

<Review comments by experts on Chapter 3 of the Second Order Draft of Wetlands Supplement>

ID	Expert (Last Name, First Name)	Chapter /Section	Start Line	End Line	Sub-section	Comment	supplementary documents	Authors' Action	Authors' note
E_3_0001	Brown, Lynette	3	1	1		In the previous Chapters land use has been spelled "land-use". In this Chapter the authors use both hyphenated and not, format for consistency. Also in Chapter 2 the Annex and Appedix appear before the References but in this Chapter they appear after, format for consistency. In all previous Chapters et al. has been italicized in the text - format for consistency. Sometimes web sites in the text are underlined and other times they are not - format for consistency throughout Chapter. When 2 author citation separate by the word "and" not "&" in the text to be consistent with previous Chapters.		Accepted with modification	All the points raised in the comments will be made consistent throughout the Wetlands Supplement.
E_3_0002	Batisha, Ayman	3	2	4		CROSS-CUTTING GUIDANCE ON REWETTED ORGANIC SOILS AND RESTORED PEATLANDS should be compatible with Line 20 Cross-cutting guidance on REWETTED PEATLANDS AND organic soils		Accepted with modification	Title will be changed and made compatible.
E_3_0003	Eggleston, Simon	3	2	4		I do not understand the use of "Cross-Cutting" in the title. How is this chapter more cross-cutting than other chapters? Ch 2 also applies to many land uses as do chapters 4 and 5. Also you also use cross-cutting ot refer to issus than apply ot all lad uses such as QA/QC and time series consistance, not methodologies. Better to title the chapter "Rewetted Organic Soils and Restored Peatlands"		Accepted	
E_3_0004	Lyde, Gund	3	19	36		Consider including references in the table of contents as done in other chapters.		Accepted	

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E_3_0005	Batisha, Ayman	3	20	20		Cross-cutting guidance on REWETTED PEATLANDS AND organic soils should be compatible with Line 2 CROSS-CUTTING GUIDANCE ON REWETTED ORGANIC SOILS AND RESTORED PEATLANDS Also REWETTED PEATLANDS AND organic soils should be lowercase (or other)		Accepted	
E_3_0006	Brown, Lynette	3	20	20		REWETTED PEATLANDS AND should not be in all capital letters.		Accepted with modification	Title will be changed and its format will be corrected.
E_3_0007	Batisha, Ayman	3	22	22		3.2 Greenhouse Gas Emissions and Removals from Rewetted Peatlands and Organic Soils maybe replaced to 3.2Greenhouse Gas Emissions and Removals		Accepted	
E_3_0008	Batisha, Ayman	3	23	23		3.2.1 CO2 Emissions and Removals by Rewetted Peatlands and Organic Soils maybe replaced to 3.2.1 CO2 Emissions and Removals		Accepted with modification	Title will be shortened.
E_3_0009	Batisha, Ayman	3	24	24		3.2.2 CH4 Emissions from Rewetted Peatlands and Organic Soils maybe replaced to 3.2.2 CH4 Emissions		Accepted with modification	Title will be shortened.
E_3_0010	Batisha, Ayman	3	25	25		3.2.3 N2O Emissions from Rewetted Peatlands and Organic Soils maybe replaced to 3.2.3 N2O Emissions		Accepted with modification	Title will be shortened.
E_3_0011	Batisha, Ayman	3	26	26		3.3 Completeness, time series consistency, QA/QC, reporting and documentation May be replaced by 3.3 Features of good practice		Accepted with modification	Title will be shortened.

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E_3_0012	Batisha, Ayman	3	28	28		3.3.2 Developing a consistent time series May be replaced by 3.3.2 Time series consistency		Accepted with modification	Title will be shortened.
E_3_0013	Batisha, Ayman	3	30	30		3.3.4 Reporting and Documentation May be replaced by 3.3.4 Documentation		Accepted with modification	Title will be shortened.
E_3_0014	Batisha, Ayman	3	31	31		Annex 3A.1 Estimation of default emission factors for CO2-C in rewetted peatlands and organic soils May be replaced by Annex 3 Estimation of default emission factors in rewetted peatlands and organic soils		Accepted with modification	Title will be shortened.
E_3_0015	Batisha, Ayman	3	32	32		Annex 3A.2 Estimation of default emission factors for CO2-DOC in rewetted peatlands and organic soils May be replaced by Annex 3.1 CO2-C		Accepted with modification	Title will be shortened.
E_3_0016	Batisha, Ayman	3	33	33		Annex 3A.3 Estimation of default emission factors for CH4-C in rewetted peatlands and organic soils May be replaced by Annex 3.2 CO2-DOC		Accepted with modification	Title will be shortened.
E_3_0017	Batisha, Ayman	3	34	34		Appendix 3.1 CO2 emissions/removals from rewetted peatlands and organic soils in Tropical climate: a basis May be replaced by Annex 3.3 CH4-C		Accepted with modification	Title will be shortened.
E_3_0018	Batisha, Ayman	3	35	35		for future methodological development May be replaced by Appendix 3.1 CO2 emissions/removals in Tropical climate		Accepted with modification	Appendix 3.1 will be removed in the final draft.

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E_3_0019	Hirota, Mitsuru	3	77	142		A little bit unclear especially on relationship with the former 2006 IPCC Guideline. Please edit some part of this section easier to see the relationship, like the Introduction section of Chap. 5.		Accepted	
E_3_0020	Schrier-Uijl, Arina	3	79	163	general/ paragraph 3.1	Suggestion: add a definition for 'rewetted soil'. When is a soil rewetted? For CO2 emissions a soil is rewetted if the drainage depth of formerly drained soils is being reduced to 30 cm drainage depth or lower?. Clarity is needed and compliancy with Chapters 1 and 2.		Accepted with modification	The action of rewetting is not dependent on WTD. Text will clarify what is a "rewetted soil".
E_3_0021	Schrier-Uijl, Arina	3	79	163	paragraph 3.1	In the document methods (or references to other documents) are give for calculation of CO2 (from soil, DOC, and fire). One might consider to also give background information on all of these pools, not 'just' the soil pool. Also its good to provide more background info on what the impact is of rewetting on the CH4 and N2O emissions. This could be taken from later paragraphs.		Accepted with modification	Background info on scope is provided for all elements except DOC. Text will be added for DOC.
E_3_0022	Schrier-Uijl, Arina	3	79	163	paragraph 3.1	• Titles of sub-paragraphs are a bit cryptic/unclear/too long. reconsider.		Accepted	
E_3_0023	Schrier-Uijl, Arina	3	79	163	paragraph 3.1	It has to be clear from the introduction that in the light of emission reduction rewetting of peat is an important measure. Its perhaps better to separate between mineral wetlands and wetlands with organic soils and to make clear that this document is only about rewetting/restoration of peatlands.		Rejected	The chapter covers all wetlands on organic soils, including but not limited to peatlands. Impact of rewetting is explained for all GHGs.

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E_3_0024	Schrier-Uijl, Arina	3	80			‘what is rewetting, restoration, rehabilitation and how they affect GHG’: Line shall be re-phrased. E.g. what are rewetting, restoration and rehabilitation and how do these activities affect the GHG balance. Also: only the effect of rewetting on the GHG balance is described, not the effect of rehabilitation and/or restoration (which partly involves rewetting, but also might involve re-vegetation, reduced management etc).		Accepted with modification	Title will be improved. Text will be provided explaining why the outcome of rehabilitation is not explicitly covered in this chapter.
E_3_0025	Wiseman, Michael	3	80	80		GHG ???		Accepted	It will be replaced with "greenhouse gas".
E_3_0026	Condor Golec, Rocio Danica	3	82	84		In this paragraph wetlands are define. I suggest this is consistent with Chapter 0 and Chapter 1.		Accepted with modification	Intro will remind reader of this defining characteristic of wetlands, but will also refer to chapter 1.
E_3_0027	Radunsky, Klaus	3	82	84		It is noted that this definition is inconsistent with the defintion of wetlands included in the glossary. It is strongly recommended to align both definitions and to use the same definitions of "wetlands" throughout the whole supplement and the IPCC Guidelines.		Accepted	

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E_3_0028	Artz, Rebekka	3	85			Given that emissions from natural peatlands do not require to be accounted for under current rules, how is it established when a restoration project has been completed, i.e. a natural peatlands has been re-established? Some guidance on this would be useful, as restoration of lightly grazed or mildly drained peatlands could conceivably result in reversion to a natural state fairly rapidly.		Rejected	Determining whether a site has returned to a "natural" states is beyond the scope of this chapter.
E_3_0029	Schrier-Uijl, Arina	3	85			‘rewetting may be accompanied by restoration’: Rewetting is not accompanied by restoration, rewetting is (part of) the restoration.		Accepted with modification	Wording will be improved to describe relationship between rewetting and restoration.
E_3_0030	Tiemeyer, Bärbel	3	85	90		Rewetting is assumed to return the peatland to natural hydrological conditions. Due to altered soil properties, nitrogen deposition, and other problems, this is frequently not possible. How do the emission factors reflect "imperfect" re-wetting?		Rejected	There is no assumption in the chapter regarding the 'naturalness' of a rewetted site, nor the 'success' of rewetting actions. The emissions factors, being based on measurements, already capture a wide range of effects and conditions.
E_3_0031	Schrier-Uijl, Arina	3	86			‘...biogeochemical processes characteristics of saturated soils, as well as of the vegetation cover that pre-dated the disturbance of these areas...’: Rephrasing needed. Processes and characteristics is double and what are the hydrological processes regarding the vegetation cover?		Accepted with modification	Wording will be improved.

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E_3_0032	Schrier-Uijl, Arina	3	90			'restoration is accompanied by rewetting': Repetition. Consistency needed with line 85		Accepted	
E_3_0033	Ding, Weixin	3	91	92		Wet management practices, Here the meaning of "wet" is not clear, please explain it clearly.		Accepted	
E_3_0034	Penman, Jim	3	91			Do we need to say 'wet management practices'? Suggest delete 'wet' since we are here talking of undrained land.		Accepted	
E_3_0035	Wiseman, Michael	3	93	93		the second (of) is not required (of some of)		Accepted with modification	The text will be restructured.
E_3_0036	Radunsky, Klaus	3	96	97		The following wording is suggested: ..from rewetting and is not covered by this chapter...		Accepted with modification	The text will be restructured.
E_3_0037	Penman, Jim	3	97			Unclear why references are given for a statement about what the chapter does not provide. Is it that information on rehabilitation as a separate activity can be found in FAO 2005, and Nellemann & Corcoran 2010? Please clarify.		Accepted	

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E_3_0038	Hergoualc'h, Kristell	3	98			<p>“The biogeochemical processes responsible for GHG fluxes from wetlands are controlled by water level position (Reddy & DeLaune 2008, pages 162-163) ...”</p> <p>Biogeochemical processes in wetlands aren't solely controlled by the water table position.</p> <p>Suggestion: “The biogeochemical processes responsible for GHG fluxes from wetlands are among other factors (e.g. nutrient status) controlled by water level position (Reddy & DeLaune 2008, pages 162-163) ...”</p>		Accepted	
E_3_0039	Schrier-Uijl, Arina	3	98	onwards		<p>the biogeochemical processes responsible for GHG fluxes from wetlands are controlled by water level position.....’: Not water level alone. At the same water level position fluxes are controlled by (depending on the climate zone) temperature (temperate), vegetation cover (temperate, boreal), nutrient status (temperate) etc., one of these factors could even be of higher significant influence on emissions of e.g. N2O or CO2 than water level. What is being meant here is that rewetting changes the GHG balance significantly in many cases.</p>		Accepted	
E_3_0040	Verchot, Louis	3	98	98		<p>Line 98: Oxygen availability is an important factor in biogeochemical processes in wetlands, but it is not the only one. Peat decomposition processes are still limited by elemental stoichiometry as in other ecosystems. Thus, factors like N availability, N deposition, base saturation etc. are often more important drivers of GHG production. See for example Bragazza et al. (PNAS 2006); Kuhry et al (Ecology 1997); Limpens et al (Biogeosciences 2008) etc. Reducing C dynamics to a single factor, particularly in managed landscapes, is overly simplistic.</p>		Accepted	

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E_3_0041	Brown, Lynette	3	101	101		There are 2 publications by Komulainen et al. from 1999 - please designate a and b in the Reference section and update references throughout Chapter.		Accepted with modification	One of the 2 references does not exist and will be deleted.
E_3_0042	Lyde, Gund	3	101	101		Komulainen et al., 1999, there are two listed in the references. See 1074 and 1079. Which one is this?		Accepted with modification	One of the 2 references does not exist and will be deleted.
E_3_0043	Artz, Rebekka	3	104			see also Samaritani, E., Siegenthaler, A., Yli-Petäys, M., Buttler, A., Christin, P.-A. & Mitchell, E.A.D. 2011. Seasonal Net Ecosystem Carbon Exchange of a Regenerating Cutaway Bog: How Long Does it Take to Restore the C-Sequestration Function? Restoration Ecology, 19, 480-489		Noted	
E_3_0044	Herbst, Mathias	3	105	109		A remark about the development over time after rewetting needs to be added here, especially so because it is explicitly mentioned for CO2 in the previous paragraph. CH4 emissions usually start at relatively low levels and increase over a couple of years following the rewetting.		Accepted	
E_3_0045	Blondel, Ana	3	106	106		Reference "Juottonen et al., 2012" might be missing or the year might be wrong on this line (see reference provided on lines 1064-1068)		Accepted	
E_3_0046	Brown, Lynette	3	106	106		Should Juottonen et al. be dated "in press" (see line 1066)?		Accepted with modification	Prope date is 2011

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E_3_0047	Lyde, Gund	3	106	106		Not listed in referencesper se. See lines 1064-1068		Accepted with modification	Prope date is 2011
E_3_0048	Schrrier-Uijl, Arina	3	107			'everything else...': Rephrase: e.g. If all other conditions are kept equal....		Accepted	
E_3_0049	Hergoualc'h, Kristell	3	108	109		_"N2O emissions in turn rapidly decrease close to zero after rewetting (Augustin et al., 1998; Wilson et al., in press)." Is there any evidence of this in the tropics? Soil emissions of N2O aren't zero in non drained tropical peat swamp forests.		Accepted with modification	Our references only refer to temperate climates.
E_3_0050	Penman, Jim	3	108			Why 'in turn'? Seems redundant; suggest delete.		Accepted	
E_3_0051	Brown, Lynette	3	109	109		Wilson et al., in press is not listed in the References - please add to References or delete from text.		Accepted	
E_3_0052	Lyde, Gund	3	109	109		Should Augustin et al., 1998; be Augustin and Merbach 1998? See line 897; Wilson et al in press not listed in references.		Accepted	
E_3_0053	Penman, Jim	3	110			Can'tsee anything about 'relevant classifiers' I swat follows; suggest delete from title		Accepted	

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E_3_0054	Schrier-Uijl, Arina	3	111			‘.....will include rewetting and restoration of wetlands on peat or organic soils..’: Rewetting = part of restoration. And: rewetting is perhaps the only restoration measure that is being covered in this document, for re-establishment of vegetation is being referred to other chapters. Give definitions in the intro for peat and organic soil to make the difference clear. Further on in the document is often written: ‘...rewetting of organic soils and peatland restoration..’ This is confusing.		Accepted with modification	"restoration" will be removed.
E_3_0055	Condor Golec, Rocio Danica	3	112	112		I will suggest Peatlands to be defined, and linked to wetlands.		Accepted with modification	Clarification at the beginning of the chapter.
E_3_0056	Penman, Jim	3	115			'Contrary to most ecosystems' is redundant, suggest delete.		Accepted	
E_3_0057	Ginzo, Hector	3	126	127		Nutrient rich peatlands receive water from (besides rainfall)...«the surrounding or underlying mineral soil...». Wouldn't it be conciser to say «...their surroundings...» because it means any spatial direction in relation to the wetlands? What worries me is the concept of soil as a source of water. Under every circumstance whatsoever soil is a source of water provided water is supplied to it by a water course (a surface source) or groundwater (an underlying source). These sources, not mineral soil, have the same rank as rainfall as fundamental sources of water to nutrient rich wetlands.		Accepted	
E_3_0058	Wiseman, Michael	3	131	134		brackets not required on both lines (sub-)tropical		Accepted	"(sub)-" will be deleted.

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E_3_0059	Blondel, Ana	3	132	132		Reference "Page et al., 2011" might be missing or the year might be wrong on this line (see reference provided on lines 1137-1138)		Accepted	(date on p. 1137-38 was wrong)
E_3_0060	Brown, Lynette	3	132	132		Page et al., 2011 is not listed in the References - please add to References or delete from text.		Accepted	
E_3_0061	Hergoualc'h, Kristell	3	132			_The reference (Schumann & Joosten 2008) isn't appropriate here. This reference is a manual for peatland restoration and doesn't report any rewetting activity in (sub)tropical regions. Suggestion: Cite instead study cases taking place in the US, South Africa or Indonesia.		Accepted	
E_3_0062	Lyde, Gund	3	132	132		Page et al., 2011 not listed in references - but there is one for 2010. See lines 1137 and 1138		Accepted	

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E_3_0063	Zhang, Guangyu	3	135	137		I suggest you read this paper: Mitsch, W.J., Tejada, J., Nahlik, A., Kohlmann, B., Bernala, B., Hernandez, C.E., 2008. Tropical wetlands for climate change research, water quality management and conservation education on a university campus in Costa Rica. Ecol. Eng 34 (4), 276–288. what is the conceptual approach? Authors should address this clearly or provide references.		Accepted with modification	"Conceptual approach" will be explained and justified in section 3.2
E_3_0064	Hergoualc'h, Kristell	3	136	137		<p>“Therefore, a default EF for rewetted tropical organic soils or peatlands was developed based on a conceptual approach.”</p> <p>I don’t see any conceptual approach in the Appendix 3.1. This appendix says “In the absence of published data on the soil emissions from rewetted tropical organic soil, the default EF as considered in Section 3.2.1 is zero.”</p> <p>If there’s not published data, how can an EF be proposed?</p> <p>What is the scientific basis for choosing an EF of zero?</p> <p>In the absence of scientific research on the topic, the IPCC shouldn’t provide an EF.</p> <p>See other comments on Appendix 3.1</p>		Accepted with modification	"Conceptual approach" will be explained and justified in section 3.2

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E_3_0065	Verchot, Louis	3	136	137		IPCC should produce evidence based information, not best guesses. In line 120 you say “default emission factors in this chapter were all derived from flux measurements”, but for tropical restored peatlands the lack of measurements is not going to be an obstacle. If this were a scientific effort, this approach would be considered to be “making up” the data and would be unacceptable. If IPCC accepts to publish numbers based on personal opinion, with no scientific evidence, it will lose credibility.		Accepted with modification	"Conceptual approach" will be explained and justified in section 3.2
E_3_0066	Wiseman, Michael	3	136	136		First word should be plural (outcomes)		Accepted with modification	Sentence will be reworded.
E_3_0067	Hergoualc'h, Kristell	3	137	138		<p>“flux values from undrained (pristine) peatlands were compiled for limited sites in Southeast Asia and Latin America and are provided in Appendix 3.1.”</p> <p>The nature and magnitude of the fluxes presented in the Appendix 3.1. are questionable. See other comments on Appendix 3.1</p>		Accepted with modification	Limitations of the data will be better explained in the appendix.
E_3_0068	Penman, Jim	3	139	141		The sentence beginning 'It is good practice...' appears to be a general instruction to undertake a science programme where the ecosystem occurs. I don't think this is acceptable at Tier 1. Should clarify that this advice applies at higher Tiers only.		Accepted with modification	It will be clarify that the good practice is to develop high-tier methods for significant sources or sinks.

