



WMO

# INTERGOVERNMENTAL PANEL ON CLIMATE CHANGE



UNEP

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**IPCC Fourth Assessment Report**  
*Expert Review of the First-Order Draft*

**Chapter 9**

## IPCC Fourth Assessment Report, First Order Draft

Chapter-Comment	Batch	From Page	From Line	To Page	To line	Comments	Considerations by the writing team
9-1	A	0	0			The chapter number in the footnote below may not be 8 but 9 for all pages. (Yoshiyuki Kiyono, Forestry and Forest Products Research Institute)	A
9-2	A	0	0			The chapter is generally well-written, comprehensive and exhaustive. Especially the first part is very informative. From about 9.4.3 onwards it becomes more and more tedious to read despite the overwhelming supply of concrete numbers. It will be hard to find what one wants. There is much repetition on crucial issues such as mitigation potential, synergies. The split in sections on 'assessment of mitigation options', interactions, effectiveness, sustainable development, technology, is not a logical sequence. I wonder if it is not possible to help the reader by discussing all issues related to mitigation, adaptation, synergies, etc more together with all the aspects addressed in different sections, instead of spreading them over the chapter. Maybe a more schematic approach would help, to guide the reader. Much redundancy could be eliminated. (Bart Kruijt, Alterra)	A
9-3	A	0	0			Several important topics seem to be missing from the chapter. In an attached file (Forestry_Z_Somogyi.doc) I provide text that could be included in the relevant parts of the chapter to fill in gaps. (Somogyi Zoltán, Joint Research Institute)	r, we considered the text contributions. They do not seem very relevant. We will however include other txt on impacts of climate change
9-4	A	0	0			In general, the chapter describes well the scientific, economic, policy, mitigation, adaptation and other aspects of the topic. However, these aspects are often mixed in a way that the same issues pop up again and again, making the 66 pages rather redundant. Suggest to reorganize content so that science is clearly separated from other aspects, and that one issue, e.g. the effects of afforestation on soil carbon, is only dealt with in one place. (Somogyi Zoltán, Joint Research Institute)	A
9-5	A	0	0	0	0	My compliments for your chapter and especially also the many cross-references to other chapters and WGII! (Monique Hoogwijk, Ecofys)	A
9-6	A	0	0	0	0	I have also mentioned this to Chapter 3, am not sure where it belongs, but there is a paper from Michiel Schaeffer (RIVM/MNP), 2005 on the impact of albedo on energy crops versus sinks resulting that the temperature reduction due to emission reduction is offset by the reduced albedo . Also the new paper in Nature on CH4 emissions from forest will be included I presume? (Monique Hoogwijk, Ecofys)	A; ancillary benefits will be incorporated more prominently
9-7	A	0	0			Within Chapter coordination – Need for greater coordination across the chapter to reduce redundancy and to organize and concentrate similar text into single	a

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						discussions that can be made more effective with better strategic placement (e.g., discussions and definitions of technical/economic/market potential). (Steven Rose, USEPA)	
9-8	A	0	0			There is a lack of explanation why certain global estimates of potential mitigation are included and why others were excluded. The main ones used on tables and text include Jung (2005) and Sathaye (2001) without a clear discussion why these were highlighted and others not. (Niles John Oliver, Tropical Forest Group)	A, but there are not many new global assessments. We have received some more references recently, and will use them
9-9	A	0	0			The sustainable development links are important, but they seem to dominate the discussion early. Given the report's mitigation focus, the authors might consider dedicating the initial sections to a purer mitigation discussion and then bring in the role of sustainable development in project implementation and success. (Steven Rose, USEPA)	A, this will also take care of overlaps
9-10	A	0	0			The chapter effectively provides illustrative examples for each discussion, but overall does not provide a good sense of where the literature stands on each issue—i.e., new literature effects on thinking, ranges in the literature, areas of consensus or lack of consensus, gaps in knowledge. (Steven Rose, USEPA)	Partly reject. We feel we do make good analysis of recent literature. Some new things arrived and will be included. We agree that the main messages of the chapter are hidden
9-11	A	0	0			Many citations are not listed in the reference section and this must be corrected for an accurate evaluation of the work. Brasseur et al (2007), Jung (2005), Chapin III et al (2005) Schwarze et al (2003) are just some examples. (Niles John Oliver, Tropical Forest Group)	A
9-12	A	0	0			In general, old FAO studies are used whereas newer FAO studies are available. (Niles John Oliver, Tropical Forest Group)	A
9-13	A	0	0			I think the authors have done a great job in putting this chapter together. (Niles John Oliver, Tropical Forest Group)	A
9-14	A	0	0			I may have missed it in my read, but no where did I find the format of US\$10+3% (and other numbers) explained. (Niles John Oliver, Tropical Forest Group)	R, seems a commonly known format
9-15	A	0	0			Far too little attention in this chapter is given to integrated solutions. For instance, many of the sub-heading are broken up into various "boxes" of mitigation. In fact, a landscape approach that includes deforestation prevention, ref/aff, bioenergy, plantations, etc may be more likely to succeed than having projects or policies that think only in the 'boxes' that the Kyoto language has given us. (Niles John Oliver, Tropical Forest Group)	A
9-16	A	0	0			Coordination with Ch. 3 – the initial text suggests a strong focus on forest	A, partly. Coordination with Steven Rose took

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						mitigation projections. This is odd, given that long-term forest projections (baseline and mitigation) are covered in chapter 3. Some sort of coordination seems necessary to define the scope of each chapter and to ensure consistency across chapters where there is overlap. Chapter 3 made a conscious decision not to cover the following believing that they were more appropriate topics for this chapter—biophysical characterization of forest carbon dynamics (by species, by carbon pool, across countries, management effects, etc.), historical trends, mitigation strategy details at the stand level, short- to mid-term baseline and mitigation projections (2030/40), regional forest carbon studies, and implementation costs and barriers. (Steven Rose, USEPA)	place in Beijing, thus coordination between 3 and 9 took place. We feel that in fod we have dealt with many items mentioned here by Steven.
9-17	A	0	0			A general comment on the chapter: I am suspect of the long-time modeling studies (e.g., Cox et al 2001) that show amazon die-back will eliminate the sink strength leading to a reversal (e.g. source). This study failed to mention that there will not be much carbon left to dieback (due to deforestation) and they failed to account for changes in carbon stocks due to outright deforestation. The chapter should mention that the die-back argument is speculative and that deforestation threats from clearing and cutting are obvious. Furthermore, authors should note somewhere in the chapter that saving forests is the best mitigation and adaptation tool for handling climate-induced stress to forests. This obvious reasoning is not expressed in this chapter, potentially perpetuating a myth that climate change is the number 1 threat to tropical forest. (Niles John Oliver, Tropical Forest Group)	A, we will cover impacts of climate change, as far as concerned to mitigation options.
9-18	A	0	0	0	0	Footers mention "Chapter 8" instead of "Chapter 9" (Bruno Locatelli, CIRAD-CATIE)	A
9-19	A	0	0			"For chapter 9 (except for tables and figures), the chapter numbering seems to be wrong (refers to chapter 8, see bottom right of the pages)" (Martina Jung, (Freelance))	A
9-20	A	0	0			Please, consider also the following cross-cutting issue of impact of warming climate on the soil carbon storages. The FOD of AR4 WG1 considers in Chapter 7.3.4 and especially in Table 7.3.4 on page 39. (Ilkka Savolainen, Technical Research Centre of Finland VTT)	
9-21	A	0	0			Please, consider also the carbon sinks from the viewpoints of emission reduction agreements. There is e.g. the questions concerning anthropogenic vs. natural contribution to sinks, consideration of permanence of carbon storages in reduction agreements, and handling of relatively large uncertainties.	R, partly, will deal with slow implementation of KP, but not with all accounting issues

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						(Ilkka Savolainen, Technical Research Centre of Finland VTT)	
9-22	A	0	0			Though this chapter introduces some countries examples, it seems to be focused on some specific countries. Authors may want to make effort to introduce wide range of countries in this chapter. (Noriyuki Kobayashi, Nihon University)	R, this goes too far
9-23	A	0	0			There is some confusion as the footer for this chapter reads 'chapter 8' (Margaret Skutsch, University of Twente)	A
9-24	A	0	0			Put at the foot of the page chapter 9 (not chapter 8) (YABI Ibouiraïma, LECREDE/DGAT/UAC)	A
9-25	A	0	0			Data on world forest resources should be updated based on FRA 2005, published in 2005 from FAO. (Noriyuki Kobayashi, Nihon University)	A
9-26	A	0	0			Comparing to the description of afforestation, reforestation and deforestation, that of forest management is not enough. Authors may want to add more description on forest management. (Noriyuki Kobayashi, Nihon University)	R, we explain forest management options clearly in the 9.4
9-27	A	0	0			The structure, contents, and wording has improved drastically since ZOD. However, this chapter still needs work on several issues. Overall, a large amount of data, figures and overview are given, indeed covering a lot of recent findings in this area. However, the interpretation of these figures and findings is in several places lacking (what does it all mean ...!!). The last chapters summarise this to a certain extent, but I feel that much work is still needed on data interpretation, summarising, concluding etc. in the respective chapter as well. (Peter Van der Meer, Alterra)	A
9-28	A	0	0			In the conclusion of this chapter there should be emphasis on the many uncertainties which play at different levels (monitoring and modelling, economic development, reactions of forests to climate change etc). It would be good to have an schematic overview of the largest uncertainties, and what could be done to take away some of these uncertainties. (Peter Van der Meer, Alterra)	A, partly. Not always uncertainties are known. We try to deal with it as good as possible
9-29	A	0	0			in my opinion the major weakness of the chapter is the very limited discussion of effects of climate variability and climate change on future trends of sinks, stocks and ultimately on the (technical) mitigation potential. Especially quantitative impact assessments have not been discussed. What will be the effect of warming within the range given in TAR and 4AR WGI. Does the given mitigation potential of -1.1GtC/yr by 2040 account for the projected climate in 2040 ? Can existing	a

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						forest survive, can they maintain their sequestration rate? Can we quantify any effect of species or ecosystem migration or degradation as a result of climate change be quantified. Effects of warming on respiration and thus belowground carbon stocks have been explored (e.g.Cox et al 2000), how about effects on above ground stocks.Any conclusive insights into the effects of CO2 fertilisation on C stocks. I am not sure that on a more integrated level many such studies exist, but if not this should be stated and accompanied by a call to adress the issue. If yes, they should be better reflected in the current document. (Ronald Hutjes, Alterra)	
9-30	A	0	0			Given one of the major goals of this chapter (give economic potential to reduce emmissions) I feel that in this whole chapter there could have been more emphasis on economic valuation of the functions that forests could play to reduce emissions and increase sequestration (Peter Van der Meer, Alterra)	A, we will put more emphasis on other values of forests, however, economic valuation is difficult and hardly done in literature,
9-31	A	0	0			at many instances throughout the chapter an estimate of some mitigation potential quantity is given for a particular price level (e.g. page 33 line 6.) However, a more general discussion of the effect of C- price levels on mitigation potential for various measures would be most welcome. (Ronald Hutjes, Alterra)	A, we will improve economics sections
9-32	A	0	0			In the first part of this chapter a large amount of figures and data are presented, some of which are quite accurate, but many other with (very) unreliable data. I think there should be more emphasis on this, stating clearly when reliability is low (maybe even not showing them when this is case). For instance fig's 9.16-9.22 based on modelling approach (which again is based on data with varying reliability) may have to be re-considered. (Peter Van der Meer, Alterra)	A, we will emphasise uncertainties more
9-33	A	0	0			What I miss at the end of the chapter is the feeling that it is clear now where we are (with science), where important gaps in knowledge still exist and where (climate change) policy makers should be active to better use the mitigative potential of this sector. Like wise for the SD agenda: where are the opportunities to harness synergy between SD and this sector. In short: the policy relevance needs to be brought out stronger. (Eveline Trines, Treeness Consult)	A
9-34	A	0	0			To quantify the mitigation potential IMAGE is used but it is not clear why IMAGE and not other models. A review of available models is necessary (also in the light of determining the need for post-AR4 modelling work in this area), including a	A, we wil explain why

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						comparison of approaches taken by those models and there reliability. Otherwise, the context of the here quantified mitigation potentials doesn't become clear enough. (Eveline Trines, Treeness Consult)	
9-35	A	0	0			The chapter misses an adequate discussion on albedo, the (im)possibility to separate naturally occurring climate changes and variability from (direct or indirect) human-induced climate change and variability, and the most recently emerged issue of methane emissions from trees. Furthermore the chapter has started a discussion on reducing emissions from (forest degradation and) deforestation but only briefly touches upon the issue of regional, local or national baselines. It should further explore the baseline options that have been brought forward in literature, both recent and in the past (in the new context - a future climate regime post-2012 - all of that material is relevant again!). (Eveline Trines, Treeness Consult)	A
9-36	A	0	0			The aspects of adaptation is more present than in other part of the report. It is too long also in the executive summary (Marco Mazzotti, Institute of Process Engineering)	, we will relate also to deforestation discussions in sbsta now
9-37	A	0	0			Your allocated pages are 30 IPCC pages, which means max. 60 A4, including references and tables and figures. You are now 84 (text) and 25 (T&F). These usually tend to increase towards the SOD!! (Sander Brinkman, TSU WG III / Brinkman Climate Change)	A
9-38	A	1	0	99		Put at the foot of the page chapter 9 (not chapter 8) (YABI Ibouraïma, LECREDE/DGAT/UAC)	A
9-39	A	1	22			write 9.5.1 (YABI Ibouraïma, LECREDE/DGAT/UAC)	A
9-40	A	1	22			write 9.4.5.1 (YABI Ibouraïma, LECREDE/DGAT/UAC)	A
9-41	A	1	23			write 9.5.2 (YABI Ibouraïma, LECREDE/DGAT/UAC)	A
9-42	A	1	23			write 9.4.5.2 (YABI Ibouraïma, LECREDE/DGAT/UAC)	A
9-43	A	1	24			write 9.5.3 (YABI Ibouraïma, LECREDE/DGAT/UAC)	A
9-44	A	1	24			write 9.4.5.3 (YABI Ibouraïma, LECREDE/DGAT/UAC)	A
9-58	A	2	0	5		not a single senstence is spent on the potential effects of climate change on the	A

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						mitigation potential (Ronald Hutjes, Alterra)	
9-59	A	2	0	5		in executive summary clearly note any deviations from TAR. E.g. the new potential of 1.1MtC/yr is 25% lower than the estimate given in the TAR (Ronald Hutjes, Alterra)	A
9-60	A	2	0	4		The executive summary does not have a lot of substance and could be better organized for continuity. The statements are qualitative and not very definitive. It would be more effective if there were more tangible statements summarizing conclusions from the chapter's assessment of the literature. You might look to the introduction (sec. 9.1), which has better executive summary material in it. Also, the conceptual introduction (sec. 9.4.1) might make a good introduction to the chapter, instead of the current sec. 9.1. (Steven Rose, USEPA)	a
9-45	A	2	25	34		not only land-use changes, but any decisions on land can affect those that most closely depend on forest resources: any change in species, or management praxis, or hunting etc. may affect people (Somogyi Zoltán, Joint Research Institute)	A
9-46	A	2	27			Executive summary. I think that effectiveness of product substitution need to be addressed somewhere. Present summary refer to only fossil fuel substitution by bioenergy. (Seiji Hashimoto, National Institute for Environmental Studies)	A
9-47	A	2	29	2	30	The sentence beginning in line 29 has some behavioural implications which should be clearly stated, because '...forestry can contribute...to reducing emission sources...' means (among other things) that we can reduce the number of cement installations by increasing the area planted with trees. This would be fine e.g. in a bucolic setting, where houses were made of wood. (Hector Ginzo, Ministerio de Relaciones Exteriores, Comercio Internacional y Culto)	Don't understand
9-48	A	2	29	4	26	The executive summary should also include a reference to the impact of forests from climate change and how this will constrain the mitigation potential from forests. For example incorporating statements from the introduction: "But forests are also affected by global change and their ability to contribute to mitigation strategies will be constrained by stresses resulting from global change." P. 5 line 6-7. (Kirsten Macey, Climate Action Network Europe)	A
9-49	A	2	34			(and other places:) land-use change here mainly means 'deforestation'. Better use	A

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						that term explicitly? (Bart Kruijt, Alterra)	
9-50	A	2	34	2	34	Land use changess can also have a positive impact on livelihoods. (Niles John Oliver, Tropical Forest Group)	A
9-51	A	2	37	2	45	Executive summary should state how, since SRLULUCF and TAR, understanding of mitigation options, their potential, and costs have changed. (Francisco de la Chesnaye, USEPA)	A
9-52	A	2	39	2	39	When referring metric ton, use "tonne". (Jose Moreira, Institute of Electrotechnology and Energy - University of Sao Paulo)	A
9-53	A	2	40	2	42	The sentence beginning in line 40 is difficult to me, a non-native English speaker. Firstly, what is it meant by '...will be for 80% located...'? Does it mean that 80% of the tropical area is amenable to be managed for CO2 sequestration with trees?. Secondly, does '...for almost half achieved through bio energy...' mean that the potential sink referred to in the preceding sentence will be partly realised by the use of bioenergy? The biomass used as fuel should not be accounted as a sink. (Hector Ginzo, Ministerio de Relaciones Exteriores, Comercio Internacional y Culto)	A, will be clarified
9-54	A	2	40	2	40	The meaning of 'medium confidence' (or of any other degree of confidence) should be indicated; it will help understanding the summary. (Hector Ginzo, Ministerio de Relaciones Exteriores, Comercio Internacional y Culto)	This is IPCC standard
9-55	A	2	40	2	40	'This sink enhancement/emission avoidance...' Sink enhancement does not entail emission avoidance; i.e. The additional sink referred to in the preceding sentence does not mean that amount of CO2 will be equivalent to avoided emissions. I suggest deleting '/emission avoidance' (Hector Ginzo, Ministerio de Relaciones Exteriores, Comercio Internacional y Culto)	A, will be clarified
9-56	A	2	40	3	2	This text is confusing, because of the shift in basis. On Pg. 2 the basis is sink enhancement/emissions avoidance. On Pg. 3 the basis switches to economic potential. How do these two compare? (Lenny Bernstein, L. S. Bernstein & Associates, L.L.C.)	A, needs to be harmonised
9-57	A	2	43	2	45	Wrt "The market potential....": I would expect an additional comment here that it is reasanable to expect an increase because of recent policy decisions (KP into force, Marrakesh Accords adopted, decision to start discussing a post 2012 era and the inclusion of the subject "reducing emissions from deforestation in developing countries" on the agenda.	A,

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						(Eveline Trines, Treeness Consult)	
9-61	A	3	20	3	23	Why only policies to combat the effect of natural disasters? The enforcement of laws and regulations aimed to protecting forests would also increase the mitigation potential of them. (Hector Ginzo, Ministerio de Relaciones Exteriores, Comercio Internacional y Culto)	A
9-62	A	3	29	3	30	It seems that 'forest' and 'plantation forest' are use interchangeably in the present sentence (cf. the reference to 'new forests'). Why not set the term 'forest' aside for natural tree-groupings, and call 'plantation' any kind of commercial tree-grouping, unless there is a clear case of a plantation of mixed tree species for forest restoration purposes; in this case, term 'new forest' could be appropriate. (Hector Ginzo, Ministerio de Relaciones Exteriores, Comercio Internacional y Culto)	A, stand versus forest estate needs to be clear
9-63	A	3	29	3	34	The paragraph on plantations should also include a reference to the negative impacts of plantations on forest people and biodiversity. (Kirsten Macey, Climate Action Network Europe)	A
9-64	A	3	32	3	33	The sentence beginning 'Policies to increase...' seems remotely related to the context of the paragraph; it should be deleted or moved elsewhere. (Hector Ginzo, Ministerio de Relaciones Exteriores, Comercio Internacional y Culto)	A, exe summ will be refined
9-65	A	3	35	3	37	What is meant by 'integrated and non-climate policies'? Why not directly refer to 'forest conservation' or 'forest protection' policies, independently of whether they had a climate-change basis? (Hector Ginzo, Ministerio de Relaciones Exteriores, Comercio Internacional y Culto)	R, forest conservation is not meant here.
9-66	A	3	35	3	35	Statement needs to be made consistent with earlier Fig. 9.26 statement. (Steven Rose, USEPA)	don't understand
9-67	A	3	39	3	39	The sentence beginning 'Due to uncertainty...' may convey e.g. the idea that guidelines existed since 2000, but their implementation was uncertain for many reasons, and this was a deterrent for carrying out land-use projects. The meaning of the sentence should be made more explicit; e.g. what are those guidelines referred to. (Hector Ginzo, Ministerio de Relaciones Exteriores, Comercio Internacional y Culto)	A, exe summ will be refined
9-68	A	3	46			put a point (.) at the end (YABI Ibouaïma, LECREDE/DGAT/UAC)	a

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9-69	A	3	46			put a point (.) at the end (YABI Ibouraima, LECREDE/DGAT/UAC)	a
9-70	A	4	48	1		Oceans are a huge collector and an immense reservoir of thermal solar energy around the world in the tropical zones (see <a href="http://www.worldenergy.org/wec-geis/publications/reports/ser/ocean/ocean.asp">http://www.worldenergy.org/wec-geis/publications/reports/ser/ocean/ocean.asp</a> or <a href="http://www.nrel.gov/otec">http://www.nrel.gov/otec</a> ). First experiments of Ocean thermal energy conversion has been conducted by the French Georges Claude in 1930. The major efforts of researches have been deployed by the USA (Hawaii), Japan and France, especially in the 70's and 80's. But actually, a japanese/indian project of a 1 MW floating plant is planned. In Hawaii, NELH was mandated to provide a support facility for research on the ocean thermal energy conversion (OTEC) process and its related technologies ( <a href="http://www.nelha.org/about/history.html">http://www.nelha.org/about/history.html</a> ), (MICHEL PAILLARD, IFREMER)	not related to ch 9
9-71	A	5	1		2	there are many more studies on effects of climate variability on C sinks at various scales (partially reviewed on p 12b bottom), this should be better represented in the chapter (e.g. in 9.3 and/or in 9.5). Also implications of this for e.g. accounting procedures could be discussed (should future commitment periods be longer to allow reducing adverse effects of e.g. severe droughts on C credits?) (Ronald Hutjes, Alterra)	a
9-72	A	5	13	5	15	The sentence beginning 'The terrestrial...' is confusing. Does it mean that forests are the largest component of the terrestrial biosphere, and as such they would sequester 0.51 Gt C y-1 from the total fossil fuel emissions from 1993 to 2003? How is that annual rate of C-sequestration reconciled with the total amount of C emitted in 10 years? (Hector Ginzo, Ministerio de Relaciones Exteriores, Comercio Internacional y Culto)	r
9-73	A	5	14	5	14	Please provide the actual land cover share (% or level) of terrestrial biosphere sequestration. More meaningful. (Steven Rose, USEPA)	don't understand
9-74	A	5	15	5	15	Bresseur et al., 2007. This text will be published only by this date? How can we use it in this report? The IPCC, 2007 also has to be modified. Probably it refers to FAR but other Working Group!! (Jose Moreira, Institute of Electrotechnology and Energy - University of Sao Paulo)	Brasseur comes out in 2006
9-75	A	5	15			write Brewer et al.. (YABI Ibouraima, LECREDE/DGAT/UAC)	a
9-76	A	5	15	5	15	Reference Brasseur et al. 2007 is missing from reference list	a

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						(Eveline Trines, Treeness Consult)	
9-77	A	5	15			What is the "Brasseur et al. 2007" reference? The carbon cycle chapter of AR4 WG1? (Francisco de la Chesnaye, USEPA)	a
9-78	A	5	15	5	18	There is no citation in reference section for the Brasseur et al 2007 reference and therefore it is difficult to evaluate this critical change from TAR. It would be useful to have this citation available to reviewers of this chapter as it is such a critical number in the overall carbon budget and this lower emission estimate is one I have a hard time believing without seeing the work. (Niles John Oliver, Tropical Forest Group)	a
9-79	A	5	15	5	15	No reference of Brasseur et al. (2007) in the reference list. (Seiji Hashimoto, National Institute for Environmental Studies)	a
9-80	A	5	15			write Brewer et al.. (YABI Ibouraima, LECREDE/DGAT/UAC)	a
9-81	A	5	19	5	23	See Moreira, 2005, Global biomass energy potential. Mitigation and Adaptation Strategies for Global Change(Special Issue, forthcoming)..). It uses results from the Second Assessment Report and provides some new conclusion on the amount of CO2 abatement and costs. (Jose Moreira, Institute of Electrotechnology and Energy - University of Sao Paulo)	a
9-82	A	5	26	5	27	Seems to suggest that the chapter will, among other things, reassess the TAR estimates of mitigation potential. I didn't find an explicit reassessment, but it would be very useful to include. (Steven Rose, USEPA)	r the whole chapter is a re assessment
9-83	A	5	30	5	30	"....other sectors", BUT.... Is this really true? Are there numbers to support that? Findings on page 27 and in section 9.4.5 do not really support this. Maybe it is worth inserting line 39 - 40 here: "since the drafting of the....mitigation potential". (Eveline Trines, Treeness Consult)	r, yes is true
9-84	A	5	35	5	38	In a large part of the world forestry/tree plantations generally generate a lot employment and generate less income then other land-use options. (Peter Van der Meer, Alterra)	a
9-85	A	5	39	5	43	Very good - I fully support this approach. (Niles John Oliver, Tropical Forest Group)	a
9-86	A	5	39	5	40	The general statement that "there seems to be many barriers that preclude the full exploitation of this mitigation potential" does not provide the reader with the full extent of complexity surrounding the issues in this sector. This statement appears to suggest that the Kyoto Protocol rules are the barriers which is precluding the use of	r

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						forests as a mitigation option, however, it is clear that the Kyoto rules alone are not the barrier. Forests only provide temporary storage of carbon, measuring forests to adequately offset permanent releases of carbon is fraught with uncertainties and it is only a short-term fix to the climate problem. This statement should be deleted as it neither states the barriers and only serves to attribute blame to the Kyoto Protocol rules which are set up to ensure sustainability requirements are met. (Kirsten Macey, Climate Action Network Europe)	
9-87	A	5	46	5	48	Another significant report has become available since the TAR that was not available to the authors at the time of writing. This report is focused on the U.S. and addresses many of the shortcomings of previous analyses mentioned: U.S. EPA (2005) Greenhouse Gas Mitigation Potential in U.S. Forestry and Agriculture, EPA 430-R-05-006, Washington, DC. Available at: <a href="http://www.epa.gov/sequestration">www.epa.gov/sequestration</a> (Francisco de la Chesnaye, USEPA)	a
9-88	A	6	3	6	4	Mention some of these studies; if they do not exist at all say so in the text. (Peter Van der Meer, Alterra)	a
9-89	A	6	14	6	25	This is a very honest assessment of the state of knowledge in this area. It should be retained and strengthened in future drafts. (Lenny Bernstein, L. S. Bernstein & Associates, L.L.C.)	a
9-90	A	6	20	6	20	The authors should be sure to consider the EMF-21 work forthcoming in the Energy Journal and the on-going EMF-22 land subgroup work. (Steven Rose, USEPA)	a
9-91	A	6	39			Figure 9.2 put in the axes (ordered and X-coordinates) a few years reference mark (YABI Ibouaraïma, LECREDE/DGAT/UAC)	will be deleted
9-92	A	6	39			Figure 9.2 put in the axes (ordered and X-coordinates) a few years reference mark (YABI Ibouaraïma, LECREDE/DGAT/UAC)	will be deleted
9-93	A	6	50			Figure 9.3: suggest to shade the central oval of "Chapter 9" to highlight it (Somogyi Zoltán, Joint Research Institute)	r
9-94	A	6	50	6	50	Fig. 9.3. As designed, not a very intuitive figure. (Steven Rose, USEPA)	r
9-95	A	7	4	7	38	The boundaries descriptions are vague and not easy to interpret. Also, it is not clear what "results" are being assessed (line 29)—is it the literature or some results generated by the chapter (which seems odd given that it would be new work)? (Steven Rose, USEPA)	r, e discussed as group, this boundary discussion is good
9-96	A	7	8	7	8	Very minor point, but I think that "disposed products and materials" is more appropriate than "disposal of materials." (Seiji Hashimoto, National Institute for Environmental Studies)	a

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9-97	A	7	11			write tation; (punctuation) (YABI Ibouraïma, LECREDE/DGAT/UAC)	a
9-98	A	7	11			write tation; (punctuation) (YABI Ibouraïma, LECREDE/DGAT/UAC)	a
9-99	A	7	13			write energy: (punctuation) (YABI Ibouraïma, LECREDE/DGAT/UAC)	a
9-100	A	7	13			write energy: (punctuation) (YABI Ibouraïma, LECREDE/DGAT/UAC)	a
9-101	A	7	19	7	21	"Baseline: focus is on economic potential against a baseline as determined by simulations with the IMAGE model..." Correct? The mitigation estimates in this chapter are from a number of different studies with a number of different baseline assumptions. How is the economic potential measured against the IMAGE baseline? (Francisco de la Chesnaye, USEPA)	a, we need to explain this more
9-102	A	7	25			I do not understand what the authors mean by "only immediate effects of deforestsation are dealt with...". What types of immediate effects are implied by the authors and what non-immediate effects are bring ignored or not dealt with? (Niles John Oliver, Tropical Forest Group)	a, needs rephrasing
9-103	A	7	29	7	29	Text format. (Jose Moreira, Institute of Electrotechnology and Energy - University of Sao Paulo)	a
9-104	A	7	35			write lies;(punctuation) (YABI Ibouraïma, LECREDE/DGAT/UAC)	a
9-105	A	7	35			write lies;(punctuation) (YABI Ibouraïma, LECREDE/DGAT/UAC)	a
9-106	A	7	41	7	45	Seems to cover what you are trying to say about what is in the chapter. Therefore, you might consider condensing, revising, or removing Lines 3-38. (Steven Rose, USEPA)	a, can be shortened
9-107	A	7	47	10	49	Paragraph 9.2 is still unbalanced and unfocussed. Para 9.2.1 gives figures which are based on different inventoris, withour explaining what they exactly mean and what error's they may contain. (Peter Van der Meer, Alterra)	Key messages will be clarified. Estimates in 9.2.1. are from forest inventories, accuracy varying between countries
9-108	A	7	47			The status and trends discussions are inconsistent in their structure and fail to provide cohesive pictures of historical trends, current status, and projections. The authors might consider breaking this into 2 separate discussions: starting with a characterization of historical trends and current status for each dimension, followed by a separate discussion on near-term baseline projections (to 2030/40). Also, this	Try to provide historical, current and projections where possible

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						second discussion would be most effective if it summarizes estimates from across the literature. (Steven Rose, USEPA)	
9-109	A	8	2	8	2	Editorial. Reference to figure 9.2 is out of context (Hector Ginzo, Ministerio de Relaciones Exteriores, Comercio Internacional y Culto)	Should be figure 9.4
9-110	A	8	3	8	9	use latest publication of FRA by FAO, 2005 (Reinhold Glauner, Institute for World Forestry)	GFRA 2005 was not earlier available, will be used for SOD
9-111	A	8	8			publication is by INPE, not INPA. (Bart Kruijt, Alterra)	OK
9-112	A	8	10	8	15	Some explanation could be given for the huge range of uncertainty in future rates of deforestation: are these the results of different studies using different forecasting models? (Margaret Skutsch, University of Twente)	MA used different scenarios, explain, to consider using a table where assumptions of various projections described
9-113	A	8	20	8	25	The apparent reduced rate of degradation is almost certainly due to changes in reporting behaviour (Margaret Skutsch, University of Twente)	Could be, to be checked from GFRA 2005
9-114	A	8	21			replace or omit 'worsening' (Reinhold Glauner, Institute for World Forestry)	Use "deteriorating"
9-115	A	8	26	8	29	The paragraph says that there are five drivers for environmental change in forests; i.e. depending on what is made to forests, there is likely to be some effects on the environment. The drivers (or actions) on forests are: land-cover changes, inappropriate exploitation of natural resources (which, in fact, is very general, and that particular activity could be more specifically referred to forests, because on drivers for forests is the subject matter of the paragraph), invasive alien species, pollution, and climate change. The last driver is confusing in the context of the paragraph, because it leads to a circular argument; i.e. climate change is a driver of environmental change in forests. Good news! The confusion grows in the second sentence of the paragraph, because there are mentioned drivers for forest degradation. The first sentence does not refers to forest degradation, although it could be one of the consequences of enviromental change. In summary, the paragraph should be rewritten, because its aims are not clearly stated. (Hector Ginzo, Ministerio de Relaciones Exteriores, Comercio Internacional y Culto)	Check General Synthesis, page 81, clarify
9-116	A	8	26	8	30	Either leave this our or elaborate on these drivers (Peter Van der Meer, Alterra)	See above response

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9-117	A	8	30			what are 'institutional gaps'? (Bart Kruijt, Alterra)	Check from the MA report
9-118	A	8	35	35		replace 'global volume of forests' with 'wood volume on a global basis' (Reinhold Glauner, Institute for World Forestry)	Replaced with “global stem volume”
9-119	A	8	35	8	46	Please indicate a bit in more detail how figures were derived, and what they mean, and what potential errors are. The discrepancy between on the one hand growth of volume and on the other hand loss of biomass is hard to grasp: is this related to difference in average specific mass of trees in forests ? Please explain better. (Peter Van der Meer, Alterra)	To be clarified
9-120	A	8	41			www.bundeswaldinventur.de is inappropriate citation in text (Reinhold Glauner, Institute for World Forestry)	Check if the latest NFI results have been published (according to MD they should have been published 3 weeks ago), and replace the reference
9-121	A	8	50			fig. 9.5 - map does not seem to be biomass BY COUNTRY (Bart Kruijt, Alterra)	Delete “by country”
9-122	A	9	9			... because of expanding agriculture.....I suggest that you add the overgrazing and the uncontrolled taking away of the wood of opens or fire, etc. (YABI Ibouaraïma, LECREDE/DGAT/UAC)	Disagree, expanding agriculture covers conversion of forest, also this wording has been used in the MEA scenario
9-123	A	9	9			... because of expanding agriculture.....I suggest that you add the overgrazing and the uncontrolled taking away of the wood of opens or fire, etc. (YABI Ibouaraïma, LECREDE/DGAT/UAC)	See above
9-124	A	9	21			there appears to be an imbalance between sections 9.2.4 and 9.2.5. (Bart Kruijt, Alterra)	Comment not understood, anyway section 9.2.5 will be revised considerably
9-125	A	9	23	9	27	use latest publication of FRA by FAO, 2005 (Reinhold Glauner, Institute for World Forestry)	Will be used for SOD (was not available for FOD)
9-126	A	9	23	9	30	The way it is worded, it implies that developing countries are more prone to mismanagement. A simple change in words would correct this, on line (28); "that these plans are appropriate..." etc. A broader reference to "plans" would make it less biased for the reader. (Niles John Oliver, Tropical Forest Group)	Disagree, as this is referring to all management plans, just recording how large share covered (i.e. also in developed world plans can be inappropriate....) – can change to plans as original meaning would not change
9-127	A	9	25	9	26	It is stated that 123 Mha represent 6% of the total forest area. Which total forest area is considered? If the total forest area is the sum of the areas for natural forests and plantations (3,869 Mha; Table 9.1), then 123 Mha is just 3.3% of that area. (Hector Ginzo, Ministerio de Relaciones Exteriores, Comercio Internacional y Culto)	Check the area and share from the FRA 2005
9-128	A	9	26	9	26	not 6 but 3 percent if I am not wrong..otherwise I do not understand.	See above response

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						(Peter Van der Meer, Alterra)	
9-129	A	9	33	9	35	As there are some certification scheme in the world, the sentence "The area of certified forests worldwide is increasing." should be written to "Certification scheme and the area of certified forests world wide is increasing." (Noriyuki Kobayashi, Nihon University)	Change to "Area of forests certified under various certification shemes is increasing worldwide".
9-130	A	9	34	9	34	convert figure (190 Mha) also in percentage of total forest area (about 5% ??) (Peter Van der Meer, Alterra)	Ok
9-131	A	9	42	9	42	Add following sentence, "G8 members agreed that working to tackle illegal logging is an important step towards sustainable forest management. (G8:The Gleneagles Communique)", after "plans to fight illegal logging and associated trade." (Noriyuki Kobayashi, Nihon University)	Ok
9-132	A	9	42	9	43	is the last sentence relevant? (Bart Kruijt, Alterra)	Just to giving impression about the possible magnitude (rough)
9-133	A	9	42			Citation is needed fo the World Bank etimate of illegal logging (Niles John Oliver, Tropical Forest Group)	Check if reference can be found, or change to another source/reference
9-134	A	9	49	10	7	Again, how reliable are those data here, I wonder how reliable these are, and I can imagine that reliable varies between regions. Also wonder what the added value is of giving the area annually harvested (just give area in the harvesting schemes). (Peter Van der Meer, Alterra)	Check the numbers from FRA 2005, and if there is any indication of accuracy
9-135	A	10	2	10	2	Please, explain what is meaning of "million m3 over bark". (Jose Moreira, Institute of Electrotechnology and Energy - University of Sao Paulo)	If this needs to be explained then a lot of forestry in general has to be explained – including bark (bark is the upper layer in stemwood)
9-136	A	10	9	10	10	"One-quarter for non-industrial end-use (e.g. for wood energy, cabon sequestration)". I believe the amount of forest plantantion for carbon sequestration is still too small. The way it is presented in the above sentence can induce the reader to believe it is comparable with plantation for wood energy. (Jose Moreira, Institute of Electrotechnology and Energy - University of Sao Paulo)	Sentence is not indicating how much of the non-industrial plantations are for wood energy or for carbon sequestration, just that 33% of the plantations are non-industrial Update numbers from FRA 2005
9-137	A	10	9	10	12	source? (Reinhold Glauner, Institute for World Forestry)	Already stated that it is FAO 2001, will be updated to FRA 2005 (FAO 2006)
9-138	A	10	10			to write FAO, 2001 (punctuation) (YABI Ibouraima, LECREDE/DGAT/UAC)	Noted
9-139	A	10	10			to write FAO, 2001 (punctuation) (YABI Ibouraima, LECREDE/DGAT/UAC)	See above
9-140	A	10	14	10	16	Curious to see that India is not listed as one of major consumers of forest products in table 9.3; maybe because a lot of trade / consumptions in India (and many other	Propably consumption is not that big (per capita and total), to be checked, likely that the

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						developing countries) is not registered ?? (Peter Van der Meer, Alterra)	table will be deleted in SOD
9-141	A	10	18			to write 2 million (YABI Ibouaraïma, LECREDE/DGAT/UAC)	Disagree
9-142	A	10	18			to write 2 million (YABI Ibouaraïma, LECREDE/DGAT/UAC)	See above response
9-143	A	10	20	10	20	Add 'Much of this is in the unrecorded, informal sector, although in many countries the turnover in this market is equivalent in size to the market for electricity (Margaret Skutsch, University of Twente)	Agree, to be added
9-144	A	10	24			to write 150 million (YABI Ibouaraïma, LECREDE/DGAT/UAC)	Disagree
9-145	A	10	24			to write 150 million (YABI Ibouaraïma, LECREDE/DGAT/UAC)	See above
9-146	A	10	40	10	40	India is new, growing player as well (Peter Van der Meer, Alterra)	True, but check from statistics, include if necessary
9-147	A	10	44	10	48	Maybe add here that especially in developing countries these environmental services are probably very hard to market (and can only play minor economic role) (Peter Van der Meer, Alterra)	Agree, add text
9-159	A	11	0			Table 9.4 – hard to read and understand (Steven Rose, USEPA)	Accepted, will be reformatted
9-148	A	11	1	13		The title suggests that this chapter tries to cover two very different topics: emission trends on one hand, and effects of forest cover on climate, on the other. I suggest to separate the two topics, and to collect all current evidences on effects under one separate section. However, there is even e third topic in the chapter, which is the (potential) effect on climate change on the forest carbon balance. This is an important topic, also very much related to adaptation and vulnerability. Clearly, this needs separate treatment, and very clear links between all these issues are needed. (Somogyi Zoltán, Joint Research Institute)	Accept – the second part of the title dropped
9-149	A	11	1	13	47	Section 9.3 is relatively short, its title promises more then actually treated. For instance effects of forest cover on climate is treated very brief. Either change heading or elaborate on this aspect. (Peter Van der Meer, Alterra)	Accept – the second part of the title dropped
9-150	A	11	4	13	4	Many of the paragraphs in sec. 9.3 provide too much detail about issues that are likely already addressed in WG1 & 2 (e.g, differences between top-down and bottom-up estimates, reasons for temporal variability) and should be shortened, and their relevance to mitigation issues should be made more clear for the reader.	Accepted – some details removed, short sentences on baselines and constraints added at the start and at the end to explain the relevance of trends to assessing mitigation

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						(Francisco de la Chesnaye, USEPA)	potential
9-151	A	11	19	11	21	why not quantify this? (Bart Kruijt, Alterra)	Noted, the quantitative results are in table 9.4; reference to this table added
9-152	A	11	30			The process.... unknown: I propose to remove this sentence (YABI Ibouaraïma, LECREDE/DGAT/UAC)	Rejected – this is an important point, leave as is
9-153	A	11	30			The process.... unknown: I propose to remove this sentence (YABI Ibouaraïma, LECREDE/DGAT/UAC)	Rejected – this is an important point, leave as is
9-154	A	11	35	22		Although the sectoral total carbon budget is discussed, very little is said about the carbon pools separately. This would be important not only on the budget itself, but with respect to the mitigation options. For example, afforestation may increase biomass carbon, but may decrease soil carbon on converted grasslands. (Somogyi Zoltán, Joint Research Institute)	Noted, addressed in 9.4.1
9-155	A	11	36	11	39	Link to previous section 9.2.1: maybe move there and treat the uncertainty of deforestation rate extensively (Peter Van der Meer, Alterra)	Accepted, to be done
9-156	A	11	42	11	42	What does '71% of budget' mean? Does budget refers to 1.1 ± 0.3 Pg C yr-1 (line 41)? (Hector Ginzo, Ministerio de Relaciones Exteriores, Comercio Internacional y Culto)	Accepted, wording revised
9-157	A	11	43	11	50	Elaborate on the difficulties there are with the conversion of forest area figures to forest biomass figures (Peter Van der Meer, Alterra)	Rejected, this is basic biogeography and space limitations make it impossible to elaborate on this.
9-158	A	11	47	11	50	I think a brief review of the current limitations of RS technology would be in order here, ie availability of high resolution images at reasonable cost, real difficulties in distinguishing forest condition even with high resolution images, see recent work by Arturo Sanchez on the impact of lianas on reflectivity for example, and particularly impossibility of 'seeing' degradation below the canopy etc. This to justify the very correct statement at the end of the sentence that in-situ measurements and modelling are essential. (Margaret Skutsch, University of Twente)	Accepted, will be mentioned space permitting RS box. Perhaps?
9-160	A	12	9		9	complete sentence as: "...had to rely heavily on other types of measurements or model based scaling techniques (Law et al....." (Ronald Hutjes, Alterra)	Accepted
9-161	A	12	11			Table 9.4. In column 'UN.ECE, 2000' the period of time covered should be indicated, unless data is for just the year 2000 (this should also be indicated) (Hector Ginzo, Ministerio de Relaciones Exteriores, Comercio Internacional y	Accepted

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						<b>Culto)</b>	
9-162	A	12	11			Table 9.4, uppermost-right cell: add "terrestrial" after "Estimates of annual" (Somogyi Zoltán, Joint Research Institute)	Accepted
9-163	A	12	13	12	18	Global estimate of product carbon stock and flows is found in: Hashimoto et al.(2002). Wood products: potential carbon sequestration and impact on net carbon emissions of industrialized countries. Environmental Science and Policy 5(2): 183-193, which is the improved estimate of: Winjum et al.(1998). Forest harvests and wood products: sources and sinks of atmospheric carbon dioxide. Forest Science 44(2): 272-284. (Seiji Hashimoto, National Institute for Environmental Studies)	Accepted
9-164	A	12	27			these forests' refers to 'tropics' (line 25)? (Bart Kruijt, Alterra)	Accepted, text revised
9-165	A	13	3			refer to Nepstad et al, nature, in stead of Cox et al. (Bart Kruijt, Alterra)	Accepted
9-166	A	13	6	13	17	More on albedo, which is still dealt with only to a limited extend, can be found in "Jazzing up the Climate Debate: exploring non-linear behavior in the climate system to feed into policy discussions", the Ph.D. report from Michiel Schaeffer (2005). This deals with amongst other things albedo, land-use and land-use cover. One of his research questions was "what is the effect on climate of extra-tropical carbon sinks or biomass plantation when in addition to the effect of net carbon uptake also the effect of changes in the surface albedo is considered?" (Eveline Trines, Treeness Consult)	Noted. Not clear if peer-reviewed publication is available, gray literature problematic since peer-reviewed publications are available
9-167	A	13	19	13	20	add in bulleted list: reforestation / afforestation rates (Reinhold Glauner, Institute for World Forestry)	Rejected – the list refers to driving forces, the rates of afforestation is more of an effect than the driver
9-168	A	13	23			write improvment ; (punctuation) (YABI Ibouaraïma, LECREDE/DGAT/UAC)	Noted
9-169	A	13	23			write improvment ; (punctuation) (YABI Ibouaraïma, LECREDE/DGAT/UAC)	Noted
9-170	A	13	25			especially... development (This sentence is not quite explicit, to better explain please) ! (YABI Ibouaraïma, LECREDE/DGAT/UAC)	Accepted – added “urban and infrastructure” to qualify “development”
9-171	A	13	25			especially... development (This sentence is not quite explicit, to better explain please) ! (YABI Ibouaraïma, LECREDE/DGAT/UAC)	Accepted – added “urban and infrastructure” to qualify “development”

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9-172	A	13	26			write managment) ; (punctuation) (YABI Ibouaraïma, LECREDE/DGAT/UAC)	Noted
9-173	A	13	26	13	26	Add 'presence of mechanisms for ecosystem service payments' (Margaret Skutsch, University of Twente)	Accepted, added more generic term – “valuation of environmental services”
9-174	A	13	26			write management) ; (punctuation) (YABI Ibouaraïma, LECREDE/DGAT/UAC)	Noted
9-175	A	13	29			write pathogenic); (punctuation) (YABI Ibouaraïma, LECREDE/DGAT/UAC)	Noted
9-176	A	13	29			write pathogenic); (punctuation) (YABI Ibouaraïma, LECREDE/DGAT/UAC)	Noted
9-177	A	14	0			this section might benefit from some general discussion on the main drivers that promote/reduce a certain class of mitigation measures. A figure conceptually similar to 9.6 would then help (Ronald Hutjes, Alterra)	TiA: Section will be rewritten
9-190	A	14	0			Sec 9.4.1 The conceptual introduction through to line 16 on page 16 could be used as the chapter introduction, with this section starting on line 17 on page 16. (Steven Rose, USEPA)	Noted: Discussed among authors and decided to keep it in this place (though the section will be rewritten anyway)
9-178	A	14	1	22		The section is redundant. Also, the thrive for an integrated assess ment is important, however, this would require a more systematic, more consistent coverage. Examples of some effects of substituting "modern" housing materials with wood are given later, but these should be brought up here. Also, the concepts of mitigation (page 14-15) should be separated from the main types of options (page 15). Furthermore, all possible effects of an option should be covered on page 14, e.g. effects on methane emissions (Keppler, F., Hamilton, J. T. G., Brass, M. & Röckmann, T. Nature 439, 187–191 (2006).), albedo, hydrological effects etc. These latter are missing from para of lines between 23-34, but a repetatively mentioned on page 15, lines 6, and then lined 46, and elsewhere. (Somogyi Zoltán, Joint Research Institute)	Reject: Authors consider conceptual model to be valuable but authors will rewrite Section 9.4.
9-179	A	14	6		8	- all organic matter in fossile fuels was also removed from the atmosphere - this topic is only worth mentioning, if the point is made how slow this process is as compared to today's fast emission rate - the point should be made that these are large pools, and preserving carbon in them is essential in order that no huge amounts of carbon get back to the atmosphere (Somogyi Zoltán, Joint Research Institute)	Three points are made: 1. Noted – yes fossil fuel also from photosynthesis. 2. Noted – fossil fuels have formed over centuries 3. Accept – global imbalance is caused by rapid oxidation of fossil C.

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9-180	A	14	8	14	8	Please, spell out NPP. (Jose Moreira, Institute of Electrotechnology and Energy - University of Sao Paulo)	
9-181	A	14	23	14	25	Policy conclusions that seem out of place. (Steven Rose, USEPA)	Accept
9-182	A	14	26			justify why actions should be 'assessed within the context of sustainable development' (Bart Kruijt, Alterra)	TiA: Actions taken without consideration of SD will not be acceptable to society.
9-183	A	14	26	14	26	Wrt the term "sustainable development". I thought WGIII agreed to talk about "making development more sustainable" rather than to talk about sustainable development. (Eveline Trines, Treeness Consult)	Noted: But throughout Ch. 9 and uin cross-cutting issues we are talking about SD
9-184	A	14	29	14	33	The description, "Moreover, increasing ... other land-sectors. For example, ... the afforested area.", requires supportive documents or citations. (Noriyuki Kobayashi, Nihon University)	TiA: But the statement is that it "may" affect other land use sectors and then we provide an example only.
9-185	A	14	30	14	34	The sentence implies that the total area available for afforestation and agriculture is constant, so that the expansion of the former can only be made by encroaching the latter. The consequence is that if crop productivity were increased to avoid a drop in food production, increased emissions of e.g. N2O would be likely result from the intensification of fertiliser use. This sentence presents a very particular and infrequent example; this sentence can be deleted fwithout any loss of meaning for the rest of the paragraph. (Hector Ginzo, Ministerio de Relaciones Exteriores, Comercio Internacional y Culto)	Reject: Yes, land area is finite and while there are land uses other than forestry and ag. – increasing forest area can only be achieved at the expense of another land category – see IPCC Good Practice Guidance for LU accounting. This is merely an example of how land-use decisions can have impacts in other sectors.
9-186	A	14	30	14	30	Add 'Moreover the social distribution of benefits and costs of increased forest areas needs to be considered if sustainable development in its broaadeer sense is to be achieved. (Margaret Skutsch, University of Twente)	Noted
9-187	A	14	35	14	46	It is a pity that no reference is made on how (sic) 'political considerations' could affect the mitigation potential of forests (first sentence in the paragraph) Those considerations are likely to be very relevant to the fate of afforestation projects under the CDM in developing countries. (Hector Ginzo, Ministerio de Relaciones Exteriores, Comercio Internacional y Culto)	Noted
9-188	A	14	43	14	45	Studies that assumes biomass will be used essentially for bioenergy production don't face this uncertainty. (Moreira, 2005, Global biomass energy potential. Mitigation and Adaptation Strategies for Global Change (Special Issue,	Reject: What uncertainty? No reference to uncertainty in those lines.

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Chapter-Comment	Batch	From Page	From Line	To Page	To line	Comments	Considerations by the writing team
						forthcoming). (Jose Moreira, Institute of Electrotechnology and Energy - University of Sao Paulo)	
9-189	A	14	43	14	46	The default assumption on harvested wood biomass is not asserted as instantly oxidised in IPCC 1996 guideline. The sentence should be written like "The clear link between the forest and ... that all harvested biomass is regarded as instantly oxidized, ..." (Noriyuki Kobayashi, Nihon University)	Reject: The wording is that it is the "assumption that ..." which is similar to stating that it is "regarded as ...."
9-191	A	15	4	15	5	assessment of implications should (ideally) also be linked to scenarios and domestic policies. This last one can lead to international leakage: forest conservation in one country can lead to higher harvesting rates in other countries. (Eveline Trines, Treeness Consult)	Accept: Will revise text to ensure that assessment should be across international boundaries.
9-192	A	15	5			it is not only the emissions, but the radiative forcing that may matter (Somogyi Zoltán, Joint Research Institute)	Accept: added radiative forcing to considerations
9-193	A	15	7	15	9	If impacts of mitigation on biodiversity are not mentioned in this chapter then where are they mentioned? Earlier in the chapter the authors correctly pointed out that mitigation has the benefit to help or harm biodiversity. More information is needed and there is literature available to cover these issues. The authors need to consider either increasing their coverage of this topic or identifying and specifying in which chapter it is included. (Jeff Price, California State University, Chico)	Accept: Biodiversity is in fact discussed later in this chapter – so will make reference to that.
9-194	A	15	8	15	9	at least short outline of socio-economic impacts has to be made (Reinhold Glauner, Institute for World Forestry)	Accept: These are already dealt with later in the chapter.
9-195	A	15	17	15	29	"Increasing wood products carbon stock" is another option. It might be included in 4th or 2nd option, but addressing the carbon stock in wood products is indispensable. Increasing wood products carbon stock can lead to the increasing product substitution, too. (Seiji Hashimoto, National Institute for Environmental Studies)	Accept: will add to bullet 4 or create new bullet 5
9-196	A	15	20	15	29	The idea that increase carbon storage in forest products, which is referred in TAR, should be added into either point. (Noriyuki Kobayashi, Nihon University)	Accept: see previous comment
9-197	A	15	20	15	21	Delete "sustainable forest management through" because this sentence focuses on area, not management. (Noriyuki Kobayashi, Nihon University)	Accept: will be reworded – point is that avoided deforestation can be through conservation or through transition to sustainable forest management.
9-198	A	15	20	15	29	This is an important grouping and needs maybe some more explanation and emphasis. I have difficulty with the difference between second and third bullet; I	TiA: Final decision will be made when section restructuring is completed.

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						would suggest to combine these (Peter Van der Meer, Alterra)	
9-199	A	15	20	15	21	"avoidance of deforestation" should come directly after "...using afforestation/reforestation" reading ...using A/R, avoidance of deforestation, and sustainable management. (Eveline Trines, Treeness Consult)	Accept: see comment 197
9-200	A	15	22	15	26	I would suggest to group the 2nd and 3rd bullit into one bullit reading "increasing carbon density" which is then split into two: stand-level and landscape-level. (Eveline Trines, Treeness Consult)	TiA: see comment 198
9-201	A	15	24	15	24	Add "including thinnings" after the word techniques;. (Noriyuki Kobayashi, Nihon University)	Reject: Thinning is typically NOT contributing to increased C density at the stand level but it does contribute to HWP stock increases.
9-202	A	15	25			how long is a longer rotation? replave by x% increased (Reinhold Glauner, Institute for World Forestry)	Reject: The statement is that a longer rotation increases stocks – the specifics of X % increase in rotation length leads to Y% increase in stocks depends entirely on the system we consider – and this is only an example.
9-203	A	15	25	15	25	Change the phrase "increasing the landscape-level carbon density" to "increasing or maintaining the landscape-level carbon density through sustainable forest management" because the idea of management is reflected to this point instead of first point. (Noriyuki Kobayashi, Nihon University)	Accept: Sustainable FM needs to be added here and in Point 1
9-204	A	15	26			... and insects, and (this sentence is not incomplete) (YABI Ibouraima, LECREDE/DGAT/UAC)	Reject: The and refers to the transition to the next bullet.
9-205	A	15	26			... and insects, and (this sentence is not incomplete) (YABI Ibouraima, LECREDE/DGAT/UAC)	Duplicate
9-206	A	15	50	15	50	Title wording: technical impacts, explain what you mean by that in introduction. (Peter Van der Meer, Alterra)	Noted – plan is to change the title
9-207	A	15	50	22	44	Section 9.4.2.: measures are not treated consistently ; use the same sub-headings for each measure which is treated (Peter Van der Meer, Alterra)	Noted – plan is to change structure of entire section
9-208	A	15	50			Section 9.4.2. If this section is organized consistent with mitigation options in forest sector which is summarized in Section 9.4.1, it is much easier and useful for readers. In Section 9.4.1, mitigation options consist of 4, but in Section 9.4.2, they	Noted: Plan is to change structure of entire section

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						consist of afforestation/reforestation, reducing deforestation, changing the forest management, products substitution, and bioenergy. (Seiji Hashimoto, National Institute for Environmental Studies)	
9-223	A	16	0			The discussion of forest carbon dynamics could be made more effective with a separate heading and figures of actual data (instead of Fig. 9.9) illustrating carbon dynamics, species differences, and differences in carbon pools. This upfront discussion could set-up nicely the discussion of management options that follows. (Steven Rose, USEPA)	Noted: Plan is to remove Box and Figure
9-209	A	16	17			biomass increment in this case should contain losses from disturbances (Somogyi Zoltán, Joint Research Institute)	Accept: Added disturbance losses to sentence
9-210	A	16	18	16	18	Check "Eucalipt". (Jose Moreira, Institute of Electrotechnology and Energy - University of Sao Paulo)	Reject: Eucalypt is the correct spelling
9-211	A	16	20			Both the text, as well as the figure should reflect the graph only discusses stocks and fluxes of a newly afforested system, and that "unmanaged" here means only that the afforested land is not managed after afforestation (which is more theoretical, than to take the example of a pristine forest) (Somogyi Zoltán, Joint Research Institute)	Noted: Plan is to remove Box and Figure
9-212	A	16	21			trees become mature and not over mature (Reinhold Glauner, Institute for World Forestry)	Noted: Plan is to remove Box and Figure
9-213	A	16	21	16	28	The fact that volume growth (and thus C gain/stock) of forest stands changes drastically is very important; elaborate on that here, giving some examples of how this works and what consequences are for C stock calculations. (Peter Van der Meer, Alterra)	Noted: Plan is to remove Box and Figure
9-214	A	16	22		22	"the total above ground stand biomass begins to decline" (Ronald Hutjes, Alterra)	Noted: Plan is to remove Box and Figure
9-215	A	16	35			Figure 9.9. A scale for the values of 'energy sector mitigation' is lacking (Hector Ginzo, Ministerio de Relaciones Exteriores, Comercio Internacional y Culto)	Noted: Plan is to remove Box and Figure
9-216	A	16	35			figure 9.9 is very theoretical, dotted line may be misleading (Reinhold Glauner, Institute for World Forestry)	Noted: Plan is to remove Box and Figure
9-217	A	16	35			Figure 9.9 mixes too many things. It should better reflect, on separate graphs, the differences between on-site pools of undisturbed forests and plantations (one figure), those between on-site and total pools (another figure), and those between carbon in forestry pools and net carbon balance of a total economy, including the use of fossil fuels (a third figure). (Somogyi Zoltán, Joint Research Institute)	Noted: Plan is to remove Box and Figure

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9-218	A	16	35	17	15	Figure 9.9 (and its text box) is hard to understand. I do not understand the legend of the figure. (Peter Van der Meer, Alterra)	Noted: Plan is to remove Box and Figure
9-219	A	16	36	17	14	The box 9.1 is problematic. What is the object of this box?. Its interpretation is much dependent on the interpretation of figure 9.9. This figure is not easily understandable as it is. For instance, the energy sector mitigation is measured in tC/100ha, but in the text the annual mitigation of that sector is set at 100 tC.yr-1. What is the assumed relationship between a rate of change in C and a carbon density? (Hector Ginzo, Ministerio de Relaciones Exteriores, Comercio Internacional y Culto)	Noted: Plan is to remove Box and Figure
9-220	A	16	39	16	41	I don't understand the comparison with the energy sector. Can you be more clear? (Jose Moreira, Institute of Electrotechnology and Energy - University of Sao Paulo)	Noted: Plan is to remove Box and Figure
9-221	A	16	40	16	45	There is a confusing use of the word "saturation" for some of economic saturation vs the more traditional use of the word for physical saturation. (Steven Rose, USEPA)	Noted: Plan is to remove Box and Figure
9-222	A	16	47	16	48	Maybe here it would be useful to assume that more aggressive sequestration scenarios can be built.(Moreira, 2005, Global biomass energy potential. Mitigation and Adaptation Strategies for Global Change (Special Issue, forthcoming). (Jose Moreira, Institute of Electrotechnology and Energy - University of Sao Paulo)	Noted: Plan is to remove Box and Figure
9-234	A	17	0			fig 9.10 please improve the quality: not separate dots for lower upper bounds but use something like error bars or other things. Also it appears that left hand figure only reflects estimates from inventory studies, recommend to include estimates from fluxtowers too. (Ronald Hutjes, Alterra)	Noted: We are considering removing the figure entirely.
9-235	A	17	0	22		The discussions of management options currently do not really provide assessments of each option in terms of the range of potential outcomes, uncertainty, and gaps in knowledge. Individual examples are given, but no sense of where the literature stands. However, the bioenergy discussion on pages 21-22 does provide a good assessment and could be a model for the other management option discussions. It provides a summary of the potential emissions change details and debate, and more concrete discussions of direct costs and implementation barriers. (Steven Rose, USEPA)	Noted: We are planning to improve section 9.4 by providing more synthesis and "value added" for policy makers.
9-236	A	17	0			Fig. 9.10. Text needs to be a brief explanation of how to read the graph. (Steven Rose, USEPA)	Noted: We are considering removing the figure entirely.
9-224	A	17	4	17	13	I do not understand this, this should be explained better (or it is my ignorance); for	Noted: Plan is to remove Box and Figure

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						instance what are the emission reduction activities, and what is their relation with forest plantations ?? (Peter Van der Meer, Alterra)	
9-225	A	17	6	17	6	For metric ton, use "tonne" here and everywhere in the text. (Jose Moreira, Institute of Electrotechnology and Energy - University of Sao Paulo)	Noted: Plan is to remove Box and Figure
9-226	A	17	18	19		section afforestation/reforestation is poorly written and repetitive in comparison with the section before that. (Bart Kruijt, Alterra)	Noted: Plan is to rewrite sections on mitigation options.
9-227	A	17	18	22	41	This comment goes for the whole section/all options: biodiversity is mentioned, but water and sustainable development should be equally important. (Eveline Trines, Treeness Consult)	Noted: Non-carbon indicators will be assessed in later sections (and in rewrite)
9-228	A	17	25	17	25	Delete "on land that was forested in the last 50 years but that has been converted to non-forested land" because the definition of "reforestation" must be the same as the one in Marrakesh Accords. (Noriyuki Kobayashi, Nihon University)	Reject: The 50 year clause is from afforestation definition in Marrakesh Accords (FCCC/CP/2001/13/Add.1, Page 58)
9-229	A	17	31	17	42	style inconsistent. Comment on the fact that also tropical (savanna, pastur) grasslands can contain high amounts of carbon, and of course also peatlands, so afforestation would not automatically lead to C gains. (Bart Kruijt, Alterra)	Noted comment on Style Reject comment on C density – text already says that forests “usually” contain higher C density.
9-230	A	17	39			here, and elsewhere: implications for GHG mitigation, and effects on biodiversity are two very different issues, and should be treated separately. (Somogyi Zoltán, Joint Research Institute)	Accept: the two issues will be treated separately.
9-231	A	17	44			Figure 9.10. This figure could be replaced with a table of means, standard deviations, and ranges. Why a figure? (Hector Ginzo, Ministerio de Relaciones Exteriores, Comercio Internacional y Culto)	Noted: We are considering removing the figure entirely.
9-232	A	17	49	18	1	The sentence beginning ‘The usually...’ should be rewritten, because it refers to a change in land-use not implied in the preceding two sentences. For instance, the sentence could begin thus: ‘When agricultural soils are afforested, intensive ploughing is ceased...’ (Hector Ginzo, Ministerio de Relaciones Exteriores, Comercio Internacional y Culto)	Noted: Although the entire section is about change in land use – namely afforestation – the wording can be improved.
9-233	A	17	50	17	50	‘...which is beneficial for soil carbon.’ At least one benefit should be indicated; otherwise the reader will be left wondering. (Hector Ginzo, Ministerio de Relaciones Exteriores, Comercio Internacional y Culto)	Accept: changed wording from “beneficial” to increase.

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9-253	A	18	0			Need for in text discussion of technical, economic, and market potential before this point in the chapter. (Steven Rose, USEPA)	Noted: These concepts are discussed in Section 9.1 Introduction
9-254	A	18	0			Fig. 9.11. There are 2 figures labeled 9.11. (Steven Rose, USEPA)	Noted – second has label 9.11b
9-237	A	18	7	18	8	What is the meaning of ‘results‘ in ‘...afforestation can yield considerable results in the soil C...’ (Hector Ginzo, Ministerio de Relaciones Exteriores, Comercio Internacional y Culto)	Accepted: Text reworded
9-238	A	18	10			losses are also reported when converting grasslands with not high clay content: Horváth, B. 2006. Detecting C stock changes in soils of afforested areas in Hungary. Submitted to Forstarchive. (Somogyi Zoltán, Joint Research Institute)	Noted: But we can only cite papers considered in Press by June 2006.
9-239	A	18	14	18	19	Reference needed here (as authors have noted). Also, afforestation of previously intensively managed agriculture areas have the potential to be negative, neutral or positive. If the previous agriculture crop was a grain or grass it might have had biodiversity value for grassland birds (among others). If this were replaced by a non-native tree then the biodiversity impacts could be negative. Similarly, poor species choice for afforestation could result in little to no local biodiversity enhancement over what was present in the agricultural area. (Jeff Price, California State University, Chico)	TiA: when section rewritten this will be elaborated.
9-240	A	18	16			add at the end of sentence: "and the biodiversity values of the area to be afforested" (Somogyi Zoltán, Joint Research Institute)	Accept:
9-241	A	18	21	18	21	Which is the ‘measure’ its cost-effectiveness is assessed? Is it afforestation/reforestation? (Hector Ginzo, Ministerio de Relaciones Exteriores, Comercio Internacional y Culto)	Accept: replaced “this measure” with AR
9-242	A	18	21			It must be mentioned that the economic returns of an afforestation usually only appear years, or rather decades, after the investment, which is a further obstacle for afforestations. (Somogyi Zoltán, Joint Research Institute)	Noted
9-243	A	18	21			“cost effectiveness of this measure is moderate to low” How was this determined? Moderate to low relative to what? It seems that these “revenue and cost” characterizations should focus more on direct and indirect costs/revenues, which need definitions, and not relative costs/revenues, which would be more appropriately discussed later with a discussion of different approaches for	Noted – this will be rewritten to clarify

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						estimating relative costs/revenues, actual estimates, study scopes, issues, gaps, etc. (Steven Rose, USEPA)	
9-244	A	18	22	18	22	Which are those 'wider boundaries'? (Hector Ginzo, Ministerio de Relaciones Exteriores, Comercio Internacional y Culto)	Noted: need to be more explicit
9-245	A	18	26	18	26	"are largely underestimated" or should it be 'are largely OVERestimated?' (Eveline Trines, Treeness Consult)	Noted: this needs to be clarified
9-246	A	18	34	18	34	Shouldn't there be a mentioning of the new methane emission findings of trees? (Eveline Trines, Treeness Consult)	Reject: Keppler et al's paper is highly speculative – we propose to not take a stand at this time
9-247	A	18	35	18	40	Supportive citation of the paragraph is required. (Noriyuki Kobayashi, Nihon University)	Noted: the entire paragraph is too speculative and needs rewriting
9-248	A	18	35			no: it is the sequestration that takes place slowly, not the afforestation. (Somogyi Zoltán, Joint Research Institute)	Noted: both the rate of A is slow as is the rate of C uptake.
9-249	A	18	36	18	37	Typo error. (Jose Moreira, Institute of Electrotechnology and Energy - University of Sao Paulo)	Accept:
9-250	A	18	36			write social (orthography (YABI Ibouraïma, LECREDE/DGAT/UAC)	Accept:
9-251	A	18	36			write social (orthography (YABI Ibouraïma, LECREDE/DGAT/UAC)	Accept
9-252	A	18	42	18	43	The statement suggests that afforestation potential is bounded by the exogenous availability of abandoned ag lands without a carbon policy. I'm not sure the authors intended that interpretation, given that the literature shows that ag lands might be increasingly afforested with rising carbon prices. (Steven Rose, USEPA)	Accept: the rate of future A will depend on the land availability, which is a function of the C costs.
9-255	A	19	4	19	4	'...that would both contain...' What does 'both' stand for? (Hector Ginzo, Ministerio de Relaciones Exteriores, Comercio Internacional y Culto)	Accept
9-256	A	19	5	19	6	The sentence "Sustainable forest management involves ... and services" should be changed to "Sustainable forest management involves avoiding degradation and deforestation, as well as enhancement of provision of forest products and services." (Noriyuki Kobayashi, Nihon University)	Accept:
9-257	A	19	8	19	8	Does 'this measures' refer to reducing deforestation? If so, I should put it explicitly. (Hector Ginzo, Ministerio de Relaciones Exteriores, Comercio Internacional y Culto)	Accept
9-258	A	19	10			degradation is an important source of emissions, and these emissions are often	Noted: Discussed by authors and decided to

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						underestimated, because the area still qualifies as a forest, and if default values are used than the loss is not captured. I suggest to have a separate section on avoiding degradation. (Somogyi Zoltán, Joint Research Institute)	address degradation but not in separate section
9-259	A	19	11	19	11	"...through e.g. urban sprawl". But what about through the opening-up a new area? E.g. remote boreal forest east of the Ural, or forest in the north of Nordic countries, or in Canada, or in emerging markets in former East Block countries (Hungaria, Bulgaria, etc.)....? (Eveline Trines, Treeness Consult)	Accept: Expanded the examples
9-260	A	19	14	19	18	Authors have correctly noted the benefit but have likely been overly cautious as to how beneficial it may be. If the avoided deforestation is native forest then the benefit to biodiversity maintenance is high. Even if the avoided deforestation is of a plantation forest it is likely of greater biodiversity value than whatever the forest is converted to. (Jeff Price, California State University, Chico)	TiA: will be improved in rewrite
9-261	A	19	17	19	18	The sentence 'This depends...' seems queer in the seneet of the paragraph because how a land-use transition fits into deforestation reduction, which in the current context means conserving forests? I should delete that sentence (Hector Ginzo, Ministerio de Relaciones Exteriores, Comercio Internacional y Culto)	Accept: will be rewritten
9-262	A	19	17			add "sometimes considerable" after "prevention of" (Somogyi Zoltán, Joint Research Institute)	Noted: but the whole paragraph will be rewritten
9-263	A	19	20	19	27	This paragraph is required clarification. (Noriyuki Kobayashi, Nihon University)	Noted: several comments received – plan to rewrite this paragraph
9-264	A	19	20	19	27	Suggest include here a reference to the uncertainties surrounding transaction costs, particularly for avoided deforestation, since there is no approved method yet for measuring the carbon impacts of AvD. The feasibility of bringing AvD into a carbon trading system depends largely on finding reliable measuring and monitoring methods which have low transaction costs, which is a major problem to develop. (Margaret Skutsch, University of Twente)	TiA: the plan is to go into more depth in the discussion of AvD.
9-265	A	19	20	19	20	Suggest delete 'indirect costs' and replace with 'opportunity costs' (Margaret Skutsch, University of Twente)	Accept: Changed as requested
9-266	A	19	20			aspect of the revenue is not approached what east does not make it possible to make a comparative analysis cost/revenue (YABI Ibouaïma, LECREDE/DGAT/UAC)	Noted: Plan is to go into more depth on AvD discussion. This is one issue to add.

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9-267	A	19	20	19	23	This section should reference a seminal paper on the subject of indirect costs; the citation is: Kremen, C., J. Niles, M. Dalton, G. Daily, P. Ehrlich, P. Guillery & J. Fay. 2000. Economic incentives of rain forest conservation across scales. Science 288: 1828-1832. (Niles John Oliver, Tropical Forest Group)	Noted: will review paper
9-268	A	19	20			aspect of the revenu is not approached what east does not make it possible to make a comparative analysis cost/revenu (YABI Ibouraïma, LECREDE/DGAT/UAC)	Accepted: If we talk about Cost/Revenue we need to address the latter in more detail.
9-269	A	19	21	19	23	In line 21, the function of 'for' (at the end of the line) is not clear. (Hector Ginzo, Ministerio de Relaciones Exteriores, Comercio Internacional y Culto)	Accepted: revisions made
9-270	A	19	26	19	27	Sentence isn't clear. Check English. (Jose Moreira, Institute of Electrotechnology and Energy - University of Sao Paulo)	Accept: needs to be rewritten
9-271	A	19	26	19	26	"Rest of Asia" doesn't make sense. (Noriyuki Kobayashi, Nihon University)	Accept: needs to be rewritten
9-272	A	19	41	19	43	Suggest explain that net forestation rates in NL are positive but despite this forest remains a net emitter of carbon because new forest has such a small stock compared to the felled old forest (Margaret Skutsch, University of Twente)	Noted: Likely to remove this level of detail.
9-273	A	19	42			write like. (punctuation (YABI Ibouraïma, LECREDE/DGAT/UAC)	Noted
9-274	A	19	42			write like. (punctuation (YABI Ibouraïma, LECREDE/DGAT/UAC)	Noted
9-275	A	19	48	19	48	I think a section should be inserted here reflecting the proposals made by PNG (UNFCCC/CP/2005/MISC.1) and IPAM that deal with reducing emissios from deforestation. That section should also explore the area of national and/or regional baselines. (Eveline Trines, Treeness Consult)	TiA: We are planning on expanding the section on AvD - though we are not going to take a stand on the current proposal.
9-276	A	19	49	19	49	This head covers both bullets 2 & 3 of page 15: another argument to combine these two (Peter Van der Meer, Alterra)	TiA: Preference is to convert this into
9-289	A	20	0	21		AR and D are two distinct, different things requiring completely different policies. I suggest to separate them. (Somogyi Zoltán, Joint Research Institute)	Noted: But they are in fact already discussed in two different sections.
9-277	A	20	2			irrigation is written twice, remove one (YABI Ibouraïma, LECREDE/DGAT/UAC)	Accept

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9-278	A	20	2			improving genetic quality is rather an issue for AR, not FM (Somogyi Zoltán, Joint Research Institute)	Reject: many planted areas around the world are planted with genetically improved materials – so this relates to both AR and FM
9-279	A	20	2			irrigation is written twice, remove one (YABI Ibouaraïma, LECREDE/DGAT/UAC)	Accept
9-280	A	20	6	20	6	Nabuurs 2005 is not in the reference list (Margaret Skutsch, University of Twente)	Noted
9-281	A	20	25			in this para, the issue of higher risk of fire should also be covered: increasing the deadwood pool is only beneficial to a certain point (Somogyi Zoltán, Joint Research Institute)	TiA: Plan to add something on fire risk interaction in the rewrite.
9-282	A	20	29	20	30	The use of GMO may not necessarily have a negative effect on biodiversity. The sentence is too definitive in that respect; it should be amended to remove the generalised idea of GMOs as eternal and unredeemed ‘bad guys’. (Hector Ginzo, Ministerio de Relaciones Exteriores, Comercio Internacional y Culto)	Accept: The issue should be represented more general – as tree selection and other forms of tree improvement programs.
9-283	A	20	30			GMO is rather an issue for AR, not FM (Somogyi Zoltán, Joint Research Institute)	Noted: though both AR and FM will benefit from tree selection and other forms of genetic improvement.
9-284	A	20	31	20	31	"Irrigated plantation....negative impacts to biodiversity." This is not entirely true. If irrigated plantations are established on degraded land (e.g. in Africa or high in the Andes), a (forest) micro-climate may well be re-established that allows the indigenous vegetation to regrow already during a first rotation. That vegetation sometimes needs just a little bit of protection to resurface. There are plenty of examples of that, e.g. Senegal and Ecuador. (Eveline Trines, Treeness Consult)	Accept: will be addressed in rewrite
9-285	A	20	36			write (Moore, 2000) (punctuation) (YABI Ibouaraïma, LECREDE/DGAT/UAC)	Accept
9-286	A	20	36			write (Moore, 2000) (punctuation) (YABI Ibouaraïma, LECREDE/DGAT/UAC)	Accept
9-287	A	20	37			in my view, the investment costs of changed FM are usually much lower than those of AR. For example, skipping one thinning, or leaving mixing species (thus avoiding monocultures) does not cost anything (Somogyi Zoltán, Joint Research Institute)	Noted: Sure, there are examples such as not doing something that cost less, but in general more intensive management is more expensive, and mixes species approaches have opportunity costs (e.g. reduced yield) along with other benefits.
9-288	A	20	45			GMO is rather an issue for AR, not FM	Noted: though both AR and FM will benefit

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						(Somogyi Zoltán, Joint Research Institute)	from tree selection and other forms of genetic improvement.
9-290	A	21	1	9	21	Suggest delete title 'products substitution' and replace with 'Increasing storage in wood products' (Margaret Skutsch, University of Twente)	Noted: but we need to address both increased storage and product substitution in this section.
9-291	A	21	1			Section Products substitution. No reference of Macqueen et al. (2004) and Anon (2005) in the reference list. (Seiji Hashimoto, National Institute for Environmental Studies)	Noted: will be fixed
9-292	A	21	3	21	3	Typo error. (Jose Moreira, Institute of Electrotechnology and Energy - University of Sao Paulo)	Accept
9-293	A	21	3	21	3	The word "atmospheric impact" seems to indicate "atmospheric flow approach" for Harvested Wood Products accounting. Though the accounting of HWP includes atmospheric flow approach, stock change approach and production approach. Therefore, the description on HWP should carefully keep balance of all the approaches. Also it should be keep in mind that the accounting of HWP is the UNFCCC or political matter. (Noriyuki Kobayashi, Nihon University)	Noted: if we were talking about approaches here, then we should keep a balance, but we are not – we are talking about atmospheric emissions throughout this and other chapters.
9-294	A	21	6			HWP are already reported by some countries, and methodologies are available, see the new 2006 IPCC Guidelines. Therefore, it is not true that HWPs are generally viewed unfavourably (Somogyi Zoltán, Joint Research Institute)	Accept: will replace the wording and reference to being “viewed unfavourably”
9-295	A	21	8	21	9	Add "in the context of promotion of sustainable forest management" after the sentence "Strategies to improve the contribution ... and increased recycling." (Noriyuki Kobayashi, Nihon University)	Accept:
9-296	A	21	10	21	16	There is no mention of biodiversity implications of wood product use, yet the impacts have the potential to be high in both directions. For example, planting poplar plantations for wood pulp often have negative biodiversity impacts in parts of North America. However, changing of tree species for different wood product uses (e.g., softwoods to hardwoods) may increase biodiversity in some regions. Using afforestation to create areas for wood products, when properly placed, actually has the potential to help ecosystems and biodiversity adapt to climate change by potentially creating corridors for species migrations to match new climates. (Jeff Price, California State University, Chico)	Noted: but biodiversity issues relate to the forest (and not the HWP) though of course the amount and type of material harvested will affect what is left and growing in the forest. Biodiversity issues are addressed elsewhere in the chapter.
9-297	A	21	11	21	12	The sentence "Wood products extend the time ... to the atmosphere" indicates that the author prefers atmospheric flow approach for Harvested Wood Products	Reject: the present statement is correct correct, in that regardless of the approach used, storing

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						accounting. As the accounting of HWP is the UNFCCC matter, it should be kept neutral expression in this report. For instance, the sentence may be rewritten like "Wood products continuously storage sequestered carbon after harvesting." (Noriyuki Kobayashi, Nihon University)	C in wood extends the time the material is kept out of the atmosphere.
9-298	A	21	12	21	13	The sentence beginnin in line 12 conveys a sense of determinism that may mislead the reader. My suggestion is to modify it by inserting at its beginning something like: 'There are circumstances under which wood-based materials...' (Hector Ginzo, Ministerio de Relaciones Exteriores, Comercio Internacional y Culto)	Accept:
9-299	A	21	15			the issue of saturation has not been dealt with in the chapter (Somogyi Zoltán, Joint Research Institute)	TiA: plan to add this in the SOD
9-300	A	21	18			not to forget to complete (YABI Ibouraïma, LECREDE/DGAT/UAC)	Noted
9-301	A	21	18			not to forget to complete (YABI Ibouraïma, LECREDE/DGAT/UAC)	Noted
9-302	A	21	20	21	24	Suggest this para is not relevant at this juncture (Margaret Skutsch, University of Twente)	TiA – will be considered in rewrite – the structure of this section will change substantially
9-303	A	21	20		21	although this is true, it is not clear why this is so - and since affecting "outside" processes can thus have an effect on forests, detailing causes by giving examples is necessary. In fact, mitigation in forestry may generally mean a drastic change in the approach of people towards forest. I wrote on this in Somogyi, Z. 2001. Can we make it without forests? L'Harmattan, Budapest. (Somogyi Zoltán, Joint Research Institute)	TiA – will be considered in rewrite – the structure of this section will change substantially
9-304	A	21	25	21	35	In this section, and elsewhere, there is reference to 'tonnes of CO2', where in other parts you refer to 'tonnes C'. Is this meant or is there a mistake/inconsistency here? The last sentence of this paragraph seems out of the blue. (Bart Kruijt, Alterra)	Accept: plan to convert back to C  Noted: will likely be deleted -
9-305	A	21	26			The forestry sector may claim this, but in a chapter like this it should be added that all carbon contained in the house will be emitted, so this is only a short-term gain. More generally: the point should be made in the chapter that forestry mitigation options usually yield delayed carbon benefits, and at least some of the benefits are temporary. These should be clearly covered in a separate section with nice, clear examples. (Somogyi Zoltán, Joint Research Institute)	Noted: all of these issues are already addressed in the chapter.
9-306	A	21	37			The section lacks materials on dendrothermal electricity and could perhaps refer	Noted: restructuring will however lead to less

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						more to the distinctions suggested in comment 14 above (Margaret Skutsch, University of Twente)	discussion of bioenergy in this section and more in Chapter 4
9-307	A	21	37	21	42	In addition to the distinction between directly harvested fuels and processed fuels, the distinction between direct use of fuels (heat for processing) versus electricity generation (dendrothermal power) is important, but not clear in this section at the moment. Also the difference between use of residues and dedicated plantations. (Margaret Skutsch, University of Twente)	Noted: restructuring will however lead to less discussion of bioenergy in this section and more in Chapter 4
9-308	A	21	46	21	46	It is not clear what does 'but also its commercial version' refer to. (Hector Ginzo, Ministerio de Relaciones Exteriores, Comercio Internacional y Culto)	Accept: Will replace non-commercial with non-industrial to clarify meaning
9-330	A	22	0	25		the distinction between stand level and landscape level is not made clear. For example, longer rotation period, fire prevention, protection against insects and other pests and pathogens can be applied at stand level, too, not only at landscape level. I suggest to merge the two items. (Somogyi Zoltán, Joint Research Institute)	TiA: will be considered in rewrite and merging appropriate if we cannot distinguish clearly
9-331	A	22	0			Sec 9.4.3. It is not clear why the IMAGE baseline is being presented and compared. What do these comparisons mean? The value of this is hard to understand given that the papers discussed have their own baselines and assumptions, the IMAGE model is only one potential global model that could be compared in this way and would likely give the reader a different impression, the IMAGE model baseline represents all LULUCF not just forestry, and the IMAGE model does not explicitly model managed forest lands. If the authors decide to go with this, they need to provide discussion of why the IMAGE model was chosen and the more discussion of regional figures and the differences portrayed between the IMAGE baseline and the various points (Steven Rose, USEPA)	Noted: We are planning to provide better explanation that IMAGE is just one of several possible models, and that our mitigation options are only loosely related to the IMAGE baseline. We had lengthy discussions of this and are planning substantial rewrite of this section.
9-309	A	22	2	22	2	The primary cost, and difficulty related to biofuels is transport to the central point of use (Margaret Skutsch, University of Twente)	Accept
9-310	A	22	6	22	6	Suggest delete full stop and insert 'but in most cases it may be assumed that natural regrowth will compensate for this and sequester an equivalent amount of carbon at least in the medium term'. Insert after 'cases of' the word 'permanent' deforestation (Margaret Skutsch, University of Twente)	Noted: there are other problems with this paragraph as well – needs to be rewritten – but the focus here is on the emissions from bioenergy – not the regrowth of the forest. D is permanent – if not it is a new land-use change to something else – not non-permanent D

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9-311	A	22	8	22	8	Suggest delete 'followed rapidly by emissions' and replace with 'long term increases in atmospheric carbon'. Delete 'more' and replace with 'also' (Margaret Skutsch, University of Twente)	Noted – the entire discussion of deforestation is inappropriate in the context of bioenergy section.
9-312	A	22	11	22	23	When speaking of relative emissions performance of bioenergy (cf. fossil fuels) it needs to be clear whether analysis is on an all gases basis (CO2 equivalent) or only on a CO2 emissions basis. Lines 19-20 are unclear when referring to sinks remaining in forest. (Spencer Edwards, Australian Greenhouse Office)	Noted: the paragraph needs rewriting but the statement in 19/20 is correct: the sink function is indeed in the forest.
9-313	A	22	11	22	23	I am unclear what the conclusion is from this section. It must be somewhere around the statement on line 18-20: "In reality, bioenergy is .... of the biomass" but it is not clear. (Eveline Trines, Treeness Consult)	Noted: the paragraph needs to be rewritten
9-314	A	22	11			Internal discussion with Ch4 (and ch 8) authors. To be solved. (Peter Bosch, IPCC TSU WGIII)	Noted: Cross-sector discussions were held at meeting in Beijing
9-315	A	22	14	22	15	Van Kooten (2005) is missing from references at the end of chapter. (Spencer Edwards, Australian Greenhouse Office)	Accept: will be added or corrected
9-316	A	22	16	22	16	The reason for the differences in efficiency are partly to do with chemical composition of these fuels but also to do with combustion efficiency of the devices used. (Margaret Skutsch, University of Twente)	Noted
9-317	A	22	18	22	20	Suggest rephrase this sentence: 'In reality, bio-energy may approach carbon neutrality if the entire carbon cycle is considered, and provided that the fuel is sustainable harvested, but removing biomass will result.....' (Margaret Skutsch, University of Twente)	Noted: the paragraph needs to be rewritten
9-318	A	22	25	22	26	Overharvesting for any sort of fuel wood will lead to forest degradation. What should perhaps be made clear here is that in many rural areas, fuelwood for own subsistence uses rarely results in overharvesting, but around cities, where there is a strong trade (yes, commercial, but informal, unregistered) in fuelwood, deforestation is rampant, in West Africa stretching up to 500km in a circle round major cities. (Margaret Skutsch, University of Twente)	Noted: could elaborate why non-industrial overharvest is bad with current space limits we need to cut not expand the chapter.
9-319	A	22	25	22	30	Biofuels have the potential to enhance biodiversity as well. There are projects in South America where planting for biofuels in abandoned cropland, even though it is in non-native species, helps preserve biodiversity by removing pressure for removal of native forests. These same areas are then replanting native species in areas where they had been cut for fuelwood. Planting native species for eventual use as	Noted: could elaborate on this point during rewrite.

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						fuelwood can have short-term biodiversity benefits as well. (Jeff Price, California State University, Chico)	
9-320	A	22	27			replace "for technical reasons" with "for technical and economic reasons" (Somogyi Zoltán, Joint Research Institute)	Accept
9-321	A	22	32	22	33	Here there is space to discuss commercial use of briquets. Commercialization of this product is increasing and the price paid by utilities, in EU, willing to generate "green electricity" is rising (100 - 120EU/tonne). (Jose Moreira, Institute of Electrotechnology and Energy - University of Sao Paulo)	Accept
9-322	A	22	33	22	33	By no means all bioenergy involves chips. In general, the transport of the residues is the main financial constraint, because the residues tend to be spread out over a large area. Hence most profitable systems involve wastes from in-situ production such as sawmills powered on their own sawdust (Margaret Skutsch, University of Twente)	Accept: need to broaden discussion to also include black liquor, sawdust and other forms of bioenergy raw materials
9-323	A	22	36	22	37	This point has already been adequately made above and is unnecessary here (Margaret Skutsch, University of Twente)	Accept
9-324	A	22	44	29	49	The grouping in different regions used in Section 9.4.3 is not consistent (but maybe this grouping is used throughout the whole FOD) ? E.g. wet & dry tropics cover almost half of the world, whereas relatively small country like Japan is also used a one group. May need re-grouping (Peter Van der Meer, Alterra)	Accept: Entire section will be restructured with more consistent use of regions
9-325	A	22	44	39	50	sections 9.4.3 - 9.5.5 (in fact para 9.4 & 9.5) are very technical, give an overflow of data of very different nature, with very different levels of accurateness. As it is the core of this chapter this should be simplified and harmonised. How exactly I am not sure, but using a consistent grouping, and treating each region in same way would help. (Peter Van der Meer, Alterra)	Accept: Entire section will be restructured with more emphasis on synthesis and policy relevant conclusions.
9-326	A	22	44	24	9	This section, in general seems to miss much of the literature on mitigation potential, especially the work done by economists developing marginal cost functions for forest carbon sequestration at different scales. Some examples follow, underneath the indicated subsection (Brian Murray, Center for Regulatory Economics and Policy Research)	Noted: we are planning to add this material, where appropriate See 334 for details on references
9-327	A	22	48	23	2	At the end of the sentence, what are the measures that 'mutually' exclude themselves? (Hector Ginzo, Ministerio de Relaciones Exteriores, Comercio Internacional y Culto)	Accept: Need to provide examples where two mitigation options are mutually exclusive – e.g. cannot have conservation and short rotation forestry on the same land area.
9-328	A	22	48			Wich a.o ? Means	Accept: will be replaced

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						(YABI Ibouaraïma, LECREDE/DGAT/UAC)	
9-329	A	22	48			Wich a.o ? Means (YABI Ibouaraïma, LECREDE/DGAT/UAC)	Accept: will be replaced
9-332	A	23	6	23	6	The choice for the IMAGE model should be explained here: why IMAGE and not another model. What other models are there, what do they do and what are their shortcomings? (Eveline Trines, Treeness Consult)	Noted: see previous comment
9-333	A	23	7	23	8	Economic potential is not addressed in figures and also not clearly in the text. (Peter Van der Meer, Alterra)	Noted: but IMAGE does not provide information on economic potential – we should however, probably indicate what potential we are estimating.
9-334	A	23	10	24	9	The section does not refer to the relatively large literature on economic studies of carbon sequestration from afforestation and forest management in the USA. One study was just released and the authors thus were probably unaware of its existence... US Environmental Protection Agency. 2005. "Greenhouse Gas Mitigation Potential in U.S. Forestry and Agriculture." Report EPA-R-05-006. Washington, D.C: U.S. Environmental Protection Agency, Office of Atmospheric Programs. This report analyzes the GHG mitigation potential on private lands in the USA from forest carbon sequestration, agricultural carbon sequestration, biofuels, and CO2 and non-CO2 mitigation potential in agriculture under baseline conditions and under CO2 prices of \$1-50 per ton CO2 equivalent (or roughly \$4-190 per ton C). It finds substantial mitigation potential at the highest CO2 price (up to 2 Gt CO2/year annualized, 1.2 GT from forestry options). There are a number of studies for the USA that provide estimates of economic mitigation potential in forestry, including Moulton, R.J. and K.R. Richards (1990) Costs of Sequestering Carbon Through Tree Planting and Forest Management in the United States. USDA Forest Service. General Technical Report GTR WO-58. Washington, DC, 47p. & Parks, P.J. and I.W. Hardie (1995) "Least Cost Carbon Reserves: Cost-Effective Subsidies to Convert Marginal Agricultural Land to Forest." Land Economics 71: 122-36. & Callaway, J.M., and B.A. McCarl (1996) "The Economic Consequences of Substituting Carbon Payments for Crop Subsidies in U.S. Agriculture." Environmental and Resource Economics 7(1996): 15-43. & Adams, Darius. M., Ralph J. Alig, Bruce A. McCarl, John M. Callaway, and Steven. M. Winnett (1999) "Minimum Cost Strategies for Sequestering Carbon in Forests." Land Economics 75(3): 360-74. & Stavins, Robert N. (1999) "The Costs of Carbon Sequestration: A Revealed-Preference Approach." American Economic Review 89(4): 994-1009. &	Noted: The main study referred to here was released AFTER the FOD was submitted for review. We now do have a copy of this study and will incorporate it in our assessments. Similarly, we will assess the other suggested studies.

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						Stavins, Robert N. and Richard Newell (2000) "Climate Change and Forest Sinks: Factors Affecting the Costs of Carbon Sequestration." Journal of Environmental Economics and Management 40: 211-235. The survey article by Richards and Stokes (2004) that is referenced in the Wet and Dry Topics section of Pp. 26-29 provides a summary of the mitigation results (\$/t C) for these and other studies of interest. (Brian Murray, Center for Regulatory Economics and Policy Research)	
9-335	A	23	12	24	9	The new U.S. EPA (2005) report (www.epa.gov/sequestration) should be included in this section for OECD North America. (Francisco de la Chesnaye, USEPA)	Noted: The study was released AFTER the FOD was submitted for review. We now do have a copy of this study and will incorporate it in our assessments.
9-336	A	23	18	23	21	Mention here that reducing regeneration delays may be very costly and difficult (Peter Van der Meer, Alterra)	Accepted: the paragraph already states that this is not realistic.
9-337	A	23	24	23	24	insert 'rate of' after 'potential', at the beginning of the line. (Hector Ginzo, Ministerio de Relaciones Exteriores, Comercio Internacional y Culto)	Reject: Additional words not required
9-338	A	23	26			M.c ? check (YABI Ibouraiima, LECREDE/DGAT/UAC)	Accept: Typo, name is McKenney
9-339	A	23	26			M.c ? check (YABI Ibouraiima, LECREDE/DGAT/UAC)	Accept: Typo, name is McKenney
9-340	A	23	39			figures 9.14, 9.16 and 9.17 please improve(replace marks by lines only) (Ronald Hutjes, Alterra)	Accept: Figures will be improved and possibly combined.
9-341	A	23	41			There is more recent US results. A good place to start is US EPA (2005), see "Greenhouse Gas Mitigation Potential in U.S. Forestry and Agriculture." Report EPA-R-05-006. Washington, D.C: U.S. Environmental Protection Agency, Office of Atmospheric Programs. (Steven Rose, USEPA)	Noted: The study was released AFTER the FOD was submitted for review. We now do have a copy of this study and will incorporate it in our assessments.
9-342	A	23	44			write growth and (to erase the comma) (YABI Ibouraiima, LECREDE/DGAT/UAC)	Accept
9-343	A	23	44			write growth and (to erase the comma) (YABI Ibouraiima, LECREDE/DGAT/UAC)	Accept
9-358	A	24	0			put space between 9.2.2 and considering (YABI Ibouraiima, LECREDE/DGAT/UAC)	Accepted
9-359	A	24	0			put space between 9.2.2 and considering (YABI Ibouraiima, LECREDE/DGAT/UAC)	Accepted
9-344	A	24	3			write ecosystem services) (to close the bracket)	Accept

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						(YABI Ibouaraïma, LECREDE/DGAT/UAC)	
9-345	A	24	3			write ecosystem services) (to close the bracket) (YABI Ibouaraïma, LECREDE/DGAT/UAC)	Accept
9-346	A	24	5			Figure 9.15. The categories 'Biomass offsets' and 'Crop Management FF' should be explained in the legend. (Hector Ginzo, Ministerio de Relaciones Exteriores, Comercio Internacional y Culto)	Accept: The legend to the figure requires better explanations
9-347	A	24	5			Figure 9.15 specify the unit of time used on x-axes (the hour or the year) (YABI Ibouaraïma, LECREDE/DGAT/UAC)	Accept: replace time with Year
9-348	A	24	5			Figure 9.15: does "all forest" contain soils? Or just the biomass? (Somogyi Zoltán, Joint Research Institute)	Accept: The legend to the figure requires better explanations
9-349	A	24	5			fig 9.15 - what is 'MMT' ? (Bart Kruijt, Alterra)	Accept: Million Metric tons needs to be added
9-350	A	24	5			Figure 9.15 specify the unit of time used on x-axes (the hour or the year) (YABI Ibouaraïma, LECREDE/DGAT/UAC)	Accept: replace time with Year
9-351	A	24	35	24	40	References not in literature list. Check: Bergen, K.M.; Conard, S.G.; Houghton, R.A. at al.: NASA and Russian scientists observe land-cover and land-use change and carbon in Russian forests. J. For., Bethesda, MD (2003),6,34-41. Conard, S.G.; Ivanova, G.A.: Wildfire in Russian boreal forests – Potential impacts of fire regime characteristics on emissions and global carbon balance estimates. Environm. Pollut., 98(1997),3,305-313. Hollinger, D.Y.; Kelliher, F.M.; Schulze, E.-D. et al.: Forest atmosphere carbon dioxide exchange in Eastern Siberia. Agricult. For. Meteorol., Durham, NH 90(1998),4,291-306. Schlosser, W.E.; Bassmann, J.H.; Wagner, F.G.; Wandschneider, P.R.: Increasing long-term storage of carbon sequestered in Russian softwood logs through enhanced lumber recovery. For. Prod. J., Madison, WIS 52(2002),9,51-59. Schulze, E.-D.; Lloyd, J.; Kelliher, F.M. et al.: Productivity of forests in the Eurosiberian boreal region and their potential to act as a carbon sink – a synthesis. Global Change Biol., (1999),5/6,703-722. Solowjow, W.A.; Nikolajew, S.W.: Rolle des Forstsektors in der Kohlenstoffbilanz der Region Leningrad. (Orig. Russ.) Isw. WUS Lesn. Sch., Archangelsk 172(2004),5,7-15. Tschestnych, O.W.; Samolodtschikow, D.G., Utkin, A.I.: Gesamtverrat des biologischen Kohlenstoffs in den Böden der bewaldeten Gebiete Russlands. (Orig. Russ.) Lessowed., Moskwa 38(2004),4,30-42.	Taken into account – several references seem very useful



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						Utkin, A.I.: Wälder Russlands als Speicher des organischen Kohlenstoffs. (Orig. Russ.) Lessowed., Moskwa 35(2001),5,8-23. (Reinhold Glauner, Institute for World Forestry)	
9-352	A	24	35	25	2	The new report by World Resources Institute (2005) Stocks and Flows: Carbon Inventory and Mitigation Potential of the Russian Forest and Land Base should be included in the Countries in Transition section. (Francisco de la Chesnaye, USEPA)	Accepted
9-353	A	24	35			See new recent work, Sohngen, B., M. Gytarsky, G. Korovin, L Laestadius, B. Murray, A. Utkin, D. Zamolodchikov. 2005. Stocks and Flows: Carbon Inventory and Mitigation Potential of the Russian Forest and Land Base. World Resources Institute, Washington, DC (available at www.wri.org). (Steven Rose, USEPA)	Accepted
9-354	A	24	35	25	2	The authors may want to consider reviewing and including the following recently published report (Dec 2005) provides a comprehensive summary of baseline forest carbon stocks and flows plus mitigation potential for the Russian Federation...Sohngen, B., M. Gytarsky, G. Korovin, L Laestadius, B. Murray, A. Utkin, D. Zamolodchikov. 2005. Stocks and Flows: Carbon Inventory and Mitigation Potential of the Russian Forest and Land Base. World Resources Institute, Washington, DC (available at www.wri.org). (Brian Murray, Center for Regulatory Economics and Policy Research)	Accepted
9-355	A	24	40			Recent improvement.... I suggest you to remove this sentence (YABI Ibouaraïma, LECREDE/DGAT/UAC)	Accepted
9-356	A	24	40			Recent improvement.... I suggest you to remove this sentence (YABI Ibouaraïma, LECREDE/DGAT/UAC)	Accepted
9-357	A	24	43			fig 9.17 - It is very hard to find the information referred to. Which are the options studies, what is their time dimension, etc? (Bart Kruijt, Alterra)	Noted -- Delete figure ?
9-360	A	25	14	25	14	remove this line: to my knowledge, the area of tropical moist forest in N. Australia is quite small but well protected (Peter Van der Meer, Alterra)	Noted, reference to be added
9-361	A	25	18	25	18	Which range of values cover those 'medium carbon prices'? As presently carbon prices are determined mostly by influences alien to a real demand of carbon allowances (or whatever), it is rather temerary to say that there exists a 'medium' or 'high' (or whatever other comparative adjective) price. (Hector Ginzo, Ministerio de Relaciones Exteriores, Comercio Internacional y Culto)	To be resolved - GJ

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Chapter-Comment	Batch	From Page	From Line	To Page	To line	Comments	Considerations by the writing team
9-362	A	25	21			figure 9.18 put the title of the x-axis (year) (YABI Ibouaraïma, LECREDE/DGAT/UAC)	Noted, figure redone
9-363	A	25	21			figure 9.18 put the title of the x-axis (year) (YABI Ibouaraïma, LECREDE/DGAT/UAC)	Noted, figure redone
9-364	A	25	32	25	33	Sentence beginning ‘Additional curbing of...’ Do you mean that the options indicated is the preceding sentence (lines 31-32) might set the point of baseline curbing in the range from -0.005 to -0.01 Gt C.y-1, which is approximately from a twentieth to a tenth of the curbing carbon rate shown in the Figure 9.19? If so, you could merge both sentences together for the sake of clarity. (Hector Ginzo, Ministerio de Relaciones Exteriores, Comercio Internacional y Culto)	To be resolved - GJ
9-365	A	25	35	25	43	It is lack of balance to describe only on Japan in this section. Whole the paragraph should be deleted or be summarized and included into following paragraph (from line 47 page 25 to line 7 page 26). (Noriyuki Kobayashi, Nihon University)	Accepted
9-366	A	25	37	25	39	Japan has always been an advocate of urban forestry as an option under Kyoto Protocol article 3.4. I'm surprised not to see that occur in the list here. (Eveline Trines, Treeness Consult)	Accepted
9-367	A	25	44			Figure 9.20 (page 107) must be deleted. It is inappropriate to carry the figure without any explanation as the result of the model is different by prerequisites and it is very much political issues. (Noriyuki Kobayashi, Nihon University)	Noted
9-368	A	25	44			figure 9.20 put the title of the x-axis (year) (YABI Ibouaraïma, LECREDE/DGAT/UAC)	Figure to be reformatted
9-369	A	25	44			figure 9.20 put the title of the x-axis (year) (YABI Ibouaraïma, LECREDE/DGAT/UAC)	Figure to be reformatted
9-370	A	25	47	26	7	E Asia is an important region. Contents is a bit thin here. (Bart Kruijt, Alterra)	Noted
9-381	A	26	0			“Wet and dry Tropics” Discusses a projection to 2100 so need to coordinate with chapter 3. Also, discusses only one study with one specific methodology, which is misleading. Other studies have very different methodologies (see sample list below) (Steven Rose, USEPA)	Accepted, to be resolved by authors
9-382	A	26	0			Section 9.4.4. Section seems out of place. Maybe fits better after the global potential discussion. (Steven Rose, USEPA)	Accepted, consider merging with earlier bioenergy section

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9-371	A	26	2	26	2	As far as I can tell this is the 1st time the word "additionality" is used. This may not be helpful as it is not clear what is meant here and it might trigger some emotional responses. (Eveline Trines, Treeness Consult)	Accept
9-372	A	26	13			This section perhaps needs an bit more ordering, dealing first with avoided deforestation potential and then with af/reforestation (at present they seem a bit mixed up). (Margaret Skutsch, University of Twente)	Noted
9-373	A	26	13	29	35	As the description on economic analysis is too detailed, it should be summarized. (Noriyuki Kobayashi, Nihon University)	Noted
9-374	A	26	13			section 9.4.3. wet and dry tropics is very hard to read. Very repetitive, especially in 'dominance of mitigation potentials for different parts of the world. It is hard to distinguish one dominance from the other. Please make more scematic or remove redundancy. (Bart Kruijt, Alterra)	Agree, repeated section to be deleted
9-375	A	26	13	28	22	The paper should include a reference to an estimate of mitigation potential that also evaluted various countries' abilities to actually implement mitigation options. This reference also has many similarities to Jung (2005) and would be useful for readers to see a comparison. This citation is: Niles, J., S. Brown, J. Pretty A. Ball & J. Fay. 2002. Potential carbon mitigation and income in developing countries from changes in use and management of agricultural and forest lands. Philosophical Transactions of the Royal Society, Series A 1797: 1621-1639. (Niles John Oliver, Tropical Forest Group)	Accepted, to be resolved
9-376	A	26	18			put space between 9.2.2 and considering (YABI Ibouraima, LECREDE/DGAT/UAC)	Noted
9-377	A	26	18			put space between 9.2.2 and considering (YABI Ibouraima, LECREDE/DGAT/UAC)	Noted
9-378	A	26	23			figure 9.22 and 9.23 put the title of the x-axis (year) (YABI Ibouraima, LECREDE/DGAT/UAC)	Noted, figure to be reformatted
9-379	A	26	23			figure 9.22 and 9.23 put the title of the x-axis (year) (YABI Ibouraima, LECREDE/DGAT/UAC)	Noted, figure to be reformatted
9-380	A	26	38	26	40	See comment (26,13,28,22) above to include reference to more recent estimates of mitigation potential for tropical countries. (Niles John Oliver, Tropical Forest Group)	Accepted
9-383	A	27	9			Define "feasible." (Steven Rose, USEPA)	Accept, word deleted

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Chapter-Comment	Batch	From Page	From Line	To Page	To line	Comments	Considerations by the writing team
9-384	A	27	15	27	17	Table 5: the grouping in regions is different from the one used in this section; also table 6 & 7 are a bit confusing as they use different sub-sets also covering previous country groups. In general, these tables are only presented for the "wet and dry tropics"; for the other groups only figures based on model runs are presented (figs. 9.13- 9.21). This should be more balanced, e.i. present similar figures/table for all country groups. (Peter Van der Meer, Alterra)	Noted. Country grouping is based on source publication. Better data availability and mitigation potential determined greater attention to tropics
9-385	A	27	16			Table 9.6. In the rightmost column, what is the exact meaning of 'cumulative'? Does it mean carbon accumulated during some time interval in the area indicated in the adjacent column? If so, the relevant period of time should be indicated. (Hector Ginzo, Ministerio de Relaciones Exteriores, Comercio Internacional y Culto)	Accepted, The use of word "cumulative" to be reconsidered for tables 9.6 and 9.7
9-386	A	27	17			Table 9.7. Values in column 'Cumulative Sequestration 2000-2050' seem too low compared to the values given in the 'Cumulative' columns of Table 9.8. Those former values look like being annual rates of C sequestration (see columns 'Annual' of Table 9.8 and the values in Table 9.10 (expressed as Gt C per year). (Hector Ginzo, Ministerio de Relaciones Exteriores, Comercio Internacional y Culto)	Accepted, The use of word "cumulative" to be reconsidered for tables 9.6 and 9.7
9-387	A	27	17			write Table 9.7 A (YABI Ibouaraïma, LECREDE/DGAT/UAC)	Noted
9-388	A	27	17			write Table 9.7 A (YABI Ibouaraïma, LECREDE/DGAT/UAC)	Noted
9-389	A	27	19			source? reliability? (Reinhold Glauner, Institute for World Forestry)	Noted, these are IMAGE projections
9-390	A	27	34	27	39	The paper Moreira, 2005 Global biomass energy potential. Mitigation and Adaptation Strategies for Global Change(Special Issue, forthcoming), has regional economic evaluations. (Jose Moreira, Institute of Electrotechnology and Energy - University of Sao Paulo)	Accepted, will add
9-391	A	27	34			write table 9.7.B (YABI Ibouaraïma, LECREDE/DGAT/UAC)	Noted
9-392	A	27	34			write table 9.7.B (YABI Ibouaraïma, LECREDE/DGAT/UAC)	Noted
9-393	A	27	36	27	39	It is risky to generalise cost per tC as has been done here (developing countries or industrialised countries) ha because there is a correlation between the project type (AR or reducing deforestation, etc.), the size of the project (small scale or large scale), various other aspects and cost per ha. In addition, there is a stronger link	Noted, generalization is necessary and simplifications inevitable in global assessments

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						between cost and project type, than cost and project size. (Eveline Trines, Treeness Consult)	
9-394	A	27	36			Need to define "cost." (Steven Rose, USEPA)	Noted
9-395	A	27	36	29	55	Costs / benefits are poorly handled, it would be good to add the benefits to this section (or is it somewhere else and did I miss it?, if so, please refer to that section) (Sander Brinkman, TSU WG III / Brinkman Climate Change)	Noted, enefits are covered elsewhere in the chapter
9-396	A	27	41			write table 9.7 C (YABI Ibouaraïma, LECREDE/DGAT/UAC)	Noted
9-397	A	27	41			write table 9.7 C (YABI Ibouaraïma, LECREDE/DGAT/UAC)	Noted
9-398	A	27	46	27	46	What is meant with the notation 'US\$ 10+5%' (and general notation 'US\$ X+Y%'). Is the per cent increment on a year basis or on any other particular time-period? (Hector Ginzo, Ministerio de Relaciones Exteriores, Comercio Internacional y Culto)	Accepted, will clarify
9-399	A	28	16			There are other studies, like Sohngen and Sedjo (2005), Sohngen and Mendelsohn (2005), Sohngen and Mendelsohn (2003), Sands and Leimbach (2003). (Steven Rose, USEPA)	Accepted, will incorporate these refs
9-400	A	28	26	28	27	Suggest make clear in the title of this box that it refers only to afforestation/reforestation and not to avoided deforestation (Margaret Skutsch, University of Twente)	Accepted, will clarify
9-401	A	28	33			write several reasons : (punctuation) (YABI Ibouaraïma, LECREDE/DGAT/UAC)	Noted
9-402	A	28	33			write several reasons : (punctuation) (YABI Ibouaraïma, LECREDE/DGAT/UAC)	Noted
9-403	A	28	34			write infrastructures ; (punctuation) (YABI Ibouaraïma, LECREDE/DGAT/UAC)	Noted
9-404	A	28	34			write infrastructures ; (punctuation) (YABI Ibouaraïma, LECREDE/DGAT/UAC)	Noted
9-405	A	28	35			write activities ; (ponctuation) (YABI Ibouaraïma, LECREDE/DGAT/UAC)	Noted
9-406	A	28	35			write activities ; (ponctuation) (YABI Ibouaraïma, LECREDE/DGAT/UAC)	Noted
9-407	A	28	36			write future; (punctuation) (YABI Ibouaraïma, LECREDE/DGAT/UAC)	Noted

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9-408	A	28	36			write future; (punctuation) (YABI Ibouaraïma, LECREDE/DGAT/UAC)	Noted
9-409	A	29	3			A clear definition of how potential for 'avoided deforestation' is calculated is missing. Make the role of a baseline explicit here. (Bart Kruijt, Alterra)	Accepted, the authors will address this important point
9-410	A	29	7			Figure 9.24 put the title of the x-axis (year) (YABI Ibouaraïma, LECREDE/DGAT/UAC)	Noted
9-411	A	29	7			Figure 9.24 put the title of the x-axis (year) (YABI Ibouaraïma, LECREDE/DGAT/UAC)	Noted
9-412	A	29	9	29	11	The paragraph refers to data displayed in Table 9.8. (A reference in the para to it would be very helpful) It is stated that the incremental mitigation potential for 'all tropics' is about -9 Gt C, and that this figure represents 69% of the 'tropics total'. What is the value of this 'tropics total'? Is it the sum of 'all tropics' and 'seven tropical countries'? (Hector Ginzo, Ministerio de Relaciones Exteriores, Comercio Internacional y Culto)	Accepted, text will be clarified
9-413	A	29	14	29	14	Transaction costs are an important (as yet unknown) element in this equation also. I think it is only fair to point out too that we are not at all sure what the impact of payments for ecoservices, such as carbon through avoided deforestation, is likely to be. A recent study in Costa Rica seems to show that the reductions in deforestation are not due to the ecoservice payments made for this, but rather to the downturn in the market for wood products. I think this is an area that needs to be signalled for more research. (Margaret Skutsch, University of Twente)	Accepted, transaction costs will be mentioned
9-414	A	29	26	29	30	From Figure 9.25 the per cent avoided deforestation in South America (49%) and Africa (21%) cannot be deduced, because in that figure there is no such category. (Hector Ginzo, Ministerio de Relaciones Exteriores, Comercio Internacional y Culto)	Noted, will try to clarify
9-415	A	29	29			write Africa, Asia (Africa is repeated) (YABI Ibouaraïma, LECREDE/DGAT/UAC)	Accepted
9-416	A	29	29			write Africa, Asia (Africa is repeated) (YABI Ibouaraïma, LECREDE/DGAT/UAC)	Accepted
9-417	A	29	36	29	46	"You mention correctly (on page 6, line 14-17) that there are few studies on regional or global scale using primary data, and (see page 14, line 37-41) that most of the estimates of mitigation potential related to forest activities cannot be compared due to differences in scope, assumptions.... My study (Jung 2005) tries to	Accepted, will review and incorporate this material if appropriate

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						make a global assessment (therefore my regional estimates are rather rough and aggregate) by estimating (based on existing data) carbon sequestration supply curves for a range of developing countries/regions. However, it is also - like all the studies on potentials and costs - subject to a certain set of assumptions (e.g. relatively conservative policy? potential). Therefore, I think, it might be more appropriate at this point to give the reader an overview of the ranges depicted by different studies out there. Furthermore, the values given in the text are not congruent with the ones given in Table 9.10." (Martina Jung, (Freelance))	
9-418	A	29	36	29	46	"The text refers to the publication of Jung (2005). Please update this also in the references by referring to the peer-reviewed version and not the 2003 Discussion Paper. The correct reference is: Jung, Martina (2005) The role of forestry projects in the Clean Development Mechanism, Environmental Science and Policy (8) 2, pp. 87-104" (Martina Jung, (Freelance))	Accepted will update the reference
9-419	A	29	36	29	46	This section is out of place here causing confusion; remove data on countries of table 10 to appropriate sections (e.g. China to East Asia etc.) (Peter Van der Meer, Alterra)	Noted, to be resolved by authots
9-420	A	29	42	29	44	(a) Latin America is a country? (b) what does it mean 'high' in 'high range -0.755, -0.2...' (Hector Ginzo, Ministerio de Relaciones Exteriores, Comercio Internacional y Culto)	Accepted, text to be revised
9-426	A	30	0			1. Table 9.6 Summarizes results of one study for each country. There are more out there, otherwise the authors need to explain the narrow focus. Also, there are issues in comparing across studies that need discussion. (Steven Rose, USEPA)	Noted
9-421	A	30	2	30	2	Suggest re-phrase title of 9.4.4 to read 'The global potential for commercial bio-energy from forest residues' (Margaret Skutsch, University of Twente)	Partially accepted. The reference to specific case maintained, since only a particular mitigation option is taken into account bioenergy. ?
9-422	A	30	23	30	25	"You say here that you are not considering non-commercial bio-energy. However, then it is addressed at page 31-32. Maybe it would be better to refer the reader to this section. " (Martina Jung, (Freelance))	Noted
9-423	A	30	25	30	25	Suggest add to end of last sentence: 'because there is so little statistical information on it, even though much of it is in fact traded in the informal sector'.	Accept first par of the sentence if the redraft retain the paragraph as it is, second part is

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						(Margaret Skutsch, University of Twente)	confuse.
9-424	A	30	41	30	42	It is not clear what those 'typical values' are. Are they 'recoverability factor' values? (Hector Ginzo, Ministerio de Relaciones Exteriores, Comercio Internacional y Culto)	Accept, it will be clarified by redrafting
9-425	A	30	47			The authors might look at the EMF-21 results to see if there are more current estimates of primary energy use and mixture. (Steven Rose, USEPA)	Noted
9-427	A	31	6	31	6	What is the meaning of 'technical potential' in the present context? Does it refer to the amount of available biomass? (Hector Ginzo, Ministerio de Relaciones Exteriores, Comercio Internacional y Culto)	Noted. it will be clarify, the definitions will be harmonize across the chapter.
9-428	A	31	16			replace line with "this may be equivalent to avoiding 0.4 Gt C of emissions from fossile fuels" (Somogyi Zoltán, Joint Research Institute)	Editorial
9-429	A	31	20	31	36	Probably here it would be useful to use the price for wood briquets in the EU for green electricity generation to set a limit on the cost for producing biomass residues. (Jose Moreira, Institute of Electrotechnology and Energy - University of Sao Paulo)	Noted. But some of the information on bioenergy related to energy efficiency and soon will be moved to the bioenergy chapter
9-430	A	31	35	31	35	What is the precise meaning of 'economic potential' in the paragraph context? It seems that it is measured in EJ/y, which are queer units for an economic parameter. (Hector Ginzo, Ministerio de Relaciones Exteriores, Comercio Internacional y Culto)	Noted. It will be clarified and the terminology used consistently across the chapter.
9-431	A	31	35	31	35	gestimated: this implies a lot of uncertainty: please explain what the level of uncertainty is here. (Peter Van der Meer, Alterra)	Noted. It will be considered if feasible. ????
9-432	A	31	36	31	36	Table 9.11: if I understand correctly this table is based on case-studies from different continents, giving costs of bioenergy from forests. Please indicate how many case studies were used to calculate the average values per region, I assume this is more then one ?? (Peter Van der Meer, Alterra)	Noted. Information on how many case studies will be included. ?????
9-433	A	31	42	31	42	On 'economic potential', see my preceding comments (line 35) (Hector Ginzo, Ministerio de Relaciones Exteriores, Comercio Internacional y Culto)	Noted.
9-434	A	31	45	32	10	I think the important thing to signal in this section is that improved stove technology does not at present 'count' in the carbon estimation since it is assumed	The issue is not for CH9. Energy efficiency issues will be moved to Bioenergy chapter.

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						that biomass fuel is carbon neutral. The falsity of this belief could be underlined here. Reference also to Kirk Smith's work which shows that even if the wood fuel is from sustainable sources, the overall GHG emissions from such stoves may be higher than from natural gas cooking (refer back to the figures on emissions from different fuels on page 22 (Margaret Skutsch, University of Twente)	
9-435	A	31	47			write 2 million (YABI Ibouraima, LECREDE/DGAT/UAC)	Editorial
9-436	A	31	47			write 2 million (YABI Ibouraima, LECREDE/DGAT/UAC)	Editorial
9-462	A	32	0			Section 9.4.2.2. This section could be melded with Section 9.4.2.3 (Steven Rose, USEPA)	Rejected. The two sections address different issues, although sections may be shortened.
9-463	A	32	0			Section 9.4.2.2. This section should consider discussing the studies listed above as well and might also consider discussions by modeling type—econometric, partial equilibrium, CGE, integrated assessment, other—and the implications of the different types of modeling. (Steven Rose, USEPA)	Noted
9-464	A	32	0			Section 9.4.2.1. This regional summing up exercise has too much uncertainty and is misleading and probably not worth doing. Comparing global model regional estimates to these would be useful, but it is more appropriate to look to global models for consistent regional estimates. (Steven Rose, USEPA)	Noted. But both bottom up and bottom down assessment need to be done. Since regional estimates are used for validating the outputs of global models being one of the main task of the sectoral chapters to include published literature of different scales, from local to global.
9-437	A	32	14	35	6	Brent Sohngen, Robert Mendelsohn and colleagues have used a global timber sector model to estimate the global mitigation potential from forests. An example of their published work is...Sohngen, Brent, and Robert Mendelsohn (2003) "An Optimal Control Model of Forest Carbon Sequestration." American Journal of Agricultural Economics 85(2): 448-457., which provides results on cumulative (100 year) global C sequestration potential of roughly 40-100 gigatons C at prices ranging from about 60-190 \$/t C. (Brian Murray, Center for Regulatory Economics and Policy Research)	Noted. Paper will be taken into account.
9-438	A	32	15			write 9.4.5.1 (not 5.4.2.1) (YABI Ibouraima, LECREDE/DGAT/UAC)	Editorial
9-439	A	32	15			write 9.4.5.1 (not 5.4.2.1) (YABI Ibouraima, LECREDE/DGAT/UAC)	Editorial

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9-440	A	32	19			Table 9.12: It is not understandable without any explanation. (Noriyuki Kobayashi, Nihon University)	Noted. Table will be reflected in the text explanatio and literature will be identifiable.
9-441	A	32	19			Table 9.12: I would suggest to split sequestration and avoidance of emissions in 2 columns (Eveline Trines, Treeness Consult)	Noted. It will be considered if feasible.
9-442	A	32	21			Figure 9.26 put the title of the x-axis (year) (YABI Ibouaraïma, LECREDE/DGAT/UAC)	Editorial
9-443	A	32	21			Figure 9.26 put the title of the x-axis (year) (YABI Ibouaraïma, LECREDE/DGAT/UAC)	Editorial
9-444	A	32	21			"Figure 9.26: Which is the data/study this figure has been based on?" (Martina Jung, (Freelance))	Accepted. Is partially coming form IMGE runs and data from table 9.12. Sources of data will be referenced.
9-445	A	32	23	32	27	Citation is required. (Noriyuki Kobayashi, Nihon University)	Accepted. Data are from table 9.12. Source of data for constructing the table will be cited there.
9-446	A	32	23			add "mitigation" after "economic" (Somogyi Zoltán, Joint Research Institute)	Rejected. Editorial
9-447	A	32	24	32	24	Why not use 'forestation' (as you did in page 27, line 6) instead of 'af/reforestation' ? (Hector Ginzo, Ministerio de Relaciones Exteriores, Comercio Internacional y Culto)	Rejected. 'af/reforestation' is a estándar terminology and many literature refers to that terms.
9-448	A	32	29	32	40	One of the biggest uncertainty is the ability of certain countries capacity and will to implement mitigation. For instance, the Democratic Rep. Of Congo has very little capacity to implement mitigation, whatever the carbon price or other variables is. A civil war of a ten years has crippled the ability of this nation to even manage its resources. While this is an extreme example, Indonesia and Brazil face major insitutional barriers to implementing mitigation even if other factors listed are adequate and supportive. (Niles John Oliver, Tropical Forest Group)	Noted. A notion on the uncertainties mentioned by the reviewer will taken in the appropriated sections of the chapter.
9-449	A	32	30			write baseline ; (punctuation) (YABI Ibouaraïma, LECREDE/DGAT/UAC)	Editorial
9-450	A	32	30			write baseline ; (punctuation) (YABI Ibouaraïma, LECREDE/DGAT/UAC)	Editorial
9-451	A	32	31			write the studies ; (punctuation) (YABI Ibouaraïma, LECREDE/DGAT/UAC)	Editorial
9-452	A	32	31			write the studies ; (punctuation)	Editorial

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						(YABI Ibouaraïma, LECREDE/DGAT/UAC)	
9-453	A	32	33	32	34	This point is already covered by the first, on line 30 (Margaret Skutsch, University of Twente)	
9-454	A	32	34			write sult ; (punctuation) (YABI Ibouaraïma, LECREDE/DGAT/UAC)	Editorial
9-455	A	32	34			write sult ; (punctuation) (YABI Ibouaraïma, LECREDE/DGAT/UAC)	Editorial
9-456	A	32	35	32	35	This bullet is incomplete. 'Concerning' lacks an object. (Hector Ginzo, Ministerio de Relaciones Exteriores, Comercio Internacional y Culto)	Noted
9-457	A	32	40	32	42	I do not understand this, why does this lead to conclusion that it is in lower end of ranges ?? Please explain better. (Peter Van der Meer, Alterra)	Noted. The authors undestain that to be conservative enough and due to the high uncertainty and the potential barriers that are difficult to asses is better to relay on the lower end.
9-458	A	32	40	32	42	The above comment totally supports the conclusion in these lines. (Niles John Oliver, Tropical Forest Group)	Noted.
9-459	A	32	44			write 9.4.5.2 (not 9.4.2.2) (YABI Ibouaraïma, LECREDE/DGAT/UAC)	Editorial
9-460	A	32	44			write 9.4.5.2 (not 9.4.2.2) (YABI Ibouaraïma, LECREDE/DGAT/UAC)	Editorial
9-461	A	32	45	32	46	Consider to include results from Moreira, 2005, Global biomass energy potential. Mitigation and Adaptation Strategies for Global Change (Special Issue, forthcoming). (Jose Moreira, Institute of Electrotechnology and Energy - University of Sao Paulo)	Noted. It will be considered if available on time.
9-470	A	33	0			Figure 9.29 put the title of the x-axis (year) (YABI Ibouaraïma, LECREDE/DGAT/UAC)	Editorial
9-465	A	33	14			write 9.4.5.2 (not 9.4.2.2) (YABI Ibouaraïma, LECREDE/DGAT/UAC)	Editorial
9-466	A	33	14			write 9.4.5.2 (not 9.4.2.2) (YABI Ibouaraïma, LECREDE/DGAT/UAC)	Editorial
9-467	A	33	23	33	24	'From their results it became...' It is implicit that those are Waterloo et al.'s (see previous line 16). But which are those results? At least, they are not shown in Table 9.13 (Hector Ginzo, Ministerio de Relaciones Exteriores, Comercio Internacional y Culto)	Rejected. The paragraph refers to the data included in table 9.13 extracted from Waterloo et. al paper.

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Chapter-Comment	Batch	From Page	From Line	To Page	To line	Comments	Considerations by the writing team
9-468	A	33	49			write 9.4.5.3 (not 9.4.2.3) (YABI Ibouaraïma, LECREDE/DGAT/UAC)	Editorial
9-469	A	33	49			write 9.4.5.3 (not 9.4.2.3) (YABI Ibouaraïma, LECREDE/DGAT/UAC)	Editorial
9-471	A	34	1	34	2	The sentence could be rephrased since determining market potential requires an endogenous comparison of forest mitigation to mitigation in other sectors, instead of the other way around. (Steven Rose, USEPA)	Noted. The definitions of the type of potential will be checked to be consistent across all chapters. The paragraph may be deleted if estándar definions appear at the end somewhere else.
9-472	A	34	16	34	24	"How does this new scheme relate to the one introduced by Figure 9.1?" (Martina Jung, (Freelance))	Noted. Definitions of different types of potential will be armonized and used consistently across the chapter including the figure 9.1. as well as with other chapters.
9-473	A	34	17	34	24	These definitions are not the same as others are using for economic and market potential. For many, economic potential includes consideration of direct implementation costs and land rents, and market potential includes endogenous cost-effective selection of mitigation strategies where market prices adjust endogenously. This is important because studies have estimated economic and market potential according to these definitions, which is contrary to the statement on Lines 38-39 and the statement dispensing with the literature on Lines 44-48. (Steven Rose, USEPA)	Noted. Definitions of different types of potential will be armonized and used consistently across the chapter including the figure 9.1. as well as with other chapters.
9-474	A	35	8	39	50	Authors should consider moving section 9.5 Interactions with Adaptation and Vulnerability to, or combining with, section 9.7 Forests and Sustainable Development. (Francisco de la Chesnaye, USEPA)	Rejected To be consistent with Chapters 4-10
9-475	A	35	26	35	26	Bruce et al 1996: isn't there anything more recent on this? This is dating back to the run-up to the SAR. The TAR must have said similar things.... And there is stronger evidence published since (e.g. in RIVM/MNP publications). (Eveline Trines, Treeness Consult)	Accepted Reference to be updated with WGI and other chapters of WGIII
9-476	A	35	27			write (IPCC, 2002) (poncuation (YABI Ibouaraïma, LECREDE/DGAT/UAC)	Accepted
9-477	A	35	27			write (IPCC, 2002) (poncuation (YABI Ibouaraïma, LECREDE/DGAT/UAC)	Accepted
9-478	A	35	29		40	9.5.1 is far too brief: it completely lacks any discussion in quantitative terms of the effects of "...potential significant disruption of ecosystems under climate change" on mitigation potentials	Accepted More explanation and references added

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						(Ronald Hutjes, Alterra)	
9-479	A	35	31		32	The beginning of the sentence should read "In addition to natural factors, the forest ecosystems have for long been subjected to many human-induced pressures...", and delete "and natural climate variability" at the end of the sentence. (Somogyi Zoltán, Joint Research Institute)	Accepted Text changed
9-480	A	35	33	35	33	"...working group II" of AR4 (Eveline Trines, Treeness Consult)	Accepted and modified
9-481	A	35	40	35	40	"...impacting on forestry operations (...)" AND THUS ON THE MITIGATIVE CAPACITY OF FORESTS. (Eveline Trines, Treeness Consult)	Accepted, text modified
9-482	A	35	42	35	45	The FOD of Chapter 4 in WGII is actually rather weak in discussing adaptation at this time. The authors of this chapter will need to review the SOD to see if this statement is correct for their SOD. If the authors of this chapter now of specific adaptive practices they may want to mention them here or at least make sure that they truly are considered in WGII. (Jeff Price, California State University, Chico)	Noted, and SOD will be referred however, if new literature is available will be used
9-483	A	36	1	36	1	For clarity and completeness, replace the text within brackets with the following: 'forest, grassland, and cropland management' (Hector Ginzo, Ministerio de Relaciones Exteriores, Comercio Internacional y Culto)	Accepted Text modified
9-484	A	36	12	38	50	It is a nice idea to see adaptation through the mitigation lens and mitigation through the adaptation lens but it ends up with a lot of repetition, perhaps there is another way of doing this eg using a table. Both the environmental and the social aspects of adaptation need to be mentioned in each section (Margaret Skutsch, University of Twente)	Accepted Attempt will be made to incorporate a table or box, depending on the literature
9-485	A	36	12	37		The chapter is redundant, and repeats many things that are mentioned before (e.g. how much is the afforestation potential) and that have nothing to do with the topic set in the title (Somogyi Zoltán, Joint Research Institute)	Rejected, for consistency with Ch4-10 Further the section has been modified and new information added
9-486	A	36	12			section 9.5.3: I miss the policy implications in this entire section. What needs to be done to promote / force (?) the inclusion of adaptation considerations into mitigation projects in the forestry sector? (Eveline Trines, Treeness Consult)	Accepted Policy implications added
9-487	A	36	12	39	17	Certain approaches to LULUCF can do both and are actively being encouraged. For instance, the Climate, Community & Biodiversity Standards request that mitigation projects also consider adaptation measures and considerations (already cited as	Accepted Reference will be searched and quoted

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						CCBA 2005). (Niles John Oliver, Tropical Forest Group)	
9-488	A	36	14	38	39	in this section an attempt could be made (if literature exist) to quantify the effect of NOT incorporating adaptation measures in mitigation. Also in the last paragraph some qunatification of "...practices which may be neutral or may reduce mitigation potential..." (Ronald Hutjes, Alterra)	Noted, no literature is known ton the authors
9-489	A	36	43			In a climate change the ecological conditions will be favourable to the development of the natural species which will be planted ? If not, the difficulty of adapted species can arise (YABI Ibouraïma, LECREDE/DGAT/UAC)	Noted, depending on literature, this issue will be addressed
9-490	A	36	43			In a climate change the ecological conditions will be favourable to the development of the natural species which will be planted ? If not, the difficulty of adapted species can arise (YABI Ibouraïma, LECREDE/DGAT/UAC)	Noted, depending on literature, this issue will be addressed
9-491	A	36	47			use latest publication of FRA by FAO, 2005; i.e. 2.8 Mha (2000-2005) (Reinhold Glauner, Institute for World Forestry)	Accepted, new reference used
9-492	A	36	47	36	47	3,1 Mha but this is not all due to the KP/FCCC.... (Eveline Trines, Treeness Consult)	Accepted, text clarified
9-493	A	37	9	37	46	Details of economic, environmental and social benefits of biomass plantations, agro-forestry and urban forestry should be given as is done in point i) and ii) (Mohan Munasinghe, Munasinghe Institute for Development (MIND))	Accepted Will be incorporated, keeping in mind the need to avoid duplication
9-494	A	37	36	37	36	I suggest replacing 'avenues' (specific) with 'alleyways' or 'alleys' (general). (Hector Ginzo, Ministerio de Relaciones Exteriores, Comercio Internacional y Culto)	Noted, avenue nad alley explained
9-495	A	37	42	37	42	".... Reducing the vulnerability of forest ecosystems". I don't think the vulnerability is reduced. It's rather that the chances increase that you are left with something if climate change affects ecosystems: some will (partially) survive or be able to adapt in time to the climate change. (Eveline Trines, Treeness Consult)	Noted, Phrase – reducing vulnerability – is usually used in such contexts
9-496	A	37	45			write (Jacquemont, 2003) (punctuation) (YABI Ibouraïma, LECREDE/DGAT/UAC)	Accepted
9-497	A	37	45			write (Jacquemont, 2003) (punctuation) (YABI Ibouraïma, LECREDE/DGAT/UAC)	Accepted
9-498	A	37	46	37	46	"fast growing exotic species". Here you have a good example of a possible policy implication: demonstrable avoidance of adverse effects on water and/or soil quality	Noted Text will be added, though policy prescriptive

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						could be made a pre-condition under the KP/UNFCCC for approval of afforestation/reforestation project activities under future climate regimes. (Eveline Trines, Treeness Consult)	
9-499	A	37	49			Table 9.15: The definition of "industrial plantation is required. The reason of the assesment such as "+" must be shown. (Noriyuki Kobayashi, Nihon University)	Noted, this is only an illustration
9-500	A	37	49	37	49	Table 9,15: this is a difficult one. Could be perceived as subjective as it depends very much of what you think of when you complete the table. In addition I think the triple + for SFM uder Carbon seq is too much: it simply cannot be as big as above. Furthermore, the use of a question mark is confusing. Rather use +/- for "could both be pos and neg". The ? for SFM and adapt.pot. should be double + in my view as you strengthen forest systems if you convert from non-sustainable to sustainable. Fire protec. and carbon seq and fire protec and biodiversity should both be triple +. The triple + for fire prot and adapt pot I really don't understand. Af and Reforestation could be grouped. The Biodiv conserv for both A and R could be both pos and neg for reasons mentioned in the text itself. On the other hand the adapt pot of both A and R should be at least a double + (Eveline Trines, Treeness Consult)	Noted, similat table has been published in literature and also in an IPCC report
9-501	A	38	5	38	5	This sentence ("... Serve as mitigation measures") should be followed with an example as this may not be clear directly to everyone. (Eveline Trines, Treeness Consult)	Accepted Example will be provided
9-502	A	38	10			put ; at the end of any sentence (punctuation) (YABI Ibouraima, LECREDE/DGAT/UAC)	Accepted
9-503	A	38	10	38	33	I miss the (re-) establishment of mangrove forest from this list: in my view one of the strongest examples of combining adaptation (coastal zone protection), with mitigation (C sequestration), biodiversity conservation and SD (fishing, shrimp farming etc). (Eveline Trines, Treeness Consult)	Accepted Very good suggestion will be incarpotated
9-504	A	38	10			put ; at the end of any sentence (punctuation) (YABI Ibouraima, LECREDE/DGAT/UAC)	Accepted
9-505	A	38	36	38	39	"However, there could ... and fire protection" The example of adaptaion practice is inconsistent with the description above from line 10, page 38 to line 33 page 38. It should be clarified. (Noriyuki Kobayashi, Nihon University)	Accepted Text to be modified
9-506	A	38	38	38	38	"silvicultural practices such as thinning": I don't understand how this can be an adaptation measure.	Noted, thiniing reduces the risk ofn pest and diseased attgack

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						(Eveline Trines, Treeness Consult)	
9-507	A	39	9			write Dang and al., 2003 (punctuation) (YABI Ibouaraïma, LECREDE/DGAT/UAC)	Accepted
9-508	A	39	9			write Dang and al., 2003 (punctuation) (YABI Ibouaraïma, LECREDE/DGAT/UAC)	Accepted
9-509	A	39	11	39	17	at this point I was left with the feeling: what about the notion that adaptation may be required to achieve the aspired levels of mitigation in forestry, or to continue to meet demands (e.g. fire wood, timber, paper, watershed management, etc.). With current projected climate change many forests may be negatively impacted upon and not sequester as much carbon as we would like.... (Eveline Trines, Treeness Consult)	Accepted Need for adaptation even to meet the normal biomass demands may be needed will be added
9-510	A	39	12			write Wilbanks, 2003 ; Gouvernement (punctuation) (YABI Ibouaraïma, LECREDE/DGAT/UAC)	Accepted
9-511	A	39	12			write Wilbanks, 2003 ; Gouvernement (punctuation) (YABI Ibouaraïma, LECREDE/DGAT/UAC)	Accepted
9-512	A	39	20	39	50	not sure of the value added of this box (Margaret Skutsch, University of Twente)	Accepted
9-513	A	39	20	39	50	It should be noted that some of the under-capitalization of the BCF results from an uneasiness of donors to support projects like Plantar. In general, multiple-benefit projects will be more likely to succeed and to attract investments, especially given the concerns of certain donors. (Niles John Oliver, Tropical Forest Group)	Accepted
9-514	A	39	29			"Update the sentence on the ERPR" (Martina Jung, (Freelance))	Accepted
9-515	A	39	33			"Here you give the impression that the BioCarbonFund is only limited to A/R activities. Maybe one could reformulate to keep clear that the BioCarbon Fund is also open to other types of projects under JI and its second window" (Martina Jung, (Freelance))	Accepted
9-526	A	40	0			at the 4th level the section numbers are wrong 9.6.2.1 should be 9.6.1.1; applies to all subsections below 9.6.1 (Ronald Hutjes, Alterra)	Accept
9-516	A	40	1	57		section 9.6 is long and although very well-written, goes over all issues again but now from a political point of view. (Bart Kruijt, Alterra)	Accepted
9-517	A	40	13	48	37	section 9.6.1 treats non-climate policies and how they can reduce sources and increase sinks: although this section is in general OK, the structure could be	Accepted

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						improved by changing the current subdivision in the section (9.6.2.1 - 9.6.2.4) into one that follows the grouping given at p 15 (Peter Van der Meer, Alterra)	
9-518	A	40	13			Section 9.6.1. <b>If this section is organized consistent with mitigation options in forest sector which is summarized in Section 9.4.1, it is much easier and useful for readers. In Section 9.4.1, mitigation options consist of 4, but Section 9.6.1 consists of conserving existing carbon stocks, increasing sequestration, and increasing substitution.</b> (Seiji Hashimoto, National Institute for Environmental Studies)	Accept.
9-519	A	40	17	40	17	As in page 2, lines 29-30, here the idea that wood can replace cement as a building material is presented as a universal truth. It is not such a truth; under certain circumstances, wood can indeed replace cement, but it cannot under any circumstance. Such a message should be avoided, because it is the result of wishful thinking. (Hector Ginzo, Ministerio de Relaciones Exteriores, Comercio Internacional y Culto)	Noted
9-520	A	40	30			I suggest that this paragraph is brought to the beginning (with the ligne14) to facilitate comprehension (YABI Ibouraima, LECREDE/DGAT/UAC)	Noted
9-521	A	40	30			I suggest that this paragraph is brought to the beginning (with the ligne14) to facilitate comprehension (YABI Ibouraima, LECREDE/DGAT/UAC)	Noted
9-522	A	40	36			write 9.6.1.1 (not 9.6.2.1) (YABI Ibouraima, LECREDE/DGAT/UAC)	Accept
9-523	A	40	36			write 9.6.1.1 (not 9.6.2.1) (YABI Ibouraima, LECREDE/DGAT/UAC)	Accept
9-524	A	40	44	41	33	This section on industrialised countries (part of para 9.6.2.1) is much shorter then section on developing countries (starting at p 41 l 35). Is this division logical ? For instance fire prevention (p 41 l 6) is a common policy in many developing countries as well. (Peter Van der Meer, Alterra)	Noted
9-525	A	40	47			Reference to 'Queensland rainforests' – the policy to stop clearing did not relate to Queensland's rainforest but Queensland's woodlands. Queensland has a number of different forests types and the legislation enacted by the Queensland State Government concerned woodland clearing. (Kirsten Macey, Climate Action Network Europe)	Accept

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9-527	A	41	2	41	2	It is not clear what '...reduced to manage for other forest values' means. Which are those forest values? (Hector Ginzo, Ministerio de Relaciones Exteriores, Comercio Internacional y Culto)	Will revise to take into account
9-528	A	41	24	41	24	<b>at this point I was wondering whether this previous section was a write-up of het author(s) (with all due respect!) or whether this indeed qualifies as a literature review..... It is also unclear to me what action items or agenda follows from all of this.</b> (Eveline Trines, Treeness Consult)	Will revise to take into account
9-529	A	41	30			write Bass, 1996) (punctuation) (YABI Ibouraïma, LECREDE/DGAT/UAC)	accept
9-530	A	41	30			write Bass, 1996) (punctuation) (YABI Ibouraïma, LECREDE/DGAT/UAC)	accept
9-531	A	41	31	41	33	<b>I don't think this is a fair reflection of the truth at all! Just under the FSC scheme 45 million ha has been certified between 1993 and 2003 with the last 35 million in the last 4 years. It operates on all continents, in all climatic zones, in all types of forest (plantation and natural forest management!) and in all ecosystems. Sure you need to have a "relatively high standard" of forest management by the time you seek certification. Ohterwise its waisted money, but it is a genuine process by now that cannot be labelled (or disqualified) as it has been done is this section.</b> (Eveline Trines, Treeness Consult)	Noted, will revise to take into account
9-532	A	42	12	42	12	Add "G8 members recognise the impacts that illegal logging, associated trade and corruption have on environmental degradation, biodiversity loss, and deforestation and hence climate change" after the sentense "Asia and Africa (World Bank, 2005)." (Noriyuki Kobayashi, Nihon University)	Noted
9-533	A	42	20	43	21	Add to the list of measures: measures to devolve forest management to local communities, on the grounds that once they have legal rights over the forest their interest in conserving it are heightened. This practice is gaining popularity in Africa, some Latin American countries and Asia, results still need to be carefully monitored but it is an interesting move. Refer forwards to Box 9.5 where this is mentioned in the form of 'collaborative forestry' (Margaret Skutsch, University of Twente)	Accept
9-534	A	42	32	42	39	Illegal logging is also occuring in developed countries like Russia (Peter Van der Meer, Alterra)	Noted, will incorporate

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9-535	A	43	12			use latest publication of FRA by FAO 2005 (Reinhold Glauner, Institute for World Forestry)	Accept
9-536	A	43	15			write (Durst and Enter, 2001) (punctuation) (YABI Ibouaraïma, LECREDE/DGAT/UAC)	Accept
9-537	A	43	15			write (Durst and Enter, 2001) (punctuation) (YABI Ibouaraïma, LECREDE/DGAT/UAC)	Accept
9-538	A	43	25	43	27	"voluntary certification": what processes are we talking about? ISO 14000, FSC,... See also my comment on page 41 line 31-33. This is an untrue statement: in particular FSC works as a very powerful instrument to conserve existing natural forest stocks in developing countries in significant quantities. See www.fsc.org for more information. It's fine if you want to include this unbalanced type of material in a literature review, but please, include some (abundantly available!) literature stating the reverse!!! (Eveline Trines, Treeness Consult)	Noted, will revise to take into account
9-539	A	43	44			write 9.6.1.2 (YABI Ibouaraïma, LECREDE/DGAT/UAC)	Accept
9-540	A	43	44			write 9.6.1.2 (YABI Ibouaraïma, LECREDE/DGAT/UAC)	Accept
9-541	A	44	8		9	use latest publication of FRA by FAO 2005 (Reinhold Glauner, Institute for World Forestry)	Accept
9-542	A	44	24	44	27	Untrue! See my comments on page 41 line 31-33 and page 43 line 25-27. Just look at the South African forestry industry, just as an example: nearly the entire forestry industry sector is FSC certified (Sappi, Mondi, Safcol, etc). Do you call that a limited impact on plantation management? Millions of plantation ha in Indonesia and like-wise in Costa Rica are certified!!!! You have to do a better job here. If plantation companies want to keep access to a serious part of the international timber market, they will have to be able to demonstrate good forest management. In that sense you can question the voluntariness of (FSC) certification, but most certainly not its effectiveness/impact on forest management. (Eveline Trines, Treeness Consult)	Noted, will revise to take into account
9-543	A	44	46			write 9.6.1.3 (not 9.6.2.3) (YABI Ibouaraïma, LECREDE/DGAT/UAC)	Accept
9-544	A	44	46			The only mention of bioenergy-electricity is right at the end on line33! Dendrothermal electricity deserves more attention than this! Many examples of small scale plants (they have to be small scale because of the transport costs) - has a lot of sustainable development benefits especially for the case of remote settlements	Noted

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						etc (Margaret Skutsch, University of Twente)	
9-545	A	44	46			Section 9.4.2.3. Many Japanese local governments provide subsidies for construction of wooden buildings by using local timber. This will bring product substitution and increase carbon stock. (Seiji Hashimoto, National Institute for Environmental Studies)	Noted
9-546	A	44	46			write 9.6.1.3 (not 9.6.2.3) (YABI Ibouraïma, LECREDE/DGAT/UAC)	Accept
9-547	A	45	4	46	4	The wording should be consistent in whole report. "harvested waste" seems to "residue". (Noriyuki Kobayashi, Nihon University)	Accept
9-548	A	45	12	46	12	The wording should be consistent in whole report. "forestry waste" seems to "residue". (Noriyuki Kobayashi, Nihon University)	Accept
9-549	A	45	23	46	23	The wording should be consistent in whole report. "forestry waste" seems to "residue". (Noriyuki Kobayashi, Nihon University)	Accept
9-550	A	45	40			write 9.6.1.4 (YABI Ibouraïma, LECREDE/DGAT/UAC)	Accept
9-551	A	45	40			write 9.6.1.4 (YABI Ibouraïma, LECREDE/DGAT/UAC)	Accept
9-552	A	47	8			write (IUCN, 2002) ; IUCN, 2004) (punctuation (YABI Ibouraïma, LECREDE/DGAT/UAC)	Accept
9-553	A	47	8			write (IUCN, 2002) ; IUCN, 2004) (punctuation (YABI Ibouraïma, LECREDE/DGAT/UAC)	Accept
9-554	A	48	44	48	45	The sentence, "COP 9 decision 19/CP.9 ... dampened investors' interest." is very subjective description. It should be rewritten objectively. (Noriyuki Kobayashi, Nihon University)	Accept
9-555	A	49	1	49	6	it would be nice to have a box listing the pros and cons of Plantar (Margaret Skutsch, University of Twente)	Rejected; example will be taken out
9-556	A	49	13	49	13	'Most projects...departed from CO2 removals...' It is not clear the meaning of 'departed from CO2 removals' (Hector Ginzo, Ministerio de Relaciones Exteriores, Comercio Internacional y Culto)	Accept
9-557	A	49	18			write (HAVE, 2003) (punctuation) (YABI Ibouraïma, LECREDE/DGAT/UAC)	Accept

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9-558	A	49	18			write (HAVE, 2003) (punctuation) (YABI Ibouraïma, LECREDE/DGAT/UAC)	Accept
9-559	A	49	19			write (UNFCCC, 2003) (punctuation) (YABI Ibouraïma, LECREDE/DGAT/UAC)	Accept
9-560	A	49	19			write (UNFCCC, 2003) (punctuation) (YABI Ibouraïma, LECREDE/DGAT/UAC)	Accept
9-561	A	49	25			write vlet and al., 2003) (orthography and punctuation) (YABI Ibouraïma, LECREDE/DGAT/UAC)	Accept
9-562	A	49	25			write vlet and al., 2003) (orthography and punctuation) (YABI Ibouraïma, LECREDE/DGAT/UAC)	Accept
9-563	A	49	36			write (UNFCCC, 2003) (punctuation) (YABI Ibouraïma, LECREDE/DGAT/UAC)	Accept
9-564	A	49	36			write (UNFCCC, 2003) (punctuation) (YABI Ibouraïma, LECREDE/DGAT/UAC)	Accept
9-565	A	49	43			write (Madlenera and al., 2003) (punctuation) (YABI Ibouraïma, LECREDE/DGAT/UAC)	Accept
9-566	A	49	43			write (Madlenera and al., 2003) (punctuation) (YABI Ibouraïma, LECREDE/DGAT/UAC)	Accept
9-567	A	49	48			48 write (Smith & schen, 2003) (punctuation) (YABI Ibouraïma, LECREDE/DGAT/UAC)	Accept
9-568	A	49	48			48 write (Smith & schen, 2003) (punctuation) (YABI Ibouraïma, LECREDE/DGAT/UAC)	Accept
9-569	A	50	1	50	4	'Biological conservation' is not a target defined in Article 2 of the UNFCCC. This is quite different from acknowledging that the conservation of biodiversity is one of the results of an ecosystem resilience to climatic perturbations. Also the text from Article 2 is not correctly quoted; the Article says '...to allow ecosystems to...' (Hector Ginzo, Ministerio de Relaciones Exteriores, Comercio Internacional y Culto)	Taken account of
9-570	A	50	8	50	8	Give a short intro to this section explaining why the examples were selected. Also, both examples presented have no clear conclusions. (Peter Van der Meer, Alterra)	Accepted; both examples have been removed
9-571	A	50	14			write (PCF, 2002) (punctuation) (YABI Ibouraïma, LECREDE/DGAT/UAC)	Accept
9-572	A	50	14			write (PCF, 2002) (punctuation) (YABI Ibouraïma, LECREDE/DGAT/UAC)	Accept

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9-573	A	50	29			write (Ellis, 2003) (punctuation) (YABI Ibouaraïma, LECREDE/DGAT/UAC)	Accept
9-574	A	50	29			write (Ellis, 2003) (punctuation) (YABI Ibouaraïma, LECREDE/DGAT/UAC)	Accept
9-575	A	51	2			Sentence does not make sense: "The afforestation area per farmer hardly surpasses one area". Latter 'area' should read 'hectare'? (Piers Maclaren, Piers Maclaren & Associates)	Taken account of
9-576	A	51	8	51	8	'The nominal price...is only achieved...' What does 'only achieved' mean? (Hector Ginzo, Ministerio de Relaciones Exteriores, Comercio Internacional y Culto)	Taken account of
9-577	A	51	42	55	2	<b>It is unclear to me how the issues mentioned in section 9.6.2.2 (leakage, pemanence, standardisation etc.) impact the figures and table given in previous chapters. Is it possible to quantify their potential impact, just to get an idea of their (relative) importance for sequestration and reduction.</b> (Peter Van der Meer, Alterra)	Rejected; the total scale of projects is so small, we don't have means to quantify the relative overall quantitative importance
9-578	A	51	49			write ....(Chromitz, 2002) (punctuation) (YABI Ibouaraïma, LECREDE/DGAT/UAC)	Accept
9-579	A	51	49			write ....(Chromitz, 2002) (punctuation) (YABI Ibouaraïma, LECREDE/DGAT/UAC)	Accept
9-580	A	52	8			write Aukland and al., 2003 (punctuation) (YABI Ibouaraïma, LECREDE/DGAT/UAC)	Accept
9-581	A	52	8			write Aukland and al., 2003 (punctuation) (YABI Ibouaraïma, LECREDE/DGAT/UAC)	Accept
9-582	A	52	9			write (Schwarge and al., 2003) (punctuation) (YABI Ibouaraïma, LECREDE/DGAT/UAC)	Accept
9-583	A	52	9			write (Schwarge and al., 2003) (punctuation) (YABI Ibouaraïma, LECREDE/DGAT/UAC)	Accept
9-584	A	52	14	52	14	Use "GHG emission reduction projects" instead of "GHG source reduction projects" (Bruno Locatelli, CIRAD-CATIE)	Accept
9-585	A	52	18	52	20	It is not clear why the accounting under decision 19/CP.9 is 'somewhat imbalanced' Please clarify. (Hector Ginzo, Ministerio de Relaciones Exteriores, Comercio Internacional y Culto)	Taken account of
9-586	A	52	18	52	20	<b>The sentence, "Accounting under decision 19/CP.9 is somewhat imbalanced: ... minus leakage.", should be deleted. As COP decision is very much political</b>	See 9-584

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						<b>issue, it is inappropriate to refer to any decisions in AR4.</b> (Noriyuki Kobayashi, Nihon University)	
9-587	A	52	18	52	20	The following statement does not correspond to what decision 19/CP.9 defined: "Accounting under decision 19/CP.9 is somewhat imbalanced: Net anthropogenic GHG removals by sinks are defined as the sum of carbon stock changes minus GHG project emissions, minus leakage." The correct statement would be: <b>"Accounting under decision 19/CP.9 is somewhat imbalanced: Net anthropogenic GHG removals by sinks are defined as the sum of carbon stock changes in the project scenario minus the sum of carbon stock changes in the baseline, minus the increase of GHG emissions caused by the project, minus leakage. Emissions reductions within the projects nor positive leakage can be accounted for."</b> (Bruno Locatelli, CIRAD-CATIE)	See above
9-588	A	52	23	52	24	One comment about the following statement. "Nevertheless, as under CDM A/R only emissions and not stock changes outside the project area are being accounted for, market leakage is hardly an issue in the first commitment period." The definition of leakage under decision 19/CP.9 refers to the "increase in GHG emissions by sources outside the boundaries". It does not exclude emissions from deforestation (a negative change in C stock = an emission) and deforestation caused by market leakage is a real issue. (Bruno Locatelli, CIRAD-CATIE)	See above
9-589	A	52	23	52	24	None of the references appears in the reference list (Chomitz 2002; Murray et al. 2002; Aukland, et al. 2003; Schwarze et al. 2003; Sohngen & Brown 2004; Vöhringer et al. 2004) (Bruno Locatelli, CIRAD-CATIE)	Accept
9-590	A	52	23			References the work of Murray et al, 2002 but this is not cited in the reference section. It is likely that the authors are referring to a working paper version of an article that was ultimately published in 2004: Murray, B.C., B.A. McCarl, and H. Lee. 2004. "Estimating Leakage from Forest Carbon Sequestration Programs." Land Economics 80(1):109-124., The US EPA 2005 study referenced above also provides new estimates on leakage for forestry and agricultural activities in the USA. (Brian Murray, Center for Regulatory Economics and Policy Research)	Accept
9-591	A	52	26	52	28	It goes without saying that leakage is not deducted from tCER and ICER on the rule.	Reject: please explain

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						More explanation of "market leakage" is required. (Noriyuki Kobayashi, Nihon University)	
9-592	A	52	28	52	30	Regarding how to account for "permanent" leakage in a "non-permanent" accounting scheme specific to forest projects, the text says that "On the one hand, this procedure is biased towards the tCER model, as the deductions only take place over one certification period. On the other hand, "permanent" project emissions are ac-counted against non-permanent CERs". After being raised by Pedroni (2004), this problem has been resolved by the CDM Working Group on Afforestation and Reforestation (Report of the 6th meeting of the CDM AR WG, Annex 8, or Report of the 22nd meeting of the CDM Executive Board, Annex 15). Discounted emissions should be cumulated since the beginning of the accounting period (in the case of tCER) or since the last issuance of credits (in the case of ICER). (Bruno Locatelli, CIRAD-CATIE)	Taken account of
9-593	A	52	30			write (Pedroni, 2004) (punctuation) (YABI Ibouaraïma, LECREDE/DGAT/UAC)	Accept
9-594	A	52	30	52	30	Pedroni (2004) does not appear in the reference list (Bruno Locatelli, CIRAD-CATIE)	Accept
9-595	A	52	30			write (Pedroni, 2004) (punctuation) (YABI Ibouaraïma, LECREDE/DGAT/UAC)	Accept
9-596	A	52	38	52	39	"The baseline net GHG removals by sinks do not account for pre-project emissions". Do you mean "without-project emissions"? (Bruno Locatelli, CIRAD-CATIE)	Taken account of
9-597	A	52	39	52	40	"An example for this is the case of a silvo-pastoral system, where tree planting on an area used for grazing leads to the establishment of a forest, and cattle grazing is continued. (...). The baseline net GHG removals by sinks do not account for pre-project emissions. However, if the ruminants remain on the area, their methane emissions will have to be accounted for as project emissions". I think this issue is still controversial among CDM experts. For some experts, if the ruminants remain on the area, as the estimation of the project scenario ("actual net GHG removals by sinks") must take into account "the increase in emissions" (19/CP9) and as there is no increase in emissions by ruminants, ruminant emissions do not appear in the project scenario (nor in the baseline). (Bruno Locatelli, CIRAD-CATIE)	Taken account of
9-598	A	52	40	52	41	If cattle were moved outside the project area, the emissions wouldo not be 'project emissions' anymore. They would certainly be accounted as leakage, which is a	Taken account of

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						different concept. (Hector Ginzo, Ministerio de Relaciones Exteriores, Comercio Internacional y Culto)	
9-599	A	52	40	52	41	Regarding the statement "If they are moved to pastures outside the project area, this will lead to project emissions, even though what the atmosphere sees remains unchanged", it may be clearer to say that "If they are moved to pastures outside the project area, this will lead to project leakage". The second example (animal moved outside) is credited of a lower contribution to climate change mitigation than the first example (animal kept in the area), even if the actual contribution is the same in both examples. (Bruno Locatelli, CIRAD-CATIE)	Taken account of
9-600	A	52	45	53	1	"Include also new developments regarding additionality at COP 11" (Martina Jung, (Freelance))	Accept
9-601	A	53	9			<b>On Permanence and tCERs. I would like to question here whether the tCER idea, which is obviously designed to fit the case of afforestation/reforestation projects, which are sinks, is applicable to Avoided Deforestation, or whether the later should not be seen as a decrease in emissions rather than a (temporary) increase in sink. Avoided deforestation implies a slowing down in the rate of oxidation of the forest resources, just as energy conservation implies a slowing down of the oxidation of oil/coal/gas. Eventually, all the fossil fuels will land up in the atmosphere, but we give carbon credits to technology which slows this. Ditto for forest conservation. hence credits for avoided deforestation should be considered CERs not tCERs. This point is not taken up in your discussion, but perhaps it should be?</b> (Margaret Skutsch, University of Twente)	Reject; the methodological issues relate to project-based A/R, and little can be learned for Compensated Reduction as proposed by now.
9-602	A	53	9	53	41	<b>"Permanence": Authors should consider other, more accurate, terms now being used like "duration" and "reversibility". This issue only seems to be treated as an afterthought as part of "project-based experience", but the larger-scale assessments in the earlier part of the chapter must be making some assumptions about the time dynamics, and durability of additional carbon sequestration. Therefore recommend this issue be treated as a more fundamental issue, and addressed in the Executive Summary, which is currently silent on duration.</b> (Francisco de la Chesnaye, USEPA)	Taken account of: This paragraph will go under "project experience". Wider context to be discussed in the group
9-603	A	53	28	53	29	The sentence beginning "This means..." should be deleted, because what it states is not right. Unless the second crediting period (if ever is one) lasted more than 15	Accept; this paragraph will be shortened.

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						years, a tCER will always expire before a lCER, which shortest crediting period lasts 20 years. As we do not know the future modalities of a second commitment period under the Kyoto Protocol, the current sentence is wide of the mark. (Hector Ginzo, Ministerio de Relaciones Exteriores, Comercio Internacional y Culto)	
9-604	A	53	39	53	41	"Which are these drawbacks? Why are lCERs then the preferred credit type for forestry projects submitted so far?" (Martina Jung, (Freelance))	See above
9-605	A	53	39	53	40	Delete: the sentence "In spite of their ... to tCER." does not make sense. (Noriyuki Kobayashi, Nihon University)	Accept; Paragraph will be shortened and reformulated
9-606	A	53	44			Table 9.16: add "in the first commitment period" in the title (Somogyi Zoltán, Joint Research Institute)	Accept
9-607	A	54	4			write (CCBA, 2005) (punctuation) (YABI Ibouraima, LECREDE/DGAT/UAC)	Accept
9-608	A	54	4			write (CCBA, 2005) (punctuation) (YABI Ibouraima, LECREDE/DGAT/UAC)	Accept
9-609	A	54	7	55	2	The section 9.6.2.2.5 is focus on proposals by IPAM and German Advisory Council on Global Change. It seems to be imbalanced to introduce only two proposals. (Noriyuki Kobayashi, Nihon University)	Accept
9-610	A	54	7			It is perhaps worth noting that one of the reasons that Compnesated Reductions was developed was because it was realised that avoided deforestation would never be acceptable under CDM because of the leakage problem. In addition to Compensated Reducations there are several other similar proposals such as the JRC model (Achard et al 2005). Most of them assume away the problem of measurement by reference to use of remote sensing but apparently do not understand the difficulty in translating areal coverage into tons of carbon. These ideas are cutting edge and offer great potential, but the practicalities are vitally important and here reference to the need to find reliable methods for establishing changes in deforestation rates is crucial (not simply that the forest inventories are unreliable, line 29 ), there need to huge advances in Remote Sensing technology first, or alternative measurement methods. (Margaret Skutsch, University of Twente)	Taken account of
9-611	A	54	7	55	2	Reference to the proposal made by Papua New Guinea and Costa Rica (see document UNFCCC/CP/2005/MISC.1) is missing from this section. (Eveline Trines, Treeness Consult)	Accept
9-612	A	54	22	54	24	In the sentence beginning 'But also...' the meaning of 'run-off effects' is not clear	Accept

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						as to what kind of effects are being considered. None of the explanations of ‘run-off’ given in e.g. ‘Oxford Advanced Learner's Dictionary’ gives sense to the sentence. Perhaps the term is part of a technical argot, in which case a footnote would help understanding it. Otherwise it should preferably be replaced with other, more accesible term. (Hector Ginzo, Ministerio de Relaciones Exteriores, Comercio Internacional y Culto)	
9-613	A	54	29			the statement that inventories are unreliable cannot be left in this report. methods to assess growing stock might be wrongly chosen and this might lead to unreliable results (Reinhold Glauner, Institute for World Forestry)	Reject; we only judge the results as unreliable, without going into reasons
9-614	A	54	33	54	34	The sentence beginning ‘Thus a stable...’ is difficult to connect with the rest of the paragraph; it states a general principle related more to a country's governance than to the reliability of forest inventories. If the meaning of this sentence were really considered crucial to the interpretation of the paragraph, the sentence, suitable rewritten, should be preferably moved to the beginning of the paragraph. (Hector Ginzo, Ministerio de Relaciones Exteriores, Comercio Internacional y Culto)	Accept
9-615	A	54	48	54	48	UNFCC=>UNFF (Noriyuki Kobayashi, Nihon University)	Reject; don’t understand your point
9-616	A	54	49			write (Scholz, 2004).(punctuation) (YABI Ibouraïma, LECREDE/DGAT/UAC)	Accept
9-617	A	54	49			write (Scholz, 2004).(punctuation) (YABI Ibouraïma, LECREDE/DGAT/UAC)	Accept
9-618	A	55	4	57	12	<b>The additional issues to be solved which are treated in section 9.6.2.3 are to my feeling somewhat hidden here. Forest definitions e.g. may also affect status of the sector (chapter 9.2), so could be treatd there. TAC are important in economic calculations and should alo maybe brought forward.</b> (Peter Van der Meer, Alterra)	Accept; paragraphs will be deleted
9-619	A	55	9	55	9	Is the 7th Conference of he Parties UNFCCC's? (Noriyuki Kobayashi, Nihon University)	See above
9-620	A	55	11			write (Kildman, 2002) (punctuation) (YABI Ibouraïma, LECREDE/DGAT/UAC)	Accept
9-621	A	55	11			write (Kildman, 2002) (punctuation) (YABI Ibouraïma, LECREDE/DGAT/UAC)	Accept
9-622	A	55	12			write (Carle & Holgren, 2003) (punctuation)	Accept

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						(YABI Ibouaraïma, LECREDE/DGAT/UAC)	
9-623	A	55	12			write (Carle & Holgren, 2003) (punctuation) (YABI Ibouaraïma, LECREDE/DGAT/UAC)	Accept
9-624	A	55	34			write (Brower and Al) (punctuation) (YABI Ibouaraïma, LECREDE/DGAT/UAC)	Accept
9-625	A	55	34			write (Brower and Al) (punctuation) (YABI Ibouaraïma, LECREDE/DGAT/UAC)	Accept
9-626	A	55	38			write (Duschke, 2002) (punctuation) (YABI Ibouaraïma, LECREDE/DGAT/UAC)	Accept
9-627	A	55	38			write (Duschke, 2002) (punctuation) (YABI Ibouaraïma, LECREDE/DGAT/UAC)	Accept
9-628	A	55	40	55	42	The sentence, "For future commitment ... in the target periods.", should be deleted or rewritten. The description seems to recommend to adopt net-net accounting. To keep AR4 neutral, the merit on gross-net accounting should be discussed.. (Noriyuki Kobayashi, Nihon University)	Taken account of; paragraph to be deleted
9-629	A	55	43	55	43	'...imbalances due to saturation...' Saturation of what? (Hector Ginzo, Ministerio de Relaciones Exteriores, Comercio Internacional y Culto)	Taken account of; paragraph to be deleted
9-630	A	55	44			write (Michaelower & Stronzik, 2000) (punctuation) (YABI Ibouaraïma, LECREDE/DGAT/UAC)	Accept
9-631	A	55	44			write (Michaelower & Stronzik, 2000) (punctuation) (YABI Ibouaraïma, LECREDE/DGAT/UAC)	Accept
9-632	A	55	46			The section refers only to transaction costs in CDM. The costs for a sectoral approach, thus for Avoided Deforestation, could be very different. Generally, CDM TAC are very high because of the high level of expertise involved. It may however be possible to lower the costs at least of the measurement and monitoring tasks by devolving these to the communities and landowners concerned. Particularly for the case of small scale forest encroachment, the involvement of the actual encroachers in these tasks is likely to be an essential part of a strategy to change behaviour towards the forest, and could be achieved through the use by such local groups of small scale high technology (eg hand held computers with GIS and GPS facility). (Margaret Skutsch, University of Twente)	Taken account of; TACs are generic to the CDM and are left out in our section
9-633	A	56	1	56	2	Sentence beginning in line 1. The costs shown should be complemented with information on the sizes of the projects involved or alternatively be related to some reference. Otherwise, it is difficult to estimate the relative weight of them in the	Taken account of; TACs are generic to the CDM and are left out in our section

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						economic and financial assessments of projects. (Hector Ginzo, Ministerio de Relaciones Exteriores, Comercio Internacional y Culto)	
9-634	A	56	2			"The references cited here are missing in the reference list" (Martina Jung, (Freelance))	Taken account of
9-635	A	56	22	56	34	This paragraph is extremely complex, because it is an exercise with at least one abstract entity. This is the 'non-additional CER'. In practice, this CER is inexistent, because the existence of a CER implies the fulfillment of additionality criteria by a MDL project. Even from a theoretical viewpoint the issue of the existence of non-additional CERs lacks interest, because accepting the possibility of non-additionality in the MDL would make the Article 12 of the Kyoto Protocol irrelevant. This paragraph and its accompanying figure 9.29 do not contribute to the clear understanding of the import of transaction costs to MDL projects. I do not mean that the exercise lacks interest or is badly conceived; it seems to me that its true worth cannot be summarised in just about 14 lines of text, particularly with concepts like 'economic optimum' and 'ecologic optimum', which should be fully explained in the present context in order to facilitate grasping their real meanings. Deletion of this paragraph will not affect substantially the rest of the section, if its deletion, however, were rejected, the exercise should be wholly rewritten in a more comprehensive way. (Hector Ginzo, Ministerio de Relaciones Exteriores, Comercio Internacional y Culto)	Taken account of; TACs are generic to the CDM and are left out in our section
9-636	A	56	22	56	35	"Finding modarilites ... small-scale projects." Whole paragraph needs to more explanation. (Noriyuki Kobayashi, Nihon University)	Taken account of; TACs are generic to the CDM and are left out in our section
9-637	A	56	35			Figure 9.29 put the title of the x-axis (year) (YABI Ibouraiima, LECREDE/DGAT/UAC)	Taken account of; TACs are generic to the CDM and are left out in our section
9-638	A	56	38	56	39	"Dutschke et al.... is missing in the reference list" (Martina Jung, (Freelance))	Accept
9-639	A	56	39	56	40	Sentence beginning in line 39. What does 'optimal control costs' mean? What does 'optimal per-unit costs' mean?. It seems that these terms come from a paper by Dutschke at al., cited in the preceding sentence. Unfortunately, that paper is not cited in the 'References' section. (Hector Ginzo, Ministerio de Relaciones Exteriores, Comercio Internacional y Culto)	Taken account of; TACs are generic to the CDM and are left out in our section
9-640	A	56	40	56	42	Sentence beginning in line 40. The second part of the sentence ('...the	Taken account of; TACs are generic to the

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						emissions...projects.') refers to 'emissions integrity risks', 'optima quality control', and both 'A/R and source projects' which reciprocal relationships should be clarified, as well as the meanings of 'emissions integrity risks' and 'optima quality control'. Moreover, the reference to A/R and source projects implies that previous references to CERs were not restricted to those obtained from A/R projects, which should be the main theme of the present chapter. This is rather mind-boggling. (Hector Ginzo, Ministerio de Relaciones Exteriores, Comercio Internacional y Culto)	CDM and are left out in our section
9-641	A	56	40	56	42	"As expiration of ICER and ... source projects." More explanation is required. (Noriyuki Kobayashi, Nihon University)	Taken account of; TACs are generic to the CDM and are left out in our section
9-642	A	56	44	56	46	Which are those modalities and procedures that should be revisited whrn the price of CERs doubles? If they were those for emitting CERs, it is not reasonable to subject them to market fluctuations, because the outcome could be a family of very specific certificates, not necessarily comparable among them. Neither is reasonable that move to balance a supply of (CERs?) from non-additional activities, because the latter should not generate any CER whatsoever, by definition. I suggest deleteing the whole sentence beginning 'Once the CER...activities.' (lines 44-46) (Hector Ginzo, Ministerio de Relaciones Exteriores, Comercio Internacional y Culto)	Taken account of; TACs are generic to the CDM and are left out in our section
9-643	A	57	0			Good intro to SD and its relevance to forestry and climate change (Mohan Munasinghe, Munasinghe Institute for Development (MIND))	Accept
9-644	A	57	9	62	45	Compared to the rest of chap. 9, chap. 9.7 ist underrepresented. There will be no climate mitigation without SD (Reinhold Glauner, Institute for World Forestry)	Taken account of
9-645	A	57	12			section 9.7 is again repeating much of the previous (Bart Kruijt, Alterra)	Accepted. It will be shorten
9-646	A	57	12	62	45	section 9.7 describes forest and SD, treating the goods and services of forests. It would be good to use the same division in ecosystem goods and services as given in the Millenium Assessment (provisioning, regulating, cultural, and remaining), and indicating per services/function what potential ancillary effects of GHG policies could be. (Peter Van der Meer, Alterra)	Rejected. A estándar approach is used for all the volume.
9-647	A	57	25	57	26	The fragment (line 25) '...moving towards it, where, how, and if...' is confusing. (Hector Ginzo, Ministerio de Relaciones Exteriores, Comercio Internacional y Culto)	Noted. Editorial.
9-648	A	58	12	58	12	Which is the precise meaning of 'offsets' in the present context? Is it 'products',	Taken into account. "Offsets" here is used to

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						'consequences'? (Hector Ginzo, Ministerio de Relaciones Exteriores, Comercio Internacional y Culto)	refer to other compensatory effects: "offset something against something". See Dictionary of Contemporary English; Longman.
9-649	A	58	19	58	19	Within the context of the sentence, 'new variable' refers to climate-change mitigation. Climate-change mitigation is not a variable; it may be a concern, a goal, a policy, etc. but not a variable. (Hector Ginzo, Ministerio de Relaciones Exteriores, Comercio Internacional y Culto)	Accepted. Language will be revised.
9-650	A	58	23	58	35	There is a good amount of discussion of co-benefits in chapters 4-11. Yet, this section in ch. 9 is the first place where I have seen a deliberate set of definitions for "ancillary benefits" and "co-benefits". I suggest: (1) a set of definitions be included in chapter 11 since that is where the most thorough discussion takes place, and (2) be sure that the use of both terms is consistent throughout the AR4. With many different authors involved, it is easy for the terms to be used slightly differently. (Mark Heil, U.S. Environmental Protection Agency)	Accepted. The issue will be revised when preparing the SOD in coordination with other authors.
9-651	A	58	23	58	35	As a non-specialist in forestry and land-use, I found reading section 9.7.2 to be very informative, but somewhat unclear. Apparently there are many countervailing forces that influence outcomes. It would be helpful if the authors included a statement that notes the ultimate balance of co-benefits and co-costs is indeterminate and depends on the specific conditions surrounding application of measures/projects (if this is accurate). Perhaps a more general set of principles could be outlined that may help summarize the many countervailing forces - if this is possible to do. (Mark Heil, U.S. Environmental Protection Agency)	Section will be review. Taken into account. The ultimate balance of co-benefits and co-costs cannot, however, be considered as "indeterminate" as a general rule. In fact much more information is now available to make a "finer tuning" in some –but not all- relevant ecosystems. Nevertheless further work is needed in some situations –as the section underlines- to better characterize the main trade-offs between environmental and economic co-benefits and co-costs.
9-652	A	58	44			what is a habitat for biodiversity? (Reinhold Glauner, Institute for World Forestry)	Accepted. As habitat is the environment in which an organism or community lives or appear, <i>strictu sensu</i> it could be accepted that there are not habitats for biodiversity. This shall be reviewed in the SOD.
9-653	A	58	46	58	46	Habitats and forests are all part of biodiversity. A more correct statement would be habitats for animals. (Jeff Price, California State University, Chico)	Rejected. The statement is only partially correct: there are habitats for every living creature (e.g. vegetals) as well as for animals.
9-654	A	60	7	60	14	This paragraph is rather weak from a biodiversity point of view. Perhaps it is	Accepted. It is relevant to give consideration

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						covered elsewhere in the chapter (in which case mention should be made) but there is a broad literature base on the impacts of plantations on biodiversity. These impacts are not limited to replacing grasslands with plantations but the replacement of forests as well. That the plantations are often non-native (e.g., Corsican pine in areas once holding Scotch pine, eucalyptus anywhere outside of Australia) and do not support the biodiversity of the native habitat type. (Jeff Price, California State University, Chico)	to the impacts of the replacement of native forests by plantations.
9-655	A	60	16	61	46	This section may wish to reference the recent article in Science addressing both these issues, expressing caution that plantations could deplete water quantity and soil quality.: Jackson, R., E. Jobbagy, R. Avissar, S. Roy, D. Barrett, C. Cook, K. Farley, D. le Maitre, B. McCarl, and B.C. Murray. 2005. "Trading Water for Carbon with Biological Carbon Sequestration." Science 310:1944-1947 (Brian Murray, Center for Regulatory Economics and Policy Research)	Accepted. The mentioned new article is a very relevant one and will be explicitly incorporated in the SOD. Nevertheless, partially similar results have already been included in the present draft when quoting Farley et al. paper. Due account will be given to this in the SOD.
9-656	A	60	39	60	44	Blank space. Something missed??? (Jose Moreira, Institute of Electrotechnology and Energy - University of Sao Paulo)	Noted.
9-657	A	61	4	61	19	too few and isolated examples, there is plenty of literature on this topic reporting on chemical AND physical impacts (Reinhold Glauner, Institute for World Forestry)	Accepted. Physical impacts were insufficiently considered. Better balance will be sought. In relation to chemical impacts, for instance, better consideration should be paid to nutrients redistribution by trees in some conditions (e.g. Calcium), as Jackson R. et al refer.
9-658	A	61	6	61	25	These paragraphs cite a mixture of reviews and site-specific studies. Although this is useful, there are now so many site specific studies that including specific studies in a review document raises the question of bias -- why are only these studies being reported? In particular, the statement on lines 18-19 that an integrated biogeochemical assessment is needed is probably not true: several important reviews have not been included. This is particularly true in the case of soil C, where the literature has now reached a clear consensus. I suggest basing this section on: Paul, K.I. et al 2002. Forest Ecology And Management, 168(1-3): 241-257 AND Guo, L.B. and Gifford, R.M., 2002. Global Change Biology, 8(4): 345-360). Additionally, these two reviews should be cited: Davis, M.R. and Condon, L.M., 2002. Australian Journal Of Soil Research, 40(4): 675-690. AND, Tate, K.R. et al., 2005. Canadian Journal of Soil Science: 85: 481-489. I suggest that the section read, "In general, afforestation of croplands presents considerable opportunity for C	Accepted. The review already showed the existence of many specific studies and some general reviews as well. The risk of bias really exists. Attention will be paid to this. References to soil C are fully shared. Proposed text is welcomed and will be taken into consideration. Literature references suggested are also going to be taken into account. More attention will be paid to literature on variation in other properties of soils.

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						sequestration in soil, while afforestation of grazing land can result in relatively smaller increases or decreases in soil C (Paul et al 2002, Guo and Gifford, 2002). Soil C losses associated with afforestation are primarily associated with a single species, Pinus radiata, and are small relative to C sequestration in living biomass (Paul et al 2002, Davis and Condron 2002, Tate et al 2005 )." Following this variation in other properties can be discussed. The recent work published in Science should also be included in the soil section, noting that other changes in soil properties are largely driven by changes in hydrology (Jackson, R.B. et al., 2005. Science, 310(5756): 1944). The two paragraphs in Jackson et al discussing afforestation effects on soil C can be adapted to follow this.  (W. Troy Baisden, Landcare Research)	
9-659	A	61	25			write (Chen and al., 2002) (punctuation) (YABI Ibouraïma, LECREDE/DGAT/UAC)	Noted
9-660	A	61	25			write (Chen and al., 2002) (punctuation) (YABI Ibouraïma, LECREDE/DGAT/UAC)	Noted
9-661	A	61	35			write Garcia-Prechae and al., 2001) (punctuation) (YABI Ibouraïma, LECREDE/DGAT/UAC)	Noted
9-662	A	61	35			write Garcia-Prechae and al., 2001) (punctuation) (YABI Ibouraïma, LECREDE/DGAT/UAC)	Noted.
9-663	A	62	1			Usually? Compared to what? After how many years? (Reinhold Glauner, Institute for World Forestry)	Accepted. "Usually" gives a vague meaning to this sentence.
9-664	A	62	18	62	18	Indeed plantation can be a tool for landscape restoration etc. on really degraded site conditions. However, using exotic tree species that have not been introduced previously to host country or species readily disperse and naturalize, such as trees in the 100 of the World's Worst Invasive Alien Species (www.issg.org) should be avoided to ensure endemic biodiversity. (Yoshiyuki Kiyono, Forestry and Forest Products Research Institute)	Accepted. Reference to invasive species is relevant.
9-665	A	62	45			write (Clavijo and al., 2005) (punctuation) (YABI Ibouraïma, LECREDE/DGAT/UAC)	Noted.
9-666	A	62	45			write (Clavijo and al., 2005) (punctuation) (YABI Ibouraïma, LECREDE/DGAT/UAC)	Noted.
9-667	A	62	47	66		section 9.8 and 9.9 are OK (Bart Kruijt, Alterra)	Noted.
9-668	A	62	47			Section 9.8. There are many duplications with previous sections.	Accepted. Duplications are decreased.

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						(Seiji Hashimoto, National Institute for Environmental Studies)	
9-669	A	63	32			write (Fuldjimori, 2001) (punctuation) (YABI Ibouraïma, LECREDE/DGAT/UAC)	Accepted.
9-670	A	63	32			write (Fuldjimori, 2001) (punctuation) (YABI Ibouraïma, LECREDE/DGAT/UAC)	Accepted.
9-671	A	63	34			write (Wright and al., 2003) (punctuation) (YABI Ibouraïma, LECREDE/DGAT/UAC)	Accepted.
9-672	A	63	34			write (Wright and al., 2003) (punctuation) (YABI Ibouraïma, LECREDE/DGAT/UAC)	Accepted.
9-673	A	63	38	63	39	Change the sentence "The development of sustainable ... promoting thinning." to "The development of sustainable low-cost technologies as well as favorable timber market price will be necessary for promoting thinning." (Noriyuki Kobayashi, Nihon University)	Accepted. The sentence is modified considering the proposed text.
9-674	A	64	3	64	5	Other HWP estimations can be seen: (Canada) Apps et al.(1999). Carbon budget of the Canadian forest product sector. Environmental Science and Policy 2: 25-41. (Germany) Burschel et al.(1993). Present role of German forests and forestry in the national carbon budget and options to its increase. Water, Air, and Soil Pollution 70: 325-340. (Other industrialized countries) Hashimoto et al.(2002). Wood products: potential carbon sequestration and impact on net carbon emissions of industrialized countries. Environmental Science and Policy 5(2): 183-193. (Seiji Hashimoto, National Institute for Environmental Studies)	Accepted. But all literature cannot be shown because of limitation of pages.
9-675	A	64	18	64	42	this is I believe the most important point of section 9.8, which should be stressed and maybe brought forward. There should be clear indication that there is an urgent need for standardised method for estimation of carbon stock and fluxes; only when this is solved better and more reliable estimates can be made. (Peter Van der Meer, Alterra)	Noted.
9-676	A	64	26			write (Masera and al., 2003) (punctuation) (YABI Ibouraïma, LECREDE/DGAT/UAC)	Accepted.
9-677	A	64	26			write (Masera and al., 2003) (punctuation) (YABI Ibouraïma, LECREDE/DGAT/UAC)	Accepted.
9-678	A	64	45			write (Van Kooten and al., 2003) (punctuation) (YABI Ibouraïma, LECREDE/DGAT/UAC)	Accepted.
9-679	A	64	45			write (Van Kooten and al., 2003) (punctuation) (YABI Ibouraïma, LECREDE/DGAT/UAC)	Accepted.

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9-684	A	65	0			Section 9.9. Long-term modeling – again there is a need to coordinate with Chap. 3 on the scope of each chapter and how to deal with overlap. Is this section really necessary in this chapter? If so, it needs to be reconciled with the long-term results earlier in this chapter and with those in Chap. 3. Also, the long-term perspective given here is that of a single model and therefore begs the question of what does the rest of the literature project? (Steven Rose, USEPA)	a, a meeting was held with ch 3
9-680	A	65	35	65	50	I suggest to include as another potential driver for A/R activities the concern with abrupt climate change. If such changes occurred in the past without human intervention, they may occur with higher frequency with the intense anthropogenic action occurring today. To reduce climate changes risks or to learn how to guide society development if such risks are detected one of the few possibilities is to strongly rely on biomass as a source of energy. Coupling energy production from biomass with Carbon Capture and Storage (CCS), it is possible to achieve real negative CO2 emission from energy production. (see Mollersten., 2003.) (Jose Moreira, Institute of Electrotechnology and Energy - University of Sao Paulo)	r, don't know what to do with this . unclear comment
9-681	A	65	37	65	41	Indicate what the level of uncertainty is of this statement; figure 9.26 does not show this. (Peter Van der Meer, Alterra)	a, we will deal better with uncertainties
9-682	A	65	40	65	41	Sentence beginning in line 40. How is it that about 40% of sink enhancement in the tropics will be achieved by bioenergy. What kind of bioenergy is that? I gather it is not the one produced by photosynthesis. Some clarification would be very helpful. (Hector Ginzo, Ministerio de Relaciones Exteriores, Comercio Internacional y Culto)	partly agree, Outlook will be re written
9-683	A	65	43	65	50	Idem: indicate what the level of uncertainty is, elaborate on the last line (what do you mean by large uncertainty).. (Peter Van der Meer, Alterra)	a, we will deal better with uncertainties
9-685	A	66	24	66	25	I would expect more words on the economic potential of forests in mitigation/reducing GC here (one of the main aims of this chapter ?) (Peter Van der Meer, Alterra)	a, more economics will be brought in
9-686	A	66	29	66	39	In my opinion this paragraph misses a brief description of the uncertainties associated with the WGII Ch.4 findings. Not with the intent to redo the work but to place the current estimates of mitigation potential of the forestry sector in the greater context: an uncertain future with respect to the impacts of climate change both in terms of timing (when will it hit), location (where will it hit) and magnitude (how hard will it hit).	a, impacts will be considered more prominently

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						(Eveline Trines, Treeness Consult)	
9-687	A	67	1			General comment. This draft has many references in the main text not included in the 'References' section. This does not facilitate to the comprehension of some rather difficult parts of this report. There is also a large section dedicated to A/R projects under the MDL, which is presented in a way that seems too theoretical for a practical activity that has been only regulated for the first commitment period, and which future after 2012 is a big unknown as to the modalities it might take. Some theoretical thinking on other afforestation or reforestation approaches to mitigation--not restricted to commercial plantations--would be very enlightening to the readers of the present report; e.g. the environmental benefits of urban forestry. (Hector Ginzo, Ministerio de Relaciones Exteriores, Comercio Internacional y Culto)	a
9-688	A	77	37			spend the years of publication until after the authors (YABI Ibouraïma, LECREDE/DGAT/UAC)	a
9-689	A	77	37			spend the years of publication until after the authors (YABI Ibouraïma, LECREDE/DGAT/UAC)	a
9-690	A	77	40			spend the years of publication until after the authors (YABI Ibouraïma, LECREDE/DGAT/UAC)	a
9-691	A	77	40			spend the years of publication until after the authors (YABI Ibouraïma, LECREDE/DGAT/UAC)	a
9-692	A	77	43			remove "Nords" (YABI Ibouraïma, LECREDE/DGAT/UAC)	a
9-693	A	77	43			remove "Nords" (YABI Ibouraïma, LECREDE/DGAT/UAC)	a
9-694	A	78	6			spend the years of publication until after the authors (YABI Ibouraïma, LECREDE/DGAT/UAC)	a
9-695	A	78	6			spend the years of publication until after the authors (YABI Ibouraïma, LECREDE/DGAT/UAC)	a
9-696	A	78	15			spend the years of publication until after the authors (YABI Ibouraïma, LECREDE/DGAT/UAC)	a
9-697	A	78	15			spend the years of publication until after the authors (YABI Ibouraïma, LECREDE/DGAT/UAC)	a
9-698	A	79	46			spend the years of publication until after the authors (YABI Ibouraïma, LECREDE/DGAT/UAC)	a
9-699	A	79	46			spend the years of publication until after the authors (YABI Ibouraïma, LECREDE/DGAT/UAC)a	a

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9-700	A	80	44			44-46 spend the years of publication until after the authors (YABI Ibouraïma, LECREDE/DGAT/UAC)	a
9-701	A	80	44			44-46 spend the years of publication until after the authors (YABI Ibouraïma, LECREDE/DGAT/UAC)	a
9-702	A	80	47			spend the years of publication until after the authors (YABI Ibouraïma, LECREDE/DGAT/UAC)	a
9-703	A	80	47			spend the years of publication until after the authors (YABI Ibouraïma, LECREDE/DGAT/UAC)	a
9-704	A	81	1			spend the years of publication until after the authors (YABI Ibouraïma, LECREDE/DGAT/UAC)	a
9-705	A	81	1			spend the years of publication until after the authors (YABI Ibouraïma, LECREDE/DGAT/UAC)	a
9-706	A	85	0			The page 85 is omitted (does not appear in the document) (YABI Ibouraïma, LECREDE/DGAT/UAC)	a
9-707	A	93	0			"Table 9.10: Potentials seem to be given in yearly values, while in the title of the table it is referred to the whole commitment period. Moreover, it should be noted that the values for the regions Asia, Africa and Latin America given in the study do only include a limited set of countries for which data was available and not all countries of the respective region. It is not clear to me how some of the values (e.g. for Latin America) have been calculated from the original table. It might also be confusing to the reader to have regions and countries (some of them being part of one of the regions) in the same table (the country groupings in the original study were included in this way in order to adapt them to the setup of the model). Therefore, I consider the table in its current version confusing and would not recommend to include it in the given manner." (Martina Jung, (Freelance))	a, more of these global estimates will be re assessed.