clearly explain what the figures included in Table 9.5 represent. In particular the numbers in parentheses need to be explained. (Government of Australia)	Agree, model section will be improved
9-141	B	36	1	36	0	Table 9.5 (part 1 of 2 of comment) - More explanation/transparency is needed on how these results were generated/assembled. Given that carbon results from these models are highly dependent on the carbon price trajectory and the baseline, it is not clear how the data was generated/assembled for this table, and how it should be interpreted. For example, it is likely that constant carbon price policies were run to produce these results; however, it is know that rising carbon carbon price trajectories produce a delayed sequestration response (e.g., Sohngen and Sedjo, in press), which would imply lower additional sequestration at \$20/tC in early decades than generated by a constant price trajectory. At a minimum, the following additional information is needed: 1. Which baselines were used? For example, Sohngen and Sedjo and Benitez et al. consider multiple baselines. 2. All of the models have run and published a variety of carbon price or stabilization policies. Each policy produces a different result. Therefore, which mitigation scenarios were used to generate these results, and how? Ideally, each model ran the same carbon price policies to generate these results...(see part 2 of 2) U.S. Government (Government of U.S. Department of State)	Make table more readable, reduce to limited number of figures Useful table Questions to be answered (maths do not match), some numbers questioned (e.g. NA fm) Contradiction between table and text
9-142	B	36	1	36	0	Table 9.5 - No need for the bioenergy rows since there is no data. Appears the 0.77 average for the TOTAL for Cent. Planned Asia a typo, and it should be 0.33. Also, missing midpoint (?) numbers for reduced deforestation in last column and some midpoints fall outside ranges. U.S. Government (Government of U.S. Department of State)	Table will be improved
9-143	B	36	1	36	0	(Table 9.5, part 2 of 2 of comment) If not, how was it done and does that compromise the comparability? Also, how should readers think about these results relative to the other results generated by these models with different carbon policies? 3. Related to #2: Are the GTM results from Sohngen and Sedjo (2006) or Sohngen's "Marginal Cost Curves..." website paper? While the same model was used, different carbon price trajectories were run in each paper and the results are not the same. 4. The needs to be available somewhere. Some of these papers provide some of the	Table will be improved

**Expert/Government Review of Second-Order-Draft
Confidential, Do Not Cite or Quote**

IPCC WGIII Fourth Assessment Report, Second Order Draft

Chapter-Comment	Batch	From Page	From Line	To Page	To line	Comments	Considerations by the writing team
						numbers via tables, but not all the numbers and most of the papers provide maps or figures that do not provide all the values behind Table 9.5 and, for the values that are represented, the map/figure format is not readily usable. U.S. Government (Government of U.S. Department of State)	
9-394	A	36	5	36	9	Table 9.5--some items need better explanation. What is NA; what are numbers in ()? Although heading says percentage for last 3 columns the values seem to be ratios? As there is nothing in fourth column, delete it and say in table legend that there is no CO2 at cost of <0 (Sandra Brown, Winrock International)	Table will be improved
9-395	A	36	10	37	4	This is one of the places where the chapter could be sharpened. Different estimates for sequestration potential can be found earlier in the paper; it is not clear how do they correspond, what factors are considered, and what is the range. An extended table (9.5?) would do. (Andrei Kirilenko, University of North Dakota)	Agree, section will be improved
9-396	A	36	11	0	0	While here the value of 12,900 MtCO2/yr is given, the summary at page 75 (line 8) refers to 12,800 MtCO2 (Martina Jung, Ecofys)	Agree, Needs refinement
9-144	B	36	11	36	12	If the 12,900 MtCO2/yr is a result of an essentially an infinite price (which it is according to footnote 1 of Table 9.5), then it should be characterized as technical potential, not economic potential. U.S. Government (Government of U.S. Department of State)	Agree, needs refinement
9-398	A	37	2	37	4	another example of poorly written text (Sandra Brown, Winrock International)	Agree, needs improvement
9-399	A	37	6	0	0	Paragraph 9.4.6. Why this case study here. Why not present this (shortened) as Box in paragraph 9.4.2.5. (Peter Van der Meer, Alterra)	Agree, whole section needs restructuring
9-145	B	37	6	37	0	Section 9.4.6 - Need to fit this section into section 9.4 and the chapter better. The information is very hard to put in context with the rest of the chapter. Also, Benitez et al. models forest biomass among other things. Their results should be added to the section. Finally, it is not clear why the focus is only on residues. Clearly, hybrid poplar is a bioenergy alternative that would merit discussion. Please provide justification for this decision or expand the coverage. It is worth noting that it is not clear that the discussion over the next three pages is truly limited to forest residues. U.S. Government (Government of U.S. Department of State)	Clarify residues and fellings only for bioenergy

**Expert/Government Review of Second-Order-Draft
Confidential, Do Not Cite or Quote**

IPCC WGIII Fourth Assessment Report, Second Order Draft

Chapter-Comment	Batch	From Page	From Line	To Page	To line	Comments	Considerations by the writing team
9-400	A	37	12	37	12	I suggest that thinnings are included with harvests in "(available after or with harvest)". (Government of Finland)	Agree, will be refined
9-401	A	37	13	37	15	Does the last sentence mean complementary harvests just for bioenergy, or what? Is it different from first option 'primary residues' (Government of Finland)	Agree, will be refined
9-402	A	37	20	37	26	suggestion to add a bullets for 1) how collection of residues affects the fertility and productivity of regenerating forest (there is little information available about this. But it can be serious threath on poor/non-fertile sites.) 2) How collection affects biodiversity (Government of Finland)	Reject, too much detail. We need to reduce txt
9-146	B	37	28	37	40	The authors emphasise the benefits of using fuel wood or forestry biomass for energy purposes but neglect the current negative evidences such as deforestation and land degradation that are happening in Africa, South America and Southeast Asia. It would be useful if the authors could quote the net environmental outcome of using fuel wood/forestry biomass for energy purposes from the literature. (Government of Australia)	Reject, very controversial issue, and largely unknown and region specific. Use of wood for fuel does not necessarily lead to deforestation
9-403	A	37	30	37	30	Why give two out of 16 countries--give a longer list or none. (Sandra Brown, Winrock International)	Agree, delete
9-404	A	37	42	0	0	Section 9.4.6.3 A reference is need to the high degree of biomass-based heating in Swedish towns. (David Viner, University of East Anglia)	Reject, not required
9-405	A	37	43	37	45	End of sentence missing. "Various studies have assessed the future potential of biomass for the forestry sector both at a global level; Yamamoto et al., 2001; Smeets et al., 2005; Fischer and Schratzenholzer, 2001; Hall et al, 45 1993; Williams, 1995; Dessus, 1992) AND ? (Government of Finland)	Agree, rephrased
9-406	A	37	43	37	43	delete "both" (Government of Germany)	Agee, rephrased
9-407	A	38	5	0	6	Because of ecological and climate constraints less than 50 % of logging residues should be used. The risk for soil carbon deterioration will increase with a successively enlarged use of logging residues from forest harvests. (Government of Sweden)	Reject, Too detailed
9-408	A	38	10	0	0	Write (IPCC, 2000)	Agree

**Expert/Government Review of Second-Order-Draft
Confidential, Do Not Cite or Quote**

IPCC WGIII Fourth Assessment Report, Second Order Draft

Chapter-Comment	Batch	From Page	From Line	To Page	To line	Comments	Considerations by the writing team
						(Expédit Wilfrid VISSIN, FLASH/Abomey-Calavi University)	
9-409	A	38	10	0	0	Write (IPCC, 2000) (YABI Ibouaïma, LECREDE/DGAT/UAC)	Agree
9-147	B	38	20	38	21	Please explain the statement "The extended timeframe has been used..." U.S. Government (Government of U.S. Department of State)	Rephrased
9-148	B	38	23	39	31	Define LHV in footnote 3. U.S. Government (Government of U.S. Department of State)	Agree
9-149	B	38	24	38	0	Table 9.6 - The caption has a line about "the economic potential is in the range of 10-20%." This is out of the blue and has no discussion describing it, justifying it, or explaining how it is used. U.S. Government (Government of U.S. Department of State)	Agree, will be clarified
9-150	B	38	24	38	0	Table 9.6 - Adding up the lows and highs to produce the "World low and high estimates" is completely ad hoc and unmerited. Just use the global study numbers and drop these other arbitrary values. In addition, the individual values should be linked to the specific references. (Government of U.S. Department of State)	Reject, regional insight is still needed.
9-410	A	38	25	38	30	World total in Table 9.6 is 5,000 if one adds the high column of numbers. If different then give a reason (Sandra Brown, Winrock International)	Agree, was changed
9-411	A	38	26	0	0	Write ... Nilson, 2006 Dessus, 1992 (Expédit Wilfrid VISSIN, FLASH/Abomey-Calavi University)	Noted
9-412	A	38	26	0	0	Write ... Nilson, 2006 Dessus, 1992 (YABI Ibouaïma, LECREDE/DGAT/UAC)	Noted
9-413	A	38	27	0	0	Write Faaij, 2005) (Expédit Wilfrid VISSIN, FLASH/Abomey-Calavi University)	Noted
9-414	A	38	27	0	0	Write Faaij, 2005) (YABI Ibouaïma, LECREDE/DGAT/UAC)	Noted
9-151	B	39	14	39	0	Section 9.4.6.6 - More discussion of economic potential results is appropriate. The technical potential numbers are not estimates of what might actually be implemented. U.S. Government (Government of U.S. Department of State)	Agree, we clarify now how we got to econ potential
9-415	A	39	18	39	20	which costs are including in the "some assessments of costs"--all of them methioned previously or just some? (Sandra Brown, Winrock International)	We clarify, that studies differ a lot on this aspect

IPCC WGIII Fourth Assessment Report, Second Order Draft

Chapter-Comment	Batch	From Page	From Line	To Page	To line	Comments	Considerations by the writing team
9-152	B	39	30	39	31	What carbon price applies to the Smeets et al. results given? U.S. Government (Government of U.S. Department of State)	we clarify now how we got to econ potential
9-416	A	39	33	0	0	Paragraph 9.4.7. Explain why you choose the selected regions; does it follow FAO division ? (Peter Van der Meer, Alterra)	Follows ipcc regions
9-153	B	39	34	39	0	Section 9.4.7.7 - Transparency on how the regional mitigation potential estimates (Tables 9.9 and 9.10) were calculated is necessary. It is not clear if the authors are creating regional estimates or simply pulling regional estimates from peer-reviewed published studies. The former could be suspect given that it may be generating new research and has not been formally peer reviewed. The regional discussion should present the raw data and describe the method for constructing Tables 9.9 and 9.10. Furthermore, ideally, the separate regional discussions should provide sets of similar information so that more detailed comparison is possible. U.S. Government (Government of U.S. Department of State)	These sections are restructured, and clarification will be sought
9-154	B	39	34	39	0	Section 9.4.7 – Header should be changed to “regional modeling approaches and results” to distinguish this section from the previous section. Overall, the reader has to work very hard to make sense of this sub-section and extract useful information. There are regional numbers from the global models in the previous sub-section and this section. There are a lot of numbers but the sub-section lacks guidance on use or consistency in the information being presented for each geographic region. The purpose of the section should be clear from the outset and a better synthesis is needed. It is not effective and will be difficult for anyone to use, especially less informed readers. U.S. Government (Government of U.S. Department of State)	Needs strong editing
9-417	A	39	37	39	37	Does "a.o" mean "among others" or "as for example"? (Government of Pakistan)	Noted,
9-418	A	39	39	39	40	What does mutual exclusion of the different measues here mean? (Sandra Brown, Winrock International)	English will be improved
9-419	A	40	1	40	1	Why not just call this "Tropical region"--rather than wet and dry tropics--what about seasonal tropics or humd or moist--the list gets long depending upon ones perspective so instead just call it tropical region (Sandra Brown, Winrock International)	Accepted
9-420	A	40	1	42	0	The future impact of climate change on the large areas of tropical forests may considerably constrain the sequestration options should be included here - see WG2 impacts for more information and consider including a reference. (Kirsten Macey, Climate Action Network Europe)	Accept, where possible information like this will be used. WG 2 will be referred to

**Expert/Government Review of Second-Order-Draft
Confidential, Do Not Cite or Quote**

IPCC WGIII Fourth Assessment Report, Second Order Draft

Chapter-Comment	Batch	From Page	From Line	To Page	To line	Comments	Considerations by the writing team
9-421	A	40	14	0	0	Mha Megahectares? Unusual abbreviation, either Mio ha or convert to km ² (Reinhold Glauner, Institute for World Forestry)	Reject, is accepted
9-422	A	40	18	40	18	they are not key drivers of estimates but factors--replace (Sandra Brown, Winrock International)	Accepted
9-423	A	40	18	40	27	So what does all this mean relative to this chapter--how does this link to models giving projections of avoided deforestation for a mitigation option. Surely more has been said about this in the literature? (Sandra Brown, Winrock International)	Accepted, needs refinement
9-424	A	40	29	0	0	Only partly true -> political will to implement activities is even more crucial as often private land has to be used (Reinhold Glauner, Institute for World Forestry)	Accepted, will be refined
9-425	A	40	31	40	31	The word "laud" should be replaced by "land". (Government of Pakistan)	Accepted
9-155	B	40	36	40	36	Our understanding is that IMAGE can also use grasslands for forests, as well as abandoned cropland. U.S. Government (Government of U.S. Department of State)	Accepted, will be refined
9-156	B	40	38	40	46	This is an incomprehensible paragraph--discussion of a carbon price trajectory and then maximum land area available results, discussion of hectare results and then reference to a figure with tonnes of carbon. Also, the reference in the figure should be "in press" not 2005 (are the results here from the final version of the paper?) U.S. Government (Government of U.S. Department of State)	Accepted, will be refined
9-157	B	40	45	40	46	It is a question whether "emissions from the 1997-1998 Indonesian fires" should be included in the calculation of global net emissions from land use change and forestry or reference case. First, it is not triggered by human activities. Second, it is a one-off event and will not happen every year. Third, it contribute substantial amount of CO2 emission (8%) to global net emissions from land use change and forestry. The authors should explain their decision on this point. (Government of Australia)	This is only mentioned here , not included in our baseline emissions
9-426	A	41	1	41	5	Convert this diagram to CO2 or add some conversion factor if this cannot be done because do not have original data. (Sandra Brown, Winrock International)	Accepted
9-158	B	41	6	41	19	It is hard to compare the results between tC/ha and tC/ha/year. The authors should, if possible, use consistent metrics. (Government of Australia)	Accepted

IPCC WGIII Fourth Assessment Report, Second Order Draft

Chapter-Comment	Batch	From Page	From Line	To Page	To line	Comments	Considerations by the writing team
9-427	A	41	7	41	8	Why just cite the Richards and Stokes review unless it is referenced in table--what is purpose of this brief sentence? Not enough to cite a source unless you use something from it. (Sandra Brown, Winrock International)	Accepted, will be refined
9-159	B	41	10	41	10	Cannot find the "176" in Table 9.7. Instead there is "141" in its place. Please correct. U.S. Government (Government of U.S. Department of State)	Accepted, will be checked
9-428	A	41	15	41	15	and in Table 9.7--use of t C/ha/year is scientifically incorrect--change throughout. (Sandra Brown, Winrock International)	Accepted
9-429	A	41	16	0	0	With regard to Table 9.7, there are a few concerns. How long are the short rotation and long rotation? The periods may have a wide range, an the potential should vary according to tree species. It is better to clearly present a representative period and tree species. (Yukihiro Chiba, Forestry and Forest Products Research Institute)	Accepted
9-160	B	41	17	41	0	Table 9.7 - A discussion of why the Sathaye et al. 2001 results are so low relative to the India and Mexico results is needed. U.S. Government (Government of U.S. Department of State)	Accepted, will be refined
9-430	A	42	3	42	3	Table 9.8--convert to CO2. Also it should be De Jong and it is under Jong in references and should be under De Jong et al (Sandra Brown, Winrock International)	Accepted
9-431	A	42	7	42	10	Please cite the latest version, which is Jung (2005) The role of forestry projects in the Clean Development Mechanism, In Environmental Science & Policy 8 (2005), pp. 87-104. The names of the four mitigation options you mention in brackets are based on the data source and are not compatible with Kyoto definitions. Therefore, it would be clearer like this: "Jung (2005) estimates a potential mitigation for A/R projects and avoided deforestation....." Furthermore, the total estimate you are referring to should be 100.54 to 173.61 MtC/yr. (Martina Jung, Ecofys)	Accepted
9-161	B	42	18	42	21	This text does not fit into the discussion--different price scenarios than presented elsewhere in the sub-section and, as is, is arbitrary information that is simply dropped in without any context. If discussing global models, need to broaden discussion beyond Sathaye et al. (in press) U.S. Government (Government of U.S. Department of State)	Accepted, will be refined
9-432	A	42	27	42	27	Replace 2nd Africa with Asia (??) (Peter Van der Meer, Alterra)	Accepted, will be checked
9-433	A	42	28	42	29	I think reference to figure 9.12 is wrong and should be 9.15? Also last sentence --	Accepted

**Expert/Government Review of Second-Order-Draft
Confidential, Do Not Cite or Quote**

IPCC WGIII Fourth Assessment Report, Second Order Draft

Chapter-Comment	Batch	From Page	From Line	To Page	To line	Comments	Considerations by the writing team
						replace insight with Brown et al 1996 -SAR and with Kauppi and Sedjo 2001 TAR. These were not insights but based on an assessment. (Sandra Brown, Winrock International)	
9-434	A	42	28	42	28	Figure 9.12; is this the right figure ?? (Peter Van der Meer, Alterra)	Accepted, will be checked
9-435	A	43	0	43	0	Box 9.3: "The difference between the two extreme-case deforestation scenarios for the Amazon (worst case scenario vs best case scenario) represents an amount equivalent to eight times the carbon emission reduction to be achieved during the first compensation period of Kyoto Protocol": This sentence should be quoted both in the Executive Summary of Chapter 9 and the Summary for Policy Makers, to stress the major issue of world-wide deforestation. (Government of France)	Partly agree, we put REDD more upfront now in executive summary
9-441	A	43	0	43	0	Graph 9.16: insert in the description of Figure 9.16 the time horizon (2050); current carbon stocks is not precise enough. (Government of Germany)	Noted
9-436	A	43	1	0	0	Box 9.3. It should be stated in what way Santilli et al. (2005) would modify the Kyoto Protocol. (David Viner, University of East Anglia)	Accepted
9-437	A	43	1	0	0	It is misleading to depict stocks and emission (=change of stocks) in one graph. Better use only stocks; emission are then the difference between stocks (Reinhold Glauner, Institute for World Forestry)	Accepted
9-438	A	43	1	0	0	Box 9.3: The values given as e.g 32+-8 Gt C refer to which time periods? (by 2050 = 200?- 2050?) (Martina Jung, Ecofys)	Accepted, it will be checked
9-439	A	43	1	0	0	Box 9.3. Include findings of Asner (2006) and see discussion by Curran & Trigg (2006). (Peter Van der Meer, Alterra)	Reject, we highlight here one major paper
9-440	A	43	1	0	0	Box 9.3 last line - "during the first compenstation period of Kyoto Protocol" should read "during the first commitment period fo the Kyoto Protocol." (Kirsten Macey, Climate Action Network Europe)	Accepted
9-162	B	43	1	43	3	Box 9.3 discusses the deforestation scenarios for the Amazon. It is not clear whether the 40% of the current Amazon forest will be eliminated by 2050 is the worst case scenario or business as usual. Inside the text, both terms are used but in the figure 9.16, it indicates it is BAU. It is hard to judge if this projection is too pessimistic. However, according to the latest Global Forest Resources Assessment Report (FAO 2001), Brazil lost only 0.4% of its forest area annually between 1990	Accepted, will be refined

Expert/Government Review of Second-Order-Draft
Confidential, Do Not Cite or Quote

IPCC WGIII Fourth Assessment Report, Second Order Draft

Chapter-Comment	Batch	From Page	From Line	To Page	To line	Comments	Considerations by the writing team
						and 2000. (Government of Australia)	
9-163	B	43	4	48	20	Box 9.3: It would be interesting for the authors to include a report on how many countries in the world have reported their carbon stock inventory and CO2 emissions from all forest pools under the IPCC Good Practice Guidance for Land Use, Land Use Change and Forestry (IPCC 2003). (Government of Australia)	Reject, outside scope
9-164	B	43	30	43	30	Box 9.3: delete "compensation" replace with "commitment". (Government of Australia)	Accepted
9-442	A	44	1	44	1	In Canada, forest fires are a 'normal' part of forest management in most of the country. The 'threat' is of an increase in the area, intensity and frequency of forest fires such that current levels of harvesting become unsustainable. (Government of Environment Canada)	Accepted
9-443	A	44	4	44	12	The example from Chen et al 2000 is not very strong, with (as stated in text) a very large uncertainty. Reduce to one sentence. Also, economic potential (I 12): should that be technical potential (I do not see a money figure here). (Peter Van der Meer, Alterra)	Rejected. Chen et al is best available for Canada. Sets the tech pot
9-444	A	44	4	44	12	As is indicated, the scenarios presented here are interesting but unrealistic scenarios. Unfortunately published studies of regional or national forest management mitigation potential in Canada is scarce. However, one could draw on earlier carbon budget modelling studies by Kurz and Apps that presented a range of scenarios. Perhaps some general conclusions could be drawn from comparisons of these scenarios, for example the sensitivity of Canada's national forest carbon budget to changes in individual model parameters. (Government of Environment Canada)	Accept – the section needs to be improved
9-165	B	44	4	44	12	Why are Canadian "theoretical" results presented? How are the "realistic" economic potential estimates determined? U.S. Government (Government of U.S. Department of State)	Noted – they are presented because at present a study like EPA 2005 has not been conducted for Canada – the “realistic economic potential” seems to be based on expert judgment – will be revised
9-166	B	44	4	44	4	Typo--"right" should be "left". The caption for Figure 9.17A seems to need this change as well. U.S. Government (Government of U.S. Department of State)	Accept
9-445	A	44	10	0	0	If neither scenario is realistic, they shouldn't be included in the report. The report is too valuable to deal with non-realistic scenarios. (Reinhold Glauner, Institute for World Forestry)	Accept – the section will be rewritten.

**Expert/Government Review of Second-Order-Draft
Confidential, Do Not Cite or Quote**

IPCC WGIII Fourth Assessment Report, Second Order Draft

Chapter-Comment	Batch	From Page	From Line	To Page	To line	Comments	Considerations by the writing team
9-446	A	44	10	44	12	Might be useful to add something about N2O emissions from such an activity--was this considered in the assessment? (Sandra Brown, Winrock International)	Accept – if we keep the details this should be added – but likely to delete the paragraph.
9-447	A	44	23	0	0	Specify a few years reference mark of the figure 9.17A (left) (YABI Ibouraima, LECREDE/DGAT/UAC)	Accept – figure will be revised or deleted
9-448	A	44	24	0	0	In Figure 9.17A, we can barely see the figure legend. (Yukihiko Chiba, Forestry and Forest Products Research Institute)	Accept – figure will be revised or deleted
9-449	A	44	24	0	0	Editorial: Figure9.17A is too small to read. (Government of Japan)	Accept – figure will be revised or deleted
9-167	B	44	28	45	14	The results of US analyses need to be more systematically presented in order to construct a coherent picture. A variety of numbers are presented from various results but the comparisons are apples to oranges and utilize older literature (e.g., see Sohngen and Sedjo, in press, in stead of Sohngen and Mendelsohn, 2001). U.S. Government (Government of U.S. Department of State)	Accept – this section still needs work –have contacted Brent for a copy of the paper.
9-168	B	44	28	44	0	Discussion should consider Lewandrowski et al. (2004) from USDA-ERS. U.S. Government (Government of U.S. Department of State)	Accept – will review the publication and consider adding to text
9-450	A	45	5	45	14	please specify the kind of potential, is it the realistic economic potential as mentioned for Canada at page 44, lines 11-12? (Government of Germany)	Accept – will explore if such information is available (recognizing that the Canadian statement is not based on published data).
9-451	A	45	24	45	0	Europe Despite the statement in line 24, which is accurate for commercial much woodland, most small woodlands are under-managed, representing a major potential for mitigation if small owners could benefit from policy measures. (Viner D., Sayer M., Uyarra M., and Hodgson N., 2006 Climate Change and the European Countryside: Impacts on Land Management and Response Strategies. Report Prepared for the Country Land and Business Association., UK. Publ., CLA, UK 180 pages). (David Viner, University of East Anglia)	Reject, too much detail
9-452	A	45	24	0	0	"with no primary forests left any more" - should rather be said "with almost no primary forests", because there is still small percent of primary forests found in northern and east-european countries (Olga Zyrina, MCPFE, LU Warsaw)	Accept
9-453	A	46	1	46	3	add a title to figure 9.17B (Government of Germany)	Accept

IPCC WGIII Fourth Assessment Report, Second Order Draft

Chapter-Comment	Batch	From Page	From Line	To Page	To line	Comments	Considerations by the writing team
9-169	B	46	1	46	0	Figure 9.17B - What is being graphed here? They appear to be reference results. If so, why since the section is about mitigation potential? U.S. Government (Government of U.S. Department of State)	Accept
9-454	A	46	2	46	2	Figure 9.17B: give a short explanation in order to make the graph interpretable without reading the main text. (Government of Germany)	Accept
9-455	A	46	3	46	3	Need more description in legend for Fig 9.17 B Europe and 9.17C on p. 47--is this theoretical or what (Sandra Brown, Winrock International)	Accept
9-456	A	46	4	46	4	title of this subchapter doesn't reflect the content change title to "Russian Federation" or keep title and add paras about others countries in transition, note that without such addition situation in other countries of transsition are not reflected in chapter 9 (Government of Germany)	Accept
9-457	A	46	5	0	10	The text is almost identical to Box 9.1, but the values differ. Which one is correct? (Andrei Kirilenko, University of North Dakota)	Box 9.1. deleted
9-458	A	46	17	46	27	what does "It" refer to in line 17, and which "The study" in line 20? Convert all units to CO2 (Sandra Brown, Winrock International)	
9-459	A	46	24	0	27	The uncertainty issue is already mentioned in this paragraph. Also, mention the uncertainty surrounding future change in forest disturbances. (Andrei Kirilenko, University of North Dakota)	Reject, constraining effect of climate change is mentioned often already
9-460	A	47	1	47	3	add a title to figure 9.17C (Government of Germany)	Accept
9-170	B	47	1	47	0	Figure 9.17C - What is being graphed here as well? U.S. Government (Government of U.S. Department of State)	Accept, will clarify
9-461	A	47	2	47	2	Figure 9.17C: give a short explanation in order to make the graph interpretable without reading the main text. (Government of Germany)	Accept
9-462	A	47	5	47	13	Why are only plantations addressed ? Australia has a much larger area of native forests some of which are among the most productive in the world. (Peter Van der Meer, Alterra)	Accept, txt rewritten partly
9-171	B	47	5	47	13	The information presented is outdated. A more contemporary and robust analysis is provided by Richards and Brack (2004). Delete all existing text and replace with: Richards and Brack (2004) used estimates of establishment rates for hardwood	Accept, txt rewritten partly.

IPCC WGIII Fourth Assessment Report, Second Order Draft

Chapter-Comment	Batch	From Page	From Line	To Page	To line	Comments	Considerations by the writing team
						(short and long rotation) and softwood plantations to model a carbon account for Australia’s post-1990 plantation estate. The resulting sequestration estimates for the Kyoto target period were 84 Mt CO ₂ -e (plantations only) and 98 Mt CO ₂ -e (plantations + wood products). The methodology used to derive these estimates was the same as that used for Australia’s Fourth National Communication to the United National Framework Convention on Climate Change and national inventory reporting. These estimates have since been updated using remotely sensed plantation area identification without substantial change to the results (Richards, pers. comm.). (Government of Australia)	
9-172	B	47	15	47	19	Need to define Kyoto forest. U.S. Government (Government of U.S. Department of State)	Noted. Reference to Kyoto removed
9-6	C	47	21	47	23	The use of the word plummeted suggests a sharp decline. In actually fact the planting rate has gradually declined over a number of years due to factors such as exchange rates, high shipping costs and log prices. See Ministry of Agriculture and Forestry (July 2006) 'Situation and outlook for Agriculture and Forestry in New Zealand: an update to the December 2005 SONZAF' and Ministry of Agriculture and Forestry (March 2006) 'A national exotic forest description as at 1 April 2005' (Government of New Zealand)	Accept. Write “declined” instead.
9-7	C	47	25	47	25	The figure of '71 MtCO ₂ e' was updated in December 2005 to 56 MtCO ₂ e. Reference: MfE 2006, 'Projected balance of emissions units during the first commitment period of the Kyoto Protocol' . Available online at: www.climatechange.govt.nz/resources/reports/projected-balance-emissions-jun06/index.html (Government of New Zealand)	Accept. Add citation to MfE, 2006
9-463	A	48	1	48	7	Some sentences are incorrect and this paragraph does not appropriately show Japanese actual situation. It is proposed to replace the paragraph with the following sentences: “In Japan, 67% of the land is covered with forests including semi-natural broad-leaved forests and planted coniferous forests mostly. The sequestration potential is estimated in the range of 35 to 70 MtCO ₂ /yr (Alexandrov et al., 1999, Matsumoto et al., 2002, Fang et al.,2005, Government of Japan, 1997), and planted forests account for more than 60% of the carbon sequestration. These assessments show that there is little potential for afforestation and reforestation, while forest management and practices for planted forests including thinning and regeneration are necessary to maintain carbon sequestration and to curb the saturation ,too.	Accept. Incorporated in redraft.

**Expert/Government Review of Second-Order-Draft
Confidential, Do Not Cite or Quote**

IPCC WGIII Fourth Assessment Report, Second Order Draft

Chapter-Comment	Batch	From Page	From Line	To Page	To line	Comments	Considerations by the writing team
						Besides, there seems to be large potential of bioenergy as a mitigation option." (Government of Japan)	
9-464	A	48	3	48	5	This sounds very policy prescriptive--not needed as part of assessment on mitigation potential (Sandra Brown, Winrock International)	Accepted, will be refined
9-173	B	48	21	48	0	Section 9.4.7.7 – Adding up bottom-up regional estimates is conceptually wrong and should not be done. The regional estimates were drawn from separate studies that are not consistent in assumptions, data, baselines, technology, options, policies, trade, input and output markets, etc. However, comparing the economic potential regional study estimates to the regional estimates from the top-down models would be useful. While there are still issues with assembling regional numbers, they are more acceptable. U.S. Government (Government of U.S. Department of State)	Reject, we highlight the differences, and describe pros and cons of both approaches in final draft
9-465	A	48	22	50	0	As far as I understand, you have been looking into mitigation potentials (LULUCF measures beyond the baseline of carbon fluxes) and calculate a number of 4130 MtCO ₂ /yr for the year 2040 (page 48, line 24). In Figure 9.19, this value is however related to the LULUCF baseline. Which values did you use to generate the upper curve (baseline plus economic potential) and how do they relate to the regional mitigation potentials described in section 9.4.7? (Martina Jung, Ecofys)	Agree, cannot be presented so strongly against baseline. Reconsider
9-466	A	48	24	0	25	The sentence of "a mitigation potential (all prices) of MtCO ₂ /yr in 2040" does not match with the y-axis label of "MtCO ₂ a-1 by 2003" in Figure 9.18. (Yukihiro Chiba, Forestry and Forest Products Research Institute)	Check unit
9-174	B	48	25	48	26	What does "given a gradual implementation of activities" mean? Also, why is a hypothetical figure given (Figure 9.19)? It appears that the authors have created an arbitrary baseline and then computed mitigation potential (or it may even be technical potential) that is independent from the baseline. If so, there are serious methodological issues with this approach. It is well known that mitigation estimates are very sensitive to the baseline. Finally, how was "medium confidence" established in this result and what is it relative to? U.S. Government (Government of U.S. Department of State)	Reword, reconsider the wedge
9-467	A	48	26	48	26	How can you get a meaningful number with medium confidence with a "theoretical figure"? Maybe you should drop the term theoretical somehow and call it what it is-- or if it really is theoretical how can you give it medium confidence? (Sandra Brown, Winrock International)	Reword, reconsider the wedge
9-468	A	48	29	0	0	'65%' of what? See my comments to page 3, lines 16-17.	Agree, reword

**Expert/Government Review of Second-Order-Draft
Confidential, Do Not Cite or Quote**

IPCC WGIII Fourth Assessment Report, Second Order Draft

Chapter-Comment	Batch	From Page	From Line	To Page	To line	Comments	Considerations by the writing team
						(Hector Ginzo, Ministerio de Relaciones Exteriores, Comercio Internacional Y Culto)	
9-469	A	48	31	0	0	Put not final at the end of the sentence (YABI Ibouiraïma, LECREDE/DGAT/UAC)	Agree, reword
9-470	A	48	35	0	0	Add "These uncertainties, along with the issues of leakage, permanence etc. (section 9.6.6) have militated against uninhibited deployment of forestry projects to meet Kyoto Protocol commitments (e.g. through J.I or the CDM). This difficulty provides additional grounds (apart from responding to the threat of abrupt climate change) for developing a separate framework for stimulating such projects so as to realise the very large, if somewhat uncertain, benefits to the atmosphere that can come from widespread deployment of land use improvement projects. Since the land available is mostly in developing countries, such large scale implementation would be a potent driver of sustainable rural development. Funding for such land use improvement would, under the holistic GHG management strategy outlined in Chapter 2 Section 2.3.4 (Read and Parshotam, 2006, under review) come from large point source emitters, such as electric power generators seeking to meet a rising obligation to offset their emissions with new forest plantations developed under conditionality to secure environmental and socio-economic sustainability. It may be noted that the rate of afforestation envisaged in Parshotam and Read (2006) exceeds by an order of magnitude the areas implicit in the literature discussed above and is envisaged to be made available (from degraded land, surplus agricultural land, logged over tropical forest (until that is stopped), died off forest areas subjected to environmental stresses, and from conversion of savannahs) under rising urgency in response to increasing concerns over symptoms of imminent abrupt climate change, and the consequent need to potentiate negative emissions energy systems through inter alia the creation a strategic stock of biomass raw material. (Peter Read, Massey University)	Reject, although we will reword, refine the section
9-471	A	48	35	48	35	Add "These uncertainties, along with the issues of leakage, permanence etc. (section 9.6.6) have militated against uninhibited deployment of forestry projects to meet Kyoto Protocol commitments (e.g. through J.I or the CDM). This difficulty provides additional grounds (apart from responding to the threat of abrupt climate change) for developing a separate framework for stimulating such projects so as to realise the very large, if somewhat uncertain, benefits to the atmosphere that can come from widespread deployment of land use improvement projects. Since the land available is mostly in developing countries, such large scale implementation	See 9-470

**Expert/Government Review of Second-Order-Draft
Confidential, Do Not Cite or Quote**

IPCC WGIII Fourth Assessment Report, Second Order Draft

Chapter-Comment	Batch	From Page	From Line	To Page	To line	Comments	Considerations by the writing team
						would be a potent driver of sustainable rural development. Funding for such land use improvement would, under the holistic GHG management strategy outlined in Chapter 2 Section 2.3.4 (Read and Parshotam, 2006, under review) come from large point source emitters, such as electric power generators seeking to meet a rising obligation to offset their emissions with new forest plantations developed under conditionality to secure environmental and socio-economic sustainability. It may be noted that the rate of afforestation envisaged in Parshotam and Read (2006) exceeds by an order of magnitude the areas implicit in the literature discussed above and is envisaged to be made available (from degraded land, surplus agricultural land, logged over tropical forest (until that is stopped), died off forest areas subjected to environmental stresses, and from conversion of savannahs) under rising urgency in response to increasing concerns over symptoms of imminent abrupt climate change, and the consequent need to potentiate negative emissions energy systems through inter alia the creation a strategic stock of biomass raw material. (Peter Read, Massey University)	
9-175	B	48	35	48	35	Leakage concerns here also exist between projects and land-uses. U.S. Government (Government of U.S. Department of State)	Accepted, needs rewording
9-472	A	49	1	0	0	put figures also into a graph (Reinhold Glauner, Institute for World Forestry)	Accepted
9-473	A	49	1	0	0	Table 9.9 what is EU +2+3? Need to explain. Also in Table 9.10 what is WEO, A1b and B2? How do results in Table 9.10 compare to 9.5? (Sandra Brown, Winrock International)	Accepted, graph will be made
9-176	B	49	1	49	0	What is the relationship between Tables 9.9 and 9.10? What exactly is the 3rd column of Table 9.10 relative to Table 9.9. This is the data graphed in Figure 9.18 , which suggests that it is technical potential (which is consistent with Table 9.5 and the data drawn from that table for Figure 9.18). However, that means that the technical potential from Table 9.10 is less than the mitigation potential in Table 9.9 which by definition is impossible. U.S. Government (Government of U.S. Department of State)	Accepted, will be refined
9-177	B	49	1	49	0	Table 9.9 - The text needs to explain the methodology behind "best estimates" and define "medium long term" U.S. Government (Government of U.S. Department of State)	Accepted, will be refined
9-474	A	49	6	0	0	Table 9.10 = Table 9.1 (Andrei Kirilenko, University of North Dakota)	Accepted

**Expert/Government Review of Second-Order-Draft
Confidential, Do Not Cite or Quote**

IPCC WGIII Fourth Assessment Report, Second Order Draft

Chapter-Comment	Batch	From Page	From Line	To Page	To line	Comments	Considerations by the writing team
9-475	A	49	6	0	0	Table 9.10 = table 9.1. The table looks scanned and needs re-established. (Shaohong WU, Institute of Geographical Sciences and Natural Resources Research, Chinese Academy of Sciences)	Accepted
9-476	A	49	10	0	0	Table 9.10 Editorial: Table 9.10 is very important but rather difficult to read. Modification of layout is required. (Government of Japan)	Accepted
9-477	A	50	1	0	0	Figures 9.19 on page 50 and Figure 9.1 at page 4 are the same. One of them may be deleted. (Government of Pakistan)	Accepted
9-478	A	50	1	50	4	clarify whether the value given in figure 9.18 is valid for countries in transition or for Russia only. Unfortunately, the terms used in this figure are not identical with the headings of the subchapters therefore, clarify how are the values for C&S America and Africa related to the numbers given in 9.4.7.1 "wet and dry tropics", for central Asia and middle East to "Centrally planned Asia"(9.4.7.6) (Government of Germany)	Accepted, will be clarified
9-178	B	50	1	50	0	The comparison of top-down and regional estimates is inadequate. There is no discussion of the huge differences shown in Figure 9.18. It is not clear what is being compared in Figure 9.18, but it appears to be only technical potential (high/infinite price). However, technical potential can be defined (and constrained) very differently across studies. For instance, an economist might argue that implementation barriers are simply a form of transactions cost and therefore a high carbon price will overcome them. Naturally, this would lead to a higher technical potential than another study that treats implementation barriers as insurmountable constraints. A more meaningful comparison is economic potential. The following is suggested: in one table present regional economic potential for 2030 from both the top-down and regional studies in separate columns and then discuss the differences-both in the values and the methodologies. Both methods are useful and they each have different strengths and weaknesses. Also, global results from the integrated assessment models should be considered. U.S. Government (Government of U.S. Department of State)	Agree, needs refinement Accepted - To have less than 20 USD price
9-479	A	50	5	0	6	Fig. 9.19 = fig. 9.1 (Andrei Kirilenko, University of North Dakota)	Accepted
9-480	A	50	5	0	0	Table 9.19 = table 9.1. (Shaohong WU, Institute of Geographical Sciences and Natural Resources Research, Chinese Academy of Sciences)	Accepted

**Expert/Government Review of Second-Order-Draft
Confidential, Do Not Cite or Quote**

IPCC WGIII Fourth Assessment Report, Second Order Draft

Chapter-Comment	Batch	From Page	From Line	To Page	To line	Comments	Considerations by the writing team
9-179	B	50	5	50	10	Figure 9.19: the authors should decide if this figure is so important that it is included twice in the chapter (it is duplicated as Figure 9.1). (Government of Australia)	Accepted
9-493	A	51	0	0	0	The issues involved in Table 9.11 are so complex that they defy the type of simplification attempted here. The table does great disservice to the amount of knowledge already gained, and being developed, to improve the carbon and other benefits of the range of mitigation options. For instance, to say that "product substitution (including bioenergy)" has a Medium Negative Impact on biodiversity ignores the many examples of where new forests (that enable product substitution) have been integrated into landscapes so as to improve biodiversity. The table does a disservice to the reader by attempting an impossible simplification and should be removed. (Reid Miner, NCASI)	Accepted. Delete the table and look for cite, after consideration, the book from CIFOR cited in comment -9-481
9-481	A	51	1	51	15	Need to look at 2005 book on the synergies between adaptation and mitigation by Roblado, Kainnanan (sp?) and Murdiyarsa published by CIFOR; need to read and reference this here (Sandra Brown, Winrock International)	Accepted, look for the reference and more literature
9-180	B	51	1	51	0	Section 9.5 - This discussion would be more meaningful if tied in with the mitigation estimates which are central to the chapter (Section 9.4). What are the qualitative implications for the mitigation potential estimates? U.S. Government (Government of U.S. Department of State)	Partially accept. More emphasis will be put in mitigation options with greater potential
9-482	A	51	17	0	0	Paragraph 9.5.1. is rather short, I suggest to elaborate somewhat more on this, and refer to some of the many studies being done in this field. (Peter Van der Meer, Alterra)	Reject. Impacts is not the objective of the volume III but it is of Volume II.
9-181	B	51	17	51	0	Section 9.5.1 - It should be noted that most current long-term forest mitigation modeling does not consider climate change feedbacks on forests of any kind. Some consider CO2 fertilization and gradual temperature changes, but none consider changes in disturbance regimes associated with climate change and therefore the implications for enhanced carbon sequestration mitigation (e.g., Sohngen and Sedjo, in press; Sathaye et al., in press; Strengers et al., 2004). U.S. Government (Government of U.S. Department of State)	Accepted. The lack of inclusion of feedback's by models will be highlighted
9-483	A	51	23	0	24	and also vulnerabilities and adaptations (Andrei Kirilenko, University of North Dakota)	Partially accepted. Will be partially addressed by redrafting
9-484	A	51	24	51	27	This is so both for trees within their natural range, eg Fagus sylvatica, and for plantations currently beyond it. Picea abies is likely to be affected in both respects. This can have a feedback in terms of potential substitution, in this case construction	Noted

**Expert/Government Review of Second-Order-Draft
Confidential, Do Not Cite or Quote**

IPCC WGIII Fourth Assessment Report, Second Order Draft

Chapter-Comment	Batch	From Page	From Line	To Page	To line	Comments	Considerations by the writing team
						timber. (David Viner, University of East Anglia)	
9-485	A	51	29	0	0	"mitigation capacity" instead of "mitigate capacity" (Lexter Manfred , University of Natural Resources and Applied Life Sciences, Vienna)	Accepted. Editorial
9-486	A	51	29	0	0	"mitigation capacity" instead of "mitigate capacity" (Lexter Manfred , University of Natural Resources and Applied Life Sciences, Vienna)	Accepted.
9-487	A	51	29	0	29	Also cite WG 2:4,5 here. Species distribution - already mentioned in this paragraph. On impacts - mention forest disturbances (wildfires, insects, extreme weather impacts, etc.) (Andrei Kirilenko, University of North Dakota)	Accepted. Good point cite WG II
9-488	A	51	29	0	0	Write (IPCC, 2002) (Expédit Wilfrid VISSIN, FLASH/Abomey-Calavi University)	Editorial
9-489	A	51	29	0	0	Write (IPCC, 2002) (YABI Ibouaïma, LECREDE/DGAT/UAC)	Editorial
9-490	A	51	33	53	0	Section 9.5.2 A subsection is needed on the conversion of existing silvicultural systems to continuous cover, uneven-aged, mixed species stands, potentially with greater resilience and a later age of maturity for individual trees. This would relate to Table 9.12 Box B on page 54 which should be expanded. Such systems rely heavily on natural regeneration, which requires discussion in this chapter. Many foresters are not well-trained to obtain natural regeneration from mature stands, eg of Quercus robur, while control of mammalian pests is an important, and growing, issue which also needs to be covered in this context. (David Viner, University of East Anglia)	Accept. Table will be review and the text will take into account the comment with in the Forest Management.
9-182	B	51	35	51	36	Unfortunately, no single discussion in Chapter 18 of WGII on forestry. It is more anecdotal then dealing with it in detail. U.S. Government (Government of U.S. Department of State)	Noted. Look for updated literature to include here.
9-491	A	51	36	51	36	Is this table from Ch 18 or is this original to this chapter? If the former then this should be referenced in the legend to the table; if original to this chapter then need to cite references for the boxes. This is a biased opinion it seems --e.g. why has product substitution been given medium negative impact? Bioenergy could actually reduce vulnerability to the whims of the international trade in ff--it seems the perspective of filling in this particular box is against energy plantations perhaps but even then some would argue trees even on short rotation are better than degraded lands	Reject... references to include will be difficult if not impossible. It has to be seen as an assessment of authors?. But, concerns will be address by deleting the table and look for cite, after consideration, the book from CIFOR cited in comment -9-481

**Expert/Government Review of Second-Order-Draft
Confidential, Do Not Cite or Quote**

IPCC WGIII Fourth Assessment Report, Second Order Draft

Chapter-Comment	Batch	From Page	From Line	To Page	To line	Comments	Considerations by the writing team
						(Sandra Brown, Winrock International)	
9-183	B	51	38	51	43	This section should also discuss the importance of national policies. U.S. Government (Government of U.S. Department of State)	Accept... but try to refer to 9.6. section where policies are described and asses.
9-492	A	51	41	51	41	Revegetation is not quoted as part of the options under Article 3.4? (Government of France)	Accepted. Obvious omission
9-8	C	52				Table 9.11 comment: This table is very vague, subjective and is not referenced. There is no clear explanation about how the judgements were arrived at. The following section does seem to relate to it, but the connection is not clear enough. More specifically, the "positive/negative impact" judgement in relation to biodiversity conservation and afforestation and reforestation is, we believe, a sweeping and inappropriate judgement. Furthermore, it is not clear why product substitution has "medium negative impacts" on biodiversity and reduction of vulnerability. If bioenergy is achieved through planted forests, for example, there are likely to be positive impacts on biodiversity (if planted on degraded land) and also positive impacts on biodiversity from a reduction in the use of less sustainable energy options. We suggest that explanations be added to table 9.11 and references to validate claims made. (Government of New Zealand)	Accepted. It will be deleted and text streamlined
9-494	A	52	1	0	0	Table 9.11: In the current form the meaning of Table 9.11 is not clear. In my opinion this is mainly due to two issues. (1) the table title reads synergy or tradeoff between mitigation activities and adaptation potential. What role has biodiversity conservation in that context? In the main body of the related text biodiversity conservation is seen as component of adaptation. If this argument is followed throughout the chapter than either the table title should be modified or biodiversity conservation should be formally identified as component of adaptation. (2) the mitigation activities (first column) are too broad to allow any specific meaning. For instance, forest management may or may not negatively impact biodiversity. (Lexter Manfred , University of Natural Resources and Applied Life Sciences, Vienna)	Accepted. Delete the table and look for cite, after consideration, the book from CIFOR cited in comment -9-481
9-495	A	52	1	0	0	Table 9.11: In the current form the meaning of Table 9.11 is not clear. In my opinion this is mainly due to two issues. (1) the table title reads synergy or tradeoff between mitigation activities and adaptation potential. What role has biodiversity conservation in that context? In the main body of the related text biodiversity conservation is seen as component of adaptation. If this argument is followed	Accepted. Delete the table and look for cite, after consideration, the book from CIFOR cited in comment -9-481

**Expert/Government Review of Second-Order-Draft
Confidential, Do Not Cite or Quote**

IPCC WGIII Fourth Assessment Report, Second Order Draft

Chapter-Comment	Batch	From Page	From Line	To Page	To line	Comments	Considerations by the writing team
						throughout the chapter than either the table title should be modified or biodiversity conservation should be formally identified as component of adaptation. (2) the mitigation activities (first column) are too broad to allow any specific meaning. For instance, forest management may or may not negatively impact biodiversity. (Lexter Manfred , University of Natural Resources and Applied Life Sciences, Vienna)	
9-496	A	52	1	52	4	Synergy rating is rather subjective. E.g. the synergy of biodiversity conservation and reducing deforestation is much more complicated than to rate it as highly positive. Biodiversity is accounted at three levels, i.e., genetic, species, ecosystem. Thus solely reducing deforestation may have limited effects on landscape level. (Reinhold Glauner, Institute for World Forestry)	Accepted. Delete the table and look for cite, after consideration, the book from CIFOR cited in comment
9-497	A	52	1	0	0	Table 9.11. Column 1, row 5, "Product substitution (including bioenergy)" is to be "Biomass energy plantation" as in page 53, line 5. Readers will wonder why products substitution causes negative biodiversity conservation. (Mario Tonosaki, Forestry and Forest Products Research Institute)	Accepted. Delete the table and look for cite, after consideration, the book from CIFOR cited in comment
9-498	A	52	1	53	35	Table 9.11 and the following descriptions should be rewritten from the viewpoint of consistency. To help understanding the meaning of each options, description on Forest Management should be added. (Government of Japan)	Accepted. Delete the table and look for cite, after consideration, the book from CIFOR cited in comment
9-499	A	52	1	0	0	Table 9.11 Column "Carbon sequestration or emission reduction potential" should be divided into two columns because those two potentials of each activities are highly depend on age structure and other natural conditions. The items of this table should be consistent with those of Table 9.12 (Government of Japan)	Accepted. Delete the table and look for cite, after consideration, the book from CIFOR cited in comment
9-500	A	52	2	52	2	In Table 9.11, impact of Agro-forestry (row) on Biodiversity conservation (column) should be +/- because the "100 of the World's Worst Invasive Species" produced by SSC's Invasive Species Specialist Group http://www.issg.org/ includes useful plant species in agro-forestry systems like Melaleuca quinquenervia, Leucaena leucocephala, Chromolaena odorata and such species can risk biodiversity. (Yoshiyuki Kiyono, Forestry and Forest Products Research Institute)	Accepted. Delete the table and look for cite, after consideration, the book from CIFOR cited in comment
9-501	A	52	5	53	35	Although correctly lined out, the whole chapter reads more than a text book than a feasible approach towards mitigation. I propose to scale the chapter down and simply list points i) to v). (Reinhold Glauner, Institute for World Forestry)	Accept. Section will be reduce and review

**Expert/Government Review of Second-Order-Draft
Confidential, Do Not Cite or Quote**

IPCC WGIII Fourth Assessment Report, Second Order Draft

Chapter-Comment	Batch	From Page	From Line	To Page	To line	Comments	Considerations by the writing team
9-502	A	52	5	53	35	Most of this section says nothing new and has very few references except to other IPCC reports and many of the paragraphs have no reference indicating this is the opinion of the authors who wrote this section--this is not the purpose of an assessment--better to say not much literature on this topic rather than a few personal opinions. I find it hard to understand that this is all to be said on this topic given several reports/books/papers on the topic that have been published of late. I think someone needs to go further into the literature and do a better job or at least admit there is not much on the topic if this be the case. (Sandra Brown, Winrock International)	Accept. Section will be reduce and review
9-503	A	52	5	0	0	Reforestation and forest conservation are legitimate ideas. It needs to be remembered, however, that there are some places where a forest will not be regenerated even after planting because of some inadequate environmental and site conditions. Also, a forest will not be easily regenerated when planting inappropriate species. Thus, it is incorrect to think that any forest can be harvested with the premise of reforestation, and it is important to evaluate site quality for regeneration prior to the harvest. Only a motivation for securing biodiversity is insufficient for strong discussion about forest management for high C sequestration. (Yukihiko Chiba, Forestry and Forest Products Research Institute)	Noted. It will be discussed in the section when review.
9-504	A	52	30	52	30	Include in last sentence: "...and fauna to new regions, which facilitates adaptation...." Wouldn't it also be beneficial for adaptation (and mitigation) if forest expansion with climate change was facilitated by establishing new forests taking into account projected changes in climate. To my understanding, in many cases, species are not able to move to new regions when climate changes. Human intervention may be required. Establishment of new forests would be most beneficial close to high quality regions (in terms of biodiversity) Introduce term extinction debt: species may exist in degrading conditions for a while but are deemed to extinction (e.g. Hanski 2000). Hanski, I., 2000. Extinction debt and species credit in boreal forests: modelling the consequences of different approaches to biodiversity conservation. Annales Zoologici Fennici 37, 271-280. (Government of Finland)	Noted, but addition rejected. The point will be taken in the new text.
9-9	C	53	33	53	34	The assertion in this sentence is a sweeping statement that is not applicable to many afforestation and reforestation situations. This sentence needs to be elaborated on to clarify in what situations, and under what conditions, the adverse impacts of	Accepted, it will be clarify. Avoiding the message that by definition planted forest are harmful to biodiversity. References will be

**Expert/Government Review of Second-Order-Draft
Confidential, Do Not Cite or Quote**

IPCC WGIII Fourth Assessment Report, Second Order Draft

Chapter-Comment	Batch	From Page	From Line	To Page	To line	Comments	Considerations by the writing team
						planted forests on biodiversity manifest themselves. Similarly, the adverse impacts on biodiversity arising from afforestation and reforestation activities are not limited to planted forests, and any revised text ought to recognise this. To give some context: Pine plantations are showing positive biodiversity and conservation benefits to New Zealand. e.g. McQueen 1973; Norton, 1989; Allen et al. 1995; Brockerhoff et al. 2003, 2005; Pawson and Brockerhoff 2005; Maunder et al. 2005; Pawson et al. 2006). As pine plantations age and develop a forest microclimate, the number of indigenous understorey species increases (McQueen 1973, Allen et al. 1995, Brockerhoff et al. 2003). The understorey of older plantation stands typically show many similarities with that of adjacent natural forests. Similar observations have been made for forest birds, insects, and other animals. Pine plantations are also inhabited by several threatened species including orchids, kiwi, bats, and certain insects. The critically endangered ground beetle <i>Holcaspis brevicula</i> is even dependent on plantation forest because a pine forest on the Canterbury Plains is its only remaining habitat (Brockerhoff et al. 2005). In areas such as the Canterbury Plains where most natural forest was lost, plantation forests can provide an important habitat for the conservation of native species that rely on a forest habitat (Ecroyd and Brockerhoff 2005). Such species may not persist in landscapes that are dominated by pasture and other agricultural land uses (Ecroyd and Brockerhoff 2005; Harris and Burns 2000). Similar observations of greater biodiversity values have been made for streams running through pine plantations than streams in adjacent pastures (Quinn et al. 1997). (Government of New Zealand)	look it up.
9-505	A	53	34	54	5	(incl. Table 9.12). It is not clear where the "qualitative ranking of forest activities" appears in Table 9.12. The title of Table 9.12 seems not to fit to the table content ideally. In the first column of Table 9.12 there are activities. In columns 2 and 3 how these activities may affect vulnerability and mitigation. I suggest to (1) clarify the ranking issue, and (2) change the title of Table 9.12. (Lexter Manfred , University of Natural Resources and Applied Life Sciences, Vienna)	Accepted. Look similar table in chapter 8 and try to give examples for adaptation in a separate column.
9-506	A	53	34	54	5	(incl. Table 9.12). It is not clear where the "qualitative ranking of forest activities" appears in Table 9.12. The title of Table 9.12 seems not to fit to the table content ideally. In the first column of Table 9.12 there are activities. In columns 2 and 3 how these activities may affect vulnerability and mitigation. I suggest to (1) clarify the ranking issue, and (2) change the title of Table 9.12. (Lexter Manfred , University of Natural Resources and Applied Life Sciences,	Accepted. Duplicate with 9-505

**Expert/Government Review of Second-Order-Draft
Confidential, Do Not Cite or Quote**

IPCC WGIII Fourth Assessment Report, Second Order Draft

Chapter-Comment	Batch	From Page	From Line	To Page	To line	Comments	Considerations by the writing team
						Vienna)	
9-507	A	54	0	0	0	Table 9.12. Add a fourth column before the “vulnerability” column and call it “incentive”, because the options mentioned (A-D) may as well give positive implications towards increased carbon stocks in forest pools as a result of Climate Change. This possibility is considered especially in some boreal countries (Scandinavia etc.). (Government of Sweden)	Partially accepted. Look similar table in Ch 8 and try to give examples for adaptation in a separate column. The inclusion of incentives is not the aim of the table.
9-508	A	54	1	0	0	Table 9.12--what is the message one is to take away from this table? And what is its source or basis for it? (Sandra Brown, Winrock International)	Accept. Table will be reassess and some concepts explain better in the text
9-509	A	54	1	0	0	specify the source of table 9.12 (Expédit Wilfrid VISSIN, FLASH/Abomey-Calavi University)	No source, developed for the chapter as it was for other sectors as well
9-510	A	54	1	0	0	specify the source of table 9.12 (YABI Ibouraima, LECREDE/DGAT/UAC)	No source, developed for the chapter as it was for other sectors as well
9-184	B	54	1	54	0	Table 9.12 - needs to be cleaned up. A lot of overlapping information with Table 9.11. U.S. Government (Government of U.S. Department of State)	Accept. Table will be reassess and some concepts explain better in the text. Table 9.11 will be deleted
9-511	A	54	4	56	10	What has been said before is also valid for chapter 9.5.3. Shorten drastically; if there is little information available, the chapter should be accordingly. Box 9.4 is ok. (Reinhold Glauner, Institute for World Forestry)	Accepted
9-185	B	54	9	54	9	The authors should explain how a "mangrove forest" can be considered as an adaptation activity. (Government of Australia)	Accepted
9-512	A	54	12	54	12	What is "contour bunding"? (Government of Environment Canada)	Accepted
9-513	A	55	5	0	0	Verchot et al. is misquoted in the rferences (Hector Ginzo, Ministerio de Relaciones Exteriores, Comercio Internacional Y Culto)	Accepted
9-186	B	55	17	55	19	The authors should explain whether the references cited, state that there are few ongoing studies to understand the interaction between mitigation and adaptation, or whether these references are exceptions to that rule and are studies that look at the interaction. (Government of Australia)	Accepted
9-187	B	55	19	55	19	Delete: Government of Australia, 2001 (the publication cited is outdated)	Accepted

IPCC WGIII Fourth Assessment Report, Second Order Draft

Chapter-Comment	Batch	From Page	From Line	To Page	To line	Comments	Considerations by the writing team
						(Government of Australia)	
9-514	A	55	21	0	0	Box 9.4 not sure the relevance of this box here--maybe it is out of order and needs to come later under 9.6.6. If moved to 9.6.6 then more needs to be added to this box or to be refocused. Might be important to acknowledge that out of the 4 methodologies accepted under the CDM AR WG, three are for projects under the BCF (China, Moldova, and Honduras). Also might be better to give a few specific examples of the projects and how they address many of concerns re: biodiversity, equity, socio-economics, and the like In this box (last but one paragraph on p. 56), accuracy is the incorrect term--one never knows how accurate one it but one can know how precise one is--this could read "that are more precise but more expensive--i delete "very" as who knows what very means!) (Sandra Brown, Winrock International)	Taken into account
9-515	A	55	21	55	21	Box 9.4: use consistent abbreviations for CO2 equivalent tonnes, here CO2e is used. In other chapters CO2-eq is seen as well (Government of Germany)	See above
9-188	B	56	0	68	0	The section discusses forest policies and the CDM but does not recognise other mitigation initiatives that support emission reductions from the forest sector. The following Australian examples could be inserted as part of such a discussion: Australian Government programs are facilitating greenhouse gas mitigation including the promotion of afforestation and reforestation. The Greenhouse Challenge Plus programme enables members to develop greenhouse gas accounts of their business which includes accounting for forest sink abatement. The Greenhouse Friendly voluntary certification initiative, a part of the Greenhouse Challenge Plus programme, facilitates the transaction of forests sink offsets to certify products as greenhouse neutral throughout their life cycle. The Greenhouse Gas Abatement Program provides grants for projects, including forest sink projects, to achieve large scale abatement over the period 2008-12. (Government of Australia)	Taken into account
9-516	A	56	1	56	1	In the 7 th line of the box, "tress" may be "trees". (Yoshiyuki Kiyono, Forestry and Forest Products Research Institute)	Editorial
9-517	A	56	1	56	1	Box : delete last para. It is more advertising and not about adaptation/mitigation synergies (Government of Germany)	Address by deleting the box
9-189	B	56	1	56	2	The authors should provide a definition or description of what a tCER and a lCER is, before they are first used in the chapter. (Government of Australia)	Accepted

**Expert/Government Review of Second-Order-Draft
Confidential, Do Not Cite or Quote**

IPCC WGIII Fourth Assessment Report, Second Order Draft

Chapter-Comment	Batch	From Page	From Line	To Page	To line	Comments	Considerations by the writing team
9-518	A	56	12	68	28	Section 9.6 is mainly dealing with policies. The policies described there are excellent. But there is lacking consideration of the implementing environment. Many of the policies are not easy to work in developing regions. It had better have a sub-section or paragraph to analyze operating possibility of the policies in different regions. (Shaohong WU, Institute of Geographical Sciences and Natural Resources Research, Chinese Academy of Sciences)	Reject. Section 9.6 describes factors affecting/barriers to implementation at a level of detail consistent with the available literature of which the authors are aware, and within the limitations of length.
9-519	A	56	12	63	0	Section 9.6 needs to be shortened (Sandra Brown, Winrock International)	Accepted
9-520	A	56	12	0	0	Paragraph 9.6 needs more integration: in its current form policies are grouped according to theirs aims; I suggest that it is more logical to present the different policies per type of policy, also taking into account the scale they work on (regional - national - global). Chapter needs to be condensed, it is now too much a mixed bag. (Peter Van der Meer, Alterra)	Rejected. Organization by mitigation type provides consistency with other sections of Chapter 9
9-190	B	56	12	56	0	This section should also consider Reilly and Asadoorian (2006), "Mitigation of greenhouse gas emissions from land use: Creating incentives within greenhouse gas emissions trading systems" that came out recently in Climatic Change. U.S. Government (Government of U.S. Department of State)	Noted
9-191	B	56	12	56	0	Section 9.6 - It would be more meaningful if tied in with the mitigation estimates in Section 9.4 in terms of the presence or lack of consideration and the qualitative biases in the estimates in 9.4. U.S. Government (Government of U.S. Department of State)	Reject – point unclear.
9-192	B	56	12	56	0	Box 9.4 Need to define tCER and ICER, or add a reference that directs the reader to section 9.6.6.5 where they are discussed in depth. U.S. Government (Government of U.S. Department of State)	Delete the box, see previous comments
9-521	A	56	15	56	25	Can say somewhere that the "causes of tropical deforestation are complex and vary from country to country and over time, in response to different social, cultural and macroeconomic conditions" (Geist and Lambin, 2002: Proximate and Underlying Driving Forces of Tropical Deforestation. Bioscience 52(2): 143-150). >> Hence, implies that there is no silver bullet; basket of policy measures needed to address national circumstances. (Katia Karousakis, OECD)	Accept, will strengthen emphasis of this point, esp as regards to REDD.
9-522	A	56	16	56	20	Two sentences that say the same thing. (Hector Ginzo, Ministerio de Relaciones Exteriores, Comercio Internacional Y	Accept

**Expert/Government Review of Second-Order-Draft
Confidential, Do Not Cite or Quote**

IPCC WGIII Fourth Assessment Report, Second Order Draft

Chapter-Comment	Batch	From Page	From Line	To Page	To line	Comments	Considerations by the writing team
						Culto)	
9-523	A	56	16	56	20	Same sentence repeated twice (Peter Van der Meer, Alterra)	Accept
9-524	A	57	10	57	18	Include statement that "there is unlikely to be a single approach which reduces emissions from deforestation in developing countries because of different national circumstances and capacities". (Kirsten Macey, Climate Action Network Europe)	Accept – see A 9-152
9-525	A	57	12	0	0	Write (FAO, 2005) (Expédit Wilfrid VISSIN, FLASH/Abomey-Calavi University)	Accept
9-526	A	57	12	0	0	Write (FAO, 2005) (YABI Ibouaïma, LECREDE/DGAT/UAC)	Accept
9-10	C	57	12			It may be worth noting the conclusion of a recent New Zealand Government review of climate change policies (MfE 2005, p333), that forests not only sequester and store carbon, but can deliver co-benefits. Thus policy options that send positive afforestation and reforestation signals could be used to maximise other co-benefits associated with forestry such as: reduced agricultural emissions, improved soil conservation, catchment management and water quality, and biodiversity, as well as the enhanced ability to produce substitute materials for more emissions-intensive products and to serve as a potential source of bioenergy. (Government of New Zealand)	Accept, the report will be considered if available.
9-527	A	57	14	0	0	Should emphasize more strongly that deforestation is also caused by policies outside the forestry sector, including, agricultural policies, transport policy, settlements schemes etc. These vary from country to country. (Katia Karousakis, OECD)	Accept – see A9-152
9-528	A	57	16	0	0	Write ...Kaimowitz, 1999 ; ... (Expédit Wilfrid VISSIN, FLASH/Abomey-Calavi University)	Accept
9-529	A	57	16	0	0	Write ...Kaimowitz, 1999 ; ... (YABI Ibouaïma, LECREDE/DGAT/UAC)	Accept
9-530	A	57	24	0	0	Write (Wunder, 2004) (Expédit Wilfrid VISSIN, FLASH/Abomey-Calavi University)	Accept
9-531	A	57	24	0	0	Write (Wunder, 2004) (YABI Ibouaïma, LECREDE/DGAT/UAC)	Accept
9-532	A	57	33	57	36	"China.....forest policies". India is one of the countries along with China, which has successfully reduced deforestation rates (refer to FAO reports). Indian case could be mentioned.	NOTED. Will review whether/how such reductions have resulted from policy interventions in India.

IPCC WGIII Fourth Assessment Report, Second Order Draft

Chapter-Comment	Batch	From Page	From Line	To Page	To line	Comments	Considerations by the writing team
						(Government of India)	
9-533	A	57	44	0	0	Write (Fearnside, 2003) (Expédit Wilfrid VISSIN, FLASH/Abomey-Calavi University)	ACC
9-534	A	57	44	0	0	Write (Fearnside, 2003) (YABI Ibouaraïma, LECREDE/DGAT/UAC)	ACC
9-535	A	57	44	57	45	Market access is referred to as an incentive for forest management following the example of forest management scheme in Brazilian Amazon. It is recommended that this reference "Market access ... on their lands." be deleted, as linkage with the Amazon scheme is not clear, no explanation nor supporting document is associated, therefore the reference is too weak in substance. (Government of Japan)	Noted – will provide supporting reference or delete.
9-536	A	58	0	0	0	Perhaps add some additional examples of international transfer payments including Debt for Nature swaps, Official Development Assistance (ODA), National Forest Funds, etc. (Katia Karousakis, OECD)	Rejected – current listing is intended to be representative, rather than comprehensive.
9-537	A	58	10	0	0	Also make reference to the efforts by the UN Food and Agricultural Organisation (FAO) (Katia Karousakis, OECD)	Accepted.
9-538	A	58	10	58	11	It is recommended that the reference to "Tropical Forest Action Plan" be deleted. This scheme was established in 90s for coordinated actions for sustainable forest management, but later it became ineffective and it is not operating to date, so it is not quite necessary to mention this framework anymore. (Government of Japan)	Accepted
9-539	A	58	12	0	0	'...but had yet had demonstrable impacts...' If the idea was to state that the indicated policy processes had demonstrable impacts on reducing deforestation, then you should substitute 'and' for 'but' and remove 'yet'. Otherwise, you should insert 'not' before 'yet'. (Hector Ginzo, Ministerio de Relaciones Exteriores, Comercio Internacional Y Culto)	Accepted
9-540	A	58	14	0	0	Add: ...deforestation "at the national level". Some local and community efforts have been successful. (Katia Karousakis, OECD)	Noted. Local level efforts may not reduce emissions, due to leakage.
9-541	A	58	24	0	0	On Costa Rica, NB: Sierra and Russman 2005: On the efficiency of environmental service payments: A forest conservation assessment in the Osa Peninsula, Costa Rica. Ecological Economics. More critical on the effectiveness (Katia Karousakis, OECD)	Noted, will review.

**Expert/Government Review of Second-Order-Draft
Confidential, Do Not Cite or Quote**

IPCC WGIII Fourth Assessment Report, Second Order Draft

Chapter-Comment	Batch	From Page	From Line	To Page	To line	Comments	Considerations by the writing team
9-542	A	58	25	58	26	In the previous texts sustainable forest management schemes in China, Brazil and Costa Rica are mentioned as "good practices". Therefore it is recommended to revise the two lines starting from line 25 of page 25 as follows; "Taken together, the policies and frameworks aiming at realizing sustainable forest managements are contributing to mitigation of deforestation, the single largest contribution of land-use change to global carbon emissions, while yet to have optimal impact." "non- climate policies" (as well as "climate policies") are not well-established nor - defined notion, so it is not appropriate to use this term. (Government of Japan)	Rejected — “non-climate” and “climate” policies are defined at the beginning of 9.6, and consistent with proposed use in other chapters of the AR4.
9-543	A	58	29	0	32	Commercial drivers would be more powerful at least in developing regions. (Shaohong WU, Institute of Geographical Sciences and Natural Resources Research, Chinese Academy of Sciences)	Noted
9-544	A	58	34	58	35	As both UNFCCC and Kyoto Protocol address sustainable forest management as one of the policy tools for mitigation of climate change, and it is appropriate to understand that sustainable forest management should cover reduction of deforestation as one of its elements. Therefore it is recommended that the reference "Under the UNFCCC and Kyoto Protocol, no climate policies currently exist to reduce emissions from deforestation or forest degradation in developing countries." should be changed into "While both UNFCCC and Kyoto Protocol address sustainable forest management as one of the policy tools for mitigation of climate change, under the Kyoto Mechanisms, reduction of emissions from deforestation or forest degradation in developing countries is not on the list of eligible activities" (Government of Japan)	Rejected – proposed text adds length without adding clarity.
9-545	A	58	38	58	38	The word "sufficient" may be replaced by "sufficiently". (Government of Pakistan)	Accepted
9-546	A	58	41	0	0	Write (UNFCCC, 2005) (Expédit Wilfrid VISSIN, FLASH/Abomey-Calavi University)	Accepted
9-547	A	58	41	0	0	Reference to UNFCCC 2005 is missing in the references section (Katia Karousakis, OECD)	Accepted
9-548	A	58	41	0	0	Write (UNFCCC, 2005) (YABI Ibouaïma, LECREDE/DGAT/UAC)	Accepted
9-549	A	58	43	59	3	Delete "With effective monitoring, such a national-level approach might substantially address the problem of leakage noted above, as reductions in emissions in one area could be balanced against any emissions increases in other areas." because this issue has been discussed under the UNFCCC and this description may lead to prejudge effectiveness of the above mentioned specific	Accepted – discussion of leakage will be revised in a stand-alone text box on REDD.

**Expert/Government Review of Second-Order-Draft
Confidential, Do Not Cite or Quote**

IPCC WGIII Fourth Assessment Report, Second Order Draft

Chapter-Comment	Batch	From Page	From Line	To Page	To line	Comments	Considerations by the writing team
						scheme mentioned above. (Government of Japan)	
9-550	A	59	1	59	3	Include reference of international leakage - national baselines address leakage in countries but not in regions which needs to be addressed. (Kirsten Macey, Climate Action Network Europe)	Accepted – see A9-550
9-551	A	59	7	59	22	"Non-climate forest policies haveimports...". India has implemented one of the largest afforestation programs in the world (refer to FAO reports). Indian experience of the largest afforestation programs under social forestry and joint forest management is not mentioned, even though literature exists. (Government of India)	Noted. Space does not exist for detailed discussion and evaluation of various national afforestation programs, some reference to various national programs will be noted.
9-11	C	59	7	59	22	One market-based approach that is not mentioned as a way of promoting afforestation and reforestation, is the devolution of carbon credits to forest owners, such as in New Zealand's permanent forest sink initiative (see http://www.beehive.govt.nz/ViewDocument.aspx?DocumentID=26957) (Government of New Zealand)	Section in Projects
9-552	A	59	12	59	15	This sentence is practically equal to the sentence in lines 19-22. (Hector Ginzo, Ministerio de Relaciones Exteriores, Comercio Internacional Y Culto)	Accepted
9-553	A	59	19	59	22	This sentence is practically equal to the sentence in lines 12-15. (Hector Ginzo, Ministerio de Relaciones Exteriores, Comercio Internacional Y Culto)	Accepted
9-193	B	59	23	59	23	The section presents limited information on policies promoting a wider range of afforestation and reforestation activities. There are several Australian examples: The Australian Government's Natural Heritage Trust and National Action Plan for Salinity and Water Quality programs provide funding for high priority local actions in the conservation and sustainable use of natural resources. These programs support vegetation conservation and establishment of commercial and environmental forests, providing for complementary mitigation and adaptation and benefits. For example, one current forest establishment project supported through the National Action Plan for Salinity and Water Quality is expected to result in sequestration of about 15 Mt CO ₂ -e over 30 years. Afforestation and reforestation are also promoted through Plantations for Australia: The 2020 Vision, which comprises commitments by government and industry to remove impediments to sustainable plantation establishment, with a target of trebling the area of plantations between 1996 and 2020. (Government of Australia)	Noted. See A9-551

**Expert/Government Review of Second-Order-Draft
Confidential, Do Not Cite or Quote**

IPCC WGIII Fourth Assessment Report, Second Order Draft

Chapter-Comment	Batch	From Page	From Line	To Page	To line	Comments	Considerations by the writing team
9-554	A	59	27	0	0	Correct "Opportunities for However"... (Katia Karousakis, OECD)	Accepted
9-555	A	59	28	59	0	This depends on the end-use and timber price. Many commercial plantations are harvested long before the trees reach optimum size, eg for construction. The key to increasing C storage (lines 31-33) is changing uses and better prices for the timber. lines 35-40. But note the long history of forest laws in, eg, Germany and Switzerland, going back at least to the mid-19th century, aimed at ensuring good management. In the UK, felling licenses serve a similar purpose. Lines 42-43. This hits the nail on the head. (David Viner, University of East Anglia)	Noted
9-556	A	59	28	59	31	Confusing sentence. (Hector Ginzo, Ministerio de Relaciones Exteriores, Comercio Internacional Y Culto)	Accepted, will revise for clarity
9-557	A	59	28	0	0	Erase "opportunities for" (Martina Jung, Ecofys)	Accepted – see A9-556
9-558	A	59	28	0	0	Grammar point - "Opportunities for However, - not clear (Kirsten Macey, Climate Action Network Europe)	Accepted – see A9-556
9-559	A	59	28	59	32	Major grammatical errors. (Government of Environment Canada)	Accepted – see A9-556
9-560	A	59	28	59	31	"Opportunities for" is additional/redundant. Same goes for "will be" at the end of sentence. It seems that words of two sentences have been mixed. (Government of Finland)	Accepted – see A9-556
9-561	A	59	28	59	33	check English of sentence starting with opportunities (Government of Germany)	Accepted – see A9-556
9-194	B	59	28	59	28	Delete "Opportunities for". (Government of Australia)	Accepted – see A9-556
9-562	A	60	2	0	0	Write ... Rainforest Alliance, 2005) (Expédit Wilfrid VISSIN, FLASH/Abomey-Calavi University)	Accepted
9-563	A	60	2	0	0	Write ... Rainforest Alliance, 2005) (YABI Ibouaïma, LECREDE/DGAT/UAC)	Accepted
9-564	A	60	12	0	0	Write (FAO, 2005) (Expédit Wilfrid VISSIN, FLASH/Abomey-Calavi University)	Accepted
9-565	A	60	12	0	0	Write (FAO, 2005) (YABI Ibouaïma, LECREDE/DGAT/UAC)	Accepted
9-566	A	60	16	0	0	Write (Goldammer, 2001 ; ...	Accepted

IPCC WGIII Fourth Assessment Report, Second Order Draft

Chapter-Comment	Batch	From Page	From Line	To Page	To line	Comments	Considerations by the writing team
						(YABI Ibouaraïma, LECREDE/DGAT/UAC)	
9-567	A	60	21	0	0	Write ... (... Service, 2000). (YABI Ibouaraïma, LECREDE/DGAT/UAC)	Accepted
9-568	A	60	26	0	0	Write (ITTO, 1999 ; ... (Expédit Wilfrid VISSIN, FLASH/Abomey-Calavi University)	Accepted
9-569	A	60	26	0	0	Write (ITTO, 1999 ; ... (YABI Ibouaraïma, LECREDE/DGAT/UAC)	Accepted
9-570	A	60	27	60	27	<p>Insert this point: 'Mitigating the impact of forest die-back: Climate change models predict substantial shifts in climatic envelopes over coming decades in many regions, including warmer temperatures and increases in extreme drought events. Such changes may increase stress on long-lived woody vegetation, directly leading to episodes of increased mortality and forest dieback. In some cases forest dieback is amplified by climate-mediated changes in the population dynamics of insect predators, or human-mediated spread of exotic diseases and insect pests, or human-altered land use patterns and disturbances. Forest stress and dieback are now becoming apparent in many parts of the world. Examples are presented from all forested continents, including: 1) substantial episodes of recent forest mortality from Alaska to Arizona, such as >1,000,000 ha of pinyon (<i>Pinus edulis</i>) dieback in the southwestern US since 2002; 2) drought impacts in the Amazon Basin; 3) dieback of several species of <i>Pinus</i> and <i>Quercus</i> in multiple mountain ranges across Mediterranean Portugal, Spain, and France; 4) recent dieback of <i>Pinus sylvestris</i> near the forest-steppe margin in the low mountains of northern Mongolia; 5) eucalypt dieback in Australia; and 6) dieback of forest species in the West African Sahel. Assessing the potential for extensive climate-induced forest dieback is a key global change research topic, since woody mortality losses can occur much faster than tree growth gains, with pervasive and persistent ecological effects, including feedbacks to other disturbance processes (e.g., fire, erosion) and loss of sequestered carbon back to the atmosphere. The reduction or mitigation of forest die-back may imply two main restoration activities: in the short term, the thinning of the forest to reduce competition and to increase nutrient and water availability. In the middle to long-term, to plan ecological restoration based on natural regeneration processes of woody species better adapted to expected climatic conditions (thus more resistant to droughts). In short, an adaptive management strategy to create sustainable ecosystems'.</p> <p>(Government of Spain)</p>	Noted: A succinct reference to climate change and linkages with 9.5 discussion of mitigation/adaptation will be added.

**Expert/Government Review of Second-Order-Draft
Confidential, Do Not Cite or Quote**

IPCC WGIII Fourth Assessment Report, Second Order Draft

Chapter-Comment	Batch	From Page	From Line	To Page	To line	Comments	Considerations by the writing team
9-571	A	60	28	60	39	This chapter is far too small. Certification is essential, or could be essential in forest conservation. There are a number of examples that demonstrate positive effects at all levels. Mitigation measures should much more support implementation of certifying forest management on the ground, espec. in the tropics where carbon stocks and biodiv are highest. (Reinhold Glauner, Institute for World Forestry)	Reject – authors believe that current discussion of the role of certification is balanced and consistent with available literature.
9-572	A	60	28	60	38	Include example of Forest Stewardship Councils certification scheme http://www.fscus.org/faqs/what_is_certification.php see literature on schemes: Behind the logo: An environmental and social assessment of forest certification schemes (2001), FERN (http://www.fern.org/pubs/reports/behind/btlrep.pdf#search=%22forest%20certification%20schemes%20fern%22) (Kirsten Macey, Climate Action Network Europe)	Rejected – rationale for inclusion is unclear.
9-573	A	60	28	60	38	UN FAO (1999) has synthesized information on forestry certification schemes including problems with these in developing countries. Among these is that the majority (80 percent) of wood and wood products produced in developing countries is also consumed in developing countries, where willingness to pay for environmentally friendly products will be constrained by ability to pay. www.rcfa-cfan.org/english/issues.12-5.html . For example, Bolivia is supposed to have largest area of certified forest in the developing countries (i.e. supply is there) but is experiencing demand-side problems. Present a balanced overview of opportunities and challenges of FSC. (Katia Karousakis, OECD)	Noted. Present focus is on data published since the 2000 TAR.
9-574	A	60	31	0	0	Write (Dahl, 2001 ; (Expédit Wilfrid VISSIN, FLASH/Abomey-Calavi University)	ACC
9-575	A	60	31	0	0	Write (Dahl, 2001 ; (YABI Ibouiraïma, LECREDE/DGAT/UAC)	ACC
9-576	A	60	38	0	0	Intersting concept, should provide reference. (Katia Karousakis, OECD)	Noted. Reference to be added as appropriate.
9-577	A	60	49	0	50	Since this chapter deals exclusively with forestry you have to mention that even though the US tax incentives encourage using lignocellulose for ethanol production, as of today there is no economically viable process that permits wood-to-ethanol fuel conversion at a large scale. (Andrei Kirilenko, University of North Dakota)	Rejected – inappropriate point for a policy-focussed discussion.
9-195	B	61	1	61	2	The following could be inserted as another example of a policy providing an incentive for use of forest biomass in energy generation: The Australian	Noted.

**Expert/Government Review of Second-Order-Draft
Confidential, Do Not Cite or Quote**

IPCC WGIII Fourth Assessment Report, Second Order Draft

Chapter-Comment	Batch	From Page	From Line	To Page	To line	Comments	Considerations by the writing team
						Government's Mandatory Renewable Energy Target, which incorporates a market for renewable energy, provides for use of biomass from plantations and wood waste as eligible renewable energy sources. (Government of Australia)	
9-578	A	61	4	61	10	This is worth expanding. In particular, the downward trend in European timber prices, illustrated in the CLIO report at several points, (with figure in the case of Couvet) is a critical disincentive. (Viner D., Sayer M., Uyarra M., and Hodgson N., 2006 Climate Change and the European Countryside: Impacts on Land Management and Response Strategies. Report Prepared for the Country Land and Business Association., UK. Publ., CLA, UK 180 pages). (David Viner, University of East Anglia)	Noted, will evaluate referenced literature to assess appropriateness of expanded discussion.
9-579	A	61	6	0	0	Write (USEPA, 2006 ; USGBC, 2006). (Expédit Wilfrid VISSIN, FLASH/Abomey-Calavi University)	Accepted
9-580	A	61	6	0	0	Write (USEPA, 2006 ; USGBC, 2006). (YABI Ibouaïma, LECREDE/DGAT/UAC)	Accepted
9-581	A	61	7	0	0	Write ... Murphy, 2004) ... (... BSR, 20006) (Expédit Wilfrid VISSIN, FLASH/Abomey-Calavi University)	Accepted
9-582	A	61	7	0	0	Write ... Murphy, 2004) ... (... BSR, 20006) (YABI Ibouaïma, LECREDE/DGAT/UAC)	Accepted
9-583	A	61	14	61	27	Agree and an important point to include. In the case of reducing deforestation, it is easier to accomplish through modification, not prevention, of the economic activity. For example, changes in technology that require less forest removal to achieve the same result, such as using GPS instead of line-of-sight clearing for seismic testing in the oil and gas sector. (Government of Environment Canada)	To address Reducing Deforestation, a box will be developed.
9-584	A	61	15	0	0	Erase "provide" in front of "profitability incentives" (Martina Jung, Ecofys)	Accepted
9-585	A	61	15	61	15	delete "provide" (Government of Germany)	Accepted
9-586	A	62	0	62	0	Box 9.6 Information given related to the land tenure management in Africa is not relevant nor accurate! It is stated that "historically, land and resources were under relatively sustainable management, driven by customary management system continued regulations and customary laws. Conflicts in land-use practices are induced by strong central government systems, leading to vast land degradation". Firstly, in Africa, the majority of the land is theoretically under State control...But, due to the poor governance, land tenure is mostly driven by the "first settler"	Accepted – Box 9.6 will be shortened and main message clarified.

**Expert/Government Review of Second-Order-Draft
Confidential, Do Not Cite or Quote**

IPCC WGIII Fourth Assessment Report, Second Order Draft

Chapter-Comment	Batch	From Page	From Line	To Page	To line	Comments	Considerations by the writing team
						principle and abide by the customary laws. Secondly, conflicts in land-use practices are more and more frequent, not principally because of the shifting from "customary management system" to "strong State management system", but rather because of the fast increase of population in Africa (that was historically under-populated, compared to other continents). Thirdly, the case study of the FAO project in Sudan aiming at promoting integrated forest management based on collaborative management is not representative of the reality. In fact, most of the projects implemented during the last years in Africa and aiming at promoting "integrated and community-based management of natural resources" were not sustainable, because of their inadequate institutional architecture (i.e. projects implemented by FAO, World Bank, GTZ, DfID, African Dvlpt Bank, Agende Française de Développement, etc.) (Government of France)	
9-587	A	62	0	63	0	box 9.6: it should shortened (Government of Germany)	Accepted – see A9-587
9-588	A	62	1	0	0	Box 9.5. Line 5-6 Use metric system. (Andrei Kirilenko, University of North Dakota)	Accepted
9-589	A	62	15	63	0	Box 9.6. Shorten the box. However interesting, the story deviates from discussion of forest policies. (Andrei Kirilenko, University of North Dakota)	Accepted – see A9-587
9-590	A	63	3	0	0	Paragraph 9.6.6. Why here, this is not a policy as such ? Explain why you treat it here, maybe it fits better somewhere else (possibly as a box ?). (Peter Van der Meer, Alterra)	Rejected; project-based mitigation is international climate policy. Anyway, the section was shortened and restructured
9-591	A	63	4	68	29	the chapter should be shortened, as already mentioned in the general comment KP rules should be dealt with in a more balanced way and should regard Art.3.3 and 3.4 and JI as well. Furthermore , the problems dealt with in the subchapters are not only a problem of projects : social issues , permanence...therefore, they could be discussed in a more general way. (Government of Germany)	Address by introducing a introductory paragraph
9-592	A	63	5	63	11	This paragraph requires clarification. Especially, relationship between first two Sentences "Due to...fewer limitations" and following two sentences "In principle..."is not clear. (Government of Japan)	Accepted; the paragraph was completely reformulated
9-593	A	63	5	63	5	Is the title 9.6.6 in line with the contents of the section? I was expecting more project descriptions. Now the sub-sections consider issue in general. (Government of Finland)	General for the section that address it: Section can be delete the 1 and 2 subsect and highlight the methodological developments since tar.

**Expert/Government Review of Second-Order-Draft
Confidential, Do Not Cite or Quote**

IPCC WGIII Fourth Assessment Report, Second Order Draft

Chapter-Comment	Batch	From Page	From Line	To Page	To line	Comments	Considerations by the writing team
							But not bring project examples in. Make few general messages clear: Including the capital achieved on capacity building in developing countries, that may be even more important than the volume of C
9-594	A	63	8	63	11	It should be more clearly stated that the last 2 sentences apply only to Annex I countries. Also, there is no certainty as to the responsibility of Annex I parties after 2012, once commitments under the Kyoto Protocol have passed. (Government of Environment Canada)	See A9-592
9-196	B	63	8	63	8	The authors should more clearly explain what they mean by "Projects in Annex I countries". Are they referring to Joint Implementation, or individual country based projects? (Government of Australia)	See A9-592
9-595	A	63	15	63	24	Not all LULUCF projects provide benefits to local people, this was one of the key issues with the inclusion of A/R in the CDM. See literature on the impacts of LULUCF projects on local communities Granda, P (2005) Carbon Sink Plantations in the Ecuadorian Andes: Impact of the Dutch FACE-PROFAFOR monoculture tree plantations' project on indigenous and peasant communities. http://www.wrm.org.uy/countries/Ecuador/face.html FERN (2005) Broken Promises: the World Bank and Forests - http://www.fern.org/media/documents/document_3625_3626.pdf (Kirsten Macey, Climate Action Network Europe)	Rejected; see A9-592. Grey literature was not included, because not enough space to discuss the issue in detail
9-596	A	64	1	0	0	Write ... (Robledo and Blaser, 2001). (Expédit Wilfrid VISSIN, FLASH/Abomey-Calavi University)	Accepted
9-597	A	64	1	0	0	Write ... (Robledo and Blaser, 2001). (YABI Ibouaraïma, LECREDE/DGAT/UAC)	
9-598	A	64	1	64	5	Are those ten areas of concern universal? And also, "(4)credibility" is not clear. Supplementary explanation should be added. (Government of Japan)	Accepted; this section has been removed, because of its overlaps with the SD section
9-599	A	64	10	0	0	Write ... (... Scherr, 2002), (Expédit Wilfrid VISSIN, FLASH/Abomey-Calavi University)	Accepted
9-600	A	64	10	0	0	Write ... (... Scherr, 2002), (YABI Ibouaraïma, LECREDE/DGAT/UAC)	Accepted
9-601	A	64	16	64	18	Delete "As for social issues". Because the CDM A/R modalities and procedures require both an environmental impact analysis and socio-economic assessment.	See A9-598

**Expert/Government Review of Second-Order-Draft
Confidential, Do Not Cite or Quote**

IPCC WGIII Fourth Assessment Report, Second Order Draft

Chapter-Comment	Batch	From Page	From Line	To Page	To line	Comments	Considerations by the writing team
						(Government of Japan)	
9-602	A	64	20	64	28	Need to update this section based on latest results of AR WG meeting. Might want to put the BCF box under this section (Sandra Brown, Winrock International)	Write a time line, and bio-carbon fund example can be included here.
9-603	A	64	20	64	29	delete chapter or add something about methodology developed since TAR (Government of Germany)	See 9-602, 593
9-604	A	64	21	64	21	"Only one was approved in 2005" should be rechecked and up-dated if there will be other projects approved before finalize this report. (Government of Japan)	See 953
9-605	A	64	22	64	24	update methodology status (Martina Jung, Ecofys)	See 953
9-197	B	64	35	64	36	It is worth stressing that leakage is not unique to forestry. U.S. Government (Government of U.S. Department of State)	Accepted
9-606	A	64	36	0	0	Write ... (Chomitz, 2002) (Expédit Wilfrid VISSIN, FLASH/Abomey-Calavi University)	Accepted
9-607	A	64	36	0	0	Write ... (Chomitz, 2002) (YABI Ibouraima, LECREDE/DGAT/UAC)	Accepted
9-608	A	65	7	65	8	The reference to 50% leakage for avoided deforestation here is wrong--the paper is only on stopping selective harvesting and was much lower than this for a real case in Bolivia 50% was an upper range but not a realistic one. Also the next sentence about the CDM AR is incorrect--expected leakage from activity shifting is definitely a factor and a detailed method is given in the Honduras methodology which the authors of this section of Ch 9 needs to look at so they get their facts right! (Sandra Brown, Winrock International)	Accepted
9-609	A	65	7	65	8	Should rephrase: Estimates of leakage from deforestation are on the order of ... (Government of Environment Canada)	Accepted
9-610	A	65	10	65	12	Pedroni (2005) Carbon accounting for sinks in the CDM after CoP-9, In Climate Policy Vol. 5, No. 4, provides a detailed discussion of such issues and should be quoted here or in the para on permanence (9.6.6.5). (Martina Jung, Ecofys)	Accepted
9-611	A	65	11	65	12	Should rephrase: ...are internally compensated by a deduction in the calculation of tCERs or lCERs claimed. (Government of Environment Canada)	Rejected; the para was reformulated
9-612	A	65	12	0	0	tCERs, lCERs - provide a reference to the subchapter where those are explained (pg	Rejected; the section was substantially

**Expert/Government Review of Second-Order-Draft
Confidential, Do Not Cite or Quote**

IPCC WGIII Fourth Assessment Report, Second Order Draft

Chapter-Comment	Batch	From Page	From Line	To Page	To line	Comments	Considerations by the writing team
						67) or move the explanations to Abbreviations (Andrei Kirilenko, University of North Dakota)	shortened
9-613	A	65	14	65	0	Table. PEM - explain abbreviation (footnote after the first use) (Andrei Kirilenko, University of North Dakota)	Accepted; the table is likely to be removed
9-614	A	65	14	65	0	Table, Top Afforestation row: incorrect source. Same row and elsewhere: check the leakage - is 0.02% a realistic rate? (Andrei Kirilenko, University of North Dakota)	
9-615	A	65	14	0	0	Please consider removing Table 9.13 from the text. It is based on unpublished work, it contains hypothetical estimates and the nature of the PEMs is unknown. The only real case seems to be de Jong's, which leakage is zero. (Hector Ginzo, Ministerio de Relaciones Exteriores, Comercio Internacional Y Culto)	See A9-613
9-616	A	65	14	66	2	Table should rater be a box and methods e.g. PEM should be briefly explained as not all target groups are familiar with that (Reinhold Glauner, Institute for World Forestry)	See A9-613
9-617	A	65	14	0	0	Table 9.13--need to clean this up first, then check once again the AR methodologies. E.g. the China and Albania meth assumes and demonstrates no leakage will occur and supports the study reported in table 9.13 on afforestation of degraded lands. Need to change the entry in this table attributed to Sohngen and Brown to a stop logging activity NOT avoided deforestation--work and estimates of that are in Aukland et al. 2003. (Sandra Brown, Winrock International)	See A9-613
9-618	A	65	14	65	16	clarify what "from the issue" and "PEM" mean (Government of Germany)	See A9-613
9-619	A	66	3	66	6	The tie-in to the previous paragraph is not direct. Confusion is created as the context changes from Kyoto Protocol or CDM to other mitigation programs. Also, in Line 6 it may be worth adding the caveat "within the forest sector" after ",then leakage" (Government of Environment Canada)	Accepted
9-620	A	66	6	0	0	Write ... EPA, 2005). (Expédit Wilfrid VISSIN, FLASH/Abomey-Calavi University)	Accepted
9-621	A	66	6	0	0	Write ... EPA, 2005). (YABI Ibouaraïma, LECREDE/DGAT/UAC)	Accepted
9-622	A	66	15	67	25	All this material on permanence is completely unnecessary--just say at the end of the first paragraph (line 20) that this has been addressed with the concept of tCERs	Accepted

IPCC WGIII Fourth Assessment Report, Second Order Draft

Chapter-Comment	Batch	From Page	From Line	To Page	To line	Comments	Considerations by the writing team
						and ICERS and cite the UNFCCC decision where this is given. End of story! (Sandra Brown, Winrock International)	
9-198	B	66	15	66	0	A more general discussion of permanence is appropriate—how to ensure retention of increased uptake. As is, the focus is on CDM under Kyoto. U.S. Government (Government of U.S. Department of State)	Accepted
9-623	A	66	16	68	5	the subchapter should deal with the permancece issue in general. It is not appropriate here to explain the MA in detail. Therefore shorten paras 2 and 3, delete table 9.14 and Figure 9.20, if table 9.14 is not deleted add a new row : "replacement""regularly after 5 years" "30 days after request of EB" in the respective columns (Government of Germany)	Accepted; table has been removed, section was shortened and restructured
9-624	A	66	23	66	25	The "time horizon" issue was not the only cause for disagreement. Other reasons include the principle of accounting for emissions and removals where and when they occur, and plantation economics. (Government of Environment Canada)	Accepted
9-625	A	67	1	67	2	The sentence beginning "Most projects..." is unclear. (Government of Environment Canada)	Accepted
9-626	A	67	2	67	4	This sentence referring to the EU's ETS scheme and exclusion of sinks projects does not relate to the paragraph it is in. Consider moving this to the section on Environmental Issues section 9.6.6.2 on page 64 as this was the main reason for the exclusion. (Kirsten Macey, Climate Action Network Europe)	Accepted
9-627	A	67	10	67	10	Upon expiry, the seller does not hold any liability but the buyer (the Annex I party) is responsible for the emissions equal to the number of tCERs or ICERs that have expired. The problem of permanence of A/R CERs under the CDM was one of seller's (or host country) liability. Decision 19/CP9 reflects the inability of Parties to agree on a system that would hold the sellers liable (with little risk of non-compliance); hence the buyer becomes liable. The initial proposal for the ICER was for a tCER that only expired upon reversal - to counter the assumption of 100% reversal after 5 years. (Government of Environment Canada)	Accepted
9-628	A	67	12	67	13	It seems contradicting to first say that only permanent allowances can replace tCERs while in the next sentence it is stated that also tCERs are accepted for replacement (Martina Jung, Ecofys)	Accepted
9-629	A	67	18	67	70	For the sentence "Assuming constant carbon prices...14 and 35 percent...durling	Accepted

**Expert/Government Review of Second-Order-Draft
Confidential, Do Not Cite or Quote**

IPCC WGIII Fourth Assessment Report, Second Order Draft

Chapter-Comment	Batch	From Page	From Line	To Page	To line	Comments	Considerations by the writing team
						the first commitment period (Figure 9.20)." supportive citation or source should be reffered. (Government of Japan)	
9-630	A	67	20	0	0	It is maybe better to write "...percent of the one of permanent CERs" (Martina Jung, Ecofys)	Accepted
9-631	A	67	23	0	0	Table, 9.14: Renewed tCER can be used during the commitment period DURING WHICH it was certified" (Martina Jung, Ecofys)	Rejected; table was deleted
9-632	A	67	23	0	0	Table 9.14: The Word "Discount" in row 1 is not clear. Maybe better to write: project emissions and negative leakage are subtracted.... (here you can bring in Pedroni (2005) Carbon accounting for sinks in the CDM after CoP-9, In Climate Policy Vol. 5, No. 4) (Martina Jung, Ecofys)	See A9-631
9-633	A	67	23	0	0	Table 9.14: formulate more clearly the two sentences in the table: "Five years after last verification during the crediting period" and "Only until the end of the last entire commitment period during the crediting period" (Martina Jung, Ecofys)	See A9-631
9-634	A	67	24	67	24	Table 9.14: The information provided here is incorrect. Please refer to Decision 19/CP9, paragraphs 23, 36, and 41 to 50 (pages 32, 35, and 36-37 respectively in FCCC/KP/CMP/2005/Add.4 (Government of Environment Canada)	See A9-631
9-645	A	68	0	0	0	figure 9.20 deserves a bit more descriptive explanation of what is shown there (in main text): what explains the shape of the two curves? What do r1 and r2 denote? (Ronald Hutjes, Alterra)	Projects 9.6
9-635	A	68	1	0	0	Figure 9.20 seems to be a little out of context here. Which part of the text it is illustrating? There is no reference in the paragraph on additionality which would explain what it is supposed to show. (Martina Jung, Ecofys)	Accepted; table was deleted
9-636	A	68	1	68	1	Figure 9.20: This figure does not appear to be directly relevant to its reference on the previous page. (Government of Environment Canada)	See A9-635
9-199	B	68	1	68	5	It would be good if more explanation could be added into the text for Figure 9.20. What is the meaning of R1 and R2? What are their relationships to tCERs and ICERs? (Government of Australia)	See A9-635

IPCC WGIII Fourth Assessment Report, Second Order Draft

Chapter-Comment	Batch	From Page	From Line	To Page	To line	Comments	Considerations by the writing team
9-200	B	68	1	68	0	Figure 9.20 – Better explanation of the figure is required. Having trouble seeing the value to this section. U.S. Government (Government of U.S. Department of State)	See A9-635
9-637	A	68	5	68	5	WRI/WBCSD published its GHG Protocol for Project Accounting in November 2005 and is also planning to release (at COP12) a guidance document for LULUCF projects (See http://www.ghgprotocol.org/templates/GHG5/layout.asp?type=p&MenuId=OTAY&doOpen=1&ClickMenu=No). Winrock International has also published a very useful document (see http://www.winrock.org/ecosystems/files/Winrock-BioCarbon_Fund_Sourcebook.pdf) (Government of Environment Canada)	Rejected; the referred grey literature is not adding value to the section on permanence
9-638	A	68	7	0	0	Maybe "buyer liability" is the better word (as the investor could also be a host country entity in case of unilateral CDM) (Martina Jung, Ecofys)	Accepted
9-639	A	68	7	68	8	Second sentence makes no sense. (Government of Environment Canada)	Accepted
9-640	A	68	7	68	8	check sentence starting with "Hence.. (Government of Germany)	Accepted
9-201	B	68	15	68	30	The authors should explain how questions about additionality and baselines, have affected the mitigation potential of A/R project activities. (Government of Australia)	Rejected; the mitigation potential does not depend on these tools
9-641	A	68	16	68	28	this whole section seems completely unconnected to the discussion in this chapter and really relates to KP CDM projects. Also it is called additionality and baselines when it only talks about additionality--which is of itself is ok as baselines and additionality are not really related (ie. additionality has nothing to do with the difference between baseline and with project activity as commonly assumed--see many discussions on this from the World Bank documents who get it right!). If its needs to be retained then it must be linked to issues related to lessons learned. One set of lessons relate to CDM AR obviously--then many of the issues 9.6.6.4-9.6.47 could be condensed into some brief discussion as to how these are addressed in the CDM and what lessons have been learned from this process--methodologies for addressing additionality and leakage are included and approved, permanence issue addressed thru t and l CERS etc... you do not need individual sections on each of the items covering about 5 pages... Also under lessons learned --why not add some brief discussions about other LULUCF activities such as those in the CCX for forest based projects, US DOE 1605b revised guidelines for doing forest-based	Accepted; the section was shortened, little lessons to be learned this far

**Expert/Government Review of Second-Order-Draft
Confidential, Do Not Cite or Quote**

IPCC WGIII Fourth Assessment Report, Second Order Draft

Chapter-Comment	Batch	From Page	From Line	To Page	To line	Comments	Considerations by the writing team
						projects, or California's CCAR registry for LULUCF projects, Australia's NSW exchange and other activities in Australia for rewarding project activities in the forest sector. Why focus only on Kyoto activities when there are many more lessons to be learned from non-KP activities. Seems each of these could be a box and how they have addressed many of the issues such as leakage, permanence, additionality, and the like. This would make a reasonable section then and encompass more types of activities for doing such projects. (Sandra Brown, Winrock International)	
9-642	A	68	16	68	28	This is a rather light or sparse treatment of the issues of additionality and baseline setting for forestry projects. The presentation of latest developments, insights and guidance should go beyond CDM A/R and the Kyoto Protocol. The overarching issue is the need to account for net emission reductions or removals that would not have occurred in the absence of the project activity. Compliance mechanisms or crediting systems address this issue by defining rules of additionality and baselines. The exact specifications will depend on the policy objectives behind the mechanism or system (e.g. some systems may not require projects to prove financial additionality). An important distinction between forestry and other project sectors is in baselines - forest management projects generally require dynamic baselines that can accommodate unpredictable natural disturbances. (Government of Environment Canada)	Rejected; there is no lessons to be learned other than the sparse experiences from CDM A/R
9-643	A	68	23	68	23	Terminology should be consistent on "normal CDM" and "industrial and A/R projects". (Government of Japan)	Noted
9-644	A	68	30	74	38	the section 9.7 and 9.8 are weak and dilute the efforts of the paper--in an assessment such as this it is quite appropriate to say not much is known about a topic rather than rambling on about poorly documented and in many cases not very relevant topics. This chapter is about mitigation in the forest sector and how this could contribute to sustainable development not a chapter on SD alone...reduce the length and link it more directly to SD --Table 9.15 is a start and could start the section at line 45, p. 69, and then condense the following material. I think one means watershed not water shield in Table 9.15 (several times) (Sandra Brown, Winrock International)	Accepted Reduce to minimum or delete 9.7.1
9-646	A	69	16	0	0	'article 2.1 (a,b)' Which MEA? (Hector Ginzo, Ministerio de Relaciones Exteriores, Comercio Internacional Y Culto)	Reject. But may be solve by reducing or deleting the section
9-647	A	69	16	69	16	it is unclear where the Article 2.1(a,b) comes from, give clear reference.	Accept. . But may be solve by reducing or

**Expert/Government Review of Second-Order-Draft
Confidential, Do Not Cite or Quote**

IPCC WGIII Fourth Assessment Report, Second Order Draft

Chapter-Comment	Batch	From Page	From Line	To Page	To line	Comments	Considerations by the writing team
						(Government of Germany)	deleting the section
9-202	B	69	16	69	16	Article 2.1 (a,b) of what agreement needs to be specified. Also, "parties" should be changed to "countries." U.S. Government (Government of U.S. Department of State)	Accept. . But may be solve by reducing or deleting the section
9-648	A	69	18	69	21	The figure is not relevant to the text. The figure compares true CERs vis-à-vis free-rider CERs as to the effect of transaction costs on the quantity of certificates. This is not related to the tCER/ICER ratio, is it? (Hector Ginzo, Ministerio de Relaciones Exteriores, Comercio Internacional Y Culto)	Projects. 9.6
9-12	C	70				Table 9.15 comment: Third row, fourth column (section B). This sentence does not make sense. Previous comments apply (see comments 39, 42 above) about negative impacts on biodiversity from afforestation and reforestation activities. (Government of New Zealand)	Accept. Table is review
9-13	C	70				Table 9.15 comment: Fourth row, fourth column (section B). Previous comments apply (see comments 39, 42, 43 above) about negative impacts on biodiversity from afforestation and reforestation activities. The impacts of forest management on biodiversity cannot be generalised, and just because a native forest is managed rather than unmanaged does not automatically mean the impacts on biodiversity will be negative. The management objectives could be to maintain and enhance biodiversity. The sentence referring to "water sheild protection" does not make sense. (Government of New Zealand)	Accept. Table is review
9-14	C	70				Table 9.15 comment: Second row, fourth column (section A). The sentence referring to biodiversity is again (see comment 39 above) a sweeping statement. Planted forests can have positive impacts on biodiversity and this is not reflected (see Maclaren, J.P. (1996) 'Environmental effects of planted forests in New Zealand'). The use of the term "mono-specific" is vague; similarly the use of the term "diverse shrub lands" is amorphous. It may be better to say, "the impacts of afforestation and reforestation on biodiversity conservation are complex. In general, if the afforestation activity replaces a land-use that was previously more biodiverse, then the impacts of the activity on biodiversity conservation objectives ought to be rigorously assessed." (Government of New Zealand)	Accept. Table is review. References will be look up
9-649	A	70	0	70	0	Table 9.15: explanations given regarding SD implications of forestry mitigation are vague and not always proved (i.e. reducing deforestation would provide sustained income for poor communities...? Not very convincing, as these poor communities	Accepted. Table will be review and better explanations will be given.

**Expert/Government Review of Second-Order-Draft
Confidential, Do Not Cite or Quote**

IPCC WGIII Fourth Assessment Report, Second Order Draft

Chapter-Comment	Batch	From Page	From Line	To Page	To line	Comments	Considerations by the writing team
						depends mainly on wood fuel: reduced deforestation is directly translated into loss of welfare...). Would it be possible to present case studies with economic evaluations based on the effects method to compare worst case scenario (business-as-usual) and best case scenario for each activity category (reducing deforestation, afforestation/reforestation, etc.)? The results could give a better understanding of trade-offs between the social, economic and environmental dimensions of forestry mitigation options. (Government of France)	
9-650	A	70	5	70	0	Table 9.15. Box A. Afforestation/reforestation will also take up unused agricultural land. Box B. A section should be added for mixed, uneven-aged forestry with continuous cover, which will have similar social and economic effects, but positive impacts in terms of biodiversity, water shield and soil protection. Box C. The environmental impacts are unlikely to be negative if the harvest is sustainable. (David Viner, University of East Anglia)	Accepted. Comments will be taken into account when reassessing the table.
9-651	A	70	5	0	0	Table 9.15; what is source for assumptions ? Are those the ones given at para 9.7.3 ? Please explain this. Under B in the table , why distinction between plantation and native forest management (implications are almost identical) (Peter Van der Meer, Alterra)	Accepted. Table improved and link to the text.
9-652	A	70	5	70	5	Table 9.15: add footnote 1 which is mentioned in column 2 row 2. check statement in part B last column, first row. in last box of part C there is a reference to bioenergy box below "less negative impacts than in case of bioenergy" but there isn't anything stated about such negative impacts, please add to (Government of Germany)	Accepted. Comments will be taken into account when reassessing the table.
9-203	B	70	5	70	0	Table 9.15. Under reducing deforestation, Economic cell, it needs to be added that forest conservation can also reduce local incomes if forest users can no longer harvest trees. Under A/R, Environment cell, add that there can be negative watershed impacts if the tree used are water-hungry species. U.S. Government (Government of U.S. Department of State)	Partially accepted. The notions will be included
9-653	A	70	6	70	6	At the row of "Reducing deforestation and forest degradation" and the column of "Social" in the table 9.15, notes corresponding to " 1 " attached to "Promote livelihood" may be missing. (Yoshiyuki Kiyono, Forestry and Forest Products Research Institute)	Accepted
9-654	A	70	6	70	6	At the row of "Afforestation/Reforestation" and the column of "Social" in the table 9.15, an influx of outside population should be referred because it is more difficult to	Accepted

**Expert/Government Review of Second-Order-Draft
Confidential, Do Not Cite or Quote**

IPCC WGIII Fourth Assessment Report, Second Order Draft

Chapter-Comment	Batch	From Page	From Line	To Page	To line	Comments	Considerations by the writing team
						manage than displacement and has strong impacts on the local society. (Yoshiyuki Kiyono, Forestry and Forest Products Research Institute)	
9-655	A	70	11	70	11	the word "shield" should be replaced by the word "shed" so that the phrase will read " ..water shed protection.." rather than "water shield protection" (Samuel Kainja, Malawi Water Partnership)	Editorial
9-656	A	70	20	70	20	the word "shield" should be replaced by the word "shed" so that the phrase will read " ..water shed protection.." rather than "water shield protection" (Samuel Kainja, Malawi Water Partnership)	Editorial
9-657	A	70	25	70	25	the word "shield" should be replaced by the word "shed" so that the phrase will read " ..water shed protection.." rather than "water shield protection" (Samuel Kainja, Malawi Water Partnership)	Editorial
9-658	A	70	32	70	32	the word "shield" should be replaced by the word "shed" so that the phrase will read " ..water shed protection.." rather than "water shield protection" (Samuel Kainja, Malawi Water Partnership)	Editorial
9-659	A	71	37	71	38	I guess the meaning of "Little evidencewhen practicing agroforestry (Clavijo et al. 2005)" from this context that agro-forestry systems may have not a serious negative impact. But in truth, agro-forestry systems can risk biodiversity in the tropics (the 100 of the World's Worst Invasive Species" produced by SSC's Invasive Species Specialist Group http://www.issg.org/ includes useful plant species in agro-forestry systems such as Melaleuca quinquenervia, Leucaena leucocephala, Chromolaena odorata) and therefore AR4 should refer to the negative aspect of the systems also. (Yoshiyuki Kiyono, Forestry and Forest Products Research Institute)	Accepted. Check
9-660	A	72	1	72	1	the sentence , " Afforestation may result in better balance in the regional water cycle balance.." should omit the second "balance" in the sentence. The second "balance" is not necessary. (Samuel Kainja, Malawi Water Partnership)	Editorial
9-15	C	72	21	72	27	Previous comments (39, 42, 43, 44 above) apply about negative impacts on biodiversity from plantations. Planted forests can have positive impacts on biodiversity and this is not reflected. (see Maclaren, J.P. (1996) 'Environmental effects of planted forests in New Zealand') We suggest the following reword for the whole paragraph, "the impacts of plantation establishment and management on biodiversity conservation are complex. In general, if the afforestation activity replaces a land-use that was previously more biodiverse, then the impacts of the activity on biodiversity conservation objectives ought to be rigorously assessed. Many factors, including scale, species, management, age, rotation period, and the	Accept. Table is review. References will be look up

Expert/Government Review of Second-Order-Draft
Confidential, Do Not Cite or Quote

IPCC WGIII Fourth Assessment Report, Second Order Draft

Chapter-Comment	Batch	From Page	From Line	To Page	To line	Comments	Considerations by the writing team
						impact of the plantation on the surrounding landscape, are relevant for assessing biodiversity impacts. We suggest that the remaining text be deleted. Specifically, we believe the first sentence is an inaccurate generalisation, and the final sentence in the paragraph is vague. (Government of New Zealand)	
9-661	A	72	23	72	37	Some important issues that can affect forest management could be implemented: 1) Biodiversity is highly dependent on land-scape structure and connectivity 2) Land-scape needs to be also continuous in time --> effect of forest management 3) Different species see land-scape (and continuity) differently. For some species a single dead log means nearly everything, but some require tens of square kilometers of space. Some species see plantations as corridors, some as inhospitable environment (probably most species in tropics fall under this category). 4) Rapid changes in land-scape structure can lead to extinction debt. Species still exist but are 'en route' to extinction. (Government of Finland)	Noted.
9-662	A	72	24	72	25	Sentence beginning ('Being...') is confusing. (Hector Ginzo, Ministerio de Relaciones Exteriores, Comercio Internacional Y Culto)	Accepted
9-663	A	72	24	72	25	Consider revising this sentence as it is not clear what the intent is. (Kirsten Macey, Climate Action Network Europe)	Accepted
9-664	A	72	24	72	24	I don't understand the sentence "Being scale.....for biodiversity" (Government of Finland)	
9-665	A	72	24	72	25	Please check sentence. (Government of Germany)	Accepted
9-666	A	72	29	72	31	Much afforestation will be on former arable land. The correct species mix is important for both resilience and biodiversity in the future. (Viner D., Sayer M., Uyarra M., and Hodgson N., 2006 Climate Change and the European Countryside: Impacts on Land Management and Response Strategies. Report Prepared for the Country Land and Business Association., UK. Publ., CLA, UK 180 pages). (David Viner, University of East Anglia)	Accepted. Reference taken up, but look for peer review if available (MEDIT refs may be
9-667	A	72	29	72	37	This short paragraph leaves the impression that little is known regarding how to integrate intensively managed forests into a landscape so as to enhance biological diversity and other landscape environmental attributes. While there is always a need for better information, a great deal is already known. Some illustrative references are (1) Bird, S. et. al., "Impacts of silvicultural practices on soil and litter arthropod diversity in a Texas plantation", Forest Ecology and Management 131 (2000) 65-	Accepted. References Will be check it and as far as possible taken into account.

**Expert/Government Review of Second-Order-Draft
Confidential, Do Not Cite or Quote**

IPCC WGIII Fourth Assessment Report, Second Order Draft

Chapter-Comment	Batch	From Page	From Line	To Page	To line	Comments	Considerations by the writing team
						80. and (2) Wilson, M.D. and Watts, "Breeding bird communities in pine plantations on the coastal plain of North Carolina", The Chat, published by teh Carolina Bird Club, West Columbia SC, Winter 2000 - more references below (Reid Miner, NCASI)	
9-668	A	72	29	72	37	More references explaining the opportunities to address biodiversity through proper forest management (continued from above) include (7) Tucker, J.W., et. al., "Managing mid-rotation pine plantations to enhance Bachman's sparrow habitat", Wildlife Society B u l l e t i n 1998, 26(2):342-348, and (8) Rosenfeld, R.N., "Bredding distribution and nest-site habitat of northern Goshawks in Wisconsin", Journal of Raptor Rresearch Vol 32 (3): 189-194 September 1998,, published by the Raptor Research Foundation, OSNA, Waco TX (Reid Miner, NCASI)	See 9-667
9-669	A	72	29	72	37	More references explaining the opportunities to address biodiversity through proper forest management (continued from above) include (5) Tappe P.A. et. al., "Breeding bird communities on four watersheds under differetn forest management scenarios in the Ouachita Mountains of Arkansas", in in Guldin, James M., tech. comp. 2004. Ouachita and Ozark Mountains symposium: ecosystem management research. Gen. Tech. Rep. SRS-74. Asheville, NC: U.S. Department of Agriculture, Forest Service, Southern Research Station. 321 p and (6) Carnus, J_M, et. al., "Planted forests and Biodiversity," UNFF Intersessional Experts Meeting on the Role of Planted Forests in Sustainable Forest Management, 24-30 March 2003, New Zealand, available at http://www.maf.govt.nz/mafnet/unff-planted-forestry-meeting/ - More references below (Reid Miner, NCASI)	See 9-667
9-670	A	72	29	72	37	More references explaining the opportunities to address biodiversity through proper forest management (continued from above) include (3) Fox, T.F. et. al., "Amphibian communities under diverse forest management in the Ouachita Mountains, Arkansas", in Guldin, James M., tech. comp. 2004. Ouachita and Ozark Mountains symposium: ecosystem management research. Gen. Tech. Rep. SRS-74. Asheville, NC: U.S. Department of Agriculture, Forest Service, Southern Research Station. 321 p.and (4) Shipman, P.A. et. al., "Reptile communities under diverse forest management in teh Ouachita Mountains, Arkansas", in in Guldin, James M., tech. comp. 2004. Ouachita and Ozark Mountains symposium: ecosystem management research. Gen. Tech. Rep. SRS-74. Asheville, NC: U.S. Department of Agriculture, Forest Service, Southern Research Station. 321 p - more below (Reid Miner, NCASI)	See 9-667

**Expert/Government Review of Second-Order-Draft
Confidential, Do Not Cite or Quote**

IPCC WGIII Fourth Assessment Report, Second Order Draft

Chapter-Comment	Batch	From Page	From Line	To Page	To line	Comments	Considerations by the writing team
9-16	C	72	30	72	31	Positive as well as negative impacts need to be managed. We suggest that the word "negative" on line 30 be deleted, and words that follow be altered to read, "impacts can be managed if adequate...." (Government of New Zealand)	Accepted. The notion will be taken into account when revising the text.
9-671	A	72	37	0	0	Write Jackson et al., 2005). (Expédit Wilfrid VISSIN, FLASH/Abomey-Calavi University)	Editorial
9-672	A	72	37	0	0	Write Jackson et al., 2005). (YABI Ibouaïma, LECREDE/DGAT/UAC)	Editorial
9-204	B	72	39	72	0	Section 9.8 - It would be more meaningful if tied in with the mitigation estimates in Section 9.4. Also, it would be useful to discuss the potential forest implications of technological change in agriculture (e.g., increased yields decreasing deforestation pressure, see Sands and Leimbach, 2003, for an example). U.S. Government (Government of U.S. Department of State)	Taken into account. Reword to connect Section 9.4 discussion.
9-673	A	72	41	74	15	In the technology RD section, meteorological flux monitoring in forests should be also covered as a new technology to be studied. (Government of Japan)	Accepted. Add a new sentence for flux towers monitoring.
9-674	A	72	41	74	40	whole Section 9.8: Could it give estimates what is the role of technology within forestry in quantitative units? If there is no such research data, could it state what is the the state of research. What technologies might be critical, less critical, etc. for mitigation (Government of Finland)	Taken into account.
9-675	A	73	3	73	15	In continuous cover forestry, where trees are selected individually for felling, this is especially important so as to avoid damage to other trees, including natural regeneration. Extraction by horse is still preferred, where possible, by some owners. Page 73 line 15. Thinning is all-important for future standing volume, and is typically the most neglected management operation where woodland is under-managed. However, low-cost technologies (line 19) are not the key, but an economic use for the thinnings. (David Viner, University of East Anglia)	Taken into account. Revised sentences.
9-676	A	73	5	73	7	Can you further explain this statement ? I would expect mechanisation to use more fossil fuel ?? (Peter Van der Meer, Alterra)	Taken into account. Revise sentences
9-677	A	73	6	0	0	Write (.... Asiainen, 1996). (Expédit Wilfrid VISSIN, FLASH/Abomey-Calavi University)	Accepted.
9-678	A	73	6	0	0	Write (.... Asiainen, 1996). (YABI Ibouaïma, LECREDE/DGAT/UAC)	Accepted.

**Expert/Government Review of Second-Order-Draft
Confidential, Do Not Cite or Quote**

IPCC WGIII Fourth Assessment Report, Second Order Draft

Chapter-Comment	Batch	From Page	From Line	To Page	To line	Comments	Considerations by the writing team
9-679	A	73	49	0	0	Write (... Marland, 1996). (Expédit Wilfrid VISSIN, FLASH/Abomey-Calavi University)	Accepted.
9-680	A	73	49	0	0	Write (... Marland, 1996). (YABI Ibouaïma, LECREDE/DGAT/UAC)	Accepted.
9-681	A	74	4	74	10	Cost analysis of mitigation options have been made and trade-offs between the social, economic and environmental dimensions of forestry mitigation options are available. Would it be possible to present some of those results ? (Government of France)	Taken into account
9-682	A	74	5	74	5	"...substitution of biomass.." What is substituted for and what is the substitute? (Government of Finland)	Accepted. Reword to "by biomass"
9-683	A	74	12	74	15	The role of technology for facilitating mitigation is very positive. See also P 73 L5-7: "The mechanization in forestry seems to be effective for promoting mitigation options". Is this really true: I wonder what is the role of more efficient harvesting/thinning technoly for deforestation in tropics? (Government of Finland)	Taken into account. Revised sentences.
9-684	A	74	25	0	0	Mention ITTO here as well ? (Peter Van der Meer, Alterra)	Accepted.
9-685	A	74	28	0	0	Insert 'sustainable' in front of forest management here. (Kirsten Macey, Climate Action Network Europe)	Accepted.
9-205	B	74	40	79	42	Issue of lack of permanence of forest sequestration should be addressed somewhere on this page. In general, section 9.5 of the technical summary does not map well to section 9.6.6. of the forestry chapter. Also, the USA has several comments on section 9.6.6. of the forestry chapter that will need to also be reflected in section 9.5 of the technical summary. U.S. Government (Government of U.S. Department of State)	Accepted. It is discussed in Werer's section.
9-686	A	74	41	75	22	The text may be reduced and/or changed to bullet points (ANISH CHATTERJEE, DEVELOPMENT ALTERNATIVES)	
9-687	A	74	42	74	42	forest mitigation of what? (need to reword the sentence) (Andrei Kirilenko, University of North Dakota)	
9-688	A	74	43	74	46	Is this consistent with the estimates given earlier in this chapter? (Martina Jung, Ecofys)	Yes it is.
9-206	B	74	45	74	0	Section 9.9 - Could be organized better. Many previous comments are relevant here as well and the section should be revised following revision of the previous sections. U.S. Government (Government of U.S. Department of State)	Accepted. We will work on the section.

**Expert/Government Review of Second-Order-Draft
Confidential, Do Not Cite or Quote**

IPCC WGIII Fourth Assessment Report, Second Order Draft

Chapter-Comment	Batch	From Page	From Line	To Page	To line	Comments	Considerations by the writing team
9-689	A	74	46	0	0	Insert other references of impacts of science including: -Tropical Forests and Atmospheric Carbon Dioxide: Current Knowledge and Potential Future Scenarios Lewis, S; Phillips, O; Baker, T; Malhi, Y; Lloyd, J (2005) and Global Response of terrestrial ecosystem structure and function to CO2 and climate change: results from six dynamic global vegetation models. Global Change Biology (2001) Cramer, W etal (Kirsten Macey, Climate Action Network Europe)	Accepted. Will be reviewed and incorporated if appropriate.
9-207	B	75	1	74	46	What is the significance of the results being within the SRES range? U.S. Government (Government of U.S. Department of State)	It gives background info to the public.
9-208	B	75	5	75	11	The use of confidence readings seems to be particularly haphazard in this chapter. These use of these readings should be standardised throughout the chapter, following the general IPCC practice. (Government of Australia)	Accepted. Use of uncertainties will be standardized
9-690	A	75	9	75	9	clarify : "Fig Exe sum 1" (.)	Accepted
9-691	A	75	9	0	0	in bracket "(Fig Exe Sum 1)"..... Is there any fig named as Exe sum 1..... please check (ANISH CHATTERJEE, DEVELOPMENT ALTERNATIVES)	Accepted
9-692	A	75	21	0	0	Instead of XXI century it is better to use 21st century.....just a suggestion..... (ANISH CHATTERJEE, DEVELOPMENT ALTERNATIVES)	Accepted
9-693	A	75	24	75	47	Other important factors are timber prices, carbon markets, adaptation of forests to site and future climate, management of insect and mammalian pests. (Viner D., Sayer M., Uyarra M., and Hodgson N., 2006 Climate Change and the European Countryside: Impacts on Land Management and Response Strategies. Report Prepared for the Country Land and Business Association., UK. Publ., CLA, UK 180 pages). (David Viner, University of East Anglia)	Accepted
9-694	A	75	24	75	47	Secondly, Hundreds of millions of forest dwellers depend on non-timber forest products (nuts, gum, honey, seeds etc) for livelihood. Increase the stake and control over forests to local communities to protect forests, biodiversity and carbon. (Government of India)	Accepted
9-695	A	75	24	75	47	"Specific factors....and others". A few points of large relevance to forest sector mitigation in developing countries (Government of India)	Accepted will be revised
9-696	A	75	26	76	36	These points need considerable editing. E.g., 75/26 Nature uses - did you mean	Accepted

**Expert/Government Review of Second-Order-Draft
Confidential, Do Not Cite or Quote**

IPCC WGIII Fourth Assessment Report, Second Order Draft

Chapter-Comment	Batch	From Page	From Line	To Page	To line	Comments	Considerations by the writing team
						conservation? (Andrei Kirilenko, University of North Dakota)	
9-697	A	75	26	75	27	If at all mentioned, this bullet should be somewhere towards the end. Sort according to importance or even work with subheadlines (Reinhold Glauner, Institute for World Forestry)	Accepted
9-698	A	75	28	75	30	The following sentence is incomplete and should be completed, ".. because as the most productive and economical interesting sites are been used." One way is to remove the word "as" and replacing the word "been" by the word "being" to read " .. Because the most productive and economical interesting sites are being used" (Samuel Kainja, Malawi Water Partnership)	Accepted
9-699	A	75	29	0	0	remove "because" (Andrei Kirilenko, University of North Dakota)	Accepted
9-700	A	75	35	75	39	This para, "A reduction in deforestation....projects". is very negative and policy makers may give up effort to halt deforestation. To halt deforestation three critical factors to be addressed are: (i) increase food production to reduce forest conversion to food production; (ii) promote sustainable harvest practices and, (iii) community participation in forest protection and management (Government of India)	Accepted the para. Will be edited
9-701	A	76	2	0	3	Did you mean that the mitigation potential will fluctuate around zero? Also, what are "large forests"? (Andrei Kirilenko, University of North Dakota)	Accepted will be revised, it should read mitigation potential of boreal forests
9-702	A	76	16	0	27	This paragraph seems to be out of place: it says nothing on mitigation and belongs to WG2 chapters. Suggest dropping it. (Andrei Kirilenko, University of North Dakota)	The para. Will be revised and only issues relevant to mitigation will be mentioned here
9-703	A	76	16	0	27	The uncertainty issue was already discussed on pg. 46. Suggest to concentrate the whole discussion in one place. (Andrei Kirilenko, University of North Dakota)	The para. Will be revised and only issues relevant to mitigation will be mentioned here
9-704	A	76	29	76	36	Include biodiversity and sustainable forest mangement as key long-term goals for land-use decisions. (Kirsten Macey, Climate Action Network Europe)	Accepted
9-17	C	76	38			References: Insert : MfE 2005: Review of Climate Change Policies: Ministry for the Environment November 2005. Available at: http://www.climatechange.govt.nz/resources/reports/policy-review-05/index.html (Government of New Zealand)	Accepted
9-705	A	76	40	0	0	Reference section will need some work and re-checking; some highlighted ones--	Accepted

**Expert/Government Review of Second-Order-Draft
Confidential, Do Not Cite or Quote**

IPCC WGIII Fourth Assessment Report, Second Order Draft

Chapter-Comment	Batch	From Page	From Line	To Page	To line	Comments	Considerations by the writing team
						DeFries et al 2005 incomplete; check with TSU about how to reference IPCC chapters--I find referencing the whole report of little use when in reality you are referring to a specific chapter (I think authors forget why they have a reference section--so reader can check up on source--giving a whole report such GPG or SR on LULUCF is not very helpful if you are referring to a specific chapter); Jong should be De Jong et al; Richards et al 2006 Pew reprot is incorect citation; (Sandra Brown, Winrock International)	
9-706	A	76	44	0	0	Specify the number of page of the document (Expédit Wilfrid VISSIN, FLASH/Abomey-Calavi University)	Accept
9-707	A	76	44	0	0	Specify the number of page of the document (YABI Ibouaïma, LECREDE/DGAT/UAC)	Accept
9-708	A	76	48	0	0	Specify the number of page of the document (YABI Ibouaïma, LECREDE/DGAT/UAC)	Accept
9-709	A	77	16	0	0	Specify the number of page of the document (YABI Ibouaïma, LECREDE/DGAT/UAC)	Accept
9-710	A	77	34	0	0	Specify the number of page of the document (Expédit Wilfrid VISSIN, FLASH/Abomey-Calavi University)	Accept
9-711	A	77	34	0	0	Specify the number of page of the document (YABI Ibouaïma, LECREDE/DGAT/UAC)	Accept
9-712	A	78	20	0	0	Put not final at the end of the sentence (Expédit Wilfrid VISSIN, FLASH/Abomey-Calavi University)	Accept
9-713	A	78	20	0	0	Put not final at the end of the sentence (YABI Ibouaïma, LECREDE/DGAT/UAC)	Accept
9-714	A	78	28	0	0	Complet the reference (Expédit Wilfrid VISSIN, FLASH/Abomey-Calavi University)	Accept
9-715	A	78	28	0	0	Complet the reference (YABI Ibouaïma, LECREDE/DGAT/UAC)	Accept
9-716	A	79	4	0	0	Write Chomitz, K.M., 2002 : ... (Expédit Wilfrid VISSIN, FLASH/Abomey-Calavi University)	Accept
9-717	A	79	4	0	0	Write Chomitz, K.M., 2002 : ... (YABI Ibouaïma, LECREDE/DGAT/UAC)	Accept
9-718	A	79	16	0	0	Write Climate Change, 2006 : ... (Expédit Wilfrid VISSIN, FLASH/Abomey-Calavi University)	Accept
9-719	A	79	16	0	0	Write Climate Change, 2006 : ... (YABI Ibouaïma, LECREDE/DGAT/UAC)	Accept

**Expert/Government Review of Second-Order-Draft
Confidential, Do Not Cite or Quote**

IPCC WGIII Fourth Assessment Report, Second Order Draft

Chapter-Comment	Batch	From Page	From Line	To Page	To line	Comments	Considerations by the writing team
9-720	A	79	17	0	0	Remove 2006 at the end of sentence (Expédit Wilfrid VISSIN, FLASH/Abomey-Calavi University)	Accept
9-721	A	79	17	0	0	Remove 2006 at the end of sentence (YABI Ibouaïma, LECREDE/DGAT/UAC)	Accept
9-209	B	81	14	81	15	Delete reference: Government of Australia, 2001: National Greenhouse Strategies (Government of Australia)	Accept
9-722	A	82	39	0	0	Specify the number of page of the document (YABI Ibouaïma, LECREDE/DGAT/UAC)	Accept
9-723	A	82	43	0	0	Specify the number of page of the document (YABI Ibouaïma, LECREDE/DGAT/UAC)	Accept
9-724	A	82	44	0	0	Specify the number of page of the document (YABI Ibouaïma, LECREDE/DGAT/UAC)	Accept
9-725	A	82	46	0	0	Specify the number of page of the document (YABI Ibouaïma, LECREDE/DGAT/UAC)	Accept
9-726	A	83	6	0	0	Specify the number of page of the document (Expédit Wilfrid VISSIN, FLASH/Abomey-Calavi University)	Accept
9-727	A	83	6	0	0	Specify the number of page of the document (YABI Ibouaïma, LECREDE/DGAT/UAC)	Accept
9-728	A	83	7	0	0	Specify the number of page of the document (Expédit Wilfrid VISSIN, FLASH/Abomey-Calavi University)	Accept
9-729	A	83	7	0	0	Specify the number of page of the document (YABI Ibouaïma, LECREDE/DGAT/UAC)	Accept
9-730	A	83	10	0	0	Specify the number of page of the document (Expédit Wilfrid VISSIN, FLASH/Abomey-Calavi University)	Accept
9-731	A	83	10	0	0	Specify the number of page of the document (YABI Ibouaïma, LECREDE/DGAT/UAC)	Accept
9-732	A	83	16	0	0	Specify the date of document (Expédit Wilfrid VISSIN, FLASH/Abomey-Calavi University)	Accept
9-733	A	83	16	0	0	Specify the date of document (YABI Ibouaïma, LECREDE/DGAT/UAC)	Accept
9-734	A	83	29	83	31	Update the reference (as also the quote in the text): Jung (2005) The role of forestry projects in the Clean Development Mechanism, In Environmental Science & Policy 8 (2005), pp. 87-104. (Martina Jung, Ecofys)	Accept
9-735	A	84	7	0	0	Specify the number of page of the document	Accept

**Expert/Government Review of Second-Order-Draft
Confidential, Do Not Cite or Quote**

IPCC WGIII Fourth Assessment Report, Second Order Draft

Chapter-Comment	Batch	From Page	From Line	To Page	To line	Comments	Considerations by the writing team
						(Expédit Wilfrid VISSIN, FLASH/Abomey-Calavi University)	
9-736	A	84	7	0	0	Specify the number of page of the document (YABI Ibouaïma, LECREDE/DGAT/UAC)	Accept
9-737	A	84	14	0	0	Specify the number of page of the document (Expédit Wilfrid VISSIN, FLASH/Abomey-Calavi University)	Accept
9-738	A	84	14	0	0	Specify the number of page of the document (YABI Ibouaïma, LECREDE/DGAT/UAC)	Accept
9-739	A	84	37	0	0	Write ... (in press). (Expédit Wilfrid VISSIN, FLASH/Abomey-Calavi University)	Accept
9-740	A	84	37	0	0	Write ... (in press). (YABI Ibouaïma, LECREDE/DGAT/UAC)	Accept
9-741	A	85	23	0	0	Specify the number of page of the document (Expédit Wilfrid VISSIN, FLASH/Abomey-Calavi University)	Accept
9-742	A	85	23	0	0	Specify the number of page of the document (YABI Ibouaïma, LECREDE/DGAT/UAC)	Accept
9-743	A	85	44	0	0	Specify the number of page of the document (YABI Ibouaïma, LECREDE/DGAT/UAC)	Accept
9-744	A	85	47	0	0	Specify the number of page of the document (YABI Ibouaïma, LECREDE/DGAT/UAC)	Accept
9-745	A	86	19	0	0	Specify the number of page of the document (YABI Ibouaïma, LECREDE/DGAT/UAC)	Accept
9-746	A	86	30	0	0	Specify the number of page of the document (YABI Ibouaïma, LECREDE/DGAT/UAC)	Accept
9-747	A	87	23	0	0	Specify the number of page of the document (YABI Ibouaïma, LECREDE/DGAT/UAC)	Accept
9-748	A	87	37	0	0	Specify the number of page of the document (YABI Ibouaïma, LECREDE/DGAT/UAC)	Accept
9-749	A	87	41	0	0	Specify the number of page of the document (Expédit Wilfrid VISSIN, FLASH/Abomey-Calavi University)	Accept
9-750	A	87	41	0	0	Specify the number of page of the document (YABI Ibouaïma, LECREDE/DGAT/UAC)	Accept
9-751	A	87	49	0	0	Specify the number of page of the document (Expédit Wilfrid VISSIN, FLASH/Abomey-Calavi University)	Accept
9-752	A	87	49	0	0	Specify the number of page of the document (YABI Ibouaïma, LECREDE/DGAT/UAC)	Accept

**Expert/Government Review of Second-Order-Draft
Confidential, Do Not Cite or Quote**

IPCC WGIII Fourth Assessment Report, Second Order Draft

Chapter-Comment	Batch	From Page	From Line	To Page	To line	Comments	Considerations by the writing team
9-753	A	88	18	0	0	Specify the number of page of the document (YABI Ibouaraïma, LECREDE/DGAT/UAC)	Accept
9-754	A	88	22	0	0	Specify the number of page of the document and where is publied (YABI Ibouaraïma, LECREDE/DGAT/UAC)	Accept
9-755	A	88	24	0	0	Specify the number of page of the document and where is publied (YABI Ibouaraïma, LECREDE/DGAT/UAC)	Accept
9-210	B	88	40	88	40	Additional reference: Brack, C., G.P. Richards, and R. Waterworth, 2006: Integrated and comprehensive estimation of emissions for greenhouse gases. Sustainability Science (In press) (Government of Australia)	Accept
9-756	A	88	44	0	0	Specify the number of page of the document (YABI Ibouaraïma, LECREDE/DGAT/UAC)	Accept
9-757	A	89	8	0	0	Write (in print). (Expédit Wilfrid VISSIN, FLASH/Abomey-Calavi University)	Accept
9-758	A	89	8	0	0	Write (in print). (YABI Ibouaraïma, LECREDE/DGAT/UAC)	Accept
9-759	A	89	17	0	0	Specify the number of page of the document (Expédit Wilfrid VISSIN, FLASH/Abomey-Calavi University)	Accept
9-760	A	89	17	0	0	Specify the number of page of the document (YABI Ibouaraïma, LECREDE/DGAT/UAC)	Accept
9-761	A	89	28	0	0	Put not final at the end of the sentence (Expédit Wilfrid VISSIN, FLASH/Abomey-Calavi University)	Accept
9-762	A	89	28	0	0	Put not final at the end of the sentence (YABI Ibouaraïma, LECREDE/DGAT/UAC)	Accept
9-763	A	89	29	0	0	Write ... (in press). (Expédit Wilfrid VISSIN, FLASH/Abomey-Calavi University)	Accept
9-764	A	89	29	0	0	Write ... (in press). (YABI Ibouaraïma, LECREDE/DGAT/UAC)	Accept
9-765	A	89	35	0	0	Specify the number of page of the document (Expédit Wilfrid VISSIN, FLASH/Abomey-Calavi University)	Accept
9-766	A	89	35	0	0	Specify the number of page of the document (YABI Ibouaraïma, LECREDE/DGAT/UAC)	Accept
9-767	A	89	43	0	0	Put not final at the end of the sentence (Expédit Wilfrid VISSIN, FLASH/Abomey-Calavi University)	Accept
9-768	A	89	43	0	0	Put not final at the end of the sentence	Accept

IPCC WGIII Fourth Assessment Report, Second Order Draft

Chapter-Comment	Batch	From Page	From Line	To Page	To line	Comments	Considerations by the writing team
						(YABI Ibouaraïma, LECREDE/DGAT/UAC)	
9-769	A	90	2	0	0	Write mann et al., 2005 : (Expédit Wilfrid VISSIN, FLASH/Abomey-Calavi University)	Accept
9-770	A	90	2	0	0	Write mann et al., 2005 : (YABI Ibouaraïma, LECREDE/DGAT/UAC)	Accept
9-771	A	90	3	0	0	Specify the number of page of the document (Expédit Wilfrid VISSIN, FLASH/Abomey-Calavi University)	Accept
9-772	A	90	3	0	0	Specify the number of page of the document (YABI Ibouaraïma, LECREDE/DGAT/UAC)	Accept
9-773	A	90	4	0	0	Write ... 2003 : (Expédit Wilfrid VISSIN, FLASH/Abomey-Calavi University)	Accept
9-774	A	90	4	0	0	Write ... 2003 : (YABI Ibouaraïma, LECREDE/DGAT/UAC)	Accept
9-775	A	90	6	0	0	Specify the number of page of the document (Expédit Wilfrid VISSIN, FLASH/Abomey-Calavi University)	Accept
9-776	A	90	6	0	0	Specify the number of page of the document (YABI Ibouaraïma, LECREDE/DGAT/UAC)	Accept
9-777	A	90	7	0	0	Write ... 1997 : (Expédit Wilfrid VISSIN, FLASH/Abomey-Calavi University)	Accept
9-778	A	90	7	0	0	Write ... 1997 : (YABI Ibouaraïma, LECREDE/DGAT/UAC)	Accept
9-779	A	90	14	0	0	Put not final at the end of the sentence (YABI Ibouaraïma, LECREDE/DGAT/UAC)	Accept
9-780	A	90	21	0	0	Specify the number of page of the document (Expédit Wilfrid VISSIN, FLASH/Abomey-Calavi University)	Accept
9-781	A	90	21	0	0	Specify the number of page of the document (YABI Ibouaraïma, LECREDE/DGAT/UAC)	Accept
9-782	A	90	22	0	0	Write ... Faaij, (2005) : (Expédit Wilfrid VISSIN, FLASH/Abomey-Calavi University)	Accept
9-783	A	90	22	0	0	Write ... Faaij, (2005) : (YABI Ibouaraïma, LECREDE/DGAT/UAC)	Accept
9-784	A	90	23	0	0	Specify the number of page of the document (YABI Ibouaraïma, LECREDE/DGAT/UAC)	Accept
9-785	A	90	26	0	0	Specify the number of page of the document (Expédit Wilfrid VISSIN, FLASH/Abomey-Calavi University)	Accept

**Expert/Government Review of Second-Order-Draft
Confidential, Do Not Cite or Quote**

IPCC WGIII Fourth Assessment Report, Second Order Draft

Chapter-Comment	Batch	From Page	From Line	To Page	To line	Comments	Considerations by the writing team
9-786	A	90	26	0	0	Specify the number of page of the document (YABI Ibouaraïma, LECREDE/DGAT/UAC)	Accept
9-787	A	90	27	0	0	Write ... (in press). (YABI Ibouaraïma, LECREDE/DGAT/UAC)	Accept
9-788	A	90	33	0	0	Write ... 2006 : ... (Expédit Wilfrid VISSIN, FLASH/Abomey-Calavi University)	Accept
9-789	A	90	33	0	0	Write ... 2006 : ... (YABI Ibouaraïma, LECREDE/DGAT/UAC)	Accept
9-790	A	90	35	0	0	Write ... 2004 : (Expédit Wilfrid VISSIN, FLASH/Abomey-Calavi University)	Accept
9-791	A	90	35	0	0	Write ... 2004 : (YABI Ibouaraïma, LECREDE/DGAT/UAC)	Accept
9-792	A	90	37	0	0	Specify the number of page of the document (Expédit Wilfrid VISSIN, FLASH/Abomey-Calavi University)	Accept
9-793	A	90	37	0	0	Specify the number of page of the document (YABI Ibouaraïma, LECREDE/DGAT/UAC)	Accept
9-794	A	90	38	0	0	Specify the number of page of the document and where is plublied (YABI Ibouaraïma, LECREDE/DGAT/UAC)	Accept
9-795	A	90	39	0	0	Write ... 2005 :... (Expédit Wilfrid VISSIN, FLASH/Abomey-Calavi University)	Accept
9-796	A	90	39	0	0	Write ... 2005 :... (YABI Ibouaraïma, LECREDE/DGAT/UAC)	Accept
9-797	A	90	40	0	0	Specify the number of page of the document (Expédit Wilfrid VISSIN, FLASH/Abomey-Calavi University)	Accept
9-798	A	90	40	0	0	Specify the number of page of the document (YABI Ibouaraïma, LECREDE/DGAT/UAC)	Accept
9-799	A	90	41	0	0	Write ... 2004 : (Expédit Wilfrid VISSIN, FLASH/Abomey-Calavi University)	Accept
9-800	A	90	41	90	45	These lines may contain repetition of the same literature. (Yoshiyuki Kiyono, Forestry and Forest Products Research Institute)	Accept
9-801	A	90	41	0	0	Write ... 2004 : (YABI Ibouaraïma, LECREDE/DGAT/UAC)	Accept
9-802	A	90	43	0	0	Write ... 2004 : (Expédit Wilfrid VISSIN, FLASH/Abomey-Calavi University)	Accept
9-803	A	90	43	0	0	Write ... 2004 :	Accept

IPCC WGIII Fourth Assessment Report, Second Order Draft

Chapter-Comment	Batch	From Page	From Line	To Page	To line	Comments	Considerations by the writing team
						(YABI Ibouaraïma, LECREDE/DGAT/UAC)	
9-804	A	90	46	0	0	Write ... Utkin, D., 2005 : ... and remove 2005 at the end (Expédit Wilfrid VISSIN, FLASH/Abomey-Calavi University)	Accept
9-805	A	90	46	0	0	Write ... Utkin, D., 2005 : ... and remove 2005 at the end (YABI Ibouaraïma, LECREDE/DGAT/UAC)	Accept
9-806	A	91	1	0	0	Specify initial of name of the author and write ... 1999 : (YABI Ibouaraïma, LECREDE/DGAT/UAC)	Accept
9-807	A	91	6	0	0	Write ... 2005 : ... (Expédit Wilfrid VISSIN, FLASH/Abomey-Calavi University)	Accept
9-808	A	91	6	0	0	Write ... 2005 : ... (YABI Ibouaraïma, LECREDE/DGAT/UAC)	Accept
9-809	A	91	10	0	0	Specify the date of document (Expédit Wilfrid VISSIN, FLASH/Abomey-Calavi University)	Accept
9-810	A	91	10	0	0	Specify the date of document (YABI Ibouaraïma, LECREDE/DGAT/UAC)	Accept
9-811	A	91	11	0	0	Specify the number of page of the document (Expédit Wilfrid VISSIN, FLASH/Abomey-Calavi University)	Accept
9-812	A	91	11	0	0	Specify the number of page of the document (YABI Ibouaraïma, LECREDE/DGAT/UAC)	Accept
9-813	A	91	15	0	0	Write ... (in press). (Expédit Wilfrid VISSIN, FLASH/Abomey-Calavi University)	Accept
9-814	A	91	15	0	0	Write ... (in press). (YABI Ibouaraïma, LECREDE/DGAT/UAC)	Accept
9-815	A	91	18	0	0	Specify the number of page of the document (Expédit Wilfrid VISSIN, FLASH/Abomey-Calavi University)	Accept
9-816	A	91	18	0	0	Specify the number of page of the document (YABI Ibouaraïma, LECREDE/DGAT/UAC)	Accept
9-817	A	91	20	0	0	Write ... (in press). (Expédit Wilfrid VISSIN, FLASH/Abomey-Calavi University)	Accept
9-818	A	91	20	0	0	Write ... (in press). (YABI Ibouaraïma, LECREDE/DGAT/UAC)	Accept
9-819	A	91	22	0	0	Specify the number of page of the document (YABI Ibouaraïma, LECREDE/DGAT/UAC)	Accept
9-820	A	91	24	0	0	Specify the number of page of the document (YABI Ibouaraïma, LECREDE/DGAT/UAC)	Accept

**Expert/Government Review of Second-Order-Draft
Confidential, Do Not Cite or Quote**

IPCC WGIII Fourth Assessment Report, Second Order Draft

Chapter-Comment	Batch	From Page	From Line	To Page	To line	Comments	Considerations by the writing team
9-821	A	91	27	0	0	Specify the number of page of the document (Expédit Wilfrid VISSIN, FLASH/Abomey-Calavi University)	Accept
9-822	A	91	27	0	0	Specify the number of page of the document (YABI Ibouaïma, LECREDE/DGAT/UAC)	Accept
9-823	A	91	35	0	0	Write ... 2004 : (Expédit Wilfrid VISSIN, FLASH/Abomey-Calavi University)	Accept
9-824	A	91	35	0	0	Write ... 2004 : (YABI Ibouaïma, LECREDE/DGAT/UAC)	Accept
9-825	A	91	41	0	0	Write ... 2000 : ... (Expédit Wilfrid VISSIN, FLASH/Abomey-Calavi University)	Accept
9-826	A	91	41	0	0	Write ... 2000 : ... (YABI Ibouaïma, LECREDE/DGAT/UAC)	Accept
9-827	A	91	43	0	0	Write ... 2004 : (Expédit Wilfrid VISSIN, FLASH/Abomey-Calavi University)	Accept
9-828	A	91	43	0	0	Write ... 2004 : (YABI Ibouaïma, LECREDE/DGAT/UAC)	Accept
9-829	A	92	15	0	0	It seems that two authors are mixed (Expédit Wilfrid VISSIN, FLASH/Abomey-Calavi University)	Accept
9-830	A	92	15	0	0	It seems that two authors are mixed (YABI Ibouaïma, LECREDE/DGAT/UAC)	Accept
9-831	A	92	18	0	0	Specify the date of document (Expédit Wilfrid VISSIN, FLASH/Abomey-Calavi University)	Accept
9-832	A	92	18	0	0	Specify the date of document (YABI Ibouaïma, LECREDE/DGAT/UAC)	Accept
9-833	A	92	19	0	0	Specify the number of page of the document (YABI Ibouaïma, LECREDE/DGAT/UAC)	Accept
9-834	A	92	38	0	0	Put not final at the end of the sentence (YABI Ibouaïma, LECREDE/DGAT/UAC)	Accept
9-835	A	93	9	0	0	Specify date of publication (YABI Ibouaïma, LECREDE/DGAT/UAC)	Accept
9-836	A	93	13	0	0	Specify date of publication (Expédit Wilfrid VISSIN, FLASH/Abomey-Calavi University)	Accept
9-837	A	93	13	0	0	Specify date of publication (YABI Ibouaïma, LECREDE/DGAT/UAC)	Accept
9-838	A	93	16	0	0	Write ... 2003 :	Accept

**Expert/Government Review of Second-Order-Draft
Confidential, Do Not Cite or Quote**

IPCC WGIII Fourth Assessment Report, Second Order Draft

Chapter-Comment	Batch	From Page	From Line	To Page	To line	Comments	Considerations by the writing team
						(Expédit Wilfrid VISSIN, FLASH/Abomey-Calavi University)	
9-839	A	93	16	0	0	Write ... 2003 : (YABI Ibouaïma, LECREDE/DGAT/UAC)	Accept
9-840	A	93	18	0	0	Write ... 2003 : (Expédit Wilfrid VISSIN, FLASH/Abomey-Calavi University)	Accept
9-841	A	93	18	0	0	Write ... 2003 : (YABI Ibouaïma, LECREDE/DGAT/UAC)	Accept