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E_3_0069	Schrier-Uijl, Arina	3	141			Equation 3.1 does include N2O.		Accepted with modification	This equation is only about carbon. A sentence on the contribution of N2O will be added after the equation.
E_3_0070	Kasimir Klemedtsson, Asa	3	145			To make the text consequent with chapter 2 I suggest a change of "domestic emission factors" into country specific emission factors"		Accepted	
E_3_0071	Verchot, Louis	3	145	146		This is inconsistent with Chapter 2.		Accepted	
E_3_0072	Brandon, Andrea	3	147	148		Not the description of what is in this chapter. Also contradicts lines 91-92 with respect to what default guidance is being provided in this chapter.		Accepted with modification	Sentences will clarify what is considered and how.
E_3_0073	Schrier-Uijl, Arina	3	148			unclear what ‘wet management’ is, is meant paludiculture? Maybe add definition somewhere.		Accepted	
E_3_0074	Verchot, Louis	3	150	150		Change “may or may not” to “may”		Accepted	

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E_3_0075	Brown, Lynette	3	152	152		All of the following land-use categories have been capitalized in previous chapters and line 243 of this Chapter "forest land, cropland, grassland, or wetlands" - format for consistency throughout chapter.		Accepted	
E_3_0076	Radunsky, Klaus	3	152	153		The sentence: "It is recommended to consider this guidance as common to all reporting categories" should be reconsidered because it leaves too much room for interpretation. At the minimum the above sentence should be limited explicit to "wetlands".		Accepted with modification	Sentence will be clarified.
E_3_0077	Radunsky, Klaus	3	155	157		The sentence "Because the functioning of these ecosystems has already been deeply altered, reporting rewetted peatlands or organic soils as unmanaged land is not consistent with good practice" should be reconsidered because frequently changes in unmanaged ecosystems are the result of unintended side effects of human action, e.g. ocean acidification or enhanced deposition of black carbon in the arctic or enhanced N-deposition in the Northern hemisphere.		Rejected	The IPCC GLs focus on direct management effects as opposed to indirect human impact.
E_3_0078	Federici, Sandro	3	158	162	3.1	I guess the same approach should be followed in chapter 2; or in both chapters both approaches should be reflected.		Accepted with modification	Distinctions are warranted between ch 2 and 3 in this matter; better justification will be provided in section 3.2.2

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E_3_0079	Penman, Jim	3	158	162		This logic of this para is difficult to understand on first encounter. Suggest redraft as: 'High spatial variation in microtopography, water level and consequently in GHG fluxes is typical to pristine peatlands (Strack et al., 2006, Laine et al., 2007, Riutta et al., 2007, Maanavilja et al., 2011). In rewetting this heterogeneity is recreated; in rewetted sites blocked ditches form the wetter end of the variation (Strack & Zuback 2012, Maanavilja et al., submitted). For this reason, in this chapter (and unlike in Chapter 2) former ditches are included as a part of rewetted sites and not treated separately.'		Accepted	
E_3_0080	Tiemeyer, Bärbel	3	158	162		Excluding methane emissions from ditches in re-wetted peatlands is not consistent with the derivation of the EF for methane: there, sites with very high water tables have been excluded (lines 1429 ff). Former ditches will have water tables comparable to shallow lakes, and probably also an accumulation of organic sediment which is suspected to be responsible for high methane emissions (eg. Hahn-Schöffl et al, 2011). While the high water level in the ditches might be unavoidable, the resulting emissions could be accounted for by including methane emissions from flooded sites (or, better, ditches into the methane EF). I would, however, suggest to keep the methodology for ditches as outlined in chapter 2.		Accepted with modification	Distinctions are warranted between ch 2 and 3 in this matter; better justification will be provided in section 3.2.2

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E_3_0081	Herbst, Mathias	3	161	161		Insert the phrase “and adds to a high spatial variability in GHG emissions (Herbst et al. 2011)” after “recreated”. (The suggested reference is found in Agricultural and Forest Meteorology 151, 841-853.)	Attachment_E_3_0081.pdf	Accepted with modification	Distinctions are warranted between ch 2 and 3 in this matter; better justification will be provided in section 3.2.2
E_3_0082	Brandon, Andrea	3	164	onwards		The terminology changes from "rewetted organic soils and restored peatlands" to "rewetted peatlands and organic soils".		Accepted	
E_3_0083	Schrier-Uijl, Arina	3	164		general paragraph 3.2	Choice of method (equation) for CO ₂ -C _{burn} is not given under TIER 1/TIER2/TIER3, while given in equation 3.2, explanation shall be given.		Accepted with modification	Complete guidance will be provided in ch 2 and not repeated in ch 3.
E_3_0084	Schrier-Uijl, Arina	3	170			this is the first time that DOM is introduced. In paragraph 3.1 (e.g line 116) its written fully.		Accepted	
E_3_0085	Herbst, Mathias	3	183	185		I wonder whether “removal” is the best choice how to name this process – shouldn’t we say “uptake”?		Accepted with modification	Both words will be used.
E_3_0086	Lundin, Lars	3	185	185		a removal a negative flux; but removal from where, i.e. soil or atmosphere ?		Rejected	Removals in the context of IPCC GLs, always refer to removals from the atmosphere. See introduction to 2006 IPCC GLs.

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ID	Expert (Last Name, First Name)	Chapter /Section	Start Line	End Line	Sub-section	Comment	supplementary documents	Authors' Action	Authors' note
E_3_0087	Kasimir Klemedtsson, Asa	3	188	189		I suggest a delete of the following sentece (since unnecessary): "from here on ...emission factor."		Accepted	
E_3_0088	Penman, Jim	3	188	189		I would delete the sentence starting with 'From here...'. It doesn't add anything to the explanation just given		Accepted	
E_3_0089	Verchot, Louis	3	188	189		Delete this sentence; the next two equations following this one statement do not use this form.		Accepted	
E_3_0090	Schrier-Uijl, Arina	3	190		equation 3.1	Paragraph 3.2 is about GHG emissions and removals from rewetted peatlands and organic soils. Then equation 3.1 shall reflect this and shall included CO2, CH4 and N2O. Or otherwise the paragraph heading has to be changed to C balance. Since this document if focussing on GHG emission its perhaps preferable to adapt the formula (not expressing it in C fluxes, but in GHG fluxes). Climate impacts have to be expressed in warming potentials.		Accepted	

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ID	Expert (Last Name, First Name)	Chapter /Section	Start Line	End Line	Sub-section	Comment	supplementary documents	Authors' Action	Authors' note
E_3_0091	Zheng, Xunhua	3	190	199		Correction is needed in line 192 : To keep the consistent sign for the term of soil carbon stock change given in equation 3.1 with the term of soil carbon stock change of equation 2.3 in Chapter 4, Volume 4 of the 2006 IPCC Guidelines, a "-" sign should be given to the right side terms of equation 3.1, i.e. change the equation to " $\Delta C_{\text{rewetted org soil}} = - [\text{CO}_2\text{-C}_{\text{rewetted org soil}} + \text{CH}_4\text{-C}_{\text{rewetted org soil}}]$ " ; Correction is needed in line 194: Change to " $\Delta C_{\text{rewetted org soil}} = \text{net C flux to (positive values) or from (negative values) rewetted organic or peat soils (tonnes C yr}^{-1}\text{)}$ "		Accepted	
E_3_0092	Federici, Sandro	3	200	212	3.2.1	it is unclear where " $\text{CO}_2\text{-C}_{\text{rewetted org soil}}$ " should be reported. I guess in the soil pool; this should be clarified, then it should be added the guidance to report zero changes from the litter in the DOM pool and to include in the LB only wooden biomass stock changes (emphasizing, in its total, that this guidance do not cover wooden biomass emissions/removals)		Accepted	Title changed as peatland is subset of organic soils
E_3_0093	Kasimir Klemetsson, Asa	3	200			Talking about "rewetted", How wet is that? I think it is a need for a definition. Rewetting can be an action or it can be avoided action i.e. no clearance of ditches whereupon the land will slowly be wet again.		Rejected	Definition of rewetting specifically given in introduction, defined as an action as deliberately raising the WT. We do not specify the means.

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ID	Expert (Last Name, First Name)	Chapter /Section	Start Line	End Line	Sub-section	Comment	supplementary documents	Authors' Action	Authors' note
E_3_0094	Abad Viñas, Raul	3	211	212		CO2-Csoil-burn should be considered whenever CO2 emissions /removals by rewetted peatlands and organic soils are considered (i.e. under tier 2-3) however, the information provided seems not transparent enough to know where these emissions should be reported (i.e. should it be reported on Table 3.3 or Table 3.4). This fact could introduce a potential risk of double counting.		Accepted with modification	The Co2-C soil burn is not included in the EF provided in Table 3.2. Additional sentence added under paragraph heading 'Emissions from burning' to clarify that we do not provide emissions factors but follow methodologies from Chapter 2
E_3_0095	Federici, Sandro	3	211	211	3.2.1	add a space between soil and burn		Accepted	
E_3_0096	Hergoualc'h, Kristell	3	215	216		<p>“Since the default CO2-C EFs in this chapter are all derived from flux measurements (see Annex 3A.1), the CO2-Ccomposite results from the net flux, emissions or removals, from the soil and non-woody vegetation taken together.”</p> <p>This isn’t clear. Which fluxes are captured and how are they measured?</p> <p>See further comments on Appendix 3A.1</p>		Rejected	This is explained in sufficiency in the following sentence and also in the Annex.

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ID	Expert (Last Name, First Name)	Chapter /Section	Start Line	End Line	Sub-section	Comment	supplementary documents	Authors' Action	Authors' note
E_3_0097	Parish, Faizal	3	215	220		Almost all tropical peatlands are naturally forested and a significant proportion of boreal/temperate peatlands are forested. In the tropics is is known that peat formation is primarily by the tree roots. This should be taken into account in this section which currently focusses on non woody vegetation only. The subsequent paragraph refers to woody biomass - but only in the context of stocks and not related to GHG flux.		Accepted with modification	Peat origin would matter for more complex methods than Tier 1.
E_3_0098	Schrrier-Uijl, Arina	3	215	216		The chamber measurements used for the EF usually do not separate between soil-fluxes and plant/tree-root (woody vegetation) fluxes (autotrophic). How does that comply with line 216?		Rejected	It is stated in Line 219 that such measurement does include autotrophic respiration also.
E_3_0099	Brown, Lynette	3	216	216		Insert "are" after "vegetation" and delete space before period.		Accepted with modification	The insertion of the word 'are' is not necessary as vegetation is not the subject. Space removed
E_3_0100	Hergoualc'h, Kristell	3	219			<p>“The contribution from non woody vegetation occurs via the two processes of photosynthesis (CO2 uptake) and autotrophic respiration (CO2 emissions).”</p> <p>Doesn't non woody vegetation also contribute to C inputs via the decomposition of above and belowground litter?</p>		Rejected	Litter is included in DOM which is a separate stock.

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ID	Expert (Last Name, First Name)	Chapter /Section	Start Line	End Line	Sub-section	Comment	supplementary documents	Authors' Action	Authors' note
E_3_0101	Schrier-Uijl, Arina	3	219			Perhaps a bit misleading since most chamber measurements used for the EF's are 'dark' chambers, that exclude photosynthesis.		Rejected	Most of the chamber measurements are done also with 'light' chambers using EGM.
E_3_0102	Verchot, Louis	3	219	220		I am not sure this is the proper way to look at it. Photosynthesis contributes to the biomass C pool, not the SOM pool. Senescence (litterfall and root mortality) contributes to the input side of the mass balance. Autotrophic respiration does not equal emission. Even if you assume that there is no change in DOM pools, flows through these pools must be accounted for if you are going to estimate emission from the SOM pool based on heterotrophic respiration fluxes. Consider an intact PSF system: there is heterotrophic respiration, but peat soils are a net sink because litter and root inputs to SOM exceed SOM respiration. If you do not account for inputs, you will estimate that these sites are sources. You cannot mix stocks and flows this way.		Accepted with modification	Valid observations but we are summarizing the key contributors to exchanges with atmosphere.
E_3_0103	Federici, Sandro	3	223	224		I guess the intention was to say that rewetting has not an impact on biomass and DOM changes. However, I guess this is not true, indeed the rewetting has an impact on growth, respiration and decay rates. I suggest to delete this sentence, indeed the following sentence says what is needed about the need to estimate changes of wooden mass (live and dead).		Accepted	Sentence deleted.

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ID	Expert (Last Name, First Name)	Chapter /Section	Start Line	End Line	Sub-section	Comment	supplementary documents	Authors' Action	Authors' note
E_3_0104	Federici, Sandro	3	224	227	3.2.1.	I guess that here should be used "Dead wood" instead than DOM, indeed all emissions associated with litter decay are already included in the term CO2- Ccomposite		Accepted with modification	DOM from wood
E_3_0105	Hergoualc'h, Kristell	3	225			_ pool written twice		Accepted	
E_3_0106	Federici, Sandro	3	228	228	3.2.1.	replace "decompose" with "splits" or "shares"		Accepted	Change to 'splits'
E_3_0107	Parish, Faizal	3	228	228		The use of decompose in this sentence is unclear		Accepted	Change to 'splits'
E_3_0108	Federici, Sandro	3	233	233	3.2.1.	I would add "mostly" between "occur" and "in". Indeed, some dead mass decay over the period of conversion (10 years by default)		Accepted	
E_3_0109	Kasimir Klemetsson, Asa	3	237	245		Also chapter 2 in this wetlands supplement deals with burning, only needed to refer to chapter 2 of this wetland supplement and to the 2006 guidelines.		Accepted	This is to clarify this with some introduction to the subject.

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ID	Expert (Last Name, First Name)	Chapter /Section	Start Line	End Line	Sub-section	Comment	supplementary documents	Authors' Action	Authors' note
E_3_0110	Schrier-Uijl, Arina	3	237			See earlier comment. Its hard to find out how to deal with emissions from peat-burning. Where is it described? And is referred to it properly? check. Or even when emissions from peat fires are significant (which might be the case as is stated in line 239), how can a country estimate this by using country-specific EF's (line 244)? It might be good to refer to VCS-based approaches to estimate carbon losses from peat-fires (e.g. based on soil subsidence)?.		Accepted with modification	It is now clearly linked to Chapter 2 where it is explained how it should be reported.
E_3_0111	Parish, Faizal	3	238	238		cross linkage needs to be made with the new section of fire in the revised chapter 2 which was not available when chapter 3 was finalised.		Accepted	
E_3_0112	Penman, Jim	3	238	239		This sentence is self-contradictory. Suggest delete.		Rejected	Likelihood of an event is different to the significance of an event.
E_3_0113	Brown, Lynette	3	240	241		The 2 should be subscript in CO2 - format throughout Chapter for consistency.		Accepted	
E_3_0114	Kasimir Klemedtsson, Asa	3	240	241		Subscript of 2 in CO2		Accepted	
E_3_0115	Blondel, Ana	3	243	243		Should be "provided in Chapters 4-7" instead of "provided in Chapters 3-6"		Accepted	
E_3_0116	Federici, Sandro	3	244	245	3.2.1.	I guess here should be added the guidance to apply the method for estimating SOM burning provided in chapter 2 of this report		Accepted	

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ID	Expert (Last Name, First Name)	Chapter /Section	Start Line	End Line	Sub-section	Comment	supplementary documents	Authors' Action	Authors' note
E_3_0117	Parish, Faizal	3	244	245		More guidance is needed here on approaches and methodologies ofr addressing burying of peat soil. Either draw on chapter 3 or add new information.		Accepted	
E_3_0118	Penman, Jim	3	244	245		I don't think we can give blanket advice to estimate emissions using country specific Efs. Essentially we are then saying that there is no Tier 1 method. CH 2 managed to provide Efs in the drained case - can these be used at Tier 1 in the absence of anything else?		Accepted	This will now refer to Chapter 2 with new methodologies there.
E_3_0119	Verchot, Louis	3	244	245		Inconsistent with Ch 2.		Accepted	New reference to chapter 2.
E_3_0120	Wang, Chunfeng	3	246	254		DOC in this part should not include the DOC from import, otherwise, it results in double-counting. To make it clear, not including DOC from import should be clearly stated.		Accepted	Sentence included.
E_3_0121	Schrier-Uijl, Arina	3	247	254		Some more explanation on drainage of peatlands causing increases in DOC in water streams (+ refs) is suggested. The given references in the Annex are from Canada and UK. Suggestion: give also references to the tropics (e.g. Baum et al., 2007*; Rixen et al., 2008; Moore et al 2013, Euchel et al are people that have done/do research on DOC losses in the tropics)		Rejected	This is not a chapter of drainage. See chapter 2

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ID	Expert (Last Name, First Name)	Chapter /Section	Start Line	End Line	Sub-section	Comment	supplementary documents	Authors' Action	Authors' note
E_3_0122	Tiemeyer, Bärbel	3	247	247		There is also some evidence that re-wetting might at least initially increase DOC-concentrations (Zak & Gelbrecht, 2007, Kalbitz and Geyer, 2002). Other studies did not find a return to pristine values (Gibson et al., 2009), or no effect on the DOC concentrations (Gibson et al., 2009), or only a very minor effect on both concentrations and fluxes (Turner et al., 2013). Even Waddington et al. (2008) do not find an effect on the DOC concentrations.		Noted	But we don't talk about concentrations but fluxes to keep it clear.
E_3_0123	Hakalahti-Siren, Teija	3	250	251		I cannot accept the way the data on DOC flux has been analysed. A comprehensive meta-analysis on the impact of restoration/rewetting on DOC flux is needed before it can be assumed that it will be equal to flux occurring in natural mires. Lack of consistency exist between systems, i.e. the flux can also increase after rewetting for over several years (see e.g. Koskinen et al. 2011). Koskinen M, Sallantausta T & Vasander H (2011) Post restoration development of organic carbon and nutrient leaching from two ecohydrologically different peatland sites. Ecological Engineering 7:1008-1016.		Rejected	Comprehensive literature review and analysis gave us supporting evidence as we do not have studies on rewetted.
E_3_0124	Lundin, Lars	3	250	251		rewetting will return DOC fluxes to natural levels; but are these higher or lower ?		Evidence show that drainage increase DOC and therefore lower	

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ID	Expert (Last Name, First Name)	Chapter /Section	Start Line	End Line	Sub-section	Comment	supplementary documents	Authors' Action	Authors' note
E_3_0125	Mutka, Kari	3	250	251		A comprehensive meta-analysis on the impact of restoration/rewetting on DOC flux is needed before it can be assumed that it will be equal to flux occurring in natural mires. Lack of consistency exist between systems, i.e. the flux can also increase tremendously immediately after rewetting for some period of time (reference is needed).		Accepted	Transition flux.
E_3_0126	Ogilvie, James	3	250	251		A comprehensive meta-analysis on the impact of restoration/rewetting on DOC flux is needed before it can be assumed that it will be equal to flux occurring in natural mires. Lack of consistency exist between systems, i.e. the flux can also increase tremendously immediately after rewetting for some period of time (reference is needed).		Accepted	Transition flux.
E_3_0127	Radunsky, Klaus	3	251	251		It is suggested to include in chapter 3 also a definition of "fluvial carbon".		Rejected	Change to waterborn.
E_3_0128	Parish, Faizal	3	252	252		Chapter 2 of current supplement of 2006 guidelines		Rejected	Chapter of supplement.
E_3_0129	Ma, Chun	3	254	254		Annex 3.A2 should be Annex 3A.2. I suggest you make consistency of it.		Accepted	
E_3_0130	Condor Golec, Rocio Danica	3	263	263		peatland nutrient status: i will include nutrient poor and nutrient rich (as described later in the chapter)		Accepted	

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ID	Expert (Last Name, First Name)	Chapter /Section	Start Line	End Line	Sub-section	Comment	supplementary documents	Authors' Action	Authors' note
E_3_0131	Boudreau, Stephanie	3	264	268		<p>“For temperate and boreal organic soils or peatlands, the basic approach makes no distinction between rewetted and restored sites and therefore the term ‘rewetted peatlands and organic soils’ is used throughout the default methodology to encompass both activities. In addition, the basic methodology is based on the assumption of no transient period for rewetted peatlands and organic soils.” In fact, EF seems to include many different restoration goals, although the common denominator is rewetting. We understand and we agree that it is important to provide an EF for rewetting of drained organic soils. However, it is unfortunate that the distinction between rewetting only and restoration involving rewetting and plant reintroduction was not made since the 2 approaches can have different impact on GHG exchanges and can also result in different transient time-period since rewetting. We understand that scientific-based data may be insufficient to distinguish between restored and rewetted sites but we believe that at least water table level (to distinguish between water table raised above or below the peat surface) should be considered as an important factor for the calculation of default EF.</p>		Noted	Water table data would not be available for Tier 1 as well as data no sufficient to calculate Tier 2. However, this point is mention in Tier 2.

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ID	Expert (Last Name, First Name)	Chapter /Section	Start Line	End Line	Sub-section	Comment	supplementary documents	Authors' Action	Authors' note
E_3_0132	Ogilvie, James	3	264	268		“For temperate and boreal organic soils or peatlands, the basic approach makes no distinction between rewetted and restored sites and therefore the term ‘rewetted peatlands and organic soils’ is used throughout the default methodology to encompass both activities. In addition, the basic methodology is based on the assumption of no transient period for rewetted peatlands and organic soils.” In fact, EF seems to include many different restoration goals, although the common denominator is rewetting. We understand and we agree that it is important to provide an EF for rewetting of drained organic soils. However, it is unfortunate that the distinction between rewetting only and restoration involving rewetting and plant reintroduction was not made since the 2 approaches can have different impact on GHG exchanges and can also result in different transient time-period since rewetting. We understand that scientific-based data may be insufficient to distinguish between restored and rewetted sites but we believe that at least water table level (to distinguish between water table raised above or below the peat surface) should be considered as an important factor for the calculation of default EF.		Noted	Water table data would not be available for Tier 1 as well as data no sufficient to calculate Tier 2. However, this point is mention in Tier 2.
E_3_0133	Condor Golec, Rocio Danica	3	270	270		Equationa 3.3.: include refence Table 3.1 for default Efs		Rejected	Common practice to show this equation. Table is separate. No reference to it necessary.
E_3_0134	Schrier-Uijl, Arina	3	276			Expression of EF’ for CO ₂ , CH ₄ and N ₂ O shall be consistent (either in t C ha-1 yr-1 or in kg C ha-1 yr-1).		Accepted	

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ID	Expert (Last Name, First Name)	Chapter /Section	Start Line	End Line	Sub-section	Comment	supplementary documents	Authors' Action	Authors' note
E_3_0135	Tiemeyer, Bärbel	3	289	292		If a subdivision is intended, the groundwater table and soil-properties should be considered as grouping factors. For higher Tier methods, methods to derive spatially differentiated groundwater levels will be needed (modelling, remote sensing, vegetation, or a combination).		Accepted	Included as being represented by vegetation composition.
E_3_0136	Lundin, Lars	3	300	301		a steady state C sequestration point; natural peatland continuously accumulate carbon otherwise how come there is increasing peat depth over time.		Rejected	This is not true. See Anderson et al 2008
E_3_0137	Kasimir Klemetsson, Asa	3	304	309		This is confusing; since also the vegetation is included. As I understand it this supplement should only deal with soil emissions. Risk for double counting.		Rejected	Risk of this double accounting is clearly stated.
E_3_0138	Penman, Jim	3	304	310		This para is about higher Tiers in general and should come after the Tier 3 material		Accepted	
E_3_0139	Verchot, Louis	3	304	304		Stock changes are used to estimate fluxes. It may be better to refer directly to the two accepted IPCC approaches: stock difference and gain-loss.		Accepted	

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ID	Expert (Last Name, First Name)	Chapter /Section	Start Line	End Line	Sub-section	Comment	supplementary documents	Authors' Action	Authors' note
E_3_0140	Federici, Sandro	3	307	308	3.2.1.	possibly guidance on the use of eddy covariance techniques should be added here; indeed, nowhere in the IPCC Guidelines guidance on EC has been included		Rejected	This is too much science for this guidance
E_3_0141	Hergoualc'h, Kristell	3	316			<p>“However if a stock difference method (such as soil subsidence)...”</p> <p>The subsidence approach isn’t a stock difference method but measures the height loss of the peat surface. Suggestion: “However if a subsidence approach (measure of the peat height loss) ...”</p>		Accepted	
E_3_0142	Kabo-bah Amos Tierayangn	3	316	316		Correct "CO2" to reflect the unique subscript of "2"		Accepted	
E_3_0143	Verchot, Louis	3	319	319		It may be useful to state somewhere in this section that models need to be validated with data when applied to new types of peatlands. Use of unvalidated models should not be considered good practice.		Accepted	
E_3_0144	Tiemeyer, Bärbel	3	320	327		For detailed estimated on DOC fluxes, the water balance or actual discharge measurements need to be known.		Accepted with modification	This is clearly stated in Tier 3 of the choice of emission factors

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ID	Expert (Last Name, First Name)	Chapter /Section	Start Line	End Line	Sub-section	Comment	supplementary documents	Authors' Action	Authors' note
E_3_0145	Tiemeyer, Bärbel	3	324	325		These parameters could be used to describe... Which models are capable to do so on a national level?		Accepted	Examples to be found in next section
E_3_0146	Tiemeyer, Bärbel	3	324	325		These parameters could be used to describe... Furthermore, parameters controlling DOC and CO2 are not necessarily the same, i.e. residence time of water (Limpens et al., 2008) and, obviously, discharge are important for DOC fluxes, but not so much for CO2.		Accepted	Additional information included
E_3_0147	Tiemeyer, Bärbel	3	329	339		Fig. 3.1. Why isn't the question "key source" the first one?		Rejected	The first question is necessary to find out whether you can stay at Tier 1 or move to Tier 2 as this is a Tier methodology
E_3_0148	Kasimir Klemetsson, Asa	3	333			Detailed information; how detailed is that? I lack detailed information in the main text of chapter 3 of how wet a rewetted area should be to be called rewetted at all.		Noted	It is considered not suitable to define rewetting using precise water table range. Further examples of detailed information to be included
E_3_0149	Brown, Lynette	3	338	338		Insert "of" after "level".		Accepted	
E_3_0150	Federici, Sandro	3	339	339	3.2.1.	replace "remvoals" with "removals"		Accepted	
E_3_0151	Kabo-bah Amos Tiereyangn	3	340	340		"....they individually accounts for" should read "...."they individually account for"		Accepted	

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ID	Expert (Last Name, First Name)	Chapter /Section	Start Line	End Line	Sub-section	Comment	supplementary documents	Authors' Action	Authors' note
E_3_0152	Herbst, Mathias	3	348	348		Were “nutrient poor” and “nutrient rich” defined quantitatively before?		Rejected	No that's why they are defined here.
E_3_0153	Lundin, Lars	3	349	350		Geology is more important than latitude		Rejected	Climate (inferred in boreal/temperate) is important first. Geology comes after. Science kept to minimum to inform inventory people
E_3_0154	Boudreau, Stephanie	3	350	352		“Some ombrotrophic bogs (nutrient poor) are underlain by minerotrophic peat layers; after industrial peat extraction and subsequent rewetting, these peatlands could be considered nutrient-rich peatland due to the influence of incoming water and the high nutrient status of the bottom peat.” This really depends in the use of the horticultural peat. In Canada, most peat extraction sites still have ombrotrophic peat properties (Ref: Wind-Mulder, H. L., L. Rochefort, et al. 1996. Water and peat chemistry comparisons of natural and post-harvested peatlands across Canada and their relevance to peatland restoration. Ecological Engineering 7: 161-181; Andersen, R., L. Rochefort, et al. (2011). La chimie des tourbières du Québec : une synthèse de 30 années de données. Le naturaliste canadien 135(1): 5-14.; Rochefort et al, in prep.).		Noted	This section is about giving ambiguous situation. In the Canadian scenario, there is no ambiguity as the cutaway has in most cases the same nutrient status than the original bog. In Europe the situation can occur that this changes due to deeper peat being extracted

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ID	Expert (Last Name, First Name)	Chapter /Section	Start Line	End Line	Sub-section	Comment	supplementary documents	Authors' Action	Authors' note
E_3_0155	Verchot, Louis	3	356	356		Actually the transition from an insignificant slope to an EF was never described. Did you assume that WT depth = 0? Or did you simply take averages. If you just took averages, what is the point of the analysis in the appendix? Sorry, but this is confusing.		Noted	This is described in the annex and should stay there. It says that we took the mean water table for each site to do the analysis demonstrating that undrained site and rewetted sites were not significantly different and therefore fluxes were used from both categories to calculate EF
E_3_0156	Verchot, Louis	3	358	358		This interpretation of the statistics is incorrect. The few statistics presented suggest that the slope is not significantly different from 0 – there is no relationship. I understand that many people believe there is a relationship, but your evidence contradicts this view and you should reject your hypothesis.		Rejected	This analysis is not to find a relationship between the two populations: undrained/rewetted. It is the correlation between fluxes and WT (this relationship is significant) which are analysed for each populations.
E_3_0157	Hergoualc'h, Kristell	3	364			“Since no data are available for rewetted or restored tropical peatlands, a default EF of zero is provided” The IPCC shouldn’t provide an EF in the absence of scientific evidence.		Accepted with modification	There is a rationale supporting the default EF of 0 and it will be explained.
E_3_0158	Schrier-Uijl, Arina	3	364			Give references for the assumed EF of 0 based on existing literature of undrained peats in the tropics.		Accepted	

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ID	Expert (Last Name, First Name)	Chapter /Section	Start Line	End Line	Sub-section	Comment	supplementary documents	Authors' Action	Authors' note
E_3_0159	Verchot, Louis	3	365	365		How was this “fact” established? The evidence in Figure 3A2 suggests that even successfully rewetted soils outside the tropics are net emitters in many cases. Hirano et al. (GBC 2012) showed that undrained tropical peat swamp forests can be a net source to the atmosphere. I have a real problem with IPCC publishing an EF with no data. IPCC should assess the current state of knowledge not the current state of beliefs. If we have no data, this should be flagged and it will stimulate appropriate research. The EF should be deleted from the table.		Accepted with modification	There is a rationale supporting the default EF of 0 and it will be explained.
E_3_0160	Parish, Faizal	3	366	367		Unclear the meaning of this sentence - previous sentence gives an EF for rewetted or restored peatlands and then this sentence says no assumption was made on restored peatland.		Accepted	
E_3_0161	Blondel, Ana	3	367	367		In sources for table 3.1: should be "Wickland et al. 2001" instead of "Wickland 2001"		Rejected	

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ID	Expert (Last Name, First Name)	Chapter /Section	Start Line	End Line	Sub-section	Comment	supplementary documents	Authors' Action	Authors' note
E_3_0162	Ding, Weixin	3	367	367		In Table 3.1, For temperate, Nutrient rich, EFco2 is suggested to be +0.15. This easily misleads the conclusion that rewetting is not a good practice for nutrient-rich organic soils. If careful analysis in Fig. 3A.2b, the average CO2 emission should be negative when the water table is above the surface. Thus, it is suggested as done in Chapter 2(L190-192) whether the water table could be introduced and then EFco2 would be given for rewetted organic soils with water table above and below the surface.		Accepted with modification	WT is not a criteria to be used for EF but new EF for Temperate given due to uncertainty range making it not different from zero.
E_3_0163	Hayne, Shari	3	367	367		Why is the source "Couwenberg et al. 2011" used to produce emission factors when the study sites are 1) a bog milled for peat extraction and then for forestry and b) fen drained for agriculture when the studies are supposed to represent either natural wetlands with the water table close to the surface or rewetted peatlands?		Accepted with modification	Augustin in Couwenberg ..refers to Augustin where three sites have been rewetted
E_3_0164	Kasimir Klemetsson, Asa	3	367	368		Table 3.1 Like in Chapter 2 it would have been good if the sources for the different EF's were clarified for each EF, not just adding them all below the table.		Accepted	

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ID	Expert (Last Name, First Name)	Chapter /Section	Start Line	End Line	Sub-section	Comment	supplementary documents	Authors' Action	Authors' note
E_3_0165	Kasimir Klemedtsson, Asa	3	367	368		Table 3.1 It is rather odd to have one EF giving emission (Temperate, nutrient rich) and the others are uptake. This is due to a large emission range with both larger uptake and larger emission. Not very good for a Tier 1 EF.		Accepted	
E_3_0166	Parish, Faizal	3	367	368		Further clarification may be needed on what is fully rewetted tropical peatland - for example where water level is restored to the level naturally found in intact peat swamp forest (normally 10-20cm below the surface with some seasonal fluctuations). Given that there may be some subsidence along the ditch lines dependent on when they were constructed - the water level may be maintained at 0-10cm below the top of the former ditches.		Accepted with modification	
E_3_0167	Schrier-Uijl, Arina	3	367		Table 3.1	It would be better if the references given below the table are coupled to the EF's in the table by giving them numbers.		Accepted	
E_3_0168	Schrier-Uijl, Arina	3	367		Table 3.1	**: what is meant by fully rewetted, WT at 0 cm below field level? (as indicated by the last part of the sentence that no organic materials will be oxidized).		Accepted	
E_3_0169	Schrier-Uijl, Arina	3	367		Table 3.1	Is the EF for temperate, nutrient rich peatlands based on 1 study? If so, why??		Rejected	21 data points, at least 6 sites

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ID	Expert (Last Name, First Name)	Chapter /Section	Start Line	End Line	Sub-section	Comment	supplementary documents	Authors' Action	Authors' note
E_3_0170	Schrier-Uijl, Arina	3	367		Table 3.1	Since factors such as 1) vegetation cover 2) average annual water table depth (is it 0, -10, -20, -30 CM below field level?) 3) other restoration practices except for rewetting are very important factors that can explain a large part of the variation between studies/sites, it might be good to include this in table 3.1, or otherwise explain this in an annex in the back of the document.		Accepted with modification	This is science to explain higher Tiers not Tier 1 so should not appear in Table. Reference to it in Annex to explain large variation added.
E_3_0171	Tiemeyer, Bärbel	3	367	367		Table 3.1: Are the emission factors, especially for temperate peatlands, significantly different from zero?		Accepted	This has been addressed and new EF provided = 0
E_3_0172	Tiemeyer, Bärbel	3	367	367		Table 3.1: Do the emission factors assume "fully successful" re-wetting?		Accepted	The word fully is subjective and was removed.
E_3_0173	Tiemeyer, Bärbel	3	368	371		I do not fully agree: Many of the studies were conducted in more or less recently re-wetted peatlands, and thus transition effects are implicitly included.		Rejected	Tier 1 EF are averages of studies with various time since rewetting and therefore the transient effects are included and removed as a factor. Hence the sentence that there is not transient period assumed for Tier 1.

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ID	Expert (Last Name, First Name)	Chapter /Section	Start Line	End Line	Sub-section	Comment	supplementary documents	Authors' Action	Authors' note
E_3_0174	Wang, Chunfeng	3	368	371		No transient period is assumed for rewetted or restored peatland is not very reasonable.		Rejected	At Tier 1 it was not possible to get enough studies to disaggregate -post-rewetting and maybe 5 or 10 years after. This is however a parameter we included in higher tiers.
E_3_0175	Tiemeyer, Bärbel	3	376	377		This can also be explained by the effects of previous land use, as many of the nutrient-rich peatlands have been used much more intensively.		Accepted	
E_3_0176	Kasimir Klemetsson, Asa	3	382	387		Although the C-source is small it is confusing with an emission from the rewetted areas. How deep was the WTD of the studies included? Could this paragraph be made better? Why are not Temperate Nutrient rich areas fully water saturated as the Tropical areas are assumed to be?		Accepted with modification	The mean water table across all these sites was -3cm. This will be explained further in this section to confirm that they are fully rewetted.
E_3_0177	Tiemeyer, Bärbel	3	382	384		This is not necessarily inconsistent as present studies are short in comparison to the peatland age, climate conditions differed, and present-day intensive agriculture might have an effect on carbon turnover.		Accepted with modification	

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ID	Expert (Last Name, First Name)	Chapter /Section	Start Line	End Line	Sub-section	Comment	supplementary documents	Authors' Action	Authors' note
E_3_0178	Verchot, Louis	3	386	387		Unless other factors like pollution, temperature, changes in snow cover, atmospheric deposition, etc., alter the biogeochemistry. Evidence for some of these phenomena is already showing up in the literature, why is it ignored here?		Accepted	
E_3_0179	Kasimir Klemetsson, Asa	3	392			fully rewetted may be refrased into "fully water saturated"		Accepted with modification	Saturation is included but fully is removed
E_3_0180	Verchot, Louis	3	395	395		You say you cannot develop an EF, but you list one in the table. Delete the EF		Rejected	New text applied
E_3_0181	Parish, Faizal	3	400	406		Use of subsidence poles and subsidence/growth measurements are also important for determining the medium to long term losses/gains from rewetted peat soil.		Accepted	
E_3_0182	Schrier-Uijl, Arina	3	400	onwards		What is exactly the difference between the requirements for Tier 2 and Tier 3? Tier 2 requires nothing (as far as has been written down here: EF;s COULD BE developed taking into account....; ‘...capturing a wide range as possible.....’) and Tier 3 requires 1) management data (maybe add information what exactly is being meant (e.g. manure and fertiliser application, mowing and ploughing, grazing etc). Suggestion: be more clear.		Accepted	

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ID	Expert (Last Name, First Name)	Chapter /Section	Start Line	End Line	Sub-section	Comment	supplementary documents	Authors' Action	Authors' note
E_3_0183	Condor Golec, Rocio Danica	3	401	401		Eddy covariance: empirical flux measurement that has been suggested, however, is it possible to measure uncertainty through this method?		Accepted	Yes. With all year round measurements, these are also more accurate than chamber measurements in some respect but uncertainty is present in the gap filling data but this can be presented.
E_3_0184	Schrrier-Uijl, Arina	3	401			Except for flux measurements such as derived from chamber and eddy, also other (indirect) measurement techniques such as soil subsidence (for estimating CO2, including DOC losses and peat-fire related soil losses) and other proxies could be given but also the use of satellite imagery for land cover etc. These are also Tier 2 methods?		Accepted with modification	Yes but these are under activity data
E_3_0185	Tiemeyer, Bärbel	3	402	403		I would suggest to add soil types or soil properties to the list of abiotic factors.		Accepted	
E_3_0186	Kasimir Klemedtsson, Asa	3	407	410		This paragraph is confusing since vegetation is covered by 2006 guidelines, not needed here, I suggest to delete this.		Accepted with modification	The confusion is removed by stating first that this is to be reported as in 2006 guidelines.
E_3_0187	Federici, Sandro	3	409	409	3.2.1.	still, only the wooden portion of DOM (dead wood)		Accepted	Woddy DOM
E_3_0188	Blondel, Ana	3	410	410		Should be "Chapter 2, Volume 4" instead of "Chapter 3, Volume 4"		Accepted	

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ID	Expert (Last Name, First Name)	Chapter /Section	Start Line	End Line	Sub-section	Comment	supplementary documents	Authors' Action	Authors' note
E_3_0189	Kasimir Klemedtsson, Asa	3	411	415		Also here the vegetation is included. It is important to be very clear where to include what, to avoid double counting.		Accepted	
E_3_0190	Kasimir Klemedtsson, Asa	3	417	418		The models mentioned, are these only examples? Why needed to mention these?		Rejected	Other reviewers asked for examples and this could help countries who wish to aspire to higher Tiers.
E_3_0191	Lyde, Gund	3	417	418		Consider giving references for the models		Accepted	
E_3_0192	Verchot, Louis	3	419	419		This is an important point, it is good to see this stated clearly.		Noted	
E_3_0193	Schrier-Uijl, Arina	3	422			If 500 mm rainfall is being used, the DOC flux natural is 0.084 (expressed as Tonnes C ha-1 yr-1? Please add). This 0.084 t C ha-1 yr-1 is out of range considering the values given in Table 3.2 (which is for rainfall < 600 mm between 0.04 and 0.07 t C ha-1 yr-1). This equation might not be applicable to regions with rainfall < 600 mm.		Accepted	Footnote to explain uncertainty.
E_3_0194	Verchot, Louis	3	424	424		delete “Robust”		Accepted	

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ID	Expert (Last Name, First Name)	Chapter /Section	Start Line	End Line	Sub-section	Comment	supplementary documents	Authors' Action	Authors' note
E_3_0195	Hakalahti-Siren, Teija	3	425	426		Based on data given in Annex 3A.2 it is not a correct assumption that the level of DOC reduction after rewetting approximately equates to the DOC increase after drainage. In some studies listed in the table sampling was done from the pore-water of the peat layer (e.g. Glatzel et al. 2003; Wallage et al. 2006), which is not a right method to compare leaching of dissolved organic carbon to waterbodies. Only studies that have used BACI-experimental set-up (before-after-control impact) should be used as a reference studies in this case and sampling should have been performed from a ditch transporting drainage waters to waterbodies (see e.g. a study by Koskinen et al. 2011).		Noted	We have reviewed the literature, but the data is so limited we included all published studies. We did not apply a criteria pertaining to the rigor of the experimental protocol
E_3_0196	Mutka, Kari	3	425	426		Based on data given in Annex 3A.2 this is not a correct assumption. In some studies listed in the table sampling was done from the pore-water of the peat layer (e.g. Glatzel et al. 2003; Wallage et al. 2006), which is not a right method to compare leaching of dissolved organic carbon to waterbodies.		Rejected	Drainage is dealt with chapter 2 and does not change guidance for Chapter 3. One study showing decrease was through cut of mineral soil

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ID	Expert (Last Name, First Name)	Chapter /Section	Start Line	End Line	Sub-section	Comment	supplementary documents	Authors' Action	Authors' note
E_3_0197	Ogilvie, James	3	425	426		Based on data given in Annex 3A.2 this is not a correct assumption. In some studies listed in the table sampling was done from the pore-water of the peat layer (e.g. Glatzel et al. 2003; Wallage et al. 2006), which is not a right method to compare leaching of dissolved organic carbon to waterbodies.		Rejected	Drainage is dealt with chapter 2 and does not change guidance for Chapter 3. One study showing decrease was through cut of mineral soil
E_3_0198	Lundin, Lars	3	426	426		"DOC increase after drainage"; in several studies we have seen the opposite, i.e. decrease in DOC flow!		Rejected	Drainage is dealt with chapter 2 and does not change guidance for Chapter 3. One study showing decrease was through cut of mineral soil
E_3_0199	Tiemeyer, Bärbel	3	426	427		This assumption does not always hold, at least for a transition period after re-wetting (Zak & Gelbrecht, 2007, Kalbitz and Geyer, 2002, Gibson et al., 2009, Turner et al., 2013). Furthermore, enzymatic latch effects might hinder a return to natural conditions (Freeman et al, 2001).		Noted	This transition period is explained in higher tiers but there is not enough data for Tier 1. The enzymatic latch effect is also transient and while it might play a role, detailed mechanistic discussion on processes is beyond the scope of this guidance.

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ID	Expert (Last Name, First Name)	Chapter /Section	Start Line	End Line	Sub-section	Comment	supplementary documents	Authors' Action	Authors' note
E_3_0200	Tiemeyer, Bärbel	3	426	427		This assumption also allows only paired studies to included into the derivation of the emission factor, which omits a number of measurements in re-wetted peatlands, e.g. Kieckbusch, 2003, Dawson et al. (2002), Rowson et al. (2010)		Accepted with modification	The paired approach is only used to show the effect of rewetting. The data from Dawson Brocky burn is included in the calculation as a natural site. Rowson was measured immediately after restoration and transient effect would be recorded only. A list of all references to calculate the EF is also added to the table now. Thesis in German only was considered as not suitable reference.
E_3_0201	Schrier-Uijl, Arina	3	442	443		Schrier-Uijl et al 2011 shows that CH ₄ that is being released from ditches and shallow lakes in temperate peat areas is considerable. Also e.g Hendriks et al 2007 measured CH ₄ from ditches in an area that had been rewetted for 15 years, showing that CH ₄ emissions from ditches plays a large role in nutrient rich (rewetted) peatlands. The underlying microbial processes affecting both CO ₂ and CH ₄ production and emission from water bodies are regulated by variables such as sediment and water temperature, oxygen availability, organic matter availability and composition, sediment and water chemistry, the presence of electron acceptors (redox conditions), pH, electrical conductivity (EC) and factors such as water depth and lake size (e.g. Stadmark and Leonardson 2005; Juutinen et al. 2009; Repo et al. 2007; Frei et al. 2006; Loeb et al. 2007; Casper et al. 2003). See also Guerin and Abril (2007), Huttunen et al (2002), Bastviken et al (2004). They all sampled on lakes and/or other water bodies.		Noted	At higher tiers, we consider good practice to include CH ₄ from ditches (see also chapter 2 where it is included in drained sites)

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ID	Expert (Last Name, First Name)	Chapter /Section	Start Line	End Line	Sub-section	Comment	supplementary documents	Authors' Action	Authors' note
E_3_0202	Hakalahti-Siren, Teija	3	446	449		Please, see the following comment: chapter two, lines 525-526.		Rejected	4 comments are attributed to lines 525-526 and therefore we cannot identify this comment.
E_3_0203	Zhang, Guobin	3	449	450		What is the basis of division precipitation regime range(600, 1000mm yr-1), please give the basis on classification , while recommendation No. 450 lines increased as follows:“Where precipitation measurements are available, DOCFLUX_NATURAL values for boreal/temperate raised bogs and fens may also be calculated from the empirical Equation $DOCFLUX_NATURAL = (0.000317 \cdot Precipitation) - 0.075$, ($R^2 = 0.67$, $p < 0.001$ for the studies listed in Table 2A.2), in the units shown above. Note that this Equation is not applicable to blanket bogs.”		Accepted with modification	Equation was complicated with the various precipitation regimes and was easier to use with a pragmatic split.
E_3_0204	Zhang, Xiaochun	3	449	450		I suggest authors should provide references for division precipitation regime range (600,1000mm yr-1).		Rejected	It is a pragmatic split to help understand the equation which otherwise would be long.
E_3_0205	Federici, Sandro	3	450	450	3.2.1.	this is a copy of table 2.2; and more in general there is in this chapter a lot of redundancy between this chapter and the previous (chapter 2), redundancy that may also be cause of inconsistency		Rejected	This is not a copy as EF DOC-rewetted is not found in Chapter 2.

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ID	Expert (Last Name, First Name)	Chapter /Section	Start Line	End Line	Sub-section	Comment	supplementary documents	Authors' Action	Authors' note
E_3_0206	Tiemeyer, Bärbel	3	455	460		Why is the regression equation better than the fixed EF in Tier 1, what is the uncertainty of the parameters in the equation, and where can its derivation be found?		Accepted	Modified: refer to Chapter 2 Annex 2A2.
E_3_0207	Tiemeyer, Bärbel	3	455	460		Where can the derivation of the regression equation be found (not in Annex 3A.2)?		Accepted	Refer to chapter 2, Annex 2A.2
E_3_0208	Tiemeyer, Bärbel	3	455	460		How large are the uncertainties of the parameters of the equation (and thus the 95% confidence intervals of the resulting emission factors)?		Accepted	Refer to chapter 2, Annex 2A.2
E_3_0209	Schrier-Uijl, Arina	3	459			Equation: reference?		Accepted	Refer to chapter 2, Annex 2A.2
E_3_0210	Zhang, Guobin	3	459	459		The empirical equation is not quite feasible. Because the DOC is positive when precipitation greater than 236.6mm yr-1 otherwise negative. Recommended when precipitation is less than 237, DOC was zero(0).		Noted	The situation where a rewetted organic soils would be in an area of precipitation less than 237 is not realistic.
E_3_0211	Tiemeyer, Bärbel	3	462	463		Please give references for the statement that the vegetation composition determines the DOC concentrations (independently from the water level).		Noted	Armstrong et al 2012

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ID	Expert (Last Name, First Name)	Chapter /Section	Start Line	End Line	Sub-section	Comment	supplementary documents	Authors' Action	Authors' note
E_3_0212	Tiemeyer, Bärbel	3	462	463		Peat degradation has been found as an important factor for DOC concentrations and should be included here (Cabezas et al., 2013; Zak & Gelbrecht, 2007, Urbanova et al., 2011)		Accepted	Included.
E_3_0213	Tiemeyer, Bärbel	3	466	467		What is meant bei "various restoration techniques" here?		Noted	Explained in Tier 3 and moved.
E_3_0214	Tiemeyer, Bärbel	3	475	477		DOC release is not equal "DOC losses from the peatland", which is are governed mainly by soil properties and hydrological conditions, thus these should be mentioned first when listing factors determining DOC losses.		Noted	Hydrological properties put first
E_3_0215	Tiemeyer, Bärbel	3	475	481		Actually measuring the discharge is crucial and should be included here.		Noted	Added (in particular discharge) after hydrology.
E_3_0216	Tiemeyer, Bärbel	3	477	481		A major difference between pre-drainage and re-wetted site is missing: the soil properties. Re-wetted sites have often highly degraded topsoils, which are prone to DOC release (Cabezas et al., 2013; Zak & Gelbrecht, 2007, Urbanova et al., 2011)		Accepted	Soil properties added
E_3_0217	Brown, Lynette	3	479	479		Delete comma.		Accepted	
E_3_0218	Tiemeyer, Bärbel	3	479	479		Are there any studies that show that - given comparable water tables and discharge rates - the vegetation composition has an effect on the actual DOC losses?		Accepted	Armstrong 2012. but no study showing that vegetation is only factor affecting DOC. But DOC were found to be different with different vegetation.

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ID	Expert (Last Name, First Name)	Chapter /Section	Start Line	End Line	Sub-section	Comment	supplementary documents	Authors' Action	Authors' note
E_3_0219	Blondel, Ana	3	480	480		It seems that a preposition or a punctuation sign is missing between the following phrases: "such as the creation of pools" and "the application of mulch..."		Accepted	
E_3_0220	Brown, Lynette	3	480	480		Insert comma after word "pools".		Accepted	
E_3_0221	Schrier-Uijl, Arina	3	483	554		Overlap with TIER 1, TIER 2 and TIER 3 in paragraph 3.2.1. Avoid repetition.		Rejected	It is not possible to avoid repetitions as 3.2.1 in general and Activity data in particular are related to one subject, but text in 487-504 lines is trying to answer what can be used to look at temporal changes.
E_3_0222	Verchot, Louis	3	483	483		Activity data procedures do not follow "Tiers". Chapter 3 of the 2006 Revised GL gives three "Approaches"; please make this section consistent with that text. You probably also need to require that activity data need to be consistent across the different types of emissions (CO2 and CH4).		Accepted	

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ID	Expert (Last Name, First Name)	Chapter /Section	Start Line	End Line	Sub-section	Comment	supplementary documents	Authors' Action	Authors' note
E_3_0223	Schrier-Uijl, Arina	3	484			‘...broken down by climate zone, type of peatland or organic soil...’: This is true for EF CO2-C composite, but not for CO2-C DOC. For CO2-C DOC its broken down by rainfall in the table. We would recommend to use peat nutrient status instead of peatland type.		Rejected	Peatland type includes information on peat nutrien status, and more widely used and available.
E_3_0224	Tiemeyer, Bärbel	3	487	504		Precipitation data will also be needed as activity data for DOC emission factors		Rejected	Tier 1 do not consider year to year changes of hydrometeorological conditions, that is why precipitation changes can be taken into account and thus not mentioned.
E_3_0225	Brown, Lynette	3	498	498		Insert "of" after the word "operation".		Accepted	The word "operated" will be deleted.
E_3_0226	Penman, Jim	3	502			Are ther operational (as opposed to research) examples of this use of LiDAR? Would be useful to reference if so.		Accepted	Reference to Lidar will be deleted.
E_3_0227	Blondel, Ana	3	503	503		Should be "produced" instead of "produce"		Accepted	
E_3_0228	Brown, Lynette	3	503	503		Change "produce" to "produced".		Accepted	
E_3_0229	Herbst, Mathias	3	503	503		Replace “reduce” with “reduced”.		Accepted	

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ID	Expert (Last Name, First Name)	Chapter /Section	Start Line	End Line	Sub-section	Comment	supplementary documents	Authors' Action	Authors' note
E_3_0230	Radunsky, Klaus	3	503	503		The following wording is suggested: ..may be produced either ...		Accepted	
E_3_0231	Wiseman, Michael	3	503	503		Seventh word should be PRODUCED		Accepted	
E_3_0232	Condor Golec, Rocio Danica	3	506	507		If applicable please include: FAO/IIASA/ISRIC/ISSCAS/JRC, 2012. Harmonized World Soil Database (version 1.2). FAO, Rome, Italy and IIASA, Laxenburg, Austria.		Accepted	To be added.
E_3_0233	Blondel, Ana	3	510	510		Missing link in: "v-c-s.org"		Accepted	
E_3_0234	Tiemeyer, Bärbel	3	510	510		Verified Carbon Standard - is this really a helpful source to find re-wetting projects? How many projects are there (especially in relation to other projects)?		Rejected	VCS is mentioned as one of the sources.
E_3_0235	Penman, Jim	3	514			This throwaway instruction is potentially confusing. It would be much clearer to replace 'for a single area' by 'as a single rewetting for the area in question'		Accepted	
E_3_0236	Tiemeyer, Bärbel	3	516	533		For a more detailed stratification, regionalisation methods for the groundwater table will be needed.		Accepted	In line 518 after composition

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ID	Expert (Last Name, First Name)	Chapter /Section	Start Line	End Line	Sub-section	Comment	supplementary documents	Authors' Action	Authors' note
E_3_0237	Radunsky, Klaus	3	518	519		The following wording is suggested: ..based on empirical data that demonstrate significant ...		Accepted	
E_3_0238	Brown, Lynette	3	531	531		Change "air" to "aerial".		Accepted	
E_3_0239	Tiemeyer, Bärbel	3	535	544		For a more detailed stratification, regionalisation methods for the groundwater table will be needed.		Rejected	Tier 3 gives opportunity to use any data (incl. groundwater) if needed.
E_3_0240	Federici, Sandro	3	536	571	3.2.2.	why CO2 emissions from SOM burning have not been included in section 3.2.1? As for CH4 emissions, CO2 emissions from biomass burning are not included in the flux measurements used for calculating the emissions factors of CO2-Crewetted org soil		Accepted with modification	SOM burning will be included; methods are already provided in ch2.
E_3_0241	Tiemeyer, Bärbel	3	537	529		Which remote sensing products are adequate to monitor the extent of peat soils or soil moisture regimes?		Rejected	It is not possible to go into details as different EO data can be used for mapping peat soils as well as to monitor their conditions incl. wetness.
E_3_0242	Penman, Jim	3	545			There appears to be no discussion of uncertainties - is this covered somewhere else?		Accepted	

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ID	Expert (Last Name, First Name)	Chapter /Section	Start Line	End Line	Sub-section	Comment	supplementary documents	Authors' Action	Authors' note
E_3_0243	Brown, Lynette	3	548	549		Delete phrase "emissions or removals resulting from", it is already stated at the beginning of the sentence.		Accepted	
E_3_0244	Schrier-Uijl, Arina	3	551		equation 3.6	CH4-CDOC shall be added since DOC related CH4 emissions might be considerable.		Rejected	DOC guidance provided in this chapter does not provide guidance on CH4 produced from the breakdown of DOC. Moreover, empirical data are not available to determine the proportion of DOC that could be broken down into CH4
E_3_0245	Zheng, Xunhua	3	555	556		To remain consistence, please delete “removals” while add “net” between “=” and “emissions”.		Rejected	"Net emissions" can have a meaning that compares flux before and after management that we do not mean here. Also, in order to be consistent with the CO2 section, we keep the terminology emissions/removals.
E_3_0246	Federici, Sandro	3	556	556	3.2.2.	equation 3.6 is about emissions, however this parameter is about emissions/removals, I suggest to replace "emissions/removals" with "net emissions". Indeed, measured CH4 fluxes are the net result of CH4 emissions and consumption processes.		Rejected	"Net emissions" can have a meaning that compares flux before and after management that we do not mean here. Also, in order to be consistent with the CO2 section, we keep the terminology emissions/removals.

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ID	Expert (Last Name, First Name)	Chapter /Section	Start Line	End Line	Sub-section	Comment	supplementary documents	Authors' Action	Authors' note
E_3_0247	Abad Viñas, Raul	3	557	558		CH4-Csoil-burn should be considered whenever CH4 emissions /removals by rewetted peatlands and organic soils are considered (under tier 2 -3) however, the information provided seems not transparent enough to know where these emissions should be reported (i.e. should it be reported on Table 3.3 or Table 3.4). This fact could introduce a potential risk of double counting.		Accepted	
E_3_0248	Hergoualc'h, Kristell	3	559			“The default EFs provided in this section will only cover CH4-Csoil.” Apparently not for the tropics; see comments on Annex 3A.3		Noted	CH4 is produced from soil and DOM and these are lumped in soil in this section
E_3_0249	Penman, Jim	3	561			Replace 'are also originating' by 'also originate'		Accepted	
E_3_0250	Federici, Sandro	3	564	569	3.2.2.	why not using also here factors provided in chapter 2 for estimating emissions from soil burning?		Accepted	A reference to Chapter 2 has been added to the text
E_3_0251	Federici, Sandro	3	574	575	3.2.2.	replace "emissions/removals" with "net emissions". Indeed, measured CH4 fluxes are the net result of CH4 emissions and consumption processes.		Rejected	"Net emissions" can have a meaning that compares flux before and after management that we do not mean here. Also, in order to be consistent with the CO2 section, we keep the terminology emissions/removals.

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ID	Expert (Last Name, First Name)	Chapter /Section	Start Line	End Line	Sub-section	Comment	supplementary documents	Authors' Action	Authors' note
E_3_0252	Penman, Jim	3	581			Replace 'the basic methodology is based on the assumption of' by 'the Tier 1 methodology assumes that there is'		Accepted	
E_3_0253	Brown, Lynette	3	587	587		Insert space after C in "-Cemissions".		Accepted	
E_3_0254	Herbst, Mathias	3	587	587		Insert a space before “emissions”.		Accepted	
E_3_0255	Brown, Lynette	3	588	590		Insert comma between 1st occurrence of "ij" to match formula. Also, to be consistent with previous formulas revise to read "climate zone i and peatland type j, ha" and the i and j should be italicized.		Accepted	
E_3_0256	Schrier-Uijl, Arina	3	592	601		Add info on temperate and boreal zones.		Accepted with modification	This text has been modified to be consistent with section content
E_3_0257	Wiseman, Michael	3	592	592		Rewetted AREAS		Rejected	Area is the correct use

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ID	Expert (Last Name, First Name)	Chapter /Section	Start Line	End Line	Sub-section	Comment	supplementary documents	Authors' Action	Authors' note
E_3_0258	Hergoualc'h, Kristell	3	593			<p>_"Thus far flux data on CH₄-C emissions from successfully rewetted tropical sites are lacking." Suppress "Thus far". Data are lacking but at least the study of Jauhiainen et al. (2012) on carbon dioxide and methane fluxes in drained tropical peat before and after hydrological restoration should be cited.</p>		Accepted with modification	This study is cited, but the correct year is 2008
E_3_0259	Brown, Lynette	3	596	596		Pluralize the word "swamp".		Accepted with modification	Text has been moved and corrected
E_3_0260	Hergoualc'h, Kristell	3	596			<p>_"represent the largest extent of peatland in the tropics (Joosten 2009, Page et al., 2010)" Cite also Yu, Z., Loisel, J., Brosseau, D.P., Beilman, D.W., Hunt, S.J., 2010. Global peatland dynamics since the Last Glacial Maximum. Geophysical research letters 37, doi:10.1029/2010GL043584</p>		Rejected	Addition of this reference does not add to the references already included.
E_3_0261	Penman, Jim	3	607			Suggest insert 'Nevertheless use of the mean value will give the unbiased estimate of total emissions from the area in question'. Authors should check, but I think this is a correct statement statistically. The fact that the median condition occurs more frequently is of no consequence.		Accepted	

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ID	Expert (Last Name, First Name)	Chapter /Section	Start Line	End Line	Sub-section	Comment	supplementary documents	Authors' Action	Authors' note
E_3_0262	Verchot, Louis	3	607	607		However, the mean is still the preferred value for extrapolation (see Petersen and Calvin 1986, 1996, other work by Tim Parkin, etc.)		Accepted	Text modified according to comment 261
E_3_0263	Condor Golec, Rocio Danica	3	610	658		Tier 2: detail scientific information, I will suggest to add it as an annex, since this information could probably not be useful for the GHG compiler.		Accepted with modification	We have shortened the text and retained the reference to Annex 3A.3 to direct the reader to where more information can be found
E_3_0264	Federici, Sandro	3	611	612	3.2.2.	in chapter 2 the threshold is at 30 cm. Is this consistent?		Accepted	This reference to WT depth of 20cm has now been removed
E_3_0265	Blondel, Ana	3	614	614		Reference "Couwenberg & Fritz 2012" is missing		Accepted	Reference has been added
E_3_0266	Brown, Lynette	3	614	614		Couwenberg and Fritz 2012 is not listed in the References - please add to References or delete from text.		Accepted	Reference has been added
E_3_0267	Lyde, Gund	3	614	614		Couwenberg & Fritz 2012 not listed in references		Accepted	Reference has been added
E_3_0268	Tiemeyer, Bärbel	3	614	614		where both low and high fluxes have been observed --> please quote studies with actual measurements		Rejected	The cited papers are compilations of CH4 fluxes that then clearly shows the range of the data at flooded sites.

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ID	Expert (Last Name, First Name)	Chapter /Section	Start Line	End Line	Sub-section	Comment	supplementary documents	Authors' Action	Authors' note
E_3_0269	Tiemeyer, Bärbel	3	620	621		Yes, re-wetting does create a more homogenous surface of the water table, but not a more homogenous depth with reference to the ground surface (ditches will have standing water).		Noted	
E_3_0270	Boudreau, Stephanie	3	622	625		<p>“In some cases rewetting and restoration practices may retain ditches (e.g. Waddington et al., 2010) and when ditches remain, it is good practice to include estimates of CH₄-C ditch emissions using methodology provided in Chapter 2 (Equation 2.6) and country-specific emission factors. Table 2A.1 can also be consulted for guidance on emission factors for ditches in drained peatlands.”</p> <p>This supports further our previous comment (Lines 264 – 268) on considering water table as an important factor to consider when calculating EF. If a site is rewetted to the point that water table is above the peat surface, this will have an important impact on CH₄ emission of rewetted fields.</p>		Noted	WT data is unlikely to be available at Tier 1, but we point out the importance of considering WT position for developing Efs at Tier 2 and 3. Moreover, data are insufficient to make this type of differentiation.
E_3_0271	Blondel, Ana	3	634	634		Should be "encouraged to monitor"		Accepted	
E_3_0272	Brown, Lynette	3	634	634		Insert the word "to" after encouraged.		Accepted	
E_3_0273	Federici, Sandro	3	634	634	3.2.2.	replace: "encouraged monitor emissions/removals" with "encouraged to monitor net emissions"		Rejected	See response to comment 245

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ID	Expert (Last Name, First Name)	Chapter /Section	Start Line	End Line	Sub-section	Comment	supplementary documents	Authors' Action	Authors' note
E_3_0274	Herbst, Mathias	3	634	634		Insert “to” between “encouraged” and “monitor”.		Accepted	
E_3_0275	Wiseman, Michael	3	634	634		are encouraged TO		Accepted	
E_3_0276	Boudreau, Stephanie	3	636	639		New study from Strack and Zuback should be cited as well. We can see that CH4 emission are reduced 10 years after restoration. See comment on line 1443 for complete reference.		Noted	This reference is included in the derivation of the EF but does not really add to the text in this section so was not added
E_3_0277	Ogilvie, James	3	636	639		“The number of long-term rewetting studies is limited and changes in CH4 flux over time remain unclear. Changes in CH4 flux with time since rewetting are likely linked to prior land-use.		Noted	This is our text copied without a comment
E_3_0278	Schrier-Uijl, Arina	3	636	644		In temperate nutrient rich (rewetted) peatlands the redox condition is one of the main drivers for CH4 emissions after rewetting		Noted	
E_3_0279	Ginzo, Hector	3	640	640		What is meant by ...high intensity grassland...?		Accepted	This has been clarified as "intensively used"
E_3_0280	Blondel, Ana	3	641	642		Reference "Augustin and Joosten 2007" is missing		Accepted with modification	Reference was replaced
E_3_0281	Brown, Lynette	3	641	642		Augustin and Joosten 2007 is not listed in the References - please add to References or delete from text.		Accepted with modification	Reference was replaced

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ID	Expert (Last Name, First Name)	Chapter /Section	Start Line	End Line	Sub-section	Comment	supplementary documents	Authors' Action	Authors' note
E_3_0282	Lyde, Gund	3	641	642		Augustin and Joosten 2007 not listed in references		Accepted with modification	Reference was replaced
E_3_0283	Tiemeyer, Bärbel	3	641	642		Augustin & Joosten, 2007 is missing in the references. Is there a study which shows that CH4 emissions from nutrient rich fens decline "after a few years"?		Accepted with modification	Reference was replaced
E_3_0284	Kabo-bah Amos Tiereyangn	3	642	642		"....encouraged monitor" should read "....encouraged to monitor..."		Accepted	
E_3_0285	Blondel, Ana	3	647	647		References "Bubier 1995", "Shannon et al.1996" and "Marnier et al., 2004" are missing		Accepted	Added to reference list
E_3_0286	Brown, Lynette	3	647	647		Bubier 1995; Shannon et al., 1996; and Marnier et al., 2004 are not listed in the References - please add to References or delete from text.		Accepted	Added to reference list
E_3_0287	Lyde, Gund	3	647	647		Bubier 1995; Marnier et al., 2004; not listed in references		Accepted	Added to reference list
E_3_0288	Brown, Lynette	3	648	648		Delete semicolon after 2010.		Accepted	

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ID	Expert (Last Name, First Name)	Chapter /Section	Start Line	End Line	Sub-section	Comment	supplementary documents	Authors' Action	Authors' note
E_3_0289	Herbst, Mathias	3	648	654		I suggest adding “Juncus” to the species list and Petersen et al. (2012) as a reference for this (Biogeosciences 9, 403-422). I know that the list cannot be complete, but particularly Juncus plays a large role (and needs to be controlled in some places) in rewetted grasslands in northwest Europe.	Attachment_E_3_0289.pdf	Accepted	
E_3_0290	Blondel, Ana	3	650	650		Reference "Sebacher et al., 1985" is missing		Accepted	Added to reference list
E_3_0291	Brown, Lynette	3	650	652		The majority of these citations are not listed in the References - please add to References or delete from text.		Accepted	Added to reference list
E_3_0292	Blondel, Ana	3	651	651		References "Chanton et al., 1992", "Schimel 1995", "Shannon et al., 1996", and "Frenzel & Rudolph 1998" are missing		Accepted	Added to reference list
E_3_0293	Lyde, Gund	3	651	651		Chanton et al., 1992,; Shannon et al., 1996,; Frenzel & Rudolph 1998,; not listed in references		Accepted	Added to reference list
E_3_0294	Blondel, Ana	3	652	652		References "Verville et al., 1998", "Yavitt & Knapp 1998", "Grünfeld & Brix 1999", and "Frenzel & Karofeld 2000" are missing		Accepted	Added to reference list
E_3_0295	Lyde, Gund	3	652	652		Verville et al., 1998; Yavitt & Knapp 1998; Grünfeld & Brix 1999,Frenzel & Karofeld 2000 not in references		Accepted	Added to reference list

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ID	Expert (Last Name, First Name)	Chapter /Section	Start Line	End Line	Sub-section	Comment	supplementary documents	Authors' Action	Authors' note
E_3_0296	Blondel, Ana	3	653	654		References "Arkebauer et al., 2001", "Armstrong & Armstrong 2011" and "Askaer et al., 2011" are missing		Accepted	Added to reference list
E_3_0297	Lyde, Gund	3	653	654		Arkebauer et al., 2001; Armstrong & Armstrong 2011 ,Askaer et al 2011 not in references		Accepted	Added to reference list
E_3_0298	Blondel, Ana	3	655	655		Reference: "Couwenberg & Fritz 2012" is missing		Accepted	Added to reference list
E_3_0299	Herbst, Mathias	3	655	655		“Couwenberg & Fritz 2012” is not found in the Reference List.		Accepted	Added to reference list
E_3_0300	Blondel, Ana	3	665	666		References: "Walter et al., 2001", "Frolking et al., 2002", "Van Huissteden et al., 2006", "Baird et al., 2009", "Li et al., 2009", and "Meng et al., 2012" are missing		Accepted	Added to reference list
E_3_0301	Brown, Lynette	3	665	666		The majority of these citations are not listed in the References - please add to References or delete from text.		Accepted	Added to reference list
E_3_0302	Lyde, Gund	3	665	666		Walter et al., 2001; Frolking et al., 2002; Van Huissteden et al., 2006; Baird et al., 2009; Li et al., 2009; Meng et al., 2012 not in references.		Accepted	Added to reference list

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ID	Expert (Last Name, First Name)	Chapter /Section	Start Line	End Line	Sub-section	Comment	supplementary documents	Authors' Action	Authors' note
E_3_0303	Tiemeyer, Bärbel	3	665	666		These are very demanding models in terms of data requirement - are there examples where they have been used on a national scale?		Noted	These models have only been applied at the ecosystem scale. Tier 3 approaches would require development of models that could be applied to the national scale
E_3_0304	Kasimir Klemetsson, Asa	3	672	675		Rewetted tropical peat soils assumes a near surface water table, why are not boreal and temperate rewetted areas having this assumption? And as said here, the water table will drop at the dry season, likewise the water table will drop during the vegetation season in temperate and boreal regions. This will influence the emissions, Have this been considered? Which also have importance for CO2 emissions.		Noted	We have considered all climate zones in the same way. In general the guidance in this chapter applies to sites with water table near the surface (as described in the introduction). In the temperate and boreal regions dry periods have been considered in the determination of EF as they are included in the calculation. The data for tropical peatlands is much more limited and thus the approach is slightly different in order to account for seasonal dry periods that may occur.
E_3_0305	Herbst, Mathias	3	673	673		Delete the word “tropical” since this statement is true for any latitude, see lines 835-837!		Rejected	See reponse to comment 304
E_3_0306	Boudreau, Stephanie	3	676	677		Table 3.3. Unit is in Kg CH4-C ha-1 yr-1. Should be translated to tonnes CH4-C ha-1 yr-1 for consistency within the Chapter and with other chapters.		Rejected	This is the consistent unit used throughout the supplement

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ID	Expert (Last Name, First Name)	Chapter /Section	Start Line	End Line	Sub-section	Comment	supplementary documents	Authors' Action	Authors' note
E_3_0307	Kasimir Klemetsson, Asa	3	676	677		Table 3.3 Temperate Poor, the annex say 5 poor sites, and in this table it is n=28 sites, inconsistency?		Noted	This is not an inconsistency. There are only 5 rewetted temperate poor sites, but the EF is based on the combined data of rewetted and undisturbed sites resulting in n=28
E_3_0308	Verchot, Louis	3	677	Table 3	Table 3	Again, I have trouble with publishing EFs when data are not available. Management alters nutrient status and we know that for example pH and NH4+ affect methanotrophy. When there are no data, it is better to just say so and not try to force a number that cannot be substantiated. It is not good practice to make things up.		Noted	These EF values are based on data. NH4 can affect methanotrophy, but across sites WT is by far the most important determinant of CH4 flux.
E_3_0309	Condor Golec, Rocio Danica	3	679	680		The uncertainty off Efs can be educed by using country specific emission factors for each..... I am not sure about this statement, since, uncertainties even if country specific will vary depeding on the measurement method that is used. Maybe it will be better just to state that it is a good practise to use country specific EFs than default EFs.		Accepted	
E_3_0310	Blondel, Ana	3	688	688		Reference "Watanabe et al., 2010" might be missing or year might be wrong.		Accepted with modification	This reference is actually Watanabe et al 2009
E_3_0311	Brown, Lynette	3	688	688		Should Watanabe et al., 2010 be 2009 (see line 1234)?		Accepted with modification	This reference is actually Watanabe et al 2009

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ID	Expert (Last Name, First Name)	Chapter /Section	Start Line	End Line	Sub-section	Comment	supplementary documents	Authors' Action	Authors' note
E_3_0312	Lyde, Gund	3	688	688		Watanabe et al., 2010 not in references		Accepted with modification	This reference is actually Watanabe et al 2009
E_3_0313	Verchot, Louis	3	691	691		Same point as above: Activity data do not follow “Tiers”. This section needs to be consistent with Chapter 3 in the 2006GL and with the revised section in the CO2 emissions part of this chapter.		Accepted with modification	AD required differ between Tiers so there is a reason for distinguishing the requirements. This will be made clearer.
E_3_0314	Tiemeyer, Bärbel	3	705	707		long-term monitoring of rewetted sites will improve the emission factors, but not the activity data - regionalisation or remote sensing methods for the groundwater table, vegetation etc. will be additionally needed.		Accepted	
E_3_0315	Penman, Jim	3	708			There appears to be no discussion of uncertainties - is this covered somewhere else?		Accepted	A section on uncertainty has been added
E_3_0316	Schrier-Uijl, Arina	3	709			What about N2O from peat-fires? As far as we can see Chapter 6 on Wetlands does not give methods to estimate N2O emissions from peat-fires. And what about N2O emissions that exist in the case of paludiculture (thus including management)? Is N2O-N leaching considered zero?		Accepted with modification	Data on N2O emissions from fires are insufficient to support the development of default EFs (See Chapter 2). N2O-N emissions from rewetted peatlands will only cover N2O-N soil in this section. Correct and add the text. N2O-N leaching do not be considered in this section.
E_3_0317	Brown, Lynette	3	714	714		Insert space after 20.		Accepted	Insert space

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ID	Expert (Last Name, First Name)	Chapter /Section	Start Line	End Line	Sub-section	Comment	supplementary documents	Authors' Action	Authors' note
E_3_0318	Federici, Sandro	3	715	716	3.2.3.	N2O removals from the atmosphere? I guess that here the intention is to say that N2O in the soil is consumed. I suggest to replace "removals" with "consumption"		Accepted	Correct the text according to comment
E_3_0319	Kasimir Klemedtsson, Asa	3	715	716		Here it is said that flooded conditions promote denitrification and N2O removals. This could be explained better; Flooded conditions slow down mineralisation due to anoxic conditions, nitrification is also very slow due to the low NH4+ availability together with the anoxic conditions. Both these processes are prerequisites for denitrification, and if available nitrate the anoxic conditions favours a complete denitrifiacion into N2.		Accepted	Correct the text according to comment
E_3_0320	Schrier-Uijl, Arina	3	719		equation 3.8	Consistency with CO2 and CH4 related equations: N2O-Nrewetted org soil = N2O-Nsoil etc.		Accepted	Correct the text, change to N2O-N
E_3_0321	Wiseman, Michael	3	723	726		If the three lines of data were moved to the left then 725 could be on one line which would read better		Accepted	Correct the text
E_3_0322	Abad Viñas, Raul	3	725	726		N2O-Csoil-burn should be considered whenever N2O emissions /removals by rewetted peatlands and organic soils are considered (under tier 2 -3) however, the information provided seems not transparent enough to know where these emissions should be reported (i.e. should it be reported on Table 3.3 or Table 3.4). This fact could introduce a potential risk of double counting.		Accepted	There is no evidence of N2O emissions from fires (See Chapter 2). N2O-N emissions from rewetted peatlands will only cover N2O-N soil in tnis section. Correct and add the text.

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ID	Expert (Last Name, First Name)	Chapter /Section	Start Line	End Line	Sub-section	Comment	supplementary documents	Authors' Action	Authors' note
E_3_0323	Blondel, Ana	3	729	729		Should be "Chapters 4-7" instead of "Chapters 3-6"		Accepted	Change to "Chapters 4-7"
E_3_0324	Blondel, Ana	3	732	732		In footnote 1: reference "Hendriks et al., 2005" might be missing or year might be wrong.		Accepted	Change reference (Hendriks et al., 2007)
E_3_0325	Federici, Sandro	3	732	732	3.2.3.	are N2O emissions from fires also assumed to be negligible? I guess this is not, further what about CH4 and CO2 emissions, are these negligible too?		Accepted	There is no evidence of N2O emissions from fires (See Chapter 2). N2O-N emissions from rewetted peatlands will only cover N2O-N soil in this section. Correct and add the text.
E_3_0326	Hergoualc'h, Kristell	3	732			<p>“Under Tier 1, emissions of nitrous oxides from rewetted soils are assumed to be negligible1.”</p> <p>Average N2O emissions in non drained tropical peat swamp forests is 2.7 kg N ha-1 y-1 or 1.2 Mg CO2-equivalent ha-1 y-1. I wouldn't say this is negligible.</p>		Rejected	N2O emissions fall to zero if the depth of the water table is less than 20 cm below the surface according to some references. We estimate rise of water table depth by rewetting.
E_3_0327	Federici, Sandro	3	733	745	3.2.3.	However, emissions from the alloctonous Nitrogen are already accounted either as direct or indirect emissions under the agriculture sector. It would be a double counting; is not it?		Rejected	To avoid risk of double-counting is described In this text.
E_3_0328	Brown, Lynette	3	736	after 736		Footnote 1, Hendriks et al., 2005 and Wilson et al., in press are not listed in the References - please add to References or delete from text.		Accepted	Change references "Hendriks et al., 2007", Wilson et al., 2013

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ID	Expert (Last Name, First Name)	Chapter /Section	Start Line	End Line	Sub-section	Comment	supplementary documents	Authors' Action	Authors' note
E_3_0329	Kasimir Klemetsson, Asa	3	736			N inputs should be avoided in this supplement since covered by the 2006 guidelines, risk for double counting.		Rejected	To avoid risk of double-counting is described In this text.
E_3_0330	Lyde, Gund	3	736	736		Footnote 1 Hendriks et al., 2005; Wilson et al., in press. Not in references		Accepted	Change references "Hendriks et al., 2007", Wilson et al., 2013
E_3_0331	Blondel, Ana	3	740	740		References "Nagata et al., 2006; 2010" might be wrong in the case of the one for year "2006"		Accepted	Correct the text
E_3_0332	Brown, Lynette	3	740	740		Should Nagata et al., 2006 be 2005 (see line 1120)?		Accepted	Correct the text
E_3_0333	Lyde, Gund	3	740	740		Nagata et al., 2006 not in references		Accepted	Correct the text
E_3_0334	Federici, Sandro	3	746	869	3.3	It should be moved in chapter 7		Accepted	
E_3_0335	Penman, Jim	3	762			Suggest say 'Proper implementation of...'		Accepted with modification	Guidance in section 3.3 will be provided in chapter 7.
E_3_0336	Federici, Sandro	3	800	800	3.3	replace "dead-organic matter" with "dead wood"		Accepted with modification	Guidance in section 3.3 will be provided in chapter 7.
E_3_0337	Herbst, Mathias	3	802	802		Insert the phrase “as well as management activities” between “ecosystems” and “should”.		Accepted with modification	Guidance in section 3.3 will be provided in chapter 7.

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ID	Expert (Last Name, First Name)	Chapter /Section	Start Line	End Line	Sub-section	Comment	supplementary documents	Authors' Action	Authors' note
E_3_0338	Lyde, Gund	3	858	864		This is good instruction. Consider adding 'definitions' to frequency, measurement methods, etc.		Accepted with modification	Guidance in section 3.3 will be provided in chapter 7.
E_3_0339	Brown, Lynette	3	867	867		Change "categories" to "category".		Accepted with modification	The section will be removed.
E_3_0340	Blondel, Ana	3	870	1269		List of references should be located at the end of the chapter, after annexes and appendixes		Accepted	Reference section has been edited
E_3_0341	Blondel, Ana	3	870	1269		Some of the references are not in alphabetical order, see entries in lines: 1231-1233, 1237-1240, 1262-1263		Noted	This reference is treated in Ch. 4, coastal wetlands
E_3_0342	Parish, Faizal	3	870	1270		literature on sucessful restoration of fen peatlands in sacramento basin in calaifornia by crooks et al is missing from list		Noted	
E_3_0343	Lyde, Gund	3	915	916		Billett and Moore not cited in text		Accepted with modification	The reference may be used in an annex; this will be verified.
E_3_0344	Lyde, Gund	3	917	919		Billett et al. 2010 not cited in text		Accepted with modification	The reference may be used in an annex; this will be verified.

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ID	Expert (Last Name, First Name)	Chapter /Section	Start Line	End Line	Sub-section	Comment	supplementary documents	Authors' Action	Authors' note
E_3_0345	Brown, Lynette	3	925	1171		The year of the publication should not be in (), format rest of References for consistency with previous Chapters.		Accepted with modification	Format will be made consistent throughout Wetlands Supplement.
E_3_0346	Lyde, Gund	3	1003	1005		Hahn-Schöfl, et al. not cited in text		Accepted with modification	The reference may be used in an annex; this will be verified.
E_3_0347	Lyde, Gund	3	1011	1013		Reference is out of order		Accepted	The order will be corrected.
E_3_0348	Brown, Lynette	3	1016	1019		This Hendriks et al., 2007 reference is duplicated, delete one.		Accepted	
E_3_0349	Lyde, Gund	3	1016	1019		Hendriks et al reference Is repeated twice		Accepted	
E_3_0350	Lyde, Gund	3	1023	1027		Hirano et al references not cited in text		Accepted	
E_3_0351	Lyde, Gund	3	1064	1068		Needs year of publication. 2012? See line 106		Accepted	
E_3_0352	Brown, Lynette	3	1094	1094		Delte extra period before "In".		Accepted	It will be corrected.
E_3_0353	Lyde, Gund	3	1161	1161		Need initials of authors first names if any		Accepted	
E_3_0354	Lyde, Gund	3	1187	1188		Stephens not cited in text		Accepted	

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ID	Expert (Last Name, First Name)	Chapter /Section	Start Line	End Line	Sub-section	Comment	supplementary documents	Authors' Action	Authors' note
E_3_0355	Brown, Lynette	3	1231	1233		This reference is not in alphabetical order.		Accepted	It will be corrected.
E_3_0356	Lyde, Gund	3	1231	1233		Reference is out of order		Accepted	It will be corrected.
E_3_0357	Lyde, Gund	3	1234	1236		Watanabe et al., 2009 not cited in text, but a 2010 is. See line 688.		Accepted	
E_3_0358	Brown, Lynette	3	1237	1240		This reference is not in alphabetical order.		Accepted	It will be corrected.
E_3_0359	Lyde, Gund	3	1237	1240		Verma et al is out of sequence		Accepted	It will be corrected.
E_3_0360	Brown, Lynette	3	1241	1244		The Whiting and Chanton 2001 reference is duplicated, delete one.		Accepted	
E_3_0361	Brown, Lynette	3	1262	1263		This reference is not in alphabetical order.		Accepted	It will be corrected.
E_3_0362	Lyde, Gund	3	1262	1263		Reference is out of order		Accepted	It will be corrected.
E_3_0363	Hergoualc'h, Kristell	3	1274			_"An extensive literature review .." How many studies? How many sites? Place a link to Table 3.1 to see the reference list		Accepted with modification	

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ID	Expert (Last Name, First Name)	Chapter /Section	Start Line	End Line	Sub-section	Comment	supplementary documents	Authors' Action	Authors' note
E_3_0364	Tiemeyer, Bärbel	3	1274	1275		Please provide a literature list with the included studies.		Accepted with modification	All literatures considered are listed in Table 3.1 and 3.2 and full references are provided in "Reference" section.
E_3_0365	Hergoualc'h, Kristell	3	1277	1278		_"expert judgement was exercised as to whether the study was scientifically acceptable for inclusion." Which were the criteria for accepting/rejecting a study?		Accepted with modification	In general, studies were assessed for their relevance to the purpose of the study; however, this level of detail is inappropriate in the context of an annex to the guidance.
E_3_0366	Hergoualc'h, Kristell	3	1278	1279		_"In total, 3 non published studies were reviewed (Drö sler 2005, Augustin and Chojnicki 2008, Wilson et al., 2012)." And included in the IPCC EF assessment?		Accepted	
E_3_0367	Hergoualc'h, Kristell	3	1280	1281		_"All studies included in the database reported CO2 flux based estimation methodologies using either the chamber or eddy covariance (EC) techniques." How were the chambers: Dark or transparent?		Rejected	The type of chamber is relevant to understand how to use the data, but not necessary in the context of this guidance.

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ID	Expert (Last Name, First Name)	Chapter /Section	Start Line	End Line	Sub-section	Comment	supplementary documents	Authors' Action	Authors' note
E_3_0368	Hayne, Shari	3	1281	1284		Eddy covariance techniques are not only suited to sites where the biomass is vertically high. It is often used at open peatland sites as well as above forest canopies. Suggest the following edits: “The chamber method is widely employed in conditions where the vegetation is either low or absent while EC towers are typically used at sites where the fetch is flat and homogeneous which includes open and treed peatlands. The EC technique is capable of measuring ecosystem flux with higher temporal resolution while replicate chambers are required to integrate within site spatial variability.”		Accepted with modification	This text has been inserted with some modification
E_3_0369	Hergoualc'h, Kristell	3	1281			“The chamber method involves the measurement of fluxes ...” The measurement of which fluxes?		Accepted with modification	Inserted "gas fluxes"
E_3_0370	Brown, Lynette	3	1288	1288		What does the D stand for in WTD, depth?		Accepted	
E_3_0371	Ginzo, Hector	3	1288	1288		You mean WTD means..water table depth?		Accepted	
E_3_0372	Schrier-Uijl, Arina	3	1288			what is meant by peatland types here, consistency needed with line 1297 (iii).		Accepted with modification	This is now called nutrient status throughout
E_3_0373	Brown, Lynette	3	1295	1295		Change colon to equal sign.		Accepted	

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ID	Expert (Last Name, First Name)	Chapter /Section	Start Line	End Line	Sub-section	Comment	supplementary documents	Authors' Action	Authors' note
E_3_0374	Hayne, Shari	3	1295	1295		Not all of the non-natural sites were rewetted, some were just restored vegetation without rewetting. (from Table 3.1)		Accepted with modification	We have now more clearly defined what is included in this "rewetted" group in the first line of Annex 3A.1
E_3_0375	Brown, Lynette	3	1296	1296		Add semicolon at end of line.		Rejected	Semi-colons all removed
E_3_0376	Brown, Lynette	3	1298	1298		Change semicolon to colon.		Accepted	
E_3_0377	Tiemeyer, Bärbel	3	1298	1314		Was the number of measurements per year also included as a quality criterion?		Noted	The quality of the experimental protocol was not considered for inclusion in the database
E_3_0378	Brown, Lynette	3	1299	1302		This language is confusing, please clarify. If they were considered "drained effectively" were they still included in the database? From this point on text only discusses undrained and rewetted - were all "drained effectively" sites also rewetted? Also how did you determine the a WT >30cm = drained but < or = 30 cm is rewetted, is this supported in the scientific literature? Additional discussion or citation would be helpful.		Accepted	We have removed this sentence from the text. The choice of -30 cm has now been better justified and references added for support.
E_3_0379	Schrier-Uijl, Arina	3	1299			define 'drainage' and 'rewetting' also in the introduction of this chapter. And perhaps explain why is chosen for the 30 cm level.		Accepted	The choice of -30 cm has now been better justified and references added for support

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ID	Expert (Last Name, First Name)	Chapter /Section	Start Line	End Line	Sub-section	Comment	supplementary documents	Authors' Action	Authors' note
E_3_0380	Kasimir Klemetsson, Asa	3	1301			In this Annex 3A.1 it is revealed what WTD to include into rewetted sites, i.e. -30 cm, but also in chapter 2 drained area <30 are included and given EF's . What is the difference?		Accepted with modification	The annex describes the range of WT used to develop the EFs. The separation between ch 2 and 3 will be clarified.
E_3_0381	Schrier-Uijl, Arina	3	1305	1310		boreal peatlands only. How is upscaling being performed for temperate peatlands? How is upscaling being performed in general? Regression based on temperature? Water level? Actual emission values? See publications that report on large over- and underestimations when using actual values only (in the case of chamber-based research).		Noted	Average emission values were used across all sites as defined in the Annex
E_3_0382	Hakalahti-Siren, Teija	3	1318	1326		A statistical test is needed to make conclusion that the array from both groups is analogous. The x-axis legend of figure 3A.1 is very unclear. What is meant by number of annual flux measurements, frequency?		Accepted	Statistical information added to the Annex
E_3_0383	Verchot, Louis	3	1318	1318		How are CO2 fluxes calculated? I assume these are net fluxes (outputs – inputs), but it is not clear.		Accepted	Added the word net
E_3_0384	Verchot, Louis	3	1320	1320		Actually, it appears that in the temperate zone, there are more extremes at both ends of the distribution for rewetted soils.		Noted	

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ID	Expert (Last Name, First Name)	Chapter /Section	Start Line	End Line	Sub-section	Comment	supplementary documents	Authors' Action	Authors' note
E_3_0385	Brown, Lynette	3	1322	1326		Revise legend order in graph b to be consistent with graph a (Rewetted first). Revise scale of graph b to maximum of 3,000 to be consistent with graph a and to better see the data points. Provide the n values for each graph in the title or as a note.		Accepted	
E_3_0386	Hergoualc'h, Kristell	3	1322			Figure 3.A.1 Suggestion : Use the same unit as for the EF (t C ha-1 y-1)		Rejected	In most cases these are the units from the original reference and this figure is not actually use in the calculation of the ER
E_3_0387	Lyde, Gund	3	1322	1324		Figure 3A.1 Consider listing the references for the published literature in a footnote.		Accepted with modification	A footnote has been added to Table 3.1 in which the reference appear
E_3_0388	Tiemeyer, Bärbel	3	1322	1326		Fig. 3A.1 and Fig. 3A.2: please consistent units (t CO ₂ -C)		Rejected	In most cases these are the units from the original reference and this figure is not actually use in the calculation of the ER
E_3_0389	Tiemeyer, Bärbel	3	1322	1326		Fig. 3A.1: Why does the 95% confidence interval only include CO ₂ uptake when around 15% of the studies reported CO ₂ emissions?		Accepted	This figure included some sites that were not used in the EF calculation (i.e. sites with water table deeper than -30 cm are shown). The figure has been redrawn to include only those sites used in the calculation of the EF.

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ID	Expert (Last Name, First Name)	Chapter /Section	Start Line	End Line	Sub-section	Comment	supplementary documents	Authors' Action	Authors' note
E_3_0390	Tiemeyer, Bärbel	3	1322	1326		Fig. 3A.1: Is the emission factor for temperate peatlands really significantly different from zero?		Accepted	The EF is now zero
E_3_0391	Herbst, Mathias	3	1325	1326		I find the x-axis title misleading, because one could think of the number of years rather than of a sequential number. Or is it just me...?		Accepted	Axis title has been changed
E_3_0392	Tiemeyer, Bärbel	3	1326	1339		Fig. 3A.2: In the description of the criteria for selecting studies (1298-1314) it is stated that "natural" sites with a water table lower than 30 cm are excluded, but these studies are still in this Figure and in the regression equation.		Accepted	Any sites with water table deeper than -30 cm have been removed from the figure
E_3_0393	Blondel, Ana	3	1327	1340		In the fitted regression line $CO_2 \text{ flux} = a + b_1 * WT$: while values of parameter "b1" are given in table 3.A.1, there is no mention of values for parameter "a" (i.e. starting point of the regression line).		Noted	The regression lines are only for illustration of the data set distribution in relation to water table. The regression equation is not used for any calculation and parameters are not required
E_3_0394	Hergoualc'h, Kristell	3	1331	1332		“Therefore, EFs were calculated using rewetted and natural/undrained data points.” How?		Accepted	This is now explained clearly in the text.
E_3_0395	Blondel, Ana	3	1336	1420		Same identifier "3A.2" used for figures on pages 33 and 37		Accepted	

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ID	Expert (Last Name, First Name)	Chapter /Section	Start Line	End Line	Sub-section	Comment	supplementary documents	Authors' Action	Authors' note
E_3_0396	Hergoualc'h, Kristell	3	1336			Relationship between water table and CO2 fluxes: what is the point in presenting these relationships if they aren't used for the calculation of the EF? I would suggest to delete them as the reader gets confused.		Noted	The regression lines are only for illustration of the data set distribution in relation to water table. The regression equation is not used for any calculation and parameters are not required
E_3_0397	Schrier-Uijl, Arina	3	1336		fig 3A2	Give R2's.		Rejected	The regression lines are only for illustration of the data set distribution in relation to water table. The regression equation and R2 is not used for any calculation and parameters are not required

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ID	Expert (Last Name, First Name)	Chapter /Section	Start Line	End Line	Sub-section	Comment	supplementary documents	Authors' Action	Authors' note
E_3_0398	Verchot, Louis	3	1336	Fig 3A.2	Fig 3A.2	The data look heteroskedastic, with variance increasing as WT approaches the surface. The CO2 data should probably be log transformed to standardize the variance and get a proper relationship. What are the R2 and P values for this relationship? Table 3A.1 suggests that this relationship has no predictive power. The slope is not significantly different from 0 in all but 1 case. How can you use this as the basis for the EF? Don't you have more robust relationships with other factors (C:N, NO3-, N deposition, base saturation, pH)? We already stratify boreal and temperate peats by nutrient status and we do that for a reason. This difference greatly affects biogeochemistry. We don't stratify boreal and temperate peats by water table depth because this factor does not make a difference. We must have better biogeochemical understanding of fluxes than this to be able to develop robust EFs. If not, we should just admit it, not pretend we have any basis for estimating the sources of variation and just take a simple mean.		Noted	See also response to comments 393, 396, 397
E_3_0399	Brown, Lynette	3	1338	1339		Delete dash in "Re-wetted" in both legends to be consistent.		Accepted	
E_3_0400	Kasimir Klemetsson, Asa	3	1338	1339		Figure 3A.2 b) Temperate zone, which shows the same pattern as the boreal zone, although larger variation. Could this variation be explained? Mean water table having a large variation?		Rejected	Explanation of the variation of fluxes is explained in the main text of the chapter. No need to further explain it here.

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ID	Expert (Last Name, First Name)	Chapter /Section	Start Line	End Line	Sub-section	Comment	supplementary documents	Authors' Action	Authors' note
E_3_0401	Brown, Lynette	3	1342	before 1343		The 2 in CO2 should be subscript (2 occurrences). Std Err. Should be replaced with S.E. to be consistent with text (see line 1330).		Accepted	
E_3_0402	Lyde, Gund	3	1342	1343		Table 3A.1 -the 2s in the CO2s should be subscripts in the title		Accepted	
E_3_0403	Tiemeyer, Bärbel	3	1342	1343		Table 3A.1: Are the coefficients of the regression equation significant, i.e. is the slope significantly different from zero? If not, the regression equations are quite useless.		Rejected	The regression lines are only for illustration of the data set distribution in relation to water table. The regression equation and R2 is not used for any calculation and parameters are not required
E_3_0404	Tiemeyer, Bärbel	3	1342	1343		Table 3A.1: In the case that the coefficients of the regression equation should be indeed significant, would they still be significant if studies with a WTD deeper than 30 cm were excluded?		Accepted with modification	These points will be removed. See also response to comment 392
E_3_0405	Tiemeyer, Bärbel	3	1342	1343		Table 3A.1: Where are this regression equations to be used?		Noted	The regression lines are only for illustration of the data set distribution in relation to water table. The regression equation is not used for any calculation and parameters are not required
E_3_0406	Tiemeyer, Bärbel	3	1342	1343		Table 3A.1: What are the units?		Noted	These are unitless

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ID	Expert (Last Name, First Name)	Chapter /Section	Start Line	End Line	Sub-section	Comment	supplementary documents	Authors' Action	Authors' note
E_3_0407	Federici, Sandro	3	1345	1387	Annex 3A.2	Please join with Annex 2A.2		Rejected	As this chapter is solely for rewetting but a large part is based on methodologies developed in Chapter 2 and therefore reference to this chapter is inevitable.
E_3_0408	Kasimir Klemetsson, Asa	3	1351	1352		inorganic carbon (DIC) would be the same as "dissolved carbonate species", so double in the sentence.		Accepted	
E_3_0409	Brown, Lynette	3	1360	1360		Change "relative" to "relatively".		Accepted	
E_3_0410	Tiemeyer, Bärbel	3	1374	1374		Not in addition - these two studies are also included in Tab. 3A.2		Accepted	
E_3_0411	Ma, Chun	3	1381	1382		References should be given for this sentence in order to provide evidences for 'a larger number of studies are available'.		Accepted	References are provided in Chapter 2

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ID	Expert (Last Name, First Name)	Chapter /Section	Start Line	End Line	Sub-section	Comment	supplementary documents	Authors' Action	Authors' note
E_3_0412	Tiemeyer, Bärbel	3	1381	1382		While I do understand that there is only a limited number of studies directly comparing DOC concentrations in and fluxes from drained and re-wetted peatlands, I do not understand why studies on re-wetted peatlands were not included in the dataset for deriving a DOC_flux_re-wetted. If there is not enough data, these values could be combined with the studies in natural peatlands, but the resulting emission factors (and the regression equation) would at least include some re-wetted sites. Besides the two studies in Tab. 3A.2, following studies could, for example, be included: Gibson et al., 2009, Turner et al., 2013, Koskinen et al., 2011, Hendriks et al., 2007		Accepted with modification	New references will be reviewed and expert judgement will be applied whether re-wetted sites can be included in the derivation of EF without any bias from either (1) representing the initial transient stage (known higher DOC fluxes for a short period after re-wetting) or (2) quality of the data in terms of where it was measured in the rewetted site (not in a ditch-like stream). Ultimately, we have shown that the assumption that rewetted organic soils behave like undrained organic soils.
E_3_0413	Zhang, Xiaochun	3	1381	1382		There should be evidences for this sentence 'a larger number of studies are available'.		Accepted	References are provided in Chapter 2
E_3_0414	Batisha, Ayman	3	1388	1388		TABLE 3A.2 should be reformatted		Accepted	
E_3_0415	Ginzo, Hector	3	1388	1388		Table 3A.2. Please explain what does DOCRE-WET mean. The subindex RE-WET may lend itself to be interpreted as «rewetting»; to avoid this, I should replace it with something like RE-DR(ained)		Accepted	Modified. New title: change in DOC
E_3_0416	Hayne, Shari	3	1388	1388		The title of Table 3A.2 is confusing with the above and below statements. Suggest inclusion of footnotes for clarification.		Accepted	Check with Chapter 2 for consistency

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ID	Expert (Last Name, First Name)	Chapter /Section	Start Line	End Line	Sub-section	Comment	supplementary documents	Authors' Action	Authors' note
E_3_0417	Rock, Joachim	3	1388	1388		Table 3A2: please avoid redundant entries in the tables. For example, delete all but one "drained blanket bog" and "UK", delete the second headings (previous land use, ...) - this only distracts from the change in units of measurement - and the second "drained", "rewetted", ...		Accepted	
E_3_0418	Schröder-Uijl, Arina	3	1388		table 3A2	include latest research of Moore et al., 2013.		Accepted	
E_3_0419	Tiemeyer, Bärbel	3	1388	1389		Tab. 3A.2: Turner et al. (2013) are also reporting concentrations in drained and re-wetted peatlands		Accepted	
E_3_0420	Tiemeyer, Bärbel	3	1388	1389		Tab. 3A.2: To be honest with the comparison between drained and re-wetted sites, the concentrations of Waddington et al. (2008) should also be included.		Accepted	
E_3_0421	Tiemeyer, Bärbel	3	1388	1389		Tab. 3A.2: There are at least a few more studies reporting fluxes from drained and re-wetted peatlands, including: Gibson et al., 2009; Turner et al., 2013		Accepted	
E_3_0422	Tiemeyer, Bärbel	3	1395	1396		Please provide a literature list with the included studies.		Accepted	

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ID	Expert (Last Name, First Name)	Chapter /Section	Start Line	End Line	Sub-section	Comment	supplementary documents	Authors' Action	Authors' note
E_3_0423	Hergoualc'h, Kristell	3	1400			<p>_"For tropical Southeast Asia, annual data are scarce and direct, non-annualized measurement values were used."</p> <p>Why if later on the EF is calculated on a yearly basis? Please, provide the CH4 fluxes of Table 3.A.3 in the same unit as the EF.</p>		Rejected	This sentence characterizes the data type that is used for transparency in the calculations. The aggregated value for these data is expressed in the EF units, but the table provides the original data from the publications in the units in which is was collected and published
E_3_0424	Hergoualc'h, Kristell	3	1402			<p>_"measurements, data from natural (undrained) peatlands only were available"</p> <p>Table 3.A.3 presents the fluxes in drained ecosystems as well</p>		Accepted with modification	All sites included were wet sites where WT was within 20 cm of the surface. However, in the original papers some were considered managed or slightly drained. We have clarified this in the text.
E_3_0425	Blondel, Ana	3	1410	1410		Footnote 2: reference "Juottonen et al., 2012" might be missing or year might be wrong		Accepted	This has been corrected in the reference list
E_3_0426	Brown, Lynette	3	1410	1412		There is no footnote #1, revise numbering throughout Annex.		Accepted	
E_3_0427	Hakalahti-Siren, Teija	3	1410	1411		It is claimed that no statistically significant differences in methaene emissions exist between undrained and rewetted treatments. However, it is not mentioned how the data was analysed. A nonparametric test should have used as the data did not follow normal distribution. Why 95 % confidence intervals were not calculated to define 95 % range? The variance was used instead, which is inappropriate, especially because the data did not follow the normal distribution.		Accepted with modification	The distribution of the data were considered in the statistical test used. This information has been added to the text. The 95% range of the data was used according to guidance provided in Volume 1, Chapter 3 of the 2006 Guidelines

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ID	Expert (Last Name, First Name)	Chapter /Section	Start Line	End Line	Sub-section	Comment	supplementary documents	Authors' Action	Authors' note
E_3_0428	Tiemeyer, Bärbel	3	1420	1425		Boreal: How can data points with a groundwater table of less than 30 cm represent "undrained" peatlands?		Accepted with modification	Data analysis now considers only sites with WT 30 cm below the surface or shallower
E_3_0429	Tiemeyer, Bärbel	3	1420	1425		Temperate: Does the regression still work if the value at a groundwater table of 50 cm is removed? How can the peatland be "undrained" with this groundwater level?		Accepted with modification	Data analysis now considers only sites with WT 30 cm below the surface or shallower
E_3_0430	Tiemeyer, Bärbel	3	1420	1425		Where are the regressions shown in the Figures to be used?		Noted	The regression are not used in any calculations but only show the overlap of the rewetted and undrained data sets
E_3_0431	Verchot, Louis	3	1420	Fig 3A.2	Fig 3A.2	This figure has the same number as the previous one. Why are no statistics presented for the regressions? It should be log10 not 10log. For the second panel, the point at -50 is probably an “influential point” and should be dropped from the regression. Try a DFFITS test.		Accepted with modification	Statistics are not shown as the importance here is to show the overlap of the data distributions, but statistics do show they are not significantly different. The point at -50 has been removed and the caption corrected
E_3_0432	Herbst, Mathias	3	1423	1425		The unit chosen for the y-axis seems quite unusual and not easy to understand. Were other, more common options considered?		Noted	In order to fit a linear regression the data were log transformed, but you need to add 1 as some negative values were in the dataset

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ID	Expert (Last Name, First Name)	Chapter /Section	Start Line	End Line	Sub-section	Comment	supplementary documents	Authors' Action	Authors' note
E_3_0433	Brown, Lynette	3	1424	before 1425		Should Juottonen et al., 2012 be "in press" (see line 1064)?		Accepted with modification	Reference has been correctd
E_3_0434	Lyde, Gund	3	1424	1424		Figure 3A.2 footnote 2 - Juottonen et al., 2012; - not in references - however there is an undated Juottonen et al listed at 1064-1068.		Accepted with modification	Reference has been correctd
E_3_0435	Verchot, Louis	3	1426	1427		What are these variance terms? Please calculate a proper variance if you are going to report this statistic. Rewetted fluxes may be considerably higher, but are they statistically significantly different?		Accepted with modification	The 95% range of the data was used according to guidance provided in Volume 1, Chapter 3 of the 2006 Guidelines and this is stated in text
E_3_0436	Hergoualc'h, Kristell	3	1427			n=274) Please correct the 4		Accepted with modification	The 4 is the footnote number and has now been moved outside of the brackets to avoid confusion
E_3_0437	Blondel, Ana	3	1428	1428		Footnote 5: reference "Koehler et al., 2010" might be missing or year might be wrong.		Accepted with modification	This was mixed in with another reference, but has now been corrected
E_3_0438	Blondel, Ana	3	1428	1428		Footnote 5: reference "Wickland et al., 2001" should be "Wickland 2001", see lines 1245-1246		Accepted	
E_3_0439	Hergoualc'h, Kristell	3	1428			n=415) Please correct the 5		Accepted with modification	The 5 is the footnote number and has now been moved outside of the brackets to avoid confusion

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ID	Expert (Last Name, First Name)	Chapter /Section	Start Line	End Line	Sub-section	Comment	supplementary documents	Authors' Action	Authors' note
E_3_0440	Tiemeyer, Bärbel	3	1429	1430		The exclusion of these high fluxes does seem slightly arbitrary, as some flooding/inundation happens in many re-wetting projects, and the emission factor is intended to represent the variability of conditions.		Noted	Some fluxes above the surface are included, but sites with deep standing water are not included in the guidance of the chapter as this guidance does not apply to flooded lands
E_3_0441	Brown, Lynette	3	1438	1438		Please add a citation confirming nutrient poor site have more dry microsites.		Rejected	This is a statement about the data set (the nutrient poor data has more deeper WT sites).
E_3_0442	Brown, Lynette	3	1440	before 1441		Wilson et al., in press and Koehler et al, 2010 are not listed in the References - please add to References or delete from text.		Accepted	References corrected
E_3_0443	Lyde, Gund	3	1440	1440		Footnote 5 Koehler et al., 2010 not in references		Accepted with modification	This was mixed in with another reference, but has now been corrected
E_3_0444	Schrier-Uijl, Arina	3	1442		fig 3A3	points in graph for methane flux of temperate, poor, RW and UN shall be switched according to Line 1426 that states that CH ₄ fluxes from rewetted temperate peatlands are considerably lower than from undrained.		Rejected	The data is presented correctly in this figure. Line 1426 refers to the grouping of all temperate sites (regardless of nutrient status) and the figure is disaggregated.
E_3_0445	Brown, Lynette	3	1451	1451		Insert the word "nutrient" after "for".		Accepted	
E_3_0446	Tiemeyer, Bärbel	3	1454	1454		Please provide references with actual measurements		Noted	This is already the case - all references include original data

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ID	Expert (Last Name, First Name)	Chapter /Section	Start Line	End Line	Sub-section	Comment	supplementary documents	Authors' Action	Authors' note
E_3_0447	Hergoualc'h, Kristell	3	1456			<p>”Data were limited to measurements associated with wet conditions (water table ≤ 20 cm below surface)”</p> <p>Why 20 cm if the Annex 3A.1 uses a criteria of 30 cm (“If a natural site had a WTD of deeper than 30 cm it was considered to be drained effectively)?</p>		Accepted	This has been made consistent
E_3_0448	Brown, Lynette	3	1458	1458		Should Couwenberg 2011 be Couwenberg et al. 2011 (see line 944)?		Accepted with modification	This reference is correct and has now been added to the reference list
E_3_0449	Hirota, Mitsuru	3	1458	1458		padi --> paddies or paddy, right?		Accepted	
E_3_0450	Lyde, Gund	3	1458	1458		Couwenberg 2011 not in references		Accepted	This has been added
E_3_0451	Tiemeyer, Bärbel	3	1458	1458		Please provide references with actual measurements		Noted	This is already the case - all references include original data
E_3_0452	Verchot, Louis	3	1458	1458		rice paddy		Accepted	
E_3_0453	Brown, Lynette	3	1461	1461		Change the t in Couwenbert to a g.		Accepted	
E_3_0454	Lyde, Gund	3	1461	1461		Should Couwenbert be Couwenberg?		Accepted	

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ID	Expert (Last Name, First Name)	Chapter /Section	Start Line	End Line	Sub-section	Comment	supplementary documents	Authors' Action	Authors' note
E_3_0455	Tiemeyer, Bärbel	3	1461	1461		Please provide references with actual measurements		Noted	This is already the case - all references include original data
E_3_0456	Batisha, Ayman	3	1463	1463		TABLE 3A.3 should be reformatted		Noted	See comment 457
E_3_0457	Hergoualc'h, Kristell	3	1463			<p>TABLE 3A.3</p> <p>It isn't clear what 'n' refers to, nor what the values in parenthesis are.</p> <p>Some studies are missing e.g. Inubushi et al. (2003), Melling et al. (2005).</p> <p>It doesn't look like a systematic review of soil CH₄ fluxes was carried out.</p> <p>Why isn't the paper of Hirano et al. (2009) cited as it summarizes the results published in Jauhiainen et al. (2001) (2004), (2005) and (2008)?</p> <p>The flux value proposed for the study Pangala et al. (2013) includes CH₄ emissions from trees. But this study has measured the fluxes over a two weeks period only during the wet season; so soil CH₄ emissions don't encompass seasonal changes.</p>		Accepted with modification	This has been clarified and studies added to the table
E_3_0458	Kasimir Klemedtsson, Asa	3	1463	1464		Why only considering a WTD of less than 20cm where it is -30 cm elsewhere, inconsistent.		Accepted	This has been made consistent

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ID	Expert (Last Name, First Name)	Chapter /Section	Start Line	End Line	Sub-section	Comment	supplementary documents	Authors' Action	Authors' note
E_3_0459	Schrier-Uijl, Arina	3	1463		Table 3A3	'wet site conditions (water table < or equal to 20 cm below the surface) are considered. While in earlier text 'wet sites' are sites with water table upto 30 cm below the surface?		Accepted	This has been made consistent
E_3_0460	Tiemeyer, Bärbel	3	1463	1464		Tab. 3A.3: Please use units (kg/(ha year)) which are consistent with the other tables.		Rejected	These units represent the time scale over which the measurements were made and the mean of the data is given in the kg/ha/yr unit
E_3_0461	Verchot, Louis	3	1463	Table 3A.3	Table 3A.3	None of these sites were rewetted. Delete the tropical section and report no EF for rewetted sites.		Rejected	We have justified this throughout and clearly identify the limitations of the data set
E_3_0462	Hergoualc'h, Kristell	3	1466			Appendix 3.1 As a general comment I'm surprised that the only publication measuring soil respiration and soil fluxes of CH ₄ in tropical systems before and after hydrological restoration (Jauhiainen et al. (2012) Carbon dioxide and methane fluxes in drained tropical peat before and after hydrological restoration) isn't even mentioned in the introduction.		Noted	The paper referred to does not describe rewetting that results in water saturated conditions. Thus does not follow our concept of rewetting.
E_3_0463	Parish, Faizal	3	1466	1517		should this be in an appendix or in the chapter as has been done for chapter 4 (section 4.6 future methodological development)		Accepted with modification	The Appendix has been removed and integrated into Annex 3A.1
E_3_0464	Blondel, Ana	3	1468	1468		Correct typo in "development"		Accepted with modification	The Appendix has been removed and integrated into Annex 3A.1

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ID	Expert (Last Name, First Name)	Chapter /Section	Start Line	End Line	Sub-section	Comment	supplementary documents	Authors' Action	Authors' note
E_3_0465	Herbst, Mathias	3	1468	1468		Replace “development” with “development”.		Accepted with modification	The Appendix has been removed and integrated into Annex 3A.1
E_3_0466	Kabo-bah Amos Tiereyangn	3	1468	1468		"development" should read "development"		Accepted with modification	The Appendix has been removed and integrated into Annex 3A.1
E_3_0467	Blondel, Ana	3	1471	1471		Reference "Koh et al., 2011" is missing		Accepted with modification	The Appendix has been removed and integrated into Annex 3A.1
E_3_0468	Brown, Lynette	3	1471	1471		Koh et al., 2011 is not listed in the References - please add to References or delete from text.		Accepted with modification	The Appendix has been removed and integrated into Annex 3A.1
E_3_0469	Lyde, Gund	3	1471	1471		Koh et al., 2011 not in references		Accepted with modification	The Appendix has been removed and integrated into Annex 3A.1
E_3_0470	Wiseman, Michael	3	1473	1473		add another word {resulting in A large		Accepted with modification	The Appendix has been removed and integrated into Annex 3A.1
E_3_0471	Hergoualc'h, Kristell	3	1482			<p>“The basis for methodological development in this Appendix focuses on changes in CO2 emissions and removals from the restoration of rewetted tropical peatlands.”</p> <p>There’s no methodological development in this Appendix.</p>		Accepted with modification	The Appendix has been removed and integrated into Annex 3A.1

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E_3_0472	Hergoualc'h, Kristell	3	1483	1484		<p>_ The approach is consistent with the default EF of Table 3.1, which assumes that rewetting effectively stops soil organic matter oxidation but, in the absence of vegetation regrowth, does not reestablish a soil C sequestration function.”</p> <p>There’s no scientific approach but just an assumption. Where is the scientific evidence that SOM oxidation stops after rewetting?</p> <p>What happens to other peat C fluxes (e.g. decomposition of dead roots and litter) after rewetting?</p>		Accepted with modification	The Appendix has been removed and integrated into Annex 3A.1, and a graphic will be added to justify the approach.
E_3_0473	Kabo-bah Amos Tiereyangn	3	1488	1488		Correct "CO2" to reflect the unique subscript of "2"		Accepted with modification	The Appendix has been removed and integrated into Annex 3A.1
E_3_0474	Parish, Faizal	3	1497	1510		Wording related to the avoidance of fire should be included in these paragraphs		Rejected	Fire avoidance is outside the scope of this chapter.
E_3_0475	Hergoualc'h, Kristell	3	1498			<p>“the default EF as considered in Section 3.2.1 is zero.”</p> <p>Why?</p> <p>What is the evidence?</p> <p>In the absence of scientific research on the topic, the IPCC shouldn’t provide an EF</p>		Accepted with modification	The Appendix has been removed and integrated into Annex 3A.1, and a graphic will be added to justify the approach.
E_3_0476	Verchot, Louis	3	1501	1501		IPCC generally does not produce Tier 2 factors. The Dommain paper is a useful study, but suggesting that it provides an appropriate value for Tier 2 for rewetted managed soils under modern conditions is a real stretch. Replication is needed. The suggested EF should be removed.		Accepted with modification	The Appendix has been removed and integrated into Annex 3A.1, and a graphic will be added to justify the approach.

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ID	Expert (Last Name, First Name)	Chapter /Section	Start Line	End Line	Sub-section	Comment	supplementary documents	Authors' Action	Authors' note
E_3_0477	Brown, Lynette	3	1502	1502		The 2 in CO ₂ should be subscript. Change the word "as" to "are".		Accepted with modification	The Appendix has been removed and integrated into Annex 3A.1
E_3_0478	Hergoualc'h, Kristell	3	1502			<p>“Preliminary indications of CO₂ emissions/removals from undrained peatlands as summarized in Table A3.1”</p> <p>This Table doesn’t summarize net emissions and removals. It is a mix of studies on soil respiration in Southeast Asia and of C accumulation rates evaluated by C dating in Peru.</p> <p>Furukawa et al. (2005), Melling et al. (2005), Hadi et al. (2001) and Inubushi et al. (2003) measured total soil respiration which doesn’t reflect net emissions or removals. Besides most values reported in the table are wrong. There were several other studies on soil respiration in tropical peat swamp forests e.g. Chimner, 2004; Chimner & Ewel, 2004; Hirano et al. , 2009, Sundari et al., 2012.</p> <p>C accumulation rates from Peru (Lahteenoja et al., 2009 and 2011), evaluated using C dating, don’t seem correct as well.</p>		Accepted with modification	The Appendix has been removed and integrated into Annex 3A.1; data limitations in the table will be discussed.
E_3_0479	Kasimir Klemetsson, Asa	3	1502			Subscript of 2 in CO ₂		Accepted with modification	The Appendix has been removed and integrated into Annex 3A.1
E_3_0480	Parish, Faizal	3	1503	1503		The wording " to entire ecosystems" is misleading as at least some of the measurements eg melling 2005 is only for soil emissions and not the entire forested peatland ecosystem.		Accepted with modification	The Appendix has been removed and integrated into Annex 3A.1; data limitations in the table will be discussed.

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ID	Expert (Last Name, First Name)	Chapter /Section	Start Line	End Line	Sub-section	Comment	supplementary documents	Authors' Action	Authors' note
E_3_0481	Parish, Faizal	3	1512	1513		I believe that these are emissions from Soil or soil associated pools (litter, DOM) rather than entire ecosystem emissions. I am not sure that the forested site studied by melling was undegraded or undrained. This should be verified. I believe thatthere are somem other studies in Se Asia for forested wetlands that show continuing net uptake of carbon. I believe that the sago in melling 2005 had some drainage. Also cross check with table 3A.3 as some of the studies on CH4 in wet swamp forest (most likely undrained) also collected data on CO2.		Accepted with modification	The Appendix has been removed and integrated into Annex 3A.1; data limitations in the table will be discussed.
E_3_0482	Rock, Joachim	3	1512	1512		Table A3.1: please delete redundant entries in columns.		Accepted with modification	The Appendix has been removed and integrated into Annex 3A.1; data limitations in the table will be discussed.
E_3_0483	Verchot, Louis	3	1515	1515		Why suggest a method based on WT depth when a previous analysis in this chapter showed that the relationship is not significant? Delete the suggestion.		Accepted with modification	The Appendix has been removed and integrated into Annex 3A.1; WT is significant but should be considered in higher tier methods.
E_3_0484	Schrier-Uijl, Arina	3	1517			this is the first time that off-site emissions are mentioned. What is exactly meant by off-site emissions? What is included in this term? Please explain perhaps earlier in the text.		Rejected	Off-site emissions are described in the main body of the chapter.

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ID	Expert (Last Name, First Name)	Chapter /Section	Start Line	End Line	Sub-section	Comment	supplementary documents	Authors' Action	Authors' note
E_3_0485	Kasimir Klemetsson, Asa	3	1521			Annexes where found after the reference list for ch 3 but for ch 2 the Anexes where found before the references.		Accepted with modification	The Appendix has been removed and integrated into Annex 3A.1
E_3_0486	Nair, Malini	3	ALL	ALL		This chapter is highly technical. There are several terms a policy maker, who refers to this document will not understand. For example, the 'eddy covariance' is mentioned several times but not explained/defined in the text anywhere. In addition, terms like subsidence data are very specific and explanation should be provided in the footnotes		Accepted with modification	The use of scientific terminology in a science-based document is sometimes necessary to ensure precision. However all efforts will be made to make the guidance accessible.
E_3_0487	Garcia-Diaz, Cristina	3	general	general		it seems that the activity data sections suggest that the areas have to be divided into climatic zones, soil types, ... when it is prerogative of the country to subdivide a land use category. It should be said that the areas could be stratified.		Accepted	
E_3_0488	Schrier-Uijl, Arina	3	general			The title might not cover the content. Is it about restoring AND rewetting, or just rewetting (with reference to documents that deal with restoration of vegetation)? Is this chapter about Wetlands? Peatlands? Peat soils? Organic soils? E.g. line 111 says 'rewetting and restoration of wetlands on peat or organic soils. Make clear what the scope is of this doc. and reflect that in the title. It would make it more clear to give (or refer to) definitions for wetland, peatland, peat soils, organic soil in the introduction.		Accepted	

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ID	Expert (Last Name, First Name)	Chapter /Section	Start Line	End Line	Sub-section	Comment	supplementary documents	Authors' Action	Authors' note
E_3_0489	Schrier-Uijl, Arina	3	general			Peatland type is in the text used to separate between nutrient rich and poor peatland systems. Suggestion: use consistently 'peatland nutrient status' in the text for the separation between nutrient rich and nutrient poor since peatland type can have different 'meanings' or 'definitions'.		Accepted	
E_3_0490	Schrier-Uijl, Arina	3	general			vague/unclear how to calculate losses/C-stock changes from peat fires (CO2-C). Where is it described? Not in the volume 4 chapters of the 2006 IPCC guidance as has been suggested in the text.		Accepted	Reader will be referred to chapter 2, where complete guidance is provided.
E_3_0491	Verchot, Louis	3	General			This chapter is by and large in good shape and makes a useful contribution to the revision of the guidelines. I will not comment so much on the positive elements, but rather focus on two areas where the chapter needs to be improved. The first major problem is the EF for rewetted tropical peatlands. In the absence of flux studies it is not valid to suggest that the EF is 0. The second area that needs improvement is the treatment of activity data. This chapter is not consistent with Chapter 3 of the 2006 Revision and activity data do not have Tiers. Specific comments below will point out where these issues arise in the text.		Accepted	
E_3_0492	GUTIERREZ BELTRAN, Natalia	3	129	130		Desarrollar investigación en este campo para las zonas tropicales y en particular sobre las ecuatoriales		Noted	

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E_3_0493	GUTIERREZ_BELTRAN, Natalia	3	132	132		Necesario disponer de este artículo Schumann & Joosten 2008		Noted	
E_3_0494	GUTIERREZ_BELTRAN, Natalia	3	145	146		La "Guía recomienda el desarrollo de factores de emisión nacionales donde la quema del suelo es una fuente no despreciable de las emisiones". No es suficiente con hacer la recomendación, se requiere que el IPCC proporcione la metodología e instrumentación para que los países "No anexo I" desarrollen estas investigaciones y así obtener IGEI en humedales más cercanos a la realidad.		Noted	
E_3_0495	GUTIERREZ_BELTRAN, Natalia	3	251	251		Interesante disponer de este artículo relacionado con factores de emisión por quemas de turberas -Glatzel et al., 2003, Wallage et al., 2006, Waddington et al., 2008		Noted	
E_3_0496	GUTIERREZ_BELTRAN, Natalia	3	263	263		Es necesario conocer la metodología para establecer las regiones climáticas y en su caso por la condición de turberas y los nutrientes disponibles en ellos.		Noted	
E_3_0497	GUTIERREZ_BELTRAN, Natalia	3	291	291		Importante disponer del artículo que trata factores de emisión de acuerdo con la composición de la vegetación presente Couwenberg et al., 2011)		Noted	

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E_3_0498	GUTIERRE Z_BELTRAN, Natalia	3	367	367		Es posible dividir la zona climática tropical en: ecuatorial y subtropical. Es importante tener en cuenta que las características de los procesos de emisión son diferentes en cada una de estas zonas.		Noted	refers to the convenience of division of tropical among ecuatorial and subtropical
E_3_0499	GUTIERRE Z_BELTRAN, Natalia	3	367	367		En la tabla, la nota del (**) se debe reconsiderar: los humedales de los Andes y en general del tropico tienen procesos de oxido -reducción que permiten un intercambio de gases importante. No obstante, falta investigación más profunda sobre estos procesos y generación de datos de emisión de gases en estas fases.		Noted	
E_3_0500	GUTIERRE Z_BELTRAN, Natalia	3	469	471		Colombia requiere conocer las metodologías para el uso de valores alternativos para el factor de conversión de CO2 Frac DOC 470 donde se dispone de pruebas para estimar la proporción de DOC exportado de las turberas.		Noted	
E_3_0501	GUTIERRE Z_BELTRAN, Natalia	3	501	503		Para el Nivel 1. Colombia requiere el apoyo del IPCC , para el manejo y gestión de las diferentes series de datos temporales de imágenes de sensores remotos (por ejemplo, fotografía aérea, LIDAR etc) puede ayudar en la detección de los cambios en las coberturas de las turberas y humedales .		Noted	

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E_3_0502	GUTIERREZ_BELTRAN, Natalia	3	524	526		Para el Nivel 2. En el caso de Colombia, la información relevante debe ser creada, por lo que se requiere apoyos externos para la conformación y creación de datos, así como de un plan de actualizaciones periódicas y mantenimiento a largo plazo de un sistema de información nacional sobre suelos humedos (régimen acuico, ú dicos) complementando así la información proveniente de las imagenes de satélite.		Noted	
E_3_0503	GUTIERREZ_BELTRAN, Natalia	3	543	544		Colombia requiere del desarrollo de protocolos para la recolección de datos de emisiones de suelos Orgánicos como los Histosoles (de turberas) y minerales con altos contenidos de materia orgánica como los Andisoles; y disponer de mecanismos de control de calidad compatibles con datos de sensores remotos y un compromiso financiero de largo plazo para la actualización y mantenimiento		Noted	
E_3_0504	GUTIERREZ_BELTRAN, Natalia	3	593	595		Se pide al comité del IPCC, realizar un esfuerzo en la revisión sobre el cálculo del factor de emisión a las condiciones mas reales en los humedales del trópico ecuatorial. Algunas investigaciones se han adelantado para estas zonas en el mundo.		Noted	
E_3_0505	GUTIERREZ_BELTRAN, Natalia	3	614	614		Importante disponer de este articulo sobre flujo de metano: Augustin y Chojnicki 2008; Couwenberg et al, 2010;. 2012 Couwenberg y Fritz;. Glatzel et al, 2011		Noted	

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E_3_0506	GUTIERREZ_BELTRAN, Natalia	3	629	631		Para Colombia es importante conocer la metodología sobre la estimación de las emisiones de CH ₄ a raíz de la inundación de un terreno agrícola enriquecido con nutrientes puesto que según el suplemento de suelos organicos la capa superior del suelo parece ser más alta en comparación con los factores de emisión promedio. Por lo que se solicita también el documento de (Augustin y Chojnicki, 2008; Glatzel et 631 al., 2011)		Noted	
E_3_0507	GUTIERREZ_BELTRAN, Natalia	3	642	647		Como parece ser que los cambios en las emisiones de CH ₄ y la absorción a través del tiempo parecen estar vinculados a la sucesión vegetal, para ello se requiera la inclusión de información de la vegetación para comprender el patrón de emisiones en el tiempo, es decir la producción de CH ₄ así como el transporte de CH ₄ del suelo saturado a la atmósfera. De igual manera se recomienda consolidar un proceso de investigación y la metodología para establecer la relacion de la microbiota del suelo en los procesos anerobios de producción de gasers de efecto invernadero, como es la fermentación y tasa de descomposición de la materia orgánica, Por lo que se requiere de una metodología clara que integre estos temas. Por lo pronto se solicita los documentos de Bubier 1995; Shannon et al, 1996;. Marnier et al, 2004;. Tuittila et al, 2000;. Wilson et al, 2007;.. Dias et al 2010 y de Tuittila et al., 2000.		Noted	Some research recomnedations and indication that is important to include information on the vegetation and succession in the particular cases?

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ID	Expert (Last Name, First Name)	Chapter /Section	Start Line	End Line	Sub-section	Comment	supplementary documents	Authors' Action	Authors' note
E_3_0508	GUTIERRE Z_BELTRAN, Natalia	3	655	658		No basta con tan solo alentar a los países para que generen sus propios FE nacionales-específicos que aborden composición de la vegetación y los suelos (ver Riutta et al., 2007, Dias et al., 2010, Couwenberg et al., 2011;... Forbrich et al., 2011). Así como para estudiar los efectos de la extracción de biomasa en los flujos de CH ₄ en turberas que han sufrido cambios. Lo anterior debe estar acompañado de un programa de fortalecimiento a los países con el fin de apoyar esta serie de estudios logrando así pasar de un tier 1 a un tier 2.		Noted	
E_3_0509	GUTIERRE Z_BELTRAN, Natalia	3	664	667		El documento afirma "Las emisiones de metano / absorciones también podría estimarse utilizando modelos basados en procesos, incluidos los factores descritos anteriormente (véase por ejemplo, Walter et al., 2001, Frolking et al., 2002, Van Huissteden et al., 2006, Baird et al., 2009, Li et al., 2009, Meng et al., 2012)". Es deseable que el IPCC reconozca la necesidad de que los países cuenten con aportes económicos y fortalecimiento de capacidades para avanzar en el modelamiento de las emisiones y absorciones de CH ₄ en suelos ecuatoriales, como los son los suelos colombianos, en estado natural, intervenidos y abandonados; de manera que estas inquietudes se transmitan a las instancias de negociación de la UNFCCC.		Noted	

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ID	Expert (Last Name, First Name)	Chapter /Section	Start Line	End Line	Sub-section	Comment	supplementary documents	Authors' Action	Authors' note
E_3_0510	GUTIERREZ_BELTRAN, Natalia	3	672	674		Una de las condiciones más comunes en nuestro medio (tropical ecuatorial) es el contraste entre la época lluviosa y la época seca o menos lluviosa que influye de manera significativa en los procesos ecológicos de los humedales. Esto denota que es necesaria más investigación en este campo. Ej. los anfibiomas del Orinoco cuyo régimen es diferente otras regiones subtropicales y templadas.		Noted	
E_3_0511	GUTIERREZ_BELTRAN, Natalia	3	676	676		En la tabla, en el clima tropical, no se realiza ninguna separación en cuanto a los contenidos de nutrientes. Se debe contemplar este aspecto en los humedales y suelos húmedos de Colombia debido a su gran diversidad de materiales y tipos de suelos, algunos con alta riqueza de nutrientes y otros con bajo contenido de nutrientes.		Noted	Commen on the convenience of idicaing differences between nutrien rich and non, or different sustata

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ID	Expert (Last Name, First Name)	Chapter /Section	Start Line	End Line	Sub-section	Comment	supplementary documents	Authors' Action	Authors' note
E_3_0512	GUTIERREZ_BELTRAN, Natalia	3	703	708		<p>Con el fin de que los países ecuatoriales empleen metodologías robustas y confiables como las expuestas en estas líneas, se requieren estudios para la estimación de las emisiones y absorciones de CH₄ y N₂O, NO₃, N₂, implementación de redes freatríméticas con el fin de monitorear y conocer la profundidad promedio anual freático vs usos del suelo y las prácticas de gestión agrícola antes de su inundación, la composición de la vegetación y los cambios sucesionales; la biomasa en el tiempo.</p> <p>Como lo afirma el suplemento, "Este tipo de información puede ser obtenido por observación a largo plazo de los sitios en diversas condiciones de humedad, y debe ser combinado con la comprensión mejorada de los procesos que vinculan las emisiones de CH₄ a estos factores". Lo anterior conlleva que los países dispongan de sistemas de monitoreo de emisiones de CH₄, para lo cual se requiere la contribución de los países mejor dotados de estas tecnologías para que fortalezcan los desarrollos que con esfuerzos han venido tratando de estructurar e implementar sistemas de monitoreo de emisiones y absorciones provenientes de diferentes categorías de uso de la tierra.</p>		Noted	

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E_3_0513	GUTIERREZ BELTRAN, Natalia	3	766	769		<p>El documento afirma "Sin embargo, la información para realizar los cálculos del Nivel 1 debe proporcionar una primera estimación de los lugares y prácticas de gestión que más contribuyen al presupuesto total de GEI, esta información permite no sólo priorizar los esfuerzos de cuantificación, pero también evaluar el grado en que un conjunto dado de datos puede considerarse representativo de un área de interés más grande."</p> <p>Colombia requiere optimizar la información existente por lo que solicita metodologías estadísticas prácticas para la evaluación de datos que puedan considerarse representativos de áreas de interés más grande, dada la gran extensión de sus áreas húmedas.</p>		Noted	

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E_3_0514	GUTIERREZ BELTRAN, Natalia	3	772	776		El documento considera que "las series de tiempo son esenciales para producir tendencias reales". Se considera entonces que las Organizaciones encargadas de generar los lineamientos para el desarrollo de inventarios y financiar su desarrollo en países en desarrollo deberían proveer de herramientas robustas de evaluación a los países con el fin de diagnosticar de manera crítica el espacio y la consistencia temporal de las definiciones y sistemas de clasificación, la información sobre las prácticas de gestión, las fuentes de datos de las actividades y los parámetros clave de estimación utilizados durante toda la serie temporal. En particular, los países deben esforzarse a aplicar los parámetros de definición consistente (s) para determinar las áreas de tierra en suelos orgánicos o turba que drenan y que se vuelven a cargar de agua, en todas las categorías de uso del suelo, con un tiempo prudencial para la adopción o creación de sus propias metodologías.		Noted	
E_3_0515	GUTIERREZ BELTRAN, Natalia	3	811	813		Es necesario que se considere la importancia de contar con un sistema de contabilidad interrelacionado a los diferentes usos del suelo vs los GEI emitidos y absorbidos para ser involucrado en el diseño de métodos nacionales y el desarrollo de valores de parámetros específicos del país, con el fin de garantizar que las transferencias de Carbono hacia y desde los depósitos de carbono, y entre la biosfera y la atmósfera, en la medida de lo posible no se contabilizada dos o más veces.		Noted	Importance of avoiding double accounting, which is generally addressed.

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E_3_0516	GUTIERREZ_BELTRAN, Natalia	3	1512	1512		La tabla presenta datos interesantes de los bosques amazonicos del Perú. Al parecer son de bosques de tierra firme y no de bosques inundables (helobias). En la zona ecuatorial son muy frecuentes los bosques de inundación con procesos ecológicos y flujos de gases particulares de efecto invernadero.		Noted	
E_3_0517	GUTIERREZ_BELTRAN, Natalia	3	General			SE REQUIERE QUE EL IPCC, DISPONGA DE LAS GUIAS DE EFECTO INVERNADERO AL MENOS EN LOS IDIOMAS DE LAS NACIONES UNIDAS, LO CUAL FACILITA LA COMPRESIÓN Y PARTICIPACIÓN OPTIMA EN EL PROCESO.		Noted	
E_3_0518	GUTIERREZ_BELTRAN, Natalia	3	General			Colombia requiere complementar y refinar el inventario de suelos de humedales y suelos húmedos (áclicos y ú dicos) a escalas mayores		Noted	
E_3_0519	GUTIERREZ_BELTRAN, Natalia	3	General			En Colombia se requiere de más estudios, monitoreo, seguimiento y modelamiento sobre la distribución y la dinámica del carbono organico en los suelos orgánicos y minerales.		Noted	

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E_3_0520	GUTIERRE Z_BELTRAN, Natalia	3	General			Es prioritario para Colombia disponer de un sistema de monitoreo y seguimiento con bases de datos integrales que incluyan variables de suelos como: tipo de suelo, humedad, dinámica del nivel freático, composición de la materia orgánica, contenidos y dinámica del Carbono, GEI (NH4, N2, NO2, NO3), la temperatura del suelo, entre otras y su modelamiento.		Noted	
E_3_0521	GUTIERRE Z_BELTRAN, Natalia	3	General			Es necesario que Colombia plantee una investigación sobre factores de emisión en suelos ECUATORIALES, con el fin de tener resultados representativos y confiables del IGEI en humedales y suelos húmedos.		Noted	
E_3_0522	GUTIERRE Z_BELTRAN, Natalia	3	General			Realizar estudios sobre los factores que impulsan la dinamica de GEI como el CO2, CO, NH4, NO2, N2, en SUELOS ECUATORIALES orgánicos y minerales		Noted	Need of EF in equatorial soils....
E_3_0523	GUTIERRE Z_BELTRAN, Natalia	3	General			En Colombia se requiere de más estudios, monitoreo, seguimiento y modelamiento sobre la distribución y la dinámica del carbono organico en los suelos orgánicos y minerales.		Noted	

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E_3_0524	GUTIERREZ BELTRAN, Natalia	3	General			Es prioritario para Colombia disponer de un sistema de monitoreo y seguimiento con bases de datos integrales que incluyan variables de suelos como: tipo de suelo, humedad, dinámica del nivel freático, 12. composición de la materia orgánica, contenidos y dinámica del Carbono, GEI (NH ₄ , N ₂ , NO ₂ , NO ₃), la temperatura del suelo, entre otras y su modelamiento.		Noted	
E_3_0525	Hatano, Ryusuke	3	80	109		Much precise definitions for rewetting, restoration, rehabilitation, using the condition of water table and period of the operation per year, may be required to obtain the activity data and emission factors.		Accepted with modification	Narrow definitions can become too restrictive and prevent countries from using domestic data. Clearer guidance will be provided on the identification of suitable AD.
E_3_0526	Hatano, Ryusuke	3	80	109		What is the difference between rewetting and irrigation?		Noted	Rewetted soils are saturated, irrigated soils are not.
E_3_0527	Hatano, Ryusuke	3	143			"greenhouse gas" should be GHGs.		Noted	Sentence disappeared in FD as a result of text restructuring.
E_3_0528	Hatano, Ryusuke	3	145			"greenhouse gases" should be GHGs.		Noted	"greenhouse gas" was replaced with "GHG" throughout the text.

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E_3_0529	Hatano, Ryusuke	3	367			note of Table 3,1 "***for fully rewetted tropical peatlands not allowing organic materials to be oxidized" can not be understood. It means no organic matter decomposition in soil. It is impossible.		Accepted with modification	It is agreed that some soil organic matter decay always occurs (albeit at a reduced rate) but decayed material is not oxidized due to saturated conditions. Footnote to table 3.1 has been modified accordingly.
E_3_0530	Hatano, Ryusuke	3	484	485		In order to obtain the activity data, I think that much more precise definition of rewetting peatlands or organic soils are required, like that peatlands or organic soils which have water table more than 30 cm below the surface by rewetting treatment.		Noted	Narrow definitions can become too restrictive and prevent countries from using domestic data. Annex clarifies that for the purpose of this guidance, soil is not considered saturated when WTD is more than 30 cm below the surface.
E_3_0531	Hatano, Ryusuke	3	1496	1499		EF= 0 can not be accepted. It is impossible to stop organic matter decomposition in soil.		Accepted with modification	It is agreed that some soil organic matter decay always occurs (albeit at a reduced rate) but decayed material is not oxidized due to saturated conditions. Footnote to table 3.1 has been modified accordingly. Additional explanations are provided in the main body of the text and in the annex